Air Toxics Ambient Monitoring

National Air Monitoring Conference
Air Toxics Session I
November 4, 2009

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Agenda

• Air Toxics Overview
• Monitoring Program History
• Program Structure
• Session Overview
Air Toxics Overview

• Air Toxics (a.k.a. Hazardous Air Pollutants or HAPs)
  – Adverse health effects
  – Pathway
  – Occurrence

• Ambient Air Monitoring
Program History

• Pre-1999

• 1999-2002
  – Compile and assess quality / utility of existing data and sampling and analysis methodology
  – Conduct initial data analyses and ten city pilot study
  – Develop air toxics monitoring strategy

• 2003 to date: implement air toxics monitoring strategy
  – Establish the trends network and associated program support, community-scale monitoring projects, continued discretionary monitoring
Program Structure

- **NATTS**
  - 27 sites for trends and accountability
  - Measure long term program progress

- **Community-Scale Monitoring Projects**
  - Competitively awarded
  - Limited duration
  - Specific local issues

- **Schools Monitoring**
  - Administrator initiative
  - Future scope / duration TBD

- **Discretionary Monitoring**
  - S/L/T agency discretion
  - Scope / duration vary
  - Specific local issues
National Air Toxics Trends Station (NATTS) Network

- Long term operation
- Principle objective: assess trends, program accountability
- Currently 27 sites (20 urban, 7 rural) across the U.S.
  - Thirteen sites established in 2003, ten sites in 2004, and two sites each in 2007 and 2008
  - Additional sites not currently planned
- Pollutants monitored: 104 HAPs (VOCs, carbonyls, PM10 metals, hexavalent chromium, PAHs/SVOCs)
- Established protocols (http://www.epa.gov/ttn/amtic/airtox.html)
NATTS Network Assessment: 2010

- Planning team to define scope / objectives
  - Total number and urban vs. rural, locations, etc.
  - Data quality / performance
    - Corrections / adjustments?
- Review all available information
  - Data in AQS
  - QA
- Target completion by end of 2010
Community-Scale Air Toxics Ambient Monitoring

• Principle objective - assist state, local and tribal communities in
  – Identifying and profiling air toxics sources
  – Characterizing the degree and extent of local-scale air toxics problems
• Competitively awarded grants / cooperative agreements
  – Grant competition centrally managed (Program Office)
  – Awards and post-award oversight by Regional Offices
  – Intended to be 2-3 years duration
• Three competitions to date: 03/04, 05/06, 07/08
• ~ $18M awarded to 53 projects
• Over a third of the projects have been completed
  – http://www.epa.gov/ttn/amtic/local.html
• Many project completions imminent – most anticipated during the coming year
Session Overview

8:00am – 10:00am

Nat’l Air Toxics Ambient Monitoring Pgm Overview
  Michael Jones, EPA/OAQPS

Ambient Air Acrolein Measurement via TO-15
  David Shelow, EPA/OAQPS

Passive Canister Sampling Challenges
  Dave Dayton, ERG

National Air Toxics Trends Station (NATTS) Quality Assurance Three-Year Assessment, 2005-2007
  Dennis Mikel, EPA/OAQPS

  Regi Commen, ERG

10:30am – 12:00pm

Method Detection Limit (MDL) Development and Standardization
  Julie Swift, ERG

USEPA Region 5 Interlab Comparability Pgm
  Motria Caudill, EPA Region 5

NYSDEC Experience with the Synspec BTEX Instrument
  Paul Sierzenga, NYS DEC

City of Houston’s Mobile Ambient Air Monitoring Lab
  James Rhubottom, Jr., City of Houston DHHS