

AIR TOXICS MONITORING NEWSLETTER

A PUBLICATION OF THE STAPPA/ALAPCO/USEPA AIR TOXICS MONITORING STEERING COMMITTEE

October 2002

The STAPPA/ALAPCO – USEPA Air Toxics Monitoring Steering Committee was established in 1999 for the purpose of overseeing the development of 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 Steering Committee 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 FY03 Funds

A total of \$9.5M is available in FY03 for air toxics monitoring: \$6.5M from the redirection of Section 105 money from implementation of National Ambient Air Quality Standards, and \$3M in Section 103 money from USEPA. On June 12, 2002, USEPA issued guidance on the \$6.5 million. (This money will be allocated on a pro-rata basis within each Region.) Suggested activities for the use of these funds include:

- (1) community scale air toxics monitoring (both ambient and deposition monitoring)
- (2) characterization of diesel particulate levels
- (3) application of alternative continuous methods
- (4) meteorological monitoring
- (5) ambient monitoring methodology
- (6) data archiving
- (7) adherence to USEPA ambient monitoring guidance
- (8) strengthening of an area's quality assurance program.

The Steering Committee is preparing guidance for the allocation of the \$3 million. A straw proposal for the allocation was distributed by STAPPA/ALAPCO to the Monitoring Committee on September 17, 2002, for review and comment. The proposal calls for:

\$1.04 M for continuation of the initial 13-site trends network

\$0.82 M for establishment of 8 new trends sites (4 rural sites -- one each in EPA Regions 1/2, 5, 6, and 9/10 -- and 4 urban sites -- one each in EPA Regions 2, 9, 5, and 4)

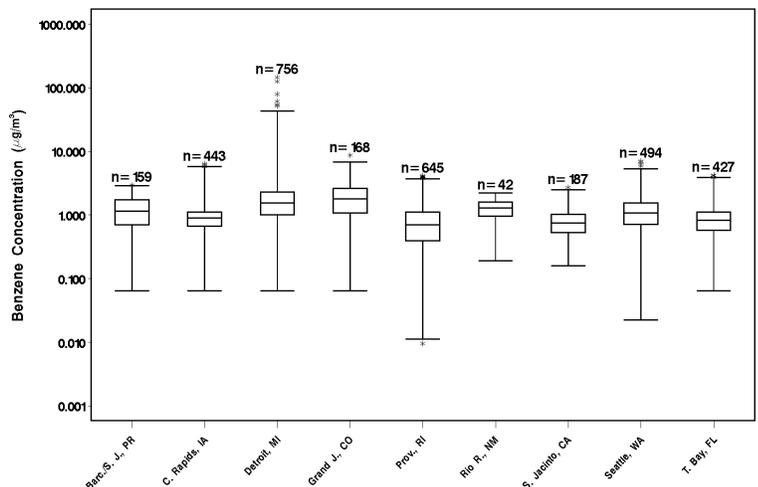
About \$1.1 M for other monitoring related activities, such as increased sampling at the 21 trends sites (e.g., other pollutants, more frequent sampling, and other monitoring technologies); special projects to address important air toxics issues (e.g., diesel particulates); a model evaluation study (using either data from the pilot city program or a new field program); and data assessments.

The Steering Committee will meet on November 6 to discuss the straw proposal and any state/local agency comments. Final guidance will be available later this year.

Analysis of Pilot City Data

On May 23, 2002, LADCO extended their contract with Battelle Memorial Institute and Sonoma Technology, Inc. to analyze the new pilot city data.

Battelle has received complete data for seven areas, with only some metals data needed for two other areas. (Note, the Keeney Knob, WV sampling got started late and may not be available in time for use in this data analysis study.) A number of data management and laboratory issues have been identified, requiring individual follow-up by Battelle. Draft datasets are being prepared for preliminary data analyses, the results of which will be presented at the November 6 Steering Committee meeting. As an example of the data summaries being prepared, the figure below shows the variability of benzene concentrations within and between cities.



Pilot City Data: Benzene Concentrations

A draft written report is expected in early 2003, to be followed by a presentation of updated results at a national workshop in spring 2003 and a final written report later in 2003.

Status of Air Toxics Monitoring Work

A number of state and local agency air toxics monitoring projects were initiated using grant funds from FY01 and FY02. The status of some of these projects will be reported here and in future editions of the Newsletter.

Regional Networks: Initial regional networks were established in Regions III and V following the same protocols as in the pilot city program. The Region III network is called "The Cooperative Air Toxic Monitoring Project" and includes sites in Delaware (3), Philadelphia (3), Pennsylvania (1), Allegheny County (1), Maryland (2), Washington, DC (1), Virginia (3), and West Virginia (3). The Region V network includes sites in IL (2), IN (1), MI (1), OH (1), and WI (1). The Region V monitoring sites are located in urban areas, downwind of the areas of greatest emissions. To help determine the comparability of data generated by participating state laboratories, Wisconsin is coordinating an inter-lab variability study.

Mobile Platforms: NC established a mobile sampling platform for air toxics. The mobile platform provides total gaseous mercury with a continuous monitor and speciation of elemental and reactive gaseous mercury with an automated front-end annular denuder. Currently, the platform is located in Charlotte, because this area was predicted by USEPA's NATA to include atmospheric mercury levels in the top 5% of national county median values. In combination with continuous data provided by a fixed-site urban monitoring location, the mobile monitoring platform is being used to contribute to a greater understanding of spatial variability and directional relationships between elevated mercury readings, point source releases, and meteorological conditions. During the study, the mobile platform will be located at three different sites. This combination will provide a clearer understanding of the influence of a large urban center on regional atmospheric mercury trends. The fixed site became operational in February 2002 and the mobile platform was deployed in September 2002.

Local Projects: St. Louis has a Community Air Project that has been ongoing for several years. The site will be part of the national network and, thus, will yield valuable information about concentrations and subsequent risk and exposure. The project has a large emphasis on characterizing formaldehyde and

will yield much data that will be shared with the larger monitoring community.

Portland Millenium and Seattle Beacon Hill neighborhoods will continue with toxics monitoring. Although Portland is not officially in the national trends network, it is anticipated that they will play a role and all data collection will adhere to national network protocols.

To characterize population exposure to air toxics in Mobile County, Alabama, the Mobile County Task Force implemented a county-wide ambient air quality monitoring study at five locations within the county for a period of one year. These locations represent a background site to measure regional air pollution levels, a population density site to measure general population exposure in an area triangulated by interstate highways, a maximum population exposure site, a stationary source evaluation site located in the northern part of the county, and a stationary source evaluation site in the southwestern part of the county. The monitoring sites were selected through an extensive process of site visits and evaluations, and began collecting data in August 2002. Monitoring parameters include meteorology, carbon monoxide, volatile organic compounds, dioxins/furans, metals, carbonyls, and benzo(a)pyrene. Data generated from the study are expected to provide sufficient information to validate air dispersion modeling. The model selected for use in the study is the Assessment System for Population Exposure Nationwide (ASPEN). Air dispersion modeling will be performed to provide a comprehensive characterization of air quality for all Mobile County. A key component of the study is the development of community-based expectations relating to air quality in Mobile County. A subcommittee has been formed and meets regularly. This subcommittee is comprised of a full range of community stakeholders and will integrate environmental, economic, and social objectives into the development of a set of expectations, which can be used to develop any non-regulatory driven improvements to air quality in Mobile County.

For information on the national monitoring pilot project and national network, please contact Sharon Nizich, USEPA, OAQPS, nizich.sharon@epa.gov, 919-541-2825. For information on the data analysis project, 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.