

COUNTY OF SAN DIEGO

GUIDELINES FOR DETERMINING SIGNIFICANCE
AND
REPORT FORMAT AND CONTENT REQUIREMENTS

AIR QUALITY



LAND USE AND ENVIRONMENT GROUP

Department of Planning and Land Use
Department of Public Works

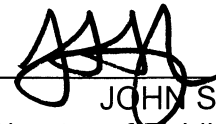
March 19, 2007

APPROVAL

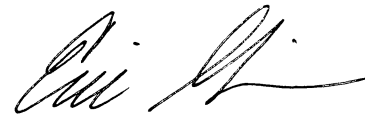
I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and were considered by the Director of Planning and Land Use, in coordination with the Director of Public Works on the 19th day of March, 2007.



GARY PRYOR
Director of Planning and Land Use




JOHN SNYDER
Director of Public Works



Attest: ERIC GIBSON
Deputy Director of Planning and Land Use

I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and have hereby been approved by the Deputy Chief Administrative Officer (DCAO) of the Land Use and Environment Group on the 19th day of March, 2007. The Director of Planning and Land Use is authorized to approve revisions to these Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality, except any revisions to the Guidelines for Determining Significance presented in Chapter 4.0 must be approved by the Deputy CAO.

Approved, March 19, 2007



CHANDRA WALLAR
Deputy CAO

COUNTY OF SAN DIEGO
REPORT FORMAT & CONTENT REQUIREMENTS
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Department of Planning and Land Use
Department of Public Works

March 19, 2007

PURPOSE

These Air Quality Report Format and Content Requirements provide guidance on conducting air quality studies and preparing reports for discretionary projects being processed by the Land Use and Environment Group. These guidelines are designed to:

1. Ensure the quality, accuracy and completeness of Air Quality Reports.
2. Aid in staff's efficient and consistent review of maps and documents from different consultants.
3. Provide adequate information to make appropriate planning decisions and to make determinations regarding conformance with applicable regulations.
4. Increase the efficiency of the environmental review process and avoid unnecessary time delays.

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1.0 INTRODUCTION

The purpose of an air quality study is to evaluate potential project level and cumulative air quality impacts that may result from a proposed project. The following is designed to provide guidance as to the content and format of extended initial studies for air quality resulting from projects within the County of San Diego. In order to minimize the number of iterations of the technical study for air quality impacts, Consultants must use the guidelines set forth in this document. The intent is to provide the reader of the technical study with a logical progression of analysis, from background information on applicable regulations and significance guidelines, to the potential impacts resulting from implementation of the project and proposed mitigation measures. However, as each case has its own issues and needs, the format/content of the analysis may need to be revised as appropriate to unique circumstances. Revisions in such cases should be discussed with the staff air quality specialist.

For all discretionary development, County staff will evaluate the need for an Air Quality Study (AQS). Guidelines for methodologies and assumptions are discussed below. These are intended to serve as a guideline and are not intended to replace sound scientific judgment. The analysis of air quality impacts, and development of mitigation measures for reducing air quality impacts are complex tasks. Typically, an AQS will include several components as outlined in Section 3.1.

2.0 AIR QUALITY STUDIES

Under CEQA, air quality impacts must be evaluated for every discretionary land use project. However, an AQS may not be required for all projects. The air quality study trigger criteria discussed below will be used by County staff as a tool in determining if an AQS is necessary. These are general guidelines that have several caveats, but if a discretionary project exceeds the construction or operational trigger criteria, an AQS needs to be prepared. The overall length of a study and the amount of information to include will vary depending on the size and scope of the project, the regional setting, the relevant air quality issues associated with the project and the degree of impacts proposed.

2.1 Criteria for Need to Prepare Air Quality Study

Trigger criteria have been developed (based on the screening-level thresholds [SLTs] in Figure 1 - County of San Diego Land Use Environmental Group (LUEG) Air Quality Significance Flow for Privately Initiated Projects) for staff to use in determining whether or not additional information is needed to answer the questions listed in the State CEQA Guidelines Appendix G, Section III, upon initial project review. (Larger/printable version of Figure 1 is available online at:

<http://www.sdcdplu.org/dplu/Resource/3~procguid/3~procguid.html#aq>)

2.1.1 Construction Grading Activity Criteria

Construction activities will be limited by emissions from equipment exhaust, fugitive dust and architectural coating emissions. The Urban Emissions program (URBEMIS) was run for a typical grading project using the URBEMIS defaults for construction equipment and other parameters. The intent of this URBEMIS run is to create conservative criteria for screening out small projects. Based on the results of simplified modeling conducted to establish these air quality study trigger thresholds (see Attachment A), **construction activities are not expected to exceed the emission SLTs identified in Figure 1 if less than 3.5 acres of ground surface material is disturbed in a single day.** However, projects with unusual circumstances like excessive volumes of cut or fill, rock blasting, diesel generators larger than 50 horsepower, construction phases lasting longer than 12 months or nearby activities considered potential for cumulative impacts may still need to prepare an Air Quality Study regardless of grading an area less than 3.5 acres per day.

2.1.2 Construction Architectural Coating Criteria

In addition to grading, architectural coatings applied to newly constructed buildings also create emissions of concern. These architectural coatings cause off-gassing of VOCs. emissions from architectural coatings were estimated as follows. SDAPCD Rule 67 specifies the VOC regulatory limits for general coatings shown in Table 1:

TABLE 1
SDAPCD Rule 67 VOC Regulatory Limits

General Coating Type	Pounds per Gallon	Grams per Liter
Flat Coatings	0.8	100
Nonflat Coatings	1.3	150
Nonflat Coatings – High Gloss	2.1	250

The September 2006 draft “2005 Architectural Coatings Survey” prepared by the CARB provides data for coatings sold in the state of California during the 2005 calendar year. Data from the survey indicate that solvent-based coatings do not meet the regulatory limits indicated in Table 1. Therefore, it is assumed that water based coatings will be required for project construction. The survey provides the data shown in Table 2 for general water-based coatings (State of California 2006b).

TABLE 2
Coating Sales-Weighted Averages

Coating Category	VOC			
	Regulatory (g/L)	Weight % VOC	Density (lb/gal)	Volume % Solids
Flat	82	2	11.4	36
Nonflat – Low Gloss	118	4	10.6	35
Nonflat – Medium Gloss	127	4	10.1	34
Nonflat – High Gloss	150	5	10.2	35

Using this information, the pounds of VOC per gallon of coating in the can may be estimated as shown in Table 3:

TABLE 3
Pounds of VOC per Gallon of Coating in the Can

Coating Category	Pounds of VOC per Gallon
Flat	0.23
Nonflat – Low Gloss	0.42
Nonflat – Medium Gloss	0.40
Nonflat – High Gloss	0.51

As seen in Table 2, based on average sales, all of the water-based general coatings identified in the survey comply with the SDAPCD Rule 67 regulatory requirements. Therefore, although it is unlikely that only high gloss nonflat coatings would be used in painting the structures, in this assessment it was assumed that these materials would be used as they would result in the greatest VOC emissions.

A factor affecting the amount of coating used to paint a structure is the “transfer efficiency” defined as the amount of solids actually coating the surface divided by the amount of solids used. Transfer efficiencies of less than 100 percent are the result of over spraying, coating “lost” due to outdoor conditions, and other factors. The SQAQMD 1993 CEQA Handbook, Table A11-13-D, indicates that the transfer efficiency for brush (and roller) applied coatings is 100 percent (SCAQMD 1993). However, in large scale commercial painting operations the application of coatings is more likely performed using an airless spraying system. Transfer efficiencies as low as 45% have been reported for airless spraying (Minnesota Pollution Control Agency 2003). This relatively low efficiency was associated with parts coating in a spray booth. For painting a large structure such as a residence, a minimum transfer efficiency of 75% was assumed to be reasonable.

As indicated in Table 2, high gloss nonflat coatings have an average 35 percent by volume solids. Therefore, one gallon of coatings would contain 0.35 gallons of solids. Solids are what coat and stay on the surface after all of the volatiles, including water and VOCs, have evaporated. For spraying applications, the SCAQMD 1993 CEQA Handbook specifies a dry coating thickness of 1 mil (0.001 inch; SCAQMD 1993). Assuming this thickness and a transfer efficiency of 75% yields a coating coverage of approximately 420

square feet per gallon of coating. Finally, there are incidental VOC emissions related to thinning the coating and cleanup. Table 4 shows the 2005 survey VOC emission factors for water based coatings (State of California 2006b):

TABLE 4
VOC Emission Factors for Thinning, Cleanup, and Additives
(pounds VOC per gallon of coating)

Operation	Emission Factor
Additives	0.004
Cleanup	0.114
Total	0.118

Therefore, based on all of the assumptions discussed above, one gallon of high gloss nonflat coating would cover approximately 420 square feet of surface area and would result in the release approximately 0.63 pounds of VOCs. The SCAQMD 1993 CEQA Handbook indicates that the estimated surface area to be coated in a residential structure is equal to 2.7 times the floor area (SCAQMD 1993). Projects that are preparing an air quality study can either calculate the architectural emissions using the assumptions discussed above or reference a maximum daily gallon amount of architectural coatings. At a limit below 110 gallons per day, it can be conservatively stated that VOC emissions will be below the 75 pound per day SLT listed in Figure 1.

2.1.3 Operational Emissions Criteria

Projects considered having less than significant air quality impacts were used in developing a methodology for screening proposed projects to allow for rapid and accurate evaluation of a project's potential to exceed the emission SLTs identified in Figure 1. For project operation, emissions resulting from residential and commercial developments are primarily related to vehicular emissions and area sources (natural gas combustion, fireplaces, etc.). The URBEMIS model was used to evaluate the emissions from several typical types of projects as shown in Table 5 (URBEMIS files can be found in Attachment A). This methodology assumes there are no traffic impacts to road intersections that are at or would be reduced to a level of service (LOS) E or F where maximum total intersection peak-hour trips do not exceed 3,000. Projects whose proposed development would exceed the development criteria in Table 5 would be required to prepare a project specific air quality study.

When assessing mixed use projects, the AQS trigger threshold would be determined by converting the various uses to equivalent single-family units using the factors shown in Table 5, and then summing them. An equivalent single-family unit is the number of single-family units that would generate approximately the same emissions as a single unit of the land use being considered. For proposed developments that do not fit into the categories identified in Table 5, a project specific air quality analysis may be required. A project would not be expected to result in operational emissions that exceed the SLTs if the project equivalent single-family units are below 300. For example, consider the following proposed development:

- 150 condominiums
- 10,000 square feet of general office space
- 20,000 square feet of quality restaurant
- $SF_{eq} = 150 \cdot 0.811 + 10 \cdot 1.58 + 20 \cdot 6.98 = 277$

Therefore, the proposed development would not be expected to result in operational emissions that would exceed the daily thresholds and subsequently no additional information or technical studies would be requested.

TABLE 5
Operational Phase Air Quality Study Trigger Criteria

Land Use	Unit of Measure	Assumed SANDAG Trip Generation Rate	Project Size that Would be Anticipated to Generate Air Emissions Greater than the Threshold Limit	Equivalent SF unit
Single Family Residential*	Dwelling Unit	10	300	1
Apartments – 6-20 DU/acre*	Dwelling Unit	8	370	0.811
Apartments – > 20 DU/acre*	Dwelling Unit	6	420	0.714
Condominiums*	Dwelling Unit	8	370	0.811
Mobile Home Park*	Dwelling Unit	5	400	0.750
Supermarket**	1,000 sq. ft.	150	25	12.0
Restaurant, Fast Food w/drive through**	1,000 sq. ft.	650	6.5	46.2
Restaurant, Quality Sit Down**	1,000 sq. ft.	100	43	6.98
Motel**	# of rooms	9	480	0.625
Neighborhood/County Park (undeveloped)**	Acre	5	880	0.341
Standard Commercial Office (<100,000 sq ft per office site)**	1,000 sq. ft.	20	190	1.58
Neighborhood shopping center**	1,000 sq. ft	120	35	8.57

* Limited by VOC emissions; for these residential units it is assumed that 5% of the units have active fireplaces burning 0.25 cord of wood over a period of 82 days and 10% of the units have active natural gas fireplaces that are used for 3 hours per day over a period of 90 days (note: hours per day and days per year are the URBEMIS defaults).

**Limited by CO emissions

3.0 REPORT FORMAT REQUIREMENTS

A thorough AQS will consider the potential effects of all aspects of a project (including project-level, and cumulative-level air quality impacts). The study should identify whether impacts are direct and/or cumulative in nature, and whether the impacts are significant, and propose mitigation measures for any identified impacts. Direct air impacts are those that are caused by and immediately related to the project. Cumulative air quality impacts are typically due to projects adjacent to each other implementing simultaneous construction or due to LOS degradation of roadway segments or intersections resulting from traffic generated or redirected by the proposed project and past, present or future projects.

3.1 Typical Air Quality Study Outline

The required sections of an AQS are provided in the outline/Table of Contents below:

COVER PAGE
TABLE OF CONTENTS (Including a list of tables, maps & figures)
GLOSSARY OF TERMS AND ACRONYMS
EXECUTIVE SUMMARY
1.0 INTRODUCTION
1.1 <u>Purpose of the Report</u>
1.2 <u>Project Location and Description</u> (Including map of proposed project location & map of AQS Area; discuss construction and/or operational project design measures, if applicable)
2.0 Existing Conditions
2.1 <u>Existing Setting</u>
2.2 <u>Climate & Meteorology</u>
2.3 <u>Regulatory Setting</u>
2.4 <u>Background Air Quality</u>
3.0 SIGNIFICANCE CRITERIA & ANALYSIS METHODOLOGIES
4.0 PROJECT IMPACT ANALYSIS
4.1 <u>Conformance to the Regional Air Quality Strategy</u>
4.1.1 Guidelines for the Determination of Significance
4.1.2 Significance of Impacts Prior to Mitigation
4.1.3 Mitigation Measures and Design Considerations
4.1.4 Conclusions
4.2 <u>Conformance to Federal and State Ambient Air Quality Standards</u>

4.2.1	Construction Impacts
4.2.1.1	Guidelines for the Determination of Significance
4.2.1.2	Significance of Impacts prior to Mitigation
4.2.1.3	Mitigation Measures and Design Considerations
4.2.1.4	Conclusions
4.2.2	Operational Impacts
4.2.2.1	Guidelines for the Determination of Significance
4.2.2.2	Significance of Impacts prior to Mitigation
4.2.2.3	Mitigation Measures and Design Considerations
4.2.2.4	Conclusions
4.3	<u>Cumulatively Considerable Net Increase of Criteria Pollutants</u>
4.3.1	Construction Impacts
4.3.1.1	Guidelines for the Determination of Significance
4.3.1.2	Significance of Impacts prior to Mitigation
4.3.1.3	Mitigation Measures and Design Considerations
4.3.1.4	Conclusions
4.3.2	Operational Impacts
4.3.2.1	Guidelines for the Determination of Significance
4.3.2.2	Significance of Impacts prior to Mitigation
4.3.2.3	Mitigation Measures and Design Considerations
4.3.2.4	Conclusions
4.4	<u>Impacts to Sensitive Receptors</u>
4.4.1	Guidelines for the Determination of Significance
4.4.2	Significance of Impacts prior to Mitigation (Construction & Operational Phases)
4.4.3	Mitigation Measures and Design Considerations (Construction & Operational Phases)
4.4.4	Conclusions
4.5	<u>Odor Impacts</u>
4.5.1	Guidelines for the Determination of Significance
4.5.2	Significance of Impacts prior to Mitigation (Construction & Operational Phases if applicable)
4.5.3	Mitigation Measures and Design Considerations (Construction & Operational Phases if applicable)
4.5.4	Conclusions
5.0	SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS & MITIGATION
6.0	REFERENCES
7.0	LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED
TECHNICAL ATTACHMENTS (order will be determined by reference in report)	

3.2 General Content Guidance

Cover Page

The cover page shall include the following information:

- Project common name
- Project numbers (i.e. TM, ZAP, etc.) including the environmental log number (ER)
- Date (original report date plus all revisions) must be revised during each iteration of the draft report)
- Name of County Approved CEQA Consultant preparing document, firm name (if applicable) and address
- Signature of County Approved CEQA Consultant
- Project proponent's name and address
- The following statement: Prepared for The County of San Diego

Table of Contents (Including a list of tables, maps & figures)

The table of contents should follow the recommended order and format outlined in this document. Page numbers should be assigned when possible especially to all the pertinent tables and figures. Titles of each attachment/appendix should be listed in the order in which they are referenced in the document.

Glossary of Terms and Acronyms

Provide a list of terms and acronyms used in the study.

Executive Summary

Provide a brief summary of the project, the potential impacts, project design measures and proposed mitigation (if applicable). No new information should be provided in the summary that is not further explained elsewhere in the document. The purpose of the summary is to provide a quick reference for the public and decision-makers. Therefore, the language should be less technical than that used in the remainder of the document.

Section 2.0 Existing Conditions

The existing condition section of the document should address the whole of the setting, the meteorological conditions, the regulatory framework and the background air quality.

- **2.1 Existing Setting**

This section should describe the existing land use, topography and the surrounding area.

- **2.2 Climate & Meteorology**

This section should include a discussion of predominant meteorological conditions in the project area, regional and micro-scale, including a brief discussion of predominant wind patterns, and precipitation levels.

- **2.3 Regulatory Setting**

This section should discuss the Federal, State & local regulatory framework for air quality. This section should also discuss state and local level programs aimed at reducing criteria pollutants.

- **2.4 Background Air Quality**

This section should provide background information on air quality status of the project area, including local air quality monitoring data, basin air quality designations for both the CAAQS and the NAAQS, and regional air quality trends.

Section 3.0 Significance Criteria & Analysis Methodology

This section should introduce the Guidelines for Determining Significance (Figure 1) then move directly into the methodology(ies) used for evaluating project emission impacts. Include in the description of the methodology or equations used to estimate emissions a discussion of the assumptions used to calculate emissions.

- **Criteria Pollutants (except $PM_{2.5}$)**

In the case of criteria pollutants, impacts are generally evaluated by comparing the sum of pollutant concentrations or emissions totals from a proposed project and existing pollutant levels (background) to the appropriate standard. Emission totals are generated using specific scientific calculations or using emission programs such as ARB's Urban Emissions Model (URBEMIS). When determining actual pollutant concentrations, a Gaussian dispersion model, such as the AMS/EPA Regulatory Model shall be used. Most models work on the premise that pollutant concentrations are diluted over time and distance from the source, due to mixing caused by meteorological conditions. A myriad of air dispersion models exist, from simple dispersion models that require only a few parameters (e.g. SCREEN3), to models that require reams of data and mainframes to run. Some models are geared toward emissions from stationary sources (e.g. stacks, ponds, or buildings), while others are designed to evaluate emissions from motor vehicles idling at intersections. The intent of a modeling analysis is to demonstrate that the proposed source emissions will not interfere with the attainment or maintenance of the NAAQS or CAAQS. In general, different models or applications are used for different scenarios and in general, the County will have discretion on determining whether or not a model or application is acceptable.

In the case of toxic air contaminants, impacts are also generally evaluated by modeling or screening. When modeling (using the Hotspot Analysis Reporting Program [HARP] or other applicable model/application) or screening for toxic air contaminants, the intent is to demonstrate that proposed source emissions will not cause an increase in cancer or acute / chronic non-cancer risks above publicly-adopted levels which are considered to pose an unacceptable risk to the public health.

Another widely accepted model is the California LINE Source Dispersion Model, version 4 (CALINE4), which is the standard modeling program used by Caltrans to

assess carbon monoxide impacts near transportation facilities, as described in Appendix B of the CO Protocol (State of California 1997). It is also based on the Gaussian diffusion equation and employs a mixing zone concept to characterize pollutant dispersion over the roadway. This model predicts air concentrations of carbon monoxide (CO), Nitrogen Dioxide (NO₂), and suspended particles near roadways. Options are available for modeling near intersections, parking lots, elevated or depressed freeways, and canyons.

- ***PM_{2.5}***

Since currently few or no PM_{2.5} emission factors have been developed for mechanical or combustion processes, an indirect approach to calculating PM_{2.5} emissions until such time as PM_{2.5} factors are developed will be used. Since PM_{2.5} is a subset of PM₁₀, the current methodology for calculating PM₁₀ from fugitive dust sources (grading, demolition, unpaved roads, open storage piles, etc.) and combustion sources (stationary combustion sources, vehicle exhaust) will continue to be used to calculate PM₁₀ and can also be used to calculate PM_{2.5}. Total suspended PM (TSP) emissions typically contain specific fractions of PM₁₀ and PM_{2.5} that can be measured. In general, PM from fugitive dust generating sources is primarily composed of PM₁₀ with a relatively small fraction of the fugitive PM consisting of PM_{2.5}. Alternatively, PM from combustion sources is primarily composed of PM_{2.5} with a small fraction consisting of particles larger than PM_{2.5} and smaller than PM₁₀.

The PM_{2.5} fraction of the PM₁₀ emissions is determined using the methodology developed by the SCAQMD as follows. It is recommended that the PM₁₀ emissions be calculated using standard PM₁₀ calculation methodologies. The PM₁₀ emission results for each emission source or operation are then multiplied by the applicable PM_{2.5} fraction, derived by emissions source, using PM profiles in Attachment B, which are from the California Emission Inventory Data and Reporting System (CEIDARS) developed by the California ARB. The CEIDARS PM profiles were used to develop emission inventories for a variety of sources and operations identified in the SCAQMD's AQMP. The CEIDARS PM profiles were streamlined by SCAQMD to be used for most types of processes that would be encountered in a CEQA or NEPA document. In addition, SCAQMD staff identified the PM_{2.5} fraction of PM₁₀. The CEIDARS PM profiles may be updated as necessary to reflect updates prepared by California ARB. If the project being evaluated is not listed among the categories in Attachment B, then the closest related type of operation/process should be used.

- ***Health Risk Calculations***

The California EPA has provided standard guidance for conducting human health risks assessments in their *Air Toxics Hot Spots Program Risk Assessment Guidelines* (California EPA 2003). In accordance with CalEPA guidance, exposure via inhalation can be calculated by the following equation:

$$Dose - inhalation = \frac{C_{air} * \{DBR\} * A * EF * ED * 10^{-6}}{AT}$$

Where:

Dose-inhalation	=	Dose through inhalation (mg/kg/day)
10^{-6}	=	Micrograms to milligrams conversion, Liters to cubic meters conversion
C_{air}	=	Pollutant concentration in air ($\mu\text{g}/\text{m}^3$)
{DBR}	=	Daily breathing Rate (L/kg body weight – day)
A	=	Inhalation absorption factor
EF	=	Exposure frequency (days/year)
ED	=	Exposure duration (years)
AT	=	Averaging time period over which exposure is averaged, in days (e.g., 25,550 days for 70 years for cancer risk)

For calculation of excess cancer risk, OEHHA guidance has provided estimates of inhalation rates, average body weights, and exposure time and frequency for residential and occupational exposure scenarios in their guidance. The averaging time for excess cancer risk (AT) is defined as a 70-year lifetime, or 25550 days.

For exposure duration, in general, OEHHA recommends a 70-year lifetime exposure duration for calculating health risks for residential exposures. However, for shorter-term exposures due to temporary impacts (such as calculation of exposures to emissions during short-term construction projects), the exposure duration can be defined based on the duration of the proposed construction.

Section 4.0 Project Impact Analysis

The Project Impact Analysis section should be divided into subsections based on the outline in Section 3.1 above.

- **4.1 Conformance to Regional Air Quality Strategy (RAQS)**

Projects that propose development consistent with the growth anticipated by the general plan would be consistent with the RAQS. In the event that a project requires a general plan amendment, additional analysis may still provide substantial evidence that the growth is accounted for in the RAQS assumptions. The RAQS relies on information from California Air Resource Board (CARB) and the San Diego Association of Governments (SANDAG), including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends, general plans, and future land use plans developed by the cities and County, for each Major Statistical Area (MSA) and their associated Subregional Areas (SRA). In order to demonstrate conformance with the RAQS when a project needs a general plan amendment to increase

density, a growth projection analysis for the applicable SRA and/or MSA comparing the SANDAG growth projections with the actual development expected to occur (based on GIS data for development recently approved or currently in the discretionary process for a specific SRA) can be completed. If the project, in conjunction with other projects within a defined boundary, contributes to growth projections that exceed SANDAG's growth projections for that defined boundary, the project would be in conflict with the RAQS and the SIP, and would have significant and unmitigated impact on air quality.

- **4.2 Conformance to Federal & State Ambient Air Quality Standards**

This section should be subdivided into the construction and operational phase impact analysis. Sections 4.2.1 & 4.2.2 and the subsequent analysis must use the following thresholds (summarized in Figure 1):

- ***The project will result in emissions that exceed 250 pounds per day of NO_x or 75 pounds per day of VOCs.***
- ***The project will result in emissions of carbon monoxide that when totaled with the ambient air concentrations will exceed a 1 hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm.***
- ***The project will result in emissions of PM_{2.5} that exceed 55 pounds per day.***
- ***The project will result in emissions of PM₁₀ that exceed 100 pounds per day and increase the ambient PM₁₀ concentration by 5 micrograms per cubic meter (5.0 µg/m³) or greater at the maximum exposed individual.***

In the event a project has significant impacts, *feasible* mitigation measures or project design considerations (preferred) which reduce the level impacts to a less than significant level must be pursued. Finally, the conclusion sections must include a table that summarizes emissions for each phase.

- **4.3 Cumulatively Considerable Net Increase of Criteria Pollutants**

This section should also be subdivided into the construction and operational phase impact analysis.

Cumulative Construction Analysis, Section 4.3.1 (construction phase) and the subsequent analysis must use the following thresholds (summarized in Figure 1):

- ***The project will result in emissions that exceed 250 pounds per day of NO_x or 75 pounds per day of VOCs.***
- ***The project will result in emissions of PM_{2.5} that exceed 55 pounds per day.***

- ***The project will result in emissions of PM₁₀ that exceed 100 pounds per day and increase the ambient PM₁₀ concentration by 5 micrograms per cubic meter (5.0 µg/m³) or greater at the maximum exposed individual.***

Cumulative Operational Analysis, Sections 4.3.2 (operational phase) and the subsequent analysis must use the following thresholds (summarized in Figure 1):

- ***A project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of PM₁₀, PM_{2.5}, NO_x and/or VOCs, would also have a significant cumulatively considerable net increase.***
- ***Projects that cause road intersections or roadway segments to operate at or below a LOS E and create a CO “hotspot” create a cumulatively considerable net increase of CO.***

It is assumed that a project which conforms to the County of San Diego General Plan, and does not have emissions exceeding the SLTs, will not create a cumulatively considerable net increase in criteria pollutants since the emissions were accounted for in the RAQS. If a project has a cumulatively considerable net increase, the impact can be reduced to less than significant with “fair share” mitigation.

Examples of “fair share” mitigation include but are not limited to the following:

Construction Mitigation Measures

- Contributing funds to Carl Moyer-like retrofit projects;
- Purchasing ERCs;
- Retrofitting some of the construction equipment with cooled exhaust gas recirculation, lean-NO_x catalysts, and/or diesel particulate filters; and/or
- Using newer equipment (newer than 1996).

Operational Mitigation Measures

- Construction of park and ride lots;
- Lower-emission school bus projects;
- Transit infrastructure;
- Natural Gas fueling infrastructure;
- Pedestrian infrastructure improvements; and
- Funding for projects that reduce diesel combustion NO_x and toxic particulate matter emissions.

Appropriate “fair share” mitigation should be proposed and the effects of such mitigation should be quantified to the maximum extent feasible. Finally, the conclusion sections must include a table that summarizes emissions for each phase.

- **4.4 Impacts to Sensitive Receptors**

This section should also be discussed in terms of the construction and operational phase impacts.

The following Guidelines for Determining Significance must be used for determining whether or not the project will expose sensitive receptors to substantial pollutant concentrations:

- ***The project places sensitive receptors near CO "hotspots" or creates CO "hotspots" near sensitive receptors.***
- ***Project implementation will result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of Toxics-Best Available Control Technology or a health hazard index greater than one would be deemed as having a potentially significant impact.***

For the purposes of CEQA analysis in the County of San Diego, the definition of a sensitive receptor includes schools (Preschool-12th Grade), hospitals, resident care facilities, day-care centers and residents. The two primary emissions of concern regarding health effects for land development projects are diesel-fired particulates and carbon monoxide. Section 4.4.2 should include a figure which shows the location of the project and the nearest sensitive receptors. Any project that proposes a regulated point source of emission will have to acquire permits from the San Diego Air Pollution Control District and further health risk analysis may be required.

- **4.5 Odor Impacts**

Odor issues are very subjective by the nature of odors themselves and their measurements are difficult to quantify. As a result, this guideline is qualitative and each project will be reviewed on an individual basis, focusing on the existing and potential surrounding uses and location of sensitive receptors. The odor section should also discuss odors from construction and operational phases.

In general a project will not have a significant impact if the following are true:

- The project does not place a new odor producing land use activity adjacent to existing sensitive receptors (ex. Waste Water Treatment facility);
- The project will not place sensitive receptors adjacent to or near a confined animal facility or other odor producing land use; and
- The project is not located near any other agricultural use with the potential to produce strong odors including but not limited to organic agricultural operations or agricultural operations that apply a substantial amount of agricultural chemicals that typically produce strong odors.

Every AQS should include statements similar to the above statements in the odor

section. If a statement(s) above is not true for a project, an odor analysis may be needed. An odor analysis will consider variables such as topography, wind patterns and other variables such as the odor threshold of the emission of concern.

Section 5.0 **Summary of Recommended Project Design Features, Impacts & Mitigation**

This section should bring together all the project impacts, project design measures and proposed mitigation (if applicable). A table can be created to summarize this information. Such a table should identify the type of impacts (direct or cumulative), the recommended mitigation measures, and the status of impacts after mitigation (fully mitigated or not). No new information should be provided in the summary that is not further explained earlier in the document.

General Mitigation Measure Guidance

Stating that a mitigation measure is not financially feasible without providing evidence is not acceptable. Any unmitigated significant impacts would require an EIR with a statement of overriding considerations from the Board of Supervisors. Alternative fuel vehicles and the use of alternative lower-emission fuels should be considered. Voluntary offsite mitigation projects may also be proposed including construction of park and ride lots, lower-emission school bus projects, transit infrastructure, CNG fueling infrastructure, pedestrian infrastructure improvements, and funding projects that reduce diesel combustion NOx and toxic particulate matter emissions are also acceptable mitigations to be considered. Various additional mitigation measures / design considerations are identified and discussed in Section 5 of the Air Quality Guidelines for Determining Significance.

Attachments Guidance

The attachments should include (in the order referenced to in the document) all spreadsheets used in emission calculations and all modeling inputs and results. Any assumptions or changes to default values must be justified.

4.0 REFERENCES

California Environmental Protection Agency

Air Toxics Hot Spots Program Risk Assessment Guidelines – The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. August 2003.

California, State of

Transportation Project-Level Carbon Monoxide Protocol. UCD-ITS-RR-97-21. California Department of Transportation. Revised December 1997.

Architectural Coatings Survey, Draft Report. California Air Resources Board. September 2006b .

http://www.arb.ca.gov/coatings/arch/survey/2005/Draft_2005_Survey_Rpt.pdf

CEQA Air Quality Handbook. South Coast Air Quality Management District, 1993.

Minnesota Pollution Control Agency

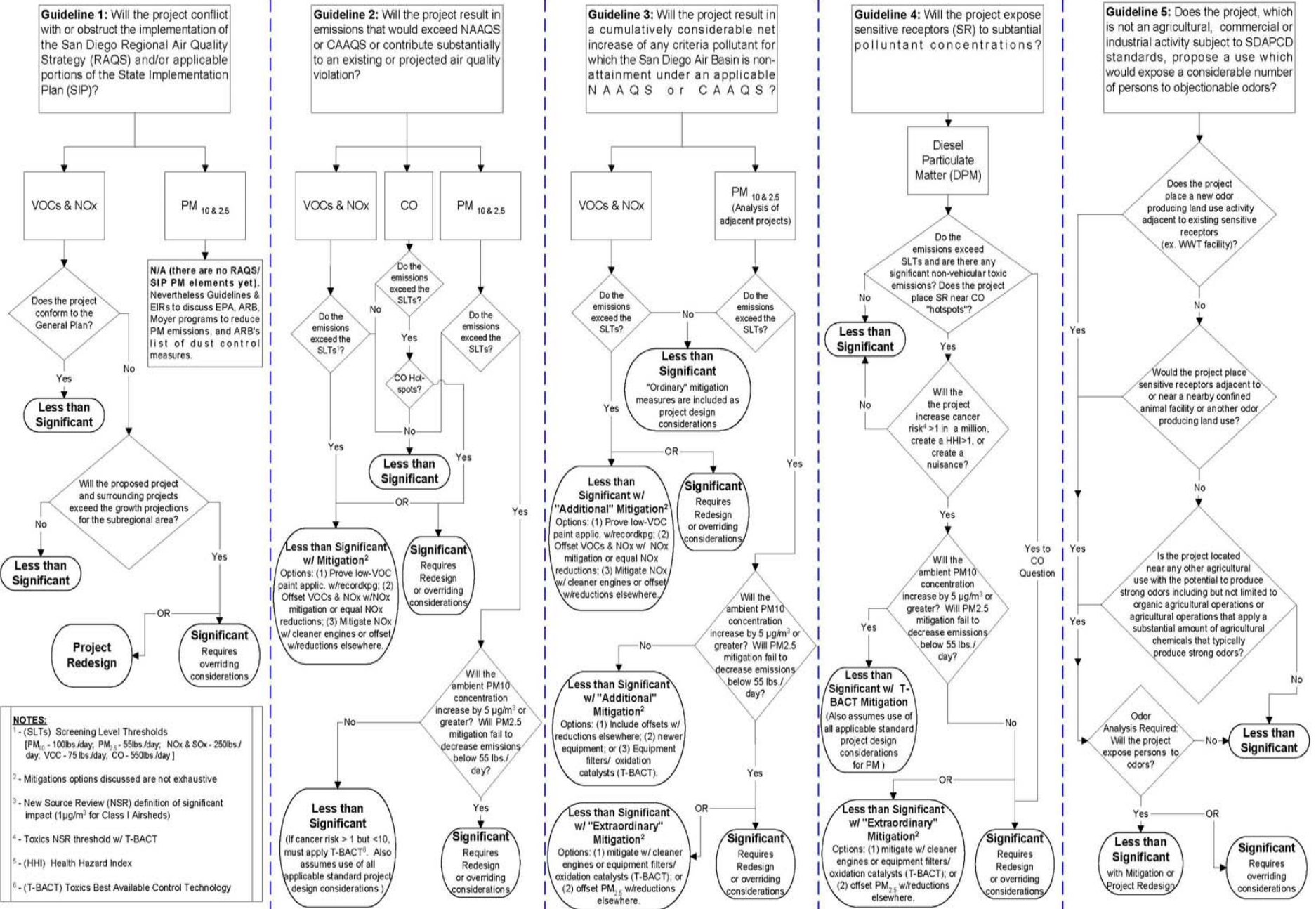
Permit Application Form EC-07, Painting/Coating Operations Calculation.

March 25, 2003. Accessed from the Minnesota Pollution Control Agency website at <http://www.pca.state.mn.us/air/permits/forms.html>.

Sacramento Metropolitan Air Quality Management District

Guide to Air Quality Assessment in Sacramento County. July 2004.

Figure 1 - County of San Diego LUEG Air Quality CEQA Significance Flow for Privately Initiated Projects



[Attachment A]

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Construction_dmg.urb
 Project Name: County - Construction
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

CONSTRUCTION EMISSION ESTIMATES

	ROG	PM10 NOx	PM10 CO	PM10 SO2	TOTAL	EXHAUST	DUST
*** 2007 ***							
TOTALS (lbs/day,unmitigated)	30.45	230.41	229.95	0.00	45.28	10.26	35.02

	ROG	PM10 NOx	PM10 CO	PM10 SO2	TOTAL	EXHAUST	DUST
*** 2008 ***							
TOTALS (lbs/day,unmitigated)	30.45	219.26	238.00	0.00	44.38	9.36	35.02

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Construction_dmg.urb
 Project Name: County - Construction
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

Construction Start Month and Year: June, 2007
 Construction Duration: 12
 Total Land Use Area to be Developed: 40 acres
 Maximum Acreage Disturbed Per Day: 3.5 acres
 Single Family Units: 0 Multi-Family Units: 0
 Retail/Office/Institutional/Industrial Square Footage: 0

CONSTRUCTION EMISSION ESTIMATES UNMITIGATED (lbs/day)

Source	ROG	NOx	CO	PM10 SO2	PM10 TOTAL	PM10 EXHAUST	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	-	-	-	35.00	-	35.00	
Off-Road Diesel	30.15	230.03	223.10		10.25	10.25	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.30	0.38	6.85	0.00	0.03	0.01	0.02
Maximum lbs/day	30.45	230.41	229.95	0.00	45.28	10.26	35.02

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 Trip	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	30.45	230.41	229.95	0.00	45.28	10.26	35.02

*** 2008***

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	-	-	-	35.00	-	35.00	
Off-Road Diesel	30.15	218.88	231.24	-	9.35	9.35	0.00
On-Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Worker Trips	0.30	0.38	6.76	0.00	0.03	0.01	0.02
Maximum lbs/day	30.45	219.26	238.00	0.00	44.38	9.36	35.02

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	0.00	-	-	-	-	-	-
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	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Max lbs/day all phases	30.45	219.26	238.00	0.00	44.38	9.36	35.02

Phase 3 - Building Construction Assumptions: Phase Turned OFF

Phase 2 - Site Grading Assumptions

Start Month/Year for Phase 2: Jun '07

Phase 2 Duration: 12 months

On-Road Truck Travel (VMT): 0

Off-Road Equipment

No.	Type	Horsepower	Load Factor	Hours/Day
7	Rubber Tired Dozers	352	0.590	8.0
7	Tractor/Loaders/Backhoes	79	0.465	8.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Construction

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Condo_gen_dmg.urb
 Project Name: County - Condos - general
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	40.48	3.20	18.94	0.03	2.44

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	34.41	58.73	421.58	0.22	37.87

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	74.88	61.93	440.51	0.25	40.31

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Condo_gen_dmg.urb
 Project Name: County - Condos - general
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.22	2.81	1.20	0	0.01
Hearth	16.01	0.39	17.74	0.03	2.43
Landscaping - No winter emissions					
Consumer Prdcts	18.25	-	-	-	-
Architectural Coatings	6.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	40.48	3.20	18.94	0.03	2.44

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Condo/townhouse general	34.41	58.73	421.58	0.22	37.87
TOTAL EMISSIONS (lbs/day)	34.41	58.73	421.58	0.22	37.87

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Condo/townhouse general	23.31	8.00 trips/dwelling unit	373.00	2,984.00
Sum of Total Trips			2,984.00	
Total Vehicle Miles Traveled			24,941.76	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Condominium/townhouse general have changed from the defaults 6.9/23.31 to 8/23.31

Changes made to the default values for Area

- The wood stove percentage changed from 35 to 0.
- The wood fireplace percentage changed from 10 to 5.
- The natural gas fireplace percentage changed from 55 to 10.
- The no hearth options percentage changed from 0 to 85.
- The fireplace cords of wood burned changed from 1.48 to .25.
- The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\fastfood_dmg.urb
Project Name: County - Fast Food Restaurant w/Drive-thru
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	0.10	0.07	0.06	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.25	77.74	549.27	0.28	50.15

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.35	77.81	549.32	0.28	50.15

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\fastfood_dmg.urb
Project Name: County - Fast Food Restaurant w/Drive-thru
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.07	0.06	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.10	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.10	0.07	0.06	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Fast food rest. w/ drive	45.25	77.74	549.27	0.28	50.15
TOTAL EMISSIONS (lbs/day)	45.25	77.74	549.27	0.28	50.15

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Fast food rest. w/ drive		650.00 trips/1000 sq. ft	6.80	4,420.00
Sum of Total Trips			4,420.00	
Total Vehicle Miles Traveled			33,039.50	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Fast food rest. w/ drive thru	5.0	2.5	92.5
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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

- The wood stove percentage changed from 35 to 0.
- The wood fireplace percentage changed from 10 to 5.
- The natural gas fireplace percentage changed from 55 to 10.
- The no hearth options percentage changed from 0 to 85.
- The fireplace cords of wood burned changed from 1.48 to .25.

The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\High_Rise_Appt_dmg.urb
Project Name: County - Apartments > 20 DU/acre
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.80	3.62	21.42	0.03	2.76

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	29.19	49.84	357.72	0.18	32.14

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	74.99	53.46	379.14	0.22	34.90

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URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\High_Rise_Appt_dmg.urb
Project Name: County - Apartments > 20 DU/acre
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.25	3.18	1.35	0	0.01
Hearth	18.12	0.44	20.07	0.03	2.75
Landscaping - No winter emissions					
Consumer Prdcts	20.65	-	-	-	-
Architectural Coatings	6.79	-	-	-	-
TOTALS(lbs/day,unmitigated)	45.80	3.62	21.42	0.03	2.76

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments high rise	29.19	49.84	357.72	0.18	32.14
TOTAL EMISSIONS (lbs/day)	29.19	49.84	357.72	0.18	32.14

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Total	
			Units	Trips
Apartments high rise	6.81	6.00 trips/dwelling unit	422.00	2,532.00
Sum of Total Trips			422.00	2,532.00
Total Vehicle Miles Traveled			422.00	21,163.72

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments high rise have changed from the defaults 5.29/6.81 to 6/6.81

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.

The wood fireplace percentage changed from 10 to 5.

The natural gas fireplace percentage changed from 55 to 10.

The no hearth options percentage changed from 0 to 85.

The fireplace cords of wood burned changed from 1.48 to .25.

The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Low_Rise_Appt_dmg.urb
Project Name: County - Apartments (6-20 DU/acre)
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	40.48	3.20	18.94	0.03	2.44

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	34.41	58.73	421.58	0.22	37.87

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	74.88	61.93	440.51	0.25	40.31

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Low_Rise_Appt_dmg.urb
Project Name: County - Apartments (6-20 DU/acre)
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.22	2.81	1.20	0	0.01
Hearth	16.01	0.39	17.74	0.03	2.43
Landscaping - No winter emissions					
Consumer Prdcts	18.25	-	-	-	-
Architectural Coatings	6.00	-	-	-	-
TOTALS(lbs/day,unmitigated)	40.48	3.20	18.94	0.03	2.44

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Apartments low rise	34.41	58.73	421.58	0.22	37.87
TOTAL EMISSIONS (lbs/day)	34.41	58.73	421.58	0.22	37.87

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Total	
			Units	Trips
Apartments low rise	23.31	8.00 trips/dwelling unit	373.00	2,984.00
Sum of Total Trips			2,984.00	
Total Vehicle Miles Traveled			24,941.76	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise have changed from the defaults 6.9/23.31 to 8/23.31

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 5.
The natural gas fireplace percentage changed from 55 to 10.
The no hearth options percentage changed from 0 to 85.
The fireplace cords of wood burned changed from 1.48 to .25.
The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\mobile_dmg.urb
Project Name: County - Mobile Homes
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	51.52	5.62	21.52	0.03	2.67

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	23.41	39.96	286.80	0.15	25.77

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	74.93	45.58	308.32	0.18	28.43

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\mobile_dmg.urb
Project Name: County - Mobile Homes
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.39	5.09	2.16	0	0.01
Hearth	17.44	0.53	19.36	0.03	2.66
Landscaping - No winter emissions					
Consumer Prdcts	19.86	-	-	-	-
Architectural Coatings	13.83	-	-	-	-
TOTALS(lbs/day,unmitigated)	51.52	5.62	21.52	0.03	2.67

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Mobile home park	23.41	39.96	286.80	0.15	25.77
TOTAL EMISSIONS (lbs/day)	23.41	39.96	286.80	0.15	25.77

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Total	
			Units	Trips
Mobile home park	67.67	5.00 trips/dwelling unit	406.00	2,030.00
Sum of Total Trips			2,030.00	
Total Vehicle Miles Traveled			16,967.76	

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	Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Mobile home park

have changed from the defaults 4.99/67.67 to 5/67.67

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 5.
The natural gas fireplace percentage changed from 55 to 10.
The no hearth options percentage changed from 0 to 85.
The fireplace cords of wood burned changed from 1.48 to .25.
The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\motel_dmg.urb
Project Name: County - Motel
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	3.87	6.25	5.25	0.00	0.01

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	44.88	77.09	544.67	0.28	49.73

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	48.74	83.34	549.92	0.28	49.74

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\motel_dmg.urb
Project Name: County - Motel
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.45	6.25	5.25	0	0.01
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	3.41	-	-	-	-

TOTALS(lbs/day,unmitigated) 3.87 6.25 5.25 0.00 0.01

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Motel	44.88	77.09	544.67	0.28	49.73
TOTAL EMISSIONS (lbs/day)	44.88	77.09	544.67	0.28	49.73

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	No. Trip Rate	Total	
			Units	Trips
Motel	9.00	trips/rooms	487.00	4,383.00
Sum of Total Trips			4,383.00	
Total Vehicle Miles Traveled			32,762.93	

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-Home-	Work	Home-Shop	Other	Commute	Non-Work Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Motel 5.0 2.5 92.5
Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
The wood fireplace percentage changed from 10 to 5.
The natural gas fireplace percentage changed from 55 to 10.
The no hearth options percentage changed from 0 to 85.
The fireplace cords of wood burned changed from 1.48 to .25.
The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\NeighPark_dmg.urb
Project Name: County - Neighborhood Park
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

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

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.31	77.83	549.89	0.28	50.21

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.31	77.83	549.89	0.28	50.21

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\NeighPark_dmg.urb
Project Name: County - Neighborhood Park
Project Location: San Diego County
On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.00	0.00	0.00	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-

Architectural Coatings	0.00	-	-	-	-	
TOTALS(lbs/day,unmitigated)	0.00	0.00	0.00	0.00	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10	
City park	45.31	77.83	549.89	0.28	50.21	
TOTAL EMISSIONS (lbs/day)	45.31	77.83	549.89	0.28	50.21	

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
City park	5.00	trips/acres	885.00	4,425.00
			Sum of Total Trips	4,425.00
			Total Vehicle Miles Traveled	33,076.88

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

City park 5.0 2.5 92.5

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

- The wood stove percentage changed from 35 to 0.
- The wood fireplace percentage changed from 10 to 5.
- The natural gas fireplace percentage changed from 55 to 10.
- The no hearth options percentage changed from 0 to 85.
- The fireplace cords of wood burned changed from 1.48 to .25.
- The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\NeighShop_dmg.urb
 Project Name: County - Neighborhood Shopping center
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	0.54	0.36	0.30	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	44.91	77.05	544.70	0.28	49.67

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.46	77.40	545.01	0.28	49.67

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\NeighShop_dmg.urb
 Project Name: County - Neighborhood Shopping center
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.03	0.36	0.30	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					

Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.52	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.54	0.36	0.30	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Strip mall	44.91	77.05	544.70	0.28	49.67
TOTAL EMISSIONS (lbs/day)	44.91	77.05	544.70	0.28	49.67

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Strip mall	120.00	trips/1000 sq. ft.	37.00	4,440.00
Sum of Total Trips			4,440.00	
Total Vehicle Miles Traveled			32,722.80	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)
 Strip mall 2.0 1.0 97.0

Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
 The wood fireplace percentage changed from 10 to 5.
 The natural gas fireplace percentage changed from 55 to 10.
 The no hearth options percentage changed from 0 to 85.
 The fireplace cords of wood burned changed from 1.48 to .25.
 The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.
 The operational winter selection item changed from 2 to 1.
 The operational summer selection item changed from 7 to 6.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\OfficeBlg_dmg.urb
 Project Name: County - General Office Building (<100,000 sq ft)
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	2.83	1.30	1.09	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	44.74	77.79	546.57	0.29	50.47

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	47.57	79.09	547.67	0.29	50.48

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\OfficeBlg_dmg.urb
 Project Name: County - General Office Building (<100,000 sq ft)
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT

(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.09	1.30	1.09	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	2.73	-	-	-	-
TOTALS(lbs/day,unmitigated)	2.83	1.30	1.09	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
General office building	44.74	77.79	546.57	0.29	50.47
TOTAL EMISSIONS (lbs/day)	44.74	77.79	546.57	0.29	50.47

Does not include correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
General office building		20.00 trips/1000 sq. ft.	195.00	3,900.00
Sum of Total Trips			3,900.00	
Total Vehicle Miles Traveled			33,247.50	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

General office building	35.0	17.5	47.5
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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

- The wood stove percentage changed from 35 to 0.
- The wood fireplace percentage changed from 10 to 5.
- The natural gas fireplace percentage changed from 55 to 10.
- The no hearth options percentage changed from 0 to 85.
- The fireplace cords of wood burned changed from 1.48 to .25.
- The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\QualRest_dmg.urb
 Project Name: County - Quality Restaurant
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	0.64	0.42	0.35	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.18	77.71	548.74	0.28	50.17

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.82	78.13	549.09	0.28	50.17

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\QualRest_dmg.urb
 Project Name: County - Quality Restaurant
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.03	0.42	0.35	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.61	-	-	-	-
TOTALS(lbs/day,unmitigated)	0.64	0.42	0.35	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Quality resturant	45.18	77.71	548.74	0.28	50.17
TOTAL EMISSIONS (lbs/day)	45.18	77.71	548.74	0.28	50.17

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Quality resturant		100.00 trips/1000 sq. ft.	43.60	4,360.00
Sum of Total Trips			4,360.00	
Total Vehicle Miles Traveled			33,048.80	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Quality restaurant	8.0	4.0	88.0
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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

- The wood stove percentage changed from 35 to 0.
- The wood fireplace percentage changed from 10 to 5.
- The natural gas fireplace percentage changed from 55 to 10.
- The no hearth options percentage changed from 0 to 85.
- The fireplace cords of wood burned changed from 1.48 to .25.
- The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Single-Family_dmg.urb
 Project Name: County - Single Family
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	39.21	4.28	16.38	0.02	2.03

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	35.63	60.82	436.55	0.22	39.22

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	74.84	65.10	452.93	0.25	41.25

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\Single-Family_dmg.urb
 Project Name: County - Single Family

Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.30	3.87	1.65	0	0.01
Hearth	13.27	0.41	14.73	0.02	2.02
Landscaping - No winter emissions					
Consumer Prdcts	15.12	-	-	-	-
Architectural Coatings	10.52	-	-	-	-
TOTALS(lbs/day,unmitigated)	39.21	4.28	16.38	0.02	2.03

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	35.63	60.82	436.55	0.22	39.22
TOTAL EMISSIONS (lbs/day)	35.63	60.82	436.55	0.22	39.22

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	103.00	10.00 trips/dwelling unit	309.00	3,090.00
Sum of Total Trips			3,090.00	
Total Vehicle Miles Traveled			25,827.77	

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)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Single family housing have changed from the defaults 9.57/103. to 10/103.

Changes made to the default values for Area

The wood stove percentage changed from 35 to 0.
 The wood fireplace percentage changed from 10 to 5.
 The natural gas fireplace percentage changed from 55 to 10.
 The no hearth options percentage changed from 0 to 85.
 The fireplace cords of wood burned changed from 1.48 to .25.
 The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

The operational emission year changed from 2005 to 2007.

URBEMIS 2002 For Windows 8.7.0

File Name: G:\DMG\County Air\County Air examples\supermarket_dmg.urb
 Project Name: County - Supermarket
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

SUMMARY REPORT
 (Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	0.44	0.29	0.24	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.21	77.57	548.39	0.28	50.00

SUM OF AREA AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10
TOTALS (lbs/day,unmitigated)	45.65	77.86	548.63	0.28	50.01

File Name: G:\DMG\County Air\County Air examples\supermarket_dmg.urb
 Project Name: County - Supermarket
 Project Location: San Diego County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

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

Source	ROG	NOx	CO	SO2	PM10
Natural Gas	0.02	0.29	0.24	0	0.00
Hearth	0.00	0.00	0.00	0.00	0.00
Landscaping - No winter emissions					
Consumer Prdcts	0.00	-	-	-	-
Architectural Coatings	0.42	-	-	-	-
TOTALS(lbs/day, unmitigated)	0.44	0.29	0.24	0.00	0.00

UNMITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Supermarket	45.21	77.57	548.39	0.28	50.00
TOTAL EMISSIONS (lbs/day)	45.21	77.57	548.39	0.28	50.00

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

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2007 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	No. Trip Rate	Total Units	Trips
Supermarket	150.00	trips/1000 sq. ft.	29.80	4,470.00
Sum of Total Trips			4,470.00	
Total Vehicle Miles Traveled			32,943.90	

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	Commuter	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	10.8	7.3	7.3
Rural Trip Length (miles)	15.0	10.0	10.0	15.0	10.0	10.0
Trip Speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	27.3	21.2	51.5			

% of Trips - Commercial (by land use)

Supermarket	2.0	1.0	97.0
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Changes made to the default values for Land Use Trip Percentages

Changes made to the default values for Area

- The wood stove percentage changed from 35 to 0.
- The wood fireplace percentage changed from 10 to 5.
- The natural gas fireplace percentage changed from 55 to 10.
- The no hearth options percentage changed from 0 to 85.
- The fireplace cords of wood burned changed from 1.48 to .25.
- The landscape year changed from 2005 to 2007.

Changes made to the default values for Operations

- The operational emission year changed from 2005 to 2007.

[Attachment B]

UPDATED CEIDARS TABLE WITH PM2.5 FRACTIONS

SCC MAIN CATEGORY	SCC SUBCATEGORY	PM2.5 FRACTION OF TOTAL PM	PM10 FRACTION OF TOTAL PM	PM2.5 FRACTION OF PM10
ASBESTOS REMOVAL		0.500	0.500	1.000
ASPHALT PAVING / ROOFING	FUGITIVE EMISSIONS	0.925	0.960	0.964
	MANUFACTURING	0.945	0.980	0.964
BURNING	AGRICULTURE/FIELD CROPS, WEED ABATEMENT	0.938	0.984	0.954
	FOREST MANAGEMENT, TIMBER AND BRUSH FIRE	0.854	0.961	0.889
	ORCHARD PRUNINGS	0.925	0.981	0.943
	RANGE MANAGEMENT, WASTE BURNING	0.932	0.983	0.948
	UNPLANNED STRUCTURAL FIRES	0.914	0.980	0.933
CEMENT MANUFACTURING		0.620	0.920	0.674
CHEMICAL MANUFACTURING	FERTILIZER-UREA	0.950	0.960	0.990
	ORGANIC AND INORGANIC CHEMICALS	0.890	0.900	0.989
COATINGS, SOLVENTS, INKS AND DYES	SOLVENT BASED	0.925	0.960	0.964
	WATER-BASED COATING	0.620	0.680	0.912
CONSUMER PRODUCTS		0.925	0.960	0.964
COOKING	BAKING, CHARBROILING, DEEP FAT FRYING	0.420	0.700	0.600
COOLING TOWER		0.420	0.700	0.600
DRY CLEANING		0.925	0.960	0.964
ELECTROPLATING	HEXAVALENT CHROME, CADMIUM	1.000	1.000	1.000
	ZINC AND COPPER	0.925	0.960	0.964
EXTERNAL COMBUSTION	COAL, COKE, LIGNITE	0.150	0.400	0.375
	GASEOUS FUEL-EXCEPT PETROLEUM AND INDUSTRIAL PROCESS HEATERS	1.000	1.000	1.000
	GASEOUS FUEL-PETROLEUM AND INDUSTRIAL PROCESS HEATER ONLY	0.930	0.950	0.979
	LIQUID FUEL-EXCEPT RESIDUAL OIL	0.967	0.976	0.991
	RESIDUAL OIL-EXCEPT UTILITY BOILERS	0.760	0.870	0.874
	RESIDUAL OIL-UTILITY BOILERS ONLY	0.953	0.970	0.982
	STEEL FURNACE	0.930	0.980	0.949
WOOD/BARK WASTE	0.927	0.997	0.930	
FABRICATED METALS	ABRASIVE BLASTING	0.790	0.860	0.919
	ARC WELDING, OXY FUEL, COPPER, ZINC, BATH	0.925	0.960	0.964

SCC MAIN CATEGORY	SCC SUBCATEGORY	PM2.5 Fraction of Total PM	PM10 Fraction of Total PM	PM2.5 Fraction of PM10
FOOD AND AGRICULTURE	COFFEE ROASTING	0.610	0.620	0.984
	FERMENTATION, RENDERING, FISH AND NUT PROCESSING	0.420	0.700	0.600
	GRAIN ELEVATORS	0.010	0.290	0.034
	GRAIN MILLING, DRYING	0.400	0.540	0.741
	LIVESTOCK WASTE	0.420	0.700	0.600
FUGITIVE DUST	AGRICULTURAL TILLING DUST	0.101	0.454	0.222
	CONSTRUCTION AND DEMOLITION	0.102	0.489	0.208
	LANDFILL DUST	0.102	0.489	0.208
	LIVESTOCK DUST	0.055	0.482	0.114
	PAVED ROAD DUST	0.077	0.457	0.169
	UNPAVED ROAD DUST	0.126	0.594	0.212
FUGITIVE EMISSIONS - ORGANIC AND INORGANIC	LIQUID FUEL STORAGE/HANDLING, LOADING, UNLOADING DISPENSING	0.925	0.960	0.964
	NATURAL GAS PRODUCTION, CRUDE OIL PRODUCTION, PETROLEUM REFINING	0.555	0.610	0.910
	ORGANIC AND INORGANIC CHEMCALS	0.925	0.960	0.964
	PROCESSING	0.925	0.960	0.964
	WELL CELLEARS, PUMPS, VALVES, FLAGES, SEALS	0.925	0.960	0.964
HEALTH CARE, LABS	STERILIZATION	0.420	0.700	0.600
INCINERATOR, AFTERBURNER, FLARES	GASEOUS FUEL	1.000	1.000	1.000
	LIQUID FUEL	0.967	0.976	0.991
	SOLID FUEL	0.200	0.300	0.667
INTERNAL COMBUSTION	DISTILLATE AND DIESEL-ELECTRIC GENERATION	0.937	0.960	0.976
	DISTILLATE AND DIESEL-EXCEPT ELECTRIC GENERATION	0.967	0.976	0.991
	GASEOUS FUEL	0.992	0.994	0.998
	GASOLINE	0.992	0.994	0.998
	JET FUEL	0.967	0.976	0.991
	SOLID PROPELLANT	0.927	0.997	0.930
MINERAL PROCESS LOSS	BRICK, CEMENT, FIBERGLASS, GLASS MFG.	0.146	0.500	0.292
	COAL CLEANING, SURFACE COAL MINE, NONMETALLIC MINERAL	0.146	0.500	0.292
	GRINDING, CRUSHING, SURFACE BLASTING	0.146	0.500	0.292
	LOADING AND UNLOADING BULK MATERIALS	0.146	0.500	0.292
MINERAL PRODUCTS	CLAY AND RELATED PRODUCTS GRINDING OPERATIONS	0.513	0.560	0.916
	CRUSHING, SCREENING, BLASTING, LOADING AND UNLOADING	0.030	0.100	0.300
	FIBERGLASS MANUFACTURING	0.992	0.994	0.998
	GLASS MELTING FURNACE	0.963	0.980	0.983

SCC MAIN CATEGORY	SCC SUBCATEGORY	PM2.5 Fraction of Total PM	PM10 Fraction of Total PM	PM2.5 Fraction of PM10
MINERAL PRODUCTS (continued)	GYPSUM MANUFACTURING	0.495	0.880	0.563
	LIME MANUFACTURING	0.117	0.300	0.390
	STONE QUARRYING	0.146	0.500	0.292
OFF-ROAD EQUIPMENT	DIESEL	0.920	1.000	0.920
	GASEOUS FUEL	0.992	0.994	0.998
	GASOLINE	0.680	0.900	0.756
ON-ROAD VEHICLES	BRAKE WEAR	0.420	0.980	0.429
	DIESEL	0.920	1.000	0.920
	GASOLINE-CATALYST	0.900	0.970	0.928
	GASOLINE-NO CATALYST	0.680	0.900	0.756
	HEAVY, MEDIUM, LIGHT DUTY TRUCKS AND VEHICLES, MOTORHOMES, BUSES, MOTORCYCLES	0.925	0.960	0.964
	TIRE WEAR	0.250	1.000	0.250
	ASPHALT CONCRETE	0.333	0.400	0.833
PETROLEUM INDRY	ASPHALT CONCRETE	0.333	0.400	0.833
	ELECTRO REDUCTION, FURNACE, FLUXING, STORAGE, PROCESSING	0.903	0.950	0.951
	IRON & STEEL, FOUNDRY, HEAT TREATING	0.860	0.960	0.896
PRIMARY AND SECONDARY METALS	STEEL FURNACE	0.600	0.830	0.723
		0.900	0.935	0.963
		0.900	0.935	0.963
RESIDENTIAL FIREPLACES AND WOOD COMBUSTION		0.900	0.935	0.963
		0.900	0.935	0.963
SHIPS	DIESEL	0.920	1.000	0.920
	LIQUID FUEL	0.937	0.960	0.976
TRAINS	HAULING, SWITCHING	0.920	1.000	0.920
WASTEWATER, SEWAGE TREATMENT, DIGESTER		0.925	0.960	0.964
WOOD PRODUCTS	SANDING	0.885	0.920	0.962
	SAWING	0.283	0.400	0.708