

**APPENDIX B:
AIR QUALITY ANALYSIS**

**Air Quality Impact Analysis Report
Home Depot Retail Center EIR
Yucca Valley, California**

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TABLE OF CONTENTS

Section 1: Introduction	1
1.1 - Purpose and Methods of Analysis.....	1
1.2 - Executive Summary	1
1.2.1 - Site Location.....	1
1.2.2 - Development Description	1
1.2.3 - Findings.....	2
1.2.4 - Mitigation Measures Designed to Reduce Air Emissions.....	2
Section 2: Setting	4
2.1 - Project Description	4
2.2 - Physical Setting.....	4
2.3 - Regulatory Setting.....	9
Section 3: Emissions Estimates	16
3.1 - Thresholds of Significance	16
3.1.1 - Thresholds for Emissions	16
3.2 - Impacts.....	17
3.2.1 - Short-term Impacts.....	17
3.2.2 - Long-term Impacts	24
3.2.3 - Mitigation Measures Designed to Reduce Air Emissions.....	28
Section 4: Findings and Conclusions	31
4.1 - Evaluation of Significance	31
4.2 - Conclusions.....	33
Section 5: References	34
5.1 - References Cited	34
5.2 - Document Preparation Staff.....	35
Appendix A: Use of URBEMIS 2002 in Determining Project Emissions	
Appendix B: URBEMIS 2002 Output Files	
Appendix C: CALINE4 Output Files	

LIST OF TABLES

Table 1: Ambient Air Quality Near Home Depot Retail Center EIR (2002-2004)..... 7
Table 2: Ambient Air Quality Standards 11
Table 3: Federal and State AAQS Attainment Status 13
Table 4: Anticipated Construction Schedule and Equipment Inventory 18
Table 5: Estimated Short-Term Emissions (Grading) 19
Table 6: Estimated Short-Term Emissions (Construction) 20
Table 7: Estimated Short-Term Emissions (Architectural Coatings and Paving) 20
Table 8: Estimated Short-Term Emissions With Mitigation Measures Designed to
Reduce Air Emissions 22
Table 9: Emission Results with Scenario 1 Incorporated..... 23
Table 10: Emission Results with Scenario 2 Incorporated..... 24
Table 11: Estimated Daily Operational Emissions (Pounds Per Day) for the Home
Depot Retail Center* 25
Table 12: Estimated CO Concentrations..... 27

LIST OF EXHIBITS

Exhibit 1: Wind Rose..... 6

SECTION 1: INTRODUCTION

1.1 - PURPOSE AND METHODS OF ANALYSIS

The following air quality assessment was prepared to evaluate whether the expected criteria air pollutant emissions generated as a result of the proposed project would cause significant impacts to air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000 *et seq.*). The methodology follows the “CEQA and Federal Conformity Guidelines” prepared by the Mojave Desert Air Quality Management District (MDAQMD) and the Antelope Valley Air Quality Management District (AVAQMD) for quantification of emissions and evaluation of potential impacts to air resources. URBEMIS 2002 version 8.7 and EMFAC2002 Version 2.2 computer programs, developed and approved by the California Air Resources Control Board, were used to quantify project-related emissions. Additionally, CALINE4 was used to perform CO hotspot analysis.

1.2 - EXECUTIVE SUMMARY

1.2.1 - Site Location

The Yucca Valley Home Depot Retail Center EIR (project) impact area contains 29.3 acres within the Town of Yucca Valley, in the County of San Bernardino. The site is bordered by State Route 62 to the north and is located east of Avalon Avenue. The east, south and western boundaries of the site are all adjacent to vacant land. The site is located in the north ½ of the northwest ¼ of Section 32, T.1.N R.6E. as shown on the U.S.G.S. *Yucca Valley North, CA 7.5'* topographic map.

1.2.2 - Development Description

The proposed project includes a Home Depot home improvement store and garden center, as well as three additional retail stores and a restaurant on 18.36 acres. The Home Depot and garden center includes about 137,283 square feet (SF) for the retail building/houseplant enclosure/outdoor garden center. Three other retail buildings cover approximately 20,000 SF, 7,150 SF, and 7,460 SF. The proposed restaurant will be 3,000 SF. The combined total square footage for all buildings in the project is 174,893 SF. The project site has regional access via the State Route (SR) 62 and State Route 247.

1.2.3 - Findings

The study found that with construction phase mitigation to reduce air emissions incorporated into the proposed project emissions will be below the applicable MDAQMD suggested thresholds of significance. During the operation of the proposed project all emissions will be below the MDAQMD suggested significance thresholds. The analysis supports the following findings:

- The project is in compliance with the MDAQMD Final Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan and the MDAQMD 2004 Ozone Attainment Plan;
- The project-generated emissions will not violate Federal or State ambient air quality standards;
- The project's contribution to cumulative impacts will not be significant;
- The project will not expose sensitive receptors to substantial pollutant concentrations, the project will not create a CO hotspot; and
- Project-generated odors will not affect a substantial number of people.

1.2.4 - Mitigation Measures Designed to Reduce Air Emissions

- During construction of the proposed improvements, the applicant will provide on-site meals to construction workers by arranging a lunch wagon to visit the construction site during work breaks particularly during the lunch hour.
- During construction of the proposed improvements, the applicant will provide on-site electrical hook ups for electric hand tools such as saws, drills, and compressors, to eliminate the need for diesel powered electric generators.
- During construction of the proposed improvements, only low volatility paints and coatings as defined in MDAQMD Rule 1113 shall be used. All paints shall be applied using either high volume low pressure (HVLP) spray equipment or by hand application.
- Prior to construction of the proposed improvements, the project proponent will provide a traffic control plan that will describe in detail safe detours around the project construction site and provide temporary traffic control (i.e. flag person) during concrete transport and other construction related truck hauling activities.
- During construction of the proposed improvements, construction equipment will be properly maintained with all maintenance repairs completed at an offsite location and include proper tuning and timing of engines.
- During construction of the proposed improvements, all contractors will be advised not to idle construction equipment on site for more than ten minutes.

- Prior to construction of the proposed improvements, the applicant will provide to the Town and MDAQMD with a project specific dust control plan for their review and approval. The dust control plan will be consistent with MDAQMD Rule 403 and will include Best Available Control Measures (BACM) that include application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when instantaneous wind speeds exceed 25 mph or average wind speeds exceed 15 mph (15 minute average) and establishing a permanent, stabilizing ground cover on finished sites. Implementation of the project specific dust control plan and BACMs will take place during construction of the proposed improvements.
- Construction and development shall be limited to 8 hours of work each day.
- Prior to final site plan approval, the project proponent shall consult with the local transit authority to assess the need for a bus stop, and related amenities (bus bench, shelter, turnout and signs). The project proponent shall coordinate with the Morongo Basin Transit Authority and the adjacent project on the appropriate location for such facilities and shall collaborate to the extent feasible on the appropriate implementation and timing. The results shall be reported to the Community Development Department and incorporated into the final design plans.

In addition to the above mentioned mitigation measures, additional mitigation is required to reduce air quality impacts to less than significant. In order to reduce emission levels below MDAQMD, one of the following scenarios shall be implemented into the proposed project:

- **Scenario 1:** The proposed project will be phased so that the grading phase of the construction and the building phase will not occur concurrently. Additionally the architectural coating phase will occur over no less than 4 weeks; or
- **Scenario 2:** Off-road vehicle will utilize aqueous diesel fuel and cooled exhaust gas recirculation. Additionally, the architectural coatings phase will occur over no less than 4 weeks.

SECTION 2: SETTING

2.1 - PROJECT DESCRIPTION

The proposed Home Depot Retail Center EIR is within the Mojave Desert Air Basin in San Bernardino County.

The proposal consists of four commercial buildings and a restaurant, totaling 174,893 square feet on 18.36 acres. Regional access to the proposed project is provided by State Route 62 and State Route 247. Local access is provided by State Route 62, and Avalon Avenue. The main entrance for the proposed project will be on SR 62, and an extension of Palisades Drive will allow for service access.

Vehicle trips are responsible for much of the long-term air quality pollutants associated with a commercial development project. The additional vehicle trips generated by the proposed project will produce air pollutant emissions. Based upon the project specific traffic study (AGA, 2005), the proposed project is assumed to generate 5,695 daily vehicle trips (ADT) with 239 of those trips occurring during the morning peak hour and 433 during the evening peak hour.

The following provides a description of the regional and local conditions affecting air quality in the project area.

2.2 - PHYSICAL SETTING

The project site is located in the Town of Yucca Valley, within the Mojave Desert Air Basin (MDAB). MDAB covers most of Southern California's high desert and includes portions of San Bernardino County, Riverside County, Los Angeles County, and Kern County. The MDAB includes the jurisdiction of several districts. The proposed project is in the San Bernardino County portion of the MDAB, and is under the jurisdiction of the Mojave Desert Air Quality Management District (MDAQMD). The MDAQMD includes all of the Mojave Desert portion of San Bernardino County, and a portion of eastern Riverside County. The southern limit of the district is the Imperial County line. The eastern boundary is the California border with Nevada and Arizona. The district is generally bounded on the south and west by mountain ranges. MDAQMD in general includes various mountain ranges interspersed with long broad valleys. The region's generally impacted by a semi-permanent high pressure zone resulting in a mild, relatively dry climate. Additionally, the mountains to the west cause the area to be in a rainshadow, reducing the typically low rainfall amounts even

more. The summers are very warm and winters are mild. The average rainfall for the region near the project site is approximately 4 inches per year, and occurs throughout the year. The local wind is generally light, and the dominant wind pattern is a daytime on-shore breeze and nighttime off-shore breezes. The local dominant wind blows from west to east as can be seen in the wind rose (Exhibit 1).

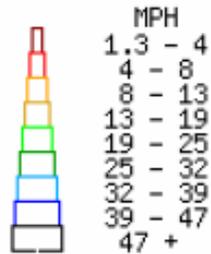
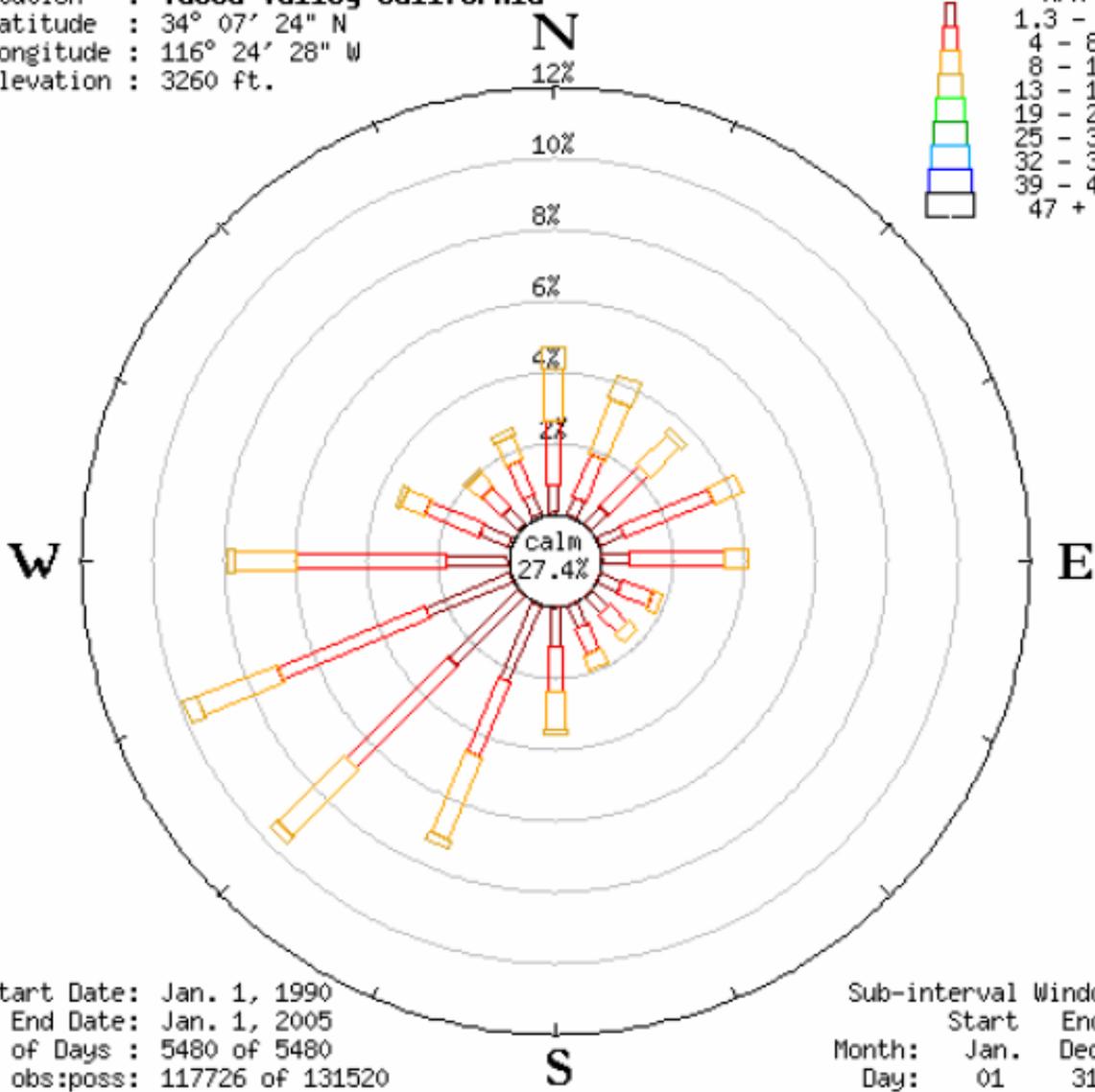
Air stagnation may occur during the early evening and early morning during periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds known as Santa Ana winds. The average air temperature in the project area is about 68° F with an average annual maximum temperature of 83.9° F and an average minimum temperature of 51.9° F. The coldest month of the year is typically January. Daily maximum temperatures in the summer occasionally exceed 105° F.

The regional and local air quality is strongly affected by topography and a dominant onshore flow. In general, ozone and other pollutants are imported from the South Coast Air Basin (SCAB) into the MDAB by onshore air flow that pushes the pollutants through the mountain passes into the Mojave Desert. Pollutants within the MDAQMD are more concentrated near the passes because of this. Additionally, mountain ranges near the project site help to block some of the pollutants from leaving the area.

Overall, air quality within the Mojave Desert Air Quality Management District varies with location, season and time of the day. The wind patterns during the summer and spring allow for pollutants to travel more easily to the southern portions of the air basin. In the fall and winter, weaker winds, and offshore breezes decrease the ability for the pollutants to travel as far. Pollutant levels can be low on days when wind speeds are high (such as during Santa Ana winds).

The project site is within the Mojave Desert Air Quality Management District of the Mojave Desert Air Basin, which has various monitoring stations throughout the region. The Home Depot Retail Center is nearest to the monitoring station in Joshua Tree National Park (Air Resources Board (ARB) site number 36152). The monitoring station in Joshua Tree National Park is located on Black Rock Canyon Road, approximately 4.5 miles south of the proposed project site. Table 1 shows the most recent published data for the project area, 2002-2004. The data shows that the region has several events in which the air quality is considered unhealthy. Even so, the air quality for the region has improved significantly over the past decade. Ozone pollution and particulate matter smaller than 10 microns (PM₁₀ and PM_{2.5}) continues to be the most distinctive problem for the region. The sources contributing to particulate matter pollution include road dust, windblown dust, agriculture,

Station : **Yucca Valley California**
 Latitude : 34° 07' 24" N
 Longitude : 116° 24' 28" W
 Elevation : 3260 ft.



Start Date: Jan. 1, 1990
 End Date: Jan. 1, 2005
 # of Days : 5480 of 5480
 # obs:poss: 117726 of 131520

Sub-interval Windows
 Start End
 Month: Jan. Dec.
 Day: 01 31
 Hour: 00 23

©Western Regional Climate Center

Source: WRCC 2005



Michael Brandman Associates

Exhibit 1
 Windrose

construction, fireplaces and wood burning stoves, and vehicle exhaust. Vehicle exhaust is the largest component of PM_{2.5}.

The proposed project is located closest to the monitoring station in Joshua Tree National Park. The air quality data for this region is collected at the station on Black Rock Canyon Road. Currently, only Ozone is measured at this site, the following criteria pollutants are not measured at this site: PM₁₀, PM_{2.5}, carbon monoxide, nitrogen dioxide, and sulfur dioxide. In order to analyze air quality for previous years, data from two of the closest monitoring stations that measure the pollutants not measured at the Black Rock Canyon monitoring station are used. Those two monitoring stations are Twenty Nine Palms-Adobe Road #2 (ARB site number 36211), and Victorville (ARB site number 36306). The Twenty Nine Palms monitoring station is located at 6136 Adobe Road in Twenty Nine Palms, approximately 19 miles from the project site, and the Victorville monitoring station is located in at 14306 Park Avenue in Victorville, approximately 60 miles from the project site.

Table 1 shows the criteria pollutant concentrations collected in for the project area. The data is based on a three-year summary between the years 2002-2004. The data is compared to the most stringent ambient air quality standard (State of California or Federal) for each pollutant. Measurements from the Joshua Tree monitoring station are used for Ozone. For measurements of carbon monoxide, sulfur dioxide, PM_{2.5}, and nitrogen dioxide, data from the Victorville station was used. For measurements of PM₁₀, the Twenty Nine Palms station was used.

Table 1: Ambient Air Quality Near Home Depot Retail Center EIR (2002-2004)

Air Pollutant	Most Stringent Air Quality Standards*	Year			Meets Ambient Standards?
		2002	2003	2004	
		Maximum Concentration & (days/ % exceeding standard)	Maximum Concentration & (days/ % exceeding standard)	Maximum Concentration & (days/ % exceeding standard)	
Ozone (O₃)					
1 Hour	0.09 ppm	0.133 ppm (38 days)	0.140 ppm (41 days)	0.137 ppm (35 days)	NO
8 Hours	0.08 ppm	0.114 ppm (33 days)	0.119 ppm (39 days)	0.107 ppm (31 days)	NO
Carbon Monoxide (CO)					
1 Hour	20 ppm	ND)	ND	ND	ND
8 Hours	9.0 ppm	1.81 ppm (0 days)	2.09 ppm (0 days)	1.70 ppm (0 days)	YES

Table 1 (Cont.): Ambient Air Quality Near Home Depot Retail Center EIR (2002-2004)

Air Pollutant	Most Stringent Air Quality Standards*	Year			Meets Ambient Standards?
		2002	2003	2004	
		Maximum Concentration & (days/ % exceeding standard)	Maximum Concentration & (days/ % exceeding standard)	Maximum Concentration & (days/ % exceeding standard)	
Nitrogen Dioxide (NO₂)					
Annual Arithmetic Mean	0.053 ppm	0.022 ppm (0 days)	0.022 ppm (0 days)	0.021 ppm (0 days)	YES
1 Hour	0.25 ppm	0.085 ppm (0 days)	0.090 ppm (0 days)	0.080 ppm (0 days)	YES
Sulfur Dioxide (SO₂)					
Annual Arithmetic Mean	0.030 ppm	0.001 ppm (0 days)	0.001 (0 days)	0.001 (0 days)	YES
24 Hours	0.04 ppm	0.006 ppm (0 days)	0.006 ppm (0 days)	0.003 ppm (0 days)	YES
1 Hour	ND	ND	ND	ND	ND
Suspended Particulate Matter (PM₁₀)					
Annual Geometric Mean	30 µg/m ³	ND	16.0 µg/m ³	ND	YES
Annual Arithmetic Mean	50 µg/m ³	24.0 µg/m ³	17.3 µg/m ³	15.1 µg/m ³	YES
24 Hours	50 µg/m ³	ND	64.0 µg/m ³ (3)	40.0 µg/m ³ (0)	NO
Fine Suspended Particulate Matter (P_{M2.5})					
Annual Arithmetic Mean	12 µg/m ³	13.9 µg/m ³	11.4 µg/m ³	10.8 µg/m ³	NO
24 Hours	65 µg/m ³	38.0 µg/m ³ (0)	28.0 µg/m ³ (0)	34.0 µg/m ³ (0)	YES
<p>* More stringent of the federal and state ambient air quality standards for the pollutant of interest; numbers in parentheses represent the number of days the standards were exceeded. Yes = meets state and federal standards NO = violates state or federal standards ND = no data reported Source: CARB</p>					

2.3 - REGULATORY SETTING

Air pollutants are classified as either primary or secondary pollutants. Primary pollutants are generated daily and emitted directly from the source, whereas secondary pollutants are created over time and occur within the atmosphere as chemical and photochemical reactions take place. Examples of primary pollutants include carbon Monoxide (CO), nitrogen dioxide (NO₂), nitrogen monoxide (NO), sulfur dioxide (SO₂), particulate matter smaller than 10 microns in size (PM₁₀) and 2.5 microns in size (PM_{2.5}) and various reactive organic gases (ROG). Note that a mixture NO and NO₂ are both oxides of nitrogen and are commonly referred to as NO_x. Primary sources of air pollutants from the proposed project are expected to be from motor vehicles (primarily CO, NO_x, and ROG) during construction and operation, and fugitive dust during the construction phase. Examples of secondary pollutants include ozone (O₃), which is a product of the reaction between NO_x and ROG in the presence of sunlight. Other secondary pollutants include photochemical aerosols. Secondary pollutants represent a large air quality problem in the basin.

The National Ambient Air Quality Standards (NAAQS) were created by the Federal Clean Air Act of 1970. Medical evidence was used to identify six criteria pollutants. Those pollutants are: carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), Lead (Pb), Particulates less than 10 microns (PM₁₀ and PM_{2.5}) and sulfur dioxide (SO₂). NAAQS were established for those pollutants and the State of California has also adopted those same six pollutants; however, the State has adopted different standards. Those six pollutants as well as ROG and their descriptions are as follows:

- **Carbon Monoxide (CO):** A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing fuels (e.g. gasoline or diesel fuel). CO levels tend to be highest during the winter months, when the meteorological conditions favor the accumulation of the pollutants.
- **Ozone (O₃):** A photochemical oxidant that is formed when ROG and NO_x (both byproducts of internal combustion engines) react in the presence of ultraviolet sunlight. Ozone is a very energetic combination of three oxygen atoms that, when it comes into contact with a surface, releases its force as chemical energy. When this happens to biological systems (i.e., the respiratory tract), this energy can cause damage to sensitive tissues in the upper and lower airways. The conditions within the region are ideal for accumulating O₃.
- **Oxides of Nitrogen (NO_x):** The two important forms of NO_x in air pollution are NO and NO₂. NO is from as a byproduct of fuel combustion and quickly reacts with oxygen to form NO₂. NO_x is a mixture of NO and NO₂ in the atmosphere. The major concern with NO_x emissions is mainly due to their contribution to the formation of O₃ and particulate matter.

- **Reactive Organic Gases (ROG):** Gaseous emissions that react with oxides of nitrogen to form ozone. ROGs are not listed as criteria pollutants, and therefore, there are no state or federal ambient air quality standards for them. Though there is no direct standard for ROGs, they are regulated because they are involved in chemical reactions that contribute to the formation of ozone. In addition, ROGs contribute to higher PM_{10} concentrations and lower visibility levels. Health effects can occur from exposures to high concentrations of ROGs, in particular, reduced oxygen uptake.
- **Sulfur Dioxide (SO_2):** Sulfur Dioxide is a colorless, pungent gas formed by the combustion of sulfur containing fossil fuels. SO_2 is a precursor to sulfate and PM_{10} . Exposure to sulfur dioxide, especially sensitive populations, can result in irritation of existing cardiovascular disease and respiratory illness. Symptoms include wheezing, shortness of breath and chest tightness, especially during exercise, and by people with asthma.
- **Lead (Pb):** Lead concentrations have not exceeded state or federal standards in the region since 1982. Lead can accumulate in bones, soft tissue, and blood and can damage the kidneys, liver, and nervous system and can result in learning disabilities, seizures and death.
- **Suspended Particulate Matter (PM_{10} and $PM_{2.5}$):** PM_{10} refers to particulate matter that is 10 microns or less in diameter (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. Particulate matter arises from sources such as road dust, diesel soot, erosion of soil, combustion particles (ashes and soot), and tire and brake abrasion. Particulate matter is often times small enough to enter into the lungs. Breathing particulate matter can aggravate asthma, increase coughing and difficult and painful breathing, can be linked to chronic bronchitis, decreases lung function, and can lead to premature death (EPA 2005).

Table 2 shows the State and federal ambient air quality standards, which establish the context for local air quality management plans.

Table 2: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O ₃)	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	0.12 ppm (235 µg/m ³)	Same as Primary Standard	Ethylene Chemiluminescence
	8 Hour	—		0.08 ppm (157 µg/m ³)		
Respirable Particulate Matter (PM ₁₀)	Annual Geo- metric Mean	30 µg/m ³	Gravimetric or Beta Attenuation	—	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	24 Hour	50 µg/m ³		150 µg/m ³		
	Annual Arithmetic Mean	—		50 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24 Hour	—	Gravimetric or Beta Attenuation	65 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³		15 µg/m ³		
Nitrogen Dioxide (NO ₂)	Annual Arithmetic Mean	—	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m ³)		—		
Carbon Monoxide (CO)	8 hour	9.0 ppm (10 mg/m ³)	Non-dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—		
Lead	30 Days average	1.5 µg/m ³	AIHL Method 54 (12/74) Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³	Same as Primary Standard	

Table 2 (Cont.): Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Sulfur Dioxide (SO ₂)	Annual Arithmetic Mean	—	Fluorescence	0.030 ppm (80 µg/m ³)	—	Pararosaniline
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (365 µg/m ³)	—	
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	1 Hour	0.25 ppm (655 µg/m ³)		—	—	
Visibility Reducing Particles	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. Method: ARB Method V (8/18/89).		No Federal Standards		
Sulfates	24 Hour	25 µg/m ³	Turbidimetric Barium Sulfate (AIHL Method 61 (2/76))			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Cadmium Hydroxide STRactan			
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			
Source: California Air Resources Board (7/09/03)						

Air basins where ambient air quality standards are exceeded are called “non-attainment” areas. If standards are met, they are designated as “attainment” areas. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered “unclassified.” Federal “non attainment” areas are considered severe, serious, or moderate as a function of deviation from standards. The current attainment designations for the project area are shown in Table 3. As shown, MDAB is currently in severe nonattainment for 1 hour ozone federal standards and serious nonattainment for federal PM₁₀ standards. The MDAB is also in moderate nonattainment for the one hour State ozone standard and non attainment for State standards for both PM₁₀ and PM_{2.5}.

Table 3: Federal and State AAQS Attainment Status

Pollutant	Averaging Time	State Status	Federal Status
Ozone	1 Hour	Moderate Non Attainment	Severe Non Attainment
Ozone	8 Hour	--	Unclassified
CO	1 Hour and 8 Hour	Attainment	Attainment
NO ₂	1 Hour and Annual	Attainment	Attainment
SO ₂	1 Hour and 24 Hour	Attainment	Attainment
PM ₁₀	24 Hour and Annual	Non Attainment	Serious Non Attainment
PM _{2.5}	24 Hour and Annual	Unclassified	Unclassified
Visibility Reducing Particles	8 Hour	Unclassified	--
Lead	30 Day and Quarter Year	Attainment	Attainment
Sulfates	24 Hour	Attainment	--
Hydrogen Sulfide	1 Hour	Unclassified	--
Vinyl Chloride	24 Hour	Unclassified	--
Source: California Air Resources Board			

The MDAB is in nonattainment for the federal and state AAQS for PM₁₀ and ozone, and for the state AAQS for PM_{2.5}. For the purpose of reaching attainment for the state and federal air quality standards for PM₁₀, the MDAQMD prepared the Final Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan (MDAQMD 2005) for the MDAB and submitted it to the state for inclusion into the State Implementation Plan (SIP) for California. This document was adopted by the MDAQMD in 1995 in order to meet the 1990 Federal Clean Air Act requirements. The document recognizes that the principle cause for local PM₁₀ emissions relates to vehicle use on the many unpaved roadways in the region. Specifically, there are over 4,000 miles of unpaved roadways in the region. Many of these roadways are used regularly. An estimated 50,800 tons of PM₁₀ (48% of the total) was emitted in 1990 from these sources. Other major sources include wind erosion from roadways and vacant lots, construction and demolition, and Bureau of Land Management (BLM) land activity (Stoddard Valley, Johnson Valley, Rasor, and El Mirage). Various rules were already in place to reduce PM₁₀ emissions, however, the 1995 plan focused on change of regulatory controls focused on four major source categories: (1) industrial activities, (2) construction/demolition activities, (3) disturbed areas, and (4) unpaved road travel. The attainment date was set for the year 2000, which has come and gone. The region is still not in attainment for PM₁₀.

The MDAQMD also published an attainment plan for ozone for state and federal standards. The MDAQMD 2004 Ozone Attainment Plan (State and Federal) was adopted in April 2004. The attainment plan recognizes one of the major ozone sources in the region is from the Los Angeles Basin which is not a part of the MDAB. The ozone is transported into the region through the passes by prevailing winds. The plan states that, without this transported pollution, the region would be in attainment for ozone.

The plan states that ozone levels have been reduced significantly in the past decade, and in fact, the more isolated areas, such as the station in Twenty-Nine Palms near the project area, are currently in attainment for the one hour NAAQS for ozone. According to the ozone attainment plan, the current MDAQMD set of rules and regulations represents all feasible control measures for MDAQMD sources. The MDAQMD has in place Reasonably Available Control Technology (RACT) requirements for all applicable sources, as well as a New Source Review program. The MDAQMD does not propose any additional control as the MDAQMD has in place all applicable RACT rules, and is achieving the CAAQS and NAAQS by the earliest practicable date not as a result of local reductions, but as a result of reductions occurring upwind. The MDAQMD will experience additional future emission reductions resulting from existing and proposed Federal and State control measures affecting mobile and area sources.

State law requires a five percent per year reduction in ozone precursors (NO_x and ROG) relative to 1990. This equates to an 85% reduction by 2007. MDAQMD is not meeting this requirement, although significant reductions have been realized relative to 1990 levels. Meeting these reductions would require complete shutdown of all sources under the MDAQMD jurisdiction, and substantial reductions from mobile sources and other sources not under the MDAQMD's jurisdiction, which is not feasible. Modeling for future emission levels was completed by the South Coast Air Quality Management District (SCAQMD) using the USEPA and CARB approved Urban Airshed Model (UAM). SCAQMD included the MDAQMD within its domain. Based on this modeling, it was determined that the MDAQMD would reach attainment for the one-hour ozone NAAQS (127ppb) in 2007, and will achieve progress in attaining the ozone CAAQS (94 ppb) by 2007.

Various rules have been developed over the years for the purpose of reaching attainment of the State and Federal air quality act. MDAQMD rules and regulations that apply to this project include MDAQMD Rule 403 which governs emissions of fugitive dust. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activities when instantaneous wind speeds exceed 25 mph

or when the average wind speed is greater than 15 mph (the average wind speed determination shall be on a 15 minute average at the nearest air-monitoring station or by wind instrument located at the site being check) and establishing a permanent stabilizing cover on finished sites.

Rule 1103 governs the sale, use, and manufacturing of asphalt and limits the ROG content in asphalt used in the MDAB. This rule applies to asphalt sold at Home Depot, as well as asphalt used during the construction of the project.

Rule 1113 governs the sale, use and manufacturing of architectural coating and limits the ROG content in paints and paint solvents. This rule applies to architectural coatings sold at the Home Depot, as well as the paints used during construction of the buildings.

SECTION 3: EMISSIONS ESTIMATES

3.1 - THRESHOLDS OF SIGNIFICANCE

The following criteria for establishing the significance of potential impacts on air quality were derived from the CEQA guidelines (Appendix G). A significant impact would occur if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or protected 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 concentrations; or
- Create objectionable odors affecting a substantial number of people.

While the final determination of whether or not a project is significant is within the purview of the lead agency pursuant to § 15064(b) of the State CEQA Guidelines, the MDAQMD recommends that the following quantitative air pollution thresholds be used by the lead agencies in determining whether the proposed project could result in a significant impact. If the lead agency finds that the proposed project has the potential to exceed these air pollution thresholds, the project should be considered significant. These thresholds have been defined by MDAQMD for the Mojave Desert Air Basin based on scientific data the MDAQMD has obtained and factual data within the federal and state Clean Air Acts. Since the project is located within the Mojave Desert Air Basin and current air quality in the project area is typical of the air basin as a whole, these thresholds are considered valid and reasonable. Each of these threshold factors is discussed below.

3.1.1 - Thresholds for Emissions

The following significance thresholds have been established by MDAQMD. Projects in the MDAB region with emissions exceeding any of these thresholds should be considered significant:

- 137 pounds per day or 25 tons per year of NO_x;
- 137 pounds per day or 25 tons per year of Reactive Organic Gases (ROG);

- 548 pounds per day or 100 tons per year of CO;
- 137 pounds per day or 25 tons per year of SO_x; and
- 82 pounds per day or 15 tons per year of PM₁₀.

3.2 - IMPACTS

Air quality impacts can be described in a short-term and long-term perspective. Short-term impacts will occur during site grading and project construction. Long-term air quality impacts will occur once the project is in operation.

3.2.1 - Short-term Impacts

Short-term impacts will include fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities and operation of grading equipment during site preparation. Construction emissions can be caused by onsite or offsite emissions. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, ROG, and PM₁₀) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (PM₁₀) from disturbed soil. Offsite emissions are principally caused by motor vehicle exhaust from delivery vehicles, as well as worker traffic, but also include road dust (PM₁₀).

Major construction-related activities include the following:

- Grading/clearing;
- Excavation and earth moving for infrastructure construction of the utilities, channel, and dwelling unit foundations and footings;
- Asphalt paving of parking areas and roadway improvements; and
- Application of architectural coatings for the buildings.

Construction equipment such as scrapers, dozers, forklifts, backhoes, water trucks are expected to be used on the project site and will result in emissions consisting of CO, NO_x, ROG, SO_x, and PM₁₀. Other equipment that would be used during the finishing phase, paving operations, and application of architectural coatings and other building materials will release ROG emissions. Construction emission can vary substantially from day to day, depending on the level of activity, the specific type of operation, and prevailing weather conditions.

Construction emission analysis was performed using the California Air Resource Board URBEMIS2002 emissions inventory model. Model inputs include the projected type of land use, the year in which construction is to begin, and the length of the construction period. This model separates the construction process into three distinct phases: demolition, site preparation, and building erection/finishing and quantifies daily emissions for each phase for the various pollutants

Construction for project is proposed beginning as early as January 2007. The project site is currently vacant, so no demolition is necessary. The initial phase will include mass rough grading of approximately 18.36 acres, paving of parking areas, and construction of infrastructure for the retail buildings. Because this initial phase of construction includes mass grading and construction of the largest building, this phase of construction represents the “worst-case” for short-term air quality impacts and will be evaluated in this analysis. Table 4 shows the expected construction activities and equipment to be used in the initial phase of development for this project.

Table 4: Anticipated Construction Schedule and Equipment Inventory

Construction Phase/Activity	Construction Equipment	Start Date	Duration
Site Preparation			
Grading	Water Truck (1)* Graders (1) Rubber Tired Dozers (2) Tractors/Loaders/Backhoes (2) Scrapers (2) Worker Vehicles	Jan 2007	6 weeks
Building/Finishing			
Infrastructure; Home Depot building; utilities, etc	Other equipment (i.e. generators, compressors etc.) (7) Forklifts (15) Concrete/Industrial saws(4) Graders (1) Rubber Tired Dozers (2) Scrapers (2) Tractors/Loaders/Backhoes (2) Worker Vehicles	Jan 2007	3.5 months
Architectural Coating	Worker Vehicles	April 2007	3 weeks
Paving of Parking Areas	Graders (1) Off Highway Trucks (1) Paving Equipment (1) Pavers (1) Rollers (2) Worker Vehicles	April 2007	3 weeks
Total Construction Period		June 2007	5 months
Source: URBEMIS2002 *Note: The water truck was modeled by using “other equipment” in the URBEMIS Model.			

Certain assumptions were made in order to complete the analysis for construction emissions. Some of these assumptions were based on the project description and others were derived from the URBEMIS2002 modeling program. The assumptions from the project description include the following information for the Initial phase of development:

- Total Site Area: 29.3 acres
- Daily Area to be Disturbed: 7.33 acres
- MDAQMD Rule 403 Compliance:
- Area to be Paved: 16 acres

Table 5 through Table 7 show the anticipated short-term daily emissions and yearly emissions associated to the construction of the Home Depot Retail Center. The information is broken down based on activities and sources and the emissions are compared to emission thresholds for the construction phase. The URBEMIS2002 output is provided in Appendix A of this document.

Table 5: Estimated Short-Term Emissions (Grading)

Pollution Source	ROG	NOx	CO	SOx	PM ₁₀
Fugitive Dust From Grading (lbs/day)	NG ¹	NG ¹	NG ¹	NG1	315.51
Off-road Construction Equipment (lbs/day)	19.73	137.94	155.97	NG1	5.93
On road Construction Equipment (lbs/day)	0.00	0.00	0.00	0.00	0.00
Worker Traffic (lbs/day)	0.17	0.32	3.47	0.00	0.02
Emissions Totals (lbs/day)	19.90	138.26	159.44	0.00	321.46
Emissions Totals (tons/year)	0.33	2.28	2.62	0.00	5.31
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/qr
Notes: ¹ Criteria pollutants that have estimated negligible values are designated NG (negligible emissions). Bold type indicates emission estimates that are above the MDAQMD significance thresholds. See Appendix B for model output report.					

Table 6: Estimated Short-Term Emissions (Construction)

Pollution Source	ROG	NOx	CO	SOx	PM ₁₀
Off-road Construction Equipment (lbs/day)	48.31	336.05	380.43	NG ¹	13.88
Worker Traffic (lbs/day)	0.33	0.19	4.02	0.00	0.06
Emissions Totals (lbs/day)	48.64	336.24	384.45	NG ¹	13.94
Emissions Totals (tons/year)	1.07	7.39	8.46	0.00	0.31
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/qr
Notes: ¹ Criteria pollutants that have estimated negligible values are designated NG (negligible emissions). Bold type indicates emission estimates that are above the MDAQMD significance thresholds. See Appendix B for model output report.					

Table 7: Estimated Short-Term Emissions (Architectural Coatings and Paving)

Pollution Source	ROG	NOx	CO	SOx	PM ₁₀
Architectural Coatings					
Architectural Coatings Off-Gas (lbs/day)	439.01	NG ¹	NG ¹	NG ¹	NG ¹
Worker Traffic (lbs/day)	0.30	0.15	3.79	NG ¹	0.06
Paving					
Asphalt Off-Gas (lbs/day)	2.84	NG ¹	NG ¹	NG ¹	NG ¹
Off-road Construction Equipment (lbs/day)	9.50	59.20	79.61	NG ¹	2.18
On road Construction Equipment (lbs/day)	0.60	9.30	2.20	0.02	0.26
Worker Traffic (lbs/day)	0.04	0.02	0.54	0.00	0.01
Emissions Totals (lbs/day)	452.29	68.67	86.14	0.02	2.51
Emissions Totals (tons/year)	3.33	8.41	9.74	0.00	0.35
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/qr
Notes: ¹ Criteria pollutants that have estimated negligible values are designated NG (negligible emissions). Bold type indicates emission estimates that are above the MDAQMD significance thresholds. See Appendix B for model output report. Architectural coating and paving activities are anticipated to occur at the same time					

When emissions projections are compared with the MDAQMD thresholds for significance, it is shown that emissions exceed the applicable thresholds for ROG's, NO_x, and PM₁₀. Unmitigated,

these emissions would result in a significant short-term impact to air quality. Air quality impacts as a result of these emission exceedances is the adverse health effects to people associated with the air pollutant emissions. In general, the health effects of ambient ROG concentrations in the atmosphere are coughing, sneezing, headaches, weakness, laryngitis, and bronchitis.

The EPA has concluded that the only form of NO_x that exists at a level to cause public health concerns is nitrogen dioxide (NO₂) (EPA 1997). Those that may be more susceptible to NO₂ are people with pre-existing respiratory disease and children 5 to 12 years old (EPA 1997). The health effects of greatest concern are mild changes in airway responsiveness and pulmonary function (EPA 1997).

ROG and NO_x emissions are also precursors to ozone formation. The Mojave Desert Air Basin is designated as a non-attainment area for ozone. The health effects of ozone include lung inflammation and lung tissue damage and a reduction in the amount of air inhaled into the lungs. The greatest risk is to those who are more active outdoors during smoggy periods, such as children, athletes, and outdoor workers.

In addition, the Mojave Desert Air Basin is designated as a non-attainment area for PM-10. Epidemiological studies show that elevated levels of PM-10 produce increased hospital admissions, increased respiratory symptoms and disease such as asthma, decreased lung function especially in children, alterations in lung tissue structure, respiratory tract defense mechanisms, and premature death of individuals subjected to chronic exposure of high concentrations of PM-10.

These health effects described above constitute air quality impacts imposed upon people living in the air basin surrounding the project site

In an effort to reduce estimated NO_x, ROG, and PM-10 emissions, a range of mitigation measures were considered. Effective NO_x emission reduction measures include properly maintaining construction equipment (5% reduction), provide temporary traffic control (e.g., flag person) during transport activities (5% reduction), prohibit truck and equipment idling in excess of ten minutes (5% reduction), provide electric power on-site for industrial saws and handheld power tools (100% reduction for saws and power tools) and providing on-site meals for construction workers through the use of lunch wagons (1% reduction in vehicle commutes). The most effective reduction measures for ROG are the use of low emissions paint as required in MDAQMD Rule 1113 (reduce 5% of ROG emissions) and the use of either high volume low pressure (HVLP) spray equipment or hand application of the paint (minimum of 60% reduction in ROG emissions). An effective PM₁₀ reduction

measure would be to create and follow a dust control plan, which includes the application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. Other potential emission reduction measures were found to be ineffective or have minimal benefits. Table 8 shows the estimated total Short-term emissions with mitigation measures to reduce air emissions from the proposed project.

Table 8: Estimated Short-Term Emissions With Mitigation Measures Designed to Reduce Air Emissions

Pollution Source	ROG	NO _x	CO	SO _x	PM ₁₀
Grading					
Emissions Totals (lbs/day)	16.93	117.55	135.83	0.00	52.15
Construction (Building)					
Emissions Totals (lbs/day)	28.88	190.48	234.67	0.00	7.61
Construction (Including Painting and Asphalt Paving)					
Emissions Totals (lbs/day)	166.75	68.65	85.5	0.02	2.51
Total for all Phases (tons/year)	2.14	6.64	8.03	0.00	1.05
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/qr
Notes: Bold type indicates emission estimates that are above the MDAQMD significance thresholds. See Appendix B for model output report.					

Even with standard mitigation measures in place, ROG emissions will exceed the MDAQMD thresholds during painting and asphaltting. NO_x emissions will still exceed the MDAQMD thresholds during building. PM₁₀ emissions will be reduced below emission thresholds, and CO and SO_x will remain below both thresholds.

Aside from standard mitigation measures, additional, non-standard mitigation can be incorporated in to the project to reduce the impacts to less than significant. In order to reduce NO_x emissions, the phasing of construction can be changed. By not overlapping the grading and building phases, as originally proposed by the project proponent, NO_x emissions will be reduced to less than significant levels. In order to reduce ROG emissions, the architectural coatings phase can be extended to 4 or

more weeks, instead of the anticipated 3 weeks. These two recommendations together would reduce impacts to less than significant for construction of the proposed project.

NO_x emissions can also be reduced by using aqueous diesel fuel and cooled exhaust gas recirculation on all off-road vehicles.

To summarize, in order to reduce short-term impacts to less than significant levels, one of the following two scenarios should be incorporated into the proposed project:

- **Scenario 1:** The proposed project will be phased so that the grading phase of the construction and the building phase will not occur concurrently. Additionally the architectural coating phase will occur over no less than 4 weeks; or
- **Scenario 2:** Off-road vehicle will utilize aqueous diesel fuel and cooled exhaust gas recirculation. Additionally, the architectural coatings phase will occur over no less than 4 weeks.

With either of these two scenarios, and the above mentioned mitigation measures incorporated into the proposed project, the impacts to air quality will be less than significant as shown in Table 9 and Table 11.

Table 9: Emission Results with Scenario 1 Incorporated

Pollution Source	ROG	NOx	CO	SOx	PM10
Grading					
Emissions Totals (lbs/day)	16.93	117.55	135.83	0.00	52.15
Construction (Building)					
Emissions Totals (lbs/day)	13.87	86.69	115.15	0.00	3.16
Construction (Including Painting and Asphalt Paving)					
Emissions Totals (lbs/day)	116.04	68.65	85.5	0.02	2.51
Total for all Phases (tons/year)	1.88	4.83	6.03	0.00	0.96
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/year

Table 10: Emission Results with Scenario 2 Incorporated

Pollution Source	ROG	NOx	CO	SOx	PM ₁₀
Grading					
Emissions Totals (lbs/day)	1.84	60.80	13.26	0.00	47.39
Construction (Building)					
Emissions Totals (lbs/day)	3.17	98.37	26.83	0.00	0.48
Construction (Including Painting and Asphalt Paving)					
Emissions Totals (lbs/day)	116.04	68.65	85.5	0.02	2.51
Total for all Phases (tons/year)	1.32	3.67	1.50	0.00	0.81
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/year

In both mitigation scenarios emissions are below the thresholds established by MDAQMD and short-term impacts to air quality are less than significant.

3.2.2 - Long-term Impacts

Long-term emissions for the proposed development are considered for project build-out after all phases are completed and occupied. Emission sources consist of mobile emissions and stationary emissions. Mobile emissions estimates are derived from motor vehicle traffic. Stationary sources include consumer products, water and area heaters and other products that consume natural gas, as well as gasoline-powered landscaping equipment.

Mobile emissions from motor vehicles are the largest project-related air quality concern. The project is estimated to generate 5,695 daily trips.

Emissions associated with operation of the proposed project are shown in Tables. The emissions are compared to the MDAQMD CEQA emission significance levels. The output from the URBEMIS2002 model for operational emissions is available in Appendix A of the assessment document.

**Table 11: Estimated Daily Operational Emissions
(Pounds Per Day) for the Home Depot Retail Center***

Operational Activity	ROG	NOx	CO	SOx	Total PM ₁₀
Mobile Emissions					
	39.59	39.88	418.05	0.23	34.15
Area Sources					
Natural Gas	0.12	1.69	1.42	0.00	0.00
Landscaping	0.37	0.01	2.34	0.00	0.01
Consumer Products	0.00	NG ¹	NG ¹	NG ¹	NG ¹
Architectural Coatings	2.45	NG ¹	NG ¹	NG ¹	NG ¹
Total Daily Emissions (pounds)	42.54	41.58	421.81	0.23	34.16
Total Yearly Emissions (Tons)	7.83	8.62	78.04	0.04	6.23
MDAQMD Thresholds	137 lbs/day 25 tons/year	137 lbs/day 25 tons/year	548 lbs/day 100 tons/year	137 lbs/day 25 tons/year	82 lbs/day 15 tons/qtr
Source: URBEMIS2002					
Notes:					
¹ Criteria pollutants that have estimated negligible values are designated NG (negligible emissions). See Appendix B for model output report.					
Bold type indicates emission estimates that are above the MDAQMD significance thresholds.					
* Data represents summer emissions					

A comparison of the URBEMIS2002 outputs for operational emissions and the MDAQMD thresholds shows that MDAQMD thresholds for CO are exceeded as a result of the operation of the Home Depot Retail Center at build out. Air quality impacts as a result of this emission exceedance is the adverse health effects to people associated with CO. CO is taken into the lungs and absorbed by red blood cells. Once absorbed, CO binds to red blood cells forming carboxyhemoglobin (COHb). Such binding reduces the oxygen carrying capacity of blood and interferes with oxygen release in tissues. Health effects observed may include early onset of cardiovascular disease, behavioral impairment; decreased physical performance of individuals, and reduced birth weight in infants of women with chronic exposure to elevated concentrations of CO. These health effects constitute a long-term air quality impact imposed upon people living in the air basin.

Carbon Monoxide (CO) is a localized problem requiring additional analysis beyond total project emissions quantification. Projects with sensitive receptors or projects that could negatively impact levels of service (LOS) of existing roads need to use the California Department of Transportation Carbon Monoxide Protocol (hereafter referred to as the CO protocol) to determine the potential to create a CO hot spot. A CO hot spot is a localized concentration of CO that is above the State or

Federal 1-hour or 8-hour ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. The proposed project has the potential to negatively impact the LOS on adjacent roadways as well as have idling vehicles queued in the drive-thru area and therefore, requires a CO hotspot analysis.

The CO protocol recommends using CALINE4, the fourth generation California Line Source Roadway Dispersion Model developed by the California Department of Transportation (Caltrans), to estimate 1 hour CO concentrations from roadway traffic. Input data for this model includes meteorology, street network geometrics, traffic information, and emissions generation rates. Meteorological data required includes average temperatures, wind direction, sigma theta (standard deviation of wind direction), and wind speed. Street network geometrics require the use of an x,y coordinate system onto which the modeled roadways can be overlain in order to identify the relative location of traffic lanes to nearby receptors. Required traffic information was taken from the project specific traffic study and includes peak hour traffic volumes and levels of service. Emission factors were calculated in grams/mile/vehicle using the EMFAC2002 computer model.

According to the CO protocol, the CALINE4 model should simulate intersections by using a reduced speed to represent intersection speeds and waits. Therefore the slowing speed approaching an intersection was calculated at an average speed of 5 miles per hour (mph) within 249 feet. This value was derived by calculating the time it would take for a vehicle to slow from 28 mph at a rate of 4.6 mph/second and doubling this distance to account for any vehicles which have already stopped at the intersection. Vehicles outside of the 249-foot intersection approaches were assumed to be at a cruise speed of 28 mph as directed by the CO protocol for suburban traffic. The PM peak hour traffic volumes were used in this analysis because they represent the highest traffic volumes for both the project area and the proposed project.

Typically, the level of service (LOS) at an intersection producing a hot spot is at D or worse during the peak hour. The CO Protocol requires a Caline4 model of intersections projected to have an LOS D or worse and are adjacent to sensitive receptors, land uses that attract people or have sidewalks and crosswalks for pedestrian access. The traffic impact analysis (TIA) (AGA 2005) determined that the following intersections would operate at LOS D or worse in year 2007: Inca Trail at SR-62, SR-247 at Buena Vista Drive/Skyline Ranch Road, SR-247 at SR-62, Joshua Lane at Yucca Trail, and Avalon Avenue/Palomar Avenue at Yucca Trail. The TIA also recommends roadway improvements that would improve the LOS at each of these intersections to LOS C or better. With these improvements incorporated into the project no intersection will require a CO hot-spot analysis for the year 2007. The TIA also looked at traffic for the year 2030. With additional improvements incorporated (as

indicated in the traffic study) into the project, the following seven intersections will operate at LOS D or worse in the year 2030:

- Pioneertown Road/Deer Trail at SR-62,
- SR-247 at SR-62,
- Balsa Avenue/Hanford Avenue at SR-62,
- Avalon Avenue at Yucca Valley Retail Center (proposed),
- Avalon Avenue at Palisades Drive,
- Yucca Mesa Road/La Contenta Road at SR-62, and
- Sunny Vista Road at Alta Loma Road.

All of these intersections are anticipated to operate at LOS D with the recommended improvements. This information along with the traffic volumes for the AM and PM Peak hours were taken from the project specific traffic study (AGA 2005).

The model procedure that was followed combined the results of the traffic analysis assuming very restrictive dispersion conditions in order to generate a worst-case impact assessment. Output from the CALINE4 model is in 1-hour CO concentrations in parts per million (ppm) at the selected receptor locations. The predicted 1-hour CO concentrations were determined by adding the ambient background 1-hour CO concentrations to the model projected 1-hour CO concentration. The 8-hour CO concentration was estimated by multiplying the 1-hour model estimate by the persistence factor for the project area (0.6) and adding the ambient background 8-hour CO concentration. The results from this screening procedure are presented in Table 12. Please note that for each of the intersections, Table 12 shows the receptor with the highest concentration. Readings on all receptors can be found in Appendix C.

Table 12: Estimated CO Concentrations

Intersection	Traffic Generated CO Concentration ²	Distance to Intersection	Background CO Concentration ³	Estimated CO Concentration ⁴	State Standards	Federal Standards
Worst Case 1-hour Average CO Concentrations						
Pioneertown/Deer Trail at SR-62	0.80 ppm	Curbside	3.48 ppm	4.28 ppm	20 ppm	35 ppm
SR-247 at SR-62	1.00 ppm	Curbside	3.48 ppm	4.48 ppm	20 ppm	35 ppm
Balsa/Hanford Avenue at SR-62	0.90 ppm	Curbside	3.48 ppm	4.38 ppm	20 ppm	35 ppm

Table 12 (Cont.): Estimated CO Concentrations

Intersection	Traffic Generated CO Concentration ²	Distance to Intersection	Background CO Concentration ³	Estimated CO Concentration ⁴	State Standards	Federal Standards
Avalon Avenue at Yucca Valley Retail Center	0.40 ppm	Curbside	3.48 ppm	3.88 ppm	20 ppm	35 ppm
Avalon Avenue at Palisades Drive	0.30 ppm	Curbside	3.48 ppm	3.51 ppm	20 ppm	35 ppm
Yucca Mesa Road at SR-62	1.10 ppm	Curbside	3.48 ppm	4.58 ppm	20 ppm	35 ppm
Sunny Vista Road at Alta Loma Road	0.30 ppm	Curbside	3.48 ppm	3.51 ppm	20 ppm	35 ppm
Worst Case 8-hour Average CO Concentrations						
Pioneertown/Deer Trail at SR-62	0.48 ppm	Curbside	2.09 ppm	2.57 ppm	9 ppm	9.5 ppm
SR-247 at SR-62	0.60 ppm	Curbside	2.09 ppm	2.69 ppm	9 ppm	9.5 ppm
Balsa/Hanford Avenue at SR-62	0.54 ppm	Curbside	2.09 ppm	2.63 ppm	9 ppm	9.5 ppm
Avalon Avenue at Yucca Valley Retail Center	0.24 ppm	Curbside	2.09 ppm	2.33 ppm	9 ppm	9.5 ppm
Avalon Avenue at Palisades Drive	0.18 ppm	Curbside	2.09 ppm	2.27 ppm	9 ppm	9.5 ppm
Yucca Mesa Road at SR-62	0.66 ppm	Curbside	2.09 ppm	2.75 ppm	9 ppm	9.5 ppm
Sunny Vista Road at Alta Loma Road	0.18 ppm	Curbside	2.09 ppm	2.27 ppm	9 ppm	9.5 ppm
Notes: ¹ Generated from project specific Traffic Study. ² Maximum CO 8-hour average concentrations in 2003, 1-hour average estimated from 8-hour average. ³ Predicted using CALINE4 computer model ⁴ Traffic generated CO concentrations + background CO concentrations See Appendix E for CALINE4 output report						

Assuming worst-case conditions, the estimated 1-hour and 8-hour average CO concentrations in combination with background concentrations are below the State and Federal ambient air quality standards. No CO hot spots are anticipated as a result of traffic generated emissions by the proposed project in combination with other anticipated development in the area.

3.2.3 - Mitigation Measures Designed to Reduce Air Emissions

- During construction of the proposed improvements, the applicant will provide on-site meals to construction workers by arranging a lunch wagon to visit the construction site during work breaks particularly during the lunch hour.

- During construction of the proposed improvements, only low volatility paints and coatings as defined in MDAQMD Rule 1113 shall be used. All paints shall be applied using either high volume low pressure (HVLP) spray equipment or by hand application.
- Prior to construction of the proposed improvements, the project proponent will provide a traffic control plan that will describe in detail safe detours around the project construction site and provide temporary traffic control (i.e. flag person) during concrete transport and other construction related truck hauling activities.
- During construction of the proposed improvements, construction equipment will be properly maintained with all maintenance repairs completed at an offsite location and includes proper tuning and timing of engines.
- During construction of the proposed improvements, all contractors will be advised not to idle construction equipment on site for more than ten minutes.
- Prior to construction of the proposed improvements, the applicant will provide to the Town and MDAQMD with a project specific dust control plan for their review and approval. The dust control plan will be consistent with MDAQMD Rule 403 and will include Best Available Control Measures (BACM) that include application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when instantaneous wind speeds exceed 25 mph or average wind speeds exceed 15 mph (15 minute average) and establishing a permanent, stabilizing ground cover on finished sites. Implementation of the project specific dust control plan and BACMs will take place during construction of the proposed improvements.
- Construction and development shall be limited to 8 hours of work each day.
- The project proponent shall consult with the local transit authority to assess the feasibility of installing a bus stop onsite and the need for bus benches and bus stop signs.

In addition to the above mentioned mitigation measures, additional mitigation is required to reduce air quality impacts to less than significant. In order to reduce emission levels below MDAQMD, one of the following scenarios shall be implemented into the proposed project:

- **Scenario 1:** The proposed project will be phased so that the grading phase of the construction and the building phase will not occur concurrently. Additionally the architectural coating phase will occur over no less than 4 weeks; or

- **Scenario 2:** Off-road vehicle will utilize aqueous diesel fuel and cooled exhaust gas recirculation. Additionally, the architectural coatings phase will occur over no less than 4 weeks.

With either of these scenario incorporated into the proposed project, short term emissions that result from construction of the proposed project would be below the MDAQMD thresholds and would therefore be less than significant.

SECTION 4: FINDINGS AND CONCLUSIONS

4.1 - EVALUATION OF SIGNIFICANCE

Under the California Environmental Quality Act, air quality impacts may be considered significant if:

- **A project conflicts with, or obstructs implementation of, the Final Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan or the MDAQMD 2004 Ozone Attainment Plan (State and Federal).**

The Final Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan was developed in order to meet the 1990 Federal Clean Air Act requirements. The control measures and related reduction estimates are based on emissions projections for a future development scenario derived from land use, population, and employment characteristics. Additionally, the MDAQMD 2004 Ozone Attainment Plan (State and Federal) was developed to ensure that the air district the air basin into compliance with all federal and state air quality standards. The plan does not proposed any additional controls, as the MDAQMD has in place all reasonably available control technology. Accordingly, conformance with these plans for development of projects is determined by demonstrating compliance with local land use plans and/or population projections.

The proposed use is consistent with the underlying general plan and specific plan designations and zoning, which is consistent with the land use information that was the basis for the current plans. Additionally, a project-specific evaluation has been conducted and demonstrates that with mitigation incorporated into the proposed project, short-term and long term emissions will not exceed MDAQMD significance thresholds. For this reason, the project is considered consistent with the plans.

- **Project-generated emissions violate federal or state ambient air quality standards.**

The project area is designated a non-attainment area for ozone, and PM-10. The preceding analysis determined that with the mitigation measures in place short-term emissions of PM₁₀, NO_x, and ROG will be below the MDAQMD thresholds. NO_x and ROG emissions are ozone precursor pollutants. In that once NO_x and ROG emissions mix in the presence of sunlight, ozone will be formed. Since the emissions will be below the MDAQMD thresholds, the project will not violate federal or state ambient air quality standards.

- **A project contributes a cumulatively considerable net increase of a criteria pollutant in a non-attainment area.**

The project area is designated as a non-attainment area for ozone and PM-10. The project-specific evaluation of emissions presented in the preceding analysis supports a conclusion that the air quality impacts for the proposed project are significant on an individual project basis. CEQA Section 21100 (e) addresses evaluation of cumulative effects allowing the use of approved land use documents in a cumulative impact analysis. CEQA Guidelines Section 15064 (i)(3) further stipulates that for an impact involving a resource that is addressed by an approved plan or mitigation program, the lead agency may determine that a project's incremental contribution is not cumulatively considerable if the project complies with the adopted plan or program. In addressing cumulative effects for air quality, the "The Final Mojave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan" (PM₁₀ Attainment Plan) and the MDAQMD 2004 Ozone Attainment Plan are the most appropriate documents to use because they set forth a comprehensive program that will lead the air basin, including the project area, into compliance with all federal and state air quality standards and utilizes control measures and related emission reduction estimates based upon emissions projections for a future development scenario derived from land use, population, and employment characteristics defined in consultation with local governments.

Since the proposed project is consistent with the attainment plans and the project is not significant on an individual basis, it is appropriate to conclude that the project's incremental contribution to criteria pollutant emissions is not cumulatively considerable.

- **Project-generated emissions expose sensitive receptors to substantial pollutant concentrations.**

Local sensitive receptors include residential subdivisions north of SR-62, just across the roadway from the proposed project boundary, as well as homes west of the proposed project site. The prevailing winds travel from west to east.

Short-term emissions of NO_x and ROG emissions are above the significance thresholds. However, these emissions will mix with the surrounding air and disperse downwind of the project site. A project specific CO hot spot review presented in the preceding analysis, demonstrates that hot spots are not created as a result of the project. Recognizing the lack of CO hot spots, the dispersion of pollutants, the direction of the prevailing winds, and the distance to sensitive receptors, the project will not expose sensitive receptors to substantial pollutant concentrations.

- **Project creates objectionable odors affecting a substantial number of people.**

The nearest area with a substantial number of people is residential subdivisions across SR-62 from the project site and a homes west of the project site. The prevailing winds blow from the west to the east. The proposed project presents the potential for generation of objectionable odors in the form of diesel exhaust in the immediate vicinity of the site during construction of the project. These emissions are anticipated to dissipate quickly as they mix with the surrounding air and move away from the source.

Considering the prevailing winds, the dispersion of emissions, and the distance to substantial numbers of people, project impacts related to objectionable odors are less than significant

4.2 - CONCLUSIONS

The short-term emissions produced during construction of the project exceed MDAQMD thresholds without mitigation for ROG, NO_x, and PM₁₀. Emissions will be reduced through incorporation of mitigation measures and all emissions will be below MDAQMD thresholds.

Long-term emissions associated to the operation of the project, including mobile sources and area sources, will not exceed MDAQMD thresholds, even without mitigation.

A CO Hotspot Analysis demonstrates that the proposed project will not violate the State or Federal CO standards. In conclusion, potential impacts to air quality as a result of the project are not considered to be significant.

SECTION 5: REFERENCES

5.1 - REFERENCES CITED

The following documents were referred to as general information sources during preparation of this document. They are available for public review at the locations abbreviated after each listing and spelled out at the end of this section. Some of these documents are also available at public libraries and at other public agency offices.

- CARB 2002 California Air Resources Control Board. Software Users Guide: URBEMIS 2002 for Windows with Enhanced Construction Module, Version 7.5. May 2003. (Available at SCAQMD)
- CalTrans 1989 California Department of Transportation, Division of New Technology and Research. CALINE4 - A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways. June 1989 (Available at CalTrans)
- EPA 2005 Environmental Protection Agency, www.epa.gov/air/urbanair/6poll.html, Accessed 2August2005.
- MDAQMD 1995 Mojave Desert Air Quality Management District, *Final Mojave Desert Planning Area Federal Particulate Matter (PM10) Attainment Plan*, July 31, 1995 (Available online at http://www.mdaqmd.ca.gov/rules_plans/documents/MDPAPM10Plan.pdf)
- MDAQMD 2004 Mojave Desert Air Quality Management District, *MDAQMD 2004 Ozone Attainment Plan(State and Federal)*, April 26, 2004. (Available online at http://www.mdaqmd.ca.gov/rules_plans/documents/MDOzonePlanFinal.pdf)
- AGA 2005 Albert Grover & Associates, *Traffic Impact Analysis for the Proposed Home Depot Project on Twenty-Nine Palms Highway/SR62 East of Avalon Avenue*. July, 2005.

Location:

Caltrans

Planning

MDAQMD

Address:

California Department of Transportation, State Government Center, 464 West 4th Street, San Bernardino, CA 92401

Community Development Department 58928 Business Center Drive, Yucca Valley, CA 92284

Mojave Desert AQMD 14306 Park Ave Victorville, CA 92392

5.2 - DOCUMENT PREPARATION STAFF

Michael Brandman Associates

Michael Hendrix, Project Manager, Air Quality Analyst

James Hickman, Environmental Analyst

Appendix A: Use of URBEMIS 2002 in Determining Project Emissions

USE OF URBEMIS 2002 IN DETERMINING PROJECT EMISSIONS

URBEMIS is a computer program that can be used to estimate emissions associated with land use development projects in California. URBEMIS, which stands for Urban Emissions Model, was originally created by the California Air Resources Board in the early 1980s. Since that time it has undergone several revisions.

This version (URBEMIS 2002 for Windows version 8.7), distributed in May 2005 in coordination with the California Air Pollution Control Officers' Association (CAPCOA), is the most current version of the URBEMIS software available at this time. Several changes in the use and defaults of URBEMIS 2002 for Windows were initiated to reflect specific conditions unique to this project. The following discussion summarizes model use and model default modifications.

URBEMIS2002 was run four times with different inputs in order to analyze the project without mitigation, the project with standard mitigation, with standard mitigation and mitigation scenario 1, and the project with standard mitigation and mitigation scenario 2.

The first model run includes unmitigated short-term and long-term project impacts. This run did not include any mitigation, and included inputs from the project description.

The second model run included project short-term impacts with standard mitigation. In order to show mitigation for electrical hookups, the model was run without the anticipated electrical equipment, other changes made to the defaults made to represent the mitigation measures are as follows:

The third model run includes the changes for electrical hookups, and the following changes to defaults:

The fourth model run includes the changes for electrical hookups, and the following changes to defaults:

Appendix B: URBEMIS 2002 Output Files

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
Retail Center.urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day, unmitigated)	452.30	336.24	384.45	0.02	329.40	13.88	315.52
TOTALS (lbs/day, mitigated)	166.75	285.82	327.14	0.02	58.90	11.80	47.10

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	2.95	1.70	3.76	0.00	0.01
TOTALS (lbs/day, mitigated)	2.95	1.70	3.76	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	39.59	39.88	418.05	0.23	34.15
TOTALS (lbs/day, mitigated)	39.47	39.74	416.58	0.23	34.03

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	42.54	41.58	421.81	0.23	34.16
TOTALS (lbs/day, mitigated)	42.41	41.44	420.35	0.23	34.04

Home Depot Retail Center Without Mitigation (02August2005).txt

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center.urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	315.51	-	315.51
Off-Road Diesel	19.73	137.94	155.97	-	5.93	5.93	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.17	0.32	3.47	0.00	0.02	0.01	0.01
Maximum lbs/day	19.90	138.26	159.44	0.00	321.46	5.94	315.52
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	48.31	336.05	380.43	-	13.88	13.88	0.00
Bldg Const Worker Trips	0.33	0.19	4.02	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	439.01	-	-	-	-	-	-
Arch Coatings Worker Trips	0.30	0.15	3.79	0.00	0.06	0.00	0.06
Asphalt Off-Gas	2.84	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.60	9.30	2.20	0.02	0.26	0.25	0.01
Asphalt Worker Trips	0.04	0.02	0.54	0.00	0.01	0.00	0.01

	Home Depot Retail Center Without Mitigation (02August2005).txt						
Maximum lbs/day	452.30	336.24	384.45	0.02	13.96	13.88	0.08
Max lbs/day all phases	452.30	336.24	384.45	0.02	329.40	13.88	315.52

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Jan '07
 Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
 Start Month/Year for Phase 3: Feb '07
 Phase 3 Duration: 3.5 months
 Start Month/Year for SubPhase Building: Feb '07
 SubPhase Building Duration: 2 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Concrete/Industrial saws	84	0.730	8.0
1	Graders	174	0.575	8.0
7	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07

Page: 3
 08/02/2005 2:39 PM

SubPhase Architectural Coatings Duration: .67 months
 Start Month/Year for SubPhase Asphalt: Apr '07
 SubPhase Asphalt Duration: .67 months
 Acres to be Paved: 16

Home Depot Retail Center Without Mitigation (02August2005).txt

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Page: 4
08/02/2005 2:39 PM

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

Source	ROG	NOx	CO	S02	PM10
Natural Gas	0.12	1.69	1.42	0	0.00
Hearth - No summer emissions					
Landscaping	0.37	0.01	2.34	0.00	0.01
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	2.45	-	-	-	-
TOTALS(lbs/day, unmitigated)	2.95	1.70	3.76	0.00	0.01

Page: 5
08/02/2005 2:39 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Fast food rest. w/ drive	7.75	8.25	86.90	0.05	7.02
Regnl shop. center	8.72	9.26	96.79	0.05	8.11
Home improvement supersto	23.12	22.38	234.36	0.13	19.02
TOTAL EMISSIONS (lbs/day)	39.59	39.88	418.05	0.23	34.15

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Home Depot Retail Center Without Mitigation (02August2005).txt

Analysis Year: 2007 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		496.12 trips/1000 sq. ft	3.00	1,488.36
Regnl shop. center		44.32 trips/1000 sq. ft.	34.61	1,533.92
Home improvement supersto		29.80 trips/1000 sq. ft.	137.28	4,091.03
Sum of Total Trips				7,113.31
Total Vehicle Miles Travelled				22,474.24

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Home Depot Retail Center Without Mitigation (02August2005).txt

Fast food rest. w/ drive thru	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0
Home improvement superstore	2.0	1.0	97.0

Page: 6
08/02/2005 2:39 PM

Changes made to the default values for Land Use Trip Percentages

- The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15
- The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35
- The Diverted Trip % for Regnl shopping cntr changed from 35 to 28
- The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17
- The Diverted Trip % for Home improvement superstore changed from 40 to 38
- The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

- Site Grading Fugitive Dust Option changed from Level 1 to Level 2
- Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.
- Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
- Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
- Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps has been changed from off to on.
- Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily has been changed from off to on.
- Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph has been changed from off to on.
- Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan has been changed from off to on.
- Phase 2 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.

Home Depot Retail Center Without Mitigation (02August2005).txt

- Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint has been changed from off to on.
- Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Offgassing: Low emission asphalt has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

- The pass by trips option switch changed from off to on.
- The mitigation option switch changed from off to on.
- The operational emission year changed from 2005 to 2007.
- The Res and Non-Res Transit Service Mitigation changed from off to on.
- The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

Page: 7
08/02/2005 2:39 PM

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot Retail Center.urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

Home Depot Retail Center Without Mitigation (02August2005).txt

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

Source *** 2007***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	5.21	-	5.21
Off-Road Diesel	0.33	2.28	2.57	-	0.10	0.10	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	0.33	2.28	2.62	0.00	5.31	0.10	5.21
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	1.06	7.39	8.37	-	0.31	0.31	0.00
Bldg Const Worker Trips	0.01	0.00	0.09	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	3.24	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.02	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.07	0.44	0.59	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	4.40	7.90	9.10	0.00	0.33	0.33	0.00
Total all phases tons/yr	4.73	10.18	11.72	0.00	5.64	0.43	5.21

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Jan '07
 Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0

Home Depot Retail Center Without Mitigation (02August2005).txt

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
4	Concrete/Industrial saws	84	0.730	8.0
1	Graders	174	0.575	8.0
7	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07

Page: 8

08/02/2005 2:39 PM

SubPhase Architectural Coatings Duration: .67 months

Start Month/Year for SubPhase Asphalt: Apr '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Page: 9

Home Depot Retail Center Without Mitigation (02August2005).txt

Home improvement superstore 29.80 trips/1000 sq. ft. 137.28 4,091.03

Sum of Total Trips 7,113.31
 Total Vehicle Miles Traveled 22,474.24

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20		1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10		3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10		1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10		1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10		0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40		0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00		0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90		0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00		0.00	0.00	100.00
Urban Bus	0.10		0.00	0.00	100.00
Motorcycle	1.70		82.40	17.60	0.00
School Bus	0.10		0.00	0.00	100.00
Motor Home	1.20		8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Fast food rest. w/ drive thru	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0
Home improvement superstore	2.0	1.0	97.0

Page: 11
 08/02/2005 2:39 PM

Changes made to the default values for Land Use Trip Percentages

Home Depot Retail Center Without Mitigation (02August2005).txt

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15
The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35
The Diverted Trip % for Regnl shopping cntr changed from 35 to 28
The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17
The Diverted Trip % for Home improvement superstore changed from 40 to 38
The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control
Plan

has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Home Depot Retail Center Without Mitigation (02August2005).txt

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: Low emission asphalt
has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

The operational emission year changed from 2005 to 2007.

The Res and Non-Res Transit Service Mitigation changed from off to on.

The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot and
Wal Mart.urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	6.64	3.97	7.22	0.00	0.02
TOTALS (lbs/day, mitigated)	6.64	3.97	7.22	0.00	0.02

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	128.28	129.42	1,356.85	0.73	109.63
TOTALS (lbs/day, mitigated)	127.81	128.91	1,351.49	0.73	109.20

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	134.92	133.39	1,364.07	0.73	109.65
TOTALS (lbs/day, mitigated)	134.45	132.89	1,358.71	0.73	109.22

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot and
Wal Mart.urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)					
Source	ROG	NOx	CO	S02	PM10
Natural Gas	0.29	3.95	3.32	0	0.01
Hearth - No summer emissions					
Landscaping	0.62	0.02	3.90	0.00	0.01
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	5.73	-	-	-	-
TOTALS(lbs/day, unmitigated)	6.64	3.97	7.22	0.00	0.02

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)					
Source	ROG	NOx	CO	S02	PM10
Natural Gas	0.29	3.95	3.32	0	0.01
Hearth - No summer emissions					
Landscaping	0.62	0.02	3.90	0.00	0.01
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	5.73	-	-	-	-
TOTALS (lbs/day, mitigated)	6.64	3.97	7.22	0.00	0.02

Area Source Mitigation Measures

Page: 3
 08/02/2005 2:36 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Fast food rest. w/ drive	18.09	19.24	202.76	0.11	16.39
Free-standing discount st	69.73	71.79	751.60	0.41	61.47
Regnl shop. center	8.79	9.45	98.79	0.06	8.32
Home improvement supersto	23.12	22.38	234.36	0.13	19.02
Gasoline/service station	8.54	6.56	69.33	0.03	4.43
TOTAL EMISSIONS (lbs/day)	128.28	129.42	1,356.85	0.73	109.63

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		496.12 trips/1000 sq. ft.	7.00	3,472.84
Free-standing discount st		56.02 trips/1000 sq. ft.	229.00	12,828.58
Regnl shop. center		44.32 trips/1000 sq. ft.	34.61	1,533.92
Home improvement supersto		29.80 trips/1000 sq. ft.	137.28	4,091.03
Gasoline/service station		162.78 trips/Pumps	12.00	1,953.36
Sum of Total Trips				23,879.73
Total Vehicle Miles Traveled				72,137.16

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent	Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20		1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10		3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10		1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10		1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10		0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40		0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00		0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90		0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00		0.00	0.00	100.00
Urban Bus	0.10		0.00	0.00	100.00
Motorcycle	1.70		82.40	17.60	0.00
School Bus	0.10		0.00	0.00	100.00
Motor Home	1.20		8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Free-standing discount store				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0

Page: 4
08/02/2005 2:36 PM

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Fast food rest. w/ drive	18.01	19.16	201.87	0.11	16.32
Free-standing discount st	69.48	71.52	748.69	0.41	61.23
Regnl shop. center	8.76	9.41	98.41	0.05	8.29
Home improvement supersto	23.04	22.29	233.45	0.13	18.95
Gasoline/service station	8.51	6.53	69.07	0.03	4.41
TOTAL EMISSIONS (lbs/day)	127.81	128.91	1,351.49	0.73	109.20
PERCENTAGE REDUCTION %	0	0	0	0	0

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive (Worker Trip Rate: 489.35)		494.38 trips/1000 sq. ft	7.00	3,460.69
Free-standing discount st		55.82 trips/1000 sq. ft.	229.00	12,783.68

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

(Worker Trip Rate: 55.26)		
Regnl shop. center	44.16 trips/1000 sq. ft.	34.61 1,528.55
(Worker Trip Rate: 43.72)		
Home improvement supersto	29.70 trips/1000 sq. ft.	137.28 4,076.71
(Worker Trip Rate: 29.39)		
Gasoline/service station	162.21 trips/Pumps	12.00 1,946.52
(Worker Trip Rate: 160.56)		

Sum of Total Trips 23,796.15
 Total Vehicle Miles Travelled 71,851.97

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Fast food rest. w/ drive thru	5.0	2.5	92.5
Free-standing discount store	2.0	1.0	97.0
Regnl shop. center	2.0	1.0	97.0
Home improvement superstore	2.0	1.0	97.0
Gasoline/service station	2.0	1.0	97.0

Page: 5
08/02/2005 2:36 PM

MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures
=====

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.35%

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 21

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 1.02%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Secure Bike Parking' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Page: 6
08/02/2005 2:36 PM

Changes made to the default values for Land Use Trip Percentages

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15

The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35

The Diverted Trip % for Discount club changed from 40 to 28

The Pass-By Trip % for Discount club changed from 5 to 17

The Diverted Trip % for Home improvement superstore changed from 40 to 38

The Pass-By Trip % for Home improvement superstore changed from 15 to 17

The Diverted Trip % for Gas/service station changed from 40 to 24

The Pass-By Trip % for Gas/service station changed from 40 to 56

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

The operational emission year changed from 2005 to 2007.

The Res and Non-Res Transit Service Mitigation changed from off to on.

The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

Page: 7

08/02/2005 2:36 PM

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot and
 WalMart.urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Tons/Year)

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Unmitigated)						
Source	ROG	NOx	CO	SO2	PM10	
Natural Gas	0.05	0.72	0.61	0.00	0.00	
Hearth	0.00	0.00	0.00	0.00	0.00	
Landscaping	0.06	0.00	0.35	0.00	0.00	
Consumer Prdcts	0.00	-	-	-	-	
Architectural Coatings	0.76	-	-	-	-	
TOTALS (tpy, unmitigated)	0.86	0.72	0.96	0.00	0.00	

AREA SOURCE EMISSION ESTIMATES (Tons per Year, Mitigated)						
Source	ROG	NOx	CO	SO2	PM10	
Natural Gas	0.05	0.72	0.61	0	0.00	
Hearth	0.00	0.00	0.00	0.00	0.00	
Landscaping	0.06	0.00	0.35	0.00	0.00	
Consumer Prdcts	0.00	-	-	-	-	
Architectural Coatings	0.76	-	-	-	-	

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt
 TOTALS (tpy, mitigated) 0.86 0.72 0.96 0.00 0.00

Area Source Mitigation Measures

Page: 8
 08/02/2005 2:36 PM

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Fast food rest. w/ drive	3.49	4.01	37.63	0.02	2.99
Free-standing discount st	13.22	14.96	139.50	0.07	11.22
Regnl shop. center	1.66	1.97	18.22	0.01	1.52
Home improvement supersto	4.31	4.66	43.57	0.02	3.47
Gasoline/service station	1.65	1.35	13.45	0.01	0.81
TOTAL EMISSIONS (tons/yr)	24.33	26.95	252.36	0.12	20.01

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		496.12 trips/1000 sq. ft	7.00	3,472.84
Free-standing discount st		56.02 trips/1000 sq. ft.	229.00	12,828.58
Regnl shop. center		44.32 trips/1000 sq. ft.	34.61	1,533.92
Home improvement supersto		29.80 trips/1000 sq. ft.	137.28	4,091.03
Gasoline/service station		162.78 trips/Pumps	12.00	1,953.36
Sum of Total Trips				23,879.73
Total Vehicle Miles Travelled				72,137.16

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Fast food rest. w/ drive thru	5.0	2.5	92.5
Free-standing discount store	2.0	1.0	97.0
Regnl shop. center	2.0	1.0	97.0
Home improvement superstore	2.0	1.0	97.0
Gasoline/service station	2.0	1.0	97.0

Page: 9

08/02/2005 2:36 PM

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Fast food rest. w/ drive	3.47	3.99	37.46	0.02	2.98

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

Free-standing discount st	13.17	14.90	138.96	0.07	11.17
Regnl shop. center	1.65	1.96	18.15	0.01	1.51
Home improvement supersto	4.30	4.64	43.40	0.02	3.46
Gasoline/service station	1.65	1.35	13.40	0.01	0.81
TOTAL EMISSIONS (tons/yr)	24.24	26.84	251.37	0.12	19.93
PERCENTAGE REDUCTION %	0	0	0	0	0

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007

Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		496.12 trips/1000 sq. ft	7.00	3,472.84
Free-standing discount st		56.02 trips/1000 sq. ft.	229.00	12,828.58
Regnl shop. center		44.32 trips/1000 sq. ft.	34.61	1,533.92
Home improvement supersto		29.80 trips/1000 sq. ft.	137.28	4,091.03
Gasoline/service station		162.78 trips/Pumps	12.00	1,953.36
		Sum of Total Trips		23,879.73
		Total Vehicle Miles Travelled		72,137.16

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Free-standing discount store				2.0	1.0	97.0
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0
Gasoline/service station				2.0	1.0	97.0

Page: 10
08/02/2005 2:36 PM

MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures

=====

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.35%

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 21

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 1.02%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Secure Bike Parking' measure was selected

Home Depot and Wal Mart With and Without Mitigation (02August2005).txt

The 'Information provided on Transportation Alternatives' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Page: 11

08/02/2005 2:36 PM

Changes made to the default values for Land Use Trip Percentages

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15

The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35

The Diverted Trip % for Discount club changed from 40 to 28

The Pass-By Trip % for Discount club changed from 5 to 17

The Diverted Trip % for Home improvement superstore changed from 40 to 38

The Pass-By Trip % for Home improvement superstore changed from 15 to 17

The Diverted Trip % for Gas/service station changed from 40 to 24

The Pass-By Trip % for Gas/service station changed from 40 to 56

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

The operational emission year changed from 2005 to 2007.

The Res and Non-Res Transit Service Mitigation changed from off to on.

The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
Retail Center (Mitigated_electricity).urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day, unmitigated)	452.30	224.07	275.66	0.02	324.40	8.88	315.52
TOTALS (lbs/day, mitigated)	166.75	190.48	234.67	0.02	54.65	7.55	47.10

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	2.95	1.70	3.76	0.00	0.01
TOTALS (lbs/day, mitigated)	2.95	1.70	3.76	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	39.59	39.88	418.05	0.23	34.15
TOTALS (lbs/day, mitigated)	39.47	39.74	416.58	0.23	34.03

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	42.54	41.58	421.81	0.23	34.16
TOTALS (lbs/day, mitigated)	42.41	41.44	420.35	0.23	34.04

Home Depot Retail Center With Mitigation (02August2005).txt

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center (Mitigated_electricty).urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	47.09	-	47.09
Off-Road Diesel	16.77	117.25	132.57	-	5.04	5.04	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.16	0.30	3.25	0.00	0.02	0.01	0.01
Maximum lbs/day	16.93	117.55	135.83	0.00	52.15	5.05	47.10
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	28.57	190.30	230.90	-	7.55	7.55	0.00
Bldg Const Worker Trips	0.31	0.18	3.77	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	153.65	-	-	-	-	-	-
Arch Coatings Worker Trips	0.25	0.13	3.18	0.00	0.06	0.00	0.06
Asphalt Off-Gas	2.70	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.60	9.30	2.20	0.02	0.26	0.25	0.01
Asphalt Worker Trips	0.04	0.02	0.51	0.00	0.01	0.00	0.01

	Home Depot Retail Center With Mitigation (02August2005).txt						
Maximum lbs/day	166.75	190.48	234.67	0.02	7.63	7.55	0.08
Max lbs/day all phases	166.75	190.48	234.67	0.02	54.65	7.55	47.10

Construction-Related Mitigation Measures

- Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
- Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
- Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
- Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
- Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
- Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
- Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 2: Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
- Phase 2: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
- Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
- Phase 3: Worker Trips: Traffic Control Plan

Page: 3
08/02/2005 2:34 PM

- Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
- Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
- Phase 3: Offgassing: HVLP Spray Equipment Low Emission Paint

Home Depot Retail Center With Mitigation (02August2005).txt

Percent Reduction(ROG 65.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)

Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan

Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)

Phase 3: Worker Trips: Traffic Control Plan

Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)

Phase 3: Offgassing: Low emission asphalt

Percent Reduction(ROG 5.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '07

Phase 2 Duration: 1.5 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07

SubPhase Architectural Coatings Duration: .67 months

Start Month/Year for SubPhase Asphalt: Apr '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Home Depot Retail Center With Mitigation (02August2005).txt

Page: 4
08/02/2005 2:34 PM

AREA SOURCE	EMISSION ESTIMATES (Summer Pounds per Day, Mitigated)	ROG	NOx	CO	S02	PM10
Natural Gas		0.12	1.69	1.42	0	0.00
Hearth - No summer emissions						
Landscaping		0.37	0.01	2.34	0.00	0.01
Consumer Prdcts		0.00	-	-	-	-
Architectural Coatings		2.45	-	-	-	-
TOTALS (lbs/day, mitigated)		2.95	1.70	3.76	0.00	0.01

Area Source Mitigation Measures

Page: 5
08/02/2005 2:34 PM

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Fast food rest. w/ drive	7.73	8.22	86.59	0.05	7.00
Regnl shop. center	8.69	9.22	96.45	0.05	8.08
Home improvement supersto	23.05	22.30	233.54	0.13	18.95
TOTAL EMISSIONS (lbs/day)	39.47	39.74	416.58	0.23	34.03
PERCENTAGE REDUCTION %	0	0	0	0	0

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Home Depot Retail Center With Mitigation (02August2005).txt

Summary of Land Uses:

Unit Type	Acreeage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		494.38 trips/1000 sq. ft	3.00	1,483.15
Regnl shop. center		44.16 trips/1000 sq. ft.	34.61	1,528.55
Home improvement supersto		29.70 trips/1000 sq. ft.	137.28	4,076.71
			Sum of Total Trips	7,088.41
			Total Vehicle Miles Traveled	22,395.58

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			

% of Trips - Commercial (by land use)

Fast food rest. w/ drive thru	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0
Home improvement superstore	2.0	1.0	97.0

Page: 6
08/02/2005 2:34 PM

MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures
=====

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.35%

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 21

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 0%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Information provided on Transportation Alternatives' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Page: 7
08/02/2005 2:34 PM

Changes made to the default values for Land Use Trip Percentages

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15

The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35

The Diverted Trip % for Regnl shopping cntr changed from 35 to 28

The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17

The Diverted Trip % for Home improvement superstore changed from 40 to 38

The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

Home Depot Retail Center With Mitigation (02August2005).txt

The user has overridden the Default Phase Lengths

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control
Plan

has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: Low emission asphalt
has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Home Depot Retail Center With Mitigation (02August2005).txt
 Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
 The mitigation option switch changed from off to on.
 The operational emission year changed from 2005 to 2007.
 The Res and Non-Res Transit Service Mitigation changed from off to on.
 The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

Page: 8
 08/02/2005 2:34 PM

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center (Mitigated_electricty).urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Tons/Year)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES MITIGATED (tons/year)

Source	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.78	-	0.78
Off-Road Diesel	0.28	1.94	2.18	-	0.08	0.08	0.00

Home Depot Retail Center With Mitigation (02August2005).txt

On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	0.28	1.94	2.23	0.00	0.86	0.08	0.78
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.63	4.19	5.08	-	0.17	0.17	0.00
Bldg Const Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	1.13	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.02	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.07	0.44	0.59	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	1.86	4.70	5.80	0.00	0.19	0.19	0.00
Total all phases tons/yr	2.14	6.64	8.03	0.00	1.05	0.27	0.78

Construction-Related Mitigation Measures

- Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
- Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
- Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
- Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
- Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
- Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
- Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 2: Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
- Phase 2: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
- Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
- Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan

Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
 Phase 3: Worker Trips: Traffic Control Plan

Page: 9
 08/02/2005 2:34 PM

Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
 Phase 3: Worker Trips: Traffic Control Plan
 Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
 Phase 3: Offgassing: HVLP Spray Equipment Low Emission Paint
 Percent Reduction(ROG 65.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
 Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
 Phase 3: Worker Trips: Traffic Control Plan
 Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
 Phase 3: Offgassing: Low emission asphalt
 Percent Reduction(ROG 5.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
 Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Jan '07
 Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
 Start Month/Year for Phase 3: Feb '07
 Phase 3 Duration: 3.5 months
 Start Month/Year for SubPhase Building: Feb '07
 SubPhase Building Duration: 2 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0

Home Depot Retail Center With Mitigation (02August2005).txt

2 Tractor/Loaders/Backhoes 79 0.465 8.0
 Start Month/Year for SubPhase Architectural Coatings: Apr '07
 SubPhase Architectural Coatings Duration: .67 months
 Start Month/Year for SubPhase Asphalt: Apr '07
 SubPhase Asphalt Duration: .67 months
 Acres to be Paved: 16
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Page: 10
 08/02/2005 2:34 PM

AREA SOURCE	EMISSION ESTIMATES (Tons per Year, Mitigated)				
Source	ROG	NOx	CO	S02	PM10
Natural Gas	0.02	0.31	0.26	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping	0.03	0.00	0.21	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.32	-	-	-	-
TOTALS (tpy, mitigated)	0.38	0.31	0.47	0.00	0.00

Area Source Mitigation Measures

Page: 11
 08/02/2005 2:34 PM

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	S02	PM10
Fast food rest. w/ drive	1.49	1.71	16.07	0.01	1.28
Regnl shop. center	1.64	1.92	17.81	0.01	1.47

	Home Depot Retail	Center With Mitigation	(02August2005).txt
Home improvement supersto	4.30	4.64	43.41 0.02 3.46
TOTAL EMISSIONS (tons/yr)	7.43	8.28	77.30 0.04 6.21
PERCENTAGE REDUCTION %	0	0	0 0 0

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		496.12 trips/1000 sq. ft	3.00	1,488.36
Regnl shop. center		44.32 trips/1000 sq. ft.	34.61	1,533.92
Home improvement supersto		29.80 trips/1000 sq. ft.	137.28	4,091.03
Sum of Total Trips				7,113.31
Total Vehicle Miles Travelled				22,474.24

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.20	1.80	97.80	0.40
Light Truck < 3,750 lbs	15.10	3.30	94.00	2.70
Light Truck 3,751- 5,750	16.10	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.10	1.40	95.80	2.80
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.40	0.00	50.00	50.00
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.10	0.00	0.00	100.00
Motorcycle	1.70	82.40	17.60	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.20	8.30	83.30	8.40

Travel Conditions

Home Depot Retail Center With Mitigation (02August2005).txt
 Residential Commercial

	Home- Work	Home- Shop	Home- Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Rural Trip Length (miles)	11.5	4.9	6.0	10.3	5.5	5.5
Trip Speeds (mph)	35.0	40.0	40.0	40.0	40.0	40.0
% of Trips - Residential	20.0	37.0	43.0			
% of Trips - Commercial (by land use)						
Fast food rest. w/ drive thru				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Home improvement superstore				2.0	1.0	97.0

Page: 12
 08/02/2005 2:34 PM

MITIGATION OPTIONS SELECTED

Non-Residential Mitigation Measures
 =====

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.35%
 Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 21
 The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
 The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 0%
 Note that the above percent is applied ONLY to worker trips.
 Inputs Selected:

The 'Information provided on Transportation Alternatives' measure was selected
 The 'Preferential Carpool/Vanpool Parking' measure was selected

Page: 13
 08/02/2005 2:34 PM

Home Depot Retail Center With Mitigation (02August2005).txt

Changes made to the default values for Land Use Trip Percentages

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15
The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35
The Diverted Trip % for Regnl shopping cntr changed from 35 to 28
The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17
The Diverted Trip % for Home improvement superstore changed from 40 to 38
The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Site Grading Fugitive Dust Option changed from Level 1 to Level 2
Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control
Plan
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.
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Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Home Depot Retail Center With Mitigation (02August2005).txt

Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: Low emission asphalt
has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

The operational emission year changed from 2005 to 2007.

The Res and Non-Res Transit Service Mitigation changed from off to on.

The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
Retail Center (Mitigated_electricty-includes change in phasing).urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day, unmitigated)	307.42	138.26	159.44	0.02	321.46	5.94	315.52
TOTALS (lbs/day, mitigated)	116.04	117.55	135.83	0.02	52.15	5.05	47.10

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	2.95	1.70	3.76	0.00	0.01
TOTALS (lbs/day, mitigated)	2.95	1.70	3.76	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	39.59	39.88	418.05	0.23	34.15
TOTALS (lbs/day, mitigated)	39.47	39.74	416.58	0.23	34.03

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	42.54	41.58	421.81	0.23	34.16
TOTALS (lbs/day, mitigated)	42.41	41.44	420.35	0.23	34.04

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center (Mitigated_electricty-includes change in phasing).urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Tons/Year)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (tpy, unmitigated)	4.11	5.59	6.98	0.00	5.43	0.22	5.21
TOTALS (tpy, mitigated)	1.88	4.83	6.03	0.00	0.96	0.18	0.78

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (tpy, unmitigated)	0.38	0.31	0.47	0.00	0.00
TOTALS (tpy, mitigated)	0.38	0.31	0.47	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (tpy, unmitigated)	7.45	8.31	77.57	0.04	6.23
TOTALS (tpy, mitigated)	7.43	8.28	77.30	0.04	6.21

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (tpy, unmitigated)	7.83	8.62	78.04	0.04	6.23
TOTALS (tpy, mitigated)	7.80	8.59	77.77	0.04	6.21

Page: 3
 08/08/2005 2:32 PM

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center (Mitigated_electricty-includes change in phasing).urb

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	315.51	-	315.51
Off-Road Diesel	19.73	137.94	155.97	-	5.93	5.93	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.17	0.32	3.47	0.00	0.02	0.01	0.01
Maximum lbs/day	19.90	138.26	159.44	0.00	321.46	5.94	315.52
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	15.95	101.78	131.04	-	3.65	3.65	0.00
Bldg Const Worker Trips	0.33	0.19	4.02	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	294.14	-	-	-	-	-	-
Arch Coatings Worker Trips	0.30	0.15	3.79	0.00	0.06	0.00	0.06
Asphalt Off-Gas	2.84	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.60	9.30	2.20	0.02	0.26	0.25	0.01
Asphalt Worker Trips	0.04	0.02	0.54	0.00	0.01	0.00	0.01
Maximum lbs/day	307.42	101.97	135.05	0.02	3.74	3.66	0.08
Max lbs/day all phases	307.42	138.26	159.44	0.02	321.46	5.94	315.52

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Jan '07
 Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07
 Phase 3 Duration: 3.5 months
 Start Month/Year for SubPhase Building: Feb '07
 SubPhase Building Duration: 2.5 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: May '07
 SubPhase Architectural Coatings Duration: 1 months
 Start Month/Year for SubPhase Asphalt: May '07
 SubPhase Asphalt Duration: .67 months
 Acres to be Paved: 16
 Off-Road Equipment

Page: 4
 08/08/2005 2:32 PM

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Source	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	47.09	-	47.09
Off-Road Diesel	16.77	117.25	132.57	-	5.04	5.04	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.16	0.30	3.25	0.00	0.02	0.01	0.01
Maximum lbs/day	16.93	117.55	135.83	0.00	52.15	5.05	47.10
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	13.56	86.51	111.38	-	3.10	3.10	0.00
Bldg Const Worker Trips	0.31	0.18	3.77	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	102.95	-	-	-	-	-	-
Arch Coatings Worker Trips	0.25	0.13	3.18	0.00	0.06	0.00	0.06
Asphalt Off-Gas	2.70	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.60	9.30	2.20	0.02	0.26	0.25	0.01
Asphalt Worker Trips	0.04	0.02	0.51	0.00	0.01	0.00	0.01
Maximum lbs/day	116.04	86.69	115.15	0.02	3.19	3.11	0.08
Max lbs/day all phases	116.04	117.55	135.83	0.02	52.15	5.05	47.10

Construction-Related Mitigation Measures

- Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 30.0%)
- Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 15.0%)
- Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 34.0%)
- Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 9.5%)
- Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 30.0%)
- Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 40.0%)

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
 Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
 Phase 2: Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
 Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
 Phase 2: Worker Trips: Traffic Control Plan
 Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
 Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
 Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
 Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
 Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
 Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
 Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
 Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
 Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
 Phase 3: Worker Trips: Traffic Control Plan
 Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
 Phase 3: Worker Trips: Traffic Control Plan
 Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
 Phase 3: Offgassing: HVLP Spray Equipment Low Emission Paint
 Percent Reduction(ROG 65.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
 Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
 Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
 Phase 3: Worker Trips: Traffic Control Plan

Page: 5
 08/08/2005 2:32 PM

Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
 Phase 3: Offgassing: Low emission asphalt
 Percent Reduction(ROG 5.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
 Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Jan '07
 Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2.5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: May '07

SubPhase Architectural Coatings Duration: 1 months

Start Month/Year for SubPhase Asphalt: May '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Page: 6

08/08/2005 2:32 PM

Changes made to the default values for Land Use Trip Percentages

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15

The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35

The Diverted Trip % for Regnl shopping cntr changed from 35 to 28

The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17

The Diverted Trip % for Home improvement superstore changed from 40 to 38

The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas has been changed from off to on.

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

- Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly has been changed from off to on.
- Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily has been changed from off to on.
- Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps has been changed from off to on.
- Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily has been changed from off to on.
- Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph has been changed from off to on.
- Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan has been changed from off to on.
- Phase 2 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
- Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint has been changed from off to on.
- Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
- Phase 3 mitigation measure Offgassing: Low emission asphalt has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

Home Depot Retail Center With Mitigation (Includes change in phasing).txt
 The operational emission year changed from 2005 to 2007.
 The Res and Non-Res Transit Service Mitigation changed from off to on.
 The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

Page: 7
 08/08/2005 2: 32 PM

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center (Mitigated_electricity-includes change in phasing).urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Tons/Year)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	5.21	-	5.21
Off-Road Diesel	0.33	2.28	2.57	-	0.10	0.10	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	0.33	2.28	2.62	0.00	5.31	0.10	5.21

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Phase 3 - Building Construction

Bldg Const Off-Road Diesel	0.44	2.80	3.60	-	0.10	0.10	0.00
Bldg Const Worker Trips	0.01	0.00	0.11	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	3.24	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.02	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.07	0.44	0.59	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	3.78	3.31	4.36	0.00	0.12	0.12	0.00
Total all phases tons/yr	4.11	5.59	6.98	0.00	5.43	0.22	5.21

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '07

Phase 2 Duration: 1.5 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2.5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: May '07

SubPhase Architectural Coatings Duration: 1 months

Start Month/Year for SubPhase Asphalt: May '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.78	-	0.78
Off-Road Diesel	0.28	1.94	2.18	-	0.08	0.08	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	0.28	1.94	2.23	0.00	0.86	0.08	0.78
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.37	2.38	3.06	-	0.08	0.08	0.00
Bldg Const Worker Trips	0.01	0.00	0.10	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	1.13	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.02	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.07	0.44	0.59	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	1.60	2.89	3.80	0.00	0.10	0.10	0.00
Total all phases tons/yr	1.88	4.83	6.03	0.00	0.96	0.18	0.78

Home Depot Retail Center With Mitigation (Includes change in phasing).txt
Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 2: Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 2: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 3: Offgassing: HVLP Spray Equipment Low Emission Paint
Percent Reduction(ROG 65.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Worker Trips: Traffic Control Plan

Page: 9
08/08/2005 2:32 PM

Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Offgassing: Low emission asphalt

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

Percent Reduction(ROG 5.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '07

Phase 2 Duration: 1.5 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2.5 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: May '07

SubPhase Architectural Coatings Duration: 1 months

Start Month/Year for SubPhase Asphalt: May '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Home Depot Retail Center With Mitigation (Includes change in phasing).txt

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15
The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35
The Diverted Trip % for Regnl shopping cntr changed from 35 to 28
The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17
The Diverted Trip % for Home improvement superstore changed from 40 to 38
The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control
Plan
has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan

Home Depot Retail Center With Mitigation (Includes change in phasing).txt
has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Offgassing: Low emission asphalt
has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

The operational emission year changed from 2005 to 2007.

The Res and Non-Res Transit Service Mitigation changed from off to on.

The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
Retail Center (Mitigated_electricty-includes aqueous diesel).urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Summer)

CONSTRUCTION EMISSION ESTIMATES

*** 2007 ***	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day, unmitigated)	307.42	224.07	275.66	0.02	324.40	8.88	315.52
TOTALS (lbs/day, mitigated)	116.04	98.37	85.49	0.02	49.53	2.43	47.10

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	2.95	1.70	3.76	0.00	0.01
TOTALS (lbs/day, mitigated)	2.95	1.70	3.76	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	39.59	39.88	418.05	0.23	34.15
TOTALS (lbs/day, mitigated)	39.47	39.74	416.58	0.23	34.03

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	S02	PM10
TOTALS (lbs/day, unmitigated)	42.54	41.58	421.81	0.23	34.16
TOTALS (lbs/day, mitigated)	42.41	41.44	420.35	0.23	34.04

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot
 Retail Center (Mitigated_electricty-includes_aqueous_diesel).urb
 Project Name: Home Depot Retail Center
 Project Location: South Coast Air Basin (Los Angeles area)
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	315.51	-	315.51
Off-Road Diesel	19.73	137.94	155.97	-	5.93	5.93	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.17	0.32	3.47	0.00	0.02	0.01	0.01
Maximum lbs/day	19.90	138.26	159.44	0.00	321.46	5.94	315.52
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	33.61	223.88	271.65	-	8.88	8.88	0.00
Bldg Const Worker Trips	0.33	0.19	4.02	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	294.14	-	-	-	-	-	-
Arch Coatings Worker Trips	0.30	0.15	3.79	0.00	0.06	0.00	0.06
Asphalt Off-Gas	2.84	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.60	9.30	2.20	0.02	0.26	0.25	0.01
Asphalt Worker Trips	0.04	0.02	0.54	0.00	0.01	0.00	0.01

	Home Depot Retail	Center With Mitigation	(Includes Aqueous Diesel)	.txt
Maximum lbs/day	307.42	224.07	275.66	0.02 8.96 8.88 0.08
Max lbs/day all phases	307.42	224.07	275.66	0.02 324.40 8.88 315.52

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
 Start Month/Year for Phase 2: Jan '07
 Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
 Start Month/Year for Phase 3: Feb '07
 Phase 3 Duration: 3.5 months
 Start Month/Year for SubPhase Building: Feb '07
 SubPhase Building Duration: 2 months
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07
 SubPhase Architectural Coatings Duration: 1 months

Page: 3
 08/08/2005 3:43 PM

Start Month/Year for SubPhase Asphalt: Apr '07
 SubPhase Asphalt Duration: .67 months
 Acres to be Paved: 16
 Off-Road Equipment

No.	Type	Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt	Horsepower	Load Factor	Hours/Day
1	Graders		174	0.575	8.0
1	Off Highway Trucks		417	0.490	8.0
1	Pavers		132	0.590	8.0
1	Paving Equipment		111	0.530	8.0
2	Rollers		114	0.430	8.0

CONSTRUCTION EMISSION ESTIMATES MITIGATED (lbs/day)

Source	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum lbs/day	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	47.09	-	47.09
Off-Road Diesel	1.68	60.50	13.26	-	0.28	0.28	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.16	0.30	3.25	0.00	0.02	0.01	0.01
Maximum lbs/day	1.84	60.80	16.51	0.00	47.39	0.29	47.10
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	2.86	98.19	23.09	-	0.42	0.42	0.00
Bldg Const Worker Trips	0.31	0.18	3.77	0.00	0.06	0.00	0.06
Arch Coatings Off-Gas	102.95	-	-	-	-	-	-
Arch Coatings Worker Trips	0.25	0.13	3.18	0.00	0.06	0.00	0.06
Asphalt Off-Gas	2.70	-	-	-	-	-	-
Asphalt Off-Road Diesel	9.50	59.20	79.61	-	2.18	2.18	0.00
Asphalt On-Road Diesel	0.60	9.30	2.20	0.02	0.26	0.25	0.01
Asphalt Worker Trips	0.04	0.02	0.51	0.00	0.01	0.00	0.01
Maximum lbs/day	116.04	98.37	85.49	0.02	2.51	2.43	0.08
Max lbs/day all phases	116.04	98.37	85.49	0.02	49.53	2.43	47.10

Construction-Related Mitigation Measures

Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 30.0%)
Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 15.0%)
Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 34.0%)
Phase 2: Off-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
Phase 2: Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
Percent Reduction(ROG 90.0% NOx 40.0% CO 90.0% SO2 0.0% PM10 85.0%)
Phase 2: Stockpiles: Cover all stock piles with tarps
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 2: Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 2: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Off-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
Phase 3: Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
Percent Reduction(ROG 90.0% NOx 40.0% CO 90.0% SO2 0.0% PM10 85.0%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch

Page: 4
08/08/2005 3:43 PM

Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 3: Offgassing: HVLP Spray Equipment Low Emission Paint
Percent Reduction(ROG 65.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Phase 3: Worker Trips: Traffic Control Plan

Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)

Phase 3: Offgassing: Low emission asphalt

Percent Reduction(ROG 5.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)

Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '07

Phase 2 Duration: 1.5 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07

SubPhase Architectural Coatings Duration: 1 months

Start Month/Year for SubPhase Asphalt: Apr '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Page: 5
08/08/2005 3:43 PM

Changes made to the default values for Land Use Trip Percentages

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15
The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35
The Diverted Trip % for Regnl shopping cntr changed from 35 to 28
The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17
The Diverted Trip % for Home improvement superstore changed from 40 to 38
The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths
Site Grading Fugitive Dust Option changed from Level 1 to Level 2
Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.
Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.
Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.
Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.
Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control
Plan
has been changed from off to on.
Phase 2 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint has been changed from off to on.
Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan has been changed from off to on.
Phase 3 mitigation measure Worker Trips: Traffic Control Plan has been changed from off to on.
Phase 3 mitigation measure Offgassing: Low emission asphalt has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2007.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

Page: 6
08/08/2005 3:43 PM

URBEMIS 2002 For Windows 8.7.0

File Name: S:\James\Projects\2790-0001 Yucca Valley Home Depot\Air Study\Home Depot Retail Center (Mitigated_electricty-includes aqueous diesel).urb
Project Name: Home Depot Retail Center
Project Location: South Coast Air Basin (Los Angeles area)
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

DETAIL REPORT
(Tons/Year)

Construction Start Month and Year: January, 2007
 Construction Duration: 5
 Total Land Use Area to be Developed: 29.3 acres
 Maximum Acreage Disturbed Per Day: 7.33 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 174893

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (tons/year)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2007***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	5.21	-	5.21
Off-Road Diesel	0.33	2.28	2.57	-	0.10	0.10	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	0.33	2.28	2.62	0.00	5.31	0.10	5.21
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.74	4.93	5.98	-	0.20	0.20	0.00
Bldg Const Worker Trips	0.01	0.00	0.09	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	3.24	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.04	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.02	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.07	0.44	0.59	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	4.08	5.44	6.72	0.00	0.22	0.22	0.00
Total all phases tons/yr	4.41	7.72	9.34	0.00	5.53	0.32	5.21

Phase 1 - Demolition Assumptions: Phase Turned OFF

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jan '07

Phase 2 Duration: 1.5 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07

SubPhase Architectural Coatings Duration: 1 months

Page: 7

08/08/2005 3:43 PM

Start Month/Year for SubPhase Asphalt: Apr '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

CONSTRUCTION EMISSION ESTIMATES MITIGATED (tons/year)

Source *** 2007***	ROG	NOx	CO	S02	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	0.00	-	0.00
Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	0.78	-	0.78
Off-Road Diesel	0.03	1.00	0.22	-	0.00	0.00	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00
Total tons/year	0.03	1.00	0.27	0.00	0.78	0.00	0.78
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	0.06	2.16	0.51	-	0.01	0.01	0.00
Bldg Const Worker Trips	0.01	0.00	0.08	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	1.13	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.02	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.07	0.44	0.59	-	0.02	0.02	0.00
Asphalt On-Road Diesel	0.00	0.07	0.02	0.00	0.00	0.00	0.00
Asphalt Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons/year	1.29	2.67	1.23	0.00	0.03	0.03	0.00
Total all phases tons/yr	1.32	3.67	1.50	0.00	0.81	0.03	0.78

Construction-Related Mitigation Measures

- Phase 2: Soil Disturbance: Apply soil stabilizers to inactive areas
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 30.0%)
- Phase 2: Soil Disturbance: Replace ground cover in disturbed areas quickly
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 15.0%)
- Phase 2: Soil Disturbance: Water exposed surfaces - 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% S02 0.0% PM10 34.0%)
- Phase 2: Off-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% S02 0.0% PM10 63.0%)
- Phase 2: Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
Percent Reduction(ROG 90.0% NOx 40.0% CO 90.0% S02 0.0% PM10 85.0%)
- Phase 2: Stockpiles: Cover all stock piles with tarps

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 9.5%)
Phase 2: Unpaved Roads: Water all haul roads 2x daily
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 30.0%)
Phase 2: Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 40.0%)
Phase 2: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 2: Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 2: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Off-Road Diesel Exhaust: Use aqueous diesel fuel
Percent Reduction(ROG 0.0% NOx 14.0% CO 0.0% SO2 0.0% PM10 63.0%)
Phase 3: Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
Percent Reduction(ROG 90.0% NOx 40.0% CO 90.0% SO2 0.0% PM10 85.0%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch
Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Worker Trips: Use shuttle to retail establishments @lunch

Page: 8
08/08/2005 3:43 PM

Percent Reduction(ROG 1.0% NOx 1.3% CO 1.3% SO2 1.3% PM10 1.3%)
Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 15.0% NOx 15.0% CO 15.0% SO2 15.0% PM10 15.0%)
Phase 3: Offgassing: HVLP Spray Equipment Low Emission Paint
Percent Reduction(ROG 65.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
Percent Reduction(ROG 0.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 3: Worker Trips: Traffic Control Plan
Percent Reduction(ROG 5.0% NOx 5.0% CO 5.0% SO2 5.0% PM10 5.0%)
Phase 3: Offgassing: Low emission asphalt
Percent Reduction(ROG 5.0% NOx 0.0% CO 0.0% SO2 0.0% PM10 0.0%)
Phase 1 - Demolition Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jan '07

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Phase 2 Duration: 1.5 months
 On-Road Truck Travel (VMT): 0
 Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions

Start Month/Year for Phase 3: Feb '07

Phase 3 Duration: 3.5 months

Start Month/Year for SubPhase Building: Feb '07

SubPhase Building Duration: 2 months

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
2	Other Equipment	190	0.620	8.0
15	Rough Terrain Forklifts	94	0.475	8.0
2	Rubber Tired Dozers	352	0.590	8.0
2	Scrapers	313	0.660	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Start Month/Year for SubPhase Architectural Coatings: Apr '07

SubPhase Architectural Coatings Duration: 1 months

Start Month/Year for SubPhase Asphalt: Apr '07

SubPhase Asphalt Duration: .67 months

Acres to be Paved: 16

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
1	Pavers	132	0.590	8.0
1	Paving Equipment	111	0.530	8.0
2	Rollers	114	0.430	8.0

Page: 9

08/08/2005 3:43 PM

Changes made to the default values for Land Use Trip Percentages

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

The Diverted Trip % for Fast food rest. w/ drive-thru changed from 40 to 15
The Pass-By Trip % for Fast food rest. w/ drive-thru changed from 10 to 35
The Diverted Trip % for Regnl shopping cntr changed from 35 to 28
The Pass-By Trip % for Regnl shopping cntr changed from 10 to 17
The Diverted Trip % for Home improvement superstore changed from 40 to 38
The Pass-By Trip % for Home improvement superstore changed from 15 to 17

Changes made to the default values for Construction

The user has overridden the Default Phase Lengths

Site Grading Fugitive Dust Option changed from Level 1 to Level 2

Phase 2 mitigation measure Soil Disturbance: Apply soil stabilizers to inactive areas
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Replace ground cover in disturbed areas quickly
has been changed from off to on.

Phase 2 mitigation measure Soil Disturbance: Water exposed surfaces - 2x daily
has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

Phase 2 mitigation measure Stockpiles: Cover all stock piles with tarps
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Water all haul roads 2x daily
has been changed from off to on.

Phase 2 mitigation measure Unpaved Roads: Reduce speed on unpaved roads to < 15 mph
has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 2 mitigation measure Off-Road Diesel Exhaust: Time and Tune engines Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 2 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use aqueous diesel fuel
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Use cooled exhaust gas recirculation(EGR)
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Use shuttle to retail establishments @lunch
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Home Depot Retail Center With Mitigation (Includes Aqueous Diesel).txt

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: HVLP Spray Equipment Low Emission Paint
has been changed from off to on.

Phase 3 mitigation measure Off-Road Diesel Exhaust: Time and Tune Reduce Idle Time Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Worker Trips: Traffic Control Plan
has been changed from off to on.

Phase 3 mitigation measure Offgassing: Low emission asphalt
has been changed from off to on.

Changes made to the default values for Area

The area source mitigation measure option switch changed from off to on.

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.

The mitigation option switch changed from off to on.

The operational emission year changed from 2005 to 2007.

The Res and Non-Res Transit Service Mitigation changed from off to on.

The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

Appendix C: CALINE4 Output Files

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 2

JOB: Yucca Vly Home Depot: Pioneer at SR-62
 RUN: Hour 1 (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)	* X	* Y	* Z
1. Recpt 1	*	-3	465	1.8
2. Recpt 2	*	12	465	1.8
3. Recpt 3	*	12	483	1.8
4. Recpt 4	*	-3	483	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* A	B	C	D	E	F	G	H
1. Recpt 1	* 87.	* .8	* .0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* 273.	* .7	* .0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	* 266.	* .7	* .0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	* 95.	* .8	* .0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	* I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
2. Recpt 2	* .0	.0	.0	.3	.0	.0	.0	.0	.2	.0	.0	.0
3. Recpt 3	* .0	.0	.0	.2	.0	.0	.0	.0	.2	.0	.0	.0
4. Recpt 4	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 2

JOB: Yucca Vly Home Depot: Hanford at SR-62
 RUN: Hour 1 (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)	* X	* Y	* Z
1. Recpt 1	*	-3	465	1.8
2. Recpt 2	*	12	465	1.8
3. Recpt 3	*	12	483	1.8
4. Recpt 4	*	-3	483	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* A	B	C	D	E	F	G	H
1. Recpt 1	* 87.	* .9 *	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* 273.	* .8 *	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	* 267.	* .8 *	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	* 95.	* .9 *	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	* I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
2. Recpt 2	* .0	.0	.0	.3	.0	.0	.0	.0	.2	.0	.0	.0
3. Recpt 3	* .0	.0	.0	.2	.0	.0	.0	.0	.3	.0	.0	.0
4. Recpt 4	* .0	.0	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 2

JOB: Yucca Vly Home Depot:SR-247 at SR-62
 RUN: Hour 1 (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)	* X	* Y	* Z
1. Recpt 1	*	-3	465	1.8
2. Recpt 2	*	12	465	1.8
3. Recpt 3	*	12	483	1.8
4. Recpt 4	*	-3	483	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* A	B	C	D	E	F	G	H
1. Recpt 1	* 87.	* .9 *	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* 275.	* 1.0 *	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	* 267.	* 1.0 *	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	* 95.	* .9 *	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	* I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
2. Recpt 2	* .0	.0	.0	.2	.0	.0	.0	.0	.3	.0	.1	.0
3. Recpt 3	* .0	.0	.0	.2	.0	.0	.0	.0	.3	.0	.1	.0
4. Recpt 4	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 2

JOB: Yucca Vly Home Depot:SR-247 at SR-62
 RUN: Hour 1 (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)	* X	* Y	* Z
1. Recpt 1	*	-3	465	1.8
2. Recpt 2	*	12	465	1.8
3. Recpt 3	*	12	483	1.8
4. Recpt 4	*	-3	483	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* A	B	C	D	E	F	G	H
1. Recpt 1	* 87.	* .9 *	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* 275.	* 1.0 *	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	* 267.	* 1.0 *	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	* 95.	* .9 *	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	* I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0
2. Recpt 2	* .0	.0	.0	.2	.0	.0	.0	.0	.3	.0	.1	.0
3. Recpt 3	* .0	.0	.0	.2	.0	.0	.0	.0	.3	.0	.1	.0
4. Recpt 4	* .0	.0	.0	.0	.3	.0	.0	.2	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
 JUNE 1989 VERSION
 PAGE 2

JOB: Yucca Vly Home Depot:AltaLoma at Sunny V
 RUN: Hour 1 (WORST CASE ANGLE)
 POLLUTANT: Carbon Monoxide

III. RECEPTOR LOCATIONS

RECEPTOR	* COORDINATES (M)	* X	* Y	* Z
1. Recpt 1	*	-3	465	1.8
2. Recpt 2	*	12	465	1.8
3. Recpt 3	*	12	480	1.8
4. Recpt 4	*	-3	480	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	* BRG (DEG)	* PRED CONC (PPM)	* A	B	C	D	E	F	G	H
1. Recpt 1	* 87.	* .3 *	.0	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* 273.	* .3 *	.0	.0	.0	.0	.0	.0	.0	.0
3. Recpt 3	* 267.	* .3 *	.0	.0	.0	.0	.0	.0	.0	.0
4. Recpt 4	* 94.	* .3 *	.0	.0	.0	.0	.0	.0	.0	.0

RECEPTOR	* I	J	K	L	M	N	O	P	Q	R	S	T
1. Recpt 1	* .0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
2. Recpt 2	* .0	.0	.0	.1	.0	.0	.0	.0	.1	.0	.0	.0
3. Recpt 3	* .0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
4. Recpt 4	* .0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0