V. ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

The following information summarizes the finding and conclusions of Air Quality Impacts as presented in the Air Quality and Noise Technical Report prepared by Terry A. Hayes Associates for the proposed Civic Center/Metlox Development Project. The Air Quality and Noise Technical Report is included in its entirety in Appendix B to this Draft EIR.

ENVIRONMENTAL SETTING

Regulatory Setting

Air quality in the United States is governed by the Federal Clean Air Act (CAA) and is administered by the United States Environmental Protection Agency (USEPA). In addition to being subject to the requirements of the CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA).

The CCAA, amended in 1992, requires all air districts in the State to endeavor to achieve and maintain State Ambient Air Quality Standards. The CCAA is administered by CARB at the state level and by the Air Quality Management Districts at the regional level. The State of California has also established ambient air quality standards, known as the California Ambient Air Quality Standard (CAAQS). These standards are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. CARB is responsible for regulating mobile air pollution sources (such as motor vehicle emissions). CARB also oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. The CCAA is administered by CARB at the state level and by the Air Quality Management Districts at the regional level.

Within the project area, the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) have responsibility for preparing the Air Quality Management Plan (AQMP), which address federal and state Clean Air Act requirements. The AQMP details goals, policies, and programs for improving air quality and establishes thresholds for daily operation emissions. Environmental review of individual projects within the region must demonstrate that daily construction and operational emissions thresholds as established by the SCAQMD would not be exceeded, nor would the number or severity of existing air quality violations.

In August of 1996, the SCAQMD submitted its AQMP to the California Air Resources Board (CARB), for inclusion in the State Implementation Plan (SIP). The AQMP also meets CCAA requirements. The Plan addressed CCAA requirements, which are intended to bring the District into compliance with state air quality standards. The Plan focused on ozone and carbon monoxide emissions, which would be reduced through public education, vehicle and fuels management, transportation controls, indirect source controls, and stationary source controls programs.

The 1997 Draft AQMP has been prepared to reflect the requirements of the 1990 Clean Air Act Amendments and is consistent with the approaches taken in the 1994 AQMP. The Plan is expected to replace, in part or in whole, many of the proposed measures set forth in the State Implementation Plan and anticipates the attainment of all by 2010. The overall control strategy for the 1997 AQMP was designed to meet applicable state and federal requirements and to demonstrate attainment with ambient air quality standards. The 1997 AQMP is the first plan required by federal law to demonstrate attainment of the federal PM10 ambient air quality standards and, therefore, places a greater focus on PM10.

Pollutants and Effects

Air quality studies generally focus on five pollutants which are most commonly measured and regulated: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), respirable particulate matter (PM10), and sulfur dioxide (SO2).

Carbon Monoxide. CO, a colorless gas, interferes with the transfer of oxygen to the brain. CO is emitted almost exclusively from the incomplete combustion of fossil fuels. Along with carbon dioxide (CO2), CO is emitted by motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. Automobile exhausts release most of the CO in urban areas. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability.

Ozone. O3, a colorless toxic gas, enters the blood stream and interferes with the transfer of oxygen, depriving sensitive tissues in the heart and brain of oxygen. O3 also damages vegetation by inhibiting growth. Although O3 is not directly emitted, it forms in the atmosphere through a chemical reaction between reactive organic compounds and nitrogen oxides (NOx), which are emitted from industrial sources and from automobiles. Substantial O3 formation generally requires a stable atmosphere with strong sunlight.

Nitrogen Dioxide. NO2, a brownish gas, irritates the lungs. It can cause breathing difficulties at high concentrations. Like O3, NO2 is not directly emitted, but is formed through a reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO2 are collectively referred to as nitrogen oxides (NOx) and are major contributors to ozone formation. NO2 also contributes to the formation of PM10,

small liquid and solid particles that are less than 10 microns in diameter (see discussion of PM10 below). At its atmospheric concentration, NO2 is only potentially irritating. High concentrations result in a brownish-red cast to the atmosphere and reduced visibility. There is some indication of a relationship between NO2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million (ppm).

Suspended Particulate Matter. PM10 refers to particulate matter less than 10 microns in diameter, about one/seventh the thickness of a human hair. Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can also form when gases emitted from industry and motor vehicles undergo chemical reactions in the atmosphere. Major sources of PM10 include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning, industrial sources, windblown dust from open lands; and atmospheric chemical and photochemical reactions. Suspended particulates produce haze and reduce visibility. Additionally, PM10 poses a greater health risk than larger-sized particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM10 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections.

Sulfur Oxides. Sulfur oxides, primarily SO2 are a product of high-sulfur fuel combustion. The main sources of SO2 are coal and oil used in power stations, industry and for domestic heating. Industrial chemical manufacturing is another source of SO2. SO2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO2 can also yellow plant leaves and erode iron and steel.

National and State Ambient Air Quality Standards

As required by the CAA, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: carbon monoxide, nitrogen oxides, ozone, PM10, sulfur oxides and lead. California has also established ambient air quality standards, known as the California Ambient Air Quality Standards (CAAQS). These standards are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. Because the CAAQS are more stringent than the NAAQS, they are used as the comparative standard in the analysis contained in this report.

Both the State and Federal standards are summarized in Table 3 on page 78. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

Table 3
State And National Ambient Air Quality Standards

Pollutant	Averaging Period	California Standards	Federal Standards	
			Primary	Secondary
Ozone (O_3)	1 hour	0.09 ppm 80 mg/m^3)	0.12 ppm (235 mg/m^3)[6]	Same as Primary Standard
	8 hour	--	0.08 ppm (157 mg/m^3)	
Respirable Particulate Matter (PM_{10})	Annual Geometric Mean	30 mg/m^3	--	Same as Primary Standard
	24 hour	50 mg/m^3	150 mg/m^3	
	Annual Arithmetic Mean	--	50 mg/m^3	--
Fine Particulate Matter ($PM_{2.5}$)	24 hour	No Separate Standard	65 mg/m^3	Same as Primary Standard
	Annual Arithmetic Mean		15 mg/m^3	
Carbon Monoxide(CO)	8 hour	9.0 (10 mg/m3)	9.0 (10 mg/m3)	None
	1 hour	20 ppm (23 mg/m3)	35 ppm (40 mg/m3)	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	--	0.053 ppm (100 mg/m^3)	Same as Primary Standard
	1 hour	0.25 ppm (470 mg/m^3)	--	
Sulfur dioxide (SO_2)	Annual Arithmetic Mean	--	0.03 ppm (80 mg/m^3)	--
	24 hour	0.04 ppm (105 mg/m^3)	0.14 ppm (365 mg/m^3)	--
	3 hour	--	--	0.5 ppm (1300 mg/m^3)
	1 hour	0.25 ppm (655 mg/m^3)	--	--
Lead	30 day average	1.5 mg/m^3	--	--
	Calendar Qtr.		1.5 mg/m^3	Same as Primary Standard
Visibility Reducing Particulates	8 hour (10 am to 6 pm, PST)	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer - visibility of ten miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent.	No Federal Standards	
Sulfates	24 hour	25 mg/m^3		
Hydrogen Sulfide	1 hour	0.03 ppm (42 mg/m^3)		

Source: California Air Resources Board, Federal and State Air Quality Standards 1999 (1/25/99)

Regional Setting and Climate

The Proposed Project is located within the South Coast Air Basin (SCAB), a 6,530 square-mile area that includes all of Orange County, the non-desert portions of Los Angeles County, and the western urbanized portions of Riverside and San Bernardino Counties. The SCAB is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and the east; and by the San Diego County line to the south. Ambient pollution concentrations recorded in Los Angeles County are among the highest in the four counties comprising the SCAB. Within the SCAB, implementation of measures to attain the objectives of the California Clean Air Act is the responsibility of the SCAQMD.

The SCAB is an area of high air pollution potential due to its climate and topography. The SCAB experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. In addition, the mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region. The region experiences frequent temperature inversions. Temperature typically decreases with height. However, under inversion conditions, temperature increases as altitude increases. Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created when the interaction between the ocean surface and lower layer of the atmosphere creates a cool, moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward.

In addition, hydrocarbons and nitrogen dioxide react under strong sunlight, creating smog. Light daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the mountains.

During the fall and winter, air quality problems are created due to carbon monoxide and nitrogen dioxide emissions. High nitrogen dioxide (NO2) levels usually occur during autumn or winter, on days with summer-like conditions. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the SCAB are associated with heavy traffic.

Attainment Status

The California Air Resources Board will designate an area as non-attainment for a pollutant if air quality data show that a State standard for a pollutant was violated at least once during the previous three calendar years. Exceedances that are caused by highly irregular or infrequent events are not considered violations of a State standard, and are not used as a basis for designating areas as non-attainment.

On the basis of regional monitoring data, the Los Angeles County portion of the SCAB has been designated as a non-attainment area for ozone, carbon monoxide, and total suspended particulates. The air basin is designated as an attainment area for nitrogen oxide and sulfur dioxide.

Local Setting

The SCAQMD monitors air quality conditions at 37 locations throughout the SCAB. The Proposed Project is located in the SCAQMD's Southwest Coastal Air Monitoring Area (No. 3), which is served by the Hawthorne monitoring station. The Hawthorne monitoring station is the closest monitoring location to the project site, located approximately three miles northeast of the Civic Center. Therefore, historical data from the Hawthorne station was used to characterize existing conditions within the vicinity of the Proposed Project area and to establish baseline air quality conditions from which to estimate future conditions with and without the Proposed Project.

The criteria pollutants monitored at the Hawthorne station include ozone (O3), carbon monoxide (CO), nitrogen oxides (NOX), and particulates (PM10). A summary of the historical data recorded by the monitoring station is located in Appendix B to this Draft EIR. Table 4 on page 81 shows the number of violations recorded at the Hawthorne monitoring station during the 1997-99 recording period.

Background Carbon Monoxide (CO) Concentrations. CO concentrations are typically used as the sole indicator of conformity with the CAAS because (1) CO levels are directly related to vehicular traffic volumes, the main source of air pollutants, and (2) localized CO concentrations and characteristics can be modeled using USEPA and SCAQMD methods. In other words, the operational air quality impacts associated with a project are generally best reflected through the estimated changes in related CO concentrations.

For purposes of the impact analysis contained in this assessment, the ambient, or background, concentration of CO was established. The background level is typically defined as the average of second-high readings over the past three-year period. A review of data from the Hawthorne monitoring station for the 1997 through 1999 period indicates that the average 8-hour background concentration was 8.0 ppm. Assuming a typical persistence factor of 0.7, the estimated 1-hour background concentration would be 11.4 ppm.

CO Concentrations at Sensitive Receptor Locations. There is a direct relationship between traffic/circulation congestion and CO impacts, since exhaust fumes from vehicular traffic is the primary source of CO. Carbon monoxide is a localized gas, which dissipates very quickly under normal meteorological conditions; therefore, CO concentrations decrease substantially as distance from the

Table 4
Criteria Pollutant Violations (1997-1999)

Pollutant	State Standard	Number of Days Above State Standard		
		1997	1998	1999
Ozone	0.09 ppm (hourly)	6	0	1
Carbon Monoxide	9.0 ppm (8-hour average)	1	1	0
Nitrogen Dioxide	0.25 ppm (hourly)	0	0	0
PM_{10}	50 ug/m^3 (24-hour average)	24	42	33
Source: California Air Resources Board, Terry A. Hayes Associates, October 2000.				

source (intersection) increases. The highest CO concentrations are typically found along sidewalk locations directly adjacent to congested roadway intersections. These locations are generally referred to as "CO hotspots."

To provide a worst-case simulation of CO concentrations within the area that may be affected by the proposed project, CO concentrations were analyzed at sidewalk locations adjacent to intersections identified as having significant traffic impacts. The traffic study concluded five of the 16 study intersections would result in significant traffic impacts prior to mitigation. The five intersections analyzed for CO hotspots are as follows: (1) Highland Ave./Manhattan Beach Blvd.; (2) Sepulveda Blvd./Manhattan Beach Blvd.; (3) Ardmore Ave./Manhattan Beach Blvd.; (4) Highland Ave./13th Street; and (5) Highland Ave./15th Street.

Although traffic volumes are notably higher during the summer months in the project locale, CO impacts are much greater during the winter months because of substantial inversion that occurs during the colder months. Thus, winter season traffic data was used to determine impacts at CO hotspot locations. Table 5 on page 82 shows the current (year 2000) CO concentrations at the five studied intersections.

At each intersection, traffic related CO contributions were added to the background conditions discussed above. Traffic CO contributions were estimated using the CAL3QHC dispersion model, which utilizes traffic volume inputs and EMFAC 7F emissions factors. As shown above, none of the five study intersections exceed the State 1-hour CO concentration standard of 20 ppm; however, each of the five study intersections currently (year 2000) exceed the State 8-hour CO concentration standard of 9 ppm.

Table 5
Existing Carbon Monoxide (Co) Concentrations 1

Intersection	1-hour	8-hour	Peak Hour
1. Highland/Manhattan Beach Blvd.	14.9	10.4	AM
2. Sepulveda/Manhattan Beach Blvd.	19.2	13.4	AM
3. Ardmore/Manhattan Beach Blvd.	16.4	11.5	AM
4. Highland/13th Street	15.9	11.1	PM
5. Highland/15th Street	16.6	11.6	PM
State Standard	**20.0**	**9.0**	
Ambient Concentration [2]	11.4	8.0	

[1] CO concentrations are in parts per million (ppm) and represent Winter conditions.

[2] All concentrations include ambient concentration.

Source: Terry A. Hayes Associates, CAL3QHC Output, October 2000.

ENVIRONMENTAL IMPACTS

Methodology and Significance Criteria

This air quality analysis is consistent with methods described in the SCAQMD California Environmental Quality Act (CEQA) Handbook (1993 edition).

The following calculation methods and estimation models were utilized in ascertaining air quality impacts: SCAQMD construction emissions calculation formulas, the CARB URBEMIS 7G emissions model, the Caltrans EMFAC emissions factor model, and the USEPA's CAL3QHC dispersion model software.

A project would have a significant impact if its daily construction or operation phase emissions were to exceed significance thresholds for carbon monoxide (CO), reactive organic gas (ROG), nitrogen oxides (NOX), sulfur oxides (SOX) or particulates (PM10) as established by the SCAQMD. Significance thresholds appear in Table 6 on page 83. Additionally, a project would have a significant impact if it were to cause criteria pollutant concentrations to exceed any CAAQS at a sensitive receptor location.

Table 6
SCAQMD Daily Emissions Thresholds [1]

Criteria Pollutants	Construction	Operations
Carbon Monoxide (CO)	550	550
Reactive Organic Gas (ROG)	75	55
Nitrogen Oxides (NO_x)	100	55
Sulfur Oxides (SO_x)	150	150
Particulates (PM_{10})	150	150

[1] In pounds per day

Source: South Coast Air Quality Management District.

The proposed project does not contain lead, hydrogen sulfide, or sulfates emissions sources; therefore, emissions and concentrations related to these pollutants will not be analyzed in this report.

Project Impacts

Construction Phase Daily Emissions

The proposed project would generate pollutant emissions from the following construction activities: (1) demolition, (2) grading and excavation, (3) construction worker travel to and from project sites, (4) delivery and hauling of construction supplies and debris to and from project sites, and (5) fuel combustion by on-site construction equipment. Table 7 on page 84 shows the estimated daily emissions associated with each construction phase. Daily emissions were derived using the applicable emission factors and formulas found in the SCAQMD CEQA Handbook, Appendix to Chapter 9.

As indicated in Table 7, grading/excavation phase PM10 emissions are anticipated to exceed the SCAQMD significance threshold of 150 ppd, which would result in a short-term significant impact.

Operations Phase Daily Emissions

Long-term project emissions would be generated by motor vehicles (mobile sources) as well as from the consumption of natural gas and electricity (stationary sources). The traffic report prepared for the project indicates that the project would generate a net increase of 3,442 weekday daily trips to the surrounding roadway system.

Table 7
Daily Construction Emissions [1]

Construction Phase	CO	ROG	NOx	SOx	PM_{10}
SCAQMD Threshold	**550**	**75**	**100**	**150**	**150**
Demolition	25	5	37	3	60
Grading/Excavation	27	5	43	3	344
Foundation	18	3	20	2	13
Building Erection/Finishing	36	5	41	3	26
Maximum	**36**	**5**	**43**	**3**	**344**
Exceed Threshold?	**No**	**No**	**No**	**No**	**Yes**

[1]Daily emissions are expressed in pounds per day.

Source: Terry A. Hayes Associates, October 2000.

Operational emissions were estimated using the California Air Resources Board's URBEMIS 7G operational emissions model, which considers land use, vehicle mix, and average trip lengths to estimate daily project operations-phase emissions. The results, shown in Table 8 on page 85, indicate that operational emissions are not anticipated to exceed daily SCAQMD significance thresholds. Thus, long-term impacts resulting from daily operational emissions would be considered less than significant.

Carbon Monoxide (CO) Hot Spots

CO concentrations were calculated using the US Environmental Protection Agency's CAL3QHC micro scale dispersion model. As indicated in Table 9 on page 85, the "Proposed Project" CO concentrations would range from 10.3 to 13.4 ppm for 1-hour concentrations; and from 7.2 to 9.4 ppm for 8-hour concentrations. There would be no violation of the 20 ppm 1-hour standard; however, the 8-hour concentration standard of 9.0 ppm could potentially be exceeded in areas adjacent the intersection of Sepulveda and Manhattan Beach Boulevard.

Table 8

Daily Operations Emissions [1]

Project	Daily Trips	Pollutant			
		CO	ROG	NO_x	PM_{10}
Proposed Project	3,442	195	22	39	22
SCAQMD Threshold		**550**	**55**	**55**	**150**
Exceed Threshold?		**No**	**No**	**No**	**No**

[1] Daily emissions are expressed in pounds per day.

Source: Terry A. Hayes Associates, URBEMIS 7G Output results, October 2000.

As shown in Table 9, below, the estimated worst-case 8-hour concentration would violate the State standard in areas adjacent to the intersection of Sepulveda and Manhattan Beach Boulevards, either with or without the proposed project. Whenever baseline conditions already exceed the State standard, the SCAQMD CEQA Handbook states that the incremental project CO contribution must be evaluated. The increment significance threshold is 1 ppm for the 1-hour averaging period, and 0.45 ppm for the 8-hour averaging period. Since the project contribution would be negligible (i.e., less than 1 ppm), this can be considered a less-than-significant impact.

Table 9

2005 Worst-Case Co Concentrations [1]

Project	Daily Trips	Pollutant			
		CO	ROG	NO_x	PM_{10}
Proposed Project	3,442	195	22	39	22
SCAQMD Threshold		**550**	**55**	**55**	**150**
Exceed Threshold?		**No**	**No**	**No**	**No**

[1] Daily emissions are expressed in pounds per day.

Source: Terry A. Hayes Associates, URBEMIS 7G Output results, October 2000.

Consistency with the AQMP

Criteria for determining consistency with the AQMP is defined in Chapter 12, Section 12.2 and Section 12.3 of the South Coast Air Quality Management District's CEQA Air Quality Handbook.

> Consistency Criterion No. 1: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.
>
> Consistency Criterion No. 2: The proposed project will not exceed the assumptions in the AQMP in 2010 or increments based on the year of project build-out phase.

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for projects include forecasts of project emissions in a regional context during construction, and in a regional as well as local context, during project occupancy. As indicated later in this section, these forecasts indicate that, with application of prescribed mitigation measures, daily construction and operations emissions are not anticipated to exceed SCAQMD significance thresholds. Above all, the consistency criteria identified under the first criterion pertain to pollutant concentrations rather than to total regional emissions.

The SCAQMD has identified CO as the best indicator pollutant for determining whether air quality violations would occur, because CO is most directly related to automobile traffic. As indicated previously, CO concentrations were modeled using the USEPA CAL3QHC dispersion model. The analysis indicated that the project would not cause or exacerbate an existing violation of the State CO concentration standard; therefore, the proposed project can be considered to comply with Consistency Criterion 1.

Regarding the project's consistency with AQMP growth assumptions, these assumptions are generated by SCAG. SCAG derives its assumptions, in part, based on the General Plans of cities located within the SCAG region. Therefore, if a project does not exceed the growth projections in the General Plan, it can be assumed to be consistent with growth assumptions in the AQMP.

The Proposed Project is not growth inducing, and the estimated job creation that would result from implementation of the Proposed Project is not sufficiently large to call into question the employment forecasts for the subregion adopted by SCAG. Since the SCAQMD has incorporated these same projections into the AQMP, it can be concluded that this project would be consistent with the projections in the AQMP. Thus, the proposed project can be considered to comply with Consistency

Criterion 2. Accordingly, the project would be consistent with AQMP's goals, policies, and programs for improving regional air quality conditions.

CUMULATIVE IMPACT ANALYSIS

The project traffic consultant, in consultation with City of Manhattan Beach Planning Department personnel, did not identify any related projects within the area that may be affected by the proposed project. Since proposed project emissions are not anticipated to SCAQMD significance thresholds, and no related projects have been identified within the area that may be affected by the proposed project, the emissions contribution from project-related traffic would have a cumulatively less-than-significant impact on regional air quality. More importantly, as described above, the project would be consistent with the AQMP, which addresses air quality regulations and policies on a regional scale. Therefore, the project's cumulative air quality impact would be considered less than significant.

MITIGATION MEASURES

As indicated previously in Table 7 on page 84, grading/excavation phase PM10 emissions are anticipated to exceed the SCAQMD significance threshold of 150 ppd, which would result in a short-term significant impact. The following mitigation measures are prescribed in an effort to reduce this impact to a less-than-significant level.

- The construction area and vicinity (500-foot radius) shall be swept and watered at least twice daily.
- Site-wetting shall occur often enough to maintain a 10 percent surface soil moisture content throughout all site grading and excavation activity.
- All haul trucks shall either be covered or maintained with two feet of free board.
- All haul trucks shall have a capacity of no less than 14 cubic yards.
- All unpaved parking or staging areas shall be watered at least four times daily.
- Site access points shall be swept/washed within thirty minutes of visible dirt deposition.
- On-site stockpiles of debris, dirt, or rusty material shall be covered or watered at least twice daily.
- Operations on any unpaved surfaces shall be suspended when winds exceed 25 mph.

- Car-pooling for construction workers shall be encouraged.

LEVELS OF SIGNIFICANCE AFTER MITIGATION

Implementation of the above-mentioned mitigation measures is anticipated to result in a substantial reduction in airborne particulate (PM10) emissions. Reductions in CO, ROG, NOX, and SOX emissions would be negligible. The estimated PM10 emissions reduction for each major construction phase is shown in Table 10, below. As shown in Table 10, application of prescribed mitigation measures are anticipated to reduce construction phase PM10 emissions to levels below significance thresholds. Therefore, with proper implementation of prescribed mitigation measures, development of the proposed project would not result in any unavoidable significant air quality impacts.

Table 10

Estimated Daily PM10 Emissions Reduction With Mitigation [1]

Construction Phase	Without Mitigation	With Mitigation	Net Benefit
Demolition	60	50	10
Grading/Excavation	344	99	245
Foundation	13	13	-
Building Erection/Finishing	26	26	-

[1] Daily emissions are expressed in pounds per day.
Source: Terry A. Hayes Associates, October 2000.