

ASSISTANCE AGREEMENT QUARTERLY REPORT SUMMARY

for the reporting period January 13, 2001 through April 12, 2001

October 18, 2001

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

EPA Assistance ID No. R-82805901-0

Investigators and Institutions:

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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:

Fifth quarter activities focused on finalizing the measurement and equipment matrix, constructing the infrastructure at the field sites, procuring and installing instruments, and commencing measurements at the East St. Louis (IL) core site. Selected semicontinuous monitors commenced operation as early as April 1, 2001, with the full suite anticipated to be on line by April 30, 2001. Integrated sampling will be phased-in starting April 15, 2001.

A collaboration between Georgia Institute of Technology and Washington University - with funding from EPRI and Ameren - will feature deployment of a Particle-into-Liquid Sampler (PILS) at the East St. Louis core site. This instrument will provide PM_{2.5} ions (including but not limited to ammonium, nitrate and sulfate) at 15-minute time resolution. Installation is scheduled for May, 2001.

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)

² Current affiliation: NPS-CIRA, Fort Collins, CO

St. Louis - Midwest Fine Particulate Matter Supersite

The sampling protocol for daily 24-hour integrated elemental and organic carbon has been expanded with respect to the proposal which called for one sample - denuded or undenuded - collected each day. The protocol as implemented includes both denuded and undenuded samples being collected each day, with an additional sample to test denuder efficiency collected on alternate days.

Figure 1 shows the East St. Louis core monitoring infrastructure with the equipment shelters and platform in the foreground and the St. Louis Gateway Arch (City of St. Louis, MO) in the background.

Publications/Presentations:

Project overview briefings were presented at: (1) Air Quality Advisory Committee Meeting, East-West Gateway Coordinating Council (St. Louis area Metropolitan Planning Organization), St. Louis, MO, January 18, 2001; (2) Supersites PI Meeting, Research Triangle Park, NC, March 20, 2001; and (3) CENRAP Stakeholder Meeting, San Antonio, TX, March 22, 2001.

Future Activities:

The next quarter will feature full implementation of the St. Louis Supersite measurement program at the East St. Louis core site. The movable platform will be deployed at the core site to provide extensive collocated data for both the integrated and continuous measurements.

Supplemental Keywords:

particulate matter, PM-2.5, monitoring, air quality

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



Figure 1. The St. Louis - Midwest Supersite core monitoring site at 13th and Tudor, East St. Louis, IL.