BAY AREA AIR QUALITY MANAGEMENT DISTRICT

March 18, 2010

Request for Proposals 2010-004

Develop Detailed TAC and PM Emissions Inventory for the Bay Area

SECTION I – SUMMARY

This RFP solicits formal proposals from companies to develop a detailed emissions inventory for toxic air contaminants and fine particulate matter from major sources in the San Francisco Bay Area. This contract is for a term of twelve months and may be extended as needed, at the Air District's sole discretion, to complete these tasks.

To respond to this RFP, an interested company should submit one (1) electronic copy (in Microsoft Office or Adobe format) of its proposal to:

Rebekah Davies, Purchasing Agent, rdavies@baaqmd.gov
Bay Area Air Quality Management District
939 Ellis Street San Francisco, CA 94109

Proposals must be received at the Air District offices at 939 Ellis Street, San Francisco, California, 94109 by 4:30 p.m. on April 15, 2010. Late proposals will not be considered.

Proposals must address all information requested in this RFP. A proposal may add information not requested in this RFP, but the information should be in addition to, not instead of, the requested information and format. Minority business enterprises, women's business enterprises, veteran's business enterprises, and Certified Green Businesses are encouraged to submit proposals**. Any questions regarding this RFP should be directed to Virginia Lau at: vlau@baaqmd.gov.**

SECTION II – BACKGROUND

A. Air District and CARE Program Overview

The Bay Area Air Quality Management District (Air District) was created by the California Legislature in 1955 as the first regional agency to deal with air pollution in California. The Air District jurisdiction includes Alameda, Contra Costa, Marin, Napa, Santa Clara, San Francisco, San Mateo, southwestern Solano, and southern Sonoma counties.

The State Legislature originally gave the Air District the authority to regulate stationary sources of air pollution, such as factories, oil refineries, chemical plants, gasoline stations, and agricultural burning. With more recent legislation, the Air District was granted authority to enact certain transportation and mobile source measures.

The Air District is governed by a twenty-three member Board of Directors, consisting of elected officials, including county supervisors, mayors, and city council members. The chief executive officer of the Air District is the Air Pollution Control Officer (APCO), a position currently held by Jack Broadbent.

As provided by the State Legislature, the Air District regulates and permits stationary sources of air pollution and administers incentive grant funding to reduce pollution from mobile sources. Since the inception of the Air District, emissions of toxic air contaminants (TACs) have significantly declined over the entire Bay Area; however, localized areas of high TAC concentrations remain. To further address this issue, the Air District initiated the Community Air Risk Evaluation (CARE) program in 2004 to identify locations with high levels of risk from TACs co-located with sensitive populations and use the information to help focus mitigation measures. Through the CARE program, the Air District developed an inventory of TAC emissions for 2005 and compiled demographics and health indicators data.

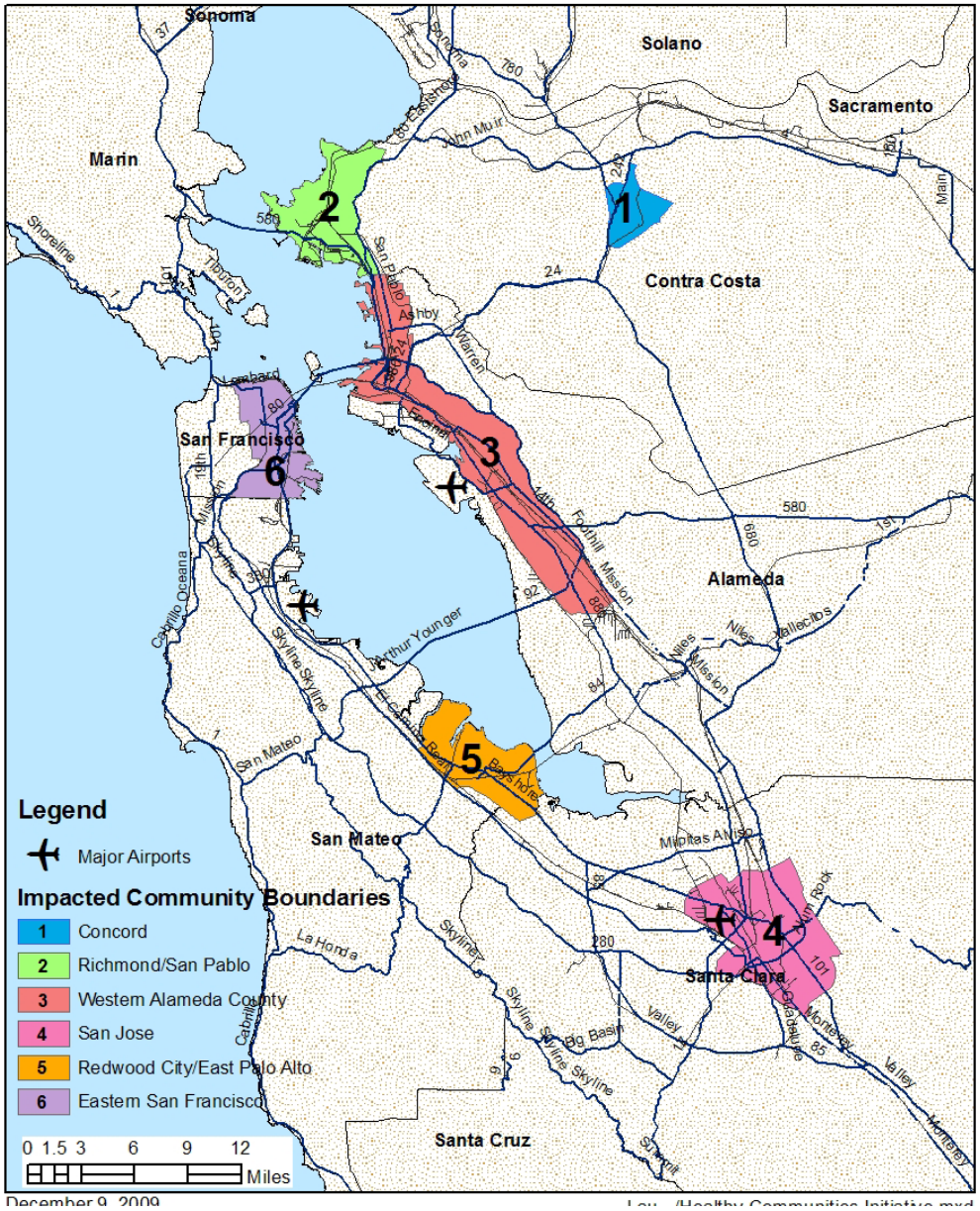
The Air District applied a regional air quality model using the 2005 emission inventory data to estimate excess cancer risk from ambient concentrations of important TAC species, including diesel particulate matter, 1,3-butadiene, benzene, formaldehyde, and acetaldehyde. The highest cancer risk levels from ambient TACs in the Bay Area tend to occur in the core urban areas, along major roadways and adjacent to freeways and port activity. Based on the combined high concentrations of TACs, higher emissions, and presence of sensitive populations, the CARE program has identified six impacted communities in the Bay Area including Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose (see Figure 1).

B. Detailed Emission Inventory

The Air District is in the process of updating its California Environmental Quality Act (CEQA) guidelines. The intent of the guidelines is to provide methodologies for determining air quality and public health impacts from projects and plans proposed in the San Francisco Bay Area. The proposed revised guidelines address a broad range of health and nuisance related effects caused by criteria pollutants, air toxics, odors, and greenhouse gas emissions and provides updated significance thresholds, assessment methodologies, and mitigation strategies for assessing these impacts.

The CEQA guidelines includes recommended methods whereby local community air pollution risk and hazard impacts from projects for both new sources and new receptors can be determined based on comparisons with applicable thresholds of significance and screening criteria and to recommend mitigation measures for these projects. The thresholds for local risks and hazards from TACs and particulate matter less than 2.5 microns in diameter (PM2.5) are intended to ensure that no source creates nor receptor endures a significant adverse impact from any individual project or collectively from all nearby stationary and mobile sources.

Figure 1. CARE Impacted Communities



As part of the recommended CEQA evaluation, project sponsors will estimate emissions from nearby stationary and mobile sources. The Air District anticipates receiving requests for emissions data for specific sources located in close proximity to proposed

projects. To facilitate this process, the Air District is seeking assistance in developing a detailed emissions inventory of significant sources in the Bay Area that can be used by project sponsors to evaluate their impact to local community air pollution risks and hazards. In addition, the Air District requires modeling parameters for each source for use in approved air dispersion models. Under this contract, for a defined set of sources, the consultant will develop an emission inventory and model parameters for each source. The emissions development work will primarily include the entire Bay Area Air Quality Management District jurisdiction; additional work will focus on the six impacted communities, as identified through the CARE program (Figure 1).

The Air District also is encouraging local jurisdictions to develop Community Risk Reduction Plans (CRRPs) to address communities with high levels of risk due to TAC and/or fine particulate matter. The CRRPs, as envisioned, will allow cities and counties to take a comprehensive, community-wide approach to reducing emissions from new and existing sources, and may provide an opportunity for plan-level compliance with CEQA requirements. These plans will require well developed emission inventories at the community level.

SECTION III – INSTRUCTIONS TO BIDDERS

A. General

1. All proposals must be made in accordance with the conditions of this RFP. Failure to address any of the requirements is grounds for rejection of this proposal.

2. All information should be complete, specific, and as concise as possible.

3. Proposals should include any additional information that the respondent deems pertinent to the understanding and evaluation of the bid.

4. The Air District may modify the RFP or issue supplementary information or guidelines during the proposal preparation period prior to the due date. Please check our website for updates.

5. Proposals shall constitute firm offers. Once submitted, proposals cannot be altered without the written consent of the Air District, but proposals may be withdrawn.

6. The Air District reserves the right to reject any and all proposals.

7. All questions must be in written form and directed to Virginia Lau and arrive no later than nine (9) days prior to RFP due date. All questions will be answered in writing and posted on the BAAQMD RFP webpage at least one week prior to the due date.

8. The cost for developing the proposal is the responsibility of the bidder, and shall not be chargeable to the Air District.

B. Submittal of Proposals

All proposals must be submitted according to the specifications set forth in Section V (A) – Contents of Proposal, and this section. Failure to adhere to these specifications may be cause for the rejection of the proposal.

1. Due Date – All proposals are due no later than 4:00 p.m., April 15, 2010 and should be directed to:

   Rebekah Davies, Purchasing Agent, rdavies@baaqmd.gov
   Bay Area Air Quality Management District
   939 Ellis Street
   San Francisco, CA 94109

2. Proposals received after the time and date provided previously specified will not be considered.

3. Signature – All proposals should be signed by an authorized representative of the bidder.

4. Submittal – Submit one (1) electronic copy (in Microsoft Office or Adobe format) of the proposal in a sealed envelope or via e-mail. Electronic submissions will be acknowledged with a return email. Plainly mark the upper, left-hand corner with the name and address of the bidder and the RFP number. Late proposals will not be accepted. Any correction or re-submission of proposals will not extended the submittal due date.

5. Grounds for Rejection – A proposal may be immediately rejected at any time if it arrives after the deadline; is not in the prescribed format; or is not signed by an individual not authorized to represent the firm.

6. Disposition of the Proposals – All responses to this RFP become property of the Air District.

7. Modification – Once submitted, proposals, including the composition of the contracting team, cannot be altered without prior written consent of the Air District. All proposals shall constitute firm offers valid for ninety (90) days from the due date.

C. Interviews

1. The Air District, at its option, may interview bidders. The interviews will be for the purpose of clarifying the proposals.

2. Submittal of new proposal material at an interview will not be permitted.

3. Interviews may involve a presentation or a question-and-answer format or any combination of these.

SECTION IV – SCOPE OF WORK

A. Developing Detailed Emissions Inventory for the Bay Area

1. Goals

The contractor shall work with the Air District to develop local emissions inventories and related methodologies to assist local governments and project sponsors in assessing community air pollution risk and hazard impacts as part of CEQA; and in developing local community risk reduction plans.

The contractor shall work with the Air District to develop model ready input files for significant sources of PM2.5 and TAC (includes gaseous and particulate diesel emissions) in the Bay Area to be used in local-scale air dispersion models.

2. Scope of Work

Under this scope of work, the Air District seeks expertise and recommendations on the following issues:

a. Evaluate On-Road Mobile Source Impacts in the Bay Area and Impacted Communities. The scope of work should include the development of emissions estimates along major roadways and highways based on total vehicle counts (including trucks) and trucks only counts. The Air District is in the process of developing screening tables for all Caltrans designated state highways in the Bay Area using the highest recorded annual average daily traffic (AADT) along each highway per county. Although the highest AADT are appropriate for screening purpose, the AADT varies significantly over the entire length of the highway. The Air District is interested in refining vehicle and truck counts on each state highway in the Bay Area based on representative annual average conditions over designated mile posts. The contractor shall determine reasonable distances along each highway in the Bay Area with representative vehicle and truck counts using the most recent Caltrans data and other available vehicle sensor data. Using emission factors from latest version of California Air Resources Board's (CARB) EMFAC Model, the contractor shall multiply the vehicle-specific emission factors by the corresponding number of vehicles per class to develop annual average and 70-year average emissions (grams/day) of PM2.5 and TAC for each highway segment in the Bay Area that can then be used in air dispersion modeling or plotted using a graphical information system (GIS).

Additionally, in the six impacted communities, the contractor will identify and evaluate major non-state roadways that may be a significant source of TACs and particulate matter. For these roadways, the contractor shall provide estimated car and truck volumes that are representative of annual average conditions. The data may be collected from the Congestion Management Agency for each county, local city, or county governments, through recent traffic studies or environmental analyses, through online databases or other

sources. The contractor shall recommend a methodology or a cut-off where additional analysis would not be necessary based on the low number of vehicle and/or truck traffic on the street. For each of the significant roadways in the impacted communities, the contractor shall develop annual average and 70-year average emissions of PM2.5 and TAC, including gaseous and particulate diesel emissions that can be applied in air dispersion modeling or plotted using GIS.

The Air District is developing emissions estimates for on-road diesel vehicles in future years 2015 and 2020. These estimates reflect CARB on-road diesel regulations and rely on scaling factors for diesel PM reductions not included in the EMFAC model. The contractor shall coordinate with Air District staff to adjust future year inventories on Bay Area highways and major roadways in the impacted communities to reflect anticipated reductions in on-road diesel emissions. The contractor shall apply the future years emission reduction factors to adjust annual average and 70-year average on-road emissions for PM2.5 and TAC estimated for all freeway segments and major roadways of diesel PM.

b. Compile a List of Stationary Diesel Engines in the Bay Area. Numerous facilities including hospitals, fire stations, schools, governmental offices, hotels, and other buildings maintain prime and standby back-up diesel generators in case of power outages. Under the Air District's Regulation 2, Rule 1, diesel generators of certain engine size are required to be permitted. The Air District currently has an emission inventory of prime and back-up generators for 2009. The Air District is interested in compiling all of the data electronically which may require the contractor to spend time reviewing permit files in the Air District office to validate some of the information in the database.

For the top 200 highest emissions generators, the contractor will also compile load (brake horsepower), engine size (horsepower), and annual hours of operations (based on permit) in the Bay Area that can then be used to estimate cancer risk based on CARB's "Hot Spots" Stationary Diesel Engine Screening Risk Assessment Tables (http://www.arb.ca.gov/ab2588/diesel/diesel.htm). For the same dataset, the contractor shall also develop modeling parameters including stack location, stack height, stack temperature, stack exit diameter, and stack exit velocity. Some of the data are already available through health risk assessments that were performed for the facility. However, the contractor will spend some time reviewing permit files and conducting site observations to fill in any missing information.

c. Compile a List of Gasoline Dispensing Facilities in the Bay Area. The Air District currently has a database that contains information on location and emission estimates for about 70% of the gas dispensing facilities (GDFs; i.e., gas stations) in the Bay Area. The contractor shall review the database and ensure that the location (in Universal Transverse Mercator [UTM] coordinates), pump dispenser dimensions, number of pumps, and vent stack parameters (temperature, stack exit diameter, stack exit flowrates) are included in the database. The contractor shall fill in any missing information

either through a review of permit files at the Air District office or conducting site observations. Missing emissions data will be estimated by the contractor based on the number of pumps and/or pump islands at each facility.

d. Compiling List of Dry Cleaners that use Perchloroethylene in the Bay Area. The CARB adopted an Airborne Toxic Control Measure (ATCM) that requires the phasing out of perchloroethylene (perc) as a dry cleaning agent by January 1, 2023. Although the use of perc will be phased out, dry cleaners that use perc are current significant source of toxic air emissions. The Air District has database that includes most of the dry cleaners in the Bay Area. The contractor will be required to review the database and fill in any missing emissions and modeling parameters. Some of the data will be available through the Air District's permit file, while information such as stack heights may require site inspection. Modeling information that will be developed includes vent stack parameters (stack height, temperature, stack exit diameter, stack exit velocity) and perc machine dimensions (height, length, and width).

e. Compilation of Significant Sources in the Bay Area. The scope of work will include compiling a list of the top 100 permitted stationary sources of TAC emissions based on the cancer risk weighted emissions and a similar list of the top 100 permitted sources of PM2.5 emissions for the entire Bay Area based on year 2009 emissions. The list excludes GDFs, diesel prime and back-up generators, and dry cleaners. The data for developing the list shall be derived from the Air District's permit files, emission inventory, or other records. The contractor shall be required to provide geocoded locations, TAC and/or PM2.5 emissions, and modeling parameters for each source. Modeling parameters will be determined based on the specific nature of the source and may include dimensions and boundaries of the facility and any stack parameters. Most of the data required to develop the model inputs is available in the permit records. For facilities in which the data are not available through the Air District permit files, the consultant will develop default parameters based on the type of industry or through collection of field data.

f. Quantifying Non-Permitted Significant Sources in the Impacted Communities. The Air District is seeking assistance in developing a methodology for quantifying emissions from significant sources that are not covered by air pollution permits. These are primarily facilities that generate significant emissions from on-road and off-road mobile sources within the impacted communities. The contractor shall develop the criteria, factors, or characteristics that identify these sources as having significant emissions. The contractor shall then identify the significant sources within each of the impacted communities based on the criterion and provide geocoded centroid location and facility boundary for each source. The contractor shall utilize the land use types in the URBEMIS (Urban Emissions) program as a guide for categorizing the sources identified under this part of the project. These sources may include, but are not limited to sources such as railyards, distribution centers, airports, ports, warehouses, and other truck related businesses. The contractor shall quantify emissions of TAC and PM2.5 from these types of sources for each of the six impacted communities.

g. Develop Methodology for Evaluating Multiple Year Construction Impacts in the Bay Area. The Air District has quantified emissions from construction activities as area sources based on county estimates. Because construction activities are significant sources of both diesel emissions and particulate matter from off-road equipment, the Air District would like to quantify emissions and identify the boundary of multiple year construction projects (greater than two year duration) proposed in the impacted communities. The contractor shall develop a methodology for analyzing and estimating emissions from multiple year construction projects. The methodology shall include a definition of applicable projects (length of time and size of construction project), types of equipment that should be included in the analysis, methodology for assessing emissions over each construction phase, and appropriate screening tools such as concentrations versus distances plots.

3. Tasks

The contractor will be required to complete the following tasks:

a. Develop annual average vehicle and truck volumes data and annual average and 70-year emissions of PM2.5 and TACs on all California freeways and major roadways in the impacted communities. Provide a methodology or cut-off for determining when low vehicle volume road does not require analysis and incorporate diesel emission reduction factors from on-road diesel regulations that are not incorporated into the latest version of EMFAC.

b. Compile a list of stationary diesel engines and back-up generators in the Bay Area and provide operating/modeling parameters for each generator with which to estimate health impact.

c. Compile list of gas dispensing facilities in the Bay Area and provide operating/modeling parameters for each facility with which to estimate health impact.

d. Compile a list of dry cleaners using perchloroethylene in the Bay Area and provide operating/modeling parameters for each facility for which to estimate health impact.

e. Identify the top 100 sources of TACs and PM2.5 in the Bay Area based on the 2009 emission inventory excluding dry cleaners, diesel engines, and gas dispensing facilities and develop modeling parameters for each source.

f. Develop criteria for identifying significant non-permitted sources and provide a list of significant sources in the impacted communities. Provide a generic methodology that addresses the data needed to model and quantify emissions from these sources.

g. Develop a methodology for analyzing and estimating emissions from long-term construction projects.

h. Participate in monthly conference calls with the project manager to discuss the status of each of the tasks and attend three (3) Air District internal meetings and present findings at one (1) public meeting.

4. Deliverables

Prepare updated emission inventories in a software program that is compatible with either Microsoft Access or Excel. Information on permitted facilities will be linked to their unique Air District's project number or GDF number. The database(s) must be easy to access and searchable using existing in-house software programs (i.e., Microsoft Office) available to Air District staff. All supporting documentation related to development of the database(s) will also be provided to the Air District. The database(s) will contain the following information:

- Annual average vehicle and truck volumes, annual average and 70-year emissions of PM2.5 and TACs, and adjusted annual average and 70-year emissions based on future diesel emissions reductions on representative California freeway segments in the Bay Area and major non-freeway roadways in the impacted communities.

- Geocoded locations and emissions of all stationary prime and back-up diesel generators in the Bay Area and the load, engine size, annual hours of operations, and stack parameters for the top 200 highest emissions generators.

- Geocoded locations, emissions, pump dispenser dimensions, number of pumps, and vent stack parameters for gasoline dispensing facilities in the Air District's database.

- Geocoded locations, emissions, stack parameters, and machine dimensions for dry cleaners using perchloroethylene in the Air District's database.

- Geocoded locations, emissions, and modeling parameters for the top 100 permitted significant sources in the Air District's database excluding gas dispensing facilities, diesel engines, and dry cleaners.

- Geocoded centroid location and facility boundary of all significant, non-permitted sources in the impacted communities.

The contractor shall also provide written methodology documents in Microsoft Word for: (1) determining when low volume roadways should not be evaluated, (2) identifying significant non-permitted sources and key data inputs required to quantify emissions from these types of sources, and (3) analyzing and estimating emissions from multiple year (greater than 2 years) construction impacts in the Bay Area.

B. Progress Reports, Air District Approval, Ownership, and Qualifications

1. Progress Reports

During the term of the contract, the contractor shall keep the contract manager apprised of progress on a bi-weekly basis via email or phone. These reports shall include progress to date and shall specifically include any requests for action needed by the Air District on the contractor's behalf. Failure to provide timely progress reports will be deemed grounds for termination of the contract.

2. Air District Approval

The contractor must first obtain written authorization from the contract manager prior to implementing any aspect of the project or work plan. Failure to obtain prior written authorization will be deemed grounds for termination of the contract.

3. Ownership

Additionally, title and full ownership rights to all intellectual property developed under this contract shall at all time remain with the Air District, unless otherwise agreed to in writing.

4. Qualifications

The contractor(s) must demonstrate five (5) years of experience in development of detailed emissions inventories for use in air dispersion modeling by government, non-profit, or private entities.

SECTION V – PROPOSAL FORMAT, CONTENT, AND SUBMITTAL

A. Contents of Proposal

Submitted proposals must follow the format outlined below and include all requested information. Failure to submit proposals in the required format can result in the proposal being eliminated from evaluation and consideration.

1. Technical Proposal

   a. Cover Letter (Section I) – Must include the name, address, and telephone number of the company, and must be signed by the person(s) authorized to represent the firm.

   b. Firm Contact Information – Provide the following information about the firm:

      - Address and telephone number of office nearest to San Francisco, California and the address and phone number of the office that each of the proposed staff members are based out of if different.

- Name of firm's representative designated as the contact
- Name of project manager, if different from the individual designated as the contact

c. Table of Contents – Clearly identify material contained in the proposal by section

d. Summary (Section II) – State overall approach to Develop Detailed TAC and PM Emissions Inventory, including the objectives and scope of work.

e. Program Schedule (Section III) – Provide projected milestones or benchmarks for completing the project within the total time allowed.

f. Firm Organization (Section IV) – Provide a statement of your firm's background and related experience in providing similar services to governmental organizations. Describe the technical capabilities of the firm and, in particular, the firm's exposure with working with environmental regulations, if any. Provide references of other, similar projects including contact name, title, and telephone number for all references listed.

g. Project Organization (Section V) – Describe the proposed management structure, program monitoring procedures, and organization of the engagement team. Provide a statement detailing your approach to the project, specifically address the firm's ability and willingness to commit and maintain staffing to successfully conclude the project on the proposed schedule.

h. Assigned Personnel (Section VI) – Provide the following information about the staff to be assigned to the project:

- List all key personnel assigned to the project by level and name. Provide a description of their background, along with a summary of their experience in providing similar services for governmental agencies, and any specialized expertise they may have. Background descriptions can be a resume, CV, or summary sheet. Substitution of project manager or staff will not be permitted without prior written approval of the Air District's assigned program manager.

- Provide a statement of the availability of staff in any local office with requisite qualifications and experience to conduct the requested project.

- Provide a statement of education and training programs provided to, or required of, the staff identified for participation in the project. Make particular mention of with reference to experience dealing with governmental agencies, procedures, and environmental regulations.

i. Retention of Working Papers (Section VII) – All working papers are the property of the Air District. Include a statement acknowledging that if your firm is awarded the contract, you will retain project related papers and related reports for a minimum of five (5) years.

j. Subcontractors (Section VIII) – List any subcontractors that will be used, the work to be performed by them, and the total number of hours or percentage of time they will spend on the contract.

k. Conflict of Interest (Section IX) – Address possible conflicts of interest with other clients affected by contractors' actions performed by the firm on behalf of the Air District. The Air District recognizes that prospective bidders may have contracts to perform similar services for other clients. Include a complete list of such clients for the past three (3) years with the type of work performed and the total number of years performing such tasks for each client. The Air District reserves the right to consider the nature and extent of such work in evaluating the proposal.

l. Additional Data (Section XI) – Provide other essential data that may assist in the evaluation of the proposal (e.g. green business certification, etc).

2. Cost Proposal

a. Name and Address – The Cost Proposal must have the name and complete address of the bidder in the upper, left hand corner.

b. Cost Proposal – The cost proposal must list the fully-burdened hourly rates and the total number of hours estimated for each level of professional and administrative staff to be used to perform the tasks required by this RFP. In addition, costs should be estimated for each of the tasks outlined in the Scope of Work. . Failure to provide a detailed cost estimate by tasks will significantly reduce the scoring for this criterion. Because the level of effort for each task will depend on the number of facilities under each source type and the amount of missing information, the contractor shall provide cost breakdowns based on the following assumptions:

i. Approximately 100 major non-freeway roadways in the Bay Area
ii. 200 each of diesel engines, GDFs, and dry cleaners
iii. 500 each of diesel engines, GDFs, and dry cleaners
iv. 1,000 each of diesel engines, GDFs, and dry cleaners
v. About 100 non-permitted significant sources

c. The Cost Proposal does not need to be a separate, sealed document.

SECTION VI – PROPOSAL EVALUATION

A panel of Air District staff will evaluate all proposals. The panel will recommend the selection of the contractor to the Air Pollution Control Officer (APCO), who will, in turn, make a recommendation to the Air District Board of Directors. The Air District Board of Directors must approve the contract to carry out the work described in this RFP. An example of a typical contract for professional services used by the Air District is included in Section VII.

Proposals will be evaluated on the following criteria:

The proposal should provide a clear statement of the work to be performed and outline a comprehensiveness work plan to address the objectives described in the RFP. The proposal should recommend methods to efficiently achieve each task and, where applicable, cite methods or examples used in previous projects that were successful.	50%
Contractor should demonstrate expertise in developing data sets for air quality and land use planning and in developing detailed emissions inventories. The contractor should describe their overall experience and accomplishments and provide relevant references.	30%
The proposal should provide detailed cost estimates for each task.	20%

The Air District reserves the right to reject any and all proposals submitted and/or request additional information. During the selection process, the Air District's evaluation panel may interview bidders. The interviews will be for clarification only. The submittal of new material will not be permitted at that time. Interviews may involve a presentation or a question-and-answer format or any combination of these.

If two or more proposals receive the same number of points, the Air District will accept the lower cost offer.

SECTION VII – SAMPLE CONTRACT

A sample contract to carry out the work described in this RFP is available on the Air District's website at http://www.baaqmd.gov/Divisions/Administration/RFP-RFQ/Sample-Documents.aspx