3B. Air Quality

INTRODUCTION

The air quality impact analysis considers construction and operational impacts associated with the proposed project. Construction and operational emissions are estimated following standards provided in the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook.

SETTING

The proposed project site is located in the eastern portion of Los Angeles County in the City of San Dimas. The proposed project site is located within the jurisdictional boundaries of the SCAQMD, within the South Coast Air Basin (SCAB). The SCAB encompasses 6,745 miles and includes some portions of San Bernardino, Riverside, Los Angeles, and Orange Counties. The SCAQMD stretches from the Pacific Ocean in the west, to the Angeles National Forest to the north, Orange County to the south, and Riverside and San Bernardino Counties to the east.

Regional Climate

The SCAB is primarily a coastal plain with interconnected valleys and low hills progressing into high mountain ranges on the perimeter. The region is located within a semi-permanent high-pressure system that lies off the coast. As a result, the weather is mild, tempered by a daytime sea breeze and a nighttime land breeze. This mild climate is infrequently interrupted by periods of extremely hot weather, winter storms, and Santa Ana winds. Rainfall in the SCAB is primarily restricted from November through April, with rainfall totals being highly variable from year to year.

The SCAB has a low average wind speed of 5.7 miles per hour (mph) in downtown Los Angeles. Inland areas record slightly lower wind speeds, while coastal areas average approximately 2 mph greater than downtown. Because of the low average wind speed, air contaminants in the SCAB don't readily disperse. On spring and summer days most pollution is moved out of the SCAB through mountain passes or is lifted by the warm vertical currents produced by the heating of the mountain slopes. From late summer through the winter months, lower wind speeds and the earlier appearance of offshore breezes combine to trap pollution in the SCAB.

The SCAB is hampered by the presence of a persistent temperature inversion layer, which limits vertical dispersion of air pollutants. In a normal atmosphere, temperature decreases with altitude. In an inversion condition temperature increases with altitude. As the pollution rises it reaches an area where the ambient temperature exceeds the

temperature of the pollution. This causes the pollution to sink back to the surface. This phenomenon acts to trap air pollution near the surface.

In summer, the longer daylight hours and bright sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form ozone. In winter, the greatest pollution problems are carbon monoxide and nitrogen oxides, which are trapped and concentrated by the inversion layer.

APPLICABLE REGULATIONS

Federal Standards

The federal Clean Air Act (CAA) of 1970 is the comprehensive law that regulates air emissions from area, stationary, and mobile sources. The law authorized the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) to protect public health and the environment. The goal of the Act was to set and achieve NAAQS in every state by 1975. The setting of maximum pollutant standards was coupled with directing the states to develop state implementation plans (SIPs) applicable to appropriate industrial sources in the state. The Act was amended in 1977 primarily to set new goal dates for achieving attainment of NAAQS since many areas of the country had failed to meet the deadlines. The 1990 amendments to the CAA in large part were intended to meet unaddressed or insufficiently addressed problems such as acid rain, ground level ozone, stratospheric ozone depletion, and air toxics.

NAAQS have been established for carbon monoxide (CO), ozone (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter (PM_{10}), and lead (Pb). These contaminants are referred to as criteria pollutants. Table 3B-1 summarizes state and federal air quality standards.

State Standards

In 1967, California's legislature passed the Mulford-Carrel Act, which established the California Air Resources Board (CARB). The CARB set state air quality standards for criteria pollutants. The state standards for these pollutants are more stringent than the corresponding federal standards (see Table 3B-1). As in the Federal Clean Air Act, the California Clean Air Act classifies areas as either being in "attainment" or "non-attainment" for these criteria pollutants. Areas designated as non-attainment are then given a set time frame to achieve attainment.

Local Regulations

The proposed project site is located within the jurisdiction of the SCAQMD. The SCAQMD adopted an Air Quality Management Plan (AQMP) in 1979, which intended to

TABLE 3B-1: AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	California Standard	Federal Primary Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone (O_3)	1 hour	0.09 ppm	0.12 ppm	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Motor vehicles.
	8 hours	---	0.08 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, CO interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9 ppm	9.0 ppm		
Nitrogen Dioxide (NO_2)	Annual Average	---	0.05 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.25 ppm	---		
	1 hour	0.25 ppm	---		
	24 hours	0.04 ppm	0.14 ppm		
Suspended Particulate Matter (PM_{10} $PM_{2.5}$)	Annual Geometric Mean	30 ug/m^3 (PM_{10})	65 ug/m^3 ($PM_{2.5}$)	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g. wind-raised dust and ocean sprays).
	Annual Arithmetic Mean	---	50 ug/m^3 (PM_{10})		
	24 hours	50 ug/m^3 (PM_{10})	150 ug/m^3 (PM_{10}) 15 ug/m^3 ($PM_{2.5}$)		
Lead	Monthly	1.5 ug/m^3	---	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurologic dysfunction (in severe cases).	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Quarterly	---	1.5 ug/m^3		

Source: California Air Resources Board, *Ambient Air Quality Standards*, January 25, 1999.

meet federal air quality standards by December 31, 1987. Using better data and modeling tools, the 1982 revision of the AQMP concluded that the basin could not demonstrate attainment by the 1987 deadline required by the federal CAA. Therefore, the 1982 Revision of the AQMP proposed a long-range strategy that could result in attainment in 20 years. In 1987, a federal court ordered the U.S. EPA to disapprove the 1982 AQMP revision because it did not demonstrate attainment of the federal standards by the 1987 deadline.[1]

Currently, the SCAQMD is operating under the 1997 AQMP and the 1999 amendment to the 1997 ozone portion of the AQMP. The 1997 AQMP relies on short-term and intermediate-term attainment measures which were to be adopted by 2000, and long term attainment measures utilizing advances in technology reasonably expected to be available by the year 2010. On January 12, 1999, the U.S. EPA proposed a partial disapproval of the ozone portion of the 1997 AQMP. The AQMD responded with the 1999 Ozone State Implementation Plan revision, which the EPA indicated would be approvable. Currently, the AQMD is in the process of preparing the Proposed 2003 Air Quality Management Plan for the South Coast Air Basin. The 2003 AQMP seeks to demonstrate attainment with state and federal air quality standards and will incorporate a revised emissions inventory, the latest modeling techniques, and updated control measures remaining from the 1997/1999 SIP and new control measures based on current technology assessments.

Criteria Air Pollutants

Ozone (O_3). O_3 is a secondary pollutant produced through a series of photochemical reactions involving reactive organic compounds (ROCs) and nitrogen oxides (NO_x). O_3 creation requires ROCs and NO_x to be available for approximately three hours in a stable atmosphere with strong sunlight. O_3 is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources generating ROCs and NO_x emissions. O_3 effects include eye and respiratory irritation, reduction of resistance to lung infection, and possible aggravation of pulmonary conditions in persons with lung disease. O_3 is also damaging to vegetation and untreated rubber.

Carbon Monoxide (CO). CO is a non-reactive pollutant that is a product of incomplete combustion. Ambient CO concentrations usually follow the spatial and temporal distributions of vehicular traffic and are also influenced by meteorological factors such as wind speed and atmospheric mixing. Under inversion conditions, CO concentrations may be distributed more uniformly over an area out to some distance from vehicular sources.

Nitrogen Oxides (NO_x). There are two oxides of nitrogen which are important in air pollution: nitric oxide (NO) and nitrogen dioxide (NO_2). NO and NO_2 are both emitted from motor vehicle engines, power plants, refineries, industrial boilers, aircraft and railroads. NO_2 is primarily formed when NO reacts with atmospheric oxygen. NO_2 gives the air the "whiskey brown" color associated with smog.

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[1] South Coast Air Quality Management District and Southern California Association of Governments, Final 1989 Air Quality Management Plan, March 1989.

Particulate Matter (PM_{10}). PM_{10} can be inhaled deep into the lungs and cause adverse health effects. PM_{10} in the atmosphere results from many kinds of dust and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter such as demolition and construction activities are more local in nature, while others such as vehicular traffic have a more regional effect.

Sulfur dioxide (SO_2). SO_2 is formed through the oxidation of elemental sulfur; suspended sulfates are the product of further oxidation of SO_2. In some parts of the state, elevated levels can be due to natural causes, such as wind-blown dust and sea salt spray. Suspended sulfates contribute to overall particulate concentrations in ambient air which, if high enough, are suspected to be a cause of premature death in individuals with pre-existing respiratory disease.

Toxic Air Contaminants (TACs). TACs, also known as hazardous air pollutants, are pollutants known or suspected to cause cancer or other serious health effects such as birth defects. TACs may also have significant adverse environmental and ecological effects. Examples of TACs include benzene, diesel particulates, hydrogen sulfide, methylchloride, 1,1,1-trichloroethane, toluene, and metals such as cadmium, mercury, chromium, and lead. Health effects from TACs vary depending on the toxicity of the specific pollutant but may include cancer, immune system damage, as well as neurological, reproductive, developmental, and respiratory problems.

According to EPA, approximately 50 percent of the TACs we are exposed to come from mobile source emissions. The EPA published its final rule to control emissions of hazardous air pollutants from mobile sources in the March 29, 2001 Federal Register. CARB approved a comprehensive diesel risk reduction plan in September 2000.

Existing Air Quality

The SCAB is in non-attainment for both the federal and state ozone, carbon monoxide, and PM_{10} standards. The State's one-hour ozone standard in the SCAQMD was exceeded 5 days in 1998 and at least once per year from 1997 through 2001 (see Table 3B-2). The PM10 standard was exceeded 15 times in 1999, and at least eight times a year from 1997 to 2001. The CO standard has not been exceeded in the proposed project area for the last five years. The SCAB is a maintenance area for the federal and state NO_x standards, which means it had once been in non-attainment.

Existing Air Pollution Sources

Air quality in the vicinity of the proposed project site is affected by emissions from motor vehicle traffic on adjacent roadways and highways and train traffic from existing railways adjacent to the project site.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. SCAQMD includes in its list of sensitive

TABLE 3B-2: PROPOSED PROJECT AREA AIR POLLUTANT SUMMARY, 1995-1999[a]

Pollutant	Standard[b]	1997	1998	1999	2000	2001
Ozone (O_3)						
Highest 1-hr average, ppm[c]	0.09	0.16	0.18	0.14	0.15	0.11
Number of standard excesses[d]		30	41	19	18	2
Carbon Monoxide (CO)						
Highest 1-hr average, ppm[c]	20.0	8.0	10.0	10.0	7.0	8.0
Number of standard excesses[d]		0	0	0	0	0
Highest 8-hr average, ppm[c]	9.1	5.0	7.3	6.7	4.9	4.71
Number of standard excesses[d]		0	0	0	0	0
Nitrogen Dioxide (NO_2)						
Highest 1-hr average, ppm[c]	0.25	0.15	0.15	0.16	0.14	0.12
Number of standard excesses[d]		0	0	0	0	0
Particulate Matter-10 Micron (PM_{10})						
Highest 24-hr average, $\mu g/m^3$ [c]	50	116	87	103	94	106
Number of standard excesses[d,e]		24	16	35	24	22
Annual Geometric Mean, $\mu g/m^3$ [c]	30	40.8	35.7	51.5	42.5	39.9
Violation		Yes	Yes	Yes	Yes	Yes

NOTE: Underlined values indicate an excess of applicable standard.

a. Data are from the SCAQMD monitoring station located at the intersection of Garey Avenue and Alvarado Street in the City of Pomona. PM10 data is taken from SCAQMD monitoring station located at the intersection of Leadora Avenue and Oakwood Avenue in the City of Glendora.

b. State standard, not to be exceeded.

c. ppm - parts per million; $\mu g/m^3$ - micrograms per cubic meter.

d. Refers to the number of days in a year during which at least one excess was recorded.

e. Measured every six days.

NA = Not Available.

Source: South Coast Air Quality Management District, *Air Quality Data Summaries*, 1996-2000.

receptors, residences, schools, playgrounds, childcare centers, convalescent homes, retirement homes, rehabilitation centers, and athletic facilities. Sensitive population groups include children, the elderly, and the acutely and chronically ill, especially those with cardio-respiratory diseases. Residential areas are also considered to be sensitive to air pollution because residents tend to be home for extended periods of time, resulting in sustained exposure to any pollutant present.

Sensitive receptors in the vicinity of the proposed project site include single-family residences located north, west, and east of the proposed project site. The Gladstone

Elementary School is located approximately one-quarter mile west of the proposed project site. There are no sensitive receptors south of the proposed project site. (See Chapter 3H, Figure 3H-1).

IMPACTS AND MITIGATION

Criteria for Determining Significance

The CEQA Guidelines checklist provides the following thresholds for determining significance with respect to air quality. Air quality impacts would be considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standards or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentration; or,
- Create objectionable odors affecting a substantial number of people.

In addition, the SCAQMD has adopted air quality thresholds of significance for construction activities and project operations that are shown in Table 3B-3.

Project Impacts

Impact 3B1: The proposed project would be consistent with the Air Quality Management Plan (AQMP). It would not conflict with or obstruct implementation of the AQMP.

Air emissions in the SCAB are regulated by the SCAQMD. Pursuant to the Clean Air Act, the SCAQMD is required to reduce emissions of criteria pollutants for which the SCAB is in non-attainment. Strategies to achieve these emissions reductions are developed in the AQMP prepared by SCAQMD for the region. Chapter 3 of the 1997 SCAQMD AQMP states, "future emissions forecasts are based on demographic and economic growth projections provided by the SCAG.[2] Individual projects and long-term

[2] SCAQMD, Air Quality Management District, 1997.

TABLE 3B-3: SCAQMD AIR POLLUTION SIGNIFICANCE CRITERIA

Air Pollutant	Project Construction	Project Operation
Carbon Monoxide (CO)	550 lbs. Per day	550 lbs. Per day
Reactive Organic Compounds (ROC)	75 lbs. Per day	55 lbs. Per day
Nitrogen Oxides (NO_x)	100 lbs. Per day	55 lbs. Per day
Particulates (PM_{10})	150 lbs. Per day	150 lbs. Per day

Source: South Coast Air Quality Management District, 1993.

programs within the region are required to be consistent with population, employment, and housing projections.

The City of San Dimas General Plan's Land Use Element designates the southeast corner of Lone Hill Avenue and Gladstone Street as an "Industrial/Business Park".[3] A General Plan amendment to change the land use designation to "Commercial" is being considered with this project. No new housing would be constructed as part of the proposed project. Therefore, the proposed project is anticipated to be consistent with the AQMP.

Mitigation Measures

No mitigation is required.

Residual Impacts

Impacts would be less than significant.

Impact 3B2: Construction of the proposed project would emit criteria pollutants. Estimated daily average construction emissions of NO_x during site grading would exceed significance thresholds set by the SCAQMD, resulting in a short term (4 months) significant impact.

Construction of the proposed project would generate air emissions. Construction-related emissions would primarily be: 1) dust generated from grading and site preparation; 2) hydrocarbon emissions from paint and asphalt; 3) exhaust emissions from powered

[3] City of San Dimas General Plan, Land Use Element.

construction equipment; and, 4) motor vehicle emissions associated with construction activities.

Construction-phase air quality impacts were analyzed quantitatively utilizing construction emissions estimation worksheets (Appendix B). The worksheets follow methodology outlined in the SCAQMD CEQA Air Quality Handbook and utilize emissions factors found in the EMFAC-2002 air emissions models and CARB Emission Inventory Publication number MO99-32.3.

The air emissions calculations assume that construction emissions would last approximately eight months and would vary day to day depending on the activities being performed. Fugitive dust emissions would vary depending on the level and type of activity, silt content of soil, and prevailing weather. Some fugitive dust would be larger-diameter particles that would settle out of the atmosphere close to the site of the actual activity. Smaller-diameter dust would remain suspended for longer periods and would include PM_{10}. Fugitive dust emissions were calculated utilizing emissions factors found in Table 11.9-1 of U.S. EPA's AP-42 compilation of emissions factors and SCAQMD CEQA Air Quality Handbook.

In addition to fugitive dust, project construction would also result in emissions of other criteria air pollutants, including ROC and NO_x, due to combustion of fuel for heavy equipment operation, truck trips, and construction worker trips. ROG would be emitted during painting and asphalt laying operations.

Construction activities would include the demolition of existing homes, grading and site preparation, and building construction. Currently it is estimated that demolition would last approximately two weeks, site grading and preparation would last approximately four and a half weeks and building construction would last approximately six months. Building construction could occur while site preparation is occurring on another portion of the site. Total construction time is anticipated to last approximately eight months.

Demolition

Prior to construction, 20, 1-story single-family homes will be removed from the proposed project site. In addition, several light industrial buildings will also be removed. Demolition is expected to last approximately two weeks and would involve the use of one backhoe, one loader, and one bulldozer. It is further assumed that 15 employees and 10 haul trucks would travel to and from the job site, and a water truck would travel one mile per day at the job site. Construction emissions worksheets are presented in Appendix B. As shown in Table 3B-4, emissions associated with demolition would not exceed SCAQMD significance criteria.

Grading and Site Preparation

Grading and site preparation is anticipated to last approximately four and a half weeks and will include site grading, underground plumbing and electrical installation and excavation. During this phase, it is estimated that two scrapers, four rollers, two compactors, one excavator, three backhoes, two loaders, one grader, and four trenchers

TABLE 3B-4: COSTCO COMMERCIAL COMPLEX CONSTRUCTION EMISSIONS

Air Pollutant	Demolition	Site Grading and Preparation	Building Construction	Significance Criteria
Carbon Monoxide (CO)	12 lbs./day	58 lbs./day	121 lbs./day	550 lbs./day
Reactive Organic Compounds (ROC)	3 lbs./day	20 lbs./day	38 lbs./day	75 lbs./day
Nitrogen Oxides (NO_x)	46 lbs./day	356 lbs./day	134 lbs./day	100 lbs./day
Particulates (PM_{10})	10 lbs./day	46 lbs./day	16 lbs./day	150 lbs./day

Source: ESA 2003, South Coast Air Quality Management District.

would work for various time periods at the proposed project site. It is further assumed that 52 employees and 38 haul trucks would travel to and from the job site, a water truck would travel 1 mile and dump trucks would travel 18 miles a day to the job site. Construction emissions worksheets are presented in Appendix B. Due to the large amount of heavy-duty diesel equipment utilized during site grading and preparation, NO_x emissions would exceed SCAQMD significance criteria. (See Table 3B-4).

SCAQMD Rule 403

In December of 1998, the SCAQMD revised its existing Rule 403 regarding fugitive dust emissions. The purpose of this rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.[4] Under this rule, a person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that the presence of such dust remains visible in the atmosphere beyond the property line of the emission source. Second, a person conducting active operations within the boundaries of the SCAB shall utilize one or more of the applicable best available control measures to minimize fugitive dust emissions from each fugitive dust source type which is part of the active operation. Third, a person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other

[4] SCAQMD. *Rule 403*. December 1998.

U.S. EPA-approved equivalent method for PM_{10} monitoring. Finally, any person in the SCAB shall prevent or remove within one hour the track-out of sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter onto public paved roadways as a result of their operations; or prevent the track-out of such material onto public paved roadways as a result of their operations and remove such material at anytime track-out extends for a cumulative distance of greater than 50 feet on to any paved public road during active operations and remove all visible roadway dust tracked-out upon public paved roadways as a result of active operations at the conclusion of each work day when active operations cease.[5] The incorporation of mitigation measures **M-3B.1** through **M-3B.2**, in addition to minimizing air emissions associated with the construction of the proposed project, will also assist in the compliance of the project with SCAQMD Rule 403.

Building Construction

During building construction, it is estimated that four forklifts, three compressors, three welders, two boomtrucks, one mortar mixer, one roller, and one paver would operate on the site for periods of time. It is further assumed that 200 employees and 10 haul trucks would travel 30 miles to and from the proposed project site, a dump truck and water truck would travel 2 miles per day to the job site. Construction emissions worksheets are presented in Appendix B. As shown in Table 3B-4, emissions associated with building construction would exceed SCAQMD significance criteria.

As shown in Table 3B-4 total construction emissions would exceed SCAQMD significance thresholds. While this would only occur during a eight-month period, construction of the proposed project would be considered a short term significant impact. Mitigation measures **M-3B.1** through **M-3B.12** would help to reduce this impact, but construction of the proposed project would represent a significant unavoidable short-term impact to air quality.

Mitigation Measures

M-3B.1 *Cover all trucks hauling soil, sand, and other loose materials, or require all trucks to maintain at least two feet of freeboard.*

M-3B.2 *Pave, water (three times daily), or apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.*

M-3B.3 *Sweep all paved access roads, parking areas, and staging areas at construction sites daily with water sweepers.*

M-3B.4 *Sweep streets daily with water sweepers if visible soil material is carried onto adjacent public streets.*

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[5] SCAQMD. *Rule 403*. December 1998.

M-3B.5 *Hydroseed or apply non-toxic stabilizers to inactive construction areas.*

M-3B.6 *Enclose, cover, water (twice daily), or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).*

M-3B.7 *Limit traffic speeds on unpaved roads to 15 miles per hour.*

M-3B.8 *Install sandbags or other erosion control measures to prevent silt runoff to public roadways during rainy season construction (November through April).*

M-3B.9 *Replant vegetation in disturbed areas as quickly as possible***.**

M-3B.10 *All construction equipment shall be properly tuned and maintained.*

M-3B.11 *General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading or unloading queues shall be kept with their engines off, when not in use, to reduce vehicle emissions.*

M-3B.12 *Construction activities shall be staged and scheduled to avoid emissions peaks, and discontinued during second-stage smog alerts.*

Residual Impacts

Impacts on NO_x would be short term (4 months) significant and unavoidable.

Impact 3B3: Operation of the proposed project would emit criteria pollutants. Estimated daily average emissions would exceed significance thresholds set by the SCAQMD.

Operational emissions include stationary and mobile sources of emissions. Stationary sources of emissions include on-site emissions and off-site emissions resulting from increased electrical energy production. Mobile source emissions are motor vehicle emissions and would be the largest source of pollutants resulting from project operation.

Project operational emissions were estimated using the California Air Resources Board URBEMIS 2002 emissions model (Appendix B). The following land use designations were utilized in the URBEMIS 2002 model run.

- 7,000 square foot high turnover sit down restaurant
- 3,500 square foot fast food restaurant with drive through
- 56,000 square feet of free standing discount store
- 149,710 square feet discount club store
- Eight pump gasoline service station

Due to the large amount of retail customers anticipated at the Costco Commercial Complex, operational emissions are dominated by on-road mobile source emissions. As shown in Table 3B-5, operational emissions would exceed SCAQMD significance thresholds. Operational emissions would be considered a significant impact to air quality.

TABLE 3B-5: COSTCO COMMERCIAL COMPLEX OPERATIONAL EMISSIONS

Air Pollutant	Project Operation	Significance Criteria
Carbon Monoxide (CO)	1,458 lbs./day	550 lbs./day
Reactive Organic Compounds (ROC)	104 lbs./day	55 lbs./day
Nitrogen Oxides (NO_x)	136 lbs./day	55 lbs./day
Particulates (PM_{10})	104 lbs./day	150 lbs./day

Source: URBEMIS 2002, South Coast Air Quality Management District.

Mitigation Measures

M-3B.13 *In compliance with the City of San Dimas' Transportation System Management (TSM) and Travel Demand Management (TDM) programs, the applicant shall support programs with the objective of increasing vehicle occupancy rates and encourage public support for the development of a balanced circulation system through a well organized public relations program.*

M-3B.14 *In compliance with SCAQMD Rule 2202, the applicant shall implement an On-Road Motor Vehicle Mitigation Plan to encourage employees to participate in ride sharing.*

M-3B.15 *Consideration shall be given to installing publicly available electric vehicle charging stations at the proposed project site.*

Residual Impacts

Impacts would be significant and unavoidable.

Impact 3B4: The proposed project is not anticipated to create objectionable odors affecting a substantial number of people.

SCAQMD lists land uses associated with odor complaints as agriculture, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding plants. The proposed project would construct two restaurants on the site. Any unforeseen kitchen odors will be controlled in accordance with SCAQMD rule 402. Adherence to SCAQMD Rule 402 would mitigate this impact to a less than significant impact.

Mitigation Measure

M-3B.16 *Restaurant and food handling operations shall adhere to SCAQMD Rule 402 (Nuisance).*

Residual Impacts

Impacts would be less than significant.

Impact 3B5: The proposed project would contribute air emissions to the region that would add to the cumulative baseline.

The CEQA Guidelines require that a project be evaluated with respect to its contribution to the cumulative condition. Currently, the existing ambient air quality baseline is affected by emissions in the SCAB. As stated above, the SCAB is in non-attainment for carbon monoxide, ozone and particulate matter. Any addition of these pollutants or their precursors in excess of SCAQMD CEQA thresholds of significance would result in a significant cumulative impact.

As shown in Impact 3B-3, operational emissions and construction NO_x emissions would exceed SCAQMD thresholds of significance. As such, the proposed project would result in a significant cumulative impact to air quality.

Mitigation Measures

No mitigation is feasible.

Residual Impacts

Impacts would be significant and unavoidable.