

St. Louis - Midwest Fine Particulate Matter Supersite

ASSISTANCE AGREEMENT QUARTERLY REPORT SUMMARY

for the reporting period July 13, 2000 through October 12, 2000

December 13, 2000

St. Louis - Midwest Particulate Matter (PM) Supersite Monitoring Program

EPA Assistance ID No. R-82805901-0

Investigators and Institutions:

Dr. Jay Turner, PI	Washington University, St. Louis, MO
Dr. Judith Chow, Co-PI	Desert Research Institute, Reno, NV
Dr. Petros Koutrakis, Co-PI	Harvard University, Cambridge, MA
Dr. Peter McMurry, Co-PI	University of Minnesota, Minneapolis, MN
Dr. John Ondov, Co-PI	University of Maryland, College Park, MD
Dr. James Schauer, Co-PI	University of Wisconsin, Madison, WI
Dr. Warren White, Co-PI	Washington University, St. Louis, MO
Mr. George Allen	Harvard University, Cambridge, MA
Dr. Tina Bahadori ¹	Electric Power Research Institute, Palo Alto, CA
Dr. Edward Macias	Washington University, St. Louis, MO
Dr. Bret Schichtel ²	Washington University, St. Louis, MO
Dr. John Watson	Desert Research Institute, Reno, NV

Lead Institution: Washington University in St. Louis
Research Category: Particulate Matter Supersites Program
Project Period: January 13, 2000- January 12, 2004
Objective of Research:

This project will provide an atmospheric measurement study which is designed to address and integrate objectives of the atmospheric, health and exposure research communities.

Progress Summary/Accomplishments:

Third quarter activities focused on finalizing the equipment/measurements matrix and selecting the monitoring sites. The project timeline for has been adjusted; measurements will commence on April 1, 2001 and end on March 31, 2002 (the proposal called for measurements to start January 1, 2001 and end on December 31, 2001). This three-month lag is necessary to improve coordination with the allied health effects and exposure studies programmed for St. Louis.

Key decisions regarding the measurements and equipment matrix include: semicontinuous PM sulfate and nitrate measurements will feature monitors developed by Dr. Petros Koutrakis and colleagues (Harvard School of Public Health); and 24-hour integrated hi-volume dichotomous samplers will be operated at the core site on a

¹ Current affiliation: American Chemistry Council, Washington, D.C. (Dr. Alan Hansen is currently serving as the official EPRI liaison to the St. Louis Supersite)

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1-in-2 day schedule using collated samplers with Teflon and quartz filters for mass/elemental analysis and EC/OC analysis, respectively.

The monitoring sites have been chosen, with formal permission for use and access granted for two of the three sites. The core site will be located at the East St. Louis (IL) compliance monitoring site (a former RAPS site) which is three kilometers east of the St. Louis City central business district. This property is owned by the Illinois Department of Transportation with the Illinois Environmental Protection Agency responsible for the compliance monitor station operations. One satellite site will be located in Park Hills (MO), approximately 60 miles south of St. Louis City. The property is owned by Mineral Area College. Approval for a second satellite site - located an urban residential area of north St. Louis City - is pending. The preliminary plan to operate three satellite sites has been modified to provide for longer sampling duration at the two aforementioned satellite sites and also frequent visits of the movable instrument platform to the core site for collocated measurements.

Publications/Presentations:

Project overview briefings were presented at: (1) Ad Hoc Air Quality Modeling Group (PM focus meeting), St. Louis, MO, July 26-27, 2000; and (2) St. Louis Chapter of the Air & Waste Management Association, St. Louis, MO, September 19, 2000.

Future Activities:

The next quarter will focus on: (1) preparing and submitting the Quality Assurance Project Plan; (2) contracting for infrastructure improvements at the monitoring sites (e.g., fences, utilities); and (3) procuring and testing major equipment.

Supplemental Keywords:

particulate matter, PM-2.5, monitoring, air quality

Relevant Web Sites: St. Louis - Midwest Supersite: <http://capita.wustl.edu/StLSuperSite>