

AIR TOXICS MONITORING NEWSLETTER

A PUBLICATION OF THE STAPPA/ALAPCO - USEPA/SAMWG AIR TOXICS MONITORING WORK GROUP
October 2003

The STAPPA/ALAPCO – USEPA/SAMWG Air Toxics Monitoring Work Group was established in 1999 for the purpose of developing recommendations for a national air toxics monitoring network. Members include representatives from several states and local agencies (Vermont, New Jersey, Texas, Oregon, California, Puget Sound), multi-state organizations (LADCO), and USEPA (OAQPS and some Regional Offices). The Work Group decided in early 2000 that the national air toxics monitoring network should be “rolled-out” over a several year period. Recent activities related to the national network are discussed in this quarterly newsletter.

Allocation of FY04 Funds

On August 15, 2003, USEPA issued final guidance for the allocation of \$10 million in FY2004 money to support national air toxics monitoring activities. (In addition, USEPA will reprogram \$6.5M in section 105 money to air toxics monitoring.)

The grant guidance identifies five major areas:

\$2.2M for continuation of the 22-site national air toxics trends sites (NATTS)

\$0.87M for purchase and maintenance of Chrome VI monitors (at each site), continuous formaldehyde monitors (at up to 3 sites), and high sensitivity CO monitors (at up to 5 sites)

\$0.385M for NATTS quality assurance

\$0.345M for data analysis projects

\$6.2M for community gradient monitoring studies

The community monitoring studies represent the next step beyond the NATTS for the national air toxics monitoring network. The objectives of this additional monitoring are to provide greater spatial resolution in communities, detect impacts from different source types, and address in-depth community exposure issues. USEPA believes that there is sufficient funding for community-scale monitoring projects in at least 10 cities, with at least four or five monitors in each city. USEPA has requested proposals for this monitoring by October 27, 2003, and is insisting that monitoring on tribal lands be included in the aggregate group of projects.

Monitoring Methods Workshop

The October 8-9 2003, air toxics monitoring workshop is right around the corner! The workshop will be held at the USEPA Office of Radiation and Indoor Air Laboratory in Las Vegas, Nevada, and is being sponsored by USEPA and the Northeast States for Coordinated Air Use Management (NESCAUM). The primary focus of the workshop is on aerosol-borne toxics methodologies, but other sampling regimes will be included. The workshop will enable state, local, and tribal air toxics staff to exchange information on issues related to the methods used in the measurement of air toxics. The meeting announcement and draft agenda are available at: <http://www.nescaum.org/committees/monitoring/AirToxicsWorkshop031008.pdf>. Limited travel reimbursement is available for state, local, and tribal personnel, as described in the announcement. If you have any questions about the workshop, then please contact Dr. George Allen, NESCAUM (gallen@nescaum.org).

Analysis of Pilot City Data

On July 3, 2003, Battelle delivered the draft final report on the analysis of the pilot city data (“Draft Technical Report for Phase II Air Toxics Monitoring Data: Analyses and Network Design Recommendations”). This study was the subject of a workshop on May 13-14, 2003, in Chicago. Copies of the presentations are available on the LADCO web site: http://64.27.125.175/reports/ladco/Air_Toxics_May_2003/Airtox_may03.htm.

The draft report is also available on the LADCO web site: <http://64.27.125.175/toxics.html>. Comments on the draft report are requested by October 1, 2003. Comments can be provided via the following link: <http://www.sdas.battelle.org/ladco/postcomment.asp>. In response to the comments, a final report will be prepared and issued by the end of October. The final report will be available on a CD, along with the final pilot city data base. A limited number of paper copies will be available upon request from LADCO.

Air Toxics Monitoring Concept Paper

The “Air Toxics Monitoring Concept Paper”, which was issued by USEPA in February 2000, addressed the role of ambient measurement data as one key element of the full air toxics assessment process. The Concept Paper identified three primary

objectives for the national air toxics mentoring program:

- characterize ambient concentrations and deposition in representative monitoring areas,
- provide data to support and evaluate dispersion and deposition models, and
- establish trends and evaluate the effectiveness of HAP reduction strategies.

USEPA is planning to revise the Concept Paper to reflect changes in the program since its inception. Now called the "Air Toxics Monitoring Strategy Paper", it will include a history of the program, summaries of current air toxics monitoring activities, review of pilot data analysis, and network design recommendations. A draft will be sent to the air toxics monitoring community at the end of October for review and input.

Next Phase of Data Analysis

On August 25, 2003, Sonoma Technology, Inc. was hired by LADCO to conduct the next phase of air toxics data analysis. The objectives for this study are as follows:

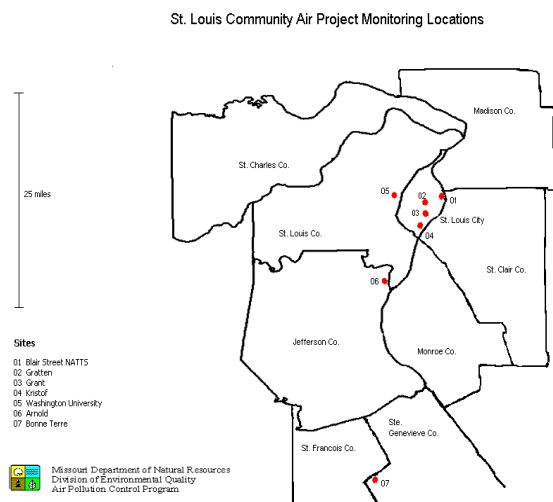
- Prepare a database with all existing air toxics data, including the historical (archive) and pilot city data.
- Provide a comprehensive "look" at the existing air toxics data. This "look" should provide both a broad national assessment of air toxics data, and a detailed local examination in a few select areas. These analyses will go beyond the initial studies by Battelle.
- Present a clear message to policy makers about air toxics concentrations across the country from both national-level and local community-level perspectives. To ensure that the study is policy-relevant, a list of policy questions is being prepared up-front.
- Provide guidance and tools to enable state and local agencies collecting air toxics data to look at and use their own data.
- Support USEPA's new air toxics web site.
- Perform limited modeling analyses, including model-to-monitor comparisons.

The project workplan is under development and will be completed once the list of policy questions is finalized. The tentative project schedule is to have draft results available by spring 2004 for presentation at the next air toxics data analysis workshop and a final project report is planned mid-2004.

St. Louis Air Toxics Monitoring Program

As the national air toxics monitoring network is being established, state and local agencies continue to operate their own air toxics monitoring programs. The monitoring conducted in St. Louis, Missouri is discussed here. (Other state/local programs will be discussed in future editions of the newsletter.)

Ambient air toxics monitoring in the St. Louis area has been focused during the last two years on the Community Air Project (CAP). This was a community-based effort to identify and reduce air pollutants in St. Louis urban area in order to improve public health. As part of this effort, the St. Louis CAP identified and prioritized toxic air pollutants in St. Louis and set human health-based cancer and non-cancer benchmarks. Measurements were made for about 250 analytes at three sites in an initial study area in south St. Louis on a one-in-six day schedule for one year (see Sites 02, 03, and 04 in the map below). This included sampling of volatile organic compounds, semi-volatiles, PM_{2.5} metals, and carbonyls. (Dioxin sampling was also conducted for one month.) Comparisons were made of ambient concentrations for 113 analytes (104 HAPs) to the respective human health-based benchmarks.



Map of Monitoring Sites in St. Louis, Missouri

Chemicals found to be of concern, with annual average concentrations greater than the respective human health-based cancer benchmarks, were formaldehyde, acetaldehyde, chromium compounds, arsenic compounds, and benzene. Only formaldehyde had an annual average concentration greater than its human health-based non-cancer benchmark. The community is subsequently working to develop air pollutant-specific strategies to improve air quality.

The monitoring network has been revised for a second year of sampling to better determine spatial and temporal variation of pollutants. This includes another area of St. Louis (a NATTS at Blair St), a continuous monitoring site at Washington University in St. Louis County, and a rural site 25 miles south of St. Louis City (Bonne Terre). Concurrent analysis of PM2.5 speciation sampling data at the Arnold site is also being conducted.

Future monitoring will include continuing the Blair St. NATTS and continuous sampling of volatiles. Sampling of metals, particularly chromium and arsenic, will help determine more fully the extent to which they are a concern, and will, hopefully, shed more light on what local sources may be in the area.

Thanks to Terry Rowles, Missouri DNR for this article

For information on national air toxics monitoring, please contact Sharon Nizich, USEPA, OAQPS, nizich.sharon@epa.gov, 919-541-2825. For information on the data analysis projects, please contact Michael Koerber, LADCO, koerber@ladco.org, 847-296-2181. This newsletter is issued on a regular (quarterly) basis to provide status reports on air toxics monitoring activities.