Donald Ballanti
Certified Consulting Meteorologist

1424 Scott Street
El Cerrito, CA 94530
(510) 234-6087
Fax: (510) 232-7752

January 12, 2005

Art Lucas
Scott Mommer Consulting
4630 W. Jacqueline Avenue, Suite 119
Fresno, CA. 93722

Subject: Clarification Regarding Construction Impacts, Proposed Huntington Beach Home Deport

Dear Mr. Lucas:

The purpose of this letter is to clarify assumptions made regarding construction activity in the URBEMIS-2002 modeling I performed for the subject project which formed the basis for my air quality report (Air Quality Impact Analysis for the Proposed Home Depot Store, City of Huntington Beach", dated December 2005). My analysis assumed that during site grading a total of 1056 truck trips would be needed to haul soil and other materials to/from the site. I used the default truck capacity of 20 cubic yards per truck. It is my understanding that 20-yard capacity trucks actually carry 15 cubic yards of material per load, but this fact doesn't alter the air quality analysis. The factor that determined emissions is the number of truck trips rather than the amount of material.

The Earthwork Report prepared by Lars Andersen and Associates calculated the total trips needed to remove and bring in material to the site as 910 (850 import trips and 60 export trips). The air quality analysis is therefore conservative (i.e., over-predicts impacts) with respect to diesel truck emissions during site grading. To allow for unforeseen situations, it was agreed upon by all consultants to utilize the conservative truck trip assumption of 1056 trips.

My report (using the assumed 1056 truck trips during site grading) concluded that, based on South Coast Air Quality Management District thresholds of significance, the project would have no significant adverse air quality impacts. It is clear that the same conclusion would be made if 910 truck trips were assumed during site grading.

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AIR QUALITY IMPACT ANALYSIS FOR THE PROPOSED HOME DEPOT STORE, CITY OF HUNTINGTON BEACH

Prepared for:

Scott Mommer Consulting
4630 W. Jacquelyn Avenue, Suite 119
Fresno, CA. 93722

December 2005

Air Pollution Meteorology • Dispersion Modeling •Climatological Analysis

INTRODUCTION

The Home Depot proposes to construct a new store within the existing Kmart shopping center located at the southwest corner or Magnolia Street and Garfield Avenue in Huntington Beach, California. The project would require the demolition of the existing Kmart structure and construction of a new structure of approximately 105,536 sq. ft. with an adjacent Garden Center measuring approximately 25,000 sq. ft.

This report describes the impacts of the proposed Home Depot store in Huntington Beach, California on local and regional air quality. This report was prepared using the air quality impact assessment recommendations of the South Coast Air Quality Management District.[1] In keeping with these recommendations, this report describes existing air quality, construction-related impacts, new direct/indirect emissions associated with the project (and the impacts of these emissions on the local and regional scale) and mitigation measures warranted to reduce or eliminate any identified significant impacts.

EXISTING CONDITIONS

Air Pollution Climatology

The project site is located within the South Coast Air Basin, a 6,600 square-mile area encompassing all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The distinctive climate of this area is determined primarily by its terrain and geographical location. Regional meteorology is largely dominated by a persistent high-pressure area, which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause changes in the weather patterns of the area. Local climatic conditions are characterized by warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and moderate humidity.

The area has a characteristic diurnal variation in wind, with an on-shore (westerly) flow in the daytime and a weak offshore land breeze at night. This normal wind pattern is occasionally interrupted by winter storms and strong northeasterly Santa Ana winds.

The South Coast Air Basin is an area of high air pollution potential, particularly from June through September. The poor ventilation characteristics of the area, attributable to light winds and shallow vertical mixing depths, frequently results in elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season, and time of day. Ozone concentrations for example tend to be lower along the coast higher in the near inland valleys, and lower in the far inland areas of the Basin and adjacent desert.

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[1] South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook.*

Ambient Air Quality Standards

Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards are levels of contaminants which represent safe levels that avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents.

The federal and California state ambient air quality standards are summarized in Table 1 for criteria pollutants relevant to this project. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health-related effects. As a result, the federal and state standards differ in some cases. In general, the California state standards are more stringent. This is particularly true for ozone and Particulate Matter ($PM_{2.5}$ and PM_{10}).

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. Toxic Air Contaminants (TACs), are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

Ambient Air Quality

The SCAQMD monitors air quality throughout the Basin at various monitoring stations. The project site is located within Source Receptor Area Number 18 (North Coastal Orange County), which is served by the Costa Mesa air monitoring station, located at 2850 Mesa Verde Drive East, in the City of Costa Mesa. Pollutants monitored at this station include ozone, carbon monoxide, nitrogen dioxide and sulfur dioxide. The nearest particulate air monitoring station is located at 1610 South Harbor Boulevard, in the City of Anaheim. The most recent monitoring data for these stations, shown in Table 2, indicate that the state 1-hour ozone standard and PM_{10} standard are exceeded in the project vicinity. The federal $PM_{2.5}$ standard is also exceeded. No other exceedances of Federal or State standards were recorded in the period 2002-2004.

Attainment Status and Regional Air Quality Plans

Federal and state air quality laws require identification of areas not meeting the ambient air quality standards. These areas must develop regional air quality plans to eventually attain the standards. Orange County is considered a non-attainment area for the state/federal standards for ozone, carbon monoxide PM_{10} and $PM_{2.5}$.

TABLE 1
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour 8-Hour	0.12 ppm 0.08 ppm	0.09 ppm 0.07 ppm
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 35.0 ppm	9.0 ppm 20.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.05 ppm --	-- 0.25 ppm
Sulfur Dioxide	Annual 24-Hour 1-Hour	0.03 ppm 0.14 ppm --	-- 0.05 ppm 0.25 ppm
PM_{10}	Annual 24-Hour	50 ug/m^3 150 ug/m^3	20 ug/m^3 50 ug/m^3
$PM_{2.5}$	Annual 24-Hour	15 ug/m^3 65 ug/m^3	12 ug/m^3 --
Lead	30-Day Avg. 3-Month Avg.	-- 1.5 ug/m^3	1.5 ug/m^3 --

ppm = parts per million
ug/m^3 = Micrograms per Cubic Meter

TABLE 2
AMBIENT AIR QUALITY AT COSTA MESA AND ANAHEIM MONITORING SITES

Pollutant/Standard		Days Exceeding Standard in: 2002	2003	2004
Ozone	1-Hour State	0	4	2
	1-Hour Federal	0	0	0
	8-Hour Federal	0	1	1
Carbon Monoxide	8-Hour State/Fed.	0	0	0
	1-Hour State	0	0	0
PM_{10}	24-Hour State	5	6	3
	24-Hour Federal	0	0	0
$PM_{2.5}$	24-Hour Federal	1	3	0
Nitrogen Dioxide	1-Hour State	0	0	0
Sulfur Dioxide	24-Hour Federal	0	0	0
	24-Hour State	0	0	0

Source: California Air Resources Board, Aerometric Data Analysis and Management System (ADAM), (www.arb.ca.gov/adam/), 2005.

The South Coast Air Quality Management District Governing Board adopted the 2003 Air Quality Management Plan (AQMP) on August 1, 2003. The 2003 AQMP updates the attainment demonstration for the federal standards for ozone and particulate matter (PM_{10}), replaces the 1997 attainment demonstration for the federal carbon monoxide (CO) standard and provides a basis for a maintenance plan for CO for the future,and updates the maintenance plan for the federal nitrogen dioxide (NO_2) standard that the South Coast Air Basin has met since 1992.

The 2003 AQMP also addresses several state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes and new air quality modeling tools. The 2003 AQMP is consistent with and builds upon the approaches taken in the 1997 AQMP and the 1999 Amendments to the Ozone SIP for the South Coast Air Basin for the attainment of the federal ozone air quality standard.

Sensitive Receptors

"Sensitive receptors" are defined as facilities where sensitive population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include residences, schools, playgrounds, child care centers, retirement homes, convalescent homes, hospitals and medical clinics. The closest sensitive receptors to the site are residences just north of the project site.

Thresholds of Significance

CEQA allows for the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. The SCAQMD has established thresholds of significance for pollutant emissions as shown in Table 3.

In addition, a significant impact would occur if local CO emissions resulting from vehicular emissions associated with the proposed project were to cause an exceedance of the I-hour or 8-hour California Ambient Air Quality Standard of 20 ppm or 9.0 ppm, respectively, at any sensitive receptor location. If baseline conditions already exceed the CAAQS at a sensitive receptor location, then the SCAQMD considers an increase of more than 1.0 ppm or 0.45 ppm for the 1-hour or 8-hour averaging period, respectively, significant.

TABLE 3
SCAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction Threshold (lbs/day)	Operational Threshold (lbs/day)
Carbon Monoxide	550	550
Nitrogen Oxides	100	55
Reactive Organic Compounds (ROC)	75	55
Particulate Matter (PM_{10})	150	150
Sulfur Oxides	150	150

PROJECT IMPACTS

The California Environmental Quality Act (CEQA) guidelines, Appendix G, provides 5 Initial Study/Negative Declaration questions to be answered during the environmental review for a project. Appendix G further states that "where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations." The following is a discussion of each of the five questions utilizing the significance thresholds of the SCAQMD as previously described.

Would the project:

A. *Conflict with or obstruct implementation of the applicable air quality plan?*

The South Coast Air Quality Management District's *CEQA Air Quality Handbook* establishes the following criteria to determine project consistency with the AQMP:

1. Will the project result in any of the following:

-An increase in the frequency or severity of existing air quality violations; or

-Cause or contribute to new air quality violations; or

-Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?

2. Will the project exceed the assumptions utilized in preparing the AQMP?

Project impacts, as described in response to questions B and C below, do not exceed the above thresholds.

The proposed project is a re-use of an existing site that previously developed as a retail center. The daily trip generation from previous uses was slightly lower, in terms of daily trip generation, than the proposed project. The project would not require a re-zoning or land use redesignation for the parcel, so project trip generation would not exceed the assumptions utilized in the AQMP, and the project does not conflict with or obstruct implementation of the AQMP.

B. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation?*

A screening procedure for estimating carbon monoxide concentrations was applied to signalized intersections under existing and future traffic conditions. The screening procedure contained in *Transportation Project-Level Carbon Monoxide Protocol* was

utilized.[2] The screening procedure is intended to allow the prediction of conservative estimates of carbon monoxide concentrations without having to run computational models such as EMFAC and CALINE4. The methodology uses estimates of the contributions to carbon monoxide concentrations for a "base case" characterized by a specific intersection configuration, meteorology, traffic volume and indicators of intersection performance. A series of correction factors are then applied to adjust the initial estimates of carbon monoxide concentrations for the specific conditions of the intersection under study. Correction factors are provided by a series of tables.

The following assumptions were made as input to the screening procedure as appropriate for a project in Orange County and based on project surroundings:

Geographical Location: Coastal
Average Cruise Speed: 35 MPH (away from intersections)
Analysis Year: 2004
Percentage of Vehicle Operating in Cold Start Mode: 30 percent
Distance to Closet Receptor: 20 feet (7 meters)

The screening procedure provides a worst-case estimate of 1-hour and 8-hour concentrations of carbon monoxide generated by vehicles impacting an intersection. The other contribution to the total concentration is the background level attributed to more distant traffic. The 8-hour background level was assumed to be 5.9 parts per million, which was the highest measured concentration of carbon monoxide measured at the Costa Mesa monitoring site during the period 2002-2004.[3]

The analysis was conducted for the Magnolia Street/Garfield Avenue intersection which is adjacent the project and the intersection most impacted by the addition of project traffic. The resulting predicted worst-case carbon monoxide concentration for existing conditions and future conditions with project are shown in Table 4. The concentrations in Table 4 are for worst-case locations under theoretical worst-case meteorological conditions. Concentrations at greater distances from the roadway would be substantially lower.

As shown in Table 4 existing concentrations meet the state/federal ambient air quality standards. The addition of project traffic would increase concentrations by up to 0.15 PPM, and concentrations remain below state/federal standards. As project traffic would not cause a violation of either ambient air quality standard, nor contribute substantially

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[2] Garza, Vincente J.; Peter Granly; Daniel Sperling. 1997. *Transportation Project-Level Carbon Monoxide Protocol.* Institute of Transportation Studies, University of California, Davis. Report UCD-ITS-RR-97-21.

[3] California Air Resources Board, Aerometric Data Analysis and Management (ADAM), 2005. (http: //www.arb.ca.gov./adam/cgi-bin/adamtop/d2wstart)

TABLE 4
PREDICTED WORST-CASE CARBON MONOXIDE CONCENTRATIONS NEAR THE MAGNOLIA/GARFIELD INTERSECTION

Concentration (Parts Per Million)			
Existing		Existing + Project	
1-Hour	8-Hour	1-Hour	8-Hour
12.98	7.79	13.12	7.87

to an existing violation, the impact of the project on local carbon monoxide concentrations is considered to be less-than-significant

C. *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)?*

The project would contribute to cumulative regional air quality impacts during both construction and operation. Construction impacts would be from a variety of sources and would include dust from construction activities. Operational impacts would be due to vehicle trips attracted to the project site and area sources such as combustion of natural gas for heating.

Construction Impacts

Construction of the proposed project would generate air pollutant emissions from the following activities: the commute of workers to and from the project site; demolition of the existing structure on the site, delivery and hauling of construction materials and supplies to and from the project site; fuel combustion by on-site construction equipment; and dust generating activities from soil disturbance.

Maximum daily construction emissions were estimated using the URBEMIS-2002 program. Table 5 shows the maximum daily emissions for demolition, site grading and building construction phases of construction. Demolition of existing structures was assumed by require 2 bulldozers, 2 loaders, 1 watering truck and on-highway trucks (20 cubic yard capacity) to haul away debris. Site grading was assumed to be accomplished with 2 graders, 2 tractors/loaders/backhoes and 1 watering truck for dust control. During site grading, it was assumed base material that would underlay the building would be brought to the site by truck and excess soil would be removed from the site. Total truck trips needed to bring base material to the site or remove excess soil from the site were estimated at 1,056 trips. Site grading was assumed to occur over a 3 week period after demolition was completed.

Building construction was assumed to require 3 concrete/industrial saws, 3 forklifts, a crane and 2 unspecified "other" pieces of diesel powered equipment. Paving was assumed to require 1 grader, 1 paver and 1 roller (compactor). All on-site equipment was assumed to be operated 8 hours per day.

URBEMIS-2002 further calculated emissions from architectural coatings, paving off-gassing and worker trips. The default architectural coatings emission factor were reduced 40% to account for recently amended SCAQMD Rule 1113 that limits VOC emissions from architectural coatings. URBEMIS-2002 defaults for paving off-gassing and worker trips were utilized. The program estimated that construction worker commute trips would average about 43 per day over the course of construction.

The URBEMIS-2002 output is included in the Appendix.

Construction activity in the South Coast Air Basin is subject to SCAQMD Rule 403 (Fugitive Dust). SCAQMD Rule 403 does not require a permit for construction activities but sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources). The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust source) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. SCAQMD Rule 403 also prohibits a construction site from causing an incremental PM_{10} concentration impact at the property line of more than 50 micrograms per cubic meter as determined through PM_{10} high-volume sampling, but the concentration standard and associated PM_{10} sampling do not apply if specific measures identified in the rule are implemented and appropriately documented.

SCAQMD Rule 403 further requires those engaged in hauling operations to take actions necessary to prevent or remove (within one hour) the track-out of bulk material onto public paved roadways.

As shown in Table 5 daily construction emissions are below the SCAQMD daily significance thresholds. Construction impacts would therefore be less-than-significant.

Regional Impacts

The project would be an indirect source of air pollutants, in that it would attract and cause an increase in vehicle trips in the region. The project would also be an area source of emissions, primarily from the combustion of natural gas for space and water heating and landscaping activities. Table 6 shows the new auto and area source emissions of regional pollutants that would result from the proposed project, based upon output from the URBEMIS-2002 computer program. Also shown are the SCAQMD's thresholds of significance. Project-related emissions are below the thresholds of significance, so project impacts on regional air quality would be less-than-significant.

d) *Expose sensitive receptors to substantial pollutant concentrations?*

TABLE 5
PREDICTED MAXIMUM CONSTRUCTION EMISSIONS, IN POUNDS PER DAY

	ROC	NO_x	CO	PM_{10}	SO_2
Demolition	7.38	65.83	53.77	13.40	0.40
Site Grading	9.99	82.65	75.93	31.73	0.50
Building Construction	66.61	82.68	91.32	3.60	0.04
SCAQMD Threshold	75.00	100.00	550.00	150.00	150.00

ROC = Reactive Organic Compounds
NO_x = Nitrogen Oxides
CO = Carbon Monoxide
PM_{10} = Particulate Matter, 10 microns
SO_2 = Sulfur Dioxide

TABLE 6
PROJECT AUTO AND AREA-SOURCE EMISSIONS (POUNDS PER DAY)

	ROC	NO_x	CO	PM_{10}	SO_2
Vehicles	43.91	44.07	469.04	35.28	0.39
Area sources	2.05	1.27	1.84	0.00	0.00
Total	45.96	45.34	470.88	35.28	0.39
SCAQMD Threshold	55.00	55.00	550.00	150.00	150.00

On site stationary sources of pollutants at the project site would be limited to heating equipment powered by natural gas. As a indirect source, the project would attract vehicle trips that would primarily generate emissions off-site and not affect nearby sensitive receptors.

The proposed project would result in a small increase in diesel powered trucks accessing the receiving docks at the rear of the Home Depot store. There are sensitive receptors directly to the west of the receiving areas.

In 1998 the California Air Resources Board identified particulate matter from diesel-fueled engines as a toxic air contaminant (TAC). CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines (CARB 2000). High volume freeways, stationary diesel engines and facilities attracting heavy and constant diesel vehicle traffic (distribution centers, truckstops) were identified as having the highest associated risk. The greatest diesel particulate risks from new development are generally associated with stationary diesel engines and locations where diesel engines are allowed to idle for extended periods. SCAMQD guidelines for diesel risk assessments identify situations requiring analysis as being locations with extended truck idling (truck stops, warehouse/distribution centers, transit centers), ship hotelling at ports and train idling).[4]

The project would attract up to 12-18 diesel truck trips to the two truck loading areas at the rear of the buidling. Because of this relatively low level of truck activity, lack of extended truck idling on the project site and the prevailing westerly winds that carry pollutants away from senstive receptors the project would have a less-than-significant impact on Toxic Air Contaminant concentrations.

E. *Create objectionable odors affecting a substantial number of people?*

The proposed project will be subject to compliance with SCAQMD's Rule 402, which regulates nuisance with regard to air quality. The rule states that "a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. "

No objectionable odors are expected as a result of either construction or operation of the proposed project. Odors are typically associated with industrial projects involving use of chemicals, solvents, petroleum products, and other strong-smelling elements used in manufacturing processes. Odors are also associated with such uses as sewage treatment facilities and landfills. As the proposed project is unrelated to these types of uses, no impacts are anticipated.

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[4] South Coast Air Quality Management District. 2003. *Health Risk Assessment Guidelines for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis.*

CONCLUSIONS AND RECOMMENDATIONS

This report evaluated the proposed project with respect to the questions regarding impact significance contained in the California Environmental Quality Act (CEQA) guidelines, Appendix G. As directed under CEQA, the analysis used the significance criteria established by the applicable air quality management or air pollution control district (in this case the South Coast Air Quality Management District). Impacts analyzed included construction-related impacts, new direct/indirect emissions associated with the project and the impacts of these emissions on the local and regional scale. No significant adverse air quality impacts were identified.

It is recommended that all construction contracts require that contractors comply with SCAQMD Rule 403 (Fugitive Dust). SCAQMD Rule 403 established general and specific requirements for all construction sites and prohibits a person from causing or allowing emissions of fugitive dust from construction such that visible in the atmosphere beyond the property line. SCAQMD Rule 403 further requires those engaged in hauling operations to take actions necessary to prevent or remove (within one hour) the track-out of bulk material onto public paved roadways.

Appendix: URBEMIS2002 Output

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\huntingtonhd.urb
Project Name: Huntington Home Depot
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

*** 2006 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	66.61	82.68	91.32	0.50	32.34	3.60	28.74

*** 2007 ***	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
TOTALS (lbs/day,unmitigated)	4.46	25.55	34.56	0.00	0.87	0.86	0.01

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	2.05	1.27	1.84	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	43.91	44.07	469.04	0.39	35.28

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.96	45.33	470.88	0.39	35.28

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Program Files\URBEMIS 2002 Version 8.7\Projects2k2\huntingtonhd.urb
Project Name: Huntington Home Depot
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: June, 2006
Construction Duration: 8.6
Total Land Use Area to be Developed: 11.46 acres
Maximum Acreage Disturbed Per Day: 2.86 acres
Single Family Units: 0 Multi-Family Units: 0
Retail/Office/Institutional/Industrial Square Footage: 130536

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	SO2	PM10 TOTAL	PM10 EXHAUST	PM10 DUST
*** 2006***							
Phase 1 - Demolition Emissions							
Fugitive Dust	-	-	-	-	10.92	-	10.92
Off-Road Diesel	6.07	43.40	46.98	-	1.84	1.84	0.00
On-Road Diesel	1.23	22.31	4.58	0.40	0.63	0.53	0.10
Worker Trips	0.08	0.12	2.21	0.00	0.01	0.00	0.01
Maximum lbs/day	7.38	65.83	53.77	0.40	13.40	2.37	11.03
Phase 2 - Site Grading Emissions							
Fugitive Dust	-	-	-	-	28.60	-	28.60
Off-Road Diesel	8.42	54.83	69.79	-	2.33	2.33	0.00
On-Road Diesel	1.53	27.80	5.71	0.50	0.79	0.66	0.13
Worker Trips	0.04	0.02	0.43	0.00	0.01	0.00	0.01
Maximum lbs/day	9.99	82.65	75.93	0.50	31.73	2.99	28.74
Phase 3 - Building Construction							
Bldg Const Off-Road Diesel	11.19	82.38	84.94	-	3.60	3.60	0.00
Bldg Const Worker Trips	0.27	0.15	3.19	0.00	0.04	0.00	0.04
Arch Coatings Off-Gas	54.88	-	-	-	-	-	-
Arch Coatings Worker Trips	0.27	0.15	3.19	0.00	0.04	0.00	0.04
Asphalt Off-Gas	0.00	-	-	-	-	-	-
Asphalt Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Asphalt On-Road Diesel	0.00	0.00	0.00	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
Maximum lbs/day	66.61	82.68	91.32	0.00	3.68	3.60	0.08
Max lbs/day all phases	66.61	82.68	91.32	0.50	32.34	3.60	28.74
*** 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	-	-	-	-	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 3 - Building Construction							
Bldg Const Off-Road Diesel	0.00	0.00	0.00	-	0.00	0.00	0.00
Bldg Const Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Arch Coatings Off-Gas	0.00	-	-	-	-	-	-
Arch Coatings Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Off-Gas	0.36	-	-	-	-	-	-
Asphalt Off-Road Diesel	4.00	24.09	33.99	-	0.83	0.83	0.00
Asphalt On-Road Diesel	0.07	1.44	0.28	0.00	0.03	0.03	0.00
Asphalt Worker Trips	0.02	0.01	0.29	0.00	0.00	0.00	0.00
Maximum lbs/day	4.46	25.55	34.56	0.00	0.87	0.86	0.01

Max lbs/day all phases	4.46	25.55	34.56	0.00	0.87	0.86	0.01

Phase 1 - Demolition Assumptions
Start Month/Year for Phase 1: Jun '06
Phase 1 Duration: 1.0 months
Building Volume Total (cubic feet): 776000
Building Volume Daily (cubic feet): 25996
On-Road Truck Travel (VMT): 962
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Other Equipment	190	0.620	8.0
2	Rubber Tired Loaders	165	0.465	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 2 - Site Grading Assumptions
Start Month/Year for Phase 2: Jul '06
Phase 2 Duration: 0.8 months
On-Road Truck Travel (VMT): 1200
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
2	Graders	174	0.575	8.0
1	Off Highway Trucks	417	0.490	8.0
2	Tractor/Loaders/Backhoes	79	0.465	8.0

Phase 3 - Building Construction Assumptions
Start Month/Year for Phase 3: Jul '06
Phase 3 Duration: 6.8 months
Start Month/Year for SubPhase Building: Jul '06
SubPhase Building Duration: 4.3 months
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
3	Concrete/Industrial saws	84	0.730	8.0
1	Cranes	190	0.430	8.0
2	Other Equipment	190	0.620	8.0
3	Rough Terrain Forklifts	94	0.475	8.0

Start Month/Year for SubPhase Architectural Coatings: Nov '06
SubPhase Architectural Coatings Duration: 2.0 months
Start Month/Year for SubPhase Asphalt: Jan '07
SubPhase Asphalt Duration: 0.5 months
Acres to be Paved: 1.5
Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
1	Graders	174	0.575	8.0
1	Pavers	132	0.590	8.0
1	Rollers	114	0.430	8.0

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.09	1.26	1.06	0	0.00
Hearth - No summer emissions					
Landscaping	0.12	0.00	0.78	0.00	0.00
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	1.83	-	-	-	-
TOTALS(lbs/day,unmitigated)	2.05	1.27	1.84	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Home improvement supersto	43.91	44.07	469.04	0.39	35.28
TOTAL EMISSIONS (lbs/day)	43.91	44.07	469.04	0.39	35.28

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2006 Temperature (F): 90 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Home improvement supersto		57.62 trips/1000 sq. ft.	130.54	7,521.48
		Sum of Total Trips		7,521.48
		Total Vehicle Miles Traveled		23,212.76

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	55.60	2.20	97.30	0.50
Light Truck < 3,750 lbs	15.10	4.00	93.40	2.60
Light Truck 3,751- 5,750	15.90	1.90	96.90	1.20
Med Truck 5,751- 8,500	7.00	1.40	95.70	2.90
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	10.00	20.00	70.00
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	0.00	91.70	8.30

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 improvement superstore				2.0	1.0	97.0