

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
REQUEST FOR PROPOSAL

THE SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT (DISTRICT) IS SEEKING
A QUALIFIED CONTRACTOR TO CONDUCT A RESEARCH ANALYSIS PROJECT

OZONE SATURATION STUDY

**MEASUREMENT AND ANALYSIS TO DETERMINE OZONE GRADIENTS
WITHIN THE ARVIN AND BAKERSFIELD AREA**

Submittal: Proposals must be received at the address below on or before
Thursday, May 9, 2013, 5:00 PM

Proposals received after the date and time stated above will not be accepted.

Submissions must include: two (2) signed copies of Proposal delivered by mail or messenger to establish official receipt;
one (1) unbound master suitable for black and white reproduction; and
one (1) electronic copy (CD-ROM) of all submittal documents in Word (Microsoft Office 2010 Professional or older versions of Microsoft Office) or PDF format.

Address James Sweet, Senior Air Quality Specialist
Submissions to: San Joaquin Valley Unified Air Pollution Control District
1990 East Gettysburg Avenue
Fresno, CA 93726-0244

Mark Envelope: PROPOSAL: Ozone Saturation Study

RFP Issuance Date: April 9, 2013

Contact: James Sweet, (559) 230-5810, james.sweet@valleyair.org

Table of Contents
Request for Proposal
OZONE SATURATION STUDY

1.0	Project Abstract	1
2.0	General and Project Background.....	2
3.0	Project Scope of Work.....	4
4.0	Project Work Products/Deliverables	8
5.0	Project Timeline, Schedule of Deliverables and Payments	13
6.0	Project Requirements and Specifications	15
7.0	Eligible Contractor Required Qualifications	17
8.0	Eligible Contractor Required Insurance / License / Bond	19
9.0	Proposal Submittal Requirements	20
10.0	Proposal Estimation of Costs	24
11.0	District Evaluation of Proposals and Contractor Selection.....	25
12.0	District Data Ownership.....	25
13.0	References	26
ATTACHMENT A: Eligibility		27
ATTACHMENT B: Proposal Budget Summary		28
ATTACHMENT C: Proposal Budget Template.....		29
ATTACHMENT D: Project Concept		30

OZONE SATURATION STUDY
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1.0 PROJECT ABSTRACT

This Request for Proposal (RFP) solicits proposals to provide a field program for temporary ozone monitoring in a portion of Kern County to determine ozone gradients in and around the Arvin area. The District is seeking a qualified Contractor to design a small scale monitoring project, establish a network of ozone monitors to collect ozone readings during the summer of 2013, collect the data and process the readings to establish ozone gradients in the study area. The data collected should be processed expeditiously with final reports completed by early 2014.

This project is expected to emplace as many as 27 low cost¹ temporary ozone monitors to collect readings during a six week portion of the peak ozone season for this area (August-September), conduct field operations to collect the data, and process the collected data for statistical and graphical analysis for indications of ozone gradients. The Contractor is also requested to utilize the data collected to provide predictive formulae for local ozone concentrations at the City of Arvin and the new and old Arvin monitoring sites, based upon the expectation of continued monitoring at Edison, Bakersfield (California St.) and the new site at Arvin.

The District will provide access to the District/ARB air monitoring site at Bakersfield (California Street) and will assist in coordination for monitoring at or near the ARB Edison site for collocation of study instruments to establish accuracy of the equipment used. The District will provide information regarding the typical ozone season for the study area and will provide ozone and meteorological data collected at Arvin, Edison, Bakersfield (Ca. St.), and Maricopa. The District will be available to meet and discuss project requirements and specifications during the term of the agreement.

1.1 Addenda and Supplements to the RFP

The District may modify the request for proposal and/or issue supplementary information or guidelines relating to the RFP at any time during the proposal preparation period. In the event that it becomes necessary to revise any part of this RFP, or if additional information is necessary to enable adequate interpretation of the provisions of this RFP, or if it is necessary to extend the deadline for Proposals, a supplement to the RFP will be released and distributed in the same manner as the release of the RFP. If the District modifies the request for proposal, the modification will be posted on the District website. Contractors whose proposals are received prior to the RFP modification will be notified that a modification to the RFP has been made and will be allowed to submit a new or

¹ Monitors are not required to meet Federal Equivalent Method (FEM) or Federal Reference Method (FRM) standards.

modified proposal. However, if a new proposal is submitted the new proposal must be received prior to the deadline and the new proposal will be evaluated in lieu of the prior proposal. The District will not review multiple proposals from a single Contractor.

1.2 Inquiries

Technical and administrative questions concerning this RFP shall be directed to James Sweet, Senior Air Quality Specialist, San Joaquin Valley Unified Air Pollution Control District at (559) 230-5810.

1.3 Confidential Information

All responsible proposals received by the District are public records and will be available for review by the public after the selection process is completed. Proposals containing information the Contractor requires to be kept confidential will be rejected as non-responsive.

2.0 GENERAL AND PROJECT BACKGROUND

2.1 General Background

The San Joaquin Valley Unified Air Pollution Control District (District) is a regional multi-county agency of the state of California empowered by the California Health and Safety Code to regulate air quality emissions within the jurisdiction of the District. District jurisdiction includes the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings, and the western and central portions of Kern. Federal and State authority also exists within the District for sources regulated on a state or national basis.

Air monitoring stations in the San Joaquin Valley are operated and maintained by the District, the California Air Resources Board (ARB), Tribal agencies, the National Park Service, and the United States Forest Service. The air monitoring stations are required by regulations adopted by the U. S. Environmental Protection Agency (EPA) to collect ambient air quality and meteorological data to determine compliance with National Ambient Air Quality Standards (NAAQS) established to protect public health. Additional uses of the, information collected by these air monitoring stations include:

- As input to daily air quality forecasting which is used to protect public health by keeping the public informed of current air quality conditions, and
- As input for air quality analysis and modeling to determine effectiveness of control strategies for the long term compliance with NAAQS.

2.2 Project Background

ARB maintained an air quality monitoring station at 20401 Bear Mountain Boulevard in Arvin, at the Arvin-Edison Water Storage District, since 1989, but had to shut down the site

in December 2010. Prior to closure, ARB was able to establish a new site at Di Giorgio Elementary School (19405 Buena Vista Blvd), Arvin, CA and operate both stations in parallel for the approximately a year (including the summer of 2010).

The parallel monitoring conducted at the two Arvin sites indicate that the new site at Arvin-Di Giorgio measured concentrations approximately 10 percent lower than the levels historically recorded on Arvin-Edison's property. While this relative difference may be due to accuracy levels inherent to air quality monitoring equipment, EPA has indicated that this difference may impact their ability to find the Valley in attainment of federal ozone standards. Additionally, data suggests that ozone concentrations that Arvin residents are exposed to are less than those measured historically at the Arvin-Bear Mountain site, and that concentrations measured at the new site at Di Giorgio Elementary School are more representative of residents' exposure.

However, in response to concerns raised, the District is sponsoring this Arvin Saturation Study to further evaluate the relative differences in ozone concentrations in the Arvin area. This study is to look at ozone levels in multiple locations in and around Arvin and should allow the District to develop relationships between measurements at the new air monitoring location (Arvin-Di Giorgio), City of Arvin, and other points in the area during the summer ozone season (in particular, August-September 2013).

2.3 Technical Discussion of Purpose

The intent of this project is to establish a temporary network of ozone monitoring devices in and around the Arvin area in Kern County to establish local ozone gradients. The District desires extensive data collection to resolve gradients for ozone in the area in and around the current and prior ozone monitoring sites near Arvin, California. The District requests optimization of the project to collect as much data as possible, potentially exchanging some data quality for more sites and a longer observation collection period. Use of an extensive network of inexpensive ozone monitors (not required to meet Federal Reference Method (FRM) or Federal Equivalent Method (FEM) standards) is preferred in comparison to a few monitoring sites with meteorological mapping of flows and gradients. Flows in this area are influenced by dominant winds, recirculation patterns that vary in intensity and frequency of occurrence, upslope/downslope flows, and subsidence and sea-breeze vertical layering impacts that may not be fully captured by a few meteorological sites. Therefore, the District is requesting a relatively fine scale network of ozone samplers that will be able to reflect the cumulative impact of the dispersion, recirculation and vertical flows. The concept for the study is small scale spacing of monitors intended to establish a saturation study for local ozone gradients.

The deliverables expected at the end of the project are a compiled set of ozone observational data, graphic analysis of the collected data, and statistical analysis to establish predictive algorithms for ozone concentrations in the Arvin area.

3.0 PROJECT SCOPE OF WORK

This section discusses the expected scope of work. Additional detail for the responding proposal is provided in the following sections describing expected deliverable work products (Section 4), the requested project schedule (Section 5) and technical specifications and other project requirements (Section 6). The RFP also defines required proposal submittal contents (Section 9 and 10).

3.1 General Description of Project

This project requires emplacement of a temporary network of ozone monitors, operation of those monitors for data collection, quality assurance, analysis and reporting. The monitoring period proposed is six weeks during the summer of 2013, preferably during the months of August and September. This project consists of six tasks to be performed for the domain selected for analysis:

- Development of a field operations plan;
- Procurement of sampling equipment;
- Site selection and setup;
- Operation of the ozone monitors for a period of six weeks, including data collection and compilation;
- Analysis of the data collected by the temporary network of monitors, after data quality assurance, to determine observed one-hour ozone gradients in the study area and to develop predictive algorithms for ozone concentrations in the Arvin area based on correlation of the temporary network observations to permanent District/ARB ozone monitors and meteorological data; and
- Preparation of a final report and presentation of results.

The Contractor is requested to propose a sampling plan including the type and amount of samplers recommended for data collection and the proposed methodologies for ozone sampling and data collection, data analysis, ozone gradient graphical analysis, and development of statistically based predictive formulae for the city of Arvin and the current and prior ozone monitoring locations near Arvin. Attachment D “Project Concept” is provided as a basis for proposals to present a general concept for the project, showing the area for study and general extent of the observational area and density of monitoring network expected. The Contractor may refine or modify the approach in the responding proposal with explanation for any significant departures or variation from the approach suggested in Attachment D.

Once the program of work has been agreed to and initiated, the Contractor must seek approval of the District Project Manager prior to recommending or implementing any changes to the proposed project. During conduct of the project, additional data collection by the Contractor beyond the specified program of work must remain within

the authorized budget. Additional efforts of any type not specified as a work product for this agreement will only be authorized by the District Project Manager for conduct by the Contractor if these additional tasks are within the approved project budget and do not impair completion of other assigned tasks.

3.2 Tasks/Scope

The order for activity for Tasks 1, 2 and 3 may be sequential or parallel, although invoices for payment should only be provided at the time of equipment purchase for Task 2 or the completion and submission of required documentation for Task 1 and 3. The District would prefer to see a fully developed field plan prior to authorizing purchase of the field equipment and supplies; however, a small percentage of the equipment may be purchased at the beginning of the project for testing, training, and utility for evaluating site selection.

Section 4.5 of this RFP provides technical writing specifications for document deliverables discussed for the following tasks.

Task 1: Prepare Field Program Planning Documents

After approval of an agreement to conduct the project, Contractor shall prepare a full Field Plan for execution of the study. Prior to the purchase or rental of equipment; Contractor shall prepare and submit to the District a Field Plan document containing a listing of equipment for purchase or rental, a full field operations plan identifying the number of sites that will be used for data collection and the time period for operational data collection. The format of the Field Plan and related deliverables is open to the Contractor's discretion and may be a single document or series of technical memoranda. The field planning document(s) should include safety procedures for Tasks 3 and 4 site selection field work and field operations. The field plan documents must include a description of the methodologies and considerations for site selection, how approval will be obtained to install equipment and conduct operations at the sites, deployment of site equipment and retrieval and removal of the equipment at the end of the project. The document(s) should describe procurement of equipment and supplies, field operations during the data collection period, and quality assurance processes that will be used to check and integrate collected data for the analysis process and delivery to the District at the completion of the project. The project is not intended to collect data for submission to regulatory databases; however, the quality assurance process for the data should determine precision and accuracy of the data collected, so that the confidence and limitations for the use of the data are clearly understood.

Task 2: Obtain Equipment and Supplies for the Field Program

Equipment purchase does not have to be accomplished as a single purchase order. Contractor may purchase a small amount of equipment and supplies at the beginning of the project for testing, training or utility in evaluating potential sites for Task 3 site selection. With timing at the discretion of the Contractor, to accommodate equipment preparation or other logistical factors, the full or remaining major purchase of equipment and supplies necessary to conduct the field program may be conducted prior to, during,

or after Task 3 site selection. Equipment should consist primarily of ozone monitors, data loggers if separate from the monitors, and such communication and support equipment and supplies as are needed to conduct the study. Reference should be made to Attachment D to this document for the general concept of the monitoring area and expected site density and to Section 6.3 and 6.4 of this document for equipment specifications. Ozone monitors should be low cost portable units to accommodate the requested network density at reasonable expense. As discussed in Section 6, monitors are not required to meet FRM or FEM standards and may be similar to portable ozone monitors used in industrial applications or ozonesondes as used in many field programs. Supplies must be considered in the equipment purchase for monitors that require periodic recharge or cleaning and recalibration. Contractor should include a reserve in the project budget to provide spare(s) for replacement due to equipment failure during the conduct of the study.

Task 3: Site Selection and Setup

Site selection will require field visits to find appropriate sites and secure permission to operate temporary instruments on private or public land. Sites should be selected for ambient observation and should not be impacted by a major emission or interfering source. Mounting of monitoring equipment should comply with manufacturers specifications and should avoid direct exposure to afternoon sunlight to minimize thermal influence on observations. It is understood that site selection may require modifications to the approach suggested in Attachment D and may require alterations from Contractor’s field plan if presented as final prior to completion of site selection. Sites selected should be documented in a site report document (see Section 4.5 deliverables) with coordinates and descriptive and pictorial records of the site location and surrounding terrain and/or buildings. Setup of the instruments must comply with the Contractor’s safety plan. Expenses for testing of ozone data collection at any or all of the network sites prior to the data collection period should be included in the project budget.

Task 4: Operation of the Ozone Monitoring Sites and Data Collection

Field operation and data collection of ozone readings in the study domain is to be projected in the project budget for a period of six weeks. The proposal shall provide a description of the monitoring network to be provided. The field plan or site selection process may make modifications to the proposal’s design; however, Contractor must receive approval for any extensive modifications to the proposal. Proposal shall identify if data collection will be 24 hours per day or will be limited to daylight observations due to staffing, battery recharging requirements or safety limitations.

Key elements may not be deleted. These elements are considered vital to collection of a robust data set for evaluation of ozone gradients and comparison of equipment used to existing permanent sites. If any of the monitors considered as a key element fails during the project, a reserve or spare monitor shall be substituted as quickly as possible. If spares are expended during the period of study, a monitor at a less vital location may be moved even if this creates a gap in the network. The key elements are:

- Operation of two collocated samplers near or at two District/ARB sites for comparison to data collected at Valley FRM/FEM sites.
- Operation of two pairs of samplers for evaluation of instrument performance and variation at/near the current and prior Arvin monitoring sites.
- Provision of at least one monitor in the city of Arvin.

Task 5: Analysis and Quality Assurance

Contractor is expected to compile data from the ozone monitors into a combined database to support 2D analysis of ozone gradients in the area for which the observational campaign is conducted. Quality review should be conducted and documented for any data rejected by the quality assurance process. Contractor is expected to develop and implement a basic Quality Assurance and Control Plan that describes: what level of quality of data is expected to be produced by this study; what steps the contractor will use in monitoring, data collection and processing to ensure that the maximum level of quality within the capabilities of the monitoring network is maintained; and what steps the Contractor will take to validate the data and identify and flag data unsuitable for inclusion in subsequent analysis.

The collected measurements should be analyzed to establish comparisons of the new and prior Arvin sites as well as the city of Arvin, and to establish one-hour ozone gradients in and around the data collection domain.

As a second task, the Contractor is requested to formulate comparative and predictive algorithms to project the ozone concentration for the city of Arvin and the current and prior Arvin ozone monitoring sites. Inputs for these algorithms must be restricted to consideration of data that will continue to be available from permanent District/ARB ozone and meteorological sites. The analysis may be conducted as spatial gradients or may consider meteorological data from the existing monitoring network operated by the District and ARB. Data for any of the parameters collected by the District/ARB stations may be requested by the Contractor for use in the analysis. The Contractor is requested to avoid reliance on meteorological data collection at the temporary ozone sites for the field program, or any other data sources that are not routinely accessible, because this data will not be available on a continuing basis as an input for the algorithms and will therefore not support future air quality predictions. Data quality objectives (DQOs) for determination of gradients and algorithms are not specified in part because the ability to define gradients will be subject to measurement accuracy and in part because while gradients are believed to be present, only the completion of analysis will be able to determine whether the variation in observed values represents a statistically sound gradient pattern or random variation without a definable pattern.

Task 6: Final Report and Presentation of Results

After the District has approved all work for prior tasks, the Contractor will provide a Draft Final Report and a Final Report. This report will describe the project approach and present the results. The report shall include the following:

- Discussion of the conduct of the field program (site documentation may be provided as a separate Appendix).
- Discussion of the compilation of the ozone data collected during the project and quality assurance conducted to validate the data. The report should document any important findings regarding consistency or variation within the compiled data. Commentary on the reliability or limitations of ozone monitors used during the study should also be included.
- Discussion of the comparison between District/ARB permanent site data and the data collected by the field program collocated sites.
- Discussion of the variations or consistency demonstrated by the pairs of samplers located near the existing and prior Arvin monitoring sites.
- Highlights of the graphic analysis performed with the data to determine ozone gradients in the study area. (Complete files of the analysis results may be provided in a separate appendix and/or computer files as appropriate to preserve the full quality of results.)
- Results of the effort to establish algorithms for prediction of future ozone concentrations at the city of Arvin and both the current and prior Arvin monitoring sites.

After the Contractor submits the Draft Final Report, the District Project Manager will provide comments to the Contractor. The Contractor shall comply with the District Project Manager's requests for supplemental documentation and clarifications in the report and address the District Project Manager's comments. The Contractor will provide the Final Report within 45 days after receipt of the District Project Manager's comments. The Final Report must be complete in providing documentation and results for all required objectives. The District requires that the technical writing be adequate to clearly explain the processes used to carry out the project. Multiple revisions may be required if the Final Report is not written to the satisfaction of the District.

The Contractor will also provide a presentation of results at a time and place selected by the Project manager with concurrence for availability by the Contractor. This presentation may occur before or after the completion of the final report by agreement between the Contractor and Project manager. The presentation will describe the observational data collection effort, processing of the collected data, analysis process and provide the resulting ozone gradient maps. Contractor will be expected to be responsive to questions regarding the completed analysis.

4.0 PROJECT WORK PRODUCTS/DELIVERABLES

4.1 Initial Meeting / Conference Call

At the start of the contract period, the Contractor's project manager and key personnel will meet with District staff via telephone or in person to discuss the overall plan, details of performing the tasks, the project schedule, items related to personnel or changes in

personnel, and to resolve any open issues that require resolution before work can begin.

4.2 Periodic Conference Calls, Progress Reports and Response to Project Direction by the District

At regular intervals defined by the District (approximately every two weeks), the project manager and key personnel will meet with District staff via telephone or in-person meeting to discuss progress for the overall plan and details of task progress. The Contractor shall involve in this discussion key project personnel or subcontractors necessary to provide details of task progress. Prior to the conference call, preferably at least one work day before the call, Contractor will email the District a brief progress report that includes:

- Current status of work progress;
- A budget status summary indicating the percentage expended on major elements and explanation for any items that are not in conformance with the submitted project budget;
 - Note: Provisions of District agreements allow some reallocation of funding resources during conduct of the project; however, exceeding the total budget is not authorized.
- A review of the project timeline and justification for any requested revisions to intermediate progress dates;
- Evidence or submittal of items deemed to be complete;
- Progress/completion status related to Action Items identified in prior progress updates;
- New Action Items identified by Contractor for discussion, direction, or approval by the District; and
- Notice of significant upcoming tasks, to allow the District to provide input on major tasks or provide go/no-go decisions on conduct of the major tasks.

The Contractor must be willing to receive guidance and direction from the District and adjust procedures and methods to resolve deficiencies or to meet objectives defined by the District. Based on progress reports and preliminary results, the District may provide direction to Contractor to delete or amend objectives and deliverables. The District may request other interim deliverables. Deletion of tasks or deliverables is fully within the authority of the District; however, the Contractor will be compensated for work already completed on curtailed tasks.

Any amended deliverables must be within the authorized budget for the project. The Contractor shall perform any additional work needed to address issues raised by this process for the items authorized by the District Project Manager unless such effort would exceed the authorized budget. Any extra effort directed by the District that does not fall within the authorized budget, or which would cause extension of the term of the agreement, requires formal amendment to the agreement. If the District determines a need for additional tasks or services not included in the proposal, the contract may be amended by agreement of both parties to include additional tasks and related costs.

4.3 Obtain All Necessary Permits

The Contractor will obtain all necessary permits required by law for completion of the tasks, including building permits from city and county and permits from the Federal Communications Commission (FCC), Federal Aviation Administration (FAA), and other agencies as required. The cost of acquiring all necessary permits, including but not limited to permitting fees, should be included in the proposal budget.

4.4 Electronic Data Submittal

The Contractor shall provide reports and data to the District in a format specified by the District using Microsoft Office software (Word, Excel, or Access Microsoft – Office 2010 Professional or older versions of Microsoft Office) and shall provide draft and final computer code, supporting data, and input files if applicable in formats agreed upon by the Contractor and District Project Manager. Supporting files or additional final products such as databases, model input files or related technical data shall be delivered in the format specified by the District Project Manager.

4.5 Deliverables

The District requires that the technical writing of all final products be adequate to clearly explain the processes used to carry out the project. Multiple document revisions may be required if reports are not written to the satisfaction of the District. The Contractor shall deliver an electronic copy for each of the following:

- Task1 Field Plan Documents: Prior to the purchase or rental of equipment; Contractor shall prepare and submit to the District a Field Plan document containing a listing of equipment for purchase or rental, a full field operations plan identifying the number of sites that will be used for data collection and the time period for operational data collection, a Safety Plan for field operations, a Site Selection Technical Memo describing how sites will be selected and how approval will be obtained to install equipment and conduct operations at the sites, and a Quality Assurance document describing the processes that will be used to check and integrate collected data for the analysis process and delivery to the District (see also discussion in Section 3.2 Task 1 and Task 5 of this RFP regarding expectations for the quality assurance plan). The format for these reports is open to the Contractor's discretion and may be provided as a single document or series of technical memorandum.
- Task 2 Technical Memoranda: Documents listing the equipment and supplies to accompany invoice for payment for equipment and supply purchases/rentals. Any permanent equipment that the Contractor expects

the District to purchase directly will be separate from this process and such equipment will become the property of the District at the end of the project.

- Task 3 Site Report: Documentation of the observational sites, providing information on the instruments operated at each site, specific geographic coordinates for each site and photographs to document the site placement and surrounding local environment.
- Task 4 Compiled Data Files: Files from the observational period, after quality assurance checks. These files may be delivered to the District prior to or after the analysis of Task 5.
- Task 5 Technical Memoranda: Documentation of the progress of analysis of the collected data, at least monthly if data analysis requires more than one month and with invoices requesting payment for completion of the analysis.
- Task 6 Draft and Final Report and Presentation of Results: Requirements are provided in the following Section 4.6 Draft and Final Report Specifications. In addition to electronic submittal, the Final Report must also be provided in printed and reproducible master.

4.6 Draft and Final Report Specifications

The Contractor shall deliver an electronic copy of the draft and final Reports in MS Word (Microsoft Office 2010 Professional or older versions of Microsoft Office) to the District Project Manager for review by the District. The District requires that the technical writing be adequate to clearly explain the processes used to carry out the project. The report must be complete in providing documentation and results for all required objectives. Multiple document revisions may be required if reports are not complete or are not written to the satisfaction of the District. The Contractor is expected to comply with requests for supplemental documentation and clarification of discussion in the draft report. The Contractor will be expected to provide revisions in the final report within 45 days after receipt of the District Project Manager's comments. Standards for completeness of the final report include:

- The executive summary of the Draft and Final report shall include a summary of the key findings.
- The Draft and Final Report shall present, document and reference all methodologies, calculations, and assumptions critical to the completion of the analysis tasks. Supporting technical documents and calculations shall be included with the report as appendices or may be cited as references if publically published and available for free electronic download.
- The Draft and Final Report must include graphical analysis of the collected data and statistical analysis and predictive algorithms for ozone concentrations in the Arvin area.
- If applicable, modeling source code documentation shall include information such as the algorithms, assumptions, calculations, externally written source code utilized, and other support data used.

- The report shall also include a bibliography of data sources referenced or used to support the evaluation and completion of tasks. The District may request that a copy of these reference documents accompany the final report in order to provide complete documentation of the report unless these documents are publically published and available for free electronic download, in which case an internet address should be included along with the bibliography citation.

Upon approval of the final report by the District, the Contractor shall deliver to the District five bound copies and one unbound reproduction master copy of the report incorporating all final alterations, additions and appendices. The Contractor shall also deliver an electronic copy of the final report produced in Microsoft Office.

4.7 Invoices and Progress Reports

The Contractor will be paid for each deliverable when the District deems that the invoice and deliverable satisfy the applicable requirements of the contract. Evidence of the completion of a task, purchase of equipment or progress report commensurate with the proposal budget and assigned tasks shall be provided prior to District approval of the invoice and processing for payment. Ten percent (10%) of each invoice payment will be withheld until all work is complete and approved by the District. Invoices for purchase of equipment may be exempt from the retention if invoiced separately from other expense and if authorized to be exempt from retention in the agreement executed with the District. The invoices must list the contract number and shall itemize all expenses incurred during the payment period completed. Each invoice will correspond to one of the tasks identified in Sections 3, 4, and 5 of this RFP. Direct labor charges and Subcontractor and Contractor charges shall be subdivided into the number of hours spent by each staff classification (e.g., project manager, instrumentation technician) for the invoice period. Additional tasks performed by the Contractor or its subcontractors to develop supporting information or analysis, which were not specified in the proposal, will not be reimbursed without prior written approval from the District. Unapproved additional tasks are not reimbursable.

The total of payments shall be separated into seven invoices:

- Invoice one should reflect costs to prepare the Field Plan documents and may also include any costs for the kickoff meeting.
- Invoice two should reflect costs for equipment purchases needed to prepare for the project. Equipment that has an extended expectation for use after the project will become the property of the District. District recommends that Contractor use rental or low cost equipment to minimize project expense. Consumables and samplers with a short expectation of serviceable life will be considered as expended during the study.
- Invoice three should reflect costs for Task 3 site selection and setup.
- Invoice four should reflect costs for Task 4 field operations data collection, which should include travel, lodging, and system operating expenses.

- Invoice five should reflect costs for Task 5 compilation of data, quality assurance and analysis of collected data.
- Invoice six should reflect costs for Task 6 preparation of the Draft and Final Reports and for the presentation of results.
- The final invoice, invoice seven, should reflect the 10% retention from all previous invoices and be submitted upon District approval of the Final Report.

The invoices must include the contract number for identification and shall be submitted in triplicate by the Contractor. The invoices shall accompany memoranda or documents for the required equipment purchases, progress reports or other defined deliverables. Contractor will be paid for the submitted invoice within 30 days following receipt of invoice and determination by the District that the invoice and progress report reflect and demonstrate work done in accordance with the contract. District will notify Contractor if the documentation provided with the invoice is not sufficient to make the required determination.

5.0 PROJECT TIMELINE, SCHEDULE OF DELIVERABLES AND PAYMENTS

The District may amend the tentative timeline for completion of work products reflected in Table 1 on the following page. The Contractor may propose an alternative deliverable and payment schedule. If the Contractor would like an alternative deliverable and/or payment schedule, the revised alternative schedule shall be included in the submitted proposal.

Percent of payment as identified in Table 1 is an estimate of allocation provided by the District to reflect the expected level of effort for each task. Actual Contractor expenses must correspond with the proposed budget for deliverables. Advance payment beyond the amount due for deliverables is not acceptable.

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TABLE 1
Proposed Project Schedule of Deliverables and Payments

Action/Work Product	Approximate Date	Percent of Payment (approximate, proposal may specify alternative allocation)
Release of RFP	April 9, 2013	
Proposal Deadline	May 9, 2013	
Contractor Selection	May	
Preparation of Contract	May	
APCO/Executive Director Approval	May	
Contract to Governing Board	May or June	
Contract Effective (if different from Board approval date)	Board Approval Date	
Kick off meeting/call	May or June	
Task 1 Prepare Detailed Field Plan	May or June	5%
Task 2 Preparation and Equipment purchases needed before data collection tasks	June	25%
Task 3 Site selection & setup in field	June-July	5%
Task 4 Data collection (six week period)	August-September	40%
Task 5 Analysis (including Quality Assurance, data integration, graphical analysis, statistical analysis and predictive algorithm development)	October-November	15%
Task 6 <ul style="list-style-type: none"> • Draft Report • Final Report • Presentation of results (may occur prior to or with Final Report) 	November-December January 2014 January 2014	10%
Project Completion	February 2014	Payment of 10% retention if applicable

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6.0 PROJECT REQUIREMENTS AND SPECIFICATIONS

The specifications and project design provided in this section shall be used by the Contractor.

Project requirements and specifications are as follows:

6.1 Management

The project manager will meet with District staff for an initial kick-off meeting within thirty (30) days of approval of the agreement between the Contractor and the District. Contractor and District may agree upon a later date for the kick-off meeting if the commencement of work by Contractor is not scheduled to occur for several months following approval of the agreement.

Contractor is required to report on the project's progress during the term of the agreement by conference call or meeting with the designated District contact not less than once every two weeks.

To the extent required by law and pursuant to Chapter 1 of Part 7 of Division 2 of the Labor Code (commencing with Section 1720), Contractor agrees to comply with all prevailing wage requirements relating to the emplacement and operation of the temporary ozone monitoring network provided by Contractor, by itself or through any Subcontractor.

6.2 Permits & Building Code

The Contractor and/or Subcontractors will obtain the appropriate permits from the city, county, and any other government agency required for installation and operation of the equipment during the data collection effort.

6.3 Equipment Specifications

The specifications proposed by Contractor for instrument selection and accuracy for the temporary ozone monitoring network design must be included in the proposal. Contractor must provide the services indicated and meet equipment specifications as follows:

PURCHASE, INSTALL, CALIBRATE AND OPERATE INSTRUMENTS:

The Contractor will purchase, install, calibrate and operate instruments in accordance with all applicable requirements. Emplacement of the temporary monitors and field operations during data collection must meet all federal and state OSHA safety requirements. The safety plan for field operations must be approved by the District Safety Officer or other person designated by the District APCO/Executive Officer.

OZONE MONITORS:

Instruments are not required to have FRM or FEM designation. Based upon previous ozone experience, ideal ozone detection sensitivity would

be at least a range of 0 ppb to 180 ppb, with an expected accuracy within 2% of the measured value. The District hopes the Contractor will be able to identify equipment of this quality at reasonable cost; however, District review of low cost monitors has not identified units meeting this level of performance. The number of sampling locations and duration of observations should be optimized rather than reducing those parameters to select instruments of better precision. Therefore, Contractor's proposal should identify that range and sensitivity of monitors found to be available which can detect ozone with at least a 0-150 ppb range. From preliminary review of low cost monitoring equipment, ozone monitors were found that cost less than \$1,000 with an expected total cost of equipment per site including data logging, battery/power supplies and ancillary equipment totally less than \$2,500 per site. If equipment of the specified accuracy would cause the cost of equipment to exceed 30% of the project budget, equipment with a lower sensitivity not less than 140 ppb may be substituted for all sites except the seven mandatory critical monitoring locations (see Attachment D). Ozone monitors must be able to record or transmit data to provide a representative ozone value for each hour during the field program. If battery life or field operations require conservation of power and resources, monitors may be limited to operation during daylight hours. Monitors should be operated in accordance with manufacturer's instructions but preferably should be located at least two meters above the ground for ambient ozone data collection and should not be obstructed from detection of ambient conditions or be severely impacted by a nearby source.

DATA LOGGER(S):

The Contractor is required to provide data recording and data collection for the project. Ozone samplers may have integrated data logging, or may output or transmit to individual or centralized data logger(s). The choice of equipment is at the discretion of the Contractor but should be identified in the proposal to demonstrate that the cost is included in the project budget.

METEOROLOGICAL INSTRUMENTATION:

Meteorological data is not requested for this project; however, if the Contractor specifies instruments that also collect additional parameters beyond ozone readings, the additional data collection will be compensable if included within the proposal. If provided, meteorological or other instruments should have sufficient sensitivity to provide reasonable accuracy during summer stagnation events. Meteorological data may be used to inform the graphical analysis of ozone gradients in the study area but must not be used as an input for the predictive algorithms as specified in Section 3.2 because that data will not be available as a future input.

6.4 Performance Testing and Warranties

DOCUMENTATION OF PRECISION:

Documentation will be provided for all instrument types used describing the expected accuracy and precision, calibration requirements and standards.

INSTRUMENT CHECK:

All instruments will be carefully inspected by the Contractor and checked for proper operation upon receipt. Contractor shall perform calibrations or testing to confirm proper operation of all instrumentation as specified in manufacturer's instructions or as provided in Contractor's Quality Assurance plan. All calibration data shall be recorded (from the data logger or other data collection system) and submitted to District for verification and archiving at the completion of the project.

FIELD CORRELATION AND ACCURACY CHECK:

Collocated monitoring at two District sites, and operation of a pair of instruments at two study sites near the current and prior Arvin monitoring sites, will be performed to establish relative accuracy of selected equipment and provide robust data collection and verification at the Arvin sites. One ozone detection instrument will be collocated with or be located near each of two District/ARB ozone monitoring stations to establish relative consistency with FRM instruments. The Contractor shall coordinate with the District's Information Technology Service (ITS) Department and Air monitoring staff to arrange for installation of the monitor at or near the District/ARB sites. At or near the current and prior Arvin monitoring site, two instruments will be located at each site to establish operational comparison of the ozone detectors used. By requiring these pairs of samplers at the key focus area Arvin sites, the project also gains a robust data set for these locations with replication and confirmation of values at the critical locations. Having two sites at each of the two locations supports the objectives for establishing whether differences in sampler observations are instrument variation or represent actual gradient differences. As a secondary quality purpose they provide a check on monitor variation through collocated sampling.

7.0 ELIGIBLE CONTRACTOR REQUIRED QUALIFICATIONS

The Contractor must demonstrate that the Contractor has extensive experience and expertise related to the requested tasks. In order to be considered by the District, the Contractor must have a valid business license; and should include the Contractor's license number in the proposal. The Contractor must demonstrate in the proposal by references or other methods that the Contractor has excellent working relationships with government agencies, skill in preparing clear and comprehensive reports and excellent technical writing skills.

The selected Contractor will be expected to use professional staff to complete all tasks. The Contractor's team (including Subcontractors' staff) identified in the proposal must have the appropriate skills and experience to perform the tasks and accomplish the objectives of this RFP. Contractor's and Sub-contractors' staff must have all licenses and certifications, training and experience, appropriate for the project and required for the tasks they perform. Contractor must ensure that staff and subcontractors are covered by worker compensation insurance at all times that they are on site, and that staff and subcontractors adhere to all applicable local, state, and federal regulations.

7.1 Excluded Parties List System (EPLS)

Because District funding for the project may include federal funds, Contractor must not presently be debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded from participation or otherwise excluded from or ineligible for participation under federal assistance programs.

A Proposer or any individual identified in the proposal that appears in the Excluded Parties List System (EPLS) is not eligible for award of a contract. The EPLS is a central registry that contains information regarding entities debarred, suspended, proposed for debarment, excluded, or otherwise declared ineligible from receiving Federal contracts. Access to the EPLS is available at www.epls.gov.

The Proposer certifies by signing the signature page of the original copy of the submitted proposal and any amendment signature page(s) that the Proposer is not presently debarred, suspended, proposed for debarment, declared ineligible, voluntarily excluded from participation, or otherwise excluded from or ineligible for participation under federal assistance programs. The Proposer should complete and return Attachment A, the certification regarding debarment, with their proposal. This document must be satisfactorily completed prior to award of the contract.

7.2 Specific skills

The Contractor must demonstrate in the proposal that the Contractor has the ability and resources to produce the deliverables requested in this RFP. The District reserves the right to reject any proposal deemed non-responsive, not responsible, and/or not reasonable.

Specific skills associated with this RFP should include:

- Obtaining necessary permits for the field operations tasks from government agencies including, but not limited to, the city, county, FAA, and FCC;
- Purchase, testing, deployment and operation of ozone monitors;
- Collection and analysis of air monitoring data;
- Analysis and mapping skills sufficient to evaluate and graphically display ozone gradients within an array of air monitors;

- Analysis skills sufficient to establish predictive ozone correlations and algorithms; and
- The Contractor’s team will include one or more members with experience in operating and installing gaseous ambient air monitoring equipment and meteorological equipment.

8.0 ELIGIBLE CONTRACTOR REQUIRED INSURANCE / LICENSE / BOND

The District will require that Contractor meet the following requirements for this project. The Contractor must provide insurance coverage in amounts and types of coverage acceptable to the District and must have and maintain professional licenses and certificates required for the tasks to be performed.

- 8.1 Without limiting the District’s right to obtain indemnification from the Contractor, all Subcontractors, or any third parties, the Contractor and all Subcontractors, at their sole expense, shall maintain in full force and effect throughout the term of the Agreement the following insurance policy(s):
 - 8.1.1 Liability insurance for bodily injury, including automobile liability, with limits of coverage of not less than Five Hundred Thousand Dollars; (\$500,000) per person and one million dollars (\$1,000,000) per occurrence;
 - 8.1.2 Liability insurance for property damage with limits of coverage not less than fifty thousand dollars (\$50,000) per occurrence;
 - 8.1.3 Workers compensation insurance in accordance with the California Labor Code; and
 - 8.1.4 Commercial general liability insurance with minimum limits of coverage of not less than one million dollars (\$1,000,000) per occurrence.
- 8.2 The foregoing insurance policy(s) shall not be canceled, reduced, or changed without a minimum of 30 calendar days advance, written notice given to District and written approval by the District to do so.
- 8.3 Prior to performing its obligations under this Agreement, Contractor shall provide District a certificate of insurance from an insurer acceptable to District evidencing proof of such insurance coverage required herein.
- 8.4 The Contractor and all Subcontractors used by the Contractor for the project shall have valid business licenses, valid certifications and licenses for the tasks they are performing (e.g. Contractor’s license, electrician’s license). Copies of all licenses and certifications for the Contractor and

Subcontractors must be submitted prior to commencing any work on the project.

- 8.5 Contractor shall list as an item in the budget the cost for establishing each insurance policy if Contractor intends to request payment as part of the agreement. If the insurance policy cost is included in general overhead or will not be billed to the District, the line item shall be marked accordingly and "N/A" shall be entered for the cost.

9.0 PROPOSAL SUBMITTAL REQUIREMENTS

Proposals submitted in response to this request for proposals shall include the following specified information and must be submitted in the form and by the date specified.

9.1 Contents of Proposal

Submitted proposals must follow the format outlined below and all requested information must be supplied. Failure to submit all requested information may result in the proposal being deemed unresponsive and therefore disqualified from consideration. The submitted proposals shall be limited to 24 pages, single sided or 12 pages, double sided, with 1" margins. Proposals shall be printed on white paper with black Arial font no smaller than 12 point. The page limit applies to the body of the proposal only and does not include resumes or appendices. Failure to submit proposals in the required format may result in elimination from proposal evaluation.

- 9.1.1 **COVER LETTER:** Include the name, address, and telephone number of the company, total project cost, the name of the contact person for the proposal, and must be signed by a person or persons authorized to represent the company. Submission of the proposal will be considered to be a binding commitment (firm offer) by the Contractor to provide the proposed services by the identified personnel at the specified cost.
- 9.1.2 **TABLE OF CONTENTS:** Clearly identify material contained in the proposal by section and page number.
- 9.1.3 **SUMMARY (SECTION 1):** State the overall approach to the project and specific objective(s). Demonstrate a clear understanding of the project goal. Include total project cost and a list of general tasks to be performed to complete the project. Provide specific examples of steps to be taken to complete the project.
- 9.1.4 **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.

- 9.1.5 PROGRAM SCHEDULE (SECTION 3): Provide projected milestones or benchmarks for all tasks and reports within the total time allowed.
- 9.1.6 PROJECT ORGANIZATION (SECTION 4): Describe the organization of the contracting group, and facilities available. Describe the proposed management structure for the project and how the progress of tasks will be tracked, including coordination of subcontractor tasks if applicable.
- 9.1.7 ASSIGNED PERSONNEL (SECTION 5): Identify the principals having primary responsibility for implementing the project. Discuss their professional and academic backgrounds, including all certifications and licenses held. 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.
- 9.1.8 DISTRICT RESOURCES (SECTION 6): Describe any District services and staff resources needed to supplement Contractor activities to achieve identified objective(s).
- 9.1.9 SUBCONTRACTORS (SECTION 7): If Subcontractors are to be used, provide each subcontractor's name and address in the proposal. Describe the work to be performed by the subcontractor and the number of hours, or the percentage of budget, allocated to subcontractor tasks for the project. Provide a list of staff who are expected to provide services, their qualifications, the subcontractors' relationship to project management, schedule, costs, and hourly rates. Contractor is responsible to ensure that the subcontractors are eligible per requirements of section 7 and maintain workers compensation and other insurance sufficient to indemnify Contractor for the tasks performed by the subcontractor.
- 9.1.10 CONTRACTOR CAPABILITY AND REFERENCES (SECTION 8): Provide a summary of the company's relevant background experience. Discuss the applicability of background experience to this RFP. Include examples of related projects completed for the District or other parties that are of a similar nature to the work requested herein. Provide references for the specified related projects conducted for other entities including telephone numbers and e-mail addresses of references.

- 9.1.11 COSTS OF PROPOSAL (SECTION 9): Identify all costs associated with the EXECUTION of this RFP. Agreements established from the proposal are considered to be fixed price, including sales tax (currently 8.975%) and other miscellaneous expenses. The proposed payment for each deliverable identified in Table 1 should be provided, as well as hourly billing rates and amount of time for each staff member that will be a part of this project. For proposals that respond to specifications requiring separable component tasks or multiple levels of effort, or for proposal options recommended by Contractor in their proposal, the cost for each separable task or level of effort shall be provided. Contractor may identify cost savings associated with any of the potential options, should the District elect to delete a task, increase or decrease the level of effort for the project or approve an optional work program element recommended in the proposal. If the proposal includes multiple alternatives for the completion of a task, the cost of each alternative should be listed separately.
- 9.1.12 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 proposed Subcontractors. Specifically, Contractors 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, Contractors 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).
- 9.1.13 ADDITIONAL INFORMATION TO DEMONSTRATE PREVIOUS EXPERIENCE (SECTION 11): Attach a description of any work prepared similar to what is requested in this RFP. These attachments will not be considered part of the 24-page limitation set for the proposal. Provide other essential data that may assist in the evaluation of this proposal.

9.2 Proposal Submission

All proposals must be submitted according to the specifications set forth in Section 9.1 - "Contents of Proposal" and this section. Failure to adhere to these specifications may be cause for rejection of proposal.

- 9.2.1 SIGNATURE: All proposals shall be signed by an authorized representative of the Contractor.

9.2.2 SUBMITTAL ROUTING INSTRUCTIONS, DUE DATE AND TIME:

The Contractor shall submit five (5) complete hard 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:

“PROPOSAL - Ozone Saturation Study”

Proposals shall be directed to:

James Sweet
Senior Air Quality Specialist
San Joaquin Valley Unified Air Pollution Control District
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244

Proposals must be received at the specified address no later than Thursday, May 9, 2013, 5:00 PM. Late proposals will not be accepted. Any correction or resubmission by the proponent will not extend the submittal due date.

The Contractor shall also submit an electronic copy of the proposal in Microsoft Word (Microsoft Office 2010 Professional or older versions of Microsoft Office). The electronic copy shall be emailed to: james.sweet@valleyair.org. Electronic submission is not a substitute for delivery of originals and is intended only to reduce reproduction costs and facilitate dissemination for proposal review.

9.2.3 GROUNDS FOR REJECTION: The District reserves the right to reject all proposals and make no awards. A proposal may be rejected immediately if it is:

- Received at any time after the exact due date and time set for receipt of proposals; or
- Not prepared in the format prescribed; or
- Not signed by an individual authorized to represent the company; or
- The Contractor does not provide a certificate regarding debarment or is added to the debarment list after submission of the proposal.

9.2.4 DISPOSITION OF PROPOSALS: All proposals become the property of the District. Unless the Contractor specifically requests otherwise and the District approves such a request, all-proposals are considered public information.

9.2.5 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.

10.0 PROPOSAL ESTIMATION OF COSTS

Total cost must be clearly indicated in the Costs of Proposal section 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 Contractor unless the District requests modifications beyond the scope of the original RFP **and** a new quote for the modifications is submitted by Contractor **and** the new quote is accepted by the District, **and** both the District and Contractor sign a change order or contract amendment accepting the revised quote. Costs must be itemized by the following categories:

- 10.1 TASK: List a total cost per task for each task. The District reserves the right to remove tasks if it is deemed necessary to remain within the budget, provides cost savings to the District, or is determined to be in the District's best interest;
- 10.2 LABOR: List an hourly labor rate for each assigned principal and technical specialist. The rate quoted must include labor, general, administrative, and overhead costs. The labor rate must adhere to all state and local requirement for projects funded with state or federal funds;
- 10.3 SUPPLIES AND EQUIPMENT: Provide an itemized list of supplies to be purchased or leased specifically for the program. The cost of each item shall be listed separately. 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 and shall be delivered to the District prior to the final payment being issued by the District or within thirty (30) days of when it is no longer needed by the Contractor for the project, whichever is first;
- 10.4 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; and
- 10.5 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.
- 10.6 MISCELLANEOUS COSTS: Any miscellaneous costs shall be specifically identified with itemized cost. Shipping and installation or other services shall

be included in the supplies and equipment or subcontractor estimates as appropriate. Any additional expected shipping, delivery, installation or service costs may be reflected as miscellaneous costs.

11.0 DISTRICT EVALUATION OF PROPOSALS AND CONTRACTOR SELECTION

Qualified and responsive proposals will be evaluated by District staff to recommend the selection of a Contractor to the District Air Pollution Control Officer (APCO)/Executive Director. District staff will evaluate all proposals to determine responsiveness to the RFP. Failure to adhere to specifications in this RFP may be cause for rejection of the proposal. Evaluation of proposals shall consider but not be limited to evaluation of the cost of proposal, thoroughness and appropriateness of proposed work program, innovation in approach to work tasks, previous experience with related tasks, and Contractor expertise and working relationships with government agencies.

District staff may interview Contractors with scores above a natural break for clarification purposes during the selection process. Interviews may be conducted to confirm or clarify statements made within the proposal or request additional information regarding equipment specified in the proposal. Contractor is not permitted to provide new material or revise cost or specifications as part of the interview process.

The selection of Contractor and approval of an agreement with the Contractor is subject to approval by the District Air Pollution Control Officer (APCO)/ Executive Director and the Governing Board. A contract will be awarded to the Contractor that in the sole discretion of the District is deemed to best and most cost-effectively meet the needs of the District. The District may choose not to award this contract if it is deemed that such action is in the best interest of the District.

All proponents will be notified of the results by letter after the Governing Board has approved the Contractor selection and agreement.

12.0 DISTRICT DATA OWNERSHIP

Results from this project may be used to interpret, evaluate and/or quantify factors relating to air quality and air quality improvement programs. Data, evaluations technical tools and recommendations provided by the Contractor in completion of this project may be used by the District in policy decisions, recommendations to the Governing Board, emission inventory improvements, or other activities under the jurisdiction of the District. The Proposer should consider the intended end-use of the results that naturally follow from the requested tasks and provide data suitable for District use. The Proposer is not authorized to establish restrictions on the release or use of final products by the District.

All data that is received, collected, produced, or developed by Contractor for completion of the Tasks shall become the exclusive property of the District. The District shall have

the right, at reasonable times during the project, to inspect and reproduce any data received, collected, produced, or developed by the Contractor.

No reports, professional papers, information, inventions, improvements, discoveries, or data obtained, prepared, assembled, or developed by the Contractor shall be released or made available (except to the District) without prior, express written approval from the District.

At the completion of the project, the Contractor shall provide the District all data developed through conduct of the project that is in its possession. All data which is received, collected, produced, or developed from conduct of the project shall become the exclusive property of the District; however, the Contractor shall be allowed to retain a copy of any non-confidential data received, collected, produced, or developed by the Contractor. Should the Contractor subsequently include data collected in this project for other evaluations and publications, the District would appreciate a notification of publication and/or a copy of the article or manuscript published.

13.0 REFERENCES

Atmospheric chemistry in California's Central Valley: linking spacebased and in situ Observations (Presentation), Ronald C. Cohen, UC Berkeley, http://acmg.seas.harvard.edu/presentations/aqast/nov2012/Cohen_AQAST_Sacramento_2012.pdf

Guide Lines for Homogenization of Ozone Sonde Data (Version 2.0: 19 November 2012), O3S-DQA panel members on homogenization of O3S-data

SPARC/IOC/GAW, Assessment of Trends in the Vertical Distribution of Ozone http://www.atmosp.physics.utoronto.ca/SPARC/SPARCReport1/2.05_O3sonde/2.05_O3sonde.html

Validation of six years of TES tropospheric ozone retrievals with ozonesonde measurements: implications for spatial patterns and temporal stability in the TES bias Atmos. Meas. Tech. Discuss., 6, 1239–1267, 2013 www.atmos-meas-tech-discuss.net/6/1239/2013/ doi:10.5194/amtd-6-1239-2013. W. W. Verstraeten^{1,2}, K. F. Boersma^{1,2}, J. Zörner^{2,*}, M. A. F. Allaart¹, K. W. Bowman³, and J. R. Worden <http://www.atmos-meas-tech-discuss.net/6/1239/2013/amtd-6-1239-2013-print.pdf>

ATTACHMENT A: ELIGIBILITY

**Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98 Section 98.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(1) The prospective recipient of Federal assistance funds certifies that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

(2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Name and Title of Authorized Representative

Signature _____

Date _____

ATTACHMENT B: PROPOSAL BUDGET SUMMARY

Direct Costs:	
1. Labor: Employee Salaries and Benefits	\$
2. Subcontractors	\$
3. Travel	\$
4. Materials and Supplies	\$
5. Miscellaneous (please specify)	\$
TOTAL DIRECT COST:	\$
Indirect Costs:	
6. Labor Overhead (as percentage of Labor Cost) _____ % rate	\$
7. Other Indirect Costs (please specify)	\$
8. Fee or Profit (as percentage of Total Cost) _____ % rate	\$
TOTAL INDIRECT COST:	\$
TOTAL COST:	\$

ATTACHMENT C: PROPOSAL BUDGET TEMPLATE

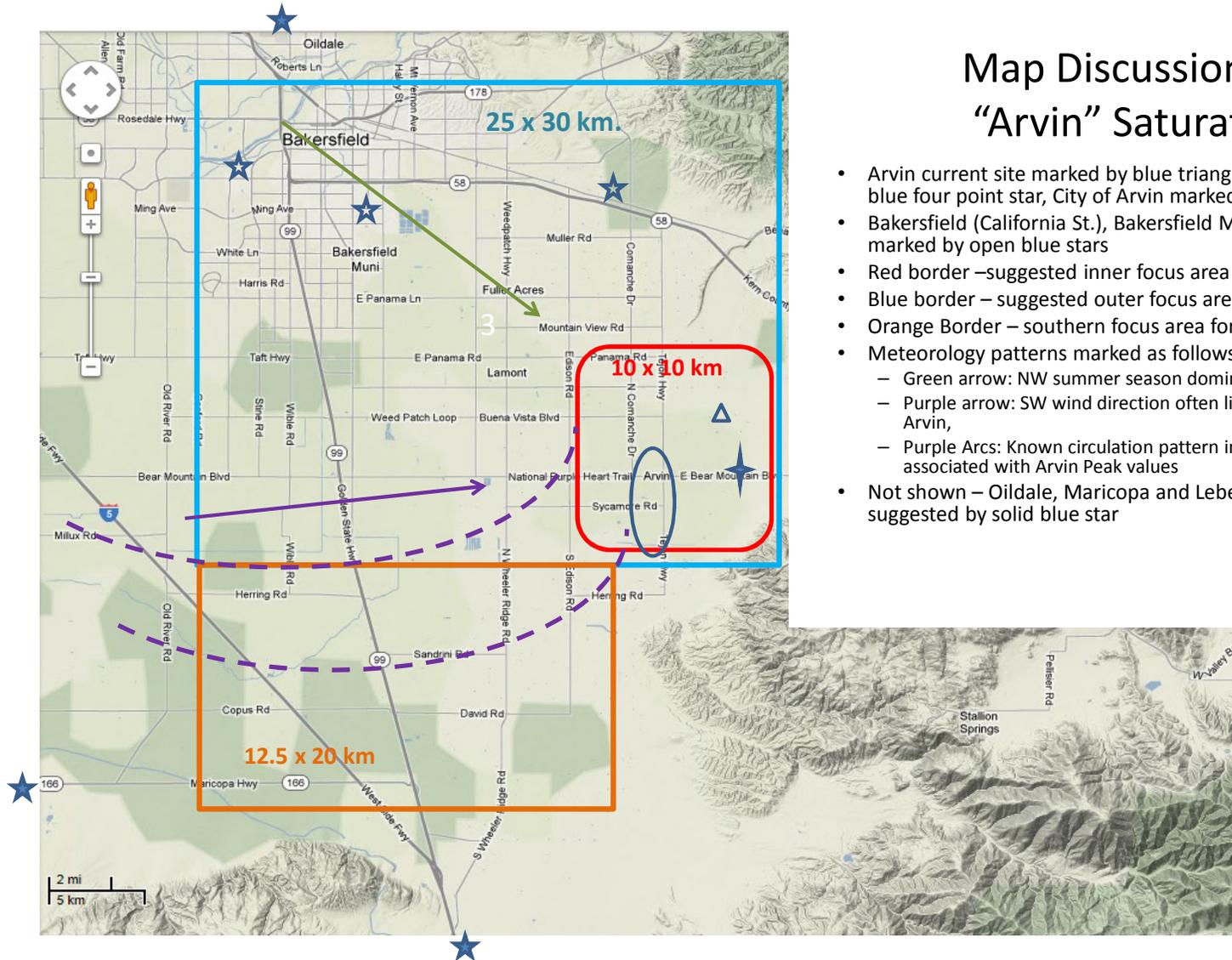
Proposal Budget Template, Itemized by Task and Personnel

* Salary, benefits, and overhead

Staff and Cost Categories	Hourly Rate*	Task 1 (hours)	Task 2 (hours)	Task 3 (hours)	Task 4 (hours)	Task 5 (hours)	Task 6 (hours)	Total Hours	Total Cost
Staff 1									
Staff 2									
Staff 3									
Staff 4									
Staff 5									
Subcontractor 1									
Subcontractor 2									
TOTAL HOURS BY TASK									
TOTAL COST BY TASK									
Travel									
Material and Other Direct Costs									
Fee									
Additional work (please specify)									
Miscellaneous (please specify)									
TOTAL FOR PROPOSAL									

ATTACHMENT D: PROJECT CONCEPT

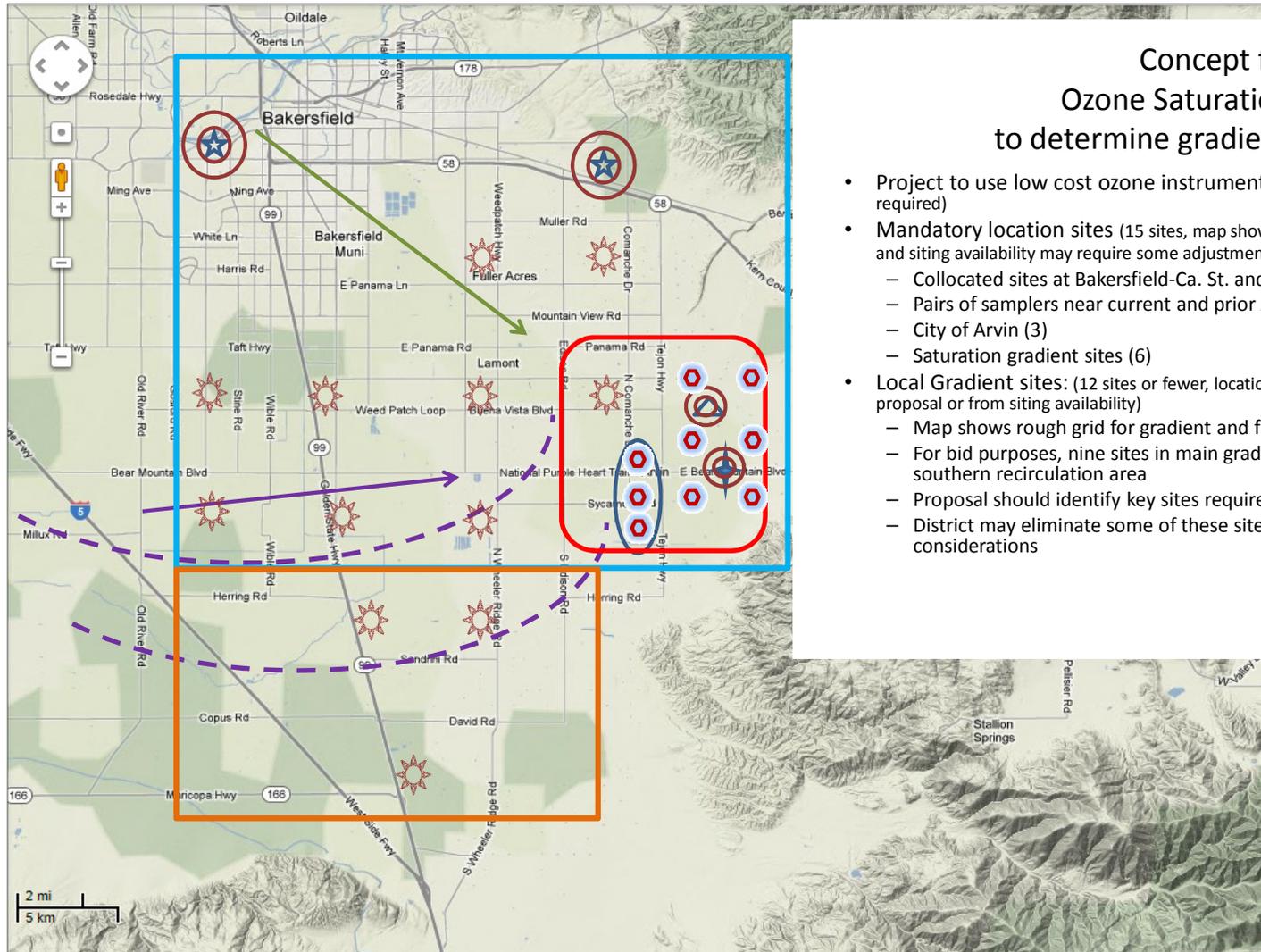
Tentative Map, Proposal may recommend technically justified changes to size and location of evaluation area.



Map Discussion Notes for “Arvin” Saturation Study

- Arvin current site marked by blue triangle, Prior Arvin site marked by solid blue four point star, City of Arvin marked by blue oval
- Bakersfield (California St.), Bakersfield Municipal Airport, and Edison sites marked by open blue stars
- Red border –suggested inner focus area
- Blue border – suggested outer focus area for sites to map ozone gradient
- Orange Border – southern focus area for ozone recirculation trajectories
- Meteorology patterns marked as follows:
 - Green arrow: NW summer season dominant wind direction,
 - Purple arrow: SW wind direction often linked to peak ozone concentrations in Arvin,
 - Purple Arcs: Known circulation pattern in southern Valley that may be associated with Arvin Peak values
- Not shown – Oildale, Maricopa and Lebec sites off map, direction suggested by solid blue star

Tentative Map, Proposal may recommend technically justified changes to size and location of evaluation area, number and placement of sites.



Concept for Ozone Saturation Study to determine gradients near Arvin

- Project to use low cost ozone instruments to support more sites (FRM not required)
- **Mandatory location sites** (15 sites, map shows approximate desired location, proposal and siting availability may require some adjustment)
 - Collocated sites at Bakersfield-Ca. St. and Edison (2)
 - Pairs of samplers near current and prior Arvin sites (4)
 - City of Arvin (3)
 - Saturation gradient sites (6)
- **Local Gradient sites:** (12 sites or fewer, location and number of sites may be adjusted in proposal or from siting availability)
 - Map shows rough grid for gradient and flow analysis
 - For bid purposes, nine sites in main gradient mapping area and three in the southern recirculation area
 - Proposal should identify key sites required for analysis
 - District may eliminate some of these sites for technical or budget considerations