Air Toxics

Hazardous air pollutants (HAPs), commonly referred to as air toxics, are pollutants known to cause or are suspected of causing cancer or other serious human health effects or ecosystem damage. Some air toxics are released from natural sources such as volcanic eruptions and forest fires. Most air toxics originate from mobile sources (cars, trucks, buses) and stationary sources (factories, refineries, power plants). Examples of some of the 188 toxic air pollutants include heavy metals such as mercury and chromium; benzene, found in gasoline; perchloroethylene, emitted from some dry cleaning facilities; and methylene chloride, used as a solvent and paint stripper by a number of industries.

DEP performs ambient air monitoring of several air toxics at a Photochemical Assessment Monitoring Station (PAMS) site in Arendtsville, Adams County. This site studies the transport of ozone precursors from urban to rural areas. The volatile organic compounds (VOCs) routinely measured include several VOC species considered to be air toxics, such as benzene, hexane, toluene, and styrene. This station was not sited to represent the highest concentrations over a wide area, but it can be useful to study trends in ambient air toxics transported over long distances. DEP operates the Arendtsville site from June to October. Figure 2-33 on the following page displays the average concentration trend of selected air toxics from 1996 until 2004. Units in Figure 2-33 are expressed in parts per billion Carbon (ppbC).

The 2004 data from the Arendtsville site has been summarized in Appendix A, Table A-23. There are no federal or state air quality standards for the monitored compounds.

DEP performs air toxics monitoring for mercury at a site near Lancaster. This site is designed to comply with EPA's expanded national toxic monitoring program. Data supplied from this monitoring site, and the expanded national network, will assist in rulemaking and model validation. EPA will use these computer models to estimate lifetime chemical exposures and subsequent health-effect risks.

Data from the Lancaster site for 2004 has been summarized in Appendix A, Table A-24. There are no federal or state ambient air quality standards for mercury.

For more information on PA's Air Toxics monitoring, visit us through the Department's website at http://www.depweb.state.pa.us (DEP Keyword: toxics).

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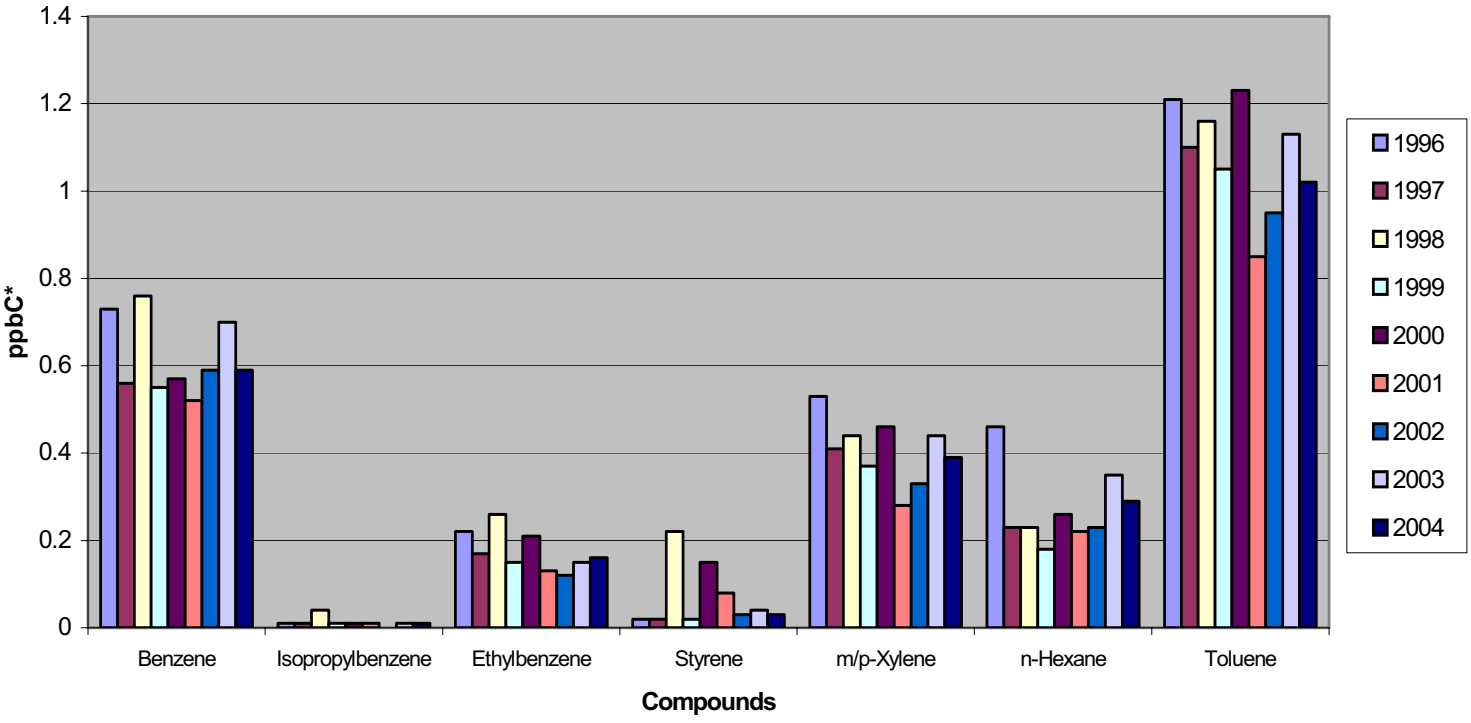
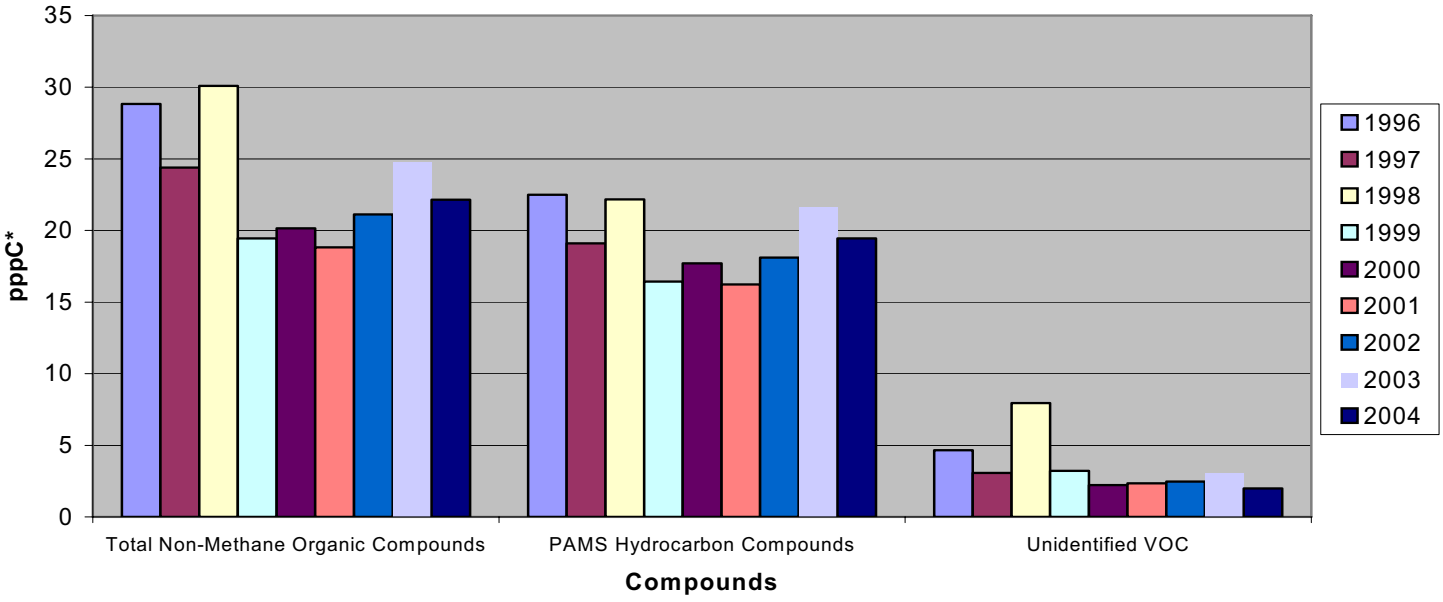
Figure 2-33. Air Toxics Trends at the Arendtsville Monitoring Site (1996-2004)
Annual Means



*** ppbC = parts per Billion Carbon**



*ppbC = parts per Billion Carbon

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