4.4 AIR QUALITY

4.4.1 METHODOLOGY

The following is a description of the technical analysis approaches used to analyze the air quality effects of the project alternatives.

CONSTRUCTION-RELATED EFFECTS

URBEMIS version 8.7 was used to estimate emissions from all construction-related sources. URBEMIS is a California-specific computer model that is owned and modified by the local air pollution control districts and air quality management districts in the State of California. URBEMIS estimates construction, area source, and operational emissions of NO_x and PM_{10} from potential land uses, using the most recent approved version of relevant ARB emissions models and emission factors and/or District-specific emission factors; and estimates emissions reductions. The program is available from http://www.urbemis.com.

Previous versions of URBEMIS were designed to estimate only emissions from motor vehicle trips generated by land use development. More recent versions of URBEMIS have been enhanced so the user can estimate construction and area source emissions and select mitigation measures for construction emissions, area sources, and motor vehicle trips. Output files from the URBEMIS version 8.7 model are presented in **Appendix S**.

OPERATIONAL EFFECTS

URBEMIS version 8.7 was also used to estimate emissions associated with long-term operation of the project alternatives. Input values for the URBEMIS version 8.7 model included data from the traffic study of the project alternatives. Trip generation estimates from the traffic study were used in the URBEMIS version 8.7 model. In addition, trip length data from the traffic study were used in the URBEMIS model. Different trip length values, specific to each of the project alternatives, were used.

Trip generation rates for the URBEMIS version 8.7 model runs have been adjusted to reflect primary trips estimated to be generated by the project alternatives. This was done so that diverted trips and pass-by trips are not included in the URBEMIS version 8.7 analysis. Diverted trips and pass-by trips were excluded from the analysis to focus the analysis presented in this EIS on the net effects of the project alternatives.

The average length of vehicle trips associated with the proposed casino is expected to be longer than the default trip length values included in the URBEMIS version 8.7 model. Therefore, project-specific trip length values were used in the air quality analysis. The average trip length was estimated using data from the Madera County Transportation Commission (MCTC) traffic model.

It should be noted that the emissions rates used in the URBEMIS version 8.7 model assume a mix of vehicle types. The vehicle mix assumption includes:

- light-duty vehicles used by the majority of travelers to the Madera or North Fork sites;
- urban buses used, for example, by tour groups;
- motor homes used, for example, by individual tourists;
- medium-duty vehicles used, for example, for delivery of supplies by vendors;
- heavy-duty vehicles used, for example, for larger deliveries.

Output files from the URBEMIS version 8.7 model are presented in **Appendix S**. Note that emission factors are not readily available for $PM_{2.5}$. To get $PM_{2.5}$ emissions, California Air Resources Board (CARB) particulate matter speciation profiles were used (CARB, 2002).

Operational Carbon Monoxide Effect

A screening analysis was used to determine the potential of the project alternatives to have a significant effect on CO concentrations. The screening analysis involved reviewing the traffic study of the project alternatives, and comparing the results of the traffic study to screening criteria.

The project's impact on CO will be considered significant if the project would:

- degrade operation of a signalized intersection to level of service (LOS) E or F, or
- substantially worsen LOS at a signalized intersection already operating at F.

These screening criteria are from the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al., 1997). If the project meets either of these criteria, the proposed project's impact on CO is considered potentially significant if it would increase traffic volumes at an intersection by an amount approaching 5%, or more.

ODORS

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the local air districts. Any project with the potential to frequently expose members of the public to objectionable odors will be deemed to have a significant impact. Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc., warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas. Analysis of potential odor impacts should be conducted for the following two situations:

- Generators – projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- Receivers – residential or other sensitive receptor projects or other projects built for the intent of attracting people locating near existing odor sources.

Because offensive odors rarely cause any physical harm and no requirements for their control are included in state or federal air quality regulations, the local air districts usually have no rules or standards related to odor emissions, other than a typical nuisance rule. Any actions related to odors are based on citizen complaints to local governments and the local air districts. To test for a potential odor concern, a visual evaluation is made to determine whether the proposed project, either as a generator or a receiver, would result in sensitive receptors being affected by odors. If the proposed project would result in sensitive receptors being located in an area affected by offensive odors, a more detailed analysis would be conducted.

TOXIC AIR CONTAMINANTS

Toxic air contaminants are less pervasive in the urban atmosphere than the criteria air pollutants, but are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants, with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2005 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being diesel PM. Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances.

The identification of diesel particulate matter (DPM) as a toxic air contaminant in 1998 led CARB to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles (Plan) in September 2000. The Plan's goals are a 75 percent reduction in DPM by 2010 and an 85 percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer causing substances. California's identification of DPM as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources (CARB 2000).

In January 2006, CARB officially identified environmental tobacco smoke (ETS) as a TAC. ETS is a complex mixture of thousands of gases and fine particulate matter emitted by the burning of tobacco products and from smoke exhaled by the smoker. The composition will vary depending on heat of combustion, tobacco content and additives present, and type of filter material used. Researchers distinguish cigarette smoke as being comprised of two main components: mainstream and sidestream smoke. ETS is a combination of exhaled mainstream smoke, sidestream smoke, and compounds that diffuse through the cigarette paper.

Neither ambient air quality standards nor emission control standards have been established for most toxic air contaminants. In lieu of ambient air quality standards, toxic air contaminant impacts are considered significant if there is a reasonable concern that proposed project patrons and/or employees would be subject to exposure concentrations harmful to human health or welfare.

ASBESTOS

Demolition

Project construction sometimes requires the demolition of existing buildings at the project site. Buildings often include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Most demolitions and many renovations are subject to an asbestos inspection prior to start of activity. The demolition, renovation or removal of asbestos-containing building materials is subject to the limitations of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) regulations as listed in the Code of Federal Regulations requiring notification and inspection and local air district regulations. Any demolition activity subject to but not complying with the requirements of the SJVAPCD and NESHAP would be considered to have a significant impact.

Naturally Occurring Asbestos (NOA)

Exposure and disturbance of rock and soil that contains asbestos can result in the release of fibers to the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (proper rock name serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include: unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. Like many counties in Central California, Madera County has

areas that contain NOA. State regulations, enforced by the appropriate local air district may affect quarries, grading, and surfacing projects.

To address some of the health concerns associated with exposure to asbestos from these activities, the ARB has adopted two Airborne Toxic Control Measures (ATCMs). CARB has an ATCM for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. This ATCM applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where NOA is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the APCO or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or NOA on the site. The ATCM also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity.

In addition, CARB has an ATCM for surfacing applications. This ATCM applies to any person who produces, sells, supplies, offers for sale or supply, uses, applies, or transports any 1) aggregate material extracted from property where any portion of the property is located in a geographic ultramafic rock unit or 2) aggregate material extracted from property that is NOT located in a geographic ultramafic rock unit if the material has been evaluated at the request of the Air Pollution Control Officer (APCO) and determined to be ultramafic rock or serpentine; tested at the request of the APCO and determined to have an asbestos content of 0.25 percent or greater; or determined by the owner / operator of a facility to be ultramafic rock, or serpentine, or material that has an asbestos content of 0.25 percent or greater. The ATCM prohibits person from using, applying, selling, supplying, or offering for sale or supply any restricted material for surfacing unless it has been tested and determined to have an asbestos content that is less than 0.25 percent

FEDERAL AIR QUALITY CONFORMITY

The General Conformity Rule of the federal Clean Air Act (CAA) (42 USC 7401), implements Section 176(c) of the Act, and establishes minimum thresholds for volatile organic compounds (VOCs)[1] and NOx (ozone precursors), CO, and other regulated constituents for non-attainment and maintenance areas. Ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$) are at issue for conformity given that the air district is in nonattainment for these pollutants. ROG and NO_X are analyzed as ozone precursors. PM_{10} emissions are analyzed for respirable particulate matter. Although $PM_{2.5}$ is a subset of PM_{10}, it also differs from the rest of PM_{10} in that a significant amount of the ambient $PM_{2.5}$ can result no only from direct emissions but also from transformation of precursors and condensing gaseous pollutants in the atmosphere

[1] VOCs are any organic compound containing at least one carbon atom except for specific exempt compounds found to be non-photochemically reactive. In this document, VOC is synonymous with ROG.

(similar to ozone creation). Therefore, pursuant to the conformity regulations, SO_2 and NO_x are analyzed as $PM_{2.5}$ precursors.

Title 40 Part 93 of the Code of Federal Regulations (CFR) was promulgated in order to determine conformity of Federal actions to state or Federal implementation plans. Whereas Subpart A of Part 93 relates to transportation plans, Subpart B is directed to general Federal actions. A federal agency must make a determination that a Federal action conforms to the applicable implementation plan before the action is taken. A conformity determination is required for each pollutant where a total of direct and indirect emissions in a nonattainment or maintenance area caused by the Federal action are greater than *de minimis* thresholds as listed in CFR Section 93.153(b).

These thresholds provide simple and direct guidance for federal agencies to ensure that they comply with approved state implementation plans (SIP). The general conformity rule includes a procedure for determining whether the rule is applicable to the actions of a federal agency. A conformity determination is required for each pollutant where the total direct and indirect emissions in a federal non-attainment or maintenance area caused by a Federal action would equal to or exceed any of the rates shown in 40 CFR Section 51.853 [b][1] or [2].

The project alternatives were evaluated to determine if they conform with approved SIPs. Emissions estimates used in the evaluation were developed using the URBEMIS version 8.7 model and CARB (2002) particulate matter speciation profiles for $PM_{2.5}$ emissions.

IMPACTS TO FEDERAL CLASS I AREAS

Title 1, Part C was established, in part, to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value. The FCAA promised to prevent significant deterioration of air quality under the Prevention of Significant Deterioration (PSD) program. The FCAA designates all international parks, national wilderness areas, and memorial parks larger than 5,000 acres, and national parks larger than 6,000 acres as "Class I areas." There are 156 mandatory Class I areas nationwide.

Any major source of emissions within 100 kilometers (62.1 miles) from a federal Class I area is required to conduct a pre-construction review of air quality impacts on the area(s). The PSD Program protects Class I areas by allowing only a small increment of air quality deterioration in these areas by providing for assessment of potential impacts on air quality related values of Class I areas. A "major source" for the PSD program is defined as a facility that will emit (from direct stationary sources) 250 tons per year of regulated pollutant. For certain specific industries, the requirements apply to facilities that emit (through direct stationary sources) 70 tons per year or more of a regulated pollutant.

INDOOR AIR QUALITY

Since 1992 there has been an Indoor Air Quality (IAQ) Program at CARB that is primarily designed "to conduct and promote the coordination of research, investigations, experiments, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, and control of indoor pollution in California."

Practical applications and solutions for IAQ concerns have been combined with other environmental concerns in an emerging concept of green or sustainable building designs. The State agency that has taken the lead in green buildings is the Integrated Waste Management Board (IWMB). In fact, the IWMB has developed a central informational web source at http://www.ciwmb.ca.gov/GreenBuilding/ where they discuss green building basics, supply a sustainable building tool kit, provide training programs for state and local government, and supply a sustainable building implementation plan.

On a national level, EPA completed, in 1999, an extensive modeling study to assess the compatibilities and trade-offs between energy, indoor air quality, and thermal comfort objectives for HVAC systems, and help formulate strategies to simultaneously achieve superior performance on each objective. To gain a better understanding of IAQ, EPA's Office of Radiation and Indoor Air also conducted a major study of IAQ in public and commercial office buildings. Most recently, EPA has expanded their existing Building Air Quality guidance with a practical tool designed to be comprehensive state-of-the-art guidance for managing IAQ in commercial buildings. This tool is called the IAQ Building Education and Assessment Tool (I-BEAM) and is designed to be used by building professionals and others interested in indoor air quality in commercial buildings.

In addition, the U.S. Green Building Council[2] (USGBC) was established as a coalition of leaders from across the building industry working to promote buildings that are environmentally responsible, profitable, and healthy places to live and work. The USGBC has developed the Leadership in Energy and Environmental Design (LEED) Green Building Rating System as a national consensus-based, market-driven building rating system designed to accelerate the development and implementation of green building practices. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources.

LEED standards are currently available or under development for new commercial construction and major renovation projects; existing building operations; commercial interiors projects; core and shell projects; homes; and neighborhood development. The module for new commercial construction gives credits for categories entitled Sustainable Sites; Water Efficiency; Energy &

[2] http://www.usgbc.org

Atmosphere; Materials & Resources; Innovation & Design Process; and Indoor Environmental Quality.

IAQ problems result from interactions between contaminant source, building site, building structure, activities within the building, mechanical equipment, climate, and occupants. Efforts to control indoor air contaminants change the relationships between these factors. There are many ways that people can intervene in these relationships to prevent or control indoor air contaminant problems. Control strategies can be categorized as source control, ventilation, air cleaning, or exposure control and successful mitigation often involves a combination of these strategies. A combination of I-BEAM and LEED factors and strategies were utilized to evaluate the IAQ concerns for this project and, where appropriate, to incorporate green building best practices for each alternative.

CLIMATE CHANGE

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. It is not possible to attribute a particular climate change impact to a single development project. Project impacts are therefore most appropriately addressed in terms of the incremental contribution to a global cumulative impact. Please refer to discussion of cumulative impacts in **Section 4.11** for this analysis

4.4.2 ALTERNATIVE A – PROPOSED PROJECT

CONSTRUCTION-RELATED IMPACTS

Alternative A would result in new construction activity, which would generate air pollutant emissions, determined by the San Joaquin Valley Air Pollution Control District (SJVAPCD) to be primarily PM_{10}. The primary source of PM_{10} would be entrainment of fugitive dust from land clearing, earth moving, and wind erosion of exposed soil.

As noted in the SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) (SJVAPCD, 2002b), "although the impacts from construction-related air pollutant emissions are temporary in duration, such emissions can still represent a significant air quality impact. In some cases, construction impacts may represent the largest air quality impact associated with a proposed project. Construction activities such as grading, excavation and travel on unpaved surfaces can generate substantial amounts of dust, and can lead to elevated concentrations of PM_{10}." Unmitigated construction-related emissions for Alternatives A-D are shown in **Table 4.4-1** for ease of comparison.

According to the GAMAQI, the SJVAPCD emphasizes the implementation of measures to control construction-related emissions, rather than the preparation of detailed quantification of construction-related emissions. Thus, consistent with the approach presented in the GAMAQI document, the generation of construction-related emissions is considered a short-term significant impact.

This impact would be reduced to a less than significant level with implementation of the mitigation measures listed in **Section 5.2.3** of this document.

TABLE 4.4-1
CONSTRUCTION-RELATED EMISSIONS

Project Alternative	Emissions in Tons Per Year				
	ROG[c]	NO_x[bc]	SO_2[b]	PM_{10}	$PM_{2.5}$[a]
Alternative A					
Amount of Emissions	10.24	24.96	0.00	1.07	1.06
Above Conformity Thresholds?	No	No	No	No	No
Alternative B					
Amount of Emissions	5.57	13.82	0.00	0.59	0.59
Above Conformity Thresholds?	No	No	No	No	No
Alternative C					
Amount of Emissions	6.56	15.92	0.00	0.69	0.69
Above Conformity Thresholds?	No	No	No	No	No
Alternative D					
Amount of Emissions	0.76	2.03	0.00	0.08	0.08
Above Conformity Thresholds?	No	No	No	No	No

NOTES: Emissions shown are for the highest year in the multi-year construction period.
Applicability threshold is 50 tons per year for ROG or NO_x (as ozone precursors), 70 tons per year for PM_{10}, 100 tons per year for $PM_{2.5}$ direct emissions, and 100 tons per for SO_2 and NO_X (as $PM_{2.5}$ precursors).
[a] CARB speciation profile shows that 99.2% of PM_{10} is $PM_{2.5}$ for gasoline powered engine emissions and 92.0% for diesel powered engine emissions. 99.2% is assumed here for a conservative analysis.
[b] $PM_{2.5}$ precursors.
[c] Ozone precursors.
SOURCE: URBEMIS version 8.7 emissions model.

OPERATION-RELATED IMPACTS

The SJVAPCD's GAMAQI document (SJVAPCD, 2002b) presents emissions thresholds that are used to determine the significance of operational air quality impacts. These local thresholds are:

- 10 tons per year of ROG emissions, and
- 10 tons per year of NO_x emissions.

Operation of Alternative A would result in the generation of ROG and NO_x, emissions. **Table 4.4-2** presents an estimate of these unmitigated operational emissions for Alternative A. Operation of Alternative A is estimated to result in:

- 29.87 tons per year of ROG emissions, and
- 46.57 tons per year of NO_x emissions.

Both ROG and NO_x emissions generated by Alternative A would be more than the 10 tons per year significance thresholds, and would therefore be a significant effect.

ROG and NO_x, emissions associated with operation of Alternative A could be reduced, but not to a less than significant level, by requiring the mitigation measures listed in **Section 5.2.3** of this document.

TABLE 4.4-2
OPERATIONAL EMISSIONS: SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT THRESHOLDS

Project Alternative	Emissions in Tons Per Year	
	ROG	NO_x
Alternative A		
Amount of Emissions	29.87	46.57
Above Significance Threshold?	Yes	Yes
Alternative B		
Amount of Emissions	20.61	32.31
Significant Effect?	Yes	Yes
Alternative C		
Amount of Emissions	29.13	46.04
Significant Effect?	Yes	Yes
Alternative D		
Amount of Emissions	3.43	5.46
Significant Effect?	No	No

NOTES: Emissions shown are for mobile sources and area sources. All values shown are in tons per year.
SOURCE: URBEMIS version 8.7 emissions model.

Operational emissions are compared to general conformity de minimums applicably thresholds in **Table 4.4-3**.

Carbon Monoxide Hot Spot Impacts

As described in the traffic study of the project alternatives, traffic operations at signalized study intersections would be LOS D or better under 2008 background conditions with Alternative A and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide*

Protocol (Garza, et al. 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or Federal standards. This impact is significant due to intersections operating above LOS D prior to mitigation. With the implementation of traffic mitigation listed in **Section 5.2.7**, this impact would be reduced to a less than significant level.

TABLE 4.4-3
OPERATIONAL EMISSIONS: APPLICABILITY OF FEDERAL CONFORMITY REGULATIONS

	Emissions in Tons Per Year				
Project Alternative	**ROG[c]**	**NO_x[bc]**	**SO_2[b]**	**PM_{10}**	**$PM_{2.5}$[a]**
Alternative A					
Amount of Emissions	29.87	46.57	0.27	43.13	42.78
Above Applicability Thresholds?	No	No	No	No	No
Alternative B					
Amount of Emissions	20.61	32.31	0.19	30.20	29.96
Above Applicability Thresholds?	No	No	No	No	No
Alternative C					
Amount of Emissions	29.13	46.04	0.27	43.11	42.77
Above Applicability Thresholds?	No	No	No	No	No
Alternative D					
Amount of Emissions	3.43	5.46	0.03	5.21	5.17
Above Applicability Thresholds?	No	No	No	No	No

NOTES: Applicability threshold is 50 tons per year for ROG or NO_x (as ozone precursors), 70 tons per year for PM_{10}, 100 tons per year for $PM_{2.5}$ direct emissions, and 100 tons per for SO_2 and NO_X (as $PM_{2.5}$ precursors).
[a] CARB speciation profile shows that 99.2% of PM_{10} is $PM_{2.5}$ for gasoline powered engine emissions and 92.0% for diesel powered engine emissions. 99.2% is assumed here for a conservative analysis.
[b] $PM_{2.5}$ precursors.
[c] Ozone precursors.
SOURCE: URBEMIS version 8.7 emissions model.

ODOR IMPACTS

The SJVAPCD has determined some common types of facilities that have been known to produce odors in the SJV. These are presented in Table 4-2 of their *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)* (SJVAPCD 2002) along with a reasonable distance from the source where the degree of odors could possibly be significant. This Table was used to determine whether the proposed project, either as a generator or a receiver, would result in sensitive receptors being within the distances indicated.

There are no existing odor generators that might impact Alternative A and Alternative A itself would not contribute odors to the region. The Alternative A WWTP would use Membrane Bioreactor (MBR) technology and would be fully enclosed. Unlike common open pond WWTPs, the MBR process does not produce odors. MBR WWTPs have been used and numerous sites

with no odor complaints. An example in California is the Thunder Valley Casino MBR WWTP, which has an MBR plant located adjacent to its parking lot. However, even a MBR WWTP, if not properly operated, could represent a source of odors that could represent a nuisance and potentially significant impact to the nearby residences. Application of odor mitigation measures will reduce the potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

TOXIC AIR CONTAMINANT IMPACTS

The gaming facility under Alternative A would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas, a potentially significant effect. Application of mitigation measures associated with loading docks would reduce potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

Possible future commercial or industrial development could affect Alternative A by creating air toxics. However, any future facilities in the area would be required to meet federal, state, and local standards associated with the handling of hazardous materials, and therefore no significant impacts to patrons or employees of the proposed casino/hotel resort are anticipated.

Emergency generators would be kept onsite but their use during infrequent, random or programmed local or regional power outages would result in limited and temporary emissions. Thus, a less than significant impact would result.

ASBESTOS IMPACTS

Implementation of Alternative A could result in the demolition of existing structures on the Madera site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Prior to any demolition activity, SJVAPCD's Enforcement Division shall be consulted to determine inspection and compliance requirements. Any demolition activity will be subject to the requirements of the Asbestos National Emission Standards for Hazardous Air Pollutants, 40 CFR sections 61.140 through 61.157. Strict compliance with these regulations will result in a less than significant impact.

Based on the fact that Alternative A is located on the valley floor, no naturally occurring asbestos (NOA) would be expected. No off-site fill that could potentially contain NOA would be required because on-site grading would balance. Thus, a less than significant effect from NOA would result.

FEDERAL CLASS I AREAS IMPACTS

Yosemite National Park, Pinnacles National Monument, Ansel Adams Wilderness Area, Kaiser Wilderness Area, and John Muir Wilderness Area are the only federal Class I areas within 100 kilometers of the Madera site. Analysis of operational emissions associated with Alternative A, presented in **Table 4.4-3,** show that Alternative A does not constitute a "major source" under PSD definitions and therefore does not trigger need for preconstruction review and assessment of impacts. Thus, a less than significant effect to Class I areas would result.

INDOOR AIR QUALITY IMPACTS

Firsthand and secondhand tobacco smoke contains carcinogens (including Polycyclic Organic Matter) and smoking would be permitted indoors at the casino. Patrons of the proposed gaming facility could be exposed to toxics and carcinogens from indoor tobacco use.

Ventilation is a standard engineering approach to assuring good indoor air quality and comfort. Ventilation removes and dilutes indoor contaminants, removes moisture from the air, which helps to prevent mold growth, and removes body effluents such as carbon dioxide that lead to a stuffy environment. Natural ventilation, through open windows and doors, is the primary ventilation route for residences, while mechanical ventilation, using HVAC systems, is most common in commercial buildings. Adequate and effective ventilation, and ducting of exhaust from combustion appliances, are necessary for acceptable indoor air quality, even when known air contaminants are minimized. However, ventilation is not a complete solution to indoor pollution: ventilation consumes energy, and some pollutants, such as formaldehyde emitted from building materials, require years to off-gas and are not completely removed by ventilation.

While there are no Federal requirements for controlling indoor air pollution or existing indoor air pollution thresholds, industry standards are available for reducing the concentrations of indoor air pollution. Industry and professional groups have developed numerous guidelines for improving indoor air quality. An example is the building ventilation standard of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE), (*Ventilation for Acceptable Indoor Air Quality*, ASHRAE Standard 62-2001). Even though industry and professional guidelines may vary in their degree of indoor air quality protection, they are widely used and generally have helped reduce some indoor pollutants over the years.

Indoor air pollutants may also not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation or proper public notice would constitute a significant effect to public health. Compliance with mitigation measures listed in **Section 5.2.3** of this document will reduce effects of indoor air quality to a less than significant level for Alternative A.

FEDERAL AIR QUALITY CONFORMITY

The General Conformity Rule describes how Federal agencies determine whether their actions conform with the applicable State Implementation Plan (SIP) (40 CFR §51.853). The rule establishes *de minimis* emissions thresholds that are used to determine whether the regulations apply and a detailed conformity determination is required. The General Conformity Rule presents different threshold levels for some pollutant, with the specific level being based on the severity of the pollution problem. Madera County has been designated a "serious" nonattainment area for ozone, a "serious" nonattainment area for PM_{10}, and a nonattainment area for $PM_{2.5}$. Therefore, according to the General Conformity Rule, the *de minimis* levels for Alternative A would be when ROG emissions are less than 50 tons per year, NO_x emissions are less than 50 tons per year, and PM_{10} emissions are less than 70 tons per year.

Construction of Alternative A would result in the generation of ROG, NO_x, and PM_{10} emissions. **Table 4.4-1** presents an estimate of these construction-related emissions for Alternative A. Construction of Alternative A is estimated to result in:

- 10.24 tons per year of ROG,
- 24.96 tons per year of NO_x,
- 0.00 tons per year of SO_2,
- 1.07 tons per year of PM_{10}, and
- 1.06 tons per year of $PM_{2.5}$, emissions.

Operation of Alternative A would also result in the generation of ROG, NO_x, and PM_{10} emissions associated with motor vehicle travel. **Table 4.4-3** presents an estimate of these operational emissions for Alternative A. Operation of Alternative A is estimated to result in:

- 29.87 tons per year of ROG,
- 46.57 tons per year of NO_x,
- 0.27 tons per year of SO_2,
- 43.13 tons per year of PM_{10}, and
- 42.78 tons per year of $PM_{2.5}$, emissions.

The emissions in **Table 4.4-1** and **Table 4.4-3** are considered separately because the construction phase of Alternative A would not overlap with the operational phase of Alternative A.

As shown in **Table 4.4-1** and **Table 4.4-3,** emissions associated with Alternative A would be less than the General Conformity Rule *de minimis* thresholds. Therefore, consistent with 40 CFR §51.583, Alternative A would conform with the SIP and a conformity determination is not required.

4.4.3 ALTERNATIVE B – REDUCED INTENSITY

This section of the EIS presents a description of air quality effects related to Alternative B. The methodology and significance thresholds used to assess these effects are described under Alternative A above. Implementation of Alternative B would result in short-term construction-related effects, and effects related to operation of the project. The following is a description of these effects.

CONSTRUCTION-RELATED EMISSIONS

Alternative B would result in new construction activity, which would generate air pollutant emissions, determined by the SJVAPCD to be primarily PM_{10}. The primary source of PM_{10} would be entrainment of fugitive dust from land clearing, earth moving, and wind erosion of exposed soil.

Consistent with the approach presented in the GAMAQI document, the generation of construction-related emissions is considered a short-term significant impact. This impact would be reduced to a less than significant level after implementation of mitigation measures listed in **Section 5.2.3** of this document.

OPERATION-RELATED IMPACTS

Operation of Alternative B would result in the generation of ROG and NO_x, emissions. **Table 4.4-2** presents an estimate of these operational emissions for Alternative B. Operation of Alternative B is estimated to result in:

- 20.61 tons per year of ROG emissions, and
- 32.31 tons per year of NO_x emissions.

Both ROG and NO_x emissions generated by Alternative B would be more than the 10 tons per year significance thresholds, and would therefore be a significant effect.

ROG and NO_x, emissions associated with operation of Alternative B could be reduced, but not to a less than significant level, by requiring the mitigation measures listed in **Section 5.2.3** of this document.

Carbon Monoxide Hot Spot Impacts

As described in the traffic study of the project alternatives, traffic operations at signalized study intersections would be LOS D or better under 2008 background conditions with Alternative B and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al. 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or Federal standards. This impact is significant due to

intersections operating above LOS D prior to mitigation. With the implementation of traffic mitigation listed in **Section 5.2.7**, this impact would be reduced to a less than significant level.

ODOR IMPACTS

A discussion of odor impacts is presented in **Section 4.4.2**. There are no existing odor generators that might impact Alternative B and Alternative B itself would not contribute odors to the region. The Alternative B WWTP would use MBR technology and would be fully enclosed. Unlike common open pond WWTPs, the MBR process does not produce odors. MBR WWTPs have been used and numerous sites with no odor complaints. However, even a MBR WWTP, if not properly operated, could represent a source of odors that could represent a nuisance and potentially significant impact to the nearby residences. Application of odor mitigation measures will reduce the potential effects to a less than significant level, Mitigation measures are listed in **Section 5.2.3** of this EIS.

TOXIC AIR CONTAMINANTS IMPACTS

The gaming facility under Alternative B would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas, a potentially significant effect. Application of mitigation measures associated with loading docks would reduce potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

Possible future commercial or industrial development could affect Alternative B by creating air toxics. However, any future facilities in the area would be required to meet federal, state, and local standards associated with the handling of hazardous materials, and therefore no significant impacts to patrons or employees of the proposed casino/hotel resort are anticipated.

Emergency generators would be kept onsite but their use during infrequent, random or programmed local or regional power outages would result in limited and temporary emissions. Thus, a less than significant impact would result.

ASBESTOS IMPACTS

Implementation of Alternative B could result in the demolition of existing structures on the Madera site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Prior to any demolition activity, SJVAPCD's Enforcement Division shall be consulted to determine inspection and compliance requirements. Any demolition activity will be subject to the requirements of the Asbestos National Emission Standards for Hazardous Air Pollutants, 40 CFR sections 61.140 through 61.157. Strict compliance with these regulations will result in a less than significant impact.

Based on the fact that Alternative B is located on the valley floor, no naturally occurring asbestos (NOA) would be expected. No off-site fill that could potentially contain NOA would be required because on-site grading would balance. Thus, a less than significant effect from NOA would result.

FEDERAL CLASS I AREAS IMPACTS

Yosemite National Park, Pinnacles National Monument, Ansel Adams Wilderness Area, Kaiser Wilderness Area, and John Muir Wilderness Area are the only federal Class I areas within 100 kilometers of the Madera site. Analysis of operational emissions associated with Alternative B, presented in **Table 4.4-3**, show that Alternative B does not constitute a "major source" under PSD definitions and therefore does not trigger need for preconstruction review and assessment of impacts. Thus, a less than significant effect to Class I areas would result.

INDOOR AIR QUALITY IMPACTS

As with Alternative A, casino patrons would be exposed to tobacco smoke. Ventilation is a standard engineering approach to assuring good indoor air quality and comfort. Adequate and effective ventilation, and ducting of exhaust from combustion appliances, are necessary for acceptable indoor air quality, even when known air contaminants are minimized. Even though industry and professional guidelines may vary in their degree of indoor air quality protection, they are widely used and generally have helped reduce some indoor pollutants over the years. Indoor air pollutants may also not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation or proper public notice would constitute a significant effect to public health. Compliance with mitigation measures listed in **Section 5.2.3** of this document will reduce effects of indoor air quality to a less than significant level for Alternative B.

FEDERAL AIR QUALITY CONFORMITY

Construction of Alternative B would result in the generation of ROG, NO_x, and PM_{10} emissions. **Table 4.4-1** presents an estimate of these construction-related emissions for Alternative B. Construction of Alternative B is estimated to result in:

- 5.57 tons per year of ROG,
- 13.82 tons per year of NO_x,
- 0.00 tons per year of SO_2,
- 0.59 tons per year of PM_{10}, and
- 0.59 tons per year of $PM_{2.5}$, emissions.

Operation of Alternative B would also result in the generation of ROG, NO_x, and PM_{10} emissions associated with motor vehicle travel. **Table 4.4-3** presents an estimate of these operational emissions for Alternative B. Operation of Alternative B is estimated to result in:

- 20.61 tons per year of ROG,
- 32.31 tons per year of NO_x,
- 0.19 tons per year of SO_2,
- 30.20 tons per year of PM_{10}, and
- 29.96 tons per year of $PM_{2.5}$, emissions.

The emissions in **Table 4.4-1** and **Table 4.4-3** are considered separately because the construction phase of Alternative B would not overlap with the operational phase of Alternative B.

As shown in **Table 4.4-1** and **Table 4.4-3,** emissions associated with Alternative B would be less than the General Conformity Rule *de minimis* thresholds. Therefore, consistent with 40 CFR §51.583, Alternative B would conform with the SIP and a conformity determination is not required.

4.4.4 ALTERNATIVE C – NON-GAMING USE

This section of the EIS presents a description of air quality effects related to Alternative C. The methodology and significance thresholds used to assess these effects are described under Alternative A above. Implementation of Alternative C would result in short-term construction-related effects, and effects related to operation of the project. The following is a description of these effects.

CONSTRUCTION-RELATED IMPACTS

Alternative C would result in new construction activity, which would generate air pollutant emissions, determined by the SJVAPCD to be primarily PM_{10}. The primary source of PM_{10} would be entrainment of fugitive dust from land clearing, earth moving, and wind erosion of exposed soil.

Consistent with the approach presented in the GAMAQI document, the generation of construction-related emissions is considered a short-term significant impact. This impact would be reduced to a less than significant level after implementation of mitigation measures listed in **Section 5.2.3** of this document.

OPERATION-RELATED IMPACTS

Operation of Alternative C would result in the generation of ROG and NO_x, emissions. **Table 4.4-2** presents an estimate of these operational emissions for Alternative C. Operation of Alternative C is estimated to result in:

- 29.13 tons per year of ROG emissions, and
- 46.04 tons per year of NO_x emissions.

Both ROG and NO_x emissions generated by Alternative C would be more than the 10-ton-per-year significance thresholds, and would therefore be a significant effect.

ROG and NO_x, emissions associated with operation of Alternative C could be reduced, but not to a less than significant level, by requiring the mitigation measures listed in **Section 5.2.3** of this document.

Carbon Monoxide Hot Spot Impacts

As described in the traffic study of the project alternatives, traffic operations at signalized study intersections would be LOS D or better under 2008 background conditions with Alternative C and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al. 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or Federal standards. This impact is significant due to intersections operating above LOS D prior to mitigation. With the implementation of traffic mitigation listed in **Section 5.2.7**, this impact would be reduced to a less than significant level.

ODOR IMPACTS

A discussion of odor impacts is presented in **Section 4.4.2**. Most of the operations listed in the GAMAQI that are known to produce odors would usually occur in the manufacturing zones. Alternative C does not include any uses that would be expected to produce offensive odors.

The Alternative C WWTP would use MBR technology and would be fully enclosed. Unlike common open pond WWTPs, the MBR process does not produce odors. MBR WWTPs have been used and numerous sites with no odor complaints. However, even a MBR WWTP, if not properly operated, could represent a source of odors that could represent a nuisance and potentially significant impact to the nearby residences. Application of odor mitigation measures will reduce the potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

TOXIC AIR CONTAMINANTS IMPACTS

The commercial development under Alternative C would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the development, especially loading areas, would result in an increased concentration of diesel emissions in those areas, a potentially significant effect. Application of mitigation measures associated with loading docks would reduce potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

ASBESTOS IMPACTS

Implementation of Alternative C could result in the demolition of existing structures on the Madera site. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not carried out when the material is disturbed. Prior to any demolition activity, SJVAPCD's Enforcement Division shall be consulted to determine inspection and compliance requirements.

Any demolition activity will be subject to the requirements of the Asbestos National Emission Standards for Hazardous Air Pollutants, 40 CFR sections 61.140 through 61.157. Strict compliance with these regulations will result in a less than significant impact.

Based on the fact that Alternative C is located on the valley floor, no naturally occurring asbestos (NOA) would be expected. No off-site fill that could potentially contain NOA would be required because on-site grading would balance. Thus, a less than significant effect from NOA would result.

FEDERAL CLASS I AREAS IMPACTS

Yosemite National Park, Pinnacles National Monument, Ansel Adams Wilderness Area, Kaiser Wilderness Area, and John Muir Wilderness Area are the only federal Class I areas within 100 kilometers of the Madera site. Analysis of operational emissions associated with Alternative C, presented in **Table 4.4-3**, show that Alternative C does not constitute a "major source" under PSD definitions and therefore does not trigger need for preconstruction review and assessment of impacts. Thus, a less than significant effect to Class I areas would result.

INDOOR AIR QUALITY IMPACTS

As smoking would be allowed in marked sections of restaurants, there are potentially significant secondhand tobacco smoke impacts, similar to those discussed for Alternative A. Indoor air pollutants may also not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation or proper public notice would constitute a significant effect to public health. Compliance with mitigation measures listed in **Section 5.2.3** will reduce effects of indoor air quality to a less than significant level for Alternative C.

FEDERAL AIR QUALITY CONFORMITY

Construction of Alternative C would result in the generation of ROG, NO_x, and PM_{10} emissions. **Table 4.4-1** presents an estimate of these construction-related emissions for Alternative C. Construction of Alternative C is estimated to result in:

- 6.56 tons per year of ROG,
- 15.92 tons per year of NO_x,
- 0.00 tons per year of SO_2,
- 0.69 tons per year of PM_{10}, and
- 0.69 tons per year of $PM_{2.5}$, emissions.

Operation of Alternative C would also result in the generation of ROG, NO_x, and PM_{10} emissions associated with motor vehicle travel. **Table 4.4-3** presents an estimate of these operational emissions for Alternative C. Operation of Alternative C is estimated to result in:

- 29.13 tons per year of ROG,
- 46.04 tons per year of NO_x,
- 0.27 tons per year of SO_2,
- 43.11 tons per year of PM_{10}, and
- 42.77 tons per year of $PM_{2.5}$, emissions.

As shown in **Table 4.4-1** and **Table 4.4-3,** emissions associated with Alternative C would be less than the General Conformity Rule *de minimis* thresholds. Therefore, consistent with 40 CFR §51.583, Alternative C would conform with the SIP and a conformity determination is not required.

4.4.5 ALTERNATIVE D – NORTH FORK LOCATION

This section of the EIS presents a description of effects related to Alternative D. The methodology and significance thresholds used to assess the air quality effects are described under Alternative A above. Implementation of Alternative D would result in short-term construction-related effects, and effects related to operation of the project. The following is a description of these effects.

CONSTRUCTION-RELATED IMPACTS

Alternative D would result in new construction activity, which would generate air pollutant emissions, determined by the SJVAPCD to be primarily PM_{10}. The primary source of PM_{10} would be entrainment of fugitive dust from land clearing, earth moving, and wind erosion of exposed soil.

Consistent with the approach presented in the GAMAQI document, the generation of construction-related emissions is considered a short-term significant impact. This impact would be reduced to a less than significant level after implementation of mitigation measures listed in **Section 5.2.3** of this document.

OPERATION-RELATED IMPACTS

Operation of Alternative D would result in the generation of ROG and NO_x, emissions. **Table 4.4-2** presents an estimate of these operational emissions for Alternative D. Operation of Alternative D is estimated to result in:

- 3.43 tons per year of ROG emissions, and
- 5.46 tons per year of NO_x emissions.

Both ROG and NO_x emissions would be less than the 10 tons per year significance thresholds, and would be a less than significant effect. No mitigation measures would be necessary.

Carbon Monoxide Hot Spot Impacts

As described in the traffic study of the project alternatives, traffic operations at signalized study intersections would be LOS D or better under 2008 background conditions with Alternative D and traffic mitigation measures. Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al. 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or Federal standards. This impact is significant due to intersections operating above LOS D prior to mitigation. With the implementation of traffic mitigation listed in **Section 5.2.7**, this impact would be reduced to a less than significant level.

ODOR IMPACTS

A discussion of odor impacts is presented in **Section 4.4.2**. There are no existing odor generators that might impact Alternative D and Alternative D itself would not contribute odors to the region. The Alternative D WWTP would use MBR technology and would be fully enclosed. Unlike common open pond WWTPs, the MBR process does not produce odors. MBR WWTPs have been used and numerous sites with no odor complaints. However, even a MBR WWTP, if not properly operated, could represent a source of odors that could represent a nuisance and potentially significant impact to the nearby residences. Application of odor mitigation measures will reduce the potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

TOXIC AIR CONTAMINANTS IMPACTS

The gaming facility under Alternative D would not itself contribute or generate toxic air contaminants. However, bus and diesel truck travel to and from the gaming facility, especially loading areas, would result in an increased concentration of diesel emissions in those areas, a potentially significant effect. Application of mitigation measures associated with loading docks would reduce potential effects to a less than significant level. Mitigation measures are listed in **Section 5.2.3** of this EIS.

Possible future commercial or industrial development could affect Alternative D by creating air toxics. However, because of the project area's rural character and relevant land use regulations, it is unlikely that toxic air contaminant emitting sources would locate near the project site. Any future facilities in the area would be required to meet federal, state, and local standards associated with the handling of hazardous materials, and therefore no significant impacts to patrons or employees of the proposed casino/hotel resort are anticipated.

Emergency generators would be kept onsite but their use during infrequent, random or programmed local or regional power outages would result in limited and temporary emissions. Thus, a less than significant impact would result.

ASBESTOS IMPACTS

Existing North Fork site structures would not be demolished under Alternative D. Therefore, no airborne asbestos fibers from structure demolition would result.

The North Fork site is located in a candidate area for Naturally Occurring Asbestos (NOA), which has been identified as a toxic air contaminant by the California Air Resources Board (CARB). The possible presence of NOA on the North Fork site represents a potentially significant impact to construction workers and residents in the area should NOA be released during construction. Mitigation measures in **Section 5.2.3** would reduce this impact to a less than significant level.

FEDERAL CLASS I AREAS IMPACTS

Yosemite National Park, Sequoia/Kings Canyon National Park, the Ansel Adams Wilderness Area, the Kaiser Wilderness Area, and the John Muir Wilderness Area are the only federal Class I areas within 100 kilometers of the North Fork site. Analysis of operational emissions associated with Alternative D, presented in **Table 4.4-3**, show that Alternative D does not constitute a "major source" under PSD definitions and therefore does not trigger need for preconstruction review and assessment of impacts. Thus, a less than significant effect to Class I areas would result.

INDOOR AIR QUALITY IMPACTS

The operation of Alternatives D would be in compliance with indoor air quality requirements, including environmental tobacco smoke (ETS). Ventilation is a standard engineering approach to assuring good indoor air quality and comfort. Adequate and effective ventilation, and ducting of exhaust from combustion appliances, are necessary for acceptable indoor air quality, even when known air contaminants are minimized. Even though industry and professional guidelines may vary in their degree of indoor air quality protection, they are widely used and generally have helped reduce some indoor pollutants over the years. Indoor air pollutants may also not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation or proper public notice would constitute a significant effect to public health. Compliance with mitigation measures listed in **Section 5.2.3** of this document will reduce effects of indoor air quality to a less than significant level for Alternative D.

FEDERAL AIR QUALITY CONFORMITY

Construction of Alternative D would result in the generation of ROG, NO_x, and PM_{10} emissions. **Table 4.4-1** presents an estimate of these construction-related emissions for Alternative D. Construction of Alternative D is estimated to result in:

- 0.76 tons per year of ROG,
- 2.03 tons per year of NO_x,
- 0.00 tons per year of SO_2,
- 0.08 tons per year of PM_{10}, and
- 0.08 tons per year of $PM_{2.5}$, emissions.

Operation of Alternative D would also result in the generation of ROG, NO_x, and PM_{10} emissions associated with motor vehicle travel. **Table 4.4-3** presents an estimate of these operational emissions for Alternative D. Operation of Alternative D is estimated to result in:

- 3.43 tons per year of ROG,
- 5.46 tons per year of NO_x,
- 0.03 tons per year of SO_2,
- 5.21 tons per year of PM_{10}, and
- 5.17 tons per year of $PM_{2.5}$, emissions.

The emissions in **Table 4.4-1** and **Table 4.4-3** are considered separately because the construction phase of Alternative D would not overlap with the operational phase of Alternative D.

As shown in **Table 4.4-1** and **Table 4.4-3,** emissions associated with Alternative D would be less than the General Conformity Rule *de minimis* thresholds. Therefore, consistent with 40 CFR §51.583, Alternative D would conform with the SIP and a conformity determination is not required.

4.4.6 ALTERNATIVE E – NO ACTION

This section of the EIS presents a description of effects related to the No Action Alternative. Implementation of the No Action Alternative would result in no short-term construction-related effects, and no effects related to operation of new facilities. Existing effects resulting from existing development and activity on the Madera and North Fork sites would continue under the No Action Alternative.

CONSTRUCTION-RELATED IMPACTS

The No Action Alternative would not result in construction activity. Therefore, this alternative would not result in the generation of emissions associated with construction.

OPERATION-RELATED IMPACTS

The No Action Alternative would not result in the generation of additional operational emissions. Emissions associated with existing residential and agricultural activity would continue. These emissions are minimal and would therefore not constitute a significant effect.

Carbon Monoxide Hot Spot Impacts

Based on criteria presented in the University of California Davis Institute of Transportation Studies document *Transportation Project-Level Carbon Monoxide Protocol* (Garza, et al. 1997), intersections operating at LOS D or better typically do not result in CO concentrations that exceed State or Federal standards. The No Action Alternative would result in baseline CO concentrations. As described in the **Section 3.8**, three signalized study intersections in the vicinity of the Madera site and one signalized study intersection in the vicinity of the Madera site would operate at LOS E or worse under the No Action Alternative. This impact is significant due to intersections operating above LOS D prior to mitigation. With the implementation of traffic mitigation listed in **Section 5.2.7**, this impact would be reduced to a less than significant level.

ODOR IMPACTS

Given that no new development would occur, the No Action Alternative would not result in the generation of odors.

TOXIC AIR CONTAMINANTS IMPACTS

Given that no new development would occur, the No Action Alternative would not result in the generation of toxic air contaminants. Existing diesel emissions from agricultural operations on the Madera site would continue under the No Action Alternative. However, these emissions would be temporary and relatively infrequent resulting in a less than significant effect.

ASBESTOS IMPACTS

No new development or ground disturbance would occur under Alternative E. Existing ground disturbance associated with agricultural activities would continue on the Madera site. However, given than the Madera site is not located in an area where NOA is expected to occur, a less than significant effect from asbestos emissions would occur under the No Action Alternative.

FEDERAL CLASS I AREAS IMPACTS

Given that no new development would occur and existing emissions associated with residential and agricultural activities on the Madera and North Fork sites does not rise to the level of a "major source," the No Action Alternative would not result in significant impacts to federal Class I areas.

INDOOR AIR QUALITY IMPACTS

Given that no new development would occur, the No Action Alternative would not result in the generation of indoor air quality impacts.

FEDERAL AIR QUALITY CONFORMITY

The No Action Alternative would not result in the generation of additional criteria pollutant emissions subject to the federal conformity regulations.