**SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT**

# REQUEST FOR PROPOSAL

January 8, 2004

The District is seeking a qualified consultant to develop emission inventory improvements and/or control measure assessments for eight source categories.

**All proposals are due to the District by 5 p.m. on February 9, 2004.**

Proposals are to be labeled:

**Request For Proposal - Emission Inventory Improvements and Control Measure Assessments**

All inquiries concerning this Request for Proposal shall be directed to:

Ms. Michelle Stanley, Air Quality Specialist
San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg Avenue
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Phone (559) 230-5800
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Email: Michelle.Stanley@valleyair.org

## 1.0 BACKGROUND

The San Joaquin Valley Unified Air Pollution Control District (District), in a cooperative effort with the California Air Resources Board (CARB), has undertaken several projects to improve its emission inventory. Some source categories have inventories based on incomplete and/or out of date data, and others have not been inventoried at all. Inventory improvement projects allow the District to take advantage of new emission source data and the latest techniques in inventory development, which in turn provide a solid base for future efforts to reduce emissions in the San Joaquin Valley.

In addition to inventory projects, the District is interested in analyses of control measures for source categories. With the ultimate goal of developing prohibitory rules intended to achieve emissions reductions, these analyses allow the District to determine which control techniques are most feasible in terms of effectiveness, availability, and cost.

## 2.0 SUMMARY

This RFP solicits proposals to prepare a report and corresponding data files that contain methodologies for estimating emissions for seven source categories. The consultant must develop a current emissions inventory, to include Total Organic Gas (TOG), Reactive Organic Gas (ROG), oxides of nitrogen (NOx), sulfur dioxide (SOX), particulate matter (PM), particulate matter ten microns in diameter or less ($PM_{10}$), and carbon monoxide (CO) for each source category. The consultant will also prepare control measure assessments for two categories. The consultant will provide draft and final methodologies for all categories, and draft and final control measure assessments where applicable. The final report shall include an overview of the project and a summary of both the emission calculation results and the control measure assessment findings.

The consultant must provide the information in an electronic format fully readable by the applications contained in Microsoft Office 2000 Professional.

Payments will be made upon satisfactory completion of work products as outlined in Table 1, Schedule of Deliverables and Payments. The project shall be completed by November 30, 2004.

## 3.0 SCOPE OF WORK

### 3.1 Emission Inventory

The contractor will develop methodologies for estimating emissions and will develop emission inventories for the following area source categories:

- Brandy production (distillation, aging and bottling);
- Crude oil production components;
- Distribution centers and truck stops;
- Underfired charbroilers;
- Screen printing;
- Beauty and nail salons;
- Bulk material storage.

The District requires that the emission inventory for each source be presented in two parts. The first part is a methodology that explains the procedure used to calculate the emissions. All methodologies prepared subject to this proposal shall follow the format specified by the DIstrict. A template of the required format is available upon request. The second part is a spreadsheet or database that contains the necessary data and equations and calculated emissions. The format of the spreadsheets or database is dependent upon the methodology. The consultant should use good spreadsheet or database design principles and techniques in developing the spreadsheets or databases. Emissions shall be calculated for each category for each county in the San Joaquin Valley. All reports will include a breakdown of emissions by process and/or subcategory, as well as a category total. Emissions of TOG, VOC, NOx, SOx, PM, $PM_{10}$, and CO shall be calculated in all methodologies for all sources.

Under the guidance of the District, consultant shall perform the following tasks:

- Review any existing methodologies (including any that other districts may have) and develop improvements. This may include rewriting the entire methodology, if existing methodologies are not adequate. Where no methodology exists, develop a methodology for the category. Methodologies will follow the format provided.
- Submit new/updated methodology to the District for review and approval.
- Gather data.
- Calculate emissions.
- Identify areas where the methodology could be improved.

Emissions inventories shall be developed for the following categories:

1. Wineries-Aging (EIC 420-410-6090-0000)

This category is an inventory of ethanol emissions resulting from the storage and aging of brandy in oak barrels. The methodology for estimating ethanol emissions from brandy aging was last updated in 1979. The statewide emissions inventory was last

updated in 1992. The existing methodology estimates county level emissions by apportioning statewide ethanol emissions from brandy aging based on the amount of grapes crushed in each county. This is not an accurate estimation because brandy production is not directly proportional to grapes crushed.

The methodology and emissions inventory can be improved by collecting county specific information. The California Department of Alcoholic Beverage Control (ABC) maintains a database of all facilities permitted to produce alcoholic beverages in California. The database contains facility specific information covering permitted production volumes and licensed operation of alcohol stills. The US Tobacco Tax Bureau (TTB) maintains a database of monthly alcohol production by facility and alcohol type. These data are available on a county level basis. Collectively, these two data sets can be used to establish annual production volumes. Brandy is aged for 2 to 10 years in oak barrels. Thus, it is equally important to account for ethanol emissions from brandy that is being aged and stored within the District. The TTB database does not include inventory information. However, correspondence with a TTB representative indicated that inventory data could be obtained by reviewing reports that are stored at each facility.

Two other potentially significant sources of ethanol emissions not addressed in the current methodology are distillation and bottling. These sources have not been characterized due to a lack of information. This project should also include a literature review to identify the availability of information that could be used to develop methodology supporting an emissions inventory for the distillation of brandy and wine spirits, and the bottling of wine and brandy.

2. Heavy Crude Oil Production Components

This category requires an emissions inventory of fugitive volatile organic compounds from leaking components that carry streams of heavy crude oil that are located in crude oil production and processing facilities and crude oil refining facilities. A “component” is defined as any device including, but is not limited to, any valve, flange, fitting, threaded connection, pump, compressor, pressure relief device, pipe, polished rod stuffing box, process drain, sealing mechanism, diaphragm, hatch, sight glass, meter, or seal fluid system. Heavy crude oil is defined as oil having an API gravity of $30^{o}$ or less.

Heavy crude oil components are currently exempt from existing District Rules 4403, 4451, and 4452 as well as new Rules 4409 and 4455 that are currently under development. District Rule 4401 addresses casing gases associated with heavy crude oil production but not components on liquid streams. The District does not have information on the number of heavy crude oil components. The consultant will gather information from oil production and refining companies, oil industry trade associations, or other agencies to determine the number and types of heavy crude components being used in crude oil production and crude oil refining facilities in the San Joaquin valley. The consultant will prepare estimates of the VOC emissions from leaking components.

The consultant will use EPA, CAPCOA or another acceptable emission calculation methodology to estimate the VOC emissions from leaking components.

3. Distribution Centers and Truck Stops

This category is concerned with emissions from internal combustion engines on mobile and portable sources emitted while such sources are at these facilities, and from the mobile and portable sources that are used exclusively at these facilities. Sources include, but are not limited to, diesel fueled internal combustion engines on trucks, trains, propane forklifts, loading equipment, and Transport Refrigeration Units.

Sources, such as trucks, should be identified as being part of a fleet or not. The number of facilities and mobile sources should also be determined. South Coast Air Quality Management District (SCAQMD) adopted Rule 1633 (Pilot Credit Generation Program for Truck/Trailer Refrigeration Units) May 11, 2001. The SCAQMD staff report for Rule 1633 may be available on their website and could provide some help in analyzing this category.

4. Underfired Charbroilers

An underfired charbroiler is a cooking device in which food is place on an iron grate above a heat source, and cooking is achieved primarily with radiant heat and by heat conduction through the grate. The heat source is located below the food. As the food cooks, fats or marinades drip onto the coals, ceramics, natural gas, or wood, producing smoke. The smoke provides the characteristic charred flavor, while the hot grates create the sear marks commonly associated with charbroiled foods.

In the late nineties, numerous studies on charbroiler emission factors were conducted. The results of these studies found that underfired charbroiling is the method that produces the largest amount of PM and VOC emissions. To further understand emissions from commercial underfired charbroilers, the District requires that existing data be reviewed and that new scientific studies be sought out in order to refine baseline inventories. As part of the emissions inventory, the total number of underfired commercial charbroilers in the District is required.

5. Screen Printing

Screen printers are mostly small- and medium-sized businesses, which perform diverse functions ranging from the printing of billboard advertisements, greeting cards, art books, clothing and posters, to printing onto electronic equipment. Screen printing uses a porous mesh screen with an ink-resistant image on its surface as a template to transfer ink to substrates. Unlike many other printing methods, substrates for screen-printing can include all types of plastics, fabrics, metals, and papers, as well as exotic substrates such as leather, masonite, glass, ceramics, wood, and electronic circuit boards. Screen printing operations affect air quality when VOCs from cleanup solvents, aerosol spray cans, and inks are released into the air. This inventory should include the

number of active screen-printing operations and the VOC-emitting activity and usage rates associated with these operations.

6. Beauty and Nail Salons

This category is concerned with emissions generated from the chemical products used to construct artificial nails and the dust from motorized and manual filing of the artificial nails, as well as the emissions associated with products used in the styling of hair, such as coloring dyes, styling aids, and hair permanent solutions.

In the early 1990s, the Environmental Epidemiology and Occupational Health (EEOH) organization studied nail salons with an interest in health concerns such as occupational asthma, silicosis, asbestosis and asbestos-related pleural disease resulting from the polymer powders containing silica which are sometimes used in creating the artificial nail. Dust is generated when the nail is filed and finished. Hair care products are also known to contain VOCs. A better understanding is needed of which hair care products, i.e. sprays, styling aids, coloring agents and permanent solutions, are used and the extent to which they are used.

This inventory should include the number of salons, schools, and other facilities that have active nail care or hair care operations. The activity and usage levels are needed to quantify emissions of both VOC and PM.

7. Bulk Material Storage

This category requires an inventory of fugitive PM and $PM_{10}$ emissions from the outdoor storage, handling, and transport of bulk materials. Facilities or operations where bulk materials are located include, but are not limited to, mining, construction, landfills, sand and gravel, agricultural products production and processing, and masonry and concrete production. The consultant will determine the number of facilities, estimate the quantity or volume of bulk materials that are normally stored, handled, or transported from such facilities, and then develop an emissions estimate of the amount of fugitive PM and $PM_{10}$ emissions generated from such operations.

## 3.2 Control Measure Assessment

Control measure assessments are required for two categories: One category (underfired charbroilers) also requires an emissions inventory, as described in the previous section; the other (asphalt batch plant dryers and heaters) requires the control measure assessment only. Control measure assessments will include development of potential control technologies and techniques, estimates of potential emission reductions expected with each technique, and the cost and overall cost effectiveness associated with implementing the control measure.

Control measure assessments shall include the following:

- Current baseline emissions and level of control
- Control technologies and techniques applicable to the source category under consideration
- Pre-existing regulations from other air districts, where applicable
- Determination of costs associated with implementation of each measure
- Estimate of potential reductions or increases expected with each technique for each of the pollutants
- Assessment of overall cost effectiveness of implementation

An example of a control measure assessment will be provided upon request. This example is to be used as a template for the work product.

Control Measure Assessments shall be developed for the following source categories:

1. Control of VOC and $PM_{10}$ from Underfired Charbroilers;
2. Control of NOx from Asphalt Batch Plants—Dryers and Heaters

### 3.3 District Data

For the tasks described in Sections 3.1 and 3.2, the District will provide the following information:

- The format of an emission inventory methodology;
- An example of a control measure assessment

District staff will be available to answer questions as needed.

## 4.0 WORK PRODUCTS/DELIVERABLES

4.1 Initial conference call: At the start of the contract period, the principal investigator and key personnel will meet with District staff via telephone to discuss the overall plan and details of performing the tasks.

4.2 Initial consultation: Prior to drafting the methodology for each category, Contractor will contact the District via telephone or e-mail in order to outline the approach to be used in preparing the methodology. Contractor shall receive approval of proposed methods before proceeding with the methodology.

4.3 Draft Methodologies and Control Measure Assessments: Contractor shall submit draft methodologies and control measure assessments to the District for review and comment, and if necessary based on District comments, shall revise said methodologies and/or assessments. The methodologies and control measure assessments need not be submitted as one package, but may be submitted as each is completed. All methodologies will require data to be collected: The approach to, and difficulty of, data collection will vary with each methodology; therefore, a reasonable effort should be made initially to determine if appropriate data is

available, and data collection shall not begin without District approval. Furthermore, if after data collection begins, Contractor determines that completion of the task is not feasible, or that the final product will not be useful to the District due to lack of appropriate data or any other reason, Contractor will notify District. District will determine whether work on the methodology should continue. If work is ceased, Contractor will be compensated accordingly for work performed up to that point.

4.4 Final Methodologies and Control Measure Assessments: Contractor shall submit the final methodologies to the District for approval prior to use in inventory preparation. Final methodologies need not be submitted as one package, but may be submitted as each is completed. Final control measure assessments may also be submitted as each is completed.

4.5 Draft Report: The Draft Report shall present all methodologies, emission inventories, and control measure assessments, and shall include a record of data sources, calculations, and assumptions. Documents generally available to the public shall be referenced in a bibliography. The executive summary of the report shall contain at least two tables; one summarizing emissions and one summarizing control measure assessments. Other documents, excerpts, and calculations shall be reproduced and attached to the report as appendices.

4.6 Final Report: The Final Report shall be an update of the Draft Report and shall address the comments and questions of District staff. Any required modifications to the data set shall be made at this stage as well.

4.7 Final Conference Call: The Consultant shall present a brief presentation via conference call of the results and methods/resources used for completing the work. Handouts are not recommended for this meeting. All summary tables, charts, graphs, etc. should be in the final document. The presentation shall include a question and answer session.

## 5.0 PROJECT TIMELINE AND SCHEDULE OF DELIVERABLES

The District may amend the following tentative timeline for completion of work products.

**TABLE 1**
**Schedule of Deliverables and Payments**

| Action/Work Product | Approximate Date | Percent of Payment |
|---|---|---|
| Contract Approval | March 18, 2004 | |
| Contract Signature | March 18, 2004 | |
| Contract Effective | March 18, 2004 | |
| Draft Methodologies and Control Measure Assessments | September 29, 2004 | 40% |
| Final Methodologies and Control Measure Assessments | October 19, 2004 | 30% |
| Draft Report | November 9, 2004 | 15% |
| Final Report | November 30, 2004 | 15% |

## 6.0 REQUIRED QUALIFICATIONS

The selected proponent shall have demonstrated extensive experience and expertise in the following areas:

- Development and use of emissions inventories and quantification methodologies;
- Development of control measure assessments;
- Point and area source reconciliation;
- Data compilation, access and manipulation; and
- Report preparation and presentation.

## 7.0 RESPONSE SUBMITTAL REQUIREMENTS

### 7.1 Contents of Proposal

Submitted proposals must follow the format outlined below and all requested information must be supplied. The submitted proposals shall be limited to 25 pages (may be double sided) and the font shall be no smaller than 12 point. Failure to submit proposals in the required format may result in elimination from proposal evaluation.

7.1.1 Cover Letter - Must include the name, address, and telephone number of the company, the name of the contact person for the proposal, and be signed by the person or persons authorized to represent the firm.

7.1.2 Table of Contents - Clearly identify material contained in the proposal by section and page number.

7.1.3 Summary (Section 1) - State overall approach to the project, including objective(s) and scope of work to be performed, and demonstrate a clear understanding of the project goal. Provide specific examples of steps to be taken to complete the analysis, as well as measures to assure reliability and applicability of data**.**

7.1.4 Work Program (Section 2) - Describe work activities or tasks to be performed including the sequence of activities and a description of methodology or techniques to be used. The work tasks for each source category may vary.

7.1.5 Program Schedule (Section 3) - Provide projected milestones or benchmarks for major products/reports within the total time allowed.

7.1.6 Project Organization (Section 4) - Describe the proposed management structure, project monitoring procedures, organization of the contracting group, and facilities available.

7.1.7 Assigned Personnel (Section 5) - Identify the principals having primary responsibility for implementing the project. Discuss their professional and academic backgrounds. Provide a summary of similar work they have previously performed. List the amount of time, on a continuous basis, that each principal will spend on this project. Describe the responsibilities and capacity of the technical personnel involved. Substitution of the project manager and/or lead personnel will not be permitted without prior written approval of the District.

7.1.8 District Resources (Section 6) - Describe any District services and staff resources needed to supplement consultant activities to achieve identified objective(s).

7.1.9 Subcontractors (Section 7) - If subcontractors are to be used, identify each of them in the proposal. Describe the work to be performed by them and the number of hours or the percentage of time they will devote to the project. Provide a list of their assigned staff, their qualifications, their relationship to project management, schedule, costs and hourly rates.

7.1.10 Consultant Capability and References (Section 8) - Provide a summary of the firm's relevant background experience. Discuss the applicability of each experience to this RFP. Include examples of emissions inventory or control measure evaluations or related projects completed for other parties that are of a similar nature to the work requested herein.

7.1.11 Costs of Proposal (Section 9) - Identify all costs associated with the execution of this RFP. Costs shall be specified by each of the source categories.

7.1.12 Conflict of Interest (Section 10) - Identify any actual or potential conflicts of interest resulting from any contractual work performed, or to be performed, for other clients, as well as any such work done, or to be done, by its proposed subcontractors. Specifically, proponents must disclose any recent or current contracts with the District, business entities regulated by the District, and/or any environmental or business interest group. In addition, proponents must disclose any contracts with the District, public or private entities, which are scheduled to be performed in the future, or which are currently under negotiation. The District will consider the nature and extent of such work in evaluating the proposal (see Section 9.0 below).

7.1.13 Additional Data (Section 11) - Attach a copy of any work prepared similar to what is requested in this RFP. (Any examples that are provided by proposer may be above and beyond the twenty-five-page limitation set for the proposal.) Provide other essential data that may assist in the evaluation of this proposal.

7.2 Proposal Submission

7.2.1 All proposals must be submitted according to the specifications set forth in Section 7.1 - "Contents of Proposal" and this section. Failure to adhere to these specifications may be cause for rejection of proposal.

7.2.2 Signature- all proposals shall be signed by an authorized representative of the proponent.

7.2.3 Due Date - The proponent shall submit five (5) complete copies of the proposal in a sealed envelope, plainly marked in the upper left-hand corner with the name and address of the proponent and the words, **"Request For Proposal - Emission Inventory Improvements and Control Measure Assessments, Miscellaneous Sources (II)."** Proposals are due no later than 5 p.m. February 9, 2004 and should be directed to:

Michelle Stanley
SJVUAPCD
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Late proposals will not be accepted. Any correction or resubmission by the proponent will not extend the submittal due date.

7.2.3 Addenda - The District may modify the proposal and/or issue supplementary information or guidelines relating to the RFP during the proposal preparation period.

7.2.4 Grounds For Rejection - A proposal may be immediately rejected if:

- It is received at any time after the exact due date and time set for receipt of proposals;
- It is not prepared in the format prescribed; or
- It is not signed by an individual authorized to represent the firm.

The District reserves the right to reject all proposals and make no awards.

7.2.5 Disposition of Proposals - The District reserves the right to reject any or all proposals. All proposals become the property of the District.

7.2.6 Modification or Withdrawal - Once submitted, proposals, including the composition of the contracting team, cannot be altered without prior written consent of the District. All proposals shall constitute firm offers and may not be withdrawn for a period of ninety (90) days following the last day to accept proposals.

## 8.0 ESTIMATION OF COSTS

Costs must be itemized by the following categories:

8.1 Source Category – List a total cost per source category shown in Sections 3.1 and 3.2. The District reserves the right to remove source categories as deemed necessary to remain within budget.

8.1 Labor - List an hourly labor rate for each assigned principal and technical specialist. The rate quoted must include labor, general, administrative, and overhead costs.

8.2 Supplies and Equipment - Provide an itemized list of supplies to be purchased or leased specifically for the program. The District will not pay for any equipment unless adequately justified. Any equipment paid for by the District will become the property of the District.

8.3 Subcontractor Costs - Identify subcontractors by name, list their cost per hour or per day, and the number of hours or days their services will be used.

8.4 Travel Costs - Identify estimated travel costs, including the number of trips required, destinations, and approximate costs of travel. Travel costs are

reimbursed at prevailing rates for the contracting company or District rates, whichever is lower, unless negotiated otherwise.

8.5 Miscellaneous Costs - If any.

**Total cost must be clearly indicated in Section 7 above (Costs of Proposal) of the proposal.**

It is expected that general overhead and administrative costs are included in the hourly rate for labor. It will be assumed that all contingencies and/or anticipated escalations are included. No additional funds will be paid above and beyond the original quote given by the selected proponent.

## 9.0 PROPOSAL EVALUATION AND CONSULTANT SELECTION

District staff will evaluate all proposals to determine responsiveness to the RFP. Staff will recommend the selection of a consultant to District management who, in turn, will recommend to the Executive Director/Air Pollution Control District or District Governing Board for final approval and execution of a contract. Proposals will be evaluated on the following criteria:

- Clarity and thoroughness of proposal;
- Presentation, including good organization and format and a minimum of grammatical errors;
- Thoroughness and appropriateness of proposed work program;
- Innovation in approach to work tasks;
- Previous experience with California air districts emissions evaluation;
- Previous experience with preparation of emission inventory methodologies;
- Previous experience in analyzing the cost effectiveness of control techniques;
- Previous experience with preparing control measure assessments;
- Cost of proposal

During the selection process, District staff may interview proponents with scores above a natural break, for clarification purposes only. No new material will be permitted at this time.

A contract will be awarded to the proponent with an acceptable proposal based on the criteria described above and cost effectiveness.

The contract is subject to approval by the District Executive Director/Air Pollution Control Officer and the Governing Board. All proponents will be notified of the results by letter.

## 10.0 INSURANCE

The District will require that any contractor prior to endorsement of a contract meet the following insurance requirements.

10.1 Without limiting District's right to obtain indemnification from Consultant or any third parties, Consultant, at its sole expense, shall maintain in full force and effect throughout the term of this Agreement the following insurance policy(s):

10.1.1 Liability insurance for bodily injury, including automobile liability, with limits of coverage of not less than Two Hundred and Fifty Thousand Dollars ($250,000) each person and Five Hundred Thousand Dollars ($500,000) each occurrence; and

10.1.2 Liability insurance for property damage with limits of coverage not less than Fifty Thousand Dollars ($50,000) each occurrence; and

10.1.3 Workers compensation insurance in accordance with the California Labor Code; and

10.1.4 Commercial general liability insurance with minimum limits of coverage of not less than One Million Dollars ($1,000,000) per occurrence.

10.2 The foregoing insurance policy(s) shall not be canceled, reduced, or changed without a minimum of thirty (30) calendar days advance, written notice given to District.

10.3 Prior to performing its obligations under this Agreement, Consultant shall provide District a certificate of insurance from an insurer acceptable to District evidencing proof of such insurance coverage required herein.

## 11. DATA OWNERSHIP

All data which is received, collected, produced, or developed by Contractor shall become the exclusive property of the District, provided however, Contractor shall be allowed to retain a copy of any nonconfidential data received, collected, produced, or developed by Contractor subject to District's exclusive ownership rights.

## 12.0 INQUIRIES

Technical and administrative questions concerning this RFP should be directed to Michelle Stanley of the Planning Division at (559) 230-5800.