Commonwealth of Pennsylvania Department of Environmental Protection Proposed Ambient Air Monitoring Network Plan – 2013 -2014

June 2013

Thomas Corbett, Governor
Commonwealth of Pennsylvania

Hon. E. Christopher Abruzzo, Acting Secretary
Department of Environmental Protection

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Acronyms

APCA	Air Pollution Control Act
AQS	Air Quality System
BAM	Beta Attenuation Monitor
CAA	Clean Air Act
CBSA	Core based statistical area
CFR	Code of Federal Regulations
CSA	Combined Statistical Area
CO	Carbon Monoxide
COPAMS	Commonwealth of Pennsylvania's Air Monitoring System
PA DEP	Pennsylvania Department of Environmental Protection
EPA	U. S. Environmental Protection Agency
FDMS	Filter Dynamics Measurement System
FEM	Federal Equivalent Method
FID	Flame Ionization Detector
FRM	Federal Reference Method
GC	Gas Chromatograph
IR	Infrared (radiation)
H_2S	Hydrogen Sulfide
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multipollutant monitoring stations
NO	The gaseous pollutant Nitrogen Oxide
NO_2	The gaseous pollutant Nitrogen Dioxide
NOx	Oxides of Nitrogen
O_3	The gaseous pollutant Ozone
PAMS	Photochemical Assessment Monitoring Station
Pb	Lead
$PM_{2.5}$	Particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM_{10}	Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
$PM_{10-2.5}$	Particulate matter with an aerodynamic diameter between 10 and 2.5 micrometers
QA	Quality Assurance
SIP	State Implementation Plan
SLAMS	State or Local Air Monitoring Stations
SO_2	The gaseous pollutant Sulfur Dioxide
SPM	Special Purpose Monitor
STN	$PM_{2.5}$ Speciation Trends Network
TSP	Total Suspended Particulate
TEOM	Tapered Element Oscillating Microbalance
UV	Ultraviolet
VOC	Volatile Organic Compounds

Introduction

In 1970, Congress enacted the Clean Air Act (CAA) authorizing the U.S. Environmental Protection Agency (EPA) to establish National Ambient Air Quality Standards (NAAQS) for pollutants shown to threaten human health and welfare. Primary NAAQS were promulgated according to criteria designed to protect public health, including an adequate margin of safety to protect sensitive populations such as children and asthmatics. The secondary NAAQS were promulgated according to criteria designed to protect public welfare (decreased visibility, damage to crops, vegetation, and buildings, etc.).

The EPA has promulgated NAAQS for the following pollutants: ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than 10 microns (PM_{10}), particulate matter less than 2.5 microns ($PM_{2.5}$), and lead (Pb). These are commonly called the "criteria" pollutants. When air quality in a geographical area, meets the NAAQS, EPA designates the area as "attainment" in accordance with Section 107 of the CAA, 42 U.S.C. section 7407. When an area does not meet the NAAQS, the area is designated by EPA as a "nonattainment" area. Certain areas are designated "unclassifiable" if sufficient information is not available to determine if the area should be designated attainment or nonattainment.

Table 1 on the following page lists all of the NAAQS for the criteria pollutants and is available at http://www.epa.gov/air/criteria.html.

Table 1. National Ambient Air Quality Standards.

Pollutant [final rule cite]		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead [73 FR 66964, Nov 12, 2008]		primary and secondary	Rolling 3 month average	0.15 µg/m3 (1)	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]		primary	1-hour	100 ppb	98th percentile, averaged over 3 years
		primary and secondary	Annual	53 ppb (2)	Annual Mean
Ozone [73 FR 16436, Mar 27, 2008]		primary and secondary	8-hour	0.075 ppm (3)	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [78 FR 3086, Jan 15, 2013	$PM_{2.5}$	primary	Annual	12 µg/m^3	annual mean, averaged over 3 years
		secondary	Annual	15 µg/m^3	annual mean, averaged over 3 years
		primary and secondary	24-hour	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010]		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
[38 FR 25678, Sept 14, 1973]		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO_2 standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard ("anti-backsliding"). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO2 standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

Requirements for Ambient Air Monitoring Network Descriptions

On October 17, 2006, EPA promulgated a final rule entitled "Revisions to Ambient Air Monitoring Regulations" for criteria pollutants (71 FR 61236), EPA stated in the Preamble that "[t]he purpose of the amendments is to enhance ambient air quality monitoring to better serve current and future air quality." The October 2006 rule also includes provisions concerning state and local agency ambient air monitoring networks. In addition to establishing limited air quality monitoring requirements for thoracic coarse particles in the size range of $PM_{10-2.5}$, EPA also modified the general monitoring network work design requirements for ambient air monitoring networks operated and maintained by state and local agencies. The minimum requirements for the number of monitors for $PM_{2.5}$ and ozone monitoring networks were also amended. Pursuant to 40 CFR sections 58.10(a) and 58.10(b), network plans must include the following for existing and proposed monitoring sites:

- A statement of purpose for each monitor
- Evidence that siting and operation of each monitor meets the requirements of 40 CFR Part 58, Appendices A, C, D, and E where applicable
- The Air Quality System (AQS) site identification number
- The location, including street address and geographical coordinates
- The sampling and analysis method(s) for each measured parameter
- The operating schedules for each monitor
- Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal
- The monitoring objective and spatial scale of representativeness for each monitor
- The identification of any sites that are suitable and sites that are not suitable for comparison against the annual $PM_{2.5}$ NAAQS, as described in Part 58.30
- The Metropolitan Statistical Area (MSA), Core Based Statistical Area (CBSA), Combined Statistical Area (CSA), or other area represented by the monitor

Commonwealth of Pennsylvania Air Monitoring Network

Program History

The Pennsylvania Air Pollution Control Act (APCA), enacted originally on January 8, 1960, 35 P.S. Section 4001 et seq., established the framework for the Commonwealth's air pollution control program. The Declaration of Policy set forth in Section 2 of the APCA, 35 P.S. Section 4002, provides:

> *It is hereby declared to be the policy of the Commonwealth of Pennsylvania to protect the air resources of the Commonwealth to the degree necessary for the (i) protection of public health, safety and well-being of its citizens; (ii) prevention of injury to plant and animal life and to property; (iii) protection of the comfort and convenience of the public and the protection of the recreational resources of the Commonwealth; (iv) development, attraction and expansion of industry, commerce and agriculture; and (v) implementation of the provisions of the Clean Air Act in the Commonwealth.*

Section 4 of the APCA empowers the Department of Environmental Protection (formerly the Department of Environmental Resources and hereafter referred to as the PA DEP or Department) to implement the provisions of the Clean Air Act in the Commonwealth. 35 P.S. Section 4004(1).

The Air Pollution Control Act of 1955 was the first federal legislation involving air pollution. This Act provided funds for federal research in air pollution. The Clean Air Act of 1963 was the first federal legislation regarding air pollution *control*. It established a federal program within the U.S. Public Health Service and authorized research into techniques for monitoring and controlling air pollution. In 1967, the Air Quality Act was enacted in order to expand federal government activities. In accordance with this law, enforcement proceedings were initiated in areas subject to interstate air pollution transport. As part of these proceedings, the federal government for the first time conducted extensive ambient monitoring studies and stationary source inspections.[1]

The federal Clean Air Act Amendments of 1970 included provisions which established criteria pollutants, authorized EPA to set national ambient air quality standards (NAAQS), and required states to develop State Implementation Plans (SIPs), which include enforceable requirements and control measures to attain and maintain the standards.

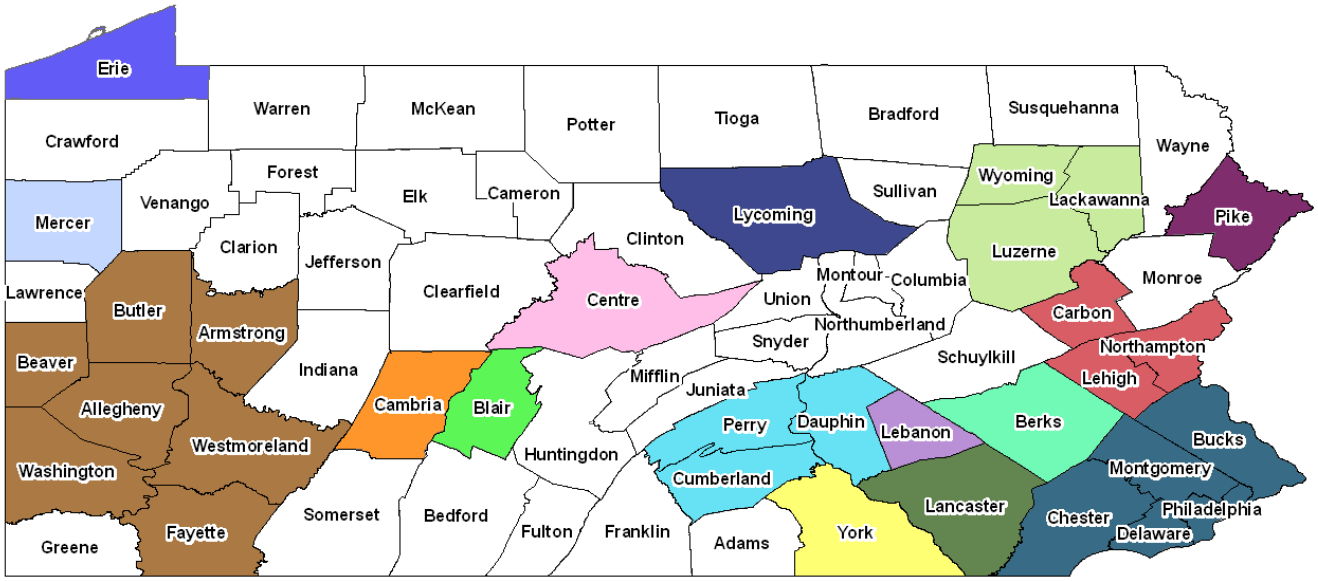
When established in 1971, the Department implemented air pollution control programs to protect the air resources of the Commonwealth that, with a great deal of success, have largely addressed major public health and welfare air quality concerns. Significant changes have occurred over the years with the program, notably with the passage of the Clean Air Act Amendments in 1990 as well as the adoption and implementation of $PM_{2.5}$ NAAQS requirements in 1997. Currently, PA DEP has an extensive monitoring program that not only monitors for criteria pollutants, but also for air toxics and volatile organic compounds (VOCs).

[1] http://www.epa.gov/air/caa/caa_history.html

Ambient Monitoring Network Overview

The Department's monitoring strategy requires the installation of monitors in areas having high population density and/or high levels of contaminants, based on EPA guidance and population information from the U.S. Office of Management and Budget (OMB). The OMB defines urbanized areas of concentrated population of 50,000 or greater as Metropolitan Statistical Areas (MSA). The Commonwealth of Pennsylvania encompasses sixteen MSAs, either wholly or in part. Figure 2-1 displays the geographical boundaries of MSA regions and population estimates for 2010 available at http://www.census.gov. The Code of Federal Regulations (CFR) sets forth minimum monitoring requirements based at least in part on population statistics for ozone, sulfur dioxide, nitrogen dioxide and particulate matter (PM) monitoring networks. PA DEP conducts air monitoring surveillance in both MSA and non-MSA regions.

Figure 2-1. Map of Metropolitan Statistical Areas (MSA) in Pennsylvania.

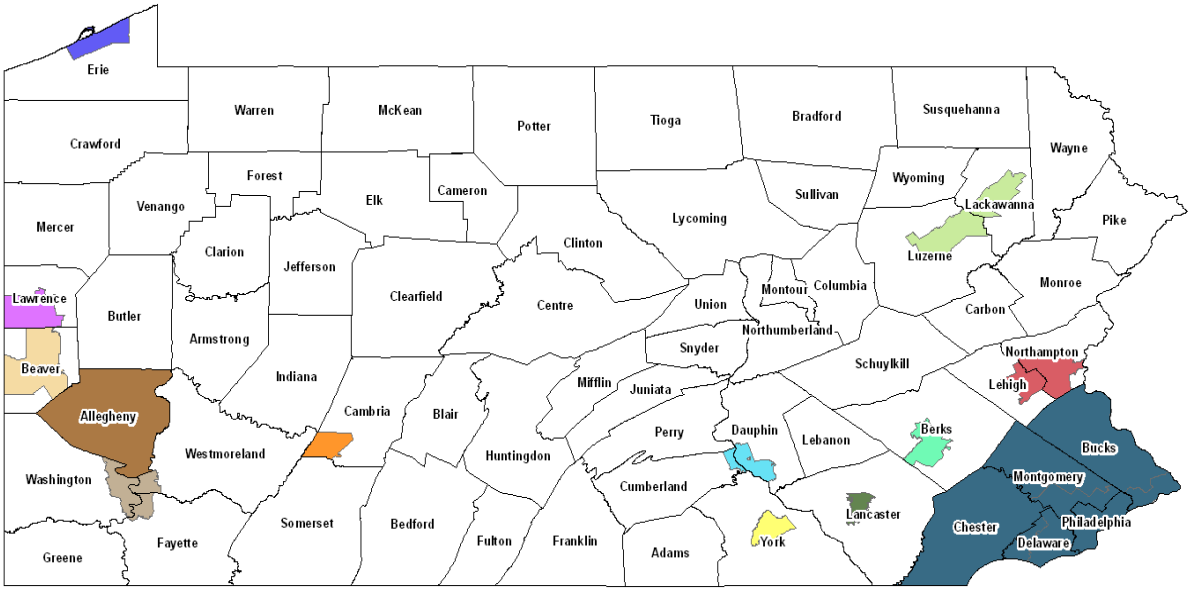


LEGEND:

	Metropolitan Statistical Area	Population		Metropolitan Statistical Area	Population
	Allentown-Bethlehem-Easton, PA-NJ	824,916		Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	5,992,414
	Altoona, PA	127,099		Pittsburgh, PA	2,359,746
	Erie, PA	280,985		Reading, PA	412,778
	Harrisburg-Carlisle, PA	552,911		Scranton-Wilkes-Barre, PA	563,223
	Johnstown, PA	143,728		State College, PA	154,722
	Lancaster, PA	523,594		Williamsport, PA	116,747
	Lebanon, PA	134,311		York-Hanover, PA	436,770
	New York-Northern New Jersey-Long Island, NY-NJ-PA	19,015,900		Youngstown-Warren-Boardman, OH-PA	562,739

In addition to MSA monitoring, over half of PA DEP air monitoring stations are located in the "air basins" of the Commonwealth. Air basins as defined in 25 Pa. Code § 121.1 consist of thirteen geographical areas. Figure 2-2 displays the geographical boundaries of these areas. PA DEP conducts air monitoring surveillance in both air basin and non-air basin regions.

Figure 2-2. Map of Pennsylvania Air Basins.



LEGEND:

	Air Basin
	Allegheny County
	Allentown, Bethlehem, Easton
	Erie
	Harrisburg
	Johnstown
	Lancaster
	Lower Beaver Valley
	Monongahela Valley
	Reading
	Scranton, Wilkes-Barre
	Southeast Pennsylvania
	Upper Beaver Valley
	York

PA DEP also maintains a cooperative agreement with Pennsylvania State University's (PSU) Department of Plant Pathology for ozone monitoring in three remote areas of the state: Centre County (near State College), Clearfield County (near Moshannon), and Tioga County (near Gleason). PSU uses ozone data collected from this cooperative monitoring effort to determine detrimental effects to Pennsylvania's forests and crops, and to assess ozone transport in rural Pennsylvania.

Description of PA DEP Ambient Air Monitoring Network

PA DEP operates the Commonwealth of Pennsylvania Air Monitoring System (COPAMS) as its air monitoring network for criteria pollutants. The COPAMS network consists of 64 stations, located in 40 out of 67 Pennsylvania counties, and encompasses both continuous and discrete methods of pollutant sampling. The continuous portion of the COPAMS network utilizes a totally automatic, microprocessor-controlled system of remote stations throughout the Commonwealth. Continuous methods employ specialized instruments designed to continuously sample and analyze ambient air *in situ*. The output of these devices is hourly pollutant concentrations. These concentrations are the raw data used to calculate the various pollutant averages needed for NAAQS comparisons. A centralized computer system operated by the Bureau of Air Quality collects the raw data on an hourly basis, enabling real-time monitoring. PA DEP utilizes continuous methods for the following pollutants: ozone, sulfur dioxide, nitrogen dioxide, oxides of nitrogen, carbon monoxide, hydrogen sulfide, $PM_{2.5}$, and PM_{10}. Various meteorological data from many of the COPAMS stations are measured using continuous methods as well, including wind speed, wind direction (vector averaged and sigma theta), ambient temperature, and solar radiation.

The non-continuous portion of the COPAMS network utilizes discrete sampling methods, with analysis of the sample performed off-site at the PA DEP Bureau of Laboratories. A discrete method is generally defined as a "manual" method of sampling, most commonly using an air filter to trap air pollutants from ambient air on a filter substrate for a defined or "discrete" period of time. The filter is then removed from the collection site and analyzed by the PA DEP Bureau of Laboratories in Harrisburg, PA. The discrete portion of the COPAMS network includes analysis methods for particulate matter 2.5 microns or less in size ($PM_{2.5}$), particulate matter 10 microns or less in size (PM_{10}), total suspended particulate (TSP), lead, sulfates, and nitrates. In addition, PA DEP conducts $PM_{2.5}$ speciation monitoring at selected sites. Speciation analysis provides a breakdown of $PM_{2.5}$ constituent compounds. Speciation analysis is performed at the Research Triangle Institute (RTI) laboratory in Research Triangle Park, NC.

The Air Toxics component of the PA DEP Air Monitoring Network utilizes various continuous and discrete sampling methods to monitor for selected toxic air pollutants, including heavy metals such as mercury and chromium; and VOCs such as benzene, trichloroethylene, and methylene chloride. Although there are no national concentration standards for these pollutants, PA DEP uses approved EPA analytical methods to determine ambient concentrations. PA DEP conducts air toxics monitoring at 18 stations, located in 14 Pennsylvania counties.

Description of Local Networks

Allegheny County Health Department

The Allegheny County Health Department (ACHD) operates a network of twenty ambient air monitoring stations, including one multi-pollutant NCore site, throughout Allegheny County. In addition to criteria pollutant monitoring, ACHD also conducts monitoring for air toxics and chemical speciation of $PM_{2.5}$ at selected sites. PA DEP maintains one Special Purpose Monitoring (SPM) site in Allegheny County at the Carnegie Science Center in Pittsburgh, as part of an air quality exhibit.

Philadelphia Air Management Services

The City of Philadelphia Health Department's Air Management Services (AMS) operates a network of eleven air monitoring sites, including one multi-pollutant NCore site, located throughout Philadelphia

County. In addition to criteria pollutant monitoring, AMS also conducts monitoring for air toxics and chemical speciation of $PM_{2.5}$ at selected sites.

This document does not provide detailed descriptions of the monitoring networks operated by the local air pollution control programs in Philadelphia and Allegheny Counties. Detailed descriptions of local networks will be submitted to EPA by the Allegheny County Health Department and the City of Philadelphia Department of Public Health Air Management Services, respectively. Contact information for ACHD and AMS is located on page 25 of this plan.

Description of Appendix A

The 2012 Pennsylvania Air Monitoring Network consists of the sites and monitors listed in Appendix A, "Monitoring Sites, Equipment, Maps, and Addresses." This appendix details site information, pollutants monitored at each site, and detailed maps of sampling sites, organized into MSA and non-MSA regions.

Description of Appendix B

Appendix B, relating to the "Pennsylvania Monitoring Network Description," provides a detailed description of the existing monitoring network. This appendix includes information related to the location of the site, monitoring parameters at the site, and details about the monitors themselves in order to meet the requirements of 40 CFR Part 58.10 (a) and (b).

The first block, the Site Information Block, contains information identifying the site by both address and latitude and longitude. This block also contains the Air Quality System (AQS) site identification and information regarding inclusion of the monitoring site in any Metropolitan Statistical Area (MSA).

Following the Site Information Block, there is a series of one or more Sensor Information Block(s), containing information for each monitor at the site. Each sensor block contains the following information:

- Sensor Type – The name of the pollutant measured by the sampler.
- Sensor Network Designation – The name of the designated network
    - NCore – National Core multipollutant Monitoring Station
    - PAMS – Photochemical Assessment Monitoring Station
    - SLAMS – State or Local Ambient Monitoring Station
    - STN – $PM_{2.5}$ Speciation Trends Network
    - SPM – Special Purpose Monitor
- Sensor Purpose Description – The purpose of the sensor
    - Population Exposure, such as the Air Quality Index
    - Regulatory compliance with Federal or State regulation
    - Research/Scientific Monitoring
    - Specific location characterization
- Sample Frequency – Specifies how often a sample is taken

- Continuous - operates 24/7; applies predominately to gaseous analyzers, although some particulate samplers (TEOM/FDMS and BAMs) operate continuously.
- Daily – a discrete sample is taken every day; applies to manual method particulate samplers.
- Every Third Day - Manual method particulate samplers that run every third day.
- Every Sixth Day – Manual method particulate samplers that run every sixth day.

- 40 CFR Part 58 Appendix A QA Assessment – A "**YES**" indicates the sensor is maintained in accordance with the Quality Assurance (QA) requirements specified in 40 CFR Part 58 Appendix A.

- 40 CFR Part 58 Appendix C Monitoring Classification – Each ambient air monitor is classified using the EPA "List of Designated Reference and Equivalent Methods" (see EPA Transfer Technology Network web page – link below).
  - Reference or Federal Reference Method (FRM) – a method of sampling that is specified in CFR Part 50.
  - Equivalent or Federal Equivalent Method (FEM) – a method that is designated as equivalent to the reference method, in accordance with 40 CFR Part 53.
  - Automated – after sampling, the analysis results are available immediately.
  - Manual –after sampling, a separate analysis at a laboratory is necessary.

  In Appendix B, the previously mentioned descriptions are combined into the following groupings:
  - Automated Reference Method,
  - Manual Reference Method,
  - Automated Equivalent Method,
  - Manual Equivalent Method, or
  - NONE – appears where there is no reference or equivalent method.

- 40 CFR Part 58 Appendix C Monitoring Method – Each ambient air monitor is classified by a specific "method number." These numbers can be found in the EPA "List of Designated Reference and Equivalent Methods" (see EPA Transfer Technology Network Web page at http://www.epa.gov/ttn/amtic/files/ambient/criteria/reference-equivalent-methods-list.pdf).

- Monitoring Method Description – Each individual ambient air monitor type has a specific method of pollutant detection. Common examples are:
  - Ozone monitors – Ultraviolet (UV) Absorption
  - SO_2 – UV Fluorescence
  - CO - Non-dispersive Infrared (IR)
  - NO_2 or NOx – Chemiluminescence
  - Lead-Inductively Coupled Argon Plasma–Optical Emissions Spectrometry
  - $PM_{2.5}$, PM_{10} – Gravimetric (or gravimetric by TEOM (Tapered Element Oscillating Microbalance), or BAM (Beta Attenuation Mass)
  - PAMS – Auto GC (Gas Chromatograph), Dual FID (Flame Ionization Detector)

- 40 CFR Part 58 Appendix D Design Criteria – Appendix D requires a certain number of monitoring samplers per geographic area. A "**YES**" indicates that the number of monitors in that particular area meets or exceeds the requirement of 40 CFR Part 58 Appendix D.

- 40 CFR Part 58 Appendix D Scale – The specific "spatial scales of representation" describes the physical dimensions of the air parcel around the monitoring station throughout which actual pollutant concentrations are reasonably similar.
    - Microscale - Areas ranging from several meters to about 100 meters,
    - Middle scale - Areas ranging from 100 meters to 0.5 kilometers,
    - Neighborhood - 0.5 to 4.0 kilometers, and uniform land use,
    - Urban scale - 4 to 50 kilometers, and
    - Regional - ten to hundreds of kilometers.

- 40 CFR Part 58 Appendix D Objective – Describes the purpose/objective for monitoring at a site.
    - Extreme downwind
    - General/Background concentration
    - Highest concentration
    - Maximum ozone concentration
    - Population exposure
    - Regional transport
    - Source oriented

- 40 CFR Part 58 Appendix E Siting Criteria – Describes certain criteria applicable to ambient air quality sampling probes and monitoring paths, such as distances from trees, obstructions, traffic lanes, etc. A "**YES**" indicates that the sensor at the given site meets or exceeds the requirements of 40 CFR Part 58 Appendix E.

- Start Date – Displays the sampling start date

- Comments – The database contains a comments section for each monitor. Appropriate comments, as necessary, are found in this area.

Description of Appendix C

Appendix C provides information pertaining to the manufacturers, models and analysis methods used in the monitoring network operated and maintained by the Department's Air Quality Monitoring Division.

Changes to Monitoring Sites and Samplers in 2012-2013

Table 2. Summary of Changes to the PA DEP Air Monitoring Network in 2012-2013.

Pollutant Network	Changes
Multiple Pollutants-Harrisburg Site Relocation	• Permanent Harrisburg monitoring station installed. • Ozone $PM_{2.5}$ and $PM_{2.5}$ speciation sampling re-established at permanent site. • PM_{10} sampling continues in Hershey (Dauphin County). • CO and NO_2 monitoring discontinued
Multiple Pollutants-Towanda Site	• Towanda monitoring station installed • Ozone and NO_2 monitoring established at site.
Ozone (O_3)	• Year-round ozone monitoring at all ozone monitoring sites in the network
$PM_{2.5}$	• FRM monitors re-installed at New Garden (Chester County), Freemansburg (Northampton County), Florence (Washington County) and Greensburg (Westmoreland County). • Collocated correlation evaluations continued.
Pb	• All Hi-Q brand monitors in network replaced with Tisch Environmental monitors • Beaver Valley (Beaver County) site relocated 375 meters southeast to Center Township Water Authority property
Air Toxics	• One VOC site relocated from Wilkes-Barre (Luzerne County) to Susquehanna County

Harrisburg Site: PA DEP completed the installation of the new Harrisburg monitoring site in March 2013, following the termination of the property lease for the previous monitoring station in December 2011. The "new" Harrisburg site replaces the temporary site, which was established in January 2012. The new permanent site is located approximately 275 meters from the previous permanent site. EPA has approved the location of the new Harrisburg site and has determined that it is unlikely that the "old" and "new" sites would be impacted differently by sources located in the surrounding area. Therefore, the change in location does not affect the monitoring objective or scale of the pollutants monitored at the station.

Monitoring at the new Harrisburg site consists of ozone, $PM_{2.5}$ and $PM_{2.5}$ speciation samplers, as well as a standard meteorological configuration. The continuous PM_{10} that was relocated to the Hershey (Dauphin County) monitoring station previously will remain at the Hershey site to support PM_{10} monitoring in the region. To conserve on limited manpower resources, CO and NO_2 monitoring was not re-established at the new Harrisburg site. These monitors are not required as part of minimum monitoring requirements set forth in 40 CFR Part 58; in addition, past monitoring data has shown that concentration levels for these pollutants remain substantially and consistently far below the levels of their respective NAAQS, meeting the criteria set forth in 40 CFR § 58.14 for discontinuation of SLAMS monitors. For these reasons, PA DEP has informed EPA of its intent to discontinue monitoring for CO and NO_2 at the Harrisburg site.

Towanda Site: In light of increased natural gas extraction activities in the north-central region of the Commonwealth, PA DEP installed a new ozone and NOx monitoring site near Towanda (Bradford County). The Towanda site is located in an area downwind of substantial Marcellus shale gas extraction drilling sites and gas compression facilities, and because of the local topography (ridge and valley), the Department wants to determine if the two factors combined will have an increasing effect on winter-time ozone levels, a situation that has occurred in western states such as Wyoming. Sampling began in March 2013.

Ozone: Beginning in 2012, PA DEP implemented year-round ozone monitoring at all ozone monitoring sites in the state-wide network. The year-round ozone monitoring program was implemented to obtain background information and to determine if unconventional shale gas activities impact wintertime ozone levels, as has been documented in other shale gas regions such as the Upper Green River Basin in Wyoming.

$PM_{2.5}$: The continuous Beta-Attenuation Mass (BAM) $PM_{2.5}$ sensor was approved as an FEM method in March 2008. However, since the deployment of these sensors into the Department's monitoring network over the past few years, PA DEP has found that the BAM sensors commonly record $PM_{2.5}$ concentration measurements approximately 10% higher than measurements obtained by gravimetric FRM monitors. During several EPA conference calls during 2012, it was noted that several other state agencies across the nation have seen similar results with the correlation between BAM and FRM monitors. PA DEP is continuing to evaluate collocated data from all monitoring sites with both BAM and FRM monitors, and is working with the BAM manufacturer to improve BAM and FRM correlation. In addition, FRM monitors have been re-installed at four sites – New Garden (Chester County), Freemansburg (Northampton County), Florence (Washington County) and Greensburg (Westmoreland County) – which previously maintained BAM samplers only for $PM_{2.5}$ monitoring.

Lead (Pb): PA DEP has completed installation of Tisch brand lead samplers at all sites in the network, replacing Hi-Q lead samplers. As stated in the previous Network Plan, the Hi-Q monitors initially purchased for Pennsylvania's expanded lead monitoring network performed poorly and had a high maintenance requirement. Replacement of the samplers with Tisch brand samplers was done in two phases — the samplers located at higher priority sites were replaced during the first phase, which was completed in February 2012. The second phase of this initiative was completed during the 2012/2013 fiscal year.

PA DEP did not relocate the quality assured collocated lead monitor from Lyons Park to Beaver Valley, as was discussed in the previous year's plan, due to the move no longer being required. Pursuant to 40 CFR Part 58, Appendix A, collocated monitors must be operated at 15% of the lead monitoring sites. The first collocated monitor must be installed at the site measuring the highest Pb concentrations in the network. Currently, PA DEP has the required two quality assured co-located monitors operating in Berks County at the Laureldale North and Lyons Park sites. During 2012, the Laureldale North monitor measured lead concentrations higher than all other monitoring sites in the lead monitoring network, surpassing Beaver Valley. Therefore, the quality assurance requirement in 40 CFR Part 58, Appendix A is met by the existing network design.

Due to contract difficulties with multiple property owners at the current Beaver Valley lead site, the Department has been actively looking into relocating the criteria lead monitor and toxic metals monitor to a new location 375 meters to the southeast. PA DEP personnel met with the new site property

owner, Center Township Water Authority, in February 2013. The Department is expecting to enter into a multi-year license agreement, and complete logistical and installation processes to have both samplers operational by June 30, 2013. EPA was consulted during the initial stages of this move and approval was granted via e-mail notification. Although the Department does not foresee factors between the two sites that would make a difference in the data collected, the Department will attempt to operate both sites concurrently, as long as possible, to provide comparison data between the two sites.

Air Toxics: Following the completion of three short-term screening-level air quality sampling initiatives in 2010, in 2012 the Department commenced a year-long sampling study in Southwestern Pennsylvania (Washington County) to assess the air quality impacts and potential chronic risk and hazard related to exposure to emissions from permanent facilities extracting, transporting and/or processing natural gas obtained using unconventional extraction methods from the Marcellus shale formation. This study, while largely looking at toxic emissions, will also examine ambient concentrations of criteria pollutants through installed continuous and discreet monitors and samplers at a new monitoring station in the study area. In addition to the primary monitoring site monitoring for Toxic VOCs (canister and carbonyl) and criteria pollutants, three smaller sites will collect Toxic VOCs (canister and/or carbonyl) and meteorological data. One of the three smaller sites will also monitor for H_2S. This one-year study will continue through most of 2013 with data analysis and report release likely to take place in late 2013 or early 2014.

After posting of the 2012 Proposed Ambient Air Monitoring Network Plan for public review and comment, numerous comments were received by the Department requesting air monitoring in Wyoming County. The requests mainly cited concern about expanded Marcellus Shale drilling activities in the county in recent years, and the effects on air quality. In order to further gauge potential chronic air toxic exposure effects to citizens living in a Marcellus shale extraction area in the Northeastern region of the Commonwealth, in early 2013 the Department relocated an existing toxic VOC canister sampler located at the Wilkes-Barre COPAMS station to a new site located in Susquehanna County where both active shale gas drilling and start-up/operation of multiple new natural gas compressor stations exist. Sampling in Susquehanna County commenced in late-February of 2013. The Department intends to sample for at least one year at the new Susquehanna County site. Unless further sampling at the site would be warranted, the Department then intends to relocate the VOC canister sampler to a location in Wyoming County that is also undergoing Marcellus shale gas well pad development, extraction, gathering and transmission for the purpose of long-term toxic exposure and risk/hazard assessment. Deployment in Wyoming County will commence in early 2014. Data collected during the two-year span (as it becomes available) will be assessed to determine further action by the Department.

While the Department originally intended to relocate the VOC sampler from the Wilkes-Barre COPAMS station (Luzerne County) to a site, "yet-to-be-determined" in Wyoming County for a period of one year, and then relocate to a site in adjacent Susquehanna County, further evaluation of Marcellus Shale activity and siting considerations prompted the Department to deploy the Susquehanna County location before the Wyoming County. Due to the higher density of larger operating compressor stations and completed well farms in Susquehanna County, as well as the lack of other large stationary VOC sources and a lower density of potential mobile sources, PA DEP determined that the Susquehanna location provided a better chance to site downwind of active facilities and better isolate and differentiate emissions from shale gas facilities.

Site and Monitoring Activity Anticipated within the Next 18 Months

Table 3. Summary of Proposed Changes to the PA DEP Air Monitoring Network within the Next 18 Months.

Pollutant Network	Proposed Changes
NO_2	• PA DEP NO_2 near-road site requirement delayed until 2017. • Chester (Delaware County) and Erie (Erie County) identified as RA-40 sites.
$PM_{2.5}$	• Continue correlation study of FEM vs. FRM monitors • Install One additional $PM_{2.5}$ monitoring site in Lancaster County
Air Toxics	• Continuation of the long-term Marcellus shale monitoring study in Washington County. These sites are located in Washington County near permanent natural gas processing facilities. • Relocate Springville VOC sampler to a "yet-to-be-determined" location in Wyoming County for one year.

Oxides of Nitrogen (NO_2): On February 9, 2010, EPA revised the primary NAAQS for nitrogen dioxide by setting a new 1-hour standard of 100 parts per billion (ppb). The standard is based on a three year average of the 98th percentile of the annual distribution of daily maximum 1-hour average concentrations. EPA also retained the annual standard of 53 ppb. When EPA promulgated the NO_2 NAAQS revision, it put a new emphasis on near-road monitoring in heavily trafficked roadways with high levels of both truck and car traffic. At least one NO_2 monitor is required in MSAs with populations over 500,000 persons. In the 2010 rule, these near-road monitors were scheduled to be installed and operational by January 1, 2013. However, during 2012, EPA acknowledged that many states and local communities are facing budget shortfalls, and even at the federal level, not enough resources existed to bring the NO_2 monitoring program to full fruition by 2013. As a result, on October 5, 2012, EPA proposed revisions to the NO_2 rule to allow for a more gradual phase in of NO_2 monitoring over a four-year period to address the resource shortfall (EPA-HQ-OAR-2012-0486). MSAs with populations of 1 million or more persons must now have at least one monitor operational by January 1, 2014, and if a second monitor is required in these MSA's, it must be operational by January 1, 2015. MSAs with populations of at least 500,000 but under a million persons will be required to have a NO_2 monitor set up and operational by 2017. Under the final NO_2 rule, PA DEP is required to install near-road monitors in four MSAs: Allentown-Bethlehem-Easton, Scranton-Wilkes-Barre, Lancaster and Harrisburg. All of these MSAs have populations of at least 500,000 but under a million persons; therefore PA DEP plans to have these monitors installed and operational by the revised 2017 deadline.

In addition, Pennsylvania shares several MSAs with neighboring states. The following are plans of county agencies and neighboring state agencies to meet the requirements of near-road NO_2 implementation:

New York/New Jersey/Long Island MSA – The New Jersey Department of Environmental Protection will be installing a monitor in the PA/NY/NJ MSA in Fort Lee along I-95 near the George Washington Bridge linking New Jersey to New York City. This monitor should be operational by January 1, 2014. The New York State Department of Environmental Conservation will be installing a second monitor on the New York City side of the Hudson River sometime by the end of 2014. At

present, Pike County represents only 0.5 percent of the total MSA population of approximately 19 million, and any monitor installed here would likely not produce NO_2 readings that would be representative of the major urban areas to the east. Therefore, PA DEP will not install a monitor in the Pike County section of this MSA.

Philadelphia/Wilmington/Camden MSA – a monitor will be installed by the Philadelphia Air Management Services at the Torresdale Train station parking lot at the intersection of 4901 Grant Street and James Street in Philadelphia. This monitor is slated to be operational by the end of 2013. Since the population of this MSA is about 6 million persons, a second monitor is required in this MSA. At present, EPA has not decided which agency will be responsible for the installation of this monitor, and it is not required to be installed until the end of 2014.

Pittsburgh MSA – a near-road NO_2 monitor will be installed by the Allegheny County Health Department (ACHD). ACHD will install this monitor at the intersection of US Route 30 and Interstate 376 (the Penn Lincoln Parkway East). Carbon monoxide will also be monitored at the ACHD location. This monitor should be up and operational by the end of 2013.

Youngstown-Warren-Boardman MSA – The population on this MSA is estimated at 550,000 persons, therefore, installation of a near-road monitor is not required prior to the start of 2017. OH EPA has informed PA DEP that it is likely that the required near-road monitor for this MSA will be installed by the Ohio EPA in the Youngstown area by the 2017 deadline.

As part of the October 2012 proposed revision to the NO_2 monitoring rule (EPA-HQ-OAR-2012-0486), EPA Regional Administrators, in collaboration with states, must require a minimum of 40 additional NO_2 monitoring stations nationwide in any area, inside or outside of CBSAs, above the minimum monitoring requirements for near-road and area-wide monitors, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations. Two sites in Pennsylvania – Chester (Delaware County) and Erie (Erie County) have been identified as meeting these criteria, and will be designated RA-40 sites by EPA.

$PM_{2.5}$: PA DEP will install one additional $PM_{2.5}$ monitor in Lancaster County. Minimum monitoring requirements set forth in 40 CFR Part 58, Appendix D require at least two $PM_{2.5}$ monitors for any MSA with populations between 500,00 and 1,000,000, where prior monitoring has measured a design value greater than or equal to 85% of the level of the $PM_{2.5}$ NAAQS. The latest 2011 population estimate available from the US Census Bureau for the Lancaster MSA is 523,594 persons. On December 14, 2012, EPA lowered the annual NAAQS from 15 to 12 µg/m3, while retaining the 24-hour NAAQS at 35 µg/m3 (78 FR 3086, 1/15/2013). The 2009-2011 design values measured at the existing Lancaster site are12.0 µg/m3 (annual) and 31 µg/m3 (24-hour), both of which are greater than 85% of the $PM_{2.5}$ NAAQS; therefore, a second PM sampler is required in this MSA. The Department is expecting to locate a suitable monitoring site, enter into a multi-year license agreement, and complete logistical and installation processes to have the sampler operational by June 30, 2014.

PA DEP will continue to review correlation data between $PM_{2.5}$ FEM BAM (continuous) and FRM gravimetric monitoring and work with the manufacturer to improve correlation results.

Air Toxics: In 2012 PA DEP initiated a year-long air sampling study to continue its assessment of air quality impacts and any potential chronic risk from natural gas operations in Pennsylvania. PA DEP

added four VOC monitoring sites in Washington County. In addition, PA DEP also installed a carbonyl monitor at one of these sites. The Department located, installed and commenced operation of the main monitoring station near a gas processing facility. The main station will house a select array of monitors including a VOC/carbonyl sampler and will operate on the standard EPA 1-in-6 day schedule. PA DEP located, installed and commenced operation of two "satellite" monitoring sites near other large compressor or gas processing facilities. The satellite sites are smaller in scale than the main site but will sample for the same toxic pollutants on the same sampling schedule. A fourth VOC monitoring site was located, installed and commenced operation as an "upwind" site to the main station. These sites will continue to monitor and collect throughout most of 2013.

The Department continues the operation of its air toxics monitoring network and partners with Millersville University, Gannon University, Bucknell University, Ursinus University, Slippery Rock University, and the Pennsylvania State University to collect samples across the Commonwealth. PA DEP continues to work with these University partners.

The Department intends to relocate the VOC canister sampler at the Springville site in Susquehanna County to a "yet to be determined" location in Wyoming County that is also undergoing Marcellus shale gas well pad development, extraction, gathering and transmission for the purpose of long-term toxic exposure and risk/hazard assessment. Deployment in Wyoming County will commence in early 2014. Data collected from both the Springville and Wyoming County site during the two-year span (as it becomes available) will be assessed to determine further action by the Department.

General Description of Criteria Pollutants

Carbon Monoxide (CO)

Carbon monoxide is a byproduct of the incomplete burning of fuels. Industrial processes contribute to carbon monoxide pollution levels, but the largest man-made source of carbon monoxide is motor vehicle emissions. This pollutant is a health concern in areas of high traffic density or near industrial sources. Peak carbon monoxide concentrations typically occur during the colder months of the year when automotive emissions are greater and nighttime inversion (a weather-related phenomenon) conditions are more frequent.

Carbon monoxide is a colorless, odorless, poisonous gas that has an affinity for hemoglobin, 210 times that of oxygen. By combining with the hemoglobin in the blood, it inhibits the delivery of oxygen to the body's tissue, thereby causing or shortness of breath, asphyxia, and eventually death. The health threat from carbon monoxide is most serious for those who suffer from cardiovascular disease. At much higher levels of exposure, healthy individuals are also affected.

Carbon monoxide is measured by infrared absorption photometry. A continuous flow of air is drawn through a sample cell where infrared light passes through it. The carbon monoxide molecules absorb a portion of the infrared light. This reduces the amount of light getting to the sensor. The light is then converted into an electrical signal related to the concentration of carbon monoxide in the sample cell.

Fine Particulate Matter ($PM_{2.5}$)

Fine particulate emissions result primarily from industrial processes and fuel combustion - including motor vehicles, residential wood burning, and forest or agricultural fires.

Fine particles can accumulate in the respiratory system and are associated with numerous adverse health effects, including decreased lung function and increased respiratory symptoms and disease. Sensitive groups that appear to be at greatest risk include the elderly, individuals with cardiopulmonary disease such as asthma, and children. $PM_{2.5}$ is the major cause of reduced visibility in parts of the United States. Other environmental impacts occur when particles deposit onto soil, plants, water, or man-made materials such as monuments or statues.

$PM_{2.5}$ is sampled by drawing air through a specially designed inlet that excludes particles larger than 2.5 microns in diameter. For the manual Federal Reference Method (FRM) sampler, the particles are collected on a Teflon™ Microfiber filter that is weighed to determine the particulate mass. The normal sampling schedule is for a 24-hour sample to be taken daily. In addition, PA DEP utilizes Federal Equivalent Method (FEM) Met One Model 1020 and Thermo-Fisher TEOM-FDMS monitors.

Lead (Pb)

Lead is emitted to the atmosphere by vehicles burning leaded fuel and from certain industrial processes, primarily battery manufacturers and lead smelters. As a result of the reduction in lead in gasoline, metal processing is now the major source of lead emissions.

Lead is a highly toxic metal when ingested or inhaled. It is a suspected carcinogen of the lungs and kidneys and has adverse effects on the cardiovascular, nervous, and renal systems.

The amount of lead in ambient air is measured by laboratory analysis of TSP filters using Inductively Coupled Plasma - Mass Spectrometry

Nitrogen Dioxide (NO_2)

Nitrogen dioxide is a highly toxic, reddish brown gas that is created primarily from fuel combustion in industrial sources and vehicles. It creates an odorous brown haze that causes eye and sinus irritation, blocks natural sunlight and reduces visibility. It can severely irritate the respiratory system and has been associated with acute effects in individuals diagnosed with respiratory disease. Nitrogen dioxide contributes to the creation of acid rain and plays a key role in nitrogen loading, adversely impacting forests and other ecosystems.

Nitrogen oxides are measured using the chemiluminescence reaction of nitric oxide (NO) with ozone (O_3). Air is drawn into a reaction chamber where it is mixed with a high concentration of ozone from an internal ozone generator. Any nitric oxide mixes with ozone to produce NO_2. Light from this reaction is detected with a photomultiplier tube and converted to an electrical signal proportional to the nitric oxide concentration. Total nitrogen oxides (NO_x) are measured by passing the air through a converter where any NO_2 in the air is reduced to nitric oxide before the air is passed to the reaction chamber. By alternately passing the air directly to the reaction chamber and through the converter before the reaction chamber, the analyzer alternately measures nitric oxide and NO_x. Nitrogen dioxide (NO_2) is measured indirectly by a subtraction of the NOx and NO_2 concentrations.

Ozone (O_3)

Ground-level ozone, or photochemical smog, is a secondary pollutant. Ozone is generally not emitted directly into the atmosphere as ozone, but rather is formed by chemical reactions between other air pollutants. The primary pollutants involved in these reactions – volatile organic compounds (VOCs) and oxides of nitrogen (NO_x) – form ozone in the presence of sunlight and warm temperatures. Thus, sources that emit these ozone precursors are sources of ozone. Nitrogen oxides result from fossil fuel combustion and sources commonly include power plants, industrial boilers, and motor vehicles. VOCs are emitted from a variety of sources, including motor vehicles, chemical plants, refineries, and even natural (biogenic) sources. Ozone and the precursor pollutants that cause ozone also can be transported into an area from pollution sources located hundreds of miles away. Because the formation of ozone is boosted by increasing sunlight and temperatures, changing weather patterns contribute to yearly differences in ozone concentrations, with peak concentrations occurring during the summer months.

Ground-level ozone is a strong irritant to the eyes and upper respiratory system and can hamper breathing. It also damages vegetation, including forest and agricultural crops, and man-made materials such as monuments and statues.

Ozone is measured by ultraviolet absorption photometry. Air is drawn through a sample cell where ultraviolet light (254 nm wavelength) passes through it. Any light that is not absorbed by the ozone is then converted into an electrical signal proportional to the ozone concentration.

Particulate Matter (PM_{10})

PM_{10} (including $PM_{2.5}$) appears to represent essentially all of the particulate emissions from transportation sources and most of the emissions in the other traditional categories (coal-burning power plants, steel mills, mining operations, etc.). Although $PM_{2.5}$ is technically included in the definition of PM_{10}, the terms "PM_{10}" or "coarse" particles are commonly used to refer to particles greater than $PM_{2.5}$, but less than 10 micrometers in diameter.

Sources of coarse particles may include dust-producing process, such as crushing or grinding operations, as well as dust stirred up by vehicles traveling on roads. While they are not as much of a health concern as are fine particles, they can aggravate respiratory conditions and irritate the linings of the eyes, nose, throat and lungs. In the environment, PM_{10} contributes to reduced visibility and degradation of man-made materials.

PM_{10} is sampled continuously using a tapered element oscillating microbalance (TEOM). Air is drawn through a specially designed inlet that excludes particles larger than 10 microns in diameter. Particle accumulation causes changes in the microbalance oscillation that are recorded by the instrument.

Sulfur Dioxide (SO_2)

Sulfur dioxide is a gaseous pollutant that is emitted primarily by industrial furnaces or power plants burning sulfur-containing coal or oil. The major health effects associated with high exposures to sulfur dioxide include effects on breathing and respiratory illness symptoms. The population most sensitive to sulfur dioxide includes asthmatics and individuals with chronic lung disease or cardiovascular disease. Sulfur dioxide damages vegetation, including forests and agricultural crops, and acts as a precursor to acid rain. Finally, sulfur dioxide can accelerate the corrosion of natural and man-made materials that are used in buildings and monuments, as well as paper, iron-containing metals, zinc, and other protective coatings.

Sulfur dioxide is measured with a fluorescence analyzer. Air is drawn through a sample cell where it is then subjected to high intensity ultraviolet light. This causes the sulfur dioxide molecules in the air to fluoresce and release light. The fluorescence is detected with a photomultiplier tube and converted to an electrical signal proportional to the SO_2 concentration.

Ambient Air Quality Monitoring Organizations and Network Summary Tables

Table 5. Air Pollution Control Agencies in the Commonwealth of Pennsylvania.

Organization	Address and Phone	Internet
Allegheny County Health Department	39th Street and Penn Ave Pittsburgh, PA 15201 (412) 578-8104	http://www.achd.net/air/index.html
City of Philadelphia Department of Public Health Air Management Services	321 University Avenue Philadelphia, PA 19104 (215) 685-7584	http://www.phila.gov/health/airmanagement/
Commonwealth of Pennsylvania Department of Environmental Protection Bureau of Air Quality Division of Air Quality Monitoring	Rachel Carson State Office Building 12th Floor 400 Market Street P.O. Box 8468 Harrisburg, PA 17105-8468 (717) 787-6548	http://www.depweb.state.pa.us/ (Choose "Air" from the left-hand menu)

Table 6. Summary of Criteria Pollutant Air Monitoring Sites.

	Criteria Pollutants													
	Ozone		Sulfur Dioxide		Nitrogen Dioxide		Carbon Monoxide		Particulate Matter		Particulate Matter		Lead	
	(O_3)		(SO_2)		(NO_2)		(CO)		($PM_{2.5}$)		(PM_{10})		(Pb)	
MSA or non-MSA Region	SLAMS	SPM	SLAMS	SPM	SLAMS	SPM	SLAMS	SPM	SLAMS	SPM	SLAMS	SPM	SLAMS	SPM
Philadelphia-Camden-Wilmington MSA[1]	4		3		2		1		4		1		2	
Allentown-Bethlehem-Easton MSA	3		1		1		1		2		2		1	
Scranton-Wilkes-Barre MSA	4		1		1		1		1		1		1	
New York-Northern NJ-Long Island MSA														
Northeast Region - Non-MSA	1								1					
Altoona MSA	1		1						1		1			
Harrisburg-Carlisle MSA	3		1		1				2		2			
Lancaster MSA	2				1				1		1		1	
Lebanon MSA	1								1					
Reading MSA	2		1		1		1		1		1		4	
York-Hanover MSA	2		1		1		1		1		1			
Southcentral Region - Non-MSA	1				1		1		1				1	
State College MSA	1		1		1				1					
Williamsport MSA	1										1			
Northcentral Region - Non-MSA	3				2									
Johnstown MSA	1		1		1		1		1		1			
Pittsburgh MSA[2]	9	2	4	1	2	2	1	2	6	1	2		4	
Southwest Region - Non-MSA	2		2										1	
Erie MSA	1		1		1		1		1		1			
Youngstown-Warren-Boardman MSA	1								1					
Northwest Region - Non-MSA	1		3				1				1		1	
Totals	***44***	***2***	***21***	***1***	***16***	***2***	***10***	***2***	***26***	***1***	***16***	***0***	***16***	***0***

[1] Philadelphia AMS operates the following number of criteria pollutant monitoring sites: O_3-3; SO_2-3; NO_2-2; CO-2; $PM_{2.5}$-5; PM_{10}-3; Pb-1

[2] Allegheny County HD operates the following number of criteria pollutant monitoring sites: O_3-3; SO_2-4; NO_2-2; CO-3; $PM_{2.5}$-8; PM_{10}-11; Pb-3

Table 7. Summary of Other Monitoring Sites.

	Air Toxics				Other Monitoring	
	Carbonyls	Mercury	Total Suspended Particulates and Metals	Volatile Organic Compunds	Hydrogen Sulfide	$PM_{2.5}$ Speciation
MSA or non-MSA Region	(Car)	(Hg)	(TSP) & Metals	(VOC)	(H_2S)	(Sp)
Philadelphia-Camden-Wilmington MSA[1]			3	5		1
Allentown-Bethlehem-Easton MSA				1	1	1
Scranton-Wilkes-Barre MSA						1
New York-Northern NJ-Long Island MSA						
Northeast Region - Non-MSA				1		
Altoona MSA						
Harrisburg-Carlisle MSA						1
Lancaster MSA	1	1	1	1		1
Lebanon MSA						
Reading MSA			1	1		1
York-Hanover MSA				1		1
Southcentral Region - Non-MSA	1			1		1
State College MSA						1
Williamsport MSA						
Northcentral Region - Non-MSA	1		1	1		
Johnstown MSA						1
Pittsburgh MSA[2]	1		2	5	1	2
Southwest Region - Non-MSA						
Erie MSA			1	1		1
Youngstown-Warren-Boardman MSA						
Northwest Region - Non-MSA					1	
Totals	***4***	***1***	***9***	***18***	***3***	***13***

[1] Philadelphia AMS operates the following number of other pollutant monitoring sites: Car-5; TSP&Metals-5; VOC-6; Sp-3

[2] Allegheny County HD operates the following number of other pollutant monitoring sites: Car-1; TSP&Metals-1; VOC-2; H_2S-3; Sp-2

This and related environmental information are available electronically via the Internet. For more information, visit us through the PA DEP web site at http://www.depweb.state.pa.us/ (Choose "Air," from the left menu).

Appendix A — PA DEP Ambient Air Monitoring Sites, Parameters and Maps

Table A-1. DEP Ambient Air Monitoring Site Locations by Region.

Southeast Region

Includes Bucks, Chester, Delaware, Montgomery and Philadelphia Counties

Philadelphia-Camden-Wilmington MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420170012	BRISTOL	BUCKS	ROCKVIEW DRIVE	40.10738 -74.8824	Southeast Pennsylvania AB
420290100	NEW GARDEN	CHESTER	NEW GARDEN AIRPORT - TOUGHKENAMON	39.83458 -75.7680	Southeast Pennsylvania AB
420450002	CHESTER	DELAWARE	FRONT ST & NORRIS ST	39.83519 -75.3721	Southeast Pennsylvania AB
420450003	SWARTHMORE	DELAWARE	500 COLLEGE AVE.	39.8969 -75.3539	Southeast Pennsylvania AB
420450004	RIDLEY PARK	DELAWARE	INDUSTRIAL HIGHWAY (RT291)	39.86292 -75.3256	Southeast Pennsylvania AB
420450109	MARCUS HOOK	DELAWARE	EAST 8TH AVE & CHURCH ST.	39.8178 -75.4142	Southeast Pennsylvania AB
420910005	COLLEGEVILLE	MONTGOMERY	URSINUS COLLEGE	40.1925 -75.4575	Southeast Pennsylvania AB
420910013	NORRISTOWN	MONTGOMERY	STATE ARMORY - 1046 BELVOIR RD	40.11327 -75.3086	Southeast Pennsylvania AB
420910016	EVANSBURG UNITED METHODIST	MONTGOMERY	3871 GERMANTOWN PIKE	40.18305 -75.4341	Southeast Pennsylvania AB

Northeast Region

Includes Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming Counties

Allentown-Bethlehem-Easton MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420250214	PALMERTON	CARBON	620 LITTLE GAP RD	40.81420 -75.5804	
420770004	ALLENTOWN	LEHIGH	STATE HOSPITAL REAR 1600 HANOVER AVE	40.61194 -75.4326	Allentown-Bethlehem-Easton AB
420950025	FREEMANSBURG	NORTHAMPTON	WASHINGTON & CAMBRIA STS. FREEMANSBURG	40.62847 -75.3415	Allentown-Bethlehem-Easton AB
420950027	LEHIGH VALLEY	NORTHAMPTON	2604 Schoenersville Road	40.64586 -75.4043	Allentown-Bethlehem-Easton AB
420951000	NAZARETH	NORTHAMPTON	SOUTH GREEN & DELAWARE	40.73473 -75.3131	Allentown-Bethlehem-Easton AB
420958000	EASTON	NORTHAMPTON	17TH AND SPRING GARDEN STREETS	40.69230 -75.2371	Allentown-Bethlehem-Easton AB

Scranton-Wilkes-Barre MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420690101	PECKVILLE	LACKAWANNA	WILSON FIRE CO. ERIE & PLEASANT	41.47908 -75.5781	Scranton-Wilkes-Barre AB
420692006	SCRANTON	LACKAWANNA	GEORGE ST TROOP AND CITY OF SCRANTON	41.44286 -75.623	Scranton-Wilkes-Barre AB
420790036	DURYEA	LUZERNE	401 YORK AVE	41.34886 -75.7473	Scranton-Wilkes-Barre AB

420791100	NANTICOKE	LUZERNE	255 LOWER BROADWAY(NEXT TO LEON&EDDY'S)	41.20919 -76.0035	Scranton-Wilkes-Barre AB
420791101	WILKES BARRE	LUZERNE	CHILWICK & WASHINGTON STS	41.26597 -75.8463	Scranton-Wilkes-Barre AB

Northeast Region - Non-MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420890002	POCONO	MONROE	DEP/DCNR Pocono District Office	41.08306 -75.3232	
pending	SPRINGVILLE	SUSQUEHANNA	TWP PROPERTY SR3004	41.6972 -75.9145	

Southcentral Region

Includes Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York Counties

Altoona MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420130801	ALTOONA	BLAIR	2ND AVE & 7TH ST	40.53563 -78.3703	

Harrisburg-Carlisle MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420410101	CARLISLE	CUMBERLAND	IMPERIAL COURT	40.24661 -77.1837	
420430401	HARRISBURG	DAUPHIN	651 Gibson Blvd	40.24699 -76.8469	Harrisburg AB
420431100	HERSHEY	DAUPHIN	SIPE AVE & MAE STREET	40.27241 -76.6814	
420990301	PERRY COUNTY	PERRY	720 GILL HILL ROAD, LITTLE BUFFALO STATE PARK	40.46 -77.1687	

Lancaster MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420710007	LANCASTER	LANCASTER	ABRAHAM LINCOLN JR HIGH GROFFTOWN RD	40.04686 -76.2834	Lancaster AB
420710009	MT JOY	LANCASTER	1088 EAST MAIN STREET	40.10894 -76.4722	
420710012	LANCASTER DOWNWIND	LANCASTER	3445 W. NEWPORT ROAD	40.04383 -76.1124	

Lebanon MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420750100	LEBANON	LEBANON	1275 BIRCH RD	40.33732 -76.3834	

Reading MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420110006	KUTZTOWN	BERKS	KUTZTOWN UNIVERSITY CAMPUS	40.51408 -75.7897	
420110011	READING AIRPORT	BERKS	1059 ARNOLD ROAD	40.38335 -75.9686	Reading AB
420110020	LAURELDALE NORTH	BERKS	3139 KUTZTOWN ROAD	40.38598 -75.9128	Reading AB

420110021	LYONS BORO	BERKS	KEMP ST.	40.47707 -75.7569	
420110022	LYONS PARK	BERKS	PARK AVE.	40.47831 -75.7539	
420111717	LAURELDALE SOUTH	BERKS	SPRING VALLEY ROAD	40.37730 -75.9145	Reading AB

York-Hanover MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
421330008	YORK	YORK	HILL ST.	39.96552 -76.6995	York AB
421330011	YORK DOWNWIND	YORK	2632 DELTA ROAD	39.86097 -76.4620	

Southcentral Region - Non-MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420010001	ARENDTSVILLE	ADAMS	NARSTO SITE - ARENDTSVILLE	39.92330 -77.3081	
420550001	METHODIST HILL	FRANKLIN	FOREST ROAD - METHODIST HILL	39.96072 -77.4755	
420550002	UPPER STRASBURG	FRANKLIN	9716 UPPER STRASBURG RD	40.05982 -77.7106	

Northcentral Region

Includes Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union Counties

State College MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420270100	STATE COLLEGE	CENTRE	PENN STATE UNIVERSITY - ARBORETUM SITE	40.81116 -77.8772	

Williamsport MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420810100	MONTOURSVILLE	LYCOMING	899 CHERRY STREET	41.25019 -76.9134	

Northcentral Region - Non-MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420334000	MOSHANNON	CLEARFIELD	LOCATED NEAR S.B. ELLIOTT STATE PARK	41.1175 -78.5261	
421174000	TIOGA COUNTY	TIOGA	TIOGA	41.64558 -76.9379	
421190001	LEWISBURG	UNION	701 MOORE AVE	40.9552 -76.8819	

Southwest Region

Includes Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland Counties

Johnstown MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420210011	JOHNSTOWN	CAMBRIA	MILLER AUTO SHOP 1 MESSENGER ST	40.30994 -78.9154	Johnstown AB

Pittsburgh MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420030010	PITTSBURGH	ALLEGHENY	CARNEGIE SCIENCE CENTER - 1 ALLEGHENY AVE	40.44591 -80.0186	Allegheny County AB
420050001	KITTANNING	ARMSTRONG	GLADE DR. & NOLTE RD. KITTANNING	40.814 -79.5646	
420070002	HOOKSTOWN	BEAVER	ROUTE 168 & TOMLINSON ROAD	40.56305 -80.5044	Lower Beaver Valley AB
420070005	BRIGHTON TWP	BEAVER	1015 SEBRING ROAD	40.68547 -80.3605	Lower Beaver Valley AB
420070006	POTTER TOWNSHIP	BEAVER	206 MOWRY RD	40.63893 -80.3656	Lower Beaver Valley AB
420070007	BEAVER VALLEY	BEAVER	760 BEAVER VALLEY MALL	40.67365 -80.3177	Lower Beaver Valley AB
420070014	BEAVER FALLS	BEAVER	EIGHTH STREET AND RIVER ALLEY	40.74780 -80.3157	Lower Beaver Valley AB
420070505	VANPORT	BEAVER	TAMAQUI DR	40.68486 -80.3229	Lower Beaver Valley AB
421250005	CHARLEROI	WASHINGTON	CHARLER01 WASTE TREATMENT PLANT	40.14658 -79.9022	Monongahela Valley AB
421250200	WASHINGTON	WASHINGTON	MCCARRELL AND FAYETTE STS	40.17063 -80.2617	
421255001	FLORENCE	WASHINGTON	HILLMAN STATE PARK - KINGS CREEK ROAD	40.44547 -80.4212	
421255200	MARCELLUS (MEDDINGS RD)	WASHINGTON	220 MEDDINGS RD	40.26896 -80.2439	
421290006	MURRYSVILLE	WESTMORELAND	OLD WILLIAM PENN HWY & SARDIS RD	40.42902 -79.6972	
421290008	GREENSBURG	WESTMORELAND	DONOHOE ROAD - PENN DOT MAINT DIST BLDG	40.30438 -79.5060	
421290009	CONEMAUGH	WESTMORELAND	SUGAR RUN - RT 711	40.39292 -79.0244	

Southwest Region - Non-MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420590002	HOLBROOK	GREENE	4.8 KM SE OF HOLBROOK	39.81602 -80.2848	
420630004	STRONGSTOWN	INDIANA	PA. DEPT. OF TRANSPORTATION - RT.403	40.5633 -78.9199	
420630005	SHELOCTA	INDIANA	182 SOUTH RIDGE RD	40.65251 -79.2927	

Northwest Region

Includes Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, Mckean, Mercer, Venango and Warren Counties

Pittsburgh MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420190020	SLIPPERY ROCK	BUTLER	1 MORROW WAY	41.06305 -80.0308	

Erie MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)

420490003	ERIE	ERIE	10TH AND MARNE STREETS	42.14197 -80.0386	Erie AB
420490004	PRESQUE ISLE	ERIE	EAST FISHER DR.	42.1620 -80.1133	Erie AB

Youngstown-Warren-Boardman MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420850100	FARRELL	MERCER	PA518 (NEW CASTLE ROAD) & PA418	41.21405 -80.4834	

Northwest Region - Non-MSA

AQS Code	Site Name	County	Street Address	Latitude Longitude	Air Basin (AB)
420730011	ELLWOOD CITY	LAWRENCE	CLYDE STREET	40.86003 -80.2790	Upper Beaver Valley AB
420730015	NEW CASTLE	LAWRENCE	S CROTON AVE & JEFFERSON ST.	40.99605 -80.3465	Upper Beaver Valley AB
421230004	WARREN OVERLOOK	WARREN	OVERLOOK SITE - NEAR STONE HILL ROAD	41.84372 -79.1728	
421230005	WARREN EAST	WARREN	2044 PENNSYLVANIA AVE EAST	41.82570 -79.1199	

Table A-2. DEP Ambient Air Monitoring Sites and Parameters Monitored by Region.

Southeast Region

Includes Bucks, Chester, Delaware, Montgomery and Philadelphia Counties

Philadelphia-Camden-Wilmington MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420170012	BRISTOL	X	X	X	X	X							
420290100	NEW GARDEN	X				X	X						
420450002	CHESTER	X	X	X		X		X	X			X	X
420450003	SWARTHMORE											X	X
420450004	RIDLEY PARK								X				
420450109	MARCUS HOOK											X	X
420910005	COLLEGEVILLE												X
420910013	NORRISTOWN	X	X			X							
420910016	EVANSBURG UNITED METHODIST												X

Northeast Region

Includes Carbon, Lackawanna, Lehigh, Luzerne, Monroe, Northampton, Pike, Schuylkill, Susquehanna, Wayne and Wyoming Counties

Allentown-Bethlehem-Easton MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420250214	PALMERTON								X				
420770004	ALLENTOWN	X						X					
420950025	FREEMANSBURG	X		X	X	X	X						X
420950027	LEHIGH VALLEY					X							
420951000	NAZARETH							X					
420958000	EASTON	X	X										

Scranton-Wilkes-Barre MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420690101	PECKVILLE	X											
420692006	SCRANTON	X		X	X	X	X						
420790036	DURYEA								X				
420791100	NANTICOKE	X											
420791101	WILKES BARRE	X	X					X					

Northeast Region - Non-MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420890002	POCONO	X				X							
pending	SPRINGVILLE												X

Southcentral Region

Includes Adams, Bedford, Berks, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry and York Counties

Altoona MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420130801	ALTOONA	X	X			X		X					

Harrisburg-Carlisle MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC

Pollutants

O3:	Ozone	PM2.5:	Particulate matter <2.5 micrometers	Car:	Carbonyls
SO2:	Sulfur dioxide	Spec:	Pm2.5 speciation	Hg:	Mercury
NO2:	Nitrogen dioxide	PM10:	Particulate matter <10 micrometers	Metals:	Total suspended particulates and selected metals
CO:	Carbon monoxide	Pb:	Lead	VOC:	Volatile organic compunds

420410101	CARLISLE					X							
420430401	HARRISBURG	X				X	X	X					
420431100	HERSHEY	X						X					
420990301	PERRY COUNTY	X	X	X									

Lancaster MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420710007	LANCASTER	X		X		X	X	X		X	X	X	X
420710009	MT JOY								X				
420710012	LANCASTER DOWNWIND	X											

Lebanon MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420750100	LEBANON	X				X							

Reading MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420110006	KUTZTOWN	X											
420110011	READING AIRPORT	X	X	X	X	X	X	X				X	X
420110020	LAURELDALE NORTH								X				
420110021	LYONS BORO								X				
420110022	LYONS PARK								X				
420111717	LAURELDALE SOUTH								X				

York-Hanover MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
421330008	YORK	X	X	X	X	X	X	X					X
421330011	YORK DOWNWIND	X											

Southcentral Region - Non-MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420010001	ARENDTSVILLE			X	X	X	X			X			X
420550001	METHODIST HILL	X											
420550002	UPPER STRASBURG								X				

Northcentral Region

Includes Bradford, Cameron, Centre, Clearfield, Clinton, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga and Union Counties

State College MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420270100	STATE COLLEGE	X	X	X		X	X						

Williamsport MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420810100	MONTOURSVILLE	X						X					

Northcentral Region - Non-MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420334000	MOSHANNON	X											
421174000	TIOGA COUNTY	X		X									
421190001	LEWISBURG									X		X	X

Pollutants

O3:	Ozone	PM2.5:	Particulate matter <2.5 micrometers	Car:	Carbonyls
SO2:	Sulfur dioxide	Spec:	Pm2.5 speciation	Hg:	Mercury
NO2:	Nitrogen dioxide	PM10:	Particulate matter <10 micrometers	Metals:	Total suspended particulates and selected metals
CO:	Carbon monoxide	Pb:	Lead	VOC:	Volatile organic compunds

Southwest Region

Includes Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington and Westmoreland Counties

Johnstown MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420210011	JOHNSTOWN	X	X	X	X	X	X	X					

Pittsburgh MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420030010	PITTSBURGH	X	X	X	X								
420050001	KITTANNING	X				X							
420070002	HOOKSTOWN	X	X										
420070005	BRIGHTON TWP	X	X										
420070006	POTTER TOWNSHIP								X				
420070007	BEAVER VALLEY								X			X	
420070014	BEAVER FALLS	X		X		X		X					X
420070505	VANPORT								X				
421250005	CHARLEROI	X	X	X	X	X		X					X
421250200	WASHINGTON	X				X							
421255001	FLORENCE	X	X			X	X						
421255200	MARCELLUS (MEDDINGS RD)	X		X	X	X				X			X
421290006	MURRYSVILLE	X											
421290008	GREENSBURG	X				X	X						X
421290009	CONEMAUGH								X				

Southwest Region - Non-MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420590002	HOLBROOK	X	X										
420630004	STRONGSTOWN	X	X										
420630005	SHELOCTA								X				

Northwest Region

Includes Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, Mckean, Mercer, Venango and Warren Counties

Pittsburgh MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420190020	SLIPPERY ROCK											X	X

Erie MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420490003	ERIE	X	X	X	X	X	X	X					
420490004	PRESQUE ISLE											X	X

Youngstown-Warren-Boardman MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420850100	FARRELL	X				X							

Northwest Region - Non-MSA

AQS Code	Site Name	O3	SO2	NO2	CO	PM2.5	Spec	PM10	Pb	Car	Hg	Metals	VOC
420730011	ELLWOOD CITY								X				

Pollutants

O3:	Ozone	PM2.5:	Particulate matter <2.5 micrometers	Car:	Carbonyls
SO2:	Sulfur dioxide	Spec:	Pm2.5 speciation	Hg:	Mercury
NO2:	Nitrogen dioxide	PM10:	Particulate matter <10 micrometers	Metals:	Total suspended particulates and selected metals
CO:	Carbon monoxide	Pb:	Lead	VOC:	Volatile organic compunds

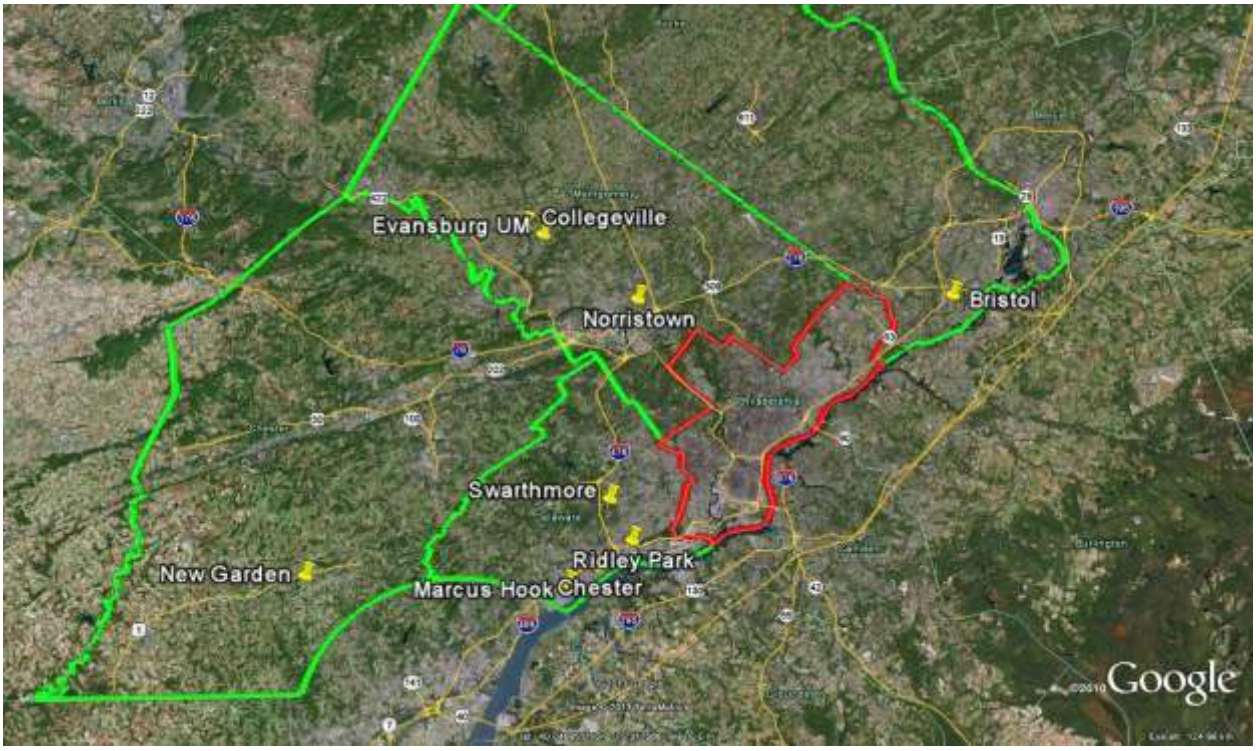
420730015	NEW CASTLE	X	X		X			X					
421230004	WARREN OVERLOOK		X										
421230005	WARREN EAST		X										

Pollutants

O3:	Ozone	PM2.5:	Particulate matter <2.5 micrometers	Car:	Carbonyls
SO2:	Sulfur dioxide	Spec:	Pm2.5 speciation	Hg:	Mercury
NO2:	Nitrogen dioxide	PM10:	Particulate matter <10 micrometers	Metals:	Total suspended particulates and selected metals
CO:	Carbon monoxide	Pb:	Lead	VOC:	Volatile organic compunds

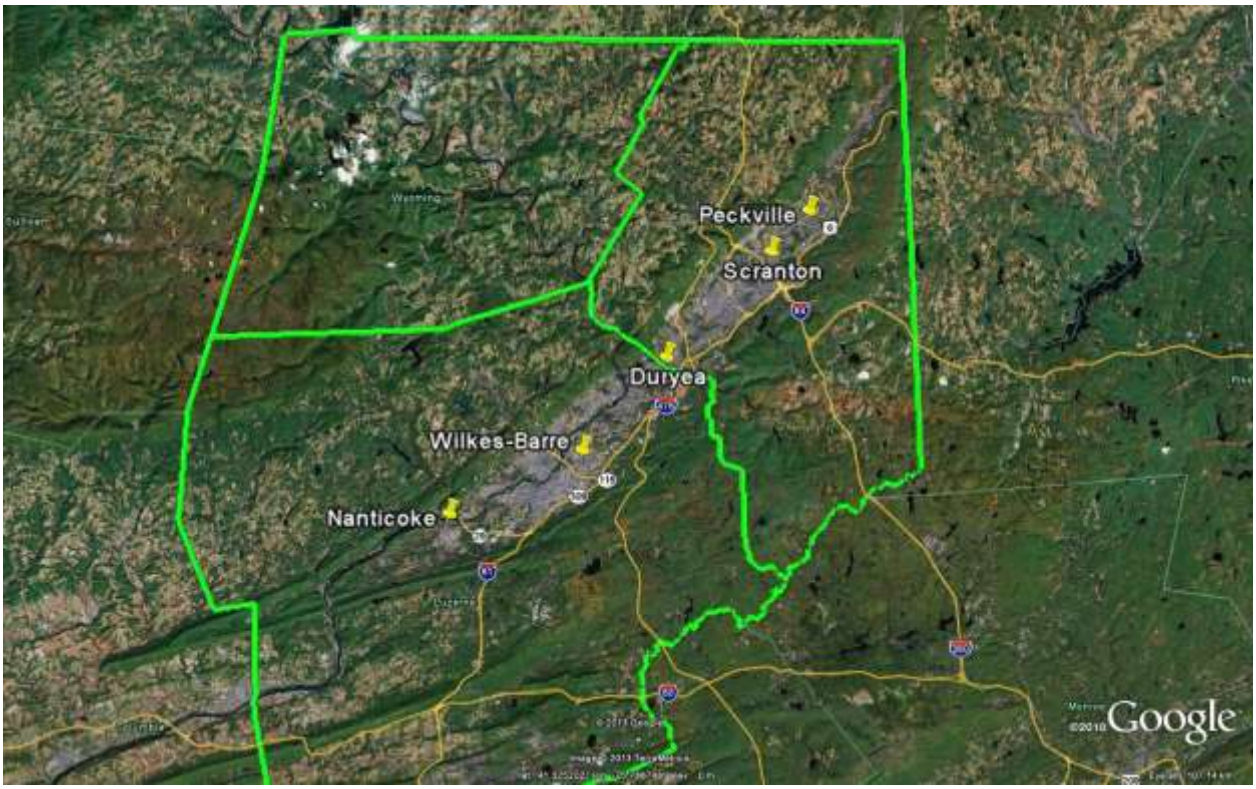
Figure A-1. DEP Ambient Air Monitoring Site Location Maps, by MSA Region.

Philadelphia-Camden-Wilmington MSA



Allentown-Bethlehem-Easton MSA

Scranton-Wilkes-Barre MSA



Northeast Region - Non-MSA

Altoona MSA

Harrisburg-Carlisle MSA

Lancaster MSA

Lebanon MSA

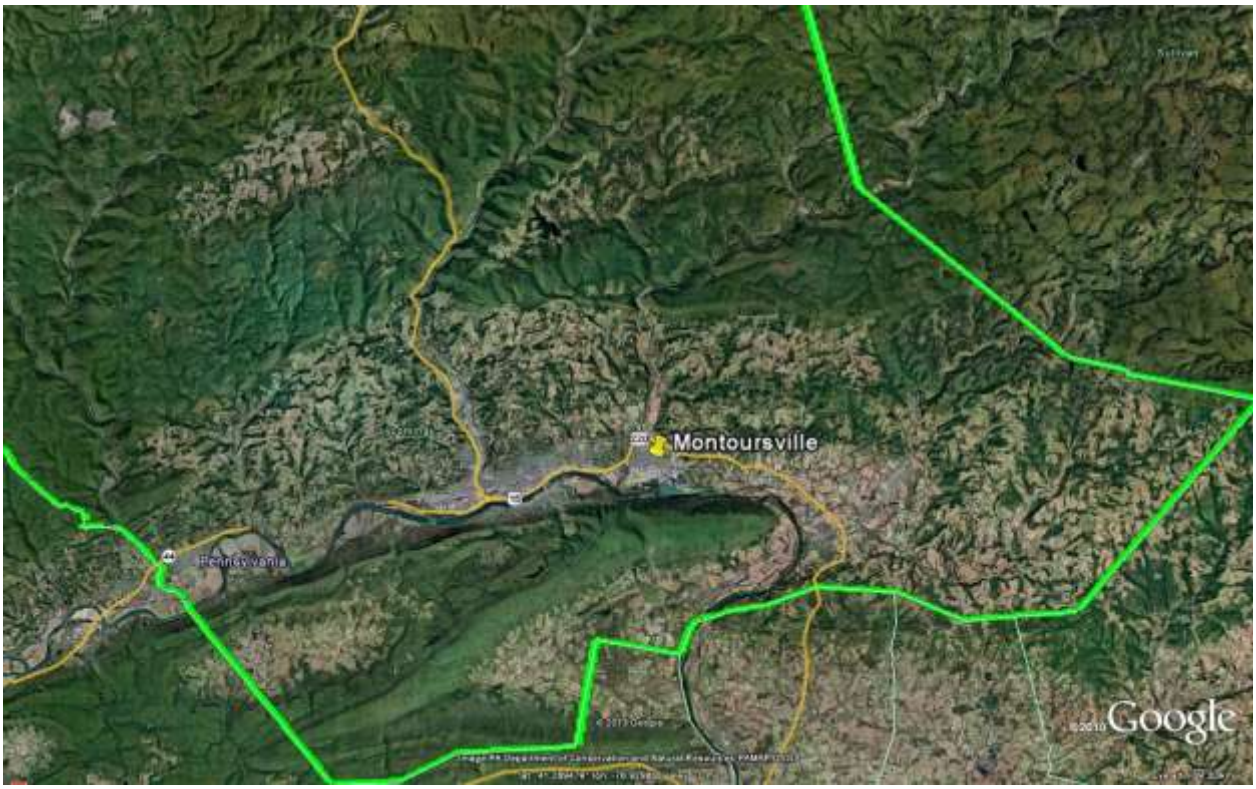
Reading MSA

York-Hanover MSA

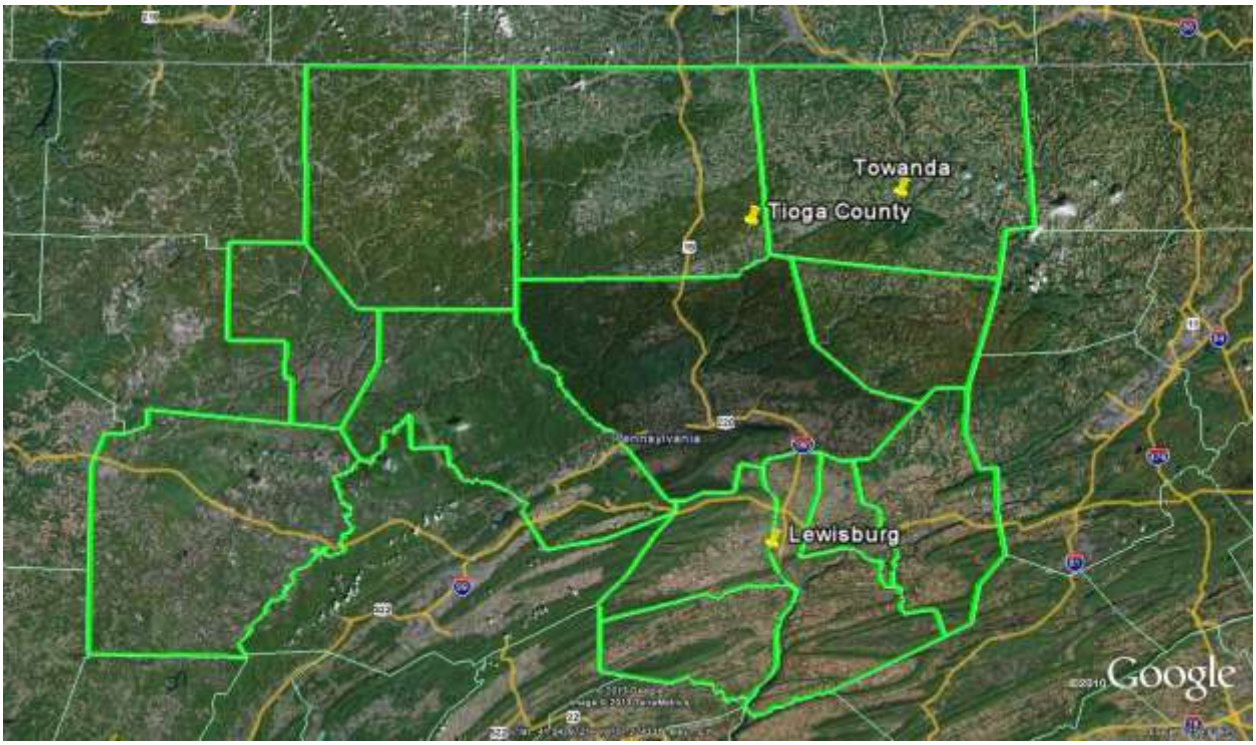
Southcentral Region - Non-MSA

State College MSA

Williamsport MSA



Northcentral Region - Non-MSA



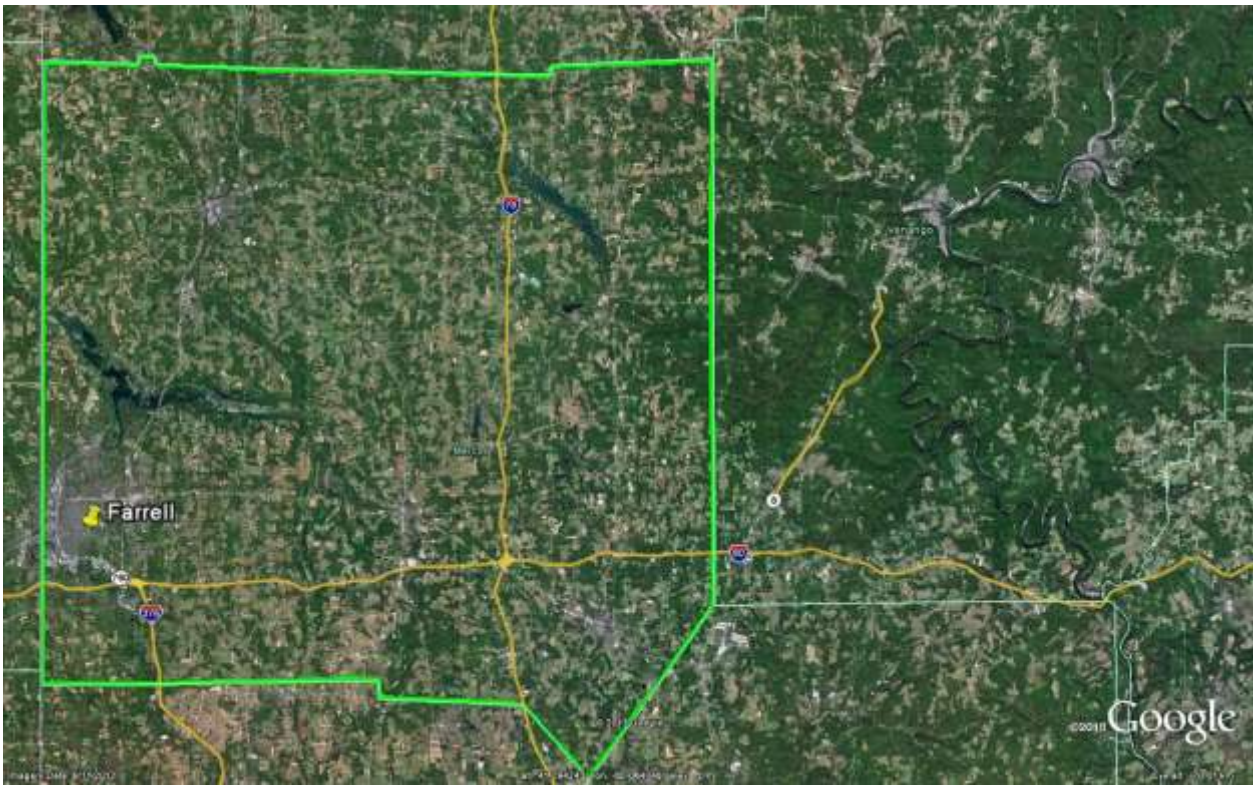
Johnstown MSA

Pittsburgh MSA

Southwest Region - Non-MSA

Erie MSA

Youngstown-Warren-Boardman MSA



Northwest Region - Non-MSA

Appendix B — PA DEP Ambient Air Monitoring Network Description

Pennsylvania Monitoring Network Description

SITE NAME:	**ALLENTOWN**	*AQS SITE ID*	**420770004**
COUNTY:	**LEHIGH**	*LATITUDE:*	**40.611944445**
MUNICIPALITY:	**ALLENTOWN**	*LONGITUDE:*	**-75.432611111**
MSA:	**Allentown-Bethlehem-Easton MSA**	*ADDRESS1:*	**STATE HOSPITAL REAR 1600 HANOVER AVE**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1984	*Comments:*	

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	5/16/1996	*Comments:*	

SITE NAME:	**ALTOONA**	*AQS SITE ID*	**420130801**
COUNTY:	**BLAIR**	*LATITUDE:*	**40.535638889**
MUNICIPALITY:	**ALTOONA**	*LONGITUDE:*	**-78.370361111**
MSA:	**Altoona MSA**	*ADDRESS1:*	**2ND AVE & 7TH ST**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	5/1/1978	*Comments:*	

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	5/17/1995	*Comments:*	

**The Pennsylvania Department of Environmental Protection, Bureau of Air Quality, maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, Appendix A, designs its network in accordance with Appendix D, and locates it sites to meet all requirements of Appendix E. Detailed Appendix A, D and E requirements appear at* http://www.gpo.gov/fdsys/search/home.action

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 6/1/2010	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 5/1/1978	*Comments:*		

SITE NAME:	**ARENDTSVILLE**	*AQS SITE ID*	**420010001**
COUNTY:	**ADAMS**	*LATITUDE:*	**39.923305556**
MUNICIPALITY:	**ARENDTSVILLE**	*LONGITUDE:*	**-77.308166667**
MSA:	**Southcentral Region - Non-MSA**	*ADDRESS1:*	**NARSTO SITE - ARENDTSVILLE**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 6/24/1997	*Comments:*		

Sensor Type:	**Carbonyls**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	DNPH - Coated Cartridges (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 6/2/1997	*Comments:*		

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 6/24/1997	*Comments:*		

**The Pennsylvania Department of Environmental Protection, Bureau of Air Quality, maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, Appendix A, designs its network in accordance with Appendix D, and locates it sites to meet all requirements of Appendix E. Detailed Appendix A, D and E requirements appear at* http://www.gpo.gov/fdsys/search/home.action

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2009	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2002	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 6/2/1997	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	PAMS	*Monitoring Method Description:*	PAMS GC (Ozone Seazon Only)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	Cont.	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 6/2/1997	*Comments:*		

SITE NAME:	**BEAVER FALLS**	*AQS SITE ID*	**420070014**
COUNTY:	**BEAVER**	*LATITUDE:*	**40.747805556**
MUNICIPALITY:	**BEAVER FALLS**	*LONGITUDE:*	**-80.31575**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**EIGHTH STREET AND RIVER ALLEY**

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1974	*Comments:*		

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1974	*Comments:*		

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 9/20/1995	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 12/1/1999	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0609-181
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	FDMS Gravimetric
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/16/2004	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 1/2/2010	*Comments:*		

SITE NAME:	**BEAVER VALLEY**	*AQS SITE ID*	**420070007**
COUNTY:	**BEAVER**	*LATITUDE:*	**40.673656**
MUNICIPALITY:	**CENTER TWP**	*LONGITUDE:*	**-80.317731**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**760 BEAVER VALLEY MALL**

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Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

Sensor Type:	**Metals/TSP**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 2/20/2011	*Comments:*		

SITE NAME:	**BRIGHTON TWP**	*AQS SITE ID*	**420070005**
COUNTY:	**BEAVER**	*LATITUDE:*	**40.685472222**
MUNICIPALITY:	**BRIGHTON TWP**	*LONGITUDE:*	**-80.3605**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**1015 SEBRING ROAD**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/20/1994	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/20/1994	*Comments:*		

SITE NAME:	**BRISTOL**	*AQS SITE ID*	**420170012**
COUNTY:	**BUCKS**	*LATITUDE:*	**40.107388889**
MUNICIPALITY:	**BRISTOL**	*LONGITUDE:*	**-74.882472222**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**ROCKVIEW DRIVE**

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Sensor Type:	**Carbon Monoxide**	***Appendix C Monitoring Method:***	RFCA-1093-093
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 3/1/1975	***Comments:***		

Sensor Type:	**Nitrogen Dioxide**	***Appendix C Monitoring Method:***	RFNA-1194-099
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1974	***Comments:***		

Sensor Type:	**Ozone**	***Appendix C Monitoring Method:***	EQOA-0992-087
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1974	***Comments:***		

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	EQPM-0308-170
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 6/1/2010	***Comments:***		

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	RFPS-0498-118
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Daily	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1999	***Comments:***		

Sensor Type:	**Sulfur Dioxide**	***Appendix C Monitoring Method:***	EQSA-0495-100
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1974	***Comments:***		

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SITE NAME:	**CARLISLE**	*AQS SITE ID*	**420410101**
COUNTY:	**CUMBERLAND**	*LATITUDE:*	**40.246611111**
MUNICIPALITY:	**CARLISLE**	*LONGITUDE:*	**-77.183722222**
MSA:	**Harrisburg-Carlisle MSA**	*ADDRESS1:*	**IMPERIAL COURT**

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	3/29/2001	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2009	*Comments:*	

SITE NAME:	**CHARLEROI**	*AQS SITE ID*	**421250005**
COUNTY:	**WASHINGTON**	*LATITUDE:*	**40.146583333**
MUNICIPALITY:	**CHARLEROI**	*LONGITUDE:*	**-79.902222222**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**CHARLER01 WASTE TREATMENT PLANT**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1982	*Comments:*	

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	RFPS-1287-063
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	6/21/1995	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/2009	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date:	5/31/2009	*Comments:*	

SITE NAME:	**CHESTER**	*AQS SITE ID*	**420450002**
COUNTY:	**DELAWARE**	*LATITUDE:*	**39.835194445**
MUNICIPALITY:	**CHESTER**	*LONGITUDE:*	**-75.372111111**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**FRONT ST & NORRIS ST**

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Sensor Type:	**Lead (TSP-based)**	***Appendix C Monitoring Method:***	EQL-0710-192
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	1 in 6	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Manual Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	2/1/1994	***Comments:***	

Sensor Type:	**Metals/TSP**	***Appendix C Monitoring Method:***	
Sensor Network Designation:	Other	***Monitoring Method Description:***	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	***Appendix D Design Criteria*:***	No
Sample Frequency:	1 in 6	***Appendix D Scale:***	
Appendix A QA Assessment*:	No	***Appendix D Objectives:***	
Appendix C Monitoring Classification:		***Appendix E Siting Criteria*:***	No
Start Date:	1/10/1995	***Comments:***	

Sensor Type:	**Nitrogen Dioxide**	***Appendix C Monitoring Method:***	RFNA-1194-099
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	1/1/1974	***Comments:***	

Sensor Type:	**Ozone**	***Appendix C Monitoring Method:***	EQOA-0992-087
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	1/1/1974	***Comments:***	

Sensor Type:	**Particulate Matter PM10**	***Appendix C Monitoring Method:***	EQPM-1090-079
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	3/3/1995	***Comments:***	

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	EQPM-0308-170
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	4/1/2009	***Comments:***	

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Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/1974	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 1/10/1995	*Comments:*		

SITE NAME:	**COLLEGEVILLE**	*AQS SITE ID*	**420910005**
COUNTY:	**MONTGOMERY**	*LATITUDE:*	**40.1925**
MUNICIPALITY:		*LONGITUDE:*	**-75.4575**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**URSINUS COLLEGE**

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 5/18/2007	*Comments:*		

SITE NAME:	**CONEMAUGH**	*AQS SITE ID*	**421290009**
COUNTY:	**WESTMORELAND**	*LATITUDE:*	**40.39292**
MUNICIPALITY:	**ST.CLAIR TWP**	*LONGITUDE:*	**-79.02446**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**SUGAR RUN - RT 711**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**DURYEA**	*AQS SITE ID*	**420790036**
COUNTY:	**LUZERNE**	*LATITUDE:*	**41.348869**
MUNICIPALITY:	**DURYEA TWP**	*LONGITUDE:*	**-75.747322**
MSA:	**Scranton-Wilkes-Barre MSA**	*ADDRESS1:*	**401 YORK AVE**

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Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**EASTON**	*AQS SITE ID*	**420958000**
COUNTY:	**NORTHAMPTON**	*LATITUDE:*	**40.692305556**
MUNICIPALITY:	**EASTON**	*LONGITUDE:*	**-75.237111111**
MSA:	**Allentown-Bethlehem-Easton MSA**	*ADDRESS1:*	**17TH AND SPRING GARDEN STREETS**

Sensor Type:	**Hydrogen Sulfide**	*Appendix C Monitoring Method:*	NONE
Sensor Network Designation:	SPM	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1986	*Comments:*		

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Max Ozone Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 10/20/1999	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 10/20/1999	*Comments:*		

SITE NAME:	**ELLWOOD CITY**	*AQS SITE ID*	**420730011**
COUNTY:	**LAWRENCE**	*LATITUDE:*	**40.860031**
MUNICIPALITY:	**ELLWOOD CITY BORO**	*LONGITUDE:*	**-80.279092**
MSA:	**Northwest Region - Non-MSA**	*ADDRESS1:*	**CLYDE STREET**

**The Pennsylvania Department of Environmental Protection, Bureau of Air Quality, maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, Appendix A, designs its network in accordance with Appendix D, and locates it sites to meet all requirements of Appendix E. Detailed Appendix A, D and E requirements appear at* http://www.gpo.gov/fdsys/search/home.action

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**ERIE**	*AQS SITE ID*	**420490003**
COUNTY:	**ERIE**	*LATITUDE:*	**42.141972222**
MUNICIPALITY:	**ERIE**	*LONGITUDE:*	**-80.038694444**
MSA:	**Erie MSA**	*ADDRESS1:*	**10TH AND MARNE STREETS**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 11/1/2004	*Comments:*		

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 5/18/1988	*Comments:*		

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 5/18/1988	*Comments:*		

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 8/10/1995	*Comments:*		

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Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2009	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2002	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 5/18/1988	*Comments:*		

SITE NAME:	**EVANSBURG UNITED METHODIST**	*AQS SITE ID*	**420910016**
COUNTY:	**MONTGOMERY**	*LATITUDE:*	**40.183056**
MUNICIPALITY:		*LONGITUDE:*	**-75.434167**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**3871 GERMANTOWN PIKE**

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 2/18/2009	*Comments:*		

SITE NAME:	**FARRELL**	*AQS SITE ID*	**420850100**
COUNTY:	**MERCER**	*LATITUDE:*	**41.214055556**
MUNICIPALITY:	**FARRELL**	*LONGITUDE:*	**-80.483472222**
MSA:	**Youngstown-Warren-Boardman MSA**	*ADDRESS1:*	**PA518 (NEW CASTLE ROAD) & PA418**

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Highest Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 9/1/1980	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Highest Concentration
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 2/1/2000	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Highest Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 11/3/2010	*Comments:*		

SITE NAME:	**FLORENCE**	*AQS SITE ID*	**421255001**
COUNTY:	**WASHINGTON**	*LATITUDE:*	**40.445472222**
MUNICIPALITY:	**FLORENCE**	*LONGITUDE:*	**-80.421222222**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**HILLMAN STATE PARK - KINGS CREEK ROAD**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 6/8/1995	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 6/11/2012	*Comments:*		

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Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2009	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2002	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1982	*Comments:*		

SITE NAME:	**FREEMANSBURG**	*AQS SITE ID*	**420950025**
COUNTY:	**NORTHAMPTON**	*LATITUDE:*	**40.628472222**
MUNICIPALITY:	**FREEMANSBURG**	*LONGITUDE:*	**-75.341583333**
MSA:	**Allentown-Bethlehem-Easton MSA**	*ADDRESS1:*	**WASHINGTON & CAMBRIA STS. FREEMANSBURG**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 8/20/1997	*Comments:*		

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 8/20/1997	*Comments:*		

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 8/20/1997	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 2/27/2012	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2009	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2002	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 1/8/2010	*Comments:*		

SITE NAME:	**GREENSBURG**	*AQS SITE ID*	**421290008**
COUNTY:	**WESTMORELAND**	*LATITUDE:*	**40.304388889**
MUNICIPALITY:	**GREENSBURG**	*LONGITUDE:*	**-79.506055556**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**DONOHOE ROAD - PENN DOT MAINT DIST BLDG**

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 10/1/1997	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 9/5/2012	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2009	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2002	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 1/2/2010	*Comments:*		

SITE NAME:	**HARRISBURG**	*AQS SITE ID*	**420430401**
COUNTY:	**DAUPHIN**	*LATITUDE:*	**40.246992**
MUNICIPALITY:	**HARRISBURG**	*LONGITUDE:*	**-76.846988**
MSA:	**Harrisburg-Carlisle MSA**	*ADDRESS1:*	**651 Gibson Blvd**

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/2013	*Comments:*		

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	RFPS-1287-063
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/2013	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/2013	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/2013	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/2013	*Comments:*		

SITE NAME:	**HERSHEY**	*AQS SITE ID*	**420431100**
COUNTY:	**DAUPHIN**	*LATITUDE:*	**40.272416667**
MUNICIPALITY:	**HERSHEY**	*LONGITUDE:*	**-76.681416667**
MSA:	**Harrisburg-Carlisle MSA**	*ADDRESS1:*	**SIPE AVE & MAE STREET**

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Max Ozone Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 8/1/1981	*Comments:*		

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/19/2012	*Comments:*		

SITE NAME:	**HOLBROOK**	*AQS SITE ID*	**420590002**
COUNTY:	**GREENE**	*LATITUDE:*	**39.816027778**
MUNICIPALITY:	**HOLBROOK**	*LONGITUDE:*	**-80.284805556**
MSA:	**Southwest Region - Non-MSA**	*ADDRESS1:*	**4.8 KM SE OF HOLBROOK**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1997	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1997	*Comments:*		

SITE NAME:	**HOOKSTOWN**	*AQS SITE ID*	**420070002**
COUNTY:	**BEAVER**	*LATITUDE:*	**40.563055556**
MUNICIPALITY:	**HOOKSTOWN**	*LONGITUDE:*	**-80.504444445**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**ROUTE 168 & TOMLINSON ROAD**

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	6/8/1995	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1983	*Comments:*	

SITE NAME:	**JOHNSTOWN**	*AQS SITE ID*	**420210011**
COUNTY:	**CAMBRIA**	*LATITUDE:*	**40.309944445**
MUNICIPALITY:	**JOHNSTOWN**	*LONGITUDE:*	**-78.915444445**
MSA:	**Johnstown MSA**	*ADDRESS1:*	**MILLER AUTO SHOP 1 MESSENGER ST**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1978	*Comments:*	

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

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Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/18/1996	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 4/1/2009	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/26/2009	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1974	*Comments:*		

SITE NAME:	**KITTANNING**	*AQS SITE ID*	**420050001**
COUNTY:	**ARMSTRONG**	*LATITUDE:*	**40.814**
MUNICIPALITY:	**KITTANNING**	*LONGITUDE:*	**-79.564694445**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**GLADE DR. & NOLTE RD. KITTANNING**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Extreme Downwind
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 8/14/1997	*Comments:*		

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Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Extreme Downwind
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2009	*Comments:*		

SITE NAME:	**KUTZTOWN**	*AQS SITE ID*	**420110006**
COUNTY:	**BERKS**	*LATITUDE:*	**40.51408**
MUNICIPALITY:	**KUTZTOWN**	*LONGITUDE:*	**-75.78972**
MSA:	**Reading MSA**	*ADDRESS1:*	**KUTZTOWN UNIVERSITY CAMPUS**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Extreme Downwind
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 9/27/2007	*Comments:*		

SITE NAME:	**LANCASTER**	*AQS SITE ID*	**420710007**
COUNTY:	**LANCASTER**	*LATITUDE:*	**40.046861111**
MUNICIPALITY:	**LANCASTER**	*LONGITUDE:*	**-76.283416667**
MSA:	**Lancaster MSA**	*ADDRESS1:*	**ABRAHAM LINCOLN JR HIGH GROFFTOWN RD**

Sensor Type:	**Carbonyls**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	DNPH - Coated Cartridges (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 5/24/1999	*Comments:*		

Sensor Type:	**Mercury**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Tekran Vapor Analyzer
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	Cont.	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 5/24/1999	*Comments:*		

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Sensor Type:	**Metals/TSP**	***Appendix C Monitoring Method:***	
Sensor Network Designation:	Other	***Monitoring Method Description:***	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	***Appendix D Design Criteria*:***	No
Sample Frequency:	1 in 6	***Appendix D Scale:***	
Appendix A QA Assessment*:	No	***Appendix D Objectives:***	
Appendix C Monitoring Classification:		***Appendix E Siting Criteria*:***	No
Start Date:	5/24/1999	***Comments:***	

Sensor Type:	**Nitrogen Dioxide**	***Appendix C Monitoring Method:***	RFNA-1194-099
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	1/1/1974	***Comments:***	

Sensor Type:	**Ozone**	***Appendix C Monitoring Method:***	EQOA-0992-087
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	1/1/1974	***Comments:***	

Sensor Type:	**Particulate Matter PM10**	***Appendix C Monitoring Method:***	EQPM-1090-079
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	3/22/1995	***Comments:***	

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	EQPM-0609-181
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	FDMS Gravimetric
Sensor Purpose Designation:	Population Exposure	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	11/1/2003	***Comments:***	

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	RFPS-0498-118
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Daily	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date:	1/1/1999	***Comments:***	

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Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2002	*Comments:*	

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date:	5/24/1999	*Comments:*	

SITE NAME:	**LANCASTER DOWNWIND**	*AQS SITE ID*	**420710012**
COUNTY:	**LANCASTER**	*LATITUDE:*	**40.043833**
MUNICIPALITY:	**LANCASTER**	*LONGITUDE:*	**-76.1124**
MSA:	**Lancaster MSA**	*ADDRESS1:*	**3445 W. NEWPORT ROAD**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Extreme Downwind
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/2008	*Comments:*	

SITE NAME:	**LAURELDALE NORTH**	*AQS SITE ID*	**420110020**
COUNTY:	**BERKS**	*LATITUDE:*	**40.385981**
MUNICIPALITY:	**MUHLENBERG TWP**	*LONGITUDE:*	**-75.912856**
MSA:	**Reading MSA**	*ADDRESS1:*	**3139 KUTZTOWN ROAD**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2010	*Comments:*	

SITE NAME:	**LAURELDALE SOUTH**	*AQS SITE ID*	**420111717**
COUNTY:	**BERKS**	*LATITUDE:*	**40.377305556**
MUNICIPALITY:	**LAURELDALE SOUTH**	*LONGITUDE:*	**-75.914583333**
MSA:	**Reading MSA**	*ADDRESS1:*	**SPRING VALLEY ROAD**

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Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/1976	*Comments:*		

SITE NAME:	**LEBANON**	*AQS SITE ID*	**420750100**
COUNTY:	**LEBANON**	*LATITUDE:*	**40.337328**
MUNICIPALITY:	**SOUTH LEBANON**	*LONGITUDE:*	**-76.383447**
MSA:	**Lebanon MSA**	*ADDRESS1:*	**1275 BIRCH RD**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 2/25/2011	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 2/25/2011	*Comments:*		

SITE NAME:	**LEHIGH VALLEY**	*AQS SITE ID*	**420950027**
COUNTY:	**NORTHAMPTON**	*LATITUDE:*	**40.645864**
MUNICIPALITY:	**BETHLEHEM**	*LONGITUDE:*	**-75.404356**
MSA:	**Allentown-Bethlehem-Easton MSA**	*ADDRESS1:*	**2604 Schoenersville Road**

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**LEWISBURG**	*AQS SITE ID*	**421190001**
COUNTY:	**UNION**	*LATITUDE:*	**40.9552**
MUNICIPALITY:	**LEWISBURG**	*LONGITUDE:*	**-76.8819**
MSA:	**Northcentral Region - Non-MSA**	*ADDRESS1:*	**701 MOORE AVE**

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Sensor Type:	**Carbonyls**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	DNPH - Coated Cartridges (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 8/1/2003	*Comments:*		

Sensor Type:	**Metals/TSP**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 8/1/2003	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 8/1/2003	*Comments:*		

SITE NAME:	**LYONS BORO**	*AQS SITE ID*	**420110021**
COUNTY:	**BERKS**	*LATITUDE:*	**40.477075**
MUNICIPALITY:	**LYONS BORO**	*LONGITUDE:*	**-75.756919**
MSA:	**Reading MSA**	*ADDRESS1:*	**KEMP ST.**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**LYONS PARK**	*AQS SITE ID*	**420110022**
COUNTY:	**BERKS**	*LATITUDE:*	**40.478319**
MUNICIPALITY:	**LYONS BORO**	*LONGITUDE:*	**-75.753947**
MSA:	**Reading MSA**	*ADDRESS1:*	**PARK AVE.**

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Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**MARCELLUS (MEDDINGS RD)**	*AQS SITE ID*	**421255200**
COUNTY:	**WASHINGTON**	*LATITUDE:*	**40.268963**
MUNICIPALITY:	**CHARTIERS TWP**	*LONGITUDE:*	**-80.243995**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**220 MEDDINGS RD**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SPM	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/23/2012	*Comments:*		

Sensor Type:	**Carbonyls**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	DNPH - Coated Cartridges (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 7/23/2012	*Comments:*		

Sensor Type:	**Hydrogen Sulfide**	*Appendix C Monitoring Method:*	NONE
Sensor Network Designation:	SPM	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Automated Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/23/2012	*Comments:*		

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SPM	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/23/2012	*Comments:*		

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SPM	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/23/2012	*Comments:*		

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SPM	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/23/2012	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 7/23/2012	*Comments:*		

SITE NAME:	**MARCUS HOOK**	*AQS SITE ID*	**420450109**
COUNTY:	**DELAWARE**	*LATITUDE:*	**39.8178**
MUNICIPALITY:	**MARCUS HOOK**	*LONGITUDE:*	**-75.4142**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**EAST 8TH AVE & CHURCH ST.**

Sensor Type:	**Metals/TSP**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 4/2/1995	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 4/2/1995	*Comments:*		

**The Pennsylvania Department of Environmental Protection, Bureau of Air Quality, maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, Appendix A, designs its network in accordance with Appendix D, and locates it sites to meet all requirements of Appendix E. Detailed Appendix A, D and E requirements appear at* http://www.gpo.gov/fdsys/search/home.action

SITE NAME:	**METHODIST HILL**	*AQS SITE ID*	**420550001**
COUNTY:	**FRANKLIN**	*LATITUDE:*	**39.960722222**
MUNICIPALITY:	**SOUTHAMPTON TWP**	*LONGITUDE:*	**-77.475527778**
MSA:	**Southcentral Region - Non-MSA**	*ADDRESS1:*	**FOREST ROAD - METHODIST HILL**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	6/26/1996	*Comments:*	

SITE NAME:	**MONTOURSVILLE**	*AQS SITE ID*	**420810100**
COUNTY:	**LYCOMING**	*LATITUDE:*	**41.250194445**
MUNICIPALITY:	**MONTOURSVILLE**	*LONGITUDE:*	**-76.913444445**
MSA:	**Williamsport MSA**	*ADDRESS1:*	**899 CHERRY STREET**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Max Ozone Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	11/20/2001	*Comments:*	

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	RFPS-1287-063
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	12/3/2001	*Comments:*	

SITE NAME:	**MOSHANNON**	*AQS SITE ID*	**420334000**
COUNTY:	**CLEARFIELD**	*LATITUDE:*	**41.1175**
MUNICIPALITY:	**ELLIOTT STATE PARK**	*LONGITUDE:*	**-78.526194445**
MSA:	**Northcentral Region - Non-MSA**	*ADDRESS1:*	**LOCATED NEAR S.B. ELLIOTT STATE PARK**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/1996	*Comments:*	

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SITE NAME:	**MT JOY**	*AQS SITE ID*	**420710009**
COUNTY:	**LANCASTER**	*LATITUDE:*	**40.108944**
MUNICIPALITY:	**RAPHO TWP**	*LONGITUDE:*	**-76.472235**
MSA:	**Lancaster MSA**	*ADDRESS1:*	**1088 EAST MAIN STREET**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2012	*Comments:*	

SITE NAME:	**MURRYSVILLE**	*AQS SITE ID*	**421290006**
COUNTY:	**WESTMORELAND**	*LATITUDE:*	**40.429027778**
MUNICIPALITY:	**MURRYSVILLE**	*LONGITUDE:*	**-79.697277778**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**OLD WILLIAM PENN HWY & SARDIS RD**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Max Ozone Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	8/1/1989	*Comments:*	

SITE NAME:	**NANTICOKE**	*AQS SITE ID*	**420791100**
COUNTY:	**LUZERNE**	*LATITUDE:*	**41.209194445**
MUNICIPALITY:	**NANTICOKE**	*LONGITUDE:*	**-76.003527778**
MSA:	**Scranton-Wilkes-Barre MSA**	*ADDRESS1:*	**255 LOWER BROADWAY(NEXT TO LEON&EDDY'S)**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1982	*Comments:*	

SITE NAME:	**NAZARETH**	*AQS SITE ID*	**420951000**
COUNTY:	**NORTHAMPTON**	*LATITUDE:*	**40.734731**
MUNICIPALITY:	**NAZARETH**	*LONGITUDE:*	**-75.313175**
MSA:	**Allentown-Bethlehem-Easton MSA**	*ADDRESS1:*	**SOUTH GREEN & DELAWARE**

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Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	8/1/2000	*Comments:*	

SITE NAME:	**NEW CASTLE**	*AQS SITE ID*	**420730015**
COUNTY:	**LAWRENCE**	*LATITUDE:*	**40.996055556**
MUNICIPALITY:	**NEW CASTLE**	*LONGITUDE:*	**-80.346527778**
MSA:	**Northwest Region - Non-MSA**	*ADDRESS1:*	**S CROTON AVE & JEFFERSON ST.**

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1978	*Comments:*	

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	10/18/1995	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

The Pennsylvania Department of Environmental Protection, Bureau of Air Quality, maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, Appendix A, designs its network in accordance with Appendix D, and locates it sites to meet all requirements of Appendix E. Detailed Appendix A, D and E requirements appear at* ***http://www.gpo.gov/fdsys/search/home.action*

SITE NAME:	**NEW GARDEN**	*AQS SITE ID*	**420290100**
COUNTY:	**CHESTER**	*LATITUDE:*	**39.834583333**
MUNICIPALITY:	**NEW GARDEN**	*LONGITUDE:*	**-75.768055556**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**NEW GARDEN AIRPORT - TOUGHKENAMON**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	6/29/2000	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	8/31/2012	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	7/1/2009	*Comments:*	

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Regional Transport
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2002	*Comments:*	

SITE NAME:	**NORRISTOWN**	*AQS SITE ID*	**420910013**
COUNTY:	**MONTGOMERY**	*LATITUDE:*	**40.113277778**
MUNICIPALITY:	**NORRISTOWN**	*LONGITUDE:*	**-75.308694445**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**STATE ARMORY - 1046 BELVOIR RD**

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0609-181
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	FDMS Gravimetric
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	10/30/2003	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	2/14/1999	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

SITE NAME:	**PALMERTON**	*AQS SITE ID*	**420250214**
COUNTY:	**CARBON**	*LATITUDE:*	**40.814204**
MUNICIPALITY:	**LOWER TOWAMENSING**	*LONGITUDE:*	**-75.580448**
MSA:	**Allentown-Bethlehem-Easton MSA**	*ADDRESS1:*	**620 LITTLE GAP RD**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	5/9/2012	*Comments:*	

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SITE NAME:	**PECKVILLE**	*AQS SITE ID*	**420690101**
COUNTY:	**LACKAWANNA**	*LATITUDE:*	**41.479083333**
MUNICIPALITY:	**PECKVILLE**	*LONGITUDE:*	**-75.578194445**
MSA:	**Scranton-Wilkes-Barre MSA**	*ADDRESS1:*	**WILSON FIRE CO. ERIE & PLEASANT**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Max Ozone Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/1991	*Comments:*	

SITE NAME:	**PERRY COUNTY**	*AQS SITE ID*	**420990301**
COUNTY:	**PERRY**	*LATITUDE:*	**40.46**
MUNICIPALITY:	**NEWPORT**	*LONGITUDE:*	**-77.1687497**
MSA:	**Harrisburg-Carlisle MSA**	*ADDRESS1:*	**720 GILL HILL ROAD, LITTLE BUFFALO STATE PARK**

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	5/25/1982	*Comments:*	

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1980	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/2/1980	*Comments:*	

SITE NAME:	**PITTSBURGH**	*AQS SITE ID*	**420030010**
COUNTY:	**ALLEGHENY**	*LATITUDE:*	**40.445916667**
MUNICIPALITY:	**PITTSBURGH**	*LONGITUDE:*	**-80.018694444**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**CARNEGIE SCIENCE CENTER - 1 ALLEGHENY AVE**

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Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SPM	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	11/25/1997	*Comments:*	

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SPM	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	11/25/1997	*Comments:*	

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SPM	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	11/25/1997	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SPM	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	11/25/1997	*Comments:*	

SITE NAME:	**POCONO**	*AQS SITE ID*	**420890002**
COUNTY:	**MONROE**	*LATITUDE:*	**41.08306**
MUNICIPALITY:	**SWIFTWATER**	*LONGITUDE:*	**-75.32328**
MSA:	**Northeast Region - Non-MSA**	*ADDRESS1:*	**DEP/DCNR Pocono District Office**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/2006	*Comments:*	

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Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 6/1/2010	*Comments:*		

SITE NAME:	**POTTER TOWNSHIP**	*AQS SITE ID*	**420070006**
COUNTY:	**BEAVER**	*LATITUDE:*	**40.638936**
MUNICIPALITY:	**POTTER TWP**	*LONGITUDE:*	**-80.365653**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**206 MOWRY RD**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

SITE NAME:	**PRESQUE ISLE**	*AQS SITE ID*	**420490004**
COUNTY:	**ERIE**	*LATITUDE:*	**42.1620**
MUNICIPALITY:		*LONGITUDE:*	**-80.1133**
MSA:	**Erie MSA**	*ADDRESS1:*	**EAST FISHER DR.**

Sensor Type:	**Metals/TSP**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 6/8/2000	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 6/8/2000	*Comments:*		

SITE NAME:	**READING AIRPORT**	*AQS SITE ID*	**420110011**
COUNTY:	**BERKS**	*LATITUDE:*	**40.38335**
MUNICIPALITY:	**READING**	*LONGITUDE:*	**-75.9686**
MSA:	**Reading MSA**	*ADDRESS1:*	**1059 ARNOLD ROAD**

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Sensor Type:	**Carbon Monoxide**	***Appendix C Monitoring Method:***	RFCA-1093-093
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 7/1/2007	***Comments:***		

Sensor Type:	**Metals/TSP**	***Appendix C Monitoring Method:***	
Sensor Network Designation:	Other	***Monitoring Method Description:***	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	***Appendix D Design Criteria*:***	No
Sample Frequency:	1 in 6	***Appendix D Scale:***	
Appendix A QA Assessment*:	No	***Appendix D Objectives:***	
Appendix C Monitoring Classification:		***Appendix E Siting Criteria*:***	No
Start Date: 6/17/2007	***Comments:***		

Sensor Type:	**Nitrogen Dioxide**	***Appendix C Monitoring Method:***	RFNA-1194-099
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 7/1/2007	***Comments:***		

Sensor Type:	**Ozone**	***Appendix C Monitoring Method:***	EQOA-0992-087
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 7/1/2007	***Comments:***		

Sensor Type:	**Particulate Matter PM10**	***Appendix C Monitoring Method:***	EQPM-1090-079
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 7/1/2007	***Comments:***		

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	EQPM-0609-181
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	FDMS Gravimetric
Sensor Purpose Designation:	Population Exposure	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Neighborhood
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 7/1/2007	***Comments:***		

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Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2007	*Comments:*		

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2007	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 7/1/2007	*Comments:*		

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 6/17/2007	*Comments:*		

SITE NAME:	**RIDLEY PARK**	*AQS SITE ID*	**420450004**
COUNTY:	**DELAWARE**	*LATITUDE:*	**39.862928**
MUNICIPALITY:		*LONGITUDE:*	**-75.325689**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**INDUSTRIAL HIGHWAY (RT291)**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 1/1/2010	*Comments:*		

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SITE NAME:	SCRANTON	*AQS SITE ID*	420692006
COUNTY:	LACKAWANNA	*LATITUDE:*	41.442861111
MUNICIPALITY:	SCRANTON	*LONGITUDE:*	-75.623
MSA:	Scranton-Wilkes-Barre MSA	*ADDRESS1:*	GEORGE ST TROOP AND CITY OF SCRANTON

Sensor Type:	**Carbon Monoxide**	*Appendix C Monitoring Method:*	RFCA-1093-093
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1978	*Comments:*	

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1974	*Comments:*	

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/14/1974	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Population Exposure	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	7/1/2009	*Comments:*	

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2002	*Comments:*	

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SITE NAME:	**SHELOCTA**	*AQS SITE ID*	**420630005**
COUNTY:	**INDIANA**	*LATITUDE:*	**40.652511**
MUNICIPALITY:	**ARMSTRONG TWP**	*LONGITUDE:*	**-79.292769**
MSA:	**Southwest Region - Non-MSA**	*ADDRESS1:*	**182 SOUTH RIDGE RD**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2010	*Comments:*	

SITE NAME:	**SLIPPERY ROCK**	*AQS SITE ID*	**420190020**
COUNTY:	**BUTLER**	*LATITUDE:*	**41.063056**
MUNICIPALITY:		*LONGITUDE:*	**-80.030833**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**1 MORROW WAY**

Sensor Type:	**Metals/TSP**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date:	8/29/2009	*Comments:*	

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date:	8/29/2009	*Comments:*	

SITE NAME:	**SPRINGVILLE**	*AQS SITE ID*	**pending**
COUNTY:	**SUSQUEHANNA**	*LATITUDE:*	**41.6972**
MUNICIPALITY:		*LONGITUDE:*	**-75.9145**
MSA:	**Northeast Region - Non-MSA**	*ADDRESS1:*	**TWP PROPERTY SR3004**

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date:	2/27/2013	*Comments:*	

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SITE NAME:	**STATE COLLEGE**	*AQS SITE ID*	**420270100**
COUNTY:	**CENTRE**	*LATITUDE:*	**40.811166667**
MUNICIPALITY:	**STATE COLLEGE**	*LONGITUDE:*	**-77.877222222**
MSA:	**State College MSA**	*ADDRESS1:*	**PENN STATE UNIVERSITY - ARBORETUM SITE**

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	3/8/2002	*Comments:*	

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/2000	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	9/1/2010	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	2/1/2000	*Comments:*	

Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2002	*Comments:*	

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Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 3/8/2002	*Comments:*		

SITE NAME:	**STRONGSTOWN**	*AQS SITE ID*	**420630004**
COUNTY:	**INDIANA**	*LATITUDE:*	**40.5633**
MUNICIPALITY:	**STRONGSTOWN**	*LONGITUDE:*	**-78.91997**
MSA:	**Southwest Region - Non-MSA**	*ADDRESS1:*	**PA. DEPT. OF TRANSPORTATION - RT.403**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 11/1/2004	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 11/1/2004	*Comments:*		

SITE NAME:	**SWARTHMORE**	*AQS SITE ID*	**420450003**
COUNTY:	**DELAWARE**	*LATITUDE:*	**39.8969**
MUNICIPALITY:	**SWARTHMORE**	*LONGITUDE:*	**-75.3539**
MSA:	**Philadelphia-Camden-Wilmington MSA**	*ADDRESS1:*	**500 COLLEGE AVE.**

Sensor Type:	**Metals/TSP**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	High Volume Sampler with Quartz Filter (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date: 1/22/1997	*Comments:*		

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Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No

Start Date: 1/22/1997 *Comments:*

SITE NAME:	**TIOGA COUNTY**	*AQS SITE ID*	**421174000**
COUNTY:	**TIOGA**	*LATITUDE:*	**41.645583333**
MUNICIPALITY:	**GLEASON**	*LONGITUDE:*	**-76.937972222**
MSA:	**Northcentral Region - Non-MSA**	*ADDRESS1:*	**TIOGA**

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes

Start Date: 5/9/2012 *Comments:*

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Regional Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	General/Background
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes

Start Date: 6/1/1999 *Comments:*

SITE NAME:	**TOWANDA**	*AQS SITE ID*	**420150011**
COUNTY:	**BRADFORD**	*LATITUDE:*	**41.705390**
MUNICIPALITY:	**MONROE TWP**	*LONGITUDE:*	**-76.512876**
MSA:	**Northcentral Region - Non-MSA**	*ADDRESS1:*	**Rt. 414 &MAIN ST**

Sensor Type:	**Nitrogen Dioxide**	*Appendix C Monitoring Method:*	RFNA-1194-099
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Chemiluminescence
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	
Appendix C Monitoring Classification:	Automated Reference Method	*Appendix E Siting Criteria*:*	Yes

Start Date: *Comments:*

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Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:		*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:		*Comments:*	

SITE NAME:	**UPPER STRASBURG**	*AQS SITE ID*	**420550002**
COUNTY:	**FRANKLIN**	*LATITUDE:*	**40.059828**
MUNICIPALITY:	**LETTERKENNY TWP**	*LONGITUDE:*	**-77.710608**
MSA:	**Southcentral Region - Non-MSA**	*ADDRESS1:*	**9716 UPPER STRASBURG RD**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Middle Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2010	*Comments:*	

SITE NAME:	**VANPORT**	*AQS SITE ID*	**420070505**
COUNTY:	**BEAVER**	*LATITUDE:*	**40.684861111**
MUNICIPALITY:	**VANPORT**	*LONGITUDE:*	**-80.322916667**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**TAMAQUI DR**

Sensor Type:	**Lead (TSP-based)**	*Appendix C Monitoring Method:*	EQL-0710-192
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	ICP-MS
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	3/1/1971	*Comments:*	

SITE NAME:	**WARREN EAST**	*AQS SITE ID*	**421230005**
COUNTY:	**WARREN**	*LATITUDE:*	**41.825708**
MUNICIPALITY:	**WARREN**	*LONGITUDE:*	**-79.119952**
MSA:	**Northwest Region - Non-MSA**	*ADDRESS1:*	**2044 PENNSYLVANIA AVE EAST**

Sensor Type:	**Hydrogen Sulfide**	*Appendix C Monitoring Method:*	NONE
Sensor Network Designation:	SPM	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Specific Location Characterization	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Source Oriented
Appendix C Monitoring Classification:	Automated Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2012	*Comments:*	

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Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Highest Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2012	*Comments:*	

SITE NAME:	**WARREN OVERLOOK**	*AQS SITE ID*	**421230004**
COUNTY:	**WARREN**	*LATITUDE:*	**41.843722222**
MUNICIPALITY:	**WARREN**	*LONGITUDE:*	**-79.172888889**
MSA:	**Northwest Region - Non-MSA**	*ADDRESS1:*	**OVERLOOK SITE - NEAR STONE HILL ROAD**

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Highest Concentration
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	11/25/1996	*Comments:*	

SITE NAME:	**WASHINGTON**	*AQS SITE ID*	**421250200**
COUNTY:	**WASHINGTON**	*LATITUDE:*	**40.170638889**
MUNICIPALITY:	**WASHINGTON**	*LONGITUDE:*	**-80.261722222**
MSA:	**Pittsburgh MSA**	*ADDRESS1:*	**MCCARRELL AND FAYETTE STS**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1984	*Comments:*	

Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	RFPS-0498-118
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Daily	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/1999	*Comments:*	

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Sensor Type:	**Particulate Matter PM2.5**	*Appendix C Monitoring Method:*	EQPM-0308-170
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	Beta Attenuation
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 11/10/2010	*Comments:*		

SITE NAME:	**WILKES BARRE**	*AQS SITE ID*	**420791101**
COUNTY:	**LUZERNE**	*LATITUDE:*	**41.265972222**
MUNICIPALITY:	**WILKES BARRE**	*LONGITUDE:*	**-75.846361111**
MSA:	**Scranton-Wilkes-Barre MSA**	*ADDRESS1:*	**CHILWICK & WASHINGTON STS**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 5/28/1982	*Comments:*		

Sensor Type:	**Particulate Matter PM10**	*Appendix C Monitoring Method:*	EQPM-1090-079
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 10/20/1994	*Comments:*		

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Neighborhood
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date: 5/28/1982	*Comments:*		

SITE NAME:	**YORK**	*AQS SITE ID*	**421330008**
COUNTY:	**YORK**	*LATITUDE:*	**39.965527778**
MUNICIPALITY:	**YORK**	*LONGITUDE:*	**-76.699583333**
MSA:	**York-Hanover MSA**	*ADDRESS1:*	**HILL ST.**

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Sensor Type:	**Carbon Monoxide**	***Appendix C Monitoring Method:***	RFCA-1093-093
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Non-dispersive Infrared
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1982	***Comments:***		

Sensor Type:	**Nitrogen Dioxide**	***Appendix C Monitoring Method:***	RFNA-1194-099
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Chemiluminescence
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1974	***Comments:***		

Sensor Type:	**Ozone**	***Appendix C Monitoring Method:***	EQOA-0992-087
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1974	***Comments:***		

Sensor Type:	**Particulate Matter PM10**	***Appendix C Monitoring Method:***	EQPM-1090-079
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	TEOM Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 7/17/1996	***Comments:***		

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	EQPM-0609-181
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	FDMS Gravimetric
Sensor Purpose Designation:	Population Exposure	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Cont.	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 8/19/2004	***Comments:***		

Sensor Type:	**Particulate Matter PM2.5**	***Appendix C Monitoring Method:***	RFPS-0498-118
Sensor Network Designation:	SLAMS	***Monitoring Method Description:***	Gravimetric
Sensor Purpose Designation:	Regulatory Compliance	***Appendix D Design Criteria*:***	Yes
Sample Frequency:	Daily	***Appendix D Scale:***	Urban Scale
Appendix A QA Assessment*:	Yes	***Appendix D Objectives:***	Population Exposure
Appendix C Monitoring Classification:	Manual Reference Method	***Appendix E Siting Criteria*:***	Yes
Start Date: 1/1/1999	***Comments:***		

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Sensor Type:	**PM2.5 Speciation**	*Appendix C Monitoring Method:*	None
Sensor Network Designation:	STN	*Monitoring Method Description:*	Gravimetric
Sensor Purpose Designation:	Research/Scientific Monitoring	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	1 in 6	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Speciation	*Appendix E Siting Criteria*:*	Yes
Start Date:	1/1/2002	*Comments:*	

Sensor Type:	**Sulfur Dioxide**	*Appendix C Monitoring Method:*	EQSA-0495-100
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Fluorescence
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Population Exposure
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/1/1974	*Comments:*	

Sensor Type:	**Volatile Organic Compound**	*Appendix C Monitoring Method:*	
Sensor Network Designation:	Other	*Monitoring Method Description:*	Canister (24 Hour)
Sensor Purpose Designation:	Air Toxics	*Appendix D Design Criteria*:*	No
Sample Frequency:	1 in 6	*Appendix D Scale:*	
Appendix A QA Assessment:*	No	*Appendix D Objectives:*	
Appendix C Monitoring Classification:		*Appendix E Siting Criteria*:*	No
Start Date:	1/15/2011	*Comments:*	

SITE NAME:	**YORK DOWNWIND**	*AQS SITE ID*	**421330011**
COUNTY:	**YORK**	*LATITUDE:*	**39.860972**
MUNICIPALITY:	**YORK**	*LONGITUDE:*	**-76.462055**
MSA:	**York-Hanover MSA**	*ADDRESS1:*	**2632 DELTA ROAD**

Sensor Type:	**Ozone**	*Appendix C Monitoring Method:*	EQOA-0992-087
Sensor Network Designation:	SLAMS	*Monitoring Method Description:*	UV Absorption
Sensor Purpose Designation:	Regulatory Compliance	*Appendix D Design Criteria*:*	Yes
Sample Frequency:	Cont.	*Appendix D Scale:*	Urban Scale
Appendix A QA Assessment:*	Yes	*Appendix D Objectives:*	Extreme Downwind
Appendix C Monitoring Classification:	Automated Equivalent Method	*Appendix E Siting Criteria*:*	Yes
Start Date:	4/22/2008	*Comments:*	

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Appendix C — PA DEP Ambient Air Monitoring Methods

Ambient Air Monitoring Equipment and Methodology

EPA mandates specific methods of sampling and analysis for all pollutants regulated by national ambient air quality standards (NAAQS). These regulations are published in the Code of Federal Regulations (CFR), and are adhered to by DEP. EPA generally approves one analysis method for each pollutant known as the Federal Reference Method (FRM). If a different method can be shown to provide adequate analysis, it may be submitted and approved by the EPA as a Federal Equivalent Method (FEM) or Automated Equivalent Method (AEM) and used in place of the FRM. PA DEP uses only FRM or FEM methods for all NAAQS-regulated pollutant monitoring. EPA-approved methods include both continuous and discrete methods.

Continuous methods are automated methods that analyze continuous samples of ambient air for the specified pollutant *in situ*. The output of these specialized air monitoring instruments are hourly pollutant concentrations, which are electronically transmitted to and stored in a data logging device (datalogger). The data is transferred from the datalogger to central operations via DEP's telecommunication network, where real-time measurements can be accessed.

Discrete methods are "manual" methods that require physical removal of a sample (usually a filter through which ambient air as been passed) from its collection site. For this reason, the pollutant concentrations obtained are for a defined or "discrete" period of time; air is not sampled continuously by the instrument.

Table C-1 provides details on the methods and instrumentation utilized by the Department's Air Quality Monitoring Division for all criteria and toxic pollutant monitoring.

Table C-1. Ambient Air Monitoring Equipment and Methods.

PARAMETER	MANUFACTURER/INSTRUMENT/MODEL	EPA METHOD DESIGNATION
Continuous Gaseous Sampling		
O_3	Teledyne Advanced Pollution Instrumentation Model 400 Photometric Ozone Analyzer http://www.teledyne-api.com/products/400e.asp	Automated Equivalent Method: EQOA-0992-087 57 FR 44565, 9/28/92 63 FR 31992, 6/11/98 67 FR 57811, 9/12/02
SO_2	Teledyne Advanced Pollution Instrumentation Model 100A UV Fluorescence SO_2 Analyzer http://www.teledyne-api.com/products/100e.asp	Automated Equivalent Method: EQSA-0495-100 60 FR 17061, 4/4/95
$NO/NO_2/NO_x$	Teledyne Advanced Pollution Instrumentation Model 200A Chemiluminescence Nitrogen Oxides Analyzer for Ambient Concentrations http://www.teledyne-api.com/products/200e.asp	Automated Reference Method: RFNA-1194-099 59 FR 61892, 12/2/94
CO	Teledyne Advanced Pollution Instrumentation Model 300 CO Gas Filter Correlation Analyzer http://www.teledyne-api.com/products/300e.asp	Automated Reference Method: RFCA-1093-093 58 FR 58166, 10/29/93
Particulate Sampling		
$PM_{2.5}$		
Discrete	R&P Partisol-Plus Model 2025 Sequential Air Sampler w/WINS and R&P Partisol-Plus Model 2025 Sequential Air Sampler w/VSCC http://www.thermoscientific.com/wps/portal/ts/products/detail?navigationId=L10405&categoryId=89579&productId=11960559.htm	Manual Reference Method: RFPS-0498-118 63 FR 18911, 4/16/98 67 FR 15567, 4/2/02 (EQPM-0202-145 redesignated as manual reference method 12/18/06)

PARAMETER	MANUFACTURER/INSTRUMENT/MODEL	EPA METHOD DESIGNATION
Continuous	Met One Instruments Beta-Attenuation Mass (BAM) Model 1020 http://www.metone.com/documents/BAM-1020_6-08.pdf	Automated Equivalent Method EQPM-0308-170 73 FR 13224, 3/12/08 73 FR 22362, 4/25/08
	R&P TEOM Series 8500a Filter Dynamics Measurement System (FDMS) and TEOM Series 1400ab http://www.thermoscientific.com/wps/portal/ts/products/detail?productId=11960562&groupType=PRODUCT&searchType=0	Automated Equivalent Method EQPM-0609-181 74 FR 28697, 6/17/2009
$PM_{2.5}$ SPECIATION	Met One Instruments SASS $PM_{2.5}$ Ambient Chemical Speciation Air Sampler http://www.metone.com/documents/SASS0301Particulate.pdf	None
PM_{10}		
Discrete	Thermo GMW PM_{10} High-Volume Air Sampler - Volumetric http://www.thermo.com/com/cda/product/detail/1,1055,23297,00.html	Manual Reference Method: RFPS-1287-063 52 FR 45684, 12/01/87 53FR 1062, 1/15/88
Continuous	Rupprecht & Patashnick (R&P) Tapered Element Oscillating Microbalance (TEOM) Series 1400 Ambient Particulate Monitor http://www.thermoscientific.com/wps/portal/ts/products/detail?navigationId=L10405&categoryId=89579&productId=11960558	Automated Equivalent Method: EQPM-1090-079 55 FR 43406, 10/29/90
LEAD	Hi-Q HVP-4300AFC Tisch TE-5170 VFC+ Inductively Coupled Plasma - Mass Spectrometry	Manual Equivalent Method EQL-0710-192 75 FR 45627, 8/3/10
Toxic Sampling		
VOC	ATEC Model 2200-12 ATEC Model 2200-102 http://www.atec-online.com/canister.htm Entech CS1200ES4 http://www.entechinst.com/media/pdfs/cs1200e_cat.pdf	EPA Compendium Method TO-15
Carbonyl	Xontech Model 925 Automated Carbonyl Sampler ATEC Model 2200-102 http://www.atec-online.com/products.htm	EPA Compendium Method TO-11A
MERCURY	Tekran Mercury Vapor Analyzer Model 2537A Cold Vapor Atomic Fluorescence Spectrometer (CVAFS) http://www.tekran.com/products/ambient-air/tekran-model-2537-cvafs-automated-mercury-analyzer/	EPA Compendium Method IO-5
TSP/Metals	Thermo GMW TSP High-Volume Air Sampler - Volumetric Flow Controlled http://www.thermoscientific.com/ecomm/servlet/productsdetail_11152_L11350_89579_11960634_-1 Inductively Coupled Plasma - Mass Spectrometry (Metals)	Manual Reference Method Method Code 802 47 FR 54912, 12/6/82 48 FR 17355 4/22/83 EPA Compendium Method IO-3.5