

FIRST AMENDMENT TO CONTRACT NO. E2007015

This First Amendment to Contract No. E2007015 (First Amendment) is entered into between the Sacramento Metropolitan Air Quality Management District (SMAQMD), a California local public agency, and **ENVIRON**, (Contractor).

1.0 Recitals

- 1.1 Under Health and Safety Code Section 40961, the SMAQMD is the local agency within the boundaries of Sacramento District with the primary responsibility for the development, implementation, monitoring, and enforcement of air pollution control strategies, clean air programs and motor vehicle use reduction measures.
- 1.2 Health and Safety Code Section 41014 authorizes the SMAQMD to conduct public education, marketing, demonstration, monitoring, research and evaluation programs or projects concerning transportation emission control measures.
- 1.3 Health and Safety Code Section 41081 (d) authorizes funds received by the SMAQMD to be used to implement low-emission vehicle strategies from vehicular sources, including, but not limited to, a clean fuels program and motor vehicle use reduction measures.
- 1.4 On February 5, 1998, Resolution No. 98-007 authorized the Board of Directors to create the Heavy-Duty Low Emission Vehicle Incentive Program for the purpose of reducing emissions from heavy-duty mobile sources operating within the Sacramento Federal Ozone Non-Attainment Area.
- 1.5 SMAQMD requires technical support to convert the existing ACCESS SECAT database to a web-based SQL Server, as well as to provide an interim solution to reduce network bottlenecks currently existing in the database system.
- 1.6 The Air Pollution Control Officer (APCO) determined it was in the best interests of the SMAQMD to waive the competitive bid requirement and award this Contract No. E20070015 to ENVIRON because ENVIRON created and maintains the current SECAT Database and has vast knowledge and experience in the complexity of the database programming.
- 1.8 SMAQMD Resolution No. 2007-036, dated August 23, 2007 authorized the Air Pollution Control Officer (APCO) to sign this Contract on behalf of the SMAQMD.

- 1.9 SMAQMD and Contractor have identified additional tasks to help achieve the goals of the original contact and provided the revised Workplan for SECAT SQL Database Migration Project.
- 1.9 This Amendment is necessary to amend the existing Contract to include an additional \$15,028 for additional SECAT SQL Database technical support.
- 1.9 Under Resolution No. ____ - ____, dated April 24, 2008 the Board of Directors authorized the Air Pollution Control Officer to sign Contract Amendment No. E2007015-A to include \$15,028 in additional funds.
- 1.9 Contractor is ready, willing and able to assist SMAQMD as described in Exhibit A of this Contract

2.0 Terms and Conditions

The parties agree to the terms and conditions listed below:

- 2.1 **Exhibit A – Scope of Services:**
Exhibit A, Scope of Services to Contract E2007015 is amended and replaced by attached **Exhibit A1** – Amendment.
- 2.2 **Exhibit B Payment Schedule and Terms:**
Exhibit B, Payment Schedule and Terms to Contract E2007015 is amended and replaced by attached **Exhibit B1** - Amendment. The total amount available under this contract is **\$115, 028**.
- 2.3 **Reaffirmation:**
In all other respects, this Contract, as amended, shall remain in full force and effect.
- 2.4 **Entire Agreement:**
This Contract, as amended, and any attachments hereto, constitutes the entire understanding between the SMAQMD and Contractor concerning the subject matter contained herein.
- 2.5 **Authority to Bind:** The persons signing on behalf of the parties to this Contract warrant that they have the legal authority to execute the Contract.

Executed by:

**Sacramento Metropolitan Air
Quality Management District**

ENVIRON

Larry Greene
Air Pollution Control Officer

D.R. Souten
Principal

Date _____

Date _____

Reviewed by:

Kathrine Pittard
District Counsel

Exhibit A-1 Amendment Scope of Services

Task 1: Workplan Development

ENVIRON will develop a project work plan that will serve as a guide to achieve the project objective, which is to fully convert the SECAT database in the ACCESS Server platform to web-based SQL Server platform. The revised workplan eliminates Task 2 of the original scope and adds Phase 5 to Task 3. The work plan will include, but not be limited to:

- Task Descriptions and Approaches; and
- Schedules of Task Activities and Deliverables.

Tasks 2: Deleted

Tasks 3: SQL Server SECAT Databases System Development

Phase 1: Set-up Website Environment and Data Structure in SQL Server

ENVIRON will set-up a working website environment using SQL Server Express and Visual Studio 2005 by:

- Identifying all tables, queries, reports, and utility capabilities that are to be kept in the new system.
- Identifying table structure changes that will optimize computation and user speed in the intended NET/SQL Server architecture. This includes establishing fixed relationships between tables and a consistent method of indexing data for fast searches;
- Converting all data table structures and data from the ACCESS server to the SQL server. The transferred data may be used temporarily for testing purposes, but may not become a live dataset;
- Simplify and reduce redundancy in the complex query structure that is currently adding unnecessary extra layers of data gathering by deleting all unnecessary elements; and
- Converting all remaining queries from the ACCESS database to SQL's optimized system of stored procedures. This tasks includes reanalysis of all built-in functions being used by queries that may have different meanings in the two coding systems.

Phase 2: Pilot Testing of Installation Issues on SMAQMD's Servers

- ENVIRON will work with SMAQMD's IT department on a simple website template to uncover and troubleshoot any live installation problems. All of the major server interaction categories will be tested at their most basic "Hello World" level to ensure that there are no technical or security issues with the network functionality that would hinder the full implementation of the final database product. These include:
 - Querying;
 - Record-saving;
 - Reporting;
 - Excel/Word file generation;
 - Emailing; and
 - File upload/download

The majority of the testing will occur in conjunction with Phase 3, 4, and 5 developments, on an as-ready or as-needed basis, as there is expected to be a moderate level of evolving interdependence between development and environment requirements.

Phase 3: Build Advanced Business Functionality

- Developing a template set of coding strategies that will be used consistently for all user interface forms and reports. This will include:
 - Creation of a tabbed interface design that will support data-binding and querying and conform to the underlying table hierarchy;
 - Recreation of all tools needed to create editable Word Reports (e.g. invoices, contracts, etc.) in the SQL database;
 - Creation of a template Crystal Reporting method for the emission and activity summary reports; and
 - Use of server-side parameters to keep track of individual users' viewing states in the SQL program;
 - Development of a security plan that defines user level security to help protect data from being accessed by non-authorized personnel; and
 - Creation of a consistent look-and-feel for the Graphic User Interface.
- Recreate the features of all forms, reports, and utilities using the developed template designs, with the notable exception of the database replication and synchronization functions for field use – these ACCESS – specific functions will be discontinued in favor of the new web design, which will allow secured central access from any internet-enabled location.

Phase 4: Beta Testing

- Perform Beta testing and quality assurance tests to verify the correct action of every feature, button, and data entry field;
- Perform test installation and draft solution on the District's own machines.

Phase 5: Additional Reporting and Data Import/Export Functions

- Develop a Central Active Query that allows large data files to be exported in a tabular form to a text or Excel file;
- Create a Multi-Layer Data system that allows a formal approval process of reviewing pending field data by managing personnel;
- Develop a Support File Upload/Download that allows the database to save and retrieve pdf's and other media supporting the database records;
- Create new data entry pages for Communications and Comments Logs;
- Interface Google Map with a third party mapping system that will plot the Latitude/Longitude values and Street Addresses; and
- Develop an Automatic Email Notification that will trigger notifications for the next step in the review process.

Phase 6: Installation of Full Live System on SMAQMD's Servers

- Transfer live data from the legacy ACCESS version of the database in a one time operation to the final version of the SQL database; and
- Troubleshoot problems with the data transfer and installation issues that arise with the distribution of a newly installed system.

Project Deliverables and Schedule

The anticipated deliverables and estimated completion dates by task for the project are provided in Table 1. The estimated completion dates are developed based on an assumption the ENVIRON receives SMAQMD's approval of the workplan.

Table 1: Proposed Project Deliverable Schedules:

Task	Deliverables	Estimated Completion Date
Task 1	Workplan	October 2007
Task 3 Phase 1	SQL Database with draft data structure, including all tables, queries, relationships, and indexes expected to be needed.	January 2008
Task 3 Phase 2	SQL Database tested for use on SMAQMD's servers, skeleton code for major expected server-client interactions.	February 2008
Task 3 Phase 3	Draft SQL Database and interface containing all of the original data input and reporting functionality from the ACCESS Database, with the exception of specific operational change requests.	April 2008
Task 3 Phase 4	Draft SQL Database and interface, fully debugged and ready for use as a beta version. No data entry into the SQL Database will be preserved from the beta-testing phase.	May 2008
Task 3 Phase 5	Additional Reporting and Data Import/Export Functions.	June 2008
Task 3 Phase 6	Final SQL Database and interface, with all historical data to date from the legacy ACCESS system, installed for live use.	June 2008

Detailed budget by tasks will be provided in the Workplan.

Revised Workplan for SECAT SQL Database Migration Project

Introduction

This revised workplan is to provide technical support to the SMAQMD to migrate the existing ACCESS SECAT database to a SQL Server based database. This revised workplan addresses the comments from SMAQMD to remove the scope for **Task 2: Interim Solution to Reduce Bottlenecks in ACCESS Version**; to provide scope and estimated level of effort for the new features that SMAQMD requested to be included in the SQL Server based database; and to provide estimated budget breakdown by tasks.

Background

The current ACCESS SECAT database in use for tracking vehicles and funding distributions a part of SMAQMD's Mobile Source Division duties has exceeded the capacity of its original designed usage specifications. The number of users, number of vehicle accounts being tracked, and increased demand for formatted output are overwhelming the current ACCESS database structure's design limitations. It has, thus, become necessary to migrate the system to a distributed client-server architecture, whereby substantial savings in network traffic and data conflict lockouts are achievable.

Preliminary mock-up tests with a SQL-backend working with an ACCESS frontend through an ODBC translation layer show that a phased transition to a fully SQL-server system will not serve the increasing user requirements of the SMAQMD. The non-native data translation layer negates any speed advantages that either system (ACCESS or SQL Server) has operating on its own. Thus, it is recommended that the ACCESS SECAT database be translated to a fully SQL Server oriented solution with native ASP.NET frontend that is designed for direct SQL Server data requests in a scalable environment.

Through substantial portions of the code will have to be translated and restructured to accommodate a web environment, certain environments are better suited to a conversion from ACCESS than others, and a MS SQL Server backend with a Visual Studio 2005 (.Net) frontend was chosen as the best technology available that would allow reuse of the largest percentage of legacy code and specialized reporting functionality, while still achieving the desired new speed and scalability characteristics.

In the meantime, it is recognized that the current solution is working beyond its ACCESS design limitation of five (5) recommended simultaneous users, and that it might also be beneficial to streamline some specific bottlenecks to smooth operations during the transition period while the full SQL Server solution is built. Some of these enhancements will carry forward into the anticipated fully SQL Server system, but some will only be temporary fixes to ease the strain on system resources during the transition period.

The project objectives, scope of work, schedule and deliverables for the work are discussed in the following sections.

Objectives

The objective of the SQL Database Migration Project is to bring forward, into a web-based environment with client server architecture, all existing functionality and data in the current SECAT system, with the exception of a handful of ACCESS-specific items such as the replication and synchronization of field databases. This migration will include all data input pages, Excel/Word reporting, and administrative functionality, and it will be structured to remove as many intermediate data request layers as possible (i.e. no ODBC data translations and limited use of on-the-fly queries.) The web-based environment will allow field entry of data without requiring the complex and error-prone synchronization process, and the client-server architecture will take advantage of load-balancing and procedure-oriented efficiencies that can be offered by large scale database systems. Accommodation of certain new out-of-scope features that have been requested is also intended, on priority basis, as time and budget allow.

Scope of Work

The SQL Database Migration Project can be divided into several discrete phases. The bulk of the work will generally be dominated by achieving certain technical goals and building design structures and templates that will not be apparent to an end user, and as such will not generally be directly assessable by non-technical SMAQMD staff. This groundwork set-up will last for several months, and most interaction with the SMAQMD staff will be at the IT-department level. The final phases will produce testable displays and report documents that will provide opportunities for detailed beta-testing by the SMAQMD staff.

Budget

As per the contract, ENVIRON is carrying out this project on a time and materials, not-to-exceed basis. The approved contract budget for the original scope of work is \$100,000. As discussed in our kick-off meeting and in the October 24, 2007 workplan, ENVIRON estimates that an additional \$20,000 is needed to complete the additional services as discussed in revised scope Task 3 Phase 5. Since SMAQMD has decided not to pursue any further activities in Interim Solution to Reduce Bottlenecks in ACCESS Version task, ENVIRON estimated that it would save about \$5,000 , which is now used to cover a portion of the \$20,028 cost estimate for the additional services. The estimated budget breakdown by tasks based on the rate schedule in the contract is provided in Table 2.

Table 2: Estimated Budget Breakdown by Tasks

Labor Category	Name	Hourly Labor Rate	Task 1 Workplan Development		Task 2 - Phase 1 SQL Database Data Structure		Task 2 - Phase 2 SQL Skeleton Database Client/Server Interface		Task 2 - Phase 3 SQL Beta Database Development		Task 2 - Phase 4 SQL Beta-Testing Database Development		Task 2 - Phase 5 SQL Beta-Testing Database Reporting & Data Import/Export		Task 2 - Phase 6 Final SQL Database Development		Total All Tasks	
			Hrs	Dollars	Hrs	Dollars	Hrs	Dollars	Hrs	Dollars	Hrs	Dollars	Hrs	Dollars	Hrs	Dollars	Hrs	Dollars
Principal	Dave Souten	233.20	3	700	1	233	1	233	1	233	1	233	1	233	2	466	10	2,332
Sr. Consultant	Lit Chan	147.01	12	1,764	6	882	4	588	5	735	8	1,176	8	1,176	8	1,176	51	7,498
Sr. Consultant	Mike Masonjones	141.10	24	3,386	104	14,674	24	3,386	142	20,036	66	9,313	100	14,110	46	6,491	506	71,397
Associate	Stella Shepard	117.61	8	941	10	1,176	102	11,996	62	7,292	22	2,587	42	4,940	10	1,176	256	30,108
Support		68.07	4	272	2	136	2	136	2	136	2	136	4	272	3	204	19	1,293
ENVIRON Labor Subtotal			51	7,063	123	17,102	133	16,340	212	28,432	99	13,445	155	20,731	69	9,513	842	112,628
Labor Total			51	7,063	123	17,102	133	16,340	212	28,432	99	13,445	155	20,731	69	9,513	842	112,628
Other Direct Costs (ODC)																		
	Travel (estimated + 10% fee)			1,200		-		-		-		-		-		1,200		2,400
	Misc.			-		-		-		-		-		-		-		-
ODCs Subtotal				1,200		-		-		-		-		-		1,200		2,400
GRAND TOTAL			51	8,263	123	17,102	133	16,340	212	28,432	99	13,445	155	20,731	69	10,713	842	115,028

**Exhibit B-1 Amendment
Payment Schedule and Terms**

1. Contractor must perform and complete all work required under this Contract in a professional manner and in accordance with the professional standards observed by competent practitioners of the profession in which Contractor, its subcontractors and agents, are engaged.
2. Contractor will be paid hourly for services described in Exhibit A of this Contract. Invoice must include title and name of person performing the work and rate of pay.
3. The APCO has the sole discretion to determine whether Contractor has successfully completed the tasks.
4. Payment will be made on a reimbursement basis. Contractor must submit one original and one duplicate invoice to SMAQMD on a monthly basis, in a mutually agreed upon format.
5. Contractor will be reimbursed for approved expenses and approved expenses documented by receipts and records. Airline travel must include copies of airline tickets, dates of travel, purpose of travel, and written record of APCO travel approval.
6. It is understood by Contractor that **\$115,028** is the maximum amount budgeted for this Contract. It is the responsibility of the Contractor to successfully complete the requested services as outlined in Exhibit A, including expenses and the acquisition of materials and supplies, while remaining within the approved budget.
7. Contractor may charge SMAQMD a 10% administration fee on direct travel and subcontractor charges. Contractor may not charge fees on purchases of any kind.
8. **Section 2.2 of this Contract contains additional reporting and fiscal requirements.**

- A. Acceptable Fees
1. **The hourly rates agreed to by SMAQMD AND Contractor shall not be increased during the term of this Contract.**
 2. SMAQMD will only pay for actual time spent completing an authorized task, with the time rounded to the nearest fifteen-minute increment.
- B. Unacceptable Fees – The SMAQMD will not pay fees associated with the following:
1. Preparing bills and invoices
 2. Responding to billing inquiries from any entity
 3. Review of this contract with the SMAQMD
 4. Improper staffing assignments (e.g., specialized personnel performing routine research tasks).
 5. Duplicate charges for the same work effort caused by your staffing and supervising requirements
 6. Employee courier services in excess of \$10.00 per delivery
 7. Staff overtime
 8. Arranging travel/accommodations
 9. Collating, velobinding or faxing
 10. Incoming faxes or emails
- C. Expenses
1. Itemization. The SMAQMD requires expenses to be itemized by date incurred and by category (e.g., photocopy, long distance telephone, parking).
 2. Detail. Each expense item must be adequately detailed so as to enable the SMAQMD to determine the exact nature, purpose and necessity of the expense.
 3. Payment. All routine expenses should be paid directly by the Contractor and billed to the SMAQMD as disbursements. Actual receipts must be attached to your bill.
 4. Telephone charges. The SMAQMD will pay actual, necessary long distance phone call charges traceable to a specific project and documented by records or receipts.
 5. Travel. Travel reimbursement will be consistent with the SMAQMD Travel Policy.
- D. Format of Invoices: Invoices shall clearly reference:
1. The billing period
 2. Actual time spent on task
 3. Name, title and rate of pay for person performing the task
 4. Detailed description of the work performed, broken down to specify a single task
 5. All fees or expenses

- E. Non reimbursable costs: SMAQMD will not reimburse the Contractor for costs associated with the following:
1. Administrative. Conference reports, billing costs, supplies, copying, printing, postage, packaging, telephone calls and fax calls not directly traceable to a specific product or program.
 2. Other. Costs of personnel associated with making travel arrangements, general clerical support, or "overhead" costs, such as rent or utilities.
 3. Markup. The SMAQMD will not reimburse the Contractor a "markup" percentage associated with the purchase of products of SMAQMD's behalf from outside vendors (such as: promotional items, print materials or exhibit booth space). Payment will be made on a reimbursement basis.
 4. The purchase of equipment, including but not limited to the following, is not authorized under this Contract:
 - ❖ Office equipment
 - ❖ Telephone equipment
 - ❖ Video equipment
 - ❖ Computer equipment
 - ❖ Computer software
 - ❖ Furniture
 - ❖ Refreshments during meetings
 - ❖ Publications/periodicals