

**Assistance Agreement Quarterly Report
for the period of October 1, 2004, to December 31, 2004**

January 3, 2005

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

WORK PROGRESS AND STATUS

Activities for the fourth quarter of 2004 are summarized based on applicable tasks stated in the Fresno Supersite QAPP.

Task 1 – Equipment Procurement and Installation.

- ARB has been working with MetOne on a study of the Beta Attenuation Monitors' (BAMs) performance. They removed the two units at the Fresno monitoring site (one of which was in need of repair) and replaced them with a single BAM PM₁₀ unit. They are going to assess the removed units to determine if the recent firmware/hardware upgrades have impacted the BAM-1020 data quality.

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) continues to work with ARB's computer support group to centralize the data acquisition system with others behind the ARB firewall. This new system will allow some preliminary validation to be done by ARB, and will provide DRI with access to five-minute data for additional validation and analysis. Testing of the new data logger is currently taking place.

Task 3 – Laboratory Measurements.

- PM_{2.5} mass and chemistry analyses of filter samples from FRM and chemical speciation samplers, collected every sixth day through 08/19/2004, are in progress. Completion of the chemical analyses and validation of the data is scheduled to be completed during the first quarter of 2005.
- DRI continues to operate the PM_{2.5} Hi-Vol instrument at a twice-per-week sampling frequency in order to obtain data for carbon intercomparison.

Task 4 – Quality Assurance.

- DRI continues 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 10/31/04. A large portion of the continuous data, collected through 9/30/04, has been submitted to ARB's CCAQS FTP site. Validation of the remaining data is in progress. This data will be submitted over the next several months. DRI continues to work with and submit data to NARSTO and SIRD as well.

Task 6 – Management and Reporting.

- Drs. John Watson and Judith Chow visited the Fresno Supersite on November 18, 2004. They were met at the site by a group of visitors from the Japan Automobile Manufacturer's Association interested in air quality issues, specifically particle and health effects studies.

EXPENDITURES

Budget expenditures are on target, and no revisions to the approved budget are expected 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 REMAINDER OF THE FOURTH QUARTER

During the first quarter of 2005, the principal investigators plan to: 1) continue data analysis from the Fresno Asthmatic Children's Environment Study (FACES, the concurrent health study conducted by the University of California, Berkeley and ARB); 2) continue finalizing and updating data validation criteria and database structure; and 3) work with ARB to install the new Data Acquisition System.

PUBLICATIONS, PRESENTATIONS, AND REPORTS

One publication was submitted during this quarter:

Chow, J.C., J.G. Watson, D.H. Lowenthal, L.-W.A. Chen, and K. Magliano (2004). Particulate Carbon Measurements in California's San Joaquin Valley. *Chemosphere*, submitted.

The following presentations were given during this quarter:

Chow, J.C. and J.G. Watson (2004). Potential Health Effects of Ultrafine Particles. Presented at the Hong Kong Environmental Protection Department, Wan Chai, Hong Kong, 9 November, 2004.

Chow, J.C. and J.G. Watson (2004). Air Pollution – Urban, Regional, and Global Perspectives. Presented at the Workshop on Environmental Concerns, Hong Kong Polytechnic University, Hong Kong, 10 November 2004.

Watson, J.G. and J.C. Chow (2004). Measurements and Characteristics of Ultrafine Particles. Presented at the Hong Kong Environmental Protection Department, Wan Chai, Hong Kong, 9 November, 2004.

No reports were prepared during this quarter.