4.4 AIR QUALITY

This section identifies the impacts to air quality that would result from the development of each alternative described in **Section 2.0**. Impacts are measured against the environmental baseline presented in **Section 3.4**. Indirect and growth and cumulative impacts are identified in **Section 4.14** and **Section 4.15**, respectively. Air Quality mitigation measures are presented in **Section 5.2.3**.

GENERAL CONFORMITY

The United States Environmental Protection Agency (USEPA) promulgated the General Conformity Rule on November 30, 1993, to implement the conformity provision of Title I, Section 176 (c)(1) of the Federal Clean Air Act (CAA), which requires that the federal government not engage, support, or provide financial assistance for licensing, permitting, or approving any activity not conforming to an approved State Implementation Plan (SIP). Consistent with the recommendation of the USEPA, compliance with the General Conformity Rule is considered in this EIS/EIR where applicable (where there is a federal action).

General Conformity Process

The conformity process involves two phases. The first phase is the conformity review process, which evaluates whether the conformity regulations would apply to the federal action (i.e. whether a determination is warranted). The second phase is the conformity determination process, which demonstrates how a federal action conforms to the applicable SIP.

Conformity Review

The purpose of a conformity review is to evaluate whether the conformity determination requirements would apply to a federal action under 40 CFR 93.153. There are four steps in the review process, of which the first three can be performed in any order. The four steps are shown below:

- Determine whether the proposed action causes emissions of criteria air pollutants (CAP).
- Determine whether the emissions of a criteria pollutant or its precursor (i.e. nitrogen oxides [NOx] and reactive organic gases [ROG] for ozone [O_3]) would occur in a non-attainment or maintenance area for that CAP.
- Determine whether the federal action is exempt from the conformity requirement as per 40 CFR 93.153 (c)(2)-(e).
- Estimate the total emissions of the pollutants of concern from the proposed action and compare the estimates to the *conformity threshold* of 40 CFR 93.153 (b)(1) and (2) and to the non-attainment or maintenance area's emissions inventory for each CAP.

If the proposed action and alternatives do not emit pollutants, are exempt under 40 CFR 93.153 (c)(2)-(e), or if the affected air basin is in attainment for all criteria pollutants, no further action is necessary.

Otherwise, the proposed action's estimated emissions must be compared to the *conformity threshold*s set forth in 40 CFR 93.153 (b)(1) and (2). If the emissions are greater than or equal to the *conformity threshold*, a conformity determination must be performed.

Conformity Determination

The purpose of the conformity determination, if needed, is to show if a proposed action conforms to the applicable SIP. Any one of the following three options can be used to establish conformity.

- The applicable SIP specifically includes an allowance for emissions of the proposed project.
- The proposed project purchases offset emission credits for the total direct and indirect emissions, which fully offset emissions within the same non-attainment or maintenance area so that there is no net increase in emissions.
- The SIP is changed to include the emissions budget of the proposed project.

SIGNIFICANCE CRITERIA

An air quality impact of a project alternative would be considered significant if it directly or indirectly:

1. Conflicts with or obstructs implementation of the applicable air quality plan;
2. Violates any air quality standard or contributes substantially to an existing or projected air quality violation;
3. Results in a cumulatively considerable net increase in any criteria air pollutants (CAPs) for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
4. Exposes sensitive receptors to substantial pollutant concentrations; and/or
5. Creates objectionable odors affecting a substantial number of people.

Construction emissions are considered to conform to California Environmental Quality Act (CEQA) Guidelines if appropriate mitigation measures, as outlined in the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines (1999), are implemented. Under the BAAQMD CEQA Guidelines operation emission thresholds are 15 tons per year (tpy) for the following pollutants: ROG, nitrogen oxides (NO_X), and particulate matter 10 microns in size (PM_{10}). If a project does not exceed these thresholds then the project is considered to conform to CEQA Guidelines 1, 2, 3, and 4. A project would conform to CEQA Guideline #5 if BAAQMD CEQA if the project does not emit odors or if a project that does emit odors is not near sensitive receptors.

ANALYSIS METHODOLOGY

Emissions resulting from the alternatives are analyzed in two distinct phases, construction and operation. Construction emissions are temporary in nature and do not overlap with operational emissions. During

the construction phase, pollutants of concern for the alternatives are NO_X, ROG, PM_{10}, and particulate matter 2.5 microns in size ($PM_{2.5}$).

During construction PM_{10} and $PM_{2.5}$ are primarily produced during mass and fine grading activities. NO_X, ROG, PM_{10}, and $PM_{2.5}$ are produced during the combustion of diesel and gasoline fuels by heavy-duty construction equipment and employee vehicles.

Operational emissions consist of area and vehicle emissions. Operational pollutants of concern are the same as construction, with the addition of carbon monoxide (CO), which is a localized pollutant and dissipates readily; therefore, CO is analyzed under "Hot Spot Analysis," which is discussed later in this section. Ferry emissions were estimated using emission factors from *Measurement of Air Pollutant Emissions from In-Service Passenger Ferries*, August, 2002. The emission factors were estimated through empirical data derived from ships operated by the Blue and Gold Fleet, San Francisco Bay Area.

Urban Emissions 2007 (URBEMIS) air quality modeling program was used to estimate emissions (**Appendix R**). URBEMIS is a California-specific computer model that estimates construction, area, mobile, and carbon dioxide (CO_2) emissions based on land uses. Both the California Air Resources Board (CARB) and the USEPA have approved the URBEMIS air modeling program for use in CEQA and National Environmental Policy Act (NEPA) (in California only) environmental document for air quality analyses. URBEMIS is the most recent version of the software, using the CARB; it uses current California and/or district-specific emission factors and emission reductions.

Construction

URBEMIS was used to estimate emissions from all construction-related sources of the project alternatives. URBEMIS modeling was performed with the assumption that construction would begin in June 2009 and continue at an average of 22 days per month for 36 months. Emissions results from URBEMIS are presented below and output files are provided in **Appendix R**.

URBEMIS provides default values for input where site-specific inputs are not available. Site-specific and default inputs are provided in **Appendix R**. Emissions associated with construction are compared to applicable general conformity *de minimis* levels and BAAQMD significance thresholds to evaluate the effects of construction activities on air quality.

Diesel Particulate Matter

Diesel particulate matter (DPM) is of concern during the construction phase of the Proposed Project. Construction would include grading, soil hauling, demolition, and building activities. These activities utilize heavy equipment, which use diesel fuel and emit DPM. The land surrounding the project site is primarily industrial (Chevron Richmond Refinery, Dutra Quarry, see **Section 3.9**), with limited recreation facilities (San Pablo Yacht Harbor). The nearest sensitive receptors to the project site are the athletic

fields and sporting facilities located 2,110 feet east of the project site on Richmond Lane, which is shielded from the project site by Potrero Ridge, which is roughly 400 feet high. DPM generally dissipates to 9 percent of its original concentration within 500 feet of the source. Due to the distance of the nearest sensitive receptor, topography, and the dissipation rate of DPM emitted during construction, none of the alternatives would expose sensitive receptors to substantial concentrations of DPM. Emission of DPM is a *less-than-significant* impact for all alternatives.

Operation

URBEMIS was used to estimate emissions associated with near- and long-term operation of the project alternatives. Input values for the model included URBEMIS defaults and the trip generation rates and trip reductions derived from the traffic impact analyses (TIA) provided by DMJH Harris/AECOM and supplemental TIA (STIA) by Abrams and Associates (**Appendix S**).

Consistent with the approach applied in the traffic analyses, the operational effects to air quality were analyzed for both near-term 2011 conditions and cumulative long-term 2025 conditions. Cumulative emissions were estimated using URBEMIS, with an operation year of 2025, refer to **Section 4.15** for 2025 analyses. Emissions associated with operation are compared to the applicable general conformity *de minimis* levels and BAAQMD significance thresholds to evaluate the effects of construction and operational activities on air quality.

Mitigation measures outlined in **Section 5.2.3** would be implemented to reduce operational criteria pollutants. Reductions are based on the BAAQMD CEQA Guidelines, 1999 and the Sacramento Municipal Air Quality Districts (SMAQMD) Recommended Guidance for Land Use Emission Reductions, 2007. Both documents provide a quantitative percent reduction for the implementation of recommended mitigation. All applicable mitigation measures were implemented.

Carbon Monoxide Hot Spot Analysis

Implementation of the alternatives would result in emissions of CO. Because CO disperses rapidly with increased distance from the source, emissions of CO are considered localized pollutants of concern rather than regional pollutants, and can be evaluated with Hot Spot analysis, in accordance with the *Transportation Project-Level Carbon Monoxide Protocol* (UC Davis, 1997). Hot Spot Analysis is conducted on intersections that after mitigation would have a level of service (LOS) of E or F (UC Davis, 1997). No intersections within the study area would operate at an LOS, after recommended mitigation, which would warrant Hot Spot Analysis (**Appendix S**). Therefore, no further analysis is needed.

Odors

Under the BAAQMD, CEQA Guidelines significance is determined in two steps; first does the project produce odors and second are there receptors close to the odor source. None of the alternatives would

produce odors and there are no receptors within 0.75 miles of the project site. Therefore, no further analysis is needed.

Indoor Air Quality Impacts

Environmental tobacco smoke (ETS), also known as second-hand smoke, is a complex mixture of chemicals generated during the burning and smoking of tobacco products to which non-smokers are exposed. On January 26, 2006, the CARB identified ETS as a Toxic Air Contaminant (TAC). ETS is now formally identified as an airborne toxic substance. Since smoking would be permitted in some indoors project components, patrons and employees of these components could be exposed to TAC from tobacco use. Although the harmful effects of ETS are widely known, it is possible that some employees or patrons would be unknowingly exposed to ETS without realizing its harmful effects. Such exposure to ETS would be a potentially significant effect.

Other indoor pollution sources that release gases or particles into the air can be the cause of indoor air quality problems in buildings. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the building. 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. Natural ventilation, through open windows and doors, is the primary ventilation route for residences, while mechanical ventilation, using heating, ventilation, and air conditioning (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.

While there are no federal or California 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. Such guidelines would be evaluated at the time that detailed plans and specifications are prepared for the HVAC system.

Climate Change

Climate change is a global phenomenon attributable to the sum of all human activities and natural processes. The Governor's Office of Planning and Research (OPR) recently provided guidance on integrating analysis of greenhouse gasses (GHG) in CEQA documents (OPR, 2008). OPR recommends

quantification of GHG emissions, assessment of the significance of any impact on climate change (provided in **Section 4.15**), and, identification of mitigation or alternatives that would reduce the GHG emissions. The analysis presented in this EIS/EIR is consistent with the guidance provided to-date by OPR. As directed by the OPR technical advisory, this analysis considers whether project emissions are individually or cumulatively significant. Based on the Proposed Project's GHG emissions (see **Section 4.15**), it was determined that specific climate change impacts could not be attributed to the proposed development. As such, project impacts are most appropriately addressed in terms of the incremental contribution to a global cumulative impact. This approach is consistent with the view articulated in the following quote provided in the *Intergovernmental Panel on Climate* (IPCC) *Change Fourth Assessment Report* (IPCC, 2007). According to the IPCC, "difficulties remain in attributing temperature on smaller than continental scales and over time scales of less than 50 years. Attribution at these scales, with limited exceptions, has not yet been established (IPCC, 2007)." For a discussion and analysis of cumulative impacts related to climate change, refer to **Section 4.15**.

4.4.1 ALTERNATIVE A – MIXED-USE TRIBAL DESTINATION RESORT AND CASINO

IMPACTS OF ALTERNATIVE A

4.4.1 Construction and operation of the proposed development under Alternative A would result in ROG, NO_X, and PM_{10} emissions. This is a potentially significant impact.

Significance After Mitigation

With the implementation of **Mitigation Measures 3-1** through **3-15** construction impacts would be reduced to *less-than-significant* levels. Implementation of **Mitigation Measures 3-17** and **3-18** would reduce ROG, NO_X, and PM_{10} emissions by 28 percent under the BAAQMD and SMAQMD guidelines. **Mitigation Measure 3-19** would further reduce ROG, NO_X, and PM_{10} emissions below the BAAQMD CEQA threshold; therefore, air quality impacts due to operation of the Proposed Project would be *less-than-significant*. **Mitigation Measures 3-16** and **3-20** through **3-25** would further reduce criteria pollutant emissions.

Impact Discussion: Construction

Construction of Alternative A would result in the generation of ROG and NO_X emissions. Construction emission estimations are based on outputs of URBEMIS air model (**Appendix R**). **Table 4.4-1** presents an estimate of these construction-related emissions for Alternative A.

Construction Conformity Review

Alternative A emits pollutants, is not exempt from conformity, and is located within a nonattainment area for O_3; therefore, the estimated emissions must be compared to *conformity threshold*s pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]).

The construction year with the maximum emissions is compared to the applicable conformity thresholds. As shown in **Table 4.4-1** the maximum yearly construction emissions do not exceed conformity thresholds and are considered to conform to General Conformity Rules and applicable SIP.

TABLE 4.4-1
MITIGATED (UNMITIGATED) CONSTRUCTION EMISSIONS – ALTERNATIVE A

Construction Year	ROG	NOx	PM10	PM2.5
	tpy	tpy	tpy	tpy
2009	3.55 (3.55)	61.22 (61.63)	3.5. (19.86)	2.19 (5.69)
2010	3.67 (3.67)	56.77 (57.30)	4.01 (29.69)	2.17 (7.65)
2011	5.81 (9.13)	6.60 (6.60)	0.43 (0.43)	0.33 (0.33)
2012	1.83 (4.79)	2.30 (2.42)	0.12 (0.18)	0.09 (0.15)
Maximum Year Emissions	5.81 (9.13)	61.22 (61.63)	4.01 (29.69)	2.19 (7.65)
Conformity Threshold	*100*	*100*	*N/A*	*N/A*
Exceeds Conformity Threshold	**No (No)**	**No (No)**	**N/A**	**N/A**
BAAQMD Threshold	*N/A*	*N/A*	*N/A*	*N/A*
Exceeds BAAQMD Threshold	**N/A**	**N/A**	**N/A**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable
Source: URBEMIS, 2007.

Construction CEQA Analyses

The BAAQMD CEQA guidelines for construction emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. Therefore, appropriate BAAQMD CEQA mitigation measures are shown in **Section 5.2.3**, which if implemented would result in a *less-than-significant* impact.

Impact Discussion: Operation

Trip Generation Rates and Trip Distribution

Trip generation rates and trip distribution for Alternative A used for URBEMIS 2007 modeling is provided in the STIA included as **Appendix S**. Under Alternative A, a 15 percent trip reduction was used for Transportation Demand Management pass-by, and Ferry service (STIA provided as **Appendix S**). Pass-by trips for retail were estimated at 28.3 percent. While too many variables exist to make a reasonably foreseeable assumption of reduced trips, it is anticipated that operation of Alternative A would result in fewer long distance automobile trips to gaming facilities located

outside of the Bay Area given that the proposed casino would be more conveniently located to those living in the Bay Area.

Operational Emissions

Area and vehicle ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from the operation of Alternative A were estimated using URBEMIS 2007. **Table 4.4-2** shows area and mobile source emissions from the operation of Alternative A.

TABLE 4.4-2
MITIGATED (UNMITIGATED) OPERATION EMISSIONS – ALTERNATIVE A

Sources	ROG	NOx	PM_{10}	$PM_{2.5}$
	tpy	tpy	tpy	tpy
Area	1.31 (1.47)	2.03 (2.53)	0.00 (0.00)	0.00 (0.00)
Mobile	36.99 (37.82)	57.50 (58.93)	92.11 (94.41)	17.51 (17.95)
Ferry Trips	0.44	10.73	0.13	0.04[1]
Total Emissions	**38.74 (39.73)**	**70.26 (72.19)**	**92.24 (94.54)**	**17.55 (17.99)**
Conformity Threshold	*100*	*100*	*N/A*	*N/A*
Exceeds Conformity Threshold	**No (No)**	**No (No)**	**N/A**	**N/A**
BAAQMD Threshold	*15*	*15*	*15*	*N/A*
Exceeds BAAQMD Threshold	**Yes (Yes)**	**Yes (Yes)**	**Yes (Yes)**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable

[1] $PM_{2.5}$ emissions estimated as 33% of PM_{10} emissions.

Source: URBEMIS, 2007.

Operation Conformity Review

Table 4.4-2 compares the operational emissions with the applicable conformity thresholds and shows that ROG and NO_X emissions generated from the operation of Alternative A are below conformity thresholds; thus, the Alternative A is considered to conform to the General Conformity Rule and applicable SIP. The SFBAAB is in attainment for PM_{10} and $PM_{2.5}$; therefore, no conformity review is necessary.

Operation CEQA Analysis

As shown in **Table 4.4-2** ROG, NO_X and PM_{10} exceed the BAAQMD CEQA guidelines; therefore, the project would not conform to the CEQA significance criteria. This would be a *potentially significant* impact. Mitigation measures are provided in **Section 5.2.3**, which would reduce criteria pollutants.

4.4.2 Demolition activities during the construction phase of the proposed development under Alternative A have the potential to release friable asbestos materials. This is a less-than-significant impact.

Construction of Alternative A would entail the demolition of some existing buildings at the project site. Buildings can potentially include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not used when the material is disturbed. As noted in **Section 3.4**, demolition activities associated with Alternative A would be subject to National Emissions Standard for Hazardous Air Pollutants (NESHAP). Strict compliance with NESHAP and the Occupational Safety and Health Administration (OSHA) procedures would result in *less-than-significant* levels of construction-related asbestos emissions.

4.4.3 Operation under Alternative A has the potential to concentrate pollutants and create odors indoors. This is a potentially significant impact.

Significance After Mitigation

With the implementation of **Mitigation Measures 3-45** through **3-53** indoor air quality impacts would be reduced to *less-than-significant* levels.

Impact Discussion

Indoor air pollutants may not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence and potential health effects of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation and appropriate public notice would therefore constitute a significant impact to public health. Implementation of mitigation measures provided in **Section 5.2.3** would reduce concentration of indoor pollutants and odors and allow those employees and patrons advanced notice so as to avoid exposure to ETS.

4.4.2 ALTERNATIVE B – MIXED-USE TRIBAL DESTINATION RESORT AND CASINO WITH RESIDENTIAL COMPONENT

IMPACTS OF ALTERNATIVE B

4.4.4 Construction and operation of the proposed development under Alternative B would result in ROG, NO_X, and PM_{10} emissions. This is a potentially significant impact.

Significance After Mitigation

With the implementation of **Mitigation Measures 3-1** through **3-15** construction impacts would be reduced to *less-than-significant* levels. Implementation of **Mitigation Measures 3-17** and **3-**

18 would reduce ROG, NO_X, and PM_{10} emissions by 34 percent under the BAAQMD and SMAQMD guidelines. **Mitigation Measure 3-19** would further reduce ROG, NO_X, and PM_{10} emissions below BAAQMD CEQA threshold; therefore, this would be a *less-than-significant* impact. **Mitigation Measures 3-16** and **3-20** through **3-25** would further reduce criteria pollutant emissions.

Impact Discussion: Construction

Construction of Alternative B would result in the generation of ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions. Construction emission estimations are based on outputs of URBEMIS air model (**Appendix R**). **Table 4.4-3** presents an estimate of these construction-related emissions for Alternative B.

TABLE 4.4-3
MITIGATED (UNMITIGATED) CONSTRUCTION EMISSIONS – ALTERNATIVE B

Construction Year	ROG	NOx	PM10	PM2.5
	tpy	tpy	tpy	tpy
2009	3.55 (3.55)	61.22 (61.63)	4.02 (26.89)	2.29 (7.16)
2010	3.75 (3.75)	57.45 (57.97)	4.81 (40.81)	2.36 (9.99)
2011	7.66 (12.13)	8.99 (8.99)	0.55 (0.55)	0.42 (0.42)
2012	2.38 (6.35)	2.87 (2.99)	0.15 (0.21)	0.11 (0.17)
Maximum Year Emissions	7.66 (12.13)	61.22 (61.63)	4.81 (40.81)	2.36 (9.99)
Conformity Threshold	*100*	*100*	*N/A*	*N/A*
Exceeds Conformity Threshold	**No (No)**	**No (No)**	**N/A**	**N/A**
BAAQMD Threshold	*N/A*	*N/A*	*N/A*	*N/A*
Exceeds BAAQMD Threshold	**N/A**	**N/A**	**N/A**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable
Source: URBEMIS, 2007.

Construction Conformity Review

Alternative B emits pollutants, is not exempt from conformity, and is located within a nonattainment area for O_3; therefore, the estimated emissions must be compared to *de minimis* thresholds pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]).

The construction year with the maximum emissions is compared to the applicable conformity thresholds. As shown in **Table 4.4-3** the maximum yearly construction emissions do not exceed

de minimis thresholds and are considered to conform to the applicable SIP.

Construction CEQA Analysis

The BAAQMD CEQA guidelines for construction emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. Therefore, appropriate BAAQMD CEQA mitigation measures are shown in **Section 5.2.3** as proposed improvement measures, which if implemented would result in a *less-than-significant* impact.

Impact Discussion: Operation

Trip Generation Rates and Trip Distribution

Trip generation rates and trip distribution for Alternative B used for URBEMIS 2007 modeling is provided in the TIA included as **Appendix S**. Under Alternative B, a 15 percent trip reduction was used for Transportation Demand Management pass-by, and Ferry service (STIA provided as **Appendix S**). Pass-by for retail was estimated at 28 percent. As with Alternative A, operation of Alternative B is expected to result in fewer long distance automobile trips to gaming facilities located outside of the Bay Area.

Operational Emissions

Area and vehicle ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from the operation of Alternative B were estimated using URBEMIS. **Table 4.4-4** shows area and mobile source emissions from the operation of Alternative B.

TABLE 4.4-4
MITIGATED (UNMITIGATED) OPERATION EMISSIONS – ALTERNATIVE B

Sources	ROG	NOx	PM_{10}	$PM_{2.5}$
	tpy	tpy	tpy	tpy
Area	4.82 (5.00)	2.65 (3.32)	0.01 (0.01)	0.01 (0.01)
Mobile	39.38 (40.49)	59.55 (61.43)	95.01 (97.98)	18.07 (18.62)
Ferry Trips	0.44	10.73	0.13	0.04[1]
Total Emissions	**44.64 (45.93)**	**72.93 (75.48)**	**95.14 (98.11)**	**18.12 (18.67)**
Conformity Threshold	*100*	*100*	*N/A*	*N/A*
Exceeds Conformity Threshold	**No (No)**	**No (No)**	**N/A**	**N/A**
BAAQMD Threshold	*15*	*15*	*15*	*N/A*
Exceeds BAAQMD Threshold	**Yes (Yes)**	**Yes (Yes)**	**Yes (Yes)**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable

[1] $PM_{2.5}$ emission estimated as 33 percent of PM_{10} emissions.

Source: URBEMIS, 2007.

Operation Conformity Review

Table 4.4-4 compares the operational emissions with the applicable conformity thresholds and shows that ROG and NO_X emissions generated from the operation of Alternative B are below conformity thresholds; thus, the Alternative B is considered to conform to the General Conformity Rule and applicable SIP. The SFBAAB is in attainment for PM_{10} and $PM_{2.5}$; therefore, no conformity review is necessary.

Operation CEQA Analysis

As shown in **Table 4.4-4** ROG, NO_X and PM_{10} exceed the BAAQMD CEQA guidelines; therefore, the project would not conform to the CEQA significance criteria. This would be a potentially significant impact. Mitigation measures are provided in **Section 5.2.3**, which would reduce criteria pollutants to *less-than-significant* levels.

4.4.5 Demolition activities during construction phase of the proposed development under Alternative B have the potential to release friable asbestos materials. This is a less-than-significant impact.

Construction of Alternative B would entail the demolition of some existing buildings at the project site. Buildings can potentially include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not used when the material is disturbed. As noted in **Section 3.4**, demolition activities associated with Alternative B would be subject to NESHAP. Strict compliance with NESHAP would result in *less-than-significant* levels of construction-related asbestos emissions.

4.4.6 Operation under Alternative B has the potential to concentrate pollutants and create odors indoors. This is a potentially significant impact.

Significance After Mitigation

With the implementation of **Mitigation Measures 3-45** through **3-53** indoor air quality impacts would be reduced to *less-than-significant* levels.

Impact Discussion

Indoor air pollutants may not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence and potential health effects of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation and appropriate public notice would therefore constitute a significant impact to public health. Implementation of mitigation measures provided in **Section 5.2.3** would reduce

concentration of indoor pollutants and odors and allow those employees and patrons advanced notice so as to avoid exposure to ETS.

4.4.3 ALTERNATIVE C – REDUCED INTENSITY MIXED-USE TRIBAL DESTINATION RESORT AND CASINO

IMPACTS OF ALTERNATIVE C

4.4.7 Construction and operation of the proposed development under Alternative C would result in ROG, NO_X, and PM_{10} emissions. This is a potentially significant impact.

Significance After Mitigation

With the implementation of **Mitigation Measures 3-1** through **3-15** construction impacts would be reduced to *less-than-significant* levels. Implementation of **Mitigation Measures 3-17** and **3-18** would reduce ROG, NO_X, and PM_{10} emissions by 28 percent under the BAAQMD and SMAQMD guidelines. **Mitigation Measure 3-19** would further reduce ROG, NO_X, and PM_{10} emissions below BAAQMD CEQA threshold; therefore, this would be a *less-than-significant* impact. **Mitigation Measures 3-16** and **3-20** through **3-25** would further reduce criteria pollutant emissions.

Impact Discussion: Construction

Construction of Alternative C would result in the generation of ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions. Construction emission estimations are based on outputs of URBEMIS air model (**Appendix R**). **Table 4.4-5** presents an estimate of these construction-related emissions for Alternative C.

TABLE 4.4-5
MITIGATED (UNMITIGATED) CONSTRUCTION EMISSIONS – ALTERNATIVE C

Construction Year	ROG	NOx	PM10	PM2.5
	tpy	tpy	tpy	tpy
2009	3.55 (3.55)	61.22 (61.63)	2.87 (10.34)	2.05 (3.70)
2010	3.58 (3.58)	56.17 (56.69)	2.93 (14.66)	1.93 (4.49)
2011	2.93 (4.44)	4.43 (4.43)	0.30 (0.30)	0.24 (0.24)
2012	0.96 (2.30)	1.68 (1.78)	0.08 (0.13)	0.07 (0.11)
Maximum Year Emissions	**3.58 (4.44)**	**61.22 (61.63)**	**2.93 (14.66)**	**2.05 (4.49)**
Conformity Threshold	*100*	*100*	*N/A*	*N/A*
Exceeds Conformity Threshold	**No (No)**	**No (No)**	**N/A**	**N/A**
BAAQMD Threshold	*N/A*	*N/A*	*N/A*	*N/A*
Exceeds BAAQMD Threshold	**N/A**	**N/A**	**N/A**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable

Source: URBEMIS, 2007.

Construction Conformity Review

Alternative C emits pollutants, is not exempt from conformity, and is located within a nonattainment area for O_3; therefore, the estimated emissions must be compared to *de minimis* thresholds pursuant to the CAA General Conformity Rule (40 CFR Section 93.153 [b][1] and [2]).

The construction year with the maximum emissions is compared to the applicable conformity thresholds. As shown in **Table 4.4-5** the maximum yearly construction emissions do not exceed *de minimis* thresholds and are considered to conform to the applicable SIP.

Construction CEQA Analysis

The BAAQMD CEQA guidelines for construction emphasize implementation of effective and comprehensive control measures rather than detailed quantification of emissions. Therefore, appropriate BAAQMD CEQA mitigation measures are shown as improvement measures in **Section 5.2.3**, which if implemented would result in a *less-than-significant* impact.

Impact Discussion: Operation

Trip Generation Rates and Trip Distribution

Trip generation rates and trip distribution for Alternative C used for URBEMIS 2007 modeling is provided in the TIA included as **Appendix S**. Under Alternative C, a 15 percent trip reduction was used for Transportation Demand Management pass-by, and Ferry service (STIA provided as **Appendix S**). Pass-by for retail was estimated at 62 percent. As with Alternative A, operation of Alternative C is expected to result in fewer long distance automobile trips to gaming facilities located outside of the Bay Area, although this effect cannot be confidently quantified.

Operational Emissions

Area and vehicle ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from the operation of Alternative C were estimated using URBEMIS. **Table 4.4-6** shows area and mobile source emissions from the operation of Alternative C.

Operation Conformity Review

Table 4.4-6 compares the operational emissions with the applicable conformity thresholds and shows that ROG and NO_X emissions generated from the operation of Alternative C are below conformity thresholds; thus, the Alternative C is considered to conform to the General Conformity Rule and applicable SIP. The SFBAAB is in attainment for PM_{10} and $PM_{2.5}$; therefore, no conformity review is necessary.

TABLE 4.4-6
MITIGATED (UNMITIGATED) OPERATION EMISSIONS – ALTERNATIVE C

Sources	ROG	NOx	PM_{10}	$PM_{2.5}$
	tpy	tpy	tpy	tpy
Area	0.62 (0.69)	0.82 (1.02)	0.00 (0.00)	0.00 (0.00)
Mobile	21.40 (21.89)	34.04 (34.90)	54.52 (55.88)	10.36 (10.62)
Ferry Trips	0.44	10.73	0.13	0.04[1]
Total Emissions	**22.46 (23.02)**	**45.59 (46.65)**	**54.65 (56.01)**	**10.40 (10.66)**
Conformity Threshold	*100*	*100*	*N/A*	*N/A*
Exceeds Conformity Threshold	**No (No)**	**No (No)**	**N/A**	**N/A**
BAAQMD Threshold	*15*	*15*	*15*	*N/A*
Exceeds BAAQMD Threshold	**Yes (Yes)**	**Yes (Yes)**	**Yes (Yes)**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable

[1] $PM_{2.5}$ emissions estimated at 33 percent of PM_{10} emissions.

Source: URBEMIS, 2007.

Operation CEQA Analysis

As shown in **Table 4.4-6** ROG, NO_X and PM_{10} exceed the BAAQMD CEQA guidelines; therefore, the project would not conform to the CEQA significance criteria. This would be a potentially significant impact. Mitigation measures are provided in **Section 5.2.3**, which would reduce criteria pollutants to *less-than-significant* levels.

4.4.8 Demolition activities during construction phase of the proposed development under Alternative C have the potential to release friable asbestos materials. This is a less-than-significant impact.

Construction of Alternative C would entail the demolition of some existing buildings at the project site. Buildings can potentially include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not used when the material is disturbed. As noted in **Section 3.4**, demolition activities associated with Alternative C would be subject to NESHAP. Strict compliance with NESHAP would result in *less-than-significant* levels of construction-related asbestos emissions.

4.4.9 Operation under Alternative C has the potential to concentrate pollutants and create odors indoors. This is a potentially significant impact.

Significance After Mitigation

With the implementation of **Mitigation Measures 3-45** through **3-53** indoor air quality impacts would be reduced to *less-than-significant* levels.

Impact Discussion

Indoor air pollutants may not be immediately perceptible by employees or customers. People could decide to avoid exposure to indoor air pollutants if notified of the presence and potential health effects of these pollutants. Operation of the facility to allow indoor smoking without proper ventilation and appropriate public notice would therefore constitute a significant impact to public health. Implementation of mitigation measures provided in **Section 5.2.3** would reduce concentration of indoor pollutants and odors and allow those employees and patrons advanced notice so as to avoid exposure to ETS.

4.4.4 ALTERNATIVE D – NON-TRUST ACQUISITION WITH NON-GAMING MIXED- USE DEVELOPMENT

IMPACTS OF ALTERNATIVE D

4.4.10 Construction and operation of the proposed development under Alternative D would result in ROG, NO_X, and PM_{10} emissions. This is a potentially significant impact.

Significance after Mitigation

With the implementation of **Mitigation Measures 3-1** through **3-15** construction impacts would be reduced to *less-than-significant* levels. Implementation of **Mitigation Measures 3-17** and **3-18** would reduce ROG, NO_X, and PM_{10} emissions by 34 percent under the BAAQMD and SMAQMD guidelines. **Mitigation Measure 3-19** would further reduce ROG, NO_X, and PM_{10} emissions below BAAQMD CEQA threshold; therefore, this is considered a *less-than-significant* impact. **Mitigation Measures 3-16** and **3-20** through **3-25** would further reduce criteria pollutant emissions.

Impact Discussion: Construction

Construction of Alternative D would result in the generation of ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions. Construction emission estimations are based on outputs of URBEMIS air model (**Appendix R**). **Table 4.4-7** presents an estimate of these construction-related emissions for Alternative D.

TABLE 4.4-7
MITIGATED (UNMITIGATED) CONSTRUCTION EMISSIONS – ALTERNATIVE D

Construction Year	ROG	NOx	PM_{10}	$PM_{2.5}$
	tpy	tpy	tpy	tpy
2009	3.55 (3.55)	61.22 (61.63)	4.13 (28.41)	2.31 (7.47)
2010	3.78 (3.78)	58.05 (58.57)	5.00 (43.22)	2.41 (10.51)
2011	7.52 (11.81)	11.11 (11.11)	0.63 (0.63)	0.49 (0.49)
2012	2.33 (6.14)	3.35 (3.47)	0.16 (0.22)	0.13 (0.18)
Maximum Year Emissions	**7.52 (11.81)**	**61.22 (61.63)**	**5.00 (43.22)**	**2.41 (10.51)**
BAAQMD Threshold	*N/A*	*N/A*	*N/A*	*N/A*
Exceeds BAAQMD Threshold	**N/A**	**N/A**	**N/A**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable
Source: URBEMIS, 2007.

Construction Significance

Alternative D is not a federal action and therefore General Conformity does not apply. BAAQMD CEQA thresholds are used as significance criteria. Alternative D would implement the BAAQMD CEQA mitigation measures for construction activities. If the BAAQMD CEQA mitigation measures are implemented than under BAAQMD CEQA guidelines Alternative D would meet CEQA significance criteria. With the implementation of construction improvement measures proposed in **Section 5.2.3**, Alternative D construction emissions would be *less-than-significant.*

Impact Discussion: Operation

Trip Generation Rates and Trip Distribution

Trip generation rates and trip distribution for Alternative D used for URBEMIS 2007 modeling is provided in the TIA included as **Appendix S**. Under Alternative D, a 39 percent pass-by was estimated for both restaurant and retail services. Ferry service, provided under Alternative D would reduce trips by 25 percent.

Operational Emissions

Area and vehicle ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from the operation of Alternative D were estimated using URBEMIS 2007. **Table 4.4-8** shows area and mobile source emissions from the operation of Alternative D.

Operation CEQA Analysis

As shown in **Table 4.4-8** ROG, NO_X and PM_{10} exceed the BAAQMD CEQA guidelines; therefore, the project would not conform to the CEQA significance criteria. This would be a potentially significant impact. Mitigation measures are provided in **Section 5.2.3**, which would

reduce criteria pollutants to a *less-than-significant* level.

TABLE 4.4-8
MITIGATED (UNMITIGATED) OPERATION EMISSIONS – ALTERNATIVE D

Sources	ROG	NOx	PM_{10}	$PM_{2.5}$
	tpy	tpy	tpy	tpy
Area	11.62 (11.69)	2.40 (3.00)	0.00 (0.01)	0.00 (0.01)
Mobile	15.47 (15.64)	24.42 (24.68)	39.01 (39.42)	7.42 (7.51)
Ferry Trips	0.22	5.36	0.07	0.02[1]
Total Emissions	**27.31 (27.55)**	**32.18 (33.04)**	**39.08 (39.51)**	**7.44 (7.53)**
BAAQMD Threshold	*15*	*15*	*15*	*N/A*
Exceeds BAAQMD Threshold	**Yes (Yes)**	**Yes (Yes)**	**Yes (Yes)**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable

[1] $PM_{2.5}$ emissions estimated as 33 percent of PM_{10} emissions.

Source: URBEMIS, 2007.

4.4.11 Demolition activities during construction phase of the proposed development under Alternative D have the potential to release friable asbestos materials. This is a less-than-significant impact.

Construction of Alternative D would entail the demolition of some existing buildings at the project site. Buildings can potentially include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not used when the material is disturbed. As noted in **Section 3.4**, demolition activities associated with Alternative D would be subject to NESHAP. Strict compliance with NESHAP would result in *less-than-significant* levels of construction-related asbestos emissions.

4.4.5 ALTERNATIVE E – TOTAL PARKLAND

IMPACTS OF ALTERNATIVE E

4.4.12 Construction and operation of the proposed development under Alternative E would result in ROG, NO_X, and PM_{10} emissions. This is a less-than-significant impact.

Construction activities (renovation of historical buildings) of Alternative E would result in the generation of ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions. Construction emission estimations are based on outputs of URBEMIS air model (**Appendix R**). **Table 4.4-9** presents an estimate of the construction-related emissions for Alternative E.

TABLE 4.4-9
MITIGATED (UNMITIGATED) CONSTRUCTION EMISSIONS – ALTERNATIVE E

Construction Year	ROG	NOx	PM10	PM2.5
	tpy	tpy	tpy	tpy
2009	2.48 (2.48)	12.00 (12.36)	0.68 (0.76)	0.44 (0.52)
2010	1.62 (1.62)	7.79 (8.08)	0.46 (0.53)	0.22 (0.28)
Maximum Year Emissions	**2.48 (2.48)**	**12.00 (12.36)**	**0.68 (0.76)**	**0.44 (0.52)**
BAAQMD Threshold	*15*	*15*	*15*	*N/A*
Exceeds BAAQMD Threshold	**N/A**	**N/A**	**N/A**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable
Source: URBEMIS, 2007.

Construction CEQA Analysis

Construction activities for the most part do not include grading and earthmoving. A large part of the construction activities is due to the renovation of the historical building at the project site. Therefore, unlike Alternatives A through D, significance is not determined solely on the implementation of the BAAQMD CEQA guideline mitigation measures, thus, construction-related emissions are compared to the applicable BAAQMD CEQA thresholds to show that emissions would not violate any air quality plans or cause a violation of the NAAQS or CAAQS. As shown in **Table 4.4-9** emissions from construction of Alternative E are less than the BAAQMD CEQA thresholds. This is a *less-than-significant* impact.

Trip Generation Rates and Trip Distribution

Trip generation rates for Alternative E used for URBEMIS modeling were derived from the ITE manual and are assumed to be 638 trips per acre per day (see **Section 4.8)**. Trip distribution is outlined in the TIA (**Appendix S**).

Operational Emissions

Area and vehicle ROG, NO_X, PM_{10}, and $PM_{2.5}$ emissions from the operation of Alternative E were estimated using URBEMIS. **Table 4.4-10** shows mobile source emissions from the operation of Alternative E. In addition, Alterative E would not result in area source emissions.

Operation CEQA Analysis

As shown in **Table 4.4-10** ROG, NO_X and PM_{10} are below the BAAQMD CEQA thresholds; therefore, the project would conform to the CEQA significance criteria. This is a *less-than-significant* impact.

TABLE 4.4-10
MITIGATED (UNMITIGATED) OPERATION EMISSIONS – ALTERNATIVE E

Sources	ROG	NOx	PM10	PM2.5
	tpy	tpy	tpy	tpy
Mobile	1.50 (1.50)	2.14 (2.15)	2.85 (2.85)	0.54 (0.54)
BAAQMD Threshold	*15*	*15*	*15*	*N/A*
Exceeds BAAQMD Threshold	**No (No)**	**No (No)**	**No (No)**	**N/A**

Note: tpy = tons per year. N/A = Not Applicable
Source: URBEMIS, 2007.

4.4.13 Renovation activities under Alternative E have the potential to release friable asbestos materials. This is a less-than-significant impact.

Renovation activities under Alternative E would include historical buildings at the project site. These buildings could potentially include materials containing asbestos. Airborne asbestos fibers pose a serious health threat if adequate control techniques are not used when the material is disturbed. As noted in **Section 3.4**, renovation activities associated with Alternative E would be subject to NESHAP. Strict compliance with NESHAP would result in *less-than-significant* levels of construction-related asbestos emissions.

4.4.6 ALTERNATIVE F – NO ACTION

IMPACTS OF ALTERNATIVE F

4.4.14 Under Alternative F no construction or operation; therefore no criteria pollutants would be emitted. No impact to the existing setting would occur.

The No-Action Alternative would not result in any operation or construction activities. No generation of ROG, NO_X, SO_X, $PM_{2.5}$, or PM_{10} emissions would occur. There would be *no impact* to the existing setting.

4.4.15 Alternative F does not propose demolition activities; therefore, no release of friable asbestos materials would occur. No impact to the existing setting would occur.

No friable asbestos materials would be released under Alterative F, as no construction demolition would occur. *No impact* to the existing setting would occur.