

**Assistance Agreement Quarterly Report  
for the period of January 1, 2004, to March 31, 2004**

April 2, 2004

Fresno, California, Particulate Matter (PM) Supersite Monitoring Program  
EPA Assistance Agreement No. R-82805701-01

**WORK PROGRESS AND STATUS**

First quarter 2004 activities are summarized based on applicable tasks stated in the Fresno Supersite QAPP.

Task 1 – Equipment Procurement and Installation.

- The PM<sub>2.5</sub> cyclone was removed from the Met One Beta-Attenuation Monitor (BAM-1020) on January 02, 2004, at 1500 PST. This unit is currently operating as a PM<sub>10</sub> mass monitor.

Task 2 – Network Operations and Data Processing.

- Network operations and data processing have continued through this calendar quarter.
- Peter Ouchida of the California Air Resources Board (ARB) has been working with ARB's computer support group to centralize the data acquisition system with others behind the ARB firewall. Some preliminary validation will be done by ARB, which will provide DRI with access to 5-minute data for additional validation and analysis. A new data logger that collects both analog and serial data has been ordered. As soon as it arrives, testing of the data collection will begin.

Task 3 – Laboratory Measurements.

- PM<sub>2.5</sub> mass and chemistry analyses of filter samples from FRM and chemical speciation samplers, collected every sixth day through 9/30/03, have been completed. Samples dated through 12/31/03 have been analyzed and validated for mass only. Chemical speciation and data validation is in progress and expected to be completed by 6/31/04.
- The speciation instrument sampling frequency was increased in December from one in six days to one in three days for the Winter Carbon Intercomparison Study. DRI has continued to operate this instrument at this sampling frequency in order to obtain more comparison data.

Task 4 – Quality Assurance.

- Continued to finalize standard operating procedures for the data analysis methods of the field measurements.

Task 5 – Data Validation and Data Analysis.

- Level 1a and 1b data validation is in process for continuous gas, particle mass and chemistry, light scattering, light absorption, particle size, and meteorological measurements through 12/31/03. A large amount of the continuous data, collected through 01/31/04, has been submitted to ARB's CCAQS FTP site. This task should be completed during the second quarter of 2004. Submission of Supersite data to the NARSTO database is also underway and should be completed during the second quarter of 2004 for data collected through December 2003.

Task 6 – Management and Reporting.

- Drs. John Watson and Judith Chow attended the annual Supersite meeting in Las Vegas, NV on February 25 and 26, 2004. They visited the Fresno Supersite on March 23 and 24, 2004.

**EXPENDITURES**

Budget expenditures to date are on target, and no revisions to the approved budget are expected to be necessary at this time.

**QUALITY ASSURANCE**

Standard operating procedures continue to be updated for the data analysis procedures.

**RESULTS**

There are no results to report for this period.

**PLANNED ACTIVITIES FOR THE FORTHCOMING QUARTER**

During the second quarter of 2004, the principal investigators plan to: 1) continue data analysis from the 2003 Winter Carbon Intercomparison Study, 2) continue finalizing procedures for the data handling protocols for the Fresno Asthmatic Children's Environment Study (the concurrent health study conducted by the University of California, Berkeley, and ARB), 3) continue finalizing data validation criteria and database structure, and 4) work with ARB to install the new Data Acquisition System.

**PUBLICATIONS, PRESENTATIONS, AND REPORTS**

No publications were prepared during this quarter.

The following four presentations were given during this quarter:

Chow, J.C. (2004). Approaches to Establish Comparability for IMPROVE and STN Carbon OC and EC. Presented at the MANE-VU/MARAMA 2004 Science Meeting, Hyatt Regency Hotel, Baltimore, MD, 28 January 2004.

Chow, J.C., J.G. Watson, L.-W.A. Chen, D.H. Lowenthal, R.J. Countess and S.J. Countess (2004). Temporal and Spatial Variations of PM<sub>2.5</sub> during CRPAQS Winter Intensives. Presented at the CRPAQS Data Analysis Meeting, Sacramento, CA, 9 March 2004.

Chow, J.C., J.G. Watson, D.H. Lowenthal and Susanne V. Hering (2004). Particulate Nitrate Measurements during CRPAQS. Presented at the CRPAQS Data Analysis Meeting, Sacramento, CA, 9 March 2004.

Fung, K., J.C. Chow, and J.G. Watson (2004). Factors Contributing to the Difference in Elemental Carbon by the IMPROVE and USEPA Speciation Trends Network STN Methods. Presented at the 3rd Asian Aerosol Conference, Hong Kong University of Science and Technology, Hong Kong, 7 January 2004.

No reports were prepared during this quarter.

**QUARTERLY REPORT SUMMARY**

See attached.