COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

1997

AMBIENT AIR QUALITY MONITORING REPORT

DIVISION OF AIR QUALITY MONITORING
400 MARKET STREET
HARRISBURG, PA 17105

For more information, visit us through the Pennsylvania website at www.pa.state.us,
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EXECUTIVE SUMMARY

The Pennsylvania Department of Environmental Protection (DEP) has a constitutional obligation to protect the right to clean air for all Pennsylvanians. DEP's Bureau of Air Quality fulfills this obligation by regulating emissions from thousands of sources, like factories and power plants. Monitoring air quality statewide, assisting companies with compliance, investigating complaints and taking enforcement action against violators are all part of DEP's work.

As DEP implements the federal Clean Air Act Amendments of 1990, the study of past and present air quality data will be a crucial component of program planning and air pollution reduction strategies.

Ambient Air Monitoring

The goals of Pennsylvania's ambient air monitoring program are to evaluate compliance with federal and state air quality standards, provide real-time monitoring of air pollution episodes, develop data for trend analysis, develop and implement air quality regulations and provide information to the public on daily air quality conditions in their area.

DEP monitors air quality in areas having high population density, high levels of expected contaminants or a combination of the two. The majority of the monitoring takes place in the 13 air basins of the Commonwealth. Air basins are geographic areas, usually valleys, where air tends to stagnate. The air basins were designated by the state legislature and written into the state code.

DEP does not generally monitor air quality in Allegheny or Philadelphia counties. Monitoring in these areas is performed by independent health agencies. An exception exists in Allegheny County, where DEP has an ambient monitoring site as part of an exhibit at the Carnegie Science Center.

Pollutant Standards Index

A Pollutant Standards Index (PSI) is published daily for 17 areas in Pennsylvania as a means of reporting daily air quality to the general public. The PSI records levels of five common air contaminants - carbon monoxide, sulfur dioxide, particulate matter (PM_{10}), ozone and nitrogen dioxide. It was developed by the U.S. Environmental Protection Agency to standardize air pollution ratings. Real time monitoring and current PSI information is also available on DEP's website at www.dep.state.pa.us (Choose Information by Subject / Air Quality).

Quality Assurance Program

DEP's Bureau of Air Quality conducts regularly scheduled performance audits and precision checks on the air monitoring equipment. Quarterly performance audits are conducted for the purpose of assessing data accuracy on carbon monoxide, sulfur dioxide, ozone, total suspended particulate matter (TSP), PM_{10} suspended particulate matter and lead monitoring systems.

Overview of Air Quality Data

Data collected by DEP can generally be divided into two groups: particulate matter and gaseous pollutants. The department uses health-based National Ambient Air Quality Standards (NAAQS) as well as several standards of its own, such as sulfates.

Total Suspended Particulate and PM_{10} Suspended Particulate Matter

Particulate matter is the solid or liquid matter in the air formed by smoke, dust, fly ash or condensing vapors that can be suspended in the air for long periods of time. Particulate emissions result primarily from industrial processes and fuel combustion. The smaller of these particles are breathed into the lungs where they can aggravate or cause respiratory ailments or carry other pollutants into the lungs.

The federal ambient air quality standard for particulate matter was revised to reflect the adverse health effects of particulate matter less than 10 microns in size (PM_{10}). PM_{10} measurements have replaced the total suspended particulate (TSP) standard because many of the larger particles included in the measurement do not penetrate into the lungs and have little health effect. PM_{10} measurements appear to represent essentially all of the particulate emissions from transportation sources and most of the emissions in the other traditional categories. Thus there is no federal or state air quality standard for TSP.

The annual mean composite of all areas of the Commonwealth has demonstrated a 23 percent improvement in TSP levels over the last 10 years. There were no sites in the Commonwealth that exceeded the former annual or 24-hour air quality standard in 1997.

PM_{10} monitoring began in the Commonwealth in 1985, with all sites continuing to meet the air quality standards. DEP completed a major commitment to install continuous PM_{10} instrumentation in all air basins in 1996. PM_{10} levels have remained fairly constant over the last 10 years with an average 4 percent improvement over the last five years. Average PM_{10} levels have improved 17 percent since 1989, when monitoring became established in all areas of the Commonwealth.

Sulfates

Sulfates in the atmosphere are of two types: primary and secondary. Primary sulfates are emitted directly into the atmosphere from industrial processes. Secondary sulfates are formed in sunlight.

Studies have shown significant correlation between high sulfate levels and illness. Sulfates also reduce visibility and contribute to acid rain. The high level of sulfates during the summer is due to sulfate formation in sunlight. Sulfates continue to be a problem in Pennsylvania.

The Commonwealth's 30-day air quality standard was violated in 1997 at all monitoring stations.

Lead

Lead is a metal that is highly toxic when ingested or inhaled. It is a suspected carcinogen of the lungs and kidneys and has adverse effects on cardio, nervous and renal systems. Lead is emitted into the atmosphere by industrial processes.

Lead levels in the Commonwealth have met the federal standards for the past 10 years and have improved by 70 percent. Relatively little improvements are now seen between years across the Commonwealth in most of the air basins that have no lead industrial sources since the removal of lead from gasoline.

Nitrates

Nitrates are particulate compounds that form in the atmosphere from the oxidation of nitrogen gases. They represent a significant portion of the finer particulate that can be inhaled into the lungs and which affect visibility.

Levels of nitrates are relatively constant across the Commonwealth. There are no long- or short-term air quality standards for nitrates.

Sulfur Dioxide

Sulfur dioxide is a gaseous pollutant that is emitted primarily by industrial furnaces or power plants burning coal or oil containing sulfur. Health problems caused by high exposures to sulfur dioxide include impairment of breathing and respiratory illnesses. Sulfur dioxide damages trees, plants and agricultural crops and is a precursor to acid rain.

All sites met the air quality standards. Sulfur dioxide levels have improved slightly or remained the same over the last 10-year period. The 1997 averages continue to be below 50 percent of the annual ambient air quality standard. The sulfur dioxide seasonal trend is directly related to space heating requirements.

Ozone

Ozone, or photochemical smog, is not emitted into the atmosphere but is formed by reactions of other pollutants. The primary pollutants entering into this reaction -- volatile organic compounds (VOC) and oxides of nitrogen (NO_x) -- create ozone in the presence of sunlight. Ozone is a strong irritant to the eyes and upper respiratory system and also damages crops.

Ozone is erratic by nature and levels fluctuate depending on weather conditions. Ozone levels are consistently higher during the summer months. Since 1989, ozone levels have shown little or no improvement. The improvements that are seen in ozone concentrations can be attributed in part to controls on VOCs and gasoline volatility. Ozone concentrations exceeded the 1-hour daily air quality standard on 7 days during 1997.

Oxides of Nitrogen

Oxides of nitrogen (NO_x) are a class of pollutants formed when fuel is burned at a very high temperature. It is predominately emitted from vehicles. Although there is no air quality standard for NO_x, the level of this pollutant is of concern due to its role in the formation of ozone and acid rain.

Nitrogen Dioxide

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 haze that causes eye and sinus irritation, blocks natural sunlight and reduces visibility. It can severely irritate respiratory illnesses. Nitrogen dioxide contributes to the creation of acid rain and adversely impacts forests and other ecosystems.

No sites in Pennsylvania exceeded the annual air quality standard in 1997. Nitrogen dioxide levels have improved on average 15 percent over the last ten years.

Carbon Monoxide

Carbon monoxide is a poisonous gas that, when introduced into the bloodstream, inhibits the delivery of oxygen to body tissue. Exposure creates a severe health risk to individuals with cardiovascular disease. The largest man-made source of carbon monoxide is vehicle emissions. This pollutant is only a health concern in areas of high traffic density or near industrial sources.

All DEP sites in the Commonwealth have met the federal air quality standards for the last 10 years. Carbon monoxide levels have seen a long-term improvement of 36 percent from levels in 1988.

For additional information about Pennsylvania's air quality programs, visit the DEP website www.dep.state.pa.us (choose Information by Subject / Air Quality).

INTRODUCTION

The goals of the ambient air monitoring program in Pennsylvania are to judge compliance with federal and state air quality standards, provide real-time monitoring of air pollution episodes, provide data for trend analysis, regulation evaluation and planning and provide public information daily on air quality.

Air quality monitoring to judge compliance with air quality standards in Pennsylvania is conducted by three agencies: DEP's Bureau of Air Quality; the Allegheny County Health Department; and Philadelphia Air Management Services.

This report contains summaries of the air quality data collected by DEP's Bureau of Air Quality in calendar year 1997. Data from Philadelphia or Allegheny counties can be obtained by contacting those agencies directly (mailing addresses and telephone numbers for all three agencies are given in Appendix B).

The monitoring strategy of DEP is to place monitors in areas having high population density, high levels of contaminants or a combination of the two. The majority of all monitoring efforts take place in the "air basins" of the Commonwealth. These "air basins" have been defined in the bureau's regulations and consist of the following 13 areas:

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

Air monitoring surveillance is conducted in all 13 air basins. Allegheny County conducts its own monitoring program, and Philadelphia, which also conducts its own monitoring program, is part of the Southeast Pennsylvania Air Basin. In addition to the 13 air basins in which DEP conducts surveillance, there are three additional non-air basin areas, which have historically significant monitoring programs: Altoona, Williamsport and the Shenango Valley. DEP recently began monitoring in Allegheny County at the Carnegie Science Center in Pittsburgh.

DEP operates two air monitoring networks in the Commonwealth: the Pennsylvania Air Quality Surveillance System (PAQSS), for high volume particulate sampling and the Commonwealth of Pennsylvania Air Monitoring System (COPAMS) for continuous pollutant sampling.

The discrete total suspended particulate network consists of 28 monitoring sites. Each site sampled total suspended particulate matter (TSP) on a schedule of once every six days. Selected filters are also analyzed for sulfates, nitrates and lead. In addition, discrete sampling is also conducted at 17 sites for suspended particulate matter of 10 microns or less in size (PM_{10}) in 1997. No additional analysis is performed on the PM_{10} sample filters.

The COPAMS network is a totally automatic, microprocessor controlled system which consists of 42 remote stations throughout the Commonwealth. These remote stations are connected by dedicated or dial-up telephone lines to a central computer system that collects the raw data. Each station measures selected parameters such as sulfur dioxide, hydrogen sulfide, ozone, carbon monoxide, nitrogen dioxide, oxides of nitrogen, PM_{10}, wind speed, wind direction (vector averaged and sigma theta), ambient temperature and solar radiation.

The sampling locations for DEP's air monitoring sites and the pollutants monitored at the site are listed in Appendix C.

In addition to the normal air monitoring surveillance conducted by DEP, two additional cooperative monitoring efforts were undertaken this year. DEP has continued a cooperative agreement with Pennsylvania State University's (PSU) Department of Plant Pathology, to conduct ozone monitoring in three remote areas of the state. The collected ozone data will be used to determine possible effects to forests and crops and assess ozone transport to rural Pennsylvania. The sites are located in the Moshannon State Forest (Clearfield County), Tiadaghton (Lycoming County), and at the Department of Conservation and Natural Resource Penn Nursery (Centre County).

To continue the efforts to understand ozone formation and transport by the North American Research Strategy for Tropospheric Ozone (NARSTO), DEP agreed to take over monitoring at three NARSTO sites: Holbrook, Greene County; Arendtsville, Adams County; and Kunkletown, Monroe County. Each NARSTO site monitors selected parameters such as ozone, sulfur dioxide, carbon monoxide and nitrogen oxides.

CHAPTER 1
AIR QUALITY STANDARDS

One of the primary goals of the ambient air monitoring program is to obtain data to compare against air quality standards. Pennsylvania has adopted all of the National Ambient Air Quality Standards (NAAQS), as well as several standards of its own. These standards, designed to protect the public health and welfare, are shown in Tables 1-1 and 1-2.

In September 1997, the NAAQS for ozone and particulate matter were revised. Since these revisions did not take place until a majority of the sampling year had already been conducted, this report and Table 1-1 will reflect the NAAQS in effect at the beginning of the year.

There are two types of NAAQS standards: primary and secondary. Primary standards protect against adverse health effects, while secondary standards protect against welfare effects such as damage to crops, vegetation, buildings and decreased visibility.

Table 1-1. National Ambient Air Quality Standards (NAAQS)

	Primary (Health Related)		Secondary (Welfare Related)	
Pollutant	Type of Average	Standard Level Concentration	Type of Average	Standard Level Concentration
Carbon Monoxide	8-hour Running	9 ppm	No Secondary Standard	
	1-hour	35 ppm	No Secondary Standard	
Lead	Maximum Quarterly Average	1.5 $\mu g/m^3$	Same as Primary Standard	
Nitrogen Dioxide	Annual Arithmetic Mean	0.053 ppm	Same as Primary Standard	
Ozone	Maximum Daily 1-Hour Average	0.12 ppm	Same as Primary Standard	
Particulate Matter PM_{10}	Annual Arithmetic Mean	50 $\mu g/m^3$	Same as Primary Standard	
	24-hour	150 $\mu g/m^3$	Same as Primary Standard	
Sulfur Dioxide	Annual Arithmetic Mean	0.03 ppm	3-hour	0.50 ppm
	24-hour	0.14 ppm		

Table 1-2. Pennsylvania Ambient Air Quality Standards

Pollutant	Type of Average	Standard Level Concentration
Settled Particulate (total)	Annual Arithmetic Mean	23 tons/$mile^2$/month
	30-day	43 tons/mile2/month
Beryllium	30-day	0.01 $\mu g/m^3$
Sulfates (as H_2SO_4)	30-day	10 $\mu g/m^3$
	24-hour	30 $\mu g/m^3$
Fluorides (total soluble, as HF)	24-hour	5 $\mu g/m^3$
Hydrogen Sulfide	24-hour	0.005 ppm
	1-hour	0.1 ppm

CHAPTER 2
AIR QUALITY TRENDS AND COMPARISONS

TOTAL SUSPENDED PARTICULATE

Total suspended particulates (TSP) are the solid or liquid matter in air. Particles vary in size and may remain suspended in the air for periods ranging from seconds to months. Particulate emissions come from coal-burning power plants, industrial processes, mining operations, municipal waste incinerators and fuel combustion. They also are produced by natural sources such as forest fires and volcanoes. The smaller of these particles are breathed into the lungs where they can aggravate or cause respiratory ailments. These smaller particles can also carry other pollutants into the lungs.

The federal ambient air quality standard for particulate matter has been revised to reflect the adverse health effects of particulate matter less than 10 microns in size (PM_{10}). There is no federal or state air quality standard for TSP.

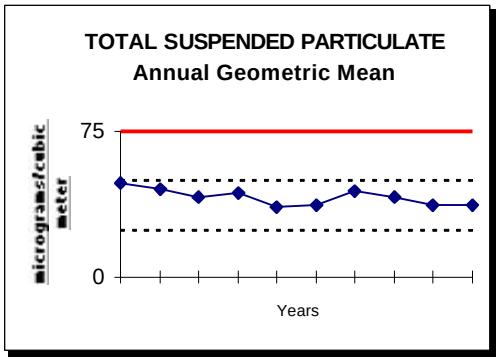


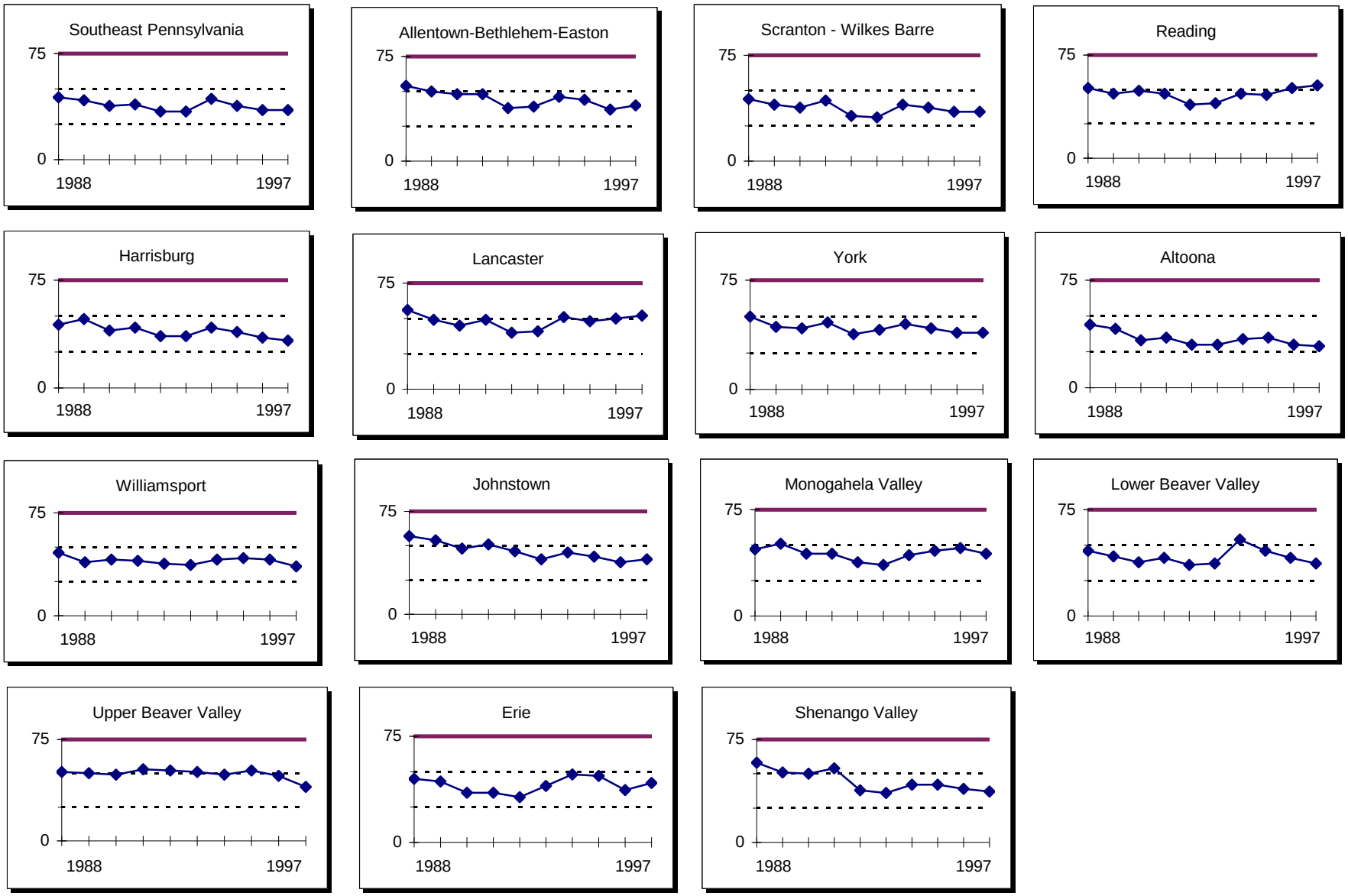
Figure 2-1. Trend in annual geometric mean TSP concentrations, 1988-1997.

Figure 2-1 shows a 23 percent decrease in annual geometric mean TSP concentrations measured across the Commonwealth between 1988 and 1997. The solid line represents the former annual primary air quality standard of 75 micrograms per cubic meter ($\mu g/m^3$).

Figure 2-2 shows the TSP trends over the last 10 years in various areas of the Commonwealth. The air basin and area's annual geometric means plotted consist of all stations which were operated during that year and which had at least 30 samples taken. Thus, stations that were moved or discontinued in the past are still included in the 10-year trend. The solid line represents the former annual primary air quality standard of 75 $\mu g/m^3$. The historical data that went into Figure 2-2 is contained in Appendix A. Table A-2 lists the annual geometric means over the last 10 years for each site that was monitored in 1997. The annual mean is shown if there were at least 30 samples collected that year.

The 1997 TSP summary is contained in Appendix A. Table A-1 tabulates the number of 24-hour samples collected, the annual geometric mean, the geometric standard deviation, the annual arithmetic mean, the three maximum 24-hour values with date of occurrence, the number of times the 24-hour values exceeded the former air quality standards, the minimum value and the number of 24-hour values in the indicated ranges. There were no sites in the Commonwealth that exceeded the former annual or 24-hour primary air quality standards in 1997. For comparison to the PM_{10} annual air quality standard, the TSP annual arithmetic mean was calculated by averaging the four quarterly arithmetic means.

FIGURE 2-2. TSP PARTICULATE TRENDS IN PENNSYLVANIA 1988 to 1997
ANNUAL GEOMETRIC MEANS (micrograms per cubic meter)



SULFATES

Sulfate particulate matter in the atmosphere is composed of two types: primary and secondary. Primary sulfates are emitted directly into the atmosphere from industrial processes. Secondary sulfates are formed in the atmosphere from other sulfur-containing compounds under mechanisms that involve photochemical processes.

Studies have shown significant correlation between high sulfate levels and increased illness absences. Sulfates are also of interest due to their effects of reducing visibility and contributing to acid rain.

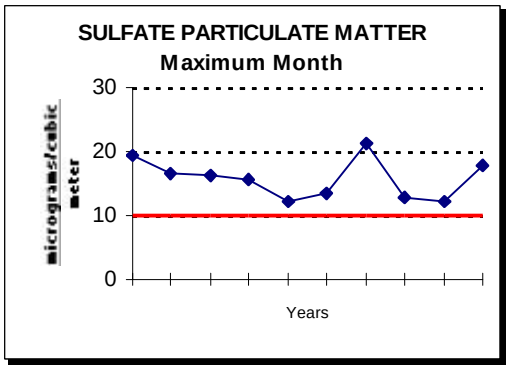


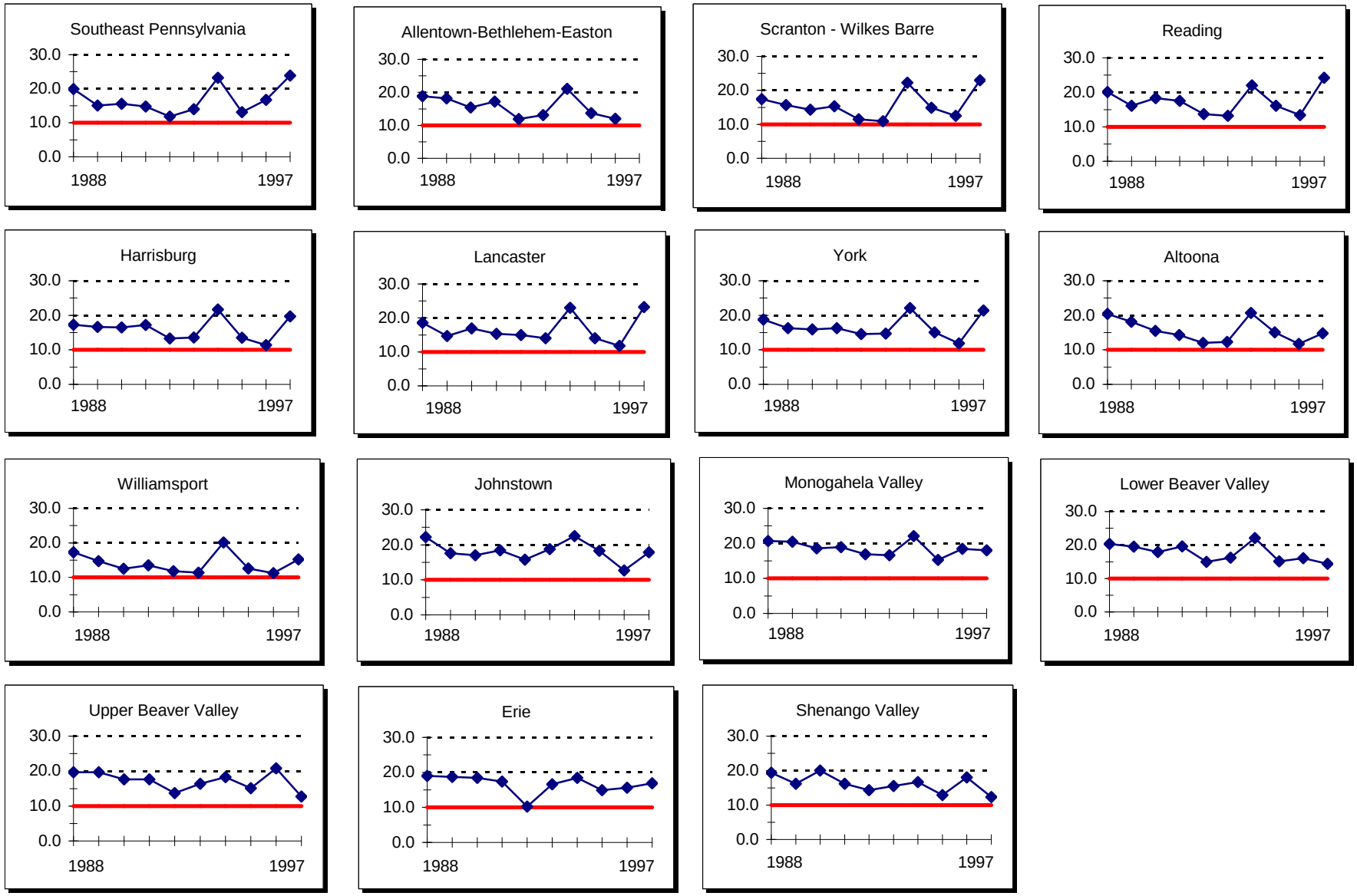
Figure 2-3. Trend in maximum monthly mean sulfate concentrations, 1988-1997.

Figure 2-3 shows the statewide trend of sulfate levels. Sulfate levels have show little long-term improvement, only 9 percent, over the last 10 years and have continually exceeded the 30-day (monthly) air quality standard. The solid line represents the 30-day state air quality standard of 10 micrograms per cubic meter ($\mu g/m^3$). In 1997, sulfates continue to be a problem with the 30-day state air quality standard being exceeded at all monitoring.

Sulfate trends, which are represented by the maximum 30-day (monthly) mean, are shown in Figure 2-4 for the years 1988 to 1997. The solid line represents the 30-day state air quality standard of 10 $\mu g/m^3$ on those graphs. Sulfate levels in all areas of the Commonwealth have shown no major improvement over the last 10 years with all areas exceeding the state air quality standard. The historical data that went into Figure 4-3 is contained in Appendix A. Table A-4 lists the maximum 30-day (monthly) means and the maximum 24-hour (daily) value over the last 10 years for each site that was monitored in 1997. The historical data is shown if there were at least 30 samples collected that year.

The 1997 sulfate summary is contained in Appendix A. Table A-3 tabulates the annual arithmetic mean, the number of 24-hour samples collected, the number of 30-day means greater than the air quality standard, the two maximum 30-day means and months of occurrence, the number of 24-hour values greater than the air quality standard and the two maximum 24-hour values with dates of occurrence. The large number of high sulfate levels during the summer is caused by the relationship between sulfate formation and photochemical processes. The maximum values will occur at the majority of sites during the period from May to September.

FIGURE 2-4. SULFATE PARTICULATE TRENDS IN PENNSYLVANIA 1988 to 1997
MAXIMUM MONTHLY MEANS (micrograms per cubic meter)



LEAD

Lead is a highly toxic metal when ingested or inhaled. It is a suspected carcinogen of the lungs and kidneys. It has adverse effects on the cardio, nervous and renal systems. 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, metals processing is the major source of lead emissions.

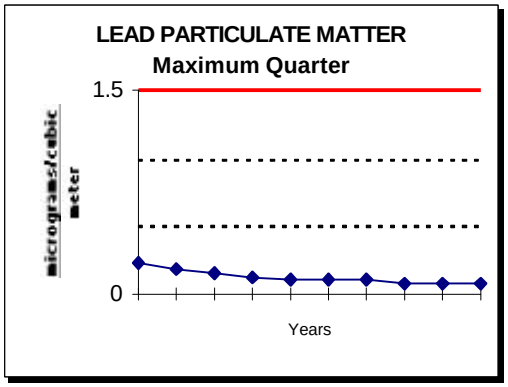


Figure 2-5. Trend in maximum quarterly average lead concentrations (including source-oriented sites), 1988-1997.

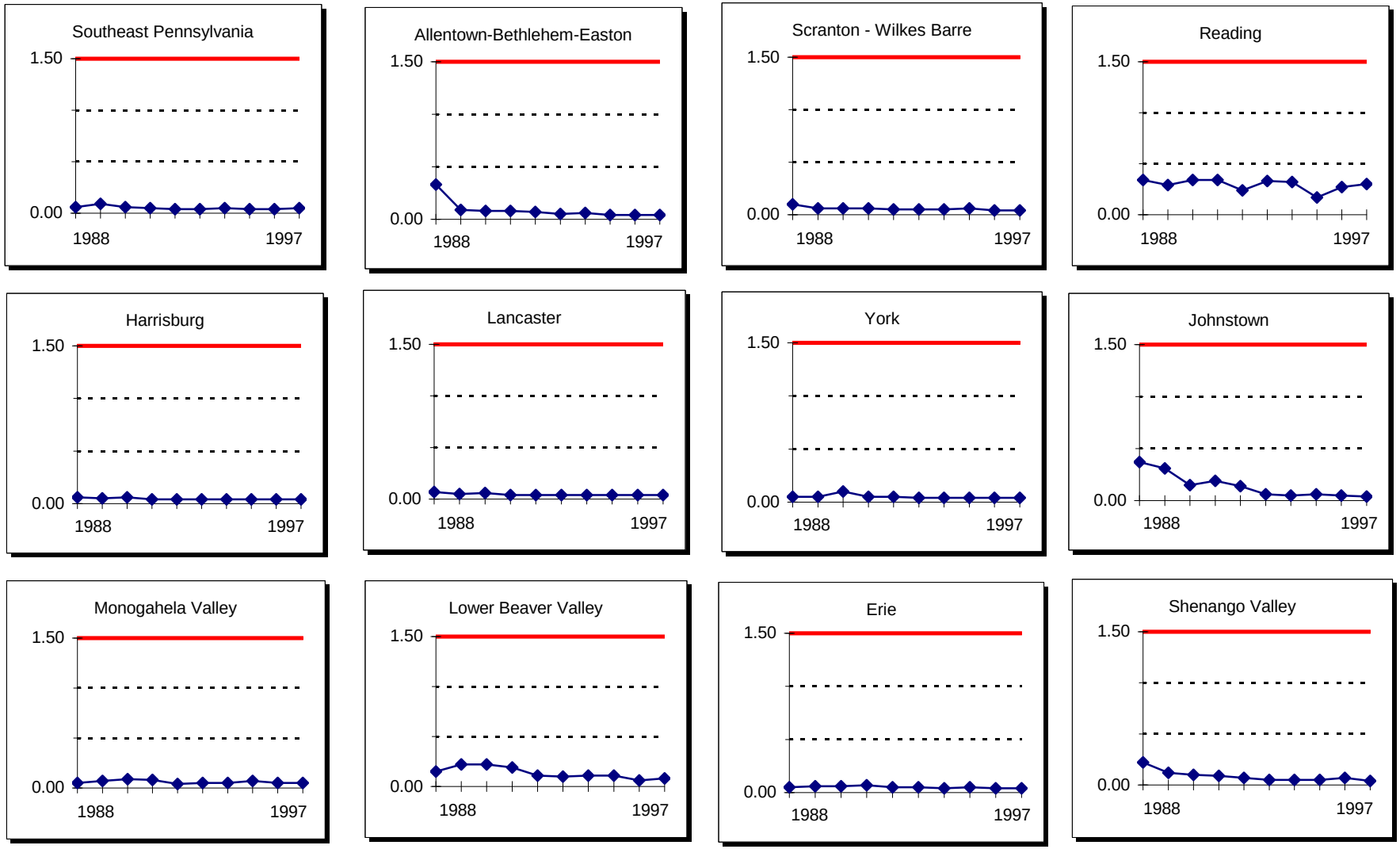
Lead concentrations for the years 1988 to 1997, are represented in Figure 2-5 by the maximum quarterly mean during the year for all monitors across the state. Lead concentrations have leveled off in the last 10 years after dramatic reductions seen in the late 1970s to early 1980s due to the implementation of lead-free gasoline. Figure 2-5 indicates that the maximum quarterly lead concentrations decreased 70 percent between 1988 and 1997. The solid line represents the quarterly mean air quality standard of 1.5 micrograms per cubic meter ($\mu g/m^3$).

Lead trends for the individual areas in the state are shown in Figure 2-6 for the years 1988 to 1997. The solid line represents the quarterly mean air quality standard of 1.5 $\mu g/m^3$ on these graphs.

The particulate lead standard was not exceeded at any monitoring site in 1997. Quarterly averages for all stations that monitored lead in 1997 are shown in Appendix A, Table A-5, along with the number of samples taken in each quarter, the annual arithmetic mean and the total number of samples for the year.

Lead historical trend data is presented in Appendix A, Table A-6 for the years 1988 to 1997. The table contains the maximum quarterly mean for each year. Trend data is shown for all sites that operated in 1997. The quarterly mean is shown if there were at least 30 samples collected that year. No current monitoring site has exceeded the air quality standard in the last 10 years. Relatively high 1997 lead levels experienced at sites located in Laureldale and Lyons are due to the influence of lead point sources close to the monitoring sites, although these sites are well below the air quality standard.

FIGURE 2-6. LEAD PARTICULATE TRENDS IN PENNSYLVANIA 1988 to 1997
MAXIMUM QUARTERLY MEANS (micrograms per cubic meter)



NITRATES

Nitrates are particulate compounds that are usually formed in the atmosphere from the oxidation of oxides of nitrogen gases. They are of interest since they represent a significant portion of the finer particulates which can be inhaled into the lungs and which have a great impact on visibility. Nitrates are also being studied to determine their impact on acid precipitation.

Table A-7 in Appendix A summarizes nitrate data collected during 1997. The table contains the annual mean, the number of samples collected, the three maximum 24-hour values and the minimum value recorded. As seen from the annual means, the levels of nitrates in the Commonwealth are relatively constant from area to area.

There are no long-term or short-term air quality standards for nitrates.

PM_{10} SUSPENDED PARTICULATE MATTER

Particulate matter (PM) is solid matter or liquid droplets from smoke, dust, fly ash or condensing vapors that can be suspended in the air for long periods of time. Particulate matter in air with aerodynamic diameters less than 10 micrometers is PM_{10}. PM_{10} has replaced the total suspended particulate (TSP) standards in recognition of the fact that many of the larger particles included in TSP measurement (up to 45 micrometers) do not penetrate into the lungs and have very little effect on health. Consequently, the PM_{10} measurement is believed to be a better indicator of actual health risks.

PM_{10} appears to represent essentially all of the particulate emissions from transportation sources and most of the emissions in the other traditional categories. The standard for PM_{10} was adopted in July 1987. On July 18, 1997, EPA revised the particulate matter standards by adding new standards for $PM_{2.5}$ (particles less than or equal to 2.5 micrometers) and by adjusting the form of the PM_{10} 24-hour standard. The comparisons discussed in this section will focus on the standards that were in place at the beginning of the 1997 monitoring year.

The Commonwealth measures PM_{10} concentrations using discrete (single sample) monitors which collect particulate matter on a filter for 24 hours and with a real-time instrument for measuring the PM_{10} particulate concentration. The tapered element oscillating microbalance (TEOM) is a gravimetric instrument that draws ambient air through a filter, constantly weighing the filter and calculating real-time PM_{10} concentrations. The analyzer reports 1-hour data, which are then used to calculate daily 24-hour averages (midnight to midnight), for comparison to the ambient air quality standard.

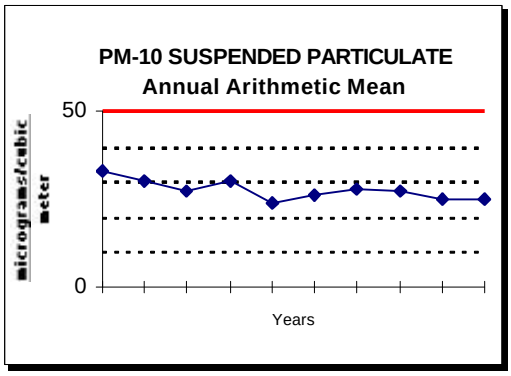


Figure 2-7. Trend in annual mean PM_{10} concentrations, 1988-1997.

Figure 2-7 graphically represents the historical statewide PM_{10} trend for the years 1988 to 1997. Monitored levels of PM_{10} levels in 1997 have improved 24 percent from levels observed in 1988 across the Commonwealth. The number of monitors has increased over the last three years with the installation of continuous monitors across the state. A majority of these monitors were installed in high population areas that are representative of large-scale exposure for comparison to the annual standard rather than the 24-hour standard. Since these sites are not source-oriented, when they are averaged in determining any short-term trend the levels tend to stay constant. As a result, PM_{10} concentrations have improved by only 4 percent over the last five years.

The map in Figure 2-8 shows the relationship of PM_{10} annual mean levels in the different counties across the Commonwealth where monitoring is performed. When there are multiple sites in the county the annual mean is an average of the sites. Only sites that have monitored 50 percent of the time during 1997 are included in this figure. All counties monitored by DEP are in attainment of the annual PM_{10} air quality standard.

The map in Figure 2-9 displays the highest second maximum 24-hour PM_{10} by county in 1997. All counties monitored by DEP are in attainment of the 24-hour PM_{10} air quality standard.

PM_{10} trends for the individual areas of the state are shown in Figure 2-10 for the years 1988 to 1997. The air basin or area averages consist of all stations which were operated during that year and had at least 30 discrete samples or 50 percent valid continuous data. PM_{10} levels have remained fairly constant over this period with an average 4 percent decrease in levels over the last 5 years. The Erie air basin has demonstrated the most improvement with a 23 percent decrease over the last 5 years. Average PM_{10} levels have improved by 17 percent since 1989, when monitoring became established in all areas of the Commonwealth. The solid line represents the annual air quality standard of 50 micrograms per cubic meter ($\mu g/m^3$).

The 1997 PM_{10} data summary appears in Appendix A, Table A-8. The table contains the arithmetic annual mean (formed from the average of the quarterly means), the number of 24-hour samples collected (or calculated), the four maximum 24-hour values, the number of values greater than 150 $\mu g/m^3$, the minimum 24-hour value and the number of 24-hour values in the specified ranges. There were no sites in the Commonwealth that violated the annual or 24-hour ambient air quality PM_{10} standard in 1997.

Historical trend data for each site that monitored in 1997 is shown in Appendix A, Table A-9. This table lists the annual arithmetic means and second maximum 24-hour mean over the last ten years for each site that monitored in 1997 with at least 50 percent data completeness.

Figure 2-8. PM-10 Particulate Matter Concentrations - 1997

Annual Means (Average by County)
(micrograms per cubic meter)

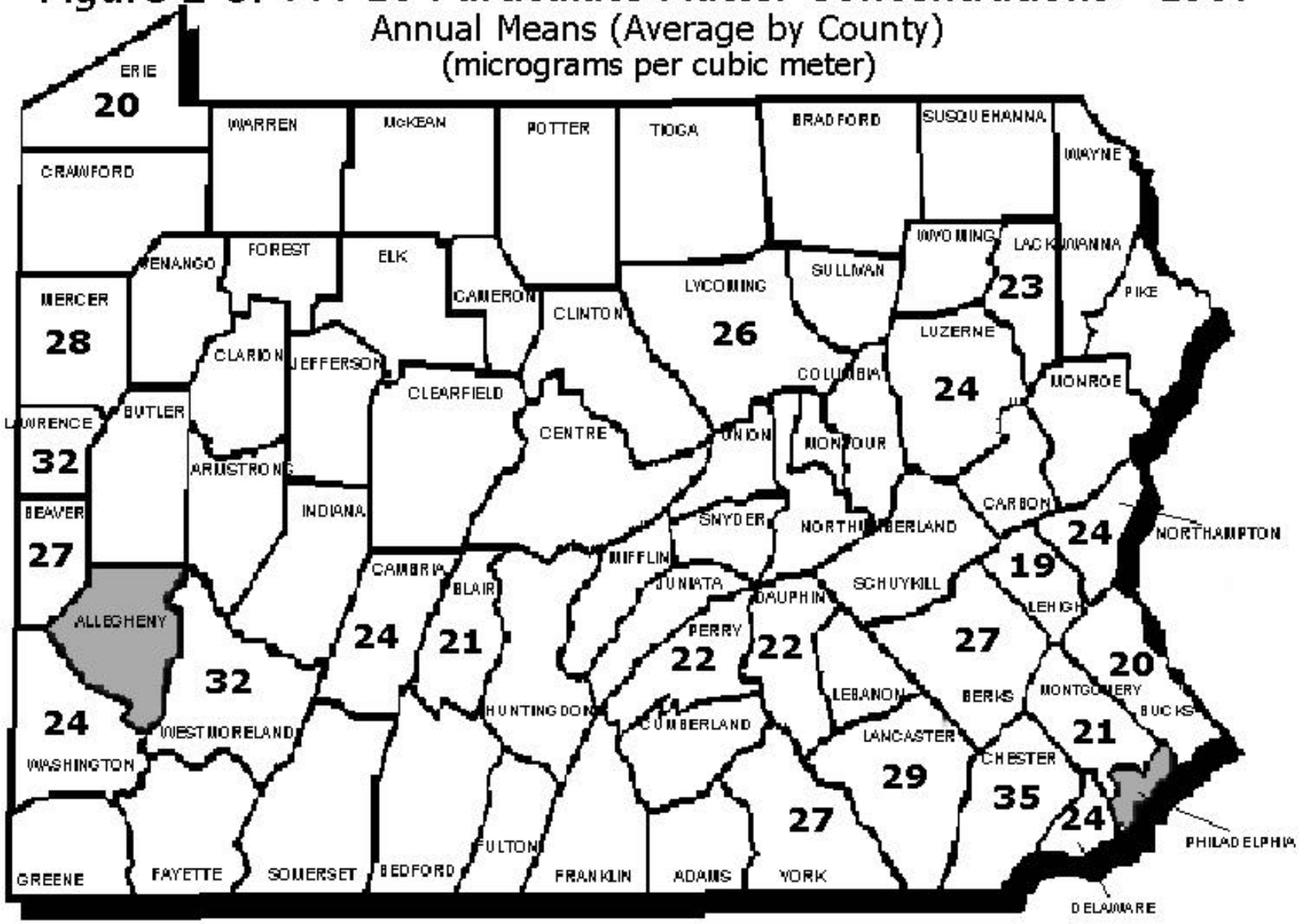


Figure 2-9. PM-10 Particulate Matter Concentrations - 1997

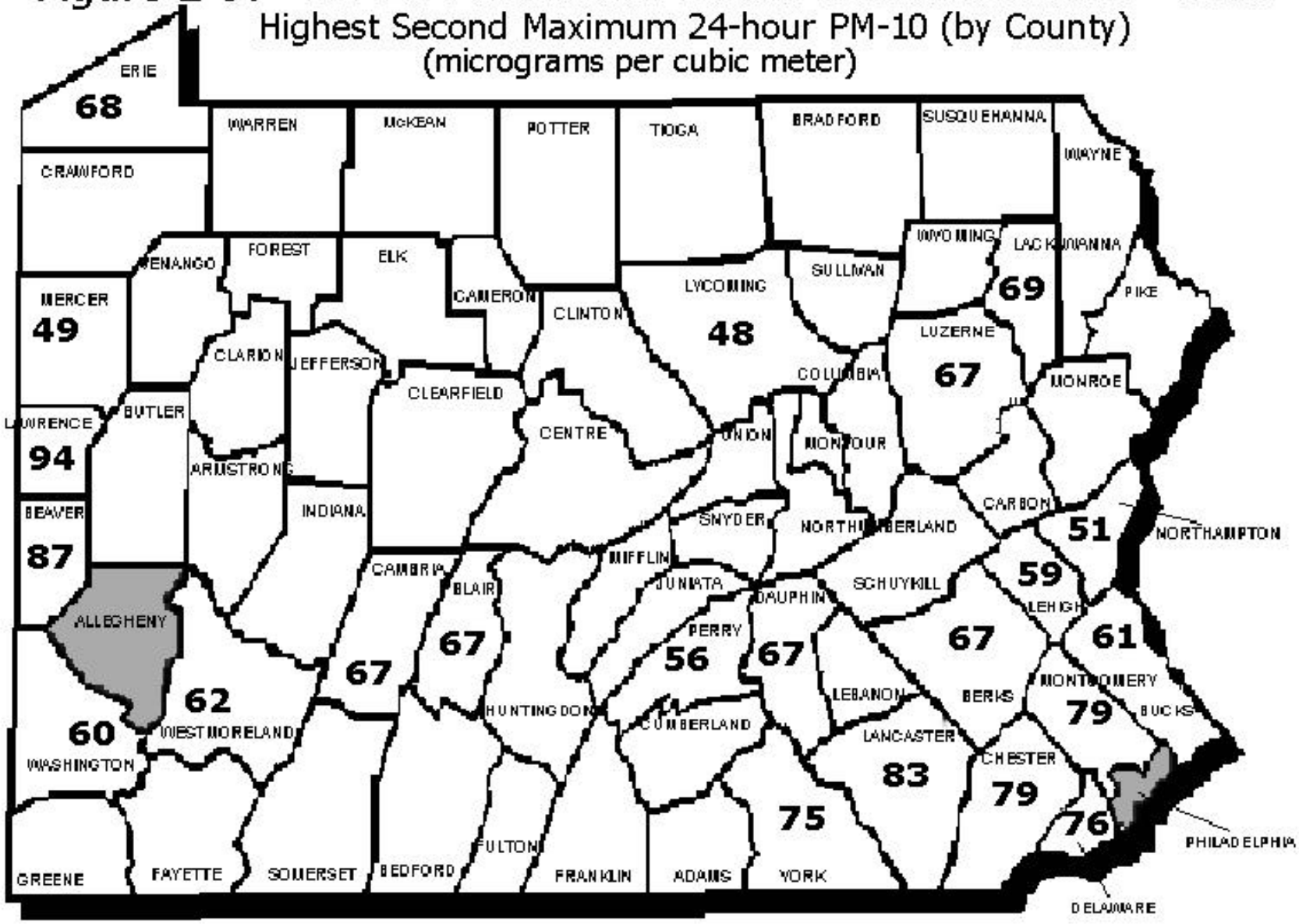
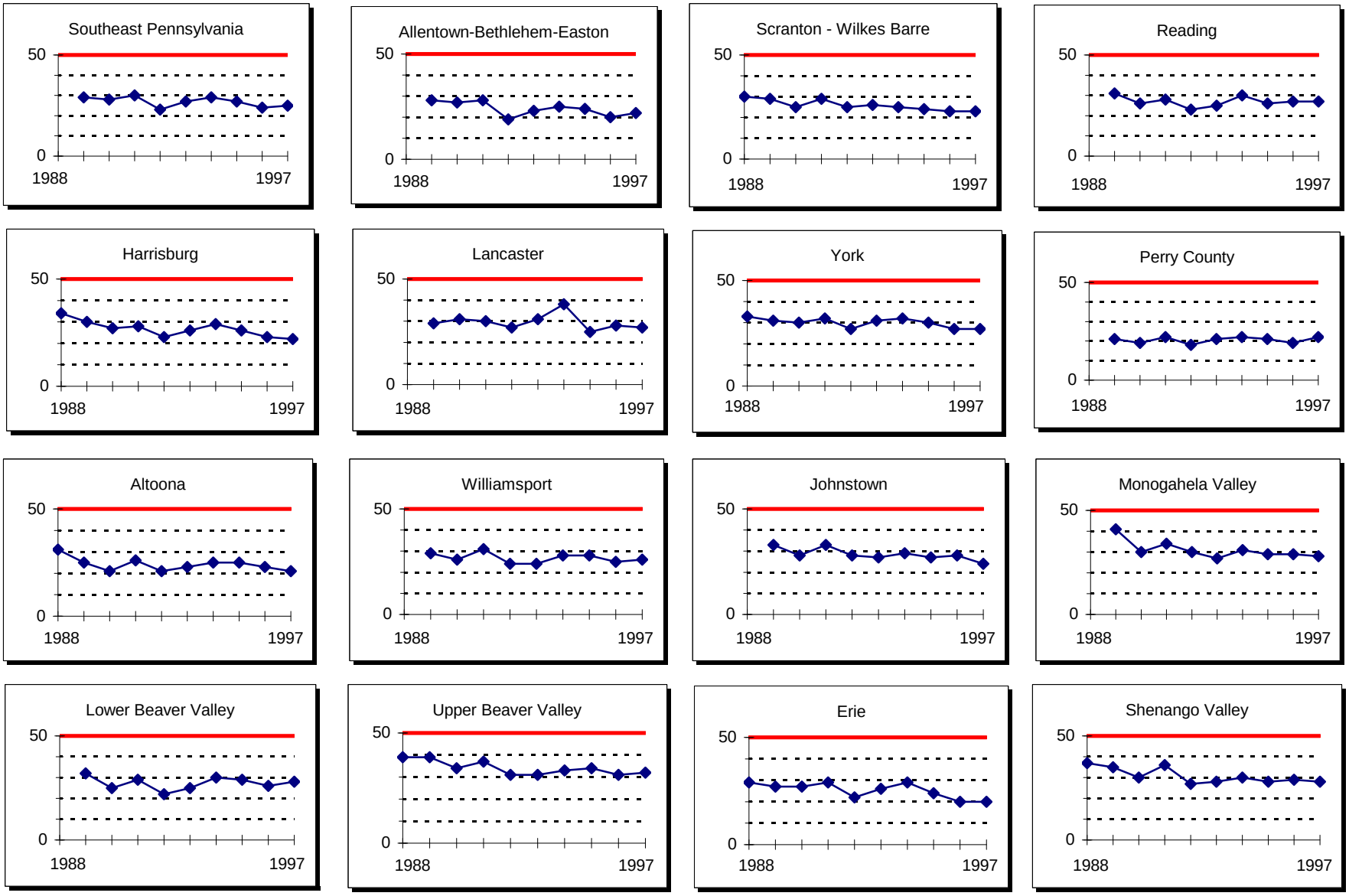


FIGURE 2-10. PM-10 PARTICULATE TRENDS IN PENNSYLVANIA 1988 to 1997
ANNUAL ARITHMETIC MEANS (micrograms per cubic meter)



SULFUR DIOXIDE

Sulfur dioxide is a gaseous pollutant that is emitted primarily by industrial furnaces or power plants burning coal or oil containing sulfur. 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 trees, plants and agricultural crops and acts as a precursor to acid rain.

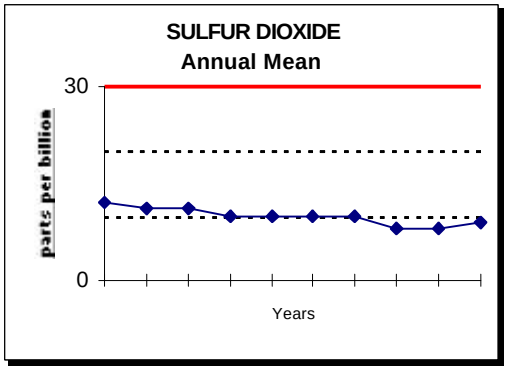


Figure 2-11. Trend in annual mean SO_2 concentrations, 1988-1997

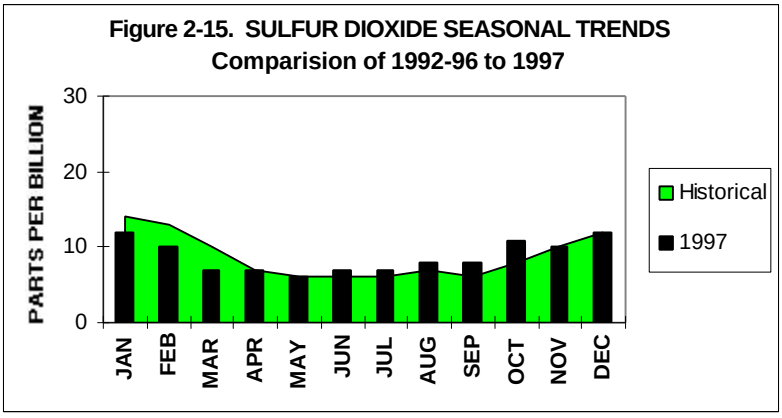
The statewide composite average of sulfur dioxide annual mean concentration for the years 1988 to 1997 is shown in Figure 2-11. Sulfur dioxide levels have shown only a slight improvement over the last ten years.

The map in Figure 2-12 displays the average sulfur dioxide annual mean by county in 1997. All counties in which monitoring was conducted met the air quality standard of 30 parts per billion (ppb).

The map in Figure 2-13 displays the highest second maximum 24-hour (daily) average concentration by county in 1997. All areas of the Commonwealth met the 24-hour air quality standard of 140 ppb.

Figure 2-14 shows the sulfur dioxide 10-year trend (1988 to 1997) of the annual arithmetic mean in the 12 air basins and the Altoona, Williamsport and Shenango Valley non-air basins. The solid line represents the annual air quality standard of 0.030 parts per million (ppm). The 1997 averages continue to be below 50 percent of the ambient air quality standard. The Johnstown air basin continues to improve with levels 47 percent less than recorded in 1988. All other areas have shown little improvement over the last 10 years, while levels in the York air basin have increased slightly over the last three years.

Sulfur dioxide levels correlate significantly with ambient temperatures. As temperatures go down, the space heating requirements increase resulting in additional burning of coal and oil. The seasonal trend for sulfur dioxide is shown in Figure 2-15 for 1997 and the average levels for the preceding five years.



Sulfur dioxide data for all sites that operated in 1997 is summarized in Appendix A, Table A-10. The summary includes the annual arithmetic mean, the percentage of valid 1-hour data collected, the number of 3-hour and 24-hour air quality standard exceedances, the two maximum 3-hour (block averaging) and 24-hour (daily) means with dates of occurrence and the number of 24-hour averages in the indicated ranges. All sites in the Commonwealth met the annual mean, 3-hour and 24-hour ambient air quality standards.

Sulfur dioxide historical data over the last ten years is presented in Appendix A, Table A-11 for all stations that operated in 1997 with at least 50 percent valid data. This data was used to produce the trend chart shown in Figure 2-14. The data includes the annual arithmetic mean, the second maximum 24-hour and 3-hour averages.

Figure 2-12. Sulfur Dioxide Concentrations - 1997

Annual Means (Average by County)

(parts per billion)

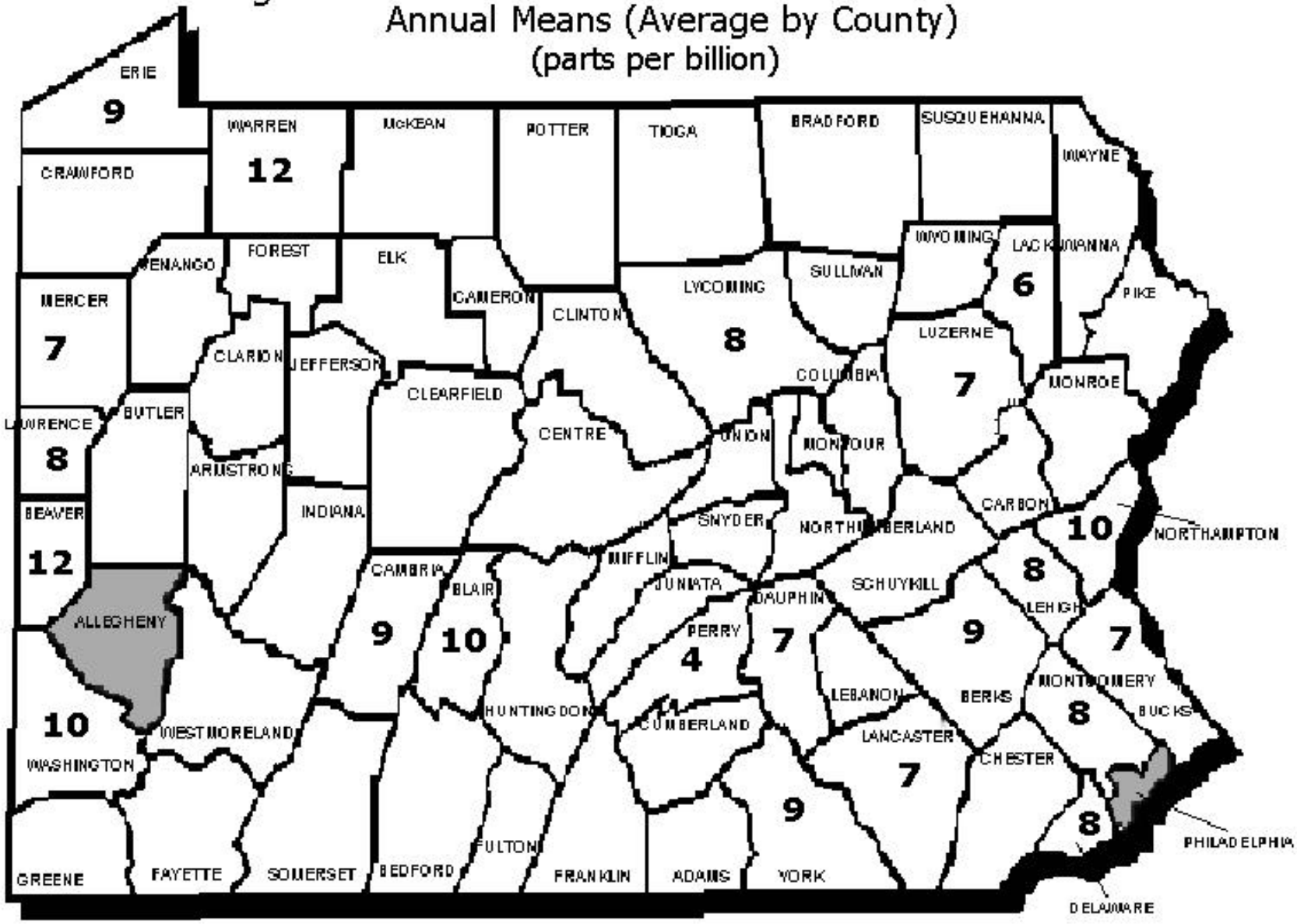


Figure 2-13. Sulfur Dioxide Concentrations - 1997

Highest Second Maximum 24-Hour Running Mean (by County)

(parts per billion)

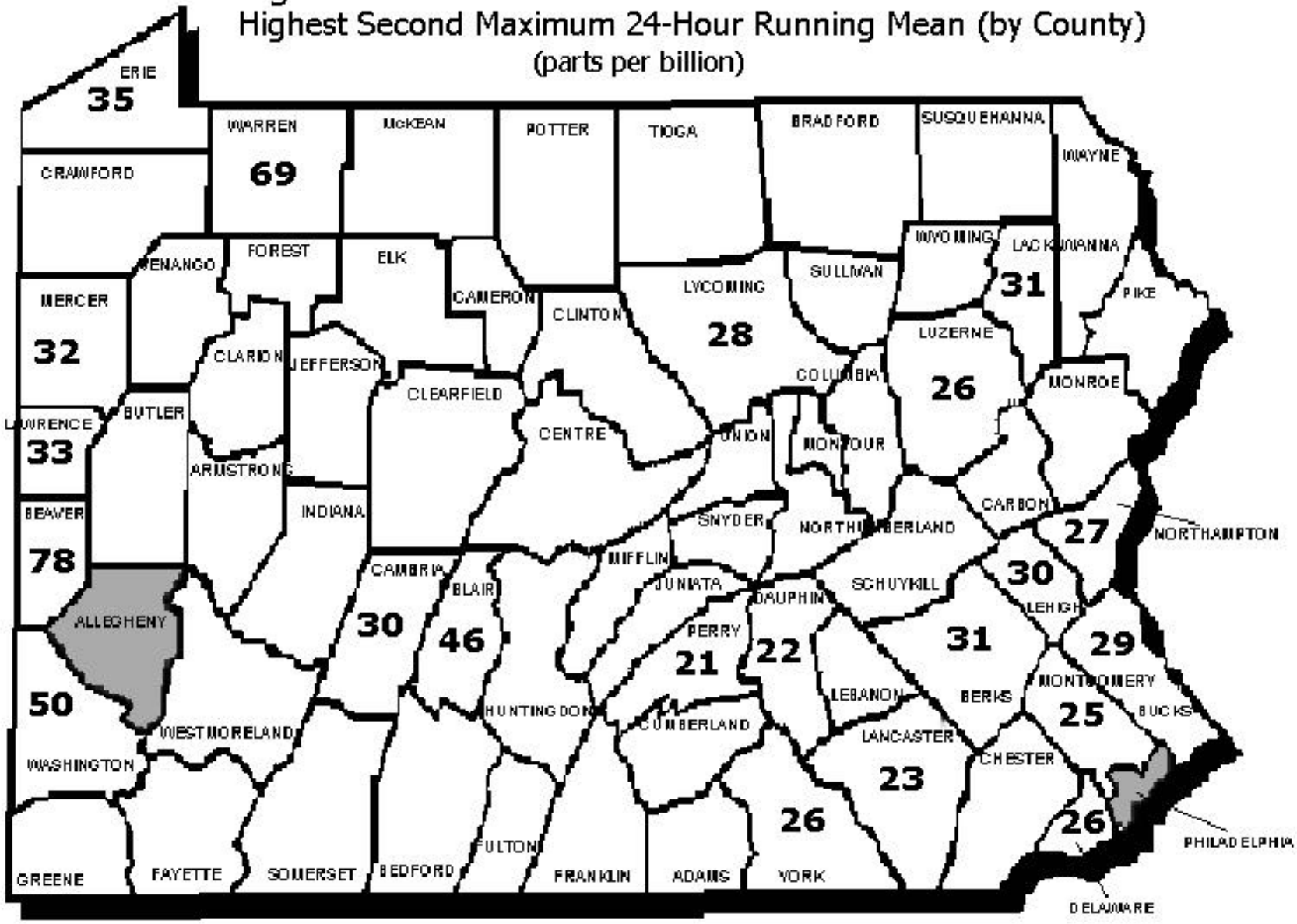
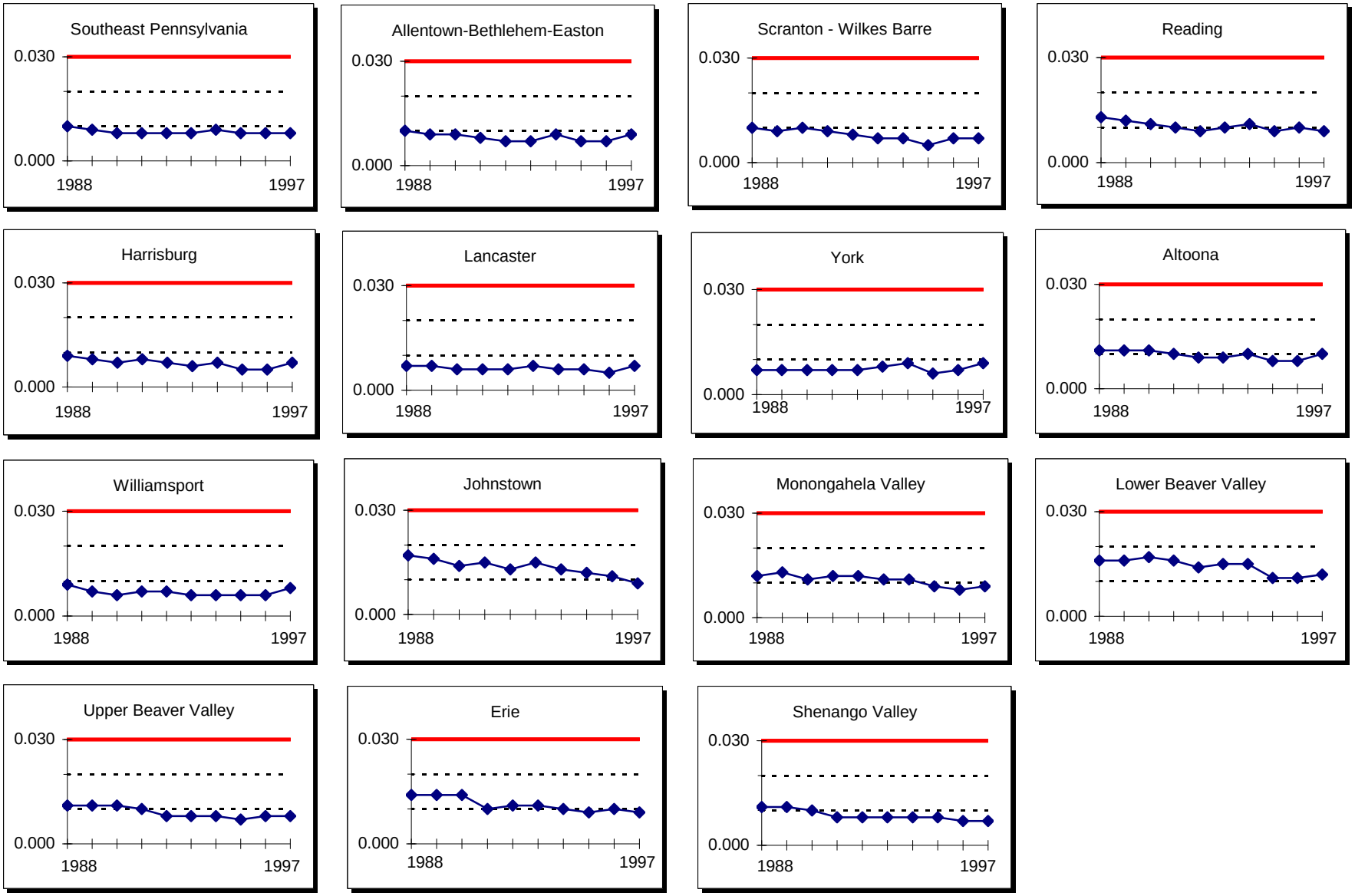


FIGURE 2-14. SULFUR DIOXIDE TRENDS IN PENNSYLVANIA 1988 to 1997
ANNUAL ARITHMETIC MEANS (PARTS PER MILLION)



OZONE

Ozone, or photochemical smog, is a secondary pollutant in that it is not emitted directly to the atmosphere but rather formed in the atmosphere by the reactions of other pollutants. Ground level ozone is formed during the summer months, when nitrogen oxides (NO_x) and volatile organic compounds (VOC) combine and react in the presence of sunlight and warm temperatures. Nitrogen oxides come from burning fossil fuels at power plants, industrial boilers and motor vehicles. They combine with volatile organic compounds like evaporated gasoline and dry cleaning solvents to create ozone. Ozone is a strong irritant to the eyes and upper respiratory system. It hampers breathing and also damages crops and materials.

In July 1997, EPA replaced the previous 1-hour primary standard (health-based) with a new 8-hour standard to protect against longer exposure periods. The secondary standard (welfare-based) was set identical to the 8-hour primary standard. The ozone secondary standard highlights the concerns associated with effects on vegetation. As a way of focusing on ozone-related vegetation effects, DEP has contracted with Pennsylvania State University to monitor at three rural sites: Moshannon State Forest, Clearfield County; Tiadaghton, Lycoming County; and at the Department of Conservation and Natural Resource Penn Nursery facility, Centre County.

In addition to the established surveillance monitoring sites, DEP also agreed to continue monitoring begun by the North American Research Strategy for Tropospheric Ozone (NARSTO). These sites are primarily designed to study ozone transport in the northeast. These sites are located in Holbrook, Greene County and Kunkletown, Monroe County.

Since the 8-hour ozone standard was not in effect at the beginning of the ozone season, this report will focus on the 1-hour standard that was in place during 1997. The ozone season in Pennsylvania is defined to be from April 1 to October 31.

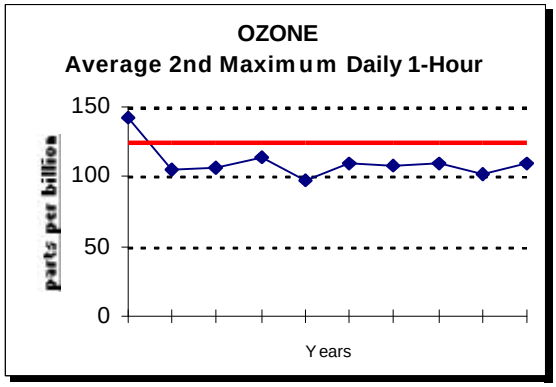


Figure 2-16. Trend in average second daily maximum 1-hour ozone concentrations, 1988-1997

Ambient ground level ozone trends are erratic by nature. Changes in meteorological conditions, population growth, and changes in emissions (VOC and NOx) influence ozone concentrations. Figure 2-16 shows that the statewide (DEP sites only) average second daily maximum 1-hour ozone concentration is 23 percent lower than the 1988 level. However, ozone levels have shown no improvement since 1989. The solid line is at the primary air quality standard of 125 parts per billion (ppb).

The map in Figure 2-17 presents the highest second daily maximum 1-hour ozone concentration by county in 1996. Lancaster, Montgomery and Delaware counties had more than one exceedance of the air quality standard in 1997. All ozone monitoring sites are included in the representation with the exception of those monitors operated by Allegheny and Philadelphia counties.

For the 12 airs basins and the Altoona, Williamsport and Shenango Valley non-air basins, Figure 2-18 shows the 10-year trend (1988 to 1997) of the average second daily maximum 1-hour ozone concentration, during the ozone season for DEP monitoring sites. Except for the large improvement between 1988 and 1989, there is no trend in ozone levels.

Williamsport has been the only area consistently below the air quality standard of 125 ppb, which is indicated by the solid line on the charts. Southeast Pennsylvania and Lancaster are the only DEP monitoring areas that are exceeding the air quality standard. Sites operated by Allegheny and Philadelphia counties are also exceeding the air quality standard.

Ozone levels correlate significantly with ambient temperatures and the longer days present during the summer months. The seasonal trend for ozone is shown in Figure 2-19 for 1997 and the average levels for the preceding five years.

Figure 2-19. OZONE SEASONAL TRENDS
Comparison of 1992-96 to 1997

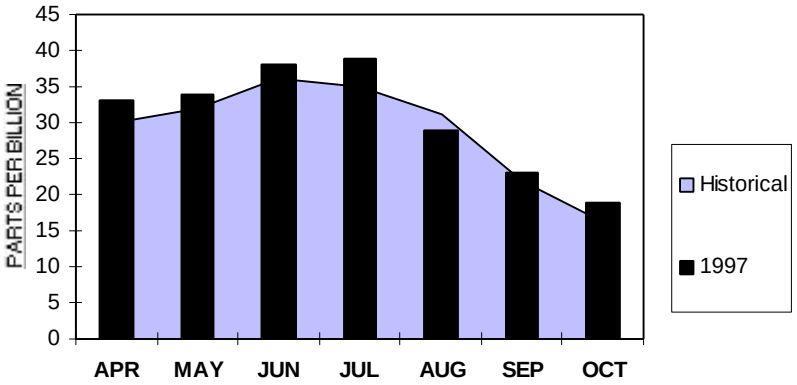


Table A-12 in Appendix A summarizes ozone data during the ozone season of 1997 for all monitoring sites. The data includes the annual mean, the percentage of 1-hour valid data values collected during the ozone season, the four highest daily 1-hour maximum values with dates of occurrence, the number of days exceeding the 125 ppb daily air quality standard and the number of daily 1-hour maximum values in the indicated ranges.

Historical data for ozone from 1988 to 1997 is contained in Appendix A, Table A-13 for all DEP sites that operated during the ozone season in 1997 with at least 50 percent valid data. The data includes the second maximum daily 1-hour value, which is on a day different from the maximum daily 1-hour value, and the number of exceedances of the air quality standard for the year. To attain compliance with the air quality standard, a site can have no more than three exceedances of the 0.12 parts per million (ppm) standard over the last three years. DEP monitoring sites located in the Southeast Pennsylvania and Lancaster air basins have more than three exceedances in the last three years along with sites operated by Allegheny and Philadelphia counties.

Table 2-1 lists the days on which the 1-hour ozone NAAQS was exceeded in 1997. This list includes monitoring sites operated by the Allegheny County Health Department and Philadelphia Air Management Services.

Table 2-1. Ozone Exceedance Days in Pennsylvania – 1997

Date of Occurrence	Monitoring Site	County	Daily 1-Hour Concentration (ppb)
6/20/97	Chester	Delaware	127
6/24/97	Norristown	Montgomery	131
	Harrison Twp.	Allegheny	129
7/8/97	Lancaster	Lancaster	128
7/12/97	Murrysville	Westmoreland	128
	Harrison Twp.	Allegheny	126
	Penn Hills	Allegheny	129
7/13/97	Johnstown	Cambria	132
	Harrison Twp.	Allegheny	133
	Lawrenceville	Allegheny	125
	Penn Hills	Allegheny	134
7/14/97	Norristown	Montgomery	135
	Chester	Delaware	126
	Lancaster	Lancaster	133
	Penn Nursery	Centre	126
	Northeast Philadelphia	Philadelphia	130
7/15/97	Bristol	Bucks	144
	Chester	Delaware	128
	Allentown	Lehigh	127
	Reading	Berks	131
	Lancaster	Lancaster	139
	Northeast Philadelphia	Philadelphia	130

Figure 2-17. Ozone Concentrations - 1997

Highest Second Maximum Daily 1-Hour Concentration (by County)

(parts per billion)

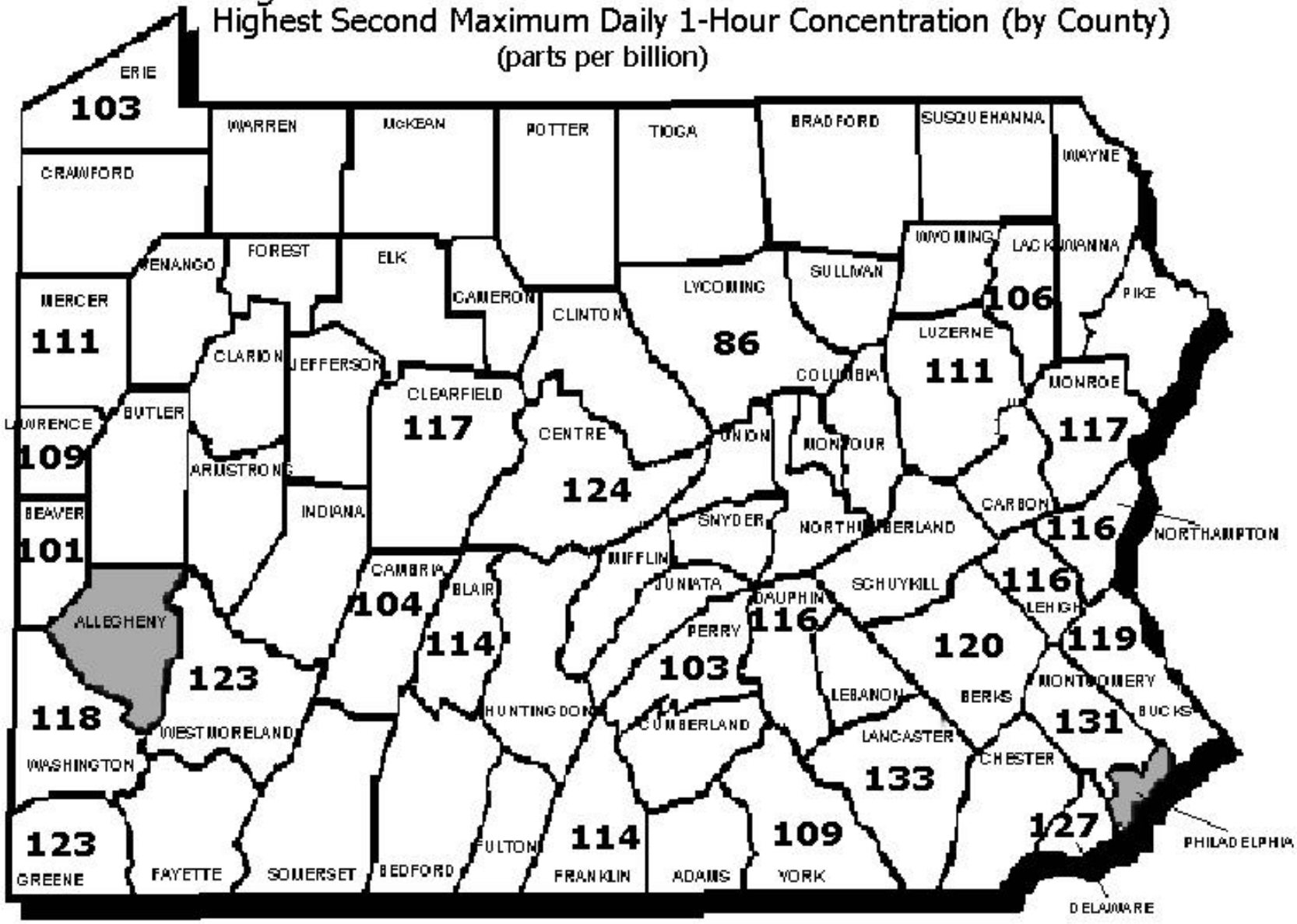
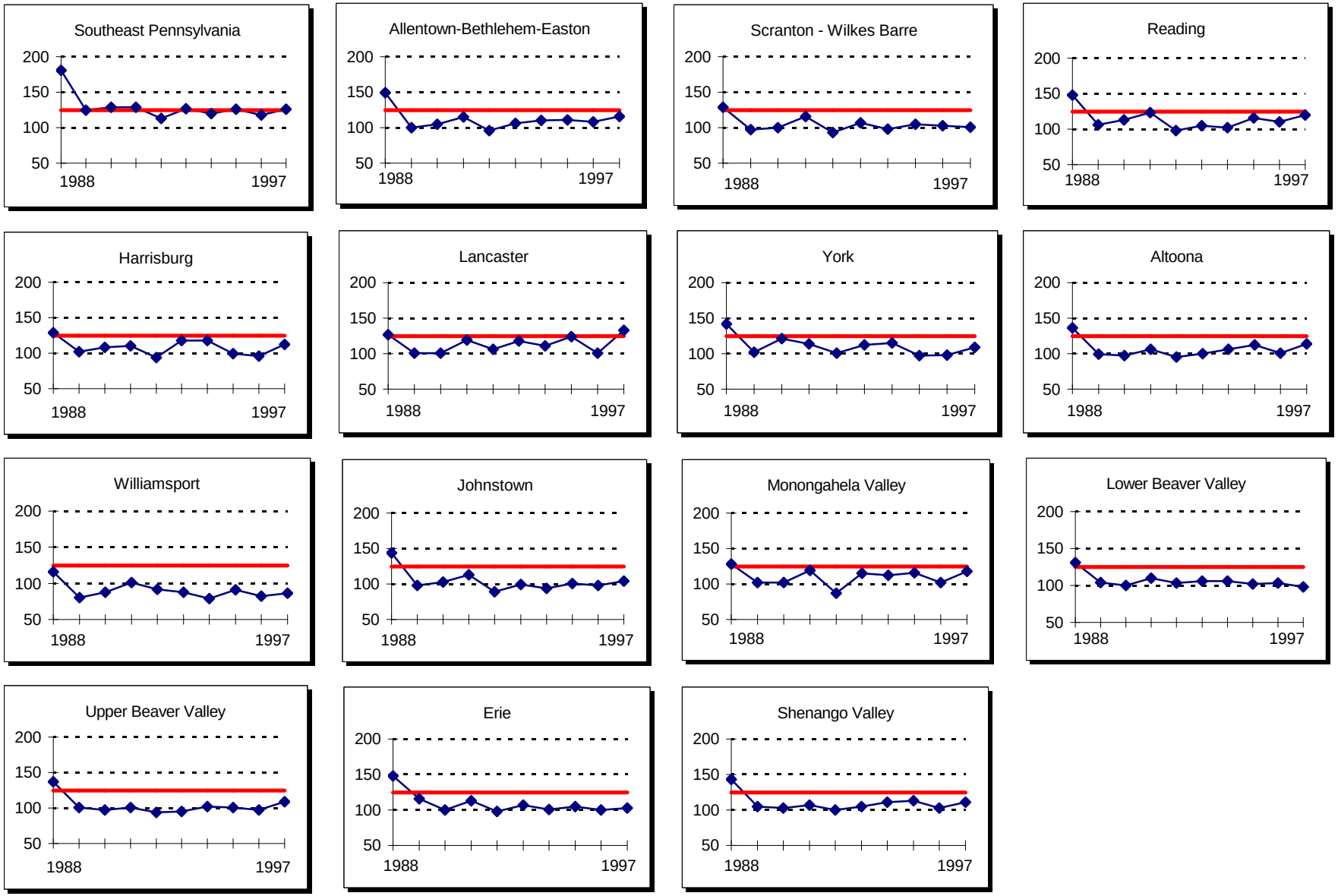


FIGURE 2-18. OZONE TRENDS IN PENNSYLVANIA 1988 to 1997
SECOND DAILY MAXIMUM 1-HOUR (PARTS PER BILLION)



NITROGEN DIOXIDE / OXIDES OF NITROGEN

Nitrogen dioxide (NO_2) is a highly toxic reddish brown gas that is emitted primarily from the combustion of fuels in stationary or transportation sources. It can cause an odorous brown haze that irritates the eyes and nose, shuts out sunlight and reduces visibility. NO_2 acts as a precursor to acidic precipitation and plays a key role in nitrogen loading of forests and ecosystems. Also, NO_2 plays an important role in the atmospheric reactions that generate ozone. NO_2 has been associated with acute effects in sufferers of respiratory disease.

Oxides of nitrogen (NO_x) are a class of pollutants formed when fuel is burned at a very high temperature (above 1200° F), such as automobiles and power plants. For air pollution purposes it is composed primarily of nitric oxide (NO) and nitrogen dioxide (NO_2). Although there is no air quality standard for NO_x, it is an important precursor to both ozone and acid rain.

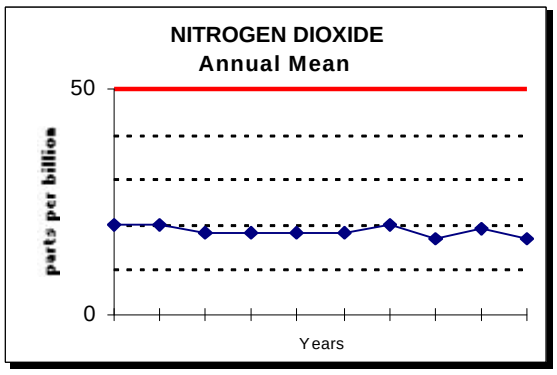


Figure 2-20. Trend in annual NO_2 concentrations, 1988-1997.

The trend in annual mean nitrogen dioxide (NO_2) concentrations statewide between 1988 and 1997 is shown in Figure 2-20. The trend shows a 15 percent decrease in the composite statewide mean over the last 10 years. All areas of the state continue to be well below the air quality annual standard of 53 parts per billion (ppb), which is indicated by the solid line in Figure 2-20.

Figure 2-21 indicates the 10-year trend of nitrogen dioxide annual mean levels from 1988 to 1997 in 12 air basins and the Altoona non-air basin. Nitrogen dioxide levels have remained relatively constant over the last 10 years. The solid line represents the air quality standard for an annual mean of 0.053 parts per million (ppm). All areas are at or below 50 percent of the annual air quality standard.

Nitrogen dioxide levels correlate significantly with ambient temperature levels, although not as high a statistical significance as does ozone and sulfur dioxide. The seasonal trend for nitrogen dioxide is shown in Figure 2-22 for 1997 and for the average of the preceding five years.

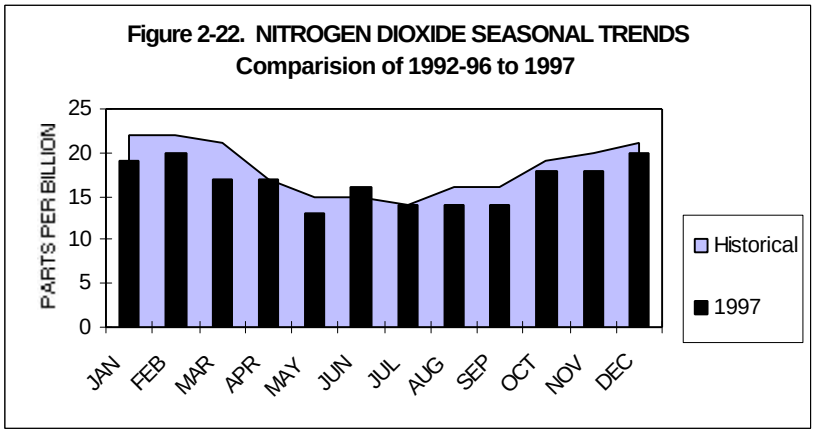


Table A-14 in Appendix A summarizes nitrogen dioxide data for 1997. The table contains the annual arithmetic mean, the percent of valid 1-hour data values collected over the calendar year, the two maximum 1-hour and 24-hour daily means with dates of occurrence and the number of 1-hour values in the indicated ranges. No site exceeded the annual primary air quality standard for nitrogen dioxide in Pennsylvania in 1997.

Historical trend data for those sites which monitored nitrogen dioxide in 1997 is presented in Appendix A, Table A-15 for the years 1988 to 1997. Data is shown for those sites with at least 50 percent valid data. The annual arithmetic mean is shown so that comparison to the air quality standard can be made for the individual sites.

Table A-16 in Appendix A summarizes data for oxides of nitrogen in 1997. This table includes the annual arithmetic mean, the percent of valid data collected during the year, the two maximum 1-hour and 24-hour daily means with dates of occurrence, and the number of 1-hour values in the indicated ranges.

Figure 2-23 represents the statewide trend of oxides of nitrogen by using the arithmetic mean from all monitoring sites over the last ten years with at least 50 percent data capture.

Figure 2-23. Oxides of Nitrogen Annual Means

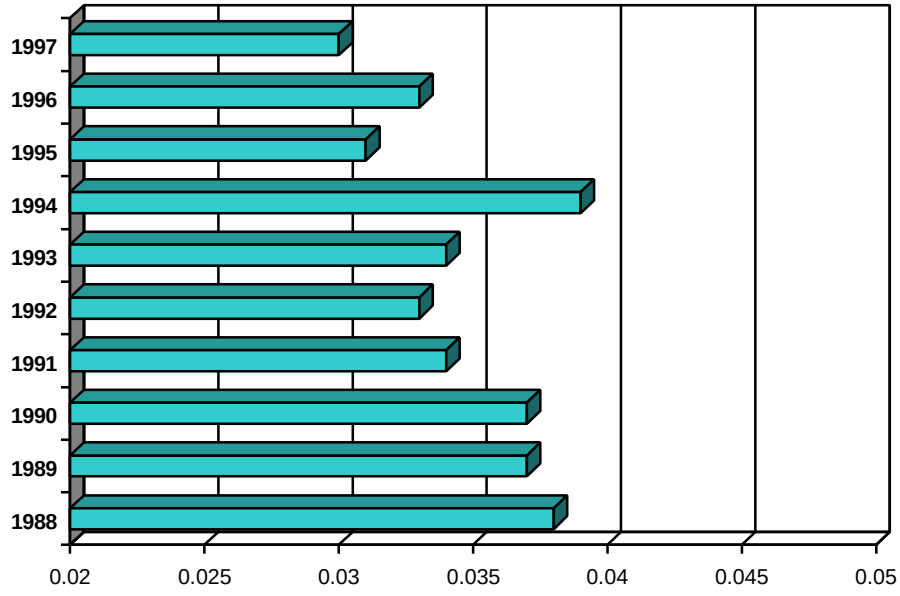
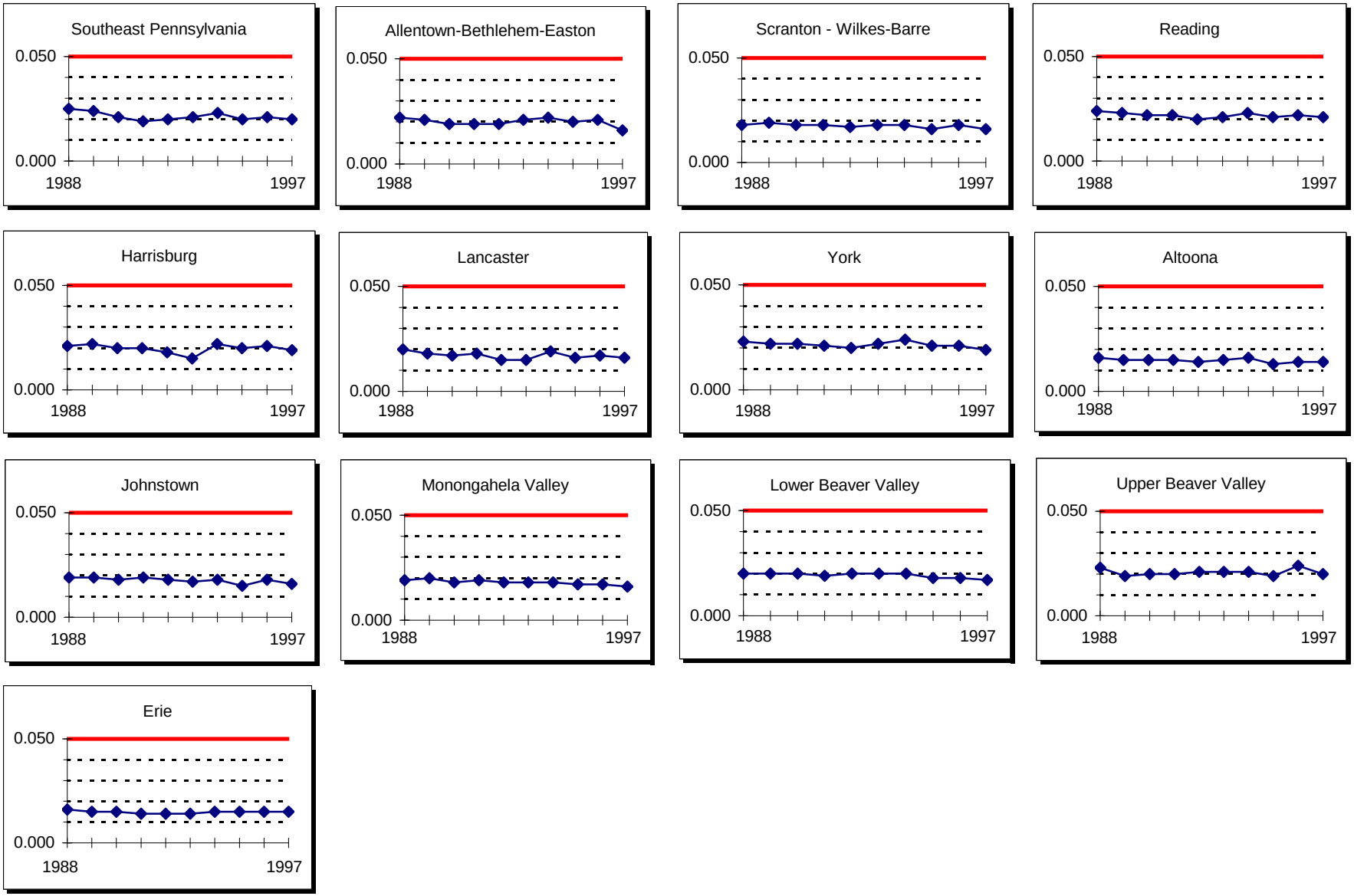


FIGURE 2-21. NITROGEN DIOXIDE TRENDS IN PENNSYLVANIA 1988 to 1997
ANNUAL ARITHMETIC MEANS (PARTS PER MILLION)



CARBON MONOXIDE

Carbon monoxide (CO) 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 asphyxia or shortness of breath. The health threat from carbon monoxide is most serious for those who suffer from cardiovascular disease. At higher levels of exposure, healthy individuals are also affected.

Carbon monoxide is a by-product of the incomplete burning of fuels. Industrial processes contribute to carbon monoxide pollution levels, but the principal source of carbon monoxide in most large urban areas is vehicular emissions.

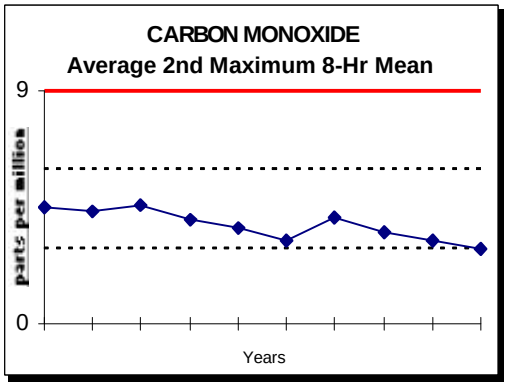


Figure 2-24. Trend in second maximum 8-hour average CO concentrations, 1988-1997.

The downward trend in carbon monoxide levels continues between 1988 and 1997. Figure 2-24 shows that statewide average second maximum 8-hour carbon monoxide concentrations decreased 36 percent over the 10-year period. The carbon monoxide improvement occurred across all monitoring environments – downtown central business district (CBD), rural and suburban (classified as other). As expected, Figure 2-25 shows that CBD sites recorded higher carbon monoxide concentrations on average, than other monitoring site locations. The CBD sites have also showed the most improvement in carbon monoxide levels, decreasing 55 percent over the last 10 years. The solid line in Figures 2-24 and 2-25 indicate the 8-hour running mean air quality standard of 9 parts per million (ppm).

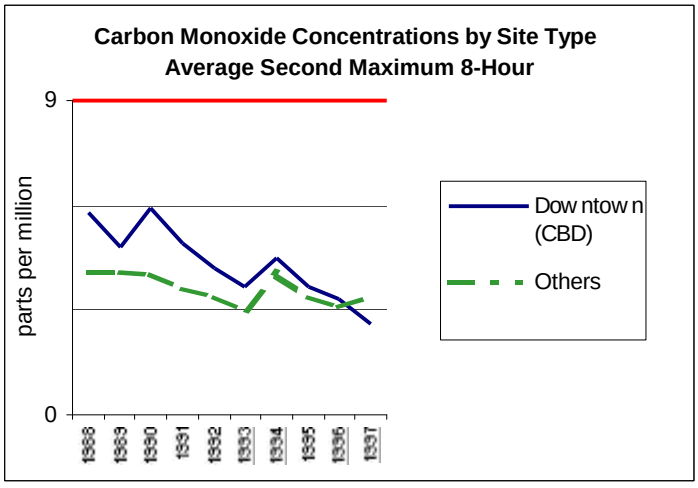


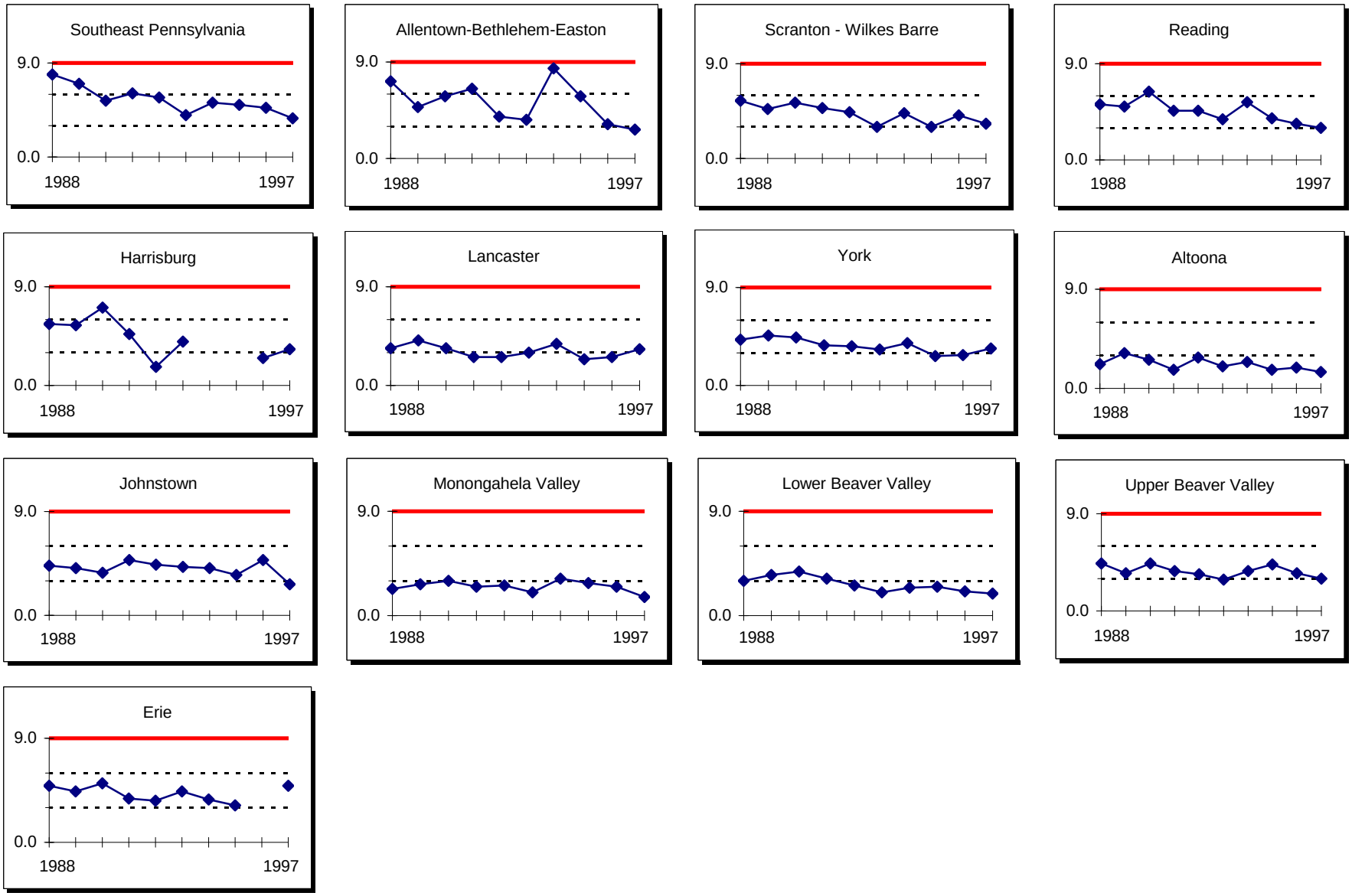
Figure 2-25. Trend in second maximum 8-hour average CO concentrations by location, 1988-1997.

The carbon monoxide 10-year historical trend for different areas of the state are shown in Figure 2-26 for 1988 to 1997 using the highest second maximum 8-hour non-overlapping running average. The largest improvements were seen in the Allentown-Bethlehem-Easton air basin that experienced a 63 percent improvement and the Southeast Pennsylvania air basin which improved 53 percent over the last 10 years. The solid lines on the graphs represent the 8-hour ambient air quality standard.

Carbon monoxide data for 1997 has been summarized in Appendix A, Table A-17. This table includes the annual arithmetic mean, the percent of valid 1-hour data collected, the two maximum 1-hour means and 8-hour non-overlapping running means with dates of occurrence, the number of 1-hour and 8-hour air quality standard exceedances and the number of 8-hour running means in the indicated ranges. There were no exceedances of the 1- or 8-hour air quality standard observed in 1997.

Historical trend data for carbon monoxide is shown in Appendix A, Table A-18, for the years 1988 to 1997 for all air monitoring sites that operated in 1997 with at least 50 percent valid data. The data in the table includes the second maximum 1-hour average and the second maximum 8-hour non-overlapping running average. The second maximum value is presented to indicate whether the site is attaining the air quality standard. The 1994 levels were abnormally elevated due to two significant air stagnation events that occurred during morning rush hours which trapped vehicular emissions.

FIGURE 2-26. CARBON MONOXIDE TRENDS IN PENNSYLVANIA 1988 to 1997
SECOND MAXIMUM 8-HOUR RUNNING MEAN (PARTS PER MILLION)



CHAPTER 3
POLLUTANT STANDARDS INDEX

A Pollutant Standards Index (PSI) is published daily for 17 areas in Pennsylvania. The Pollutant Standards Index incorporates recorded levels of five common air contaminants - carbon monoxide (CO), sulfur dioxide (SO_2), suspended particulate matter 10 microns or less in size (PM_{10}), ozone (O_3) and nitrogen dioxide (NO_2).

The PSI uses a segmented linear function to convert concentration levels of these pollutants into normalized numbers based on the National Ambient Air Quality Standards (NAAQS), the various episode levels and the significant harm levels for each pollutant. The actual breakpoints for the PSI values in terms of pollutant concentrations are shown in Table 3-1. The highest index number calculated from the five subindices is published along with the pollutant responsible and a descriptor term of good (0-50), moderate (51-100), unhealthful (101-199), very unhealthful (200-299) or hazardous (300-500).

The Commonwealth has now installed continuous PM_{10} monitors for suspended particulate matter at all of its PSI reporting sites.

Table 3-2 shows the number of days the index was reported in each descriptor category, as well as showing the number of times the pollutant (subindex) was worse than moderate. Table 3-3 shows the numbers and percentage of days that the PSI was based on a particular pollutant subindex. Ozone readings were used only during the ozone season of April 1 to October 31.

TABLE 3-1. BREAKPOINTS FOR THE POLLUTANT STANDARDS INDEX (PSI)

Breakpoints	PSI Value	PM_{10} ($\mu g/m^3$) 24-Hour	SO_2 (ppm) 24-Hour	CO (ppm) 8-Hour	Ozone (ppm) 1-Hour	NO_2 (ppm) 1-Hour
50% of Primary Short-Term NAAQS	50	50[a]	0.03[a]	4.5	0.06	---[b]
Primary Short-Term NAAQS	100	150	0.14	9.0	0.12	---[b]
Alert Level	200	350	0.30	15.0	0.20	0.6
Warning Level	300	420	0.60	30.0	0.40	1.2
Emergency Level	400	500	0.80	40.0	0.50	1.6
Significant Harm Level	500	600	1.00	50.0	0.60	2.0

[a] Annual primary NAAQS
[b] No index value reported at concentration levels below those specified by the Alert Level Criteria

TABLE 3-2. POLLUTANT STANDARDS INDEX SUMMARY BY CATEGORY

JANUARY 1997 to DECEMBER 1997

	NUMBER OF DAYS INDEX REPORTED IN CATEGORY					NO. DAYS	NUMBER OF DAYS SUBINDEX WORSE THAN MODERATE				
STATION	GOOD	MODERATE	UNHEALTHFUL	VERY UNHEALTHFUL	HAZARDOUS	INDEX REPORTED	PM-10	SULFUR DIOXIDE	OZONE	CARBON MONOXIDE	NITROGEN DIOXIDE
BRISTOL	292	72	1	0	0	365	0	0	1	0	0
CHESTER	270	92	3	0	0	365	0	0	3	0	0
NORRISTOWN	279	78	4	0	0	361	0	0	4	0	0
ALLENTOWN	294	70	1	0	0	365	0	0	1	0	0
FREEMANSBURG	122	12	0	0	0	134	0	0	0	0	0
SCRANTON	302	63	0	0	0	365	0	0	0	0	0
WILKES-BARRE	307	58	0	0	0	365	0	0	0	0	0
READING	299	65	1	0	0	365	0	0	1	0	0
HARRISBURG	295	70	0	0	0	365	0	0	0	0	0
LANCASTER	273	89	3	0	0	365	0	0	3	0	0
YORK	282	83	0	0	0	365	0	0	0	0	0
ALTOONA	291	74	0	0	0	365	0	0	0	0	0
JOHNSTOWN	296	67	1	0	0	364	0	0	1	0	0
CHARLEROI	266	99	0	0	0	365	0	0	0	0	0
BEAVER FALLS	285	80	0	0	0	365	0	0	0	0	0
NEW CASTLE	269	96	0	0	0	365	0	0	0	0	0
ERIE	300	65	0	0	0	365	0	0	0	0	0

Table 3-3. Pollutant Standards Index Summary by Pollutant

January 1997 to December 1997

NUMBER OF DAYS AND PERCENTAGE SUBINDEX WAS MAXIMUM

STATION	PM-10		SULFUR DIOXIDE		OZONE		CARBON MONOXIDE		NITROGEN DIOXIDE	
Bristol	90	(24.7)	40	(11.0)	204	(55.9)	31	(8.5)	0	(0.0)
Chester	103	(28.2)	68	(18.6)	194	(53.2)	0	(0.0)	0	(0.0)
Norristown	91	(25.2)	53	(14.7)	204	(56.5)	13	(3.6)	0	(0.0)
Allentown	86	(23.6)	49	(13.4)	203	(55.6)	27	(7.4)	0	(0.0)
Freemansburg	11	(8.2)	56	(41.8)	66	(49.3)	1	(0.7)	0	(0.0)
Scranton	101	(27.7)	48	(13.2)	208	(57.0)	8	(2.2)	0	(0.0)
Wilkes-Barre	97	(26.6)	39	(10.7)	204	(55.9)	25	(6.8)	0	(0.0)
Reading	54	(14.8)	95	(26.0)	203	(55.6)	13	(3.6)	0	(0.0)
Harrisburg	100	(27.4)	50	(13.7)	204	(55.9)	11	(3.0)	0	(0.0)
Lancaster	127	(34.8)	29	(7.9)	206	(56.4)	3	(0.8)	0	(0.0)
York	91	(24.9)	61	(16.7)	201	(55.1)	12	(3.3)	0	(0.0)
Altoona	70	(19.2)	91	(24.9)	203	(55.6)	1	(0.3)	0	(0.0)
Johnstown	80	(22.0)	78	(21.4)	200	(54.9)	6	(1.6)	0	(0.0)
Charleroi	82	(22.5)	68	(18.6)	213	(58.4)	2	(0.5)	0	(0.0)
Beaver Falls	121	(33.2)	52	(14.2)	187	(51.2)	5	(1.4)	0	(0.0)
New Castle	174	(47.7)	23	(6.3)	161	(44.1)	7	(1.9)	0	(0.0)
Erie	68	(18.6)	80	(21.9)	199	(54.5)	15	(4.1)	0	(0.0)

Numbers in () indicate percentage subindex was maximum

CHAPTER 4
PRECISION AND ACCURACY

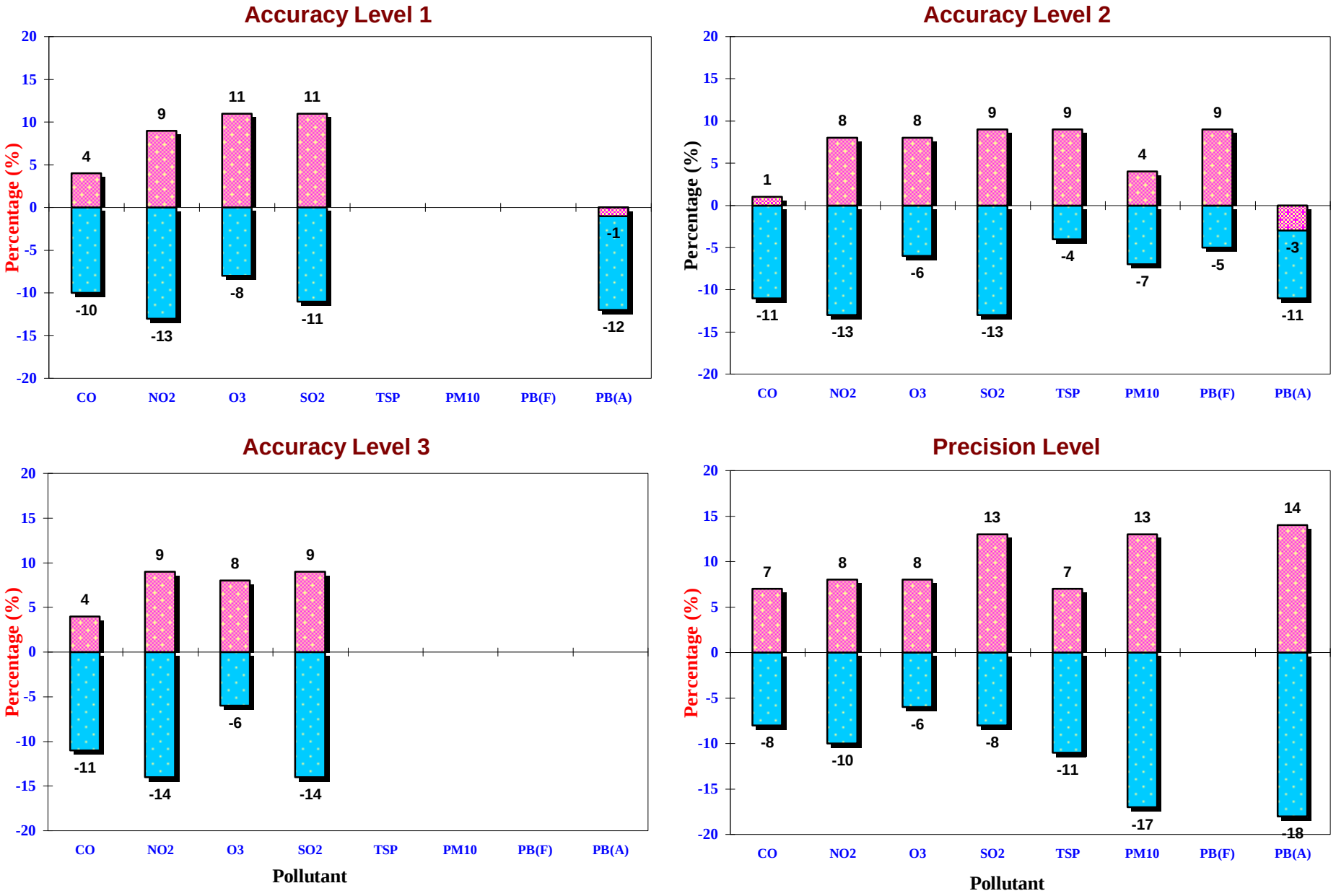
DEP conducts regularly scheduled performance audits and precision checks on all air monitoring equipment. Performance audits are conducted for the purpose of assessing data accuracy on carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone (O_3), total suspended particulate (TSP), suspended particulate matter 10 microns or less in size (PM_{10}) and lead (Pb) monitoring equipment. Precision checks are performed biweekly on CO, SO_2, NO_2 and O_3 and every sampling day (once every sixth day) for selected TSP, PM_{10} and lead.

Data obtained from the performance audits and precision checks are converted to 95 percent upper and lower probability limits using standard statistical methods. For precision, only one probability level is calculated for each parameter. However, accuracy is determined at up to three points. Acceptable 95 percent probability limits for accuracy are $\pm$ 20 percent for continuous gaseous parameters and $\pm$ 15 percent for discrete particulate parameters (TSP, PM_{10} and lead). Acceptable 95 percent probability limits for precision are $\pm$ 15 percent for all parameters.

Figure 4-1 summarizes the 95 percent probability limits from all four quarterly reporting periods within the calendar year. The values presented were calculated from weighted arithmetic averages for each quarter's probability limits. Two different types of lead checks are performed; flow, which is indicated by PB(F) and analytical, which is indicated by PB(A) on the legends of each graph.

FIGURE 4-1 1997 ANNUAL ACCURACY AND PRECISION PROBABILITY LIMITS

95% LOWER/UPPER LIMITS



APPENDIX A

DATA TABLES

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

TOTAL SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Geometric Annual Mean	Geometric Standard Deviation	Arithmetic Annual Mean	Number Obs.	Daily Averages 1st Max 24HR Mean	1st Max Date MM/DD	2nd Max 24HR Mean	2nd Max Date MM/DD	3nd Max 24HR Mean	3nd Max Date MM/DD	Number Obs. >260	Number Obs. >150	Minimum 24 Hour Mean	Number of 24 Hour Values In Ranges 0 to 65	66 to 130	131 to 195	196 to 260	261 to 325	326 to 390	391 to 455	> 455
Southeast Pennsylvania Air Basin																						
Bristol	P01	28	1.49	31	61	80	07/15	52	06/21	52	07/27	0	0	12	60	1	0	0	0	0	0	0
Chester	P11	55	1.64	62	59	161	10/07	141	06/27	132	07/09	0	1	21	37	19	3	0	0	0	0	0
Conshohocken	P12	37	1.45	39	59	97	07/15	78	07/27	69	06/21	0	0	17	55	4	0	0	0	0	0	0
Allentown-Bethlehem-Easton Air Basin																						
Bethlehem East	A12	45	1.44	54	27	78	04/16	76	08/02	74	06/21	0	0	16	22	5	0	0	0	0	0	0
Northampton	A23	39	1.61	43	45	107	07/15	85	03/29	77	07/21	0	0	10	40	5	0	0	0	0	0	0
Nazareth	A24	28	1.73	32	47	65	08/08	64	0826	61	04/16	0	0	10	47	0	0	0	0	0	0	0
Scranton-Wilkes-Barre Air Basin																						
Wilkes-Barre	S07	35	1.48	38	61	94	07/15	66	07/27	62	12/18	0	0	11	59	2	0	0	0	0	0	0
DEP Region 2 Non-Air Basin																						
Palmerton	205	31	1.56	34	57	85	07/15	63	12/18	56	06/21	0	0	10	56	1	0	0	0	0	0	0
Reading Air Basin																						
Laureldale South	R10	53	1.73	62	59	150	04/16	137	02/21	137	07/21	0	0	21	38	16	5	0	0	0	0	0
Harrisburg Air Basin																						
Harrisburg	H06	36	1.61	40	54	94	07/15	92	09/01	73	04/16	0	0	12	49	5	0	0	0	0	0	0
Lemoyne	H15	30	1.57	33	58	85	07/15	65	07/27	62	02/21	0	0	11	57	1	0	0	0	0	0	0

**** No Long-Term or Short-Term Air Quality Standards *****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

TOTAL SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Geometric Annual Mean	Geometric Standard Deviation	Arithmetic Annual Mean	Number Obs.	Daily Averages 1st Max 24HR Mean	1st Max Date MM/DD	2nd Max 24HR Mean	2nd Max Date MM/DD	3nd Max 24HR Mean	3nd Max Date MM/DD	Number Obs. >260	Number Obs. >150	Minimum 24 Hour Mean	Number of 24 Hour Values In Ranges 0 to 65	66 to 130	131 to 195	196 to 260	261 to 325	326 to 390	391 to 455	> 455
Lancaster Air Basin																						
Lancaster North	L04	49	1.44	53	55	130	10/07	117	07/15	82	04/04	0	0	21	41	14	0	0	0	0	0	0
Lancaster West	L05	54	1.39	57	57	132	10/07	118	07/15	92	12/18	0	0	25	40	16	1	0	0	0	0	0
York Air Basin																						
York Central	Y02	39	1.41	42	60	99	07/15	74	07/27	67	07/21	0	0	20	57	3	0	0	0	0	0	0
DEP Region 3 Non-Air Basin																						
Lyons East	301	32	1.51	36	59	95	07/15	68	03/29	68	06/21	0	0	14	56	3	0	0	0	0	0	0
Perry County	305	20	1.59	22	60	60	07/15	54	10/07	49	07/27	0	0	9	60	0	0	0	0	0	0	0
Lyons South	370	30	1.47	32	61	89	07/15	70	07/27	63	06/21	0	0	13	59	2	0	0	0	0	0	0
Altoona Non-Air Basin																						
Altoona East	308	29	1.62	33	57	76	12/18	74	03/17	67	04/04	0	0	10	54	3	0	0	0	0	0	0
Williamsport Non-Air Basin																						
Williamsport Central	401	36	1.48	39	58	80	07/15	69	03/17	65	11/18	0	0	16	56	2	0	0	0	0	0	0
DEP Region 4 Non-Air Basin																						
State College	408	34	1.47	37	59	81	12/18	79	07/15	65	10/13	0	0	17	57	2	0	0	0	0	0	0
Johnstown Air Basin																						
East Conemaugh	J08	40	1.61	44	56	92	12/18	83	05/28	82	07/15	0	0	13	48	8	0	0	0	0	0	0

**** No Long-Term or Short-Term Air Quality Standards *****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

TOTAL SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Geometric Annual Mean	Geometric Standard Deviation	Arithmetic Annual Mean	Number Obs.	Daily Averages 1st Max 24HR Mean	1st Max Date MM/DD	2nd Max 24HR Mean	2nd Max Date MM/DD	3nd Max 24HR Mean	3nd Max Date MM/DD	Number Obs. >260	Number Obs. >150	Minimum 24 Hour Mean	Number of 24 Hour Values In Ranges 0 to 65	66 to 130	131 to 195	196 to 260	261 to 325	326 to 390	391 to 455	> 455
Monongahela Valley Air Basin																						
Monessen	M16	44	1.62	49	50	107	12/24	98	04/04	91	04/22	0	0	15	41	9	0	0	0	0	0	0
Lower Beaver Valley Air Basin																						
Vanport	B05	35	1.62	39	55	81	12/24	77	10/07	73	08/02	0	0	11	51	4	0	0	0	0	0	0
Ambridge	B07	39	1.57	44	57	125	12/24	90	10/07	87	08/26	0	0	16	49	8	0	0	0	0	0	0
DEP Region 5 Non-Air Basin																						
Washington	503	38	1.48	42	53	92	04/04	83	10/07	81	12/18	0	0	18	50	3	0	0	0	0	0	0
Upper Beaver Valley Air Basin																						
Ellwood City	B16	40	1.43	43	60	85	04/04	80	07/15	76	08/02	0	0	19	53	7	0	0	0	0	0	0
Erie Air Basin																						
Erie Central	E07	42	1.57	46	55	105	04/04	104	08/02	96	07/15	0	0	16	46	9	0	0	0	0	0	0
Shenango Valley Non-Air Basin																						
Farrell	602	37	1.47	40	59	82	10/07	78	04/04	75	08/08	0	0	19	53	6	0	0	0	0	0	0

**** No Long-Term or Short-Term Air Quality Standards *****

TOTAL SUSPENDED PARTICULATE MATTER
HISTORICAL TREND
ANNUAL GEOMETRIC MEANS
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Southeast Pennsylvania Air Basin											
BRISTOL	(P01)	41	34	**	**	**	**	**	33	31	28
CHESTER	(P11)	51	48	39	40	34	36	44	43	43	55
CONSHOHOCKEN	(P12)	46	42	40	39	36	32	44	36	33	37
Allentown-Bethlehem-Easton Air Basin											
BETHLEHEM EAST	(A12)	55	49	55	48	34	38	46	45	39	***
NORTHAMPTON	(A23)	**	**	**	**	**	**	**	**	38	39
NAZARETH	(A24)	**	**	**	**	**	**	**	**	32	28
Scranton-Wilkes Barre Air Basin											
WILKES BARRE	(S07)	40	40	38	45	35	33	42	37	35	35
DEP Region 2 Non-Air Basin											
PALMERTON	(205)	44	48	40	37	32	29	34	29	32	31
Reading Air Basin											
LAURELDALE SOUTH	(R10)	49	47	47	48	41	41	48	50	51	53
Harrisburg Air Basin											
HARRISBURG	(H06)	46	47	42	42	35	35	43	43	40	36
LEMOYNE	(H15)	**	**	**	**	**	**	**	36	31	30
Lancaster Air Basin											
LANCASTER NORTH	(L04)	56	47	47	50	42	45	58	45	47	49
LANCASTER WEST	(L05)	62	57	50	53	43	43	51	53	53	54
York Air Basin											
YORK CENTRAL	(Y02)	47	43	39	43	37	39	46	39	39	39
DEP Region 3 Non-Air Basin											
LYONS EAST	(301)	**	32	33	32	28	27	37	36	34	32
PERRY COUNTY	(305)	25	25	21	25	19	21	26	25	21	20
LYONS SOUTH	(370)	**	**	**	**	29	28	35	31	29	30

** Indicates less than 30 samples collected during year

TOTAL SUSPENDED PARTICULATE MATTER
HISTORICAL TREND
ANNUAL GEOMETRIC MEANS
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Altoona Non-Air Basin											
ALTOONA	(308)	45	41	33	35	30	30	34	35	30	29
Williamsport Non-Air Basin											
WILLIAMSPORT	(401)	46	39	41	40	38	37	41	42	41	36
DEP Region 4 Non-Air Basin											
STATE COLLEGE	(408)	41	39	34	41	32	32	41	38	33	34
Johnstown Air Basin											
EAST CONEMAUGH	(J08	**	**	**	**	**	**	**	**	37	40
Monongahela Valley Air Basin											
MONESSEN	(M16)	**	**	**	**	**	**	**	**	**	44
Lower Beaver Valley Air Basin											
VANPORT	(B05)	44	44	38	40	31	32	50	**	35	35
AMBRIDGE	(B07)	50	45	44	42	37	40	57	**	47	39
DEP Region 5 Non-Air Basin											
WASHINGTON	(503)	54	49	45	43	41	41	51	46	**	38
Upper Beaver Valley Air Basin											
ELLWOOD CITY	(B16)	55	50	**	56	48	46	57	59	48	40
Erie Air Basin											
ERIE CENTRAL	(E07)	50	50	40	39	32	40	48	47	37	42
Shenango Valley Non-Air Basin											
FARRELL	(602)	58	51	50	54	38	36	42	42	39	37

** Indicates less than 30 samples collected during year

COMMWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

SULFATE SUSPENDED PARTICULATE MATTER SUMMARY

(UNITS: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Annual Mean	Number Obs.	Number 30 Day > 10	1st Max 30 Day Mean	1st Max 30 Day MM	2nd Max 30 Day Mean	2nd Max 30 Day MM	Number 24 Hour > 30	1st Max 24 Hour Mean	1st Max 24 Hour MM/DD	2nd Max 24 Hour Mean	2nd Max 24 Hour MM/DD
Southeast Pennsylvania Air Basin													
Conshohocken	P12	9.7	59	3	23.9	7	11.7	9	2	34.9	07/15	30.3	07/27
Allentown-Bethlehem-Easton Air Basin													
Bethlehem East	A12	11.2	27	4	22.9	7	15.9	9	0	29.0	07/27	24.0	06/21
Scranton-Wilkes-Barre Air Basin													
Wilkes-Barre	S07	9.1	61	2	23.0	7	11.7	9	2	35.8	07/15	32.5	07/27
DEP Region 2 Non-Air Basin													
Palmerton	205	8.7	57	2	20.0	7	10.3	9	0	28.4	07/15	22.0	06/21
Reading Air Basin													
Laureldale South	R10	9.9	59	3	24.2	7	11.3	8	2	35.1	07/15	31.2	07/27
Harrisburg Air Basin													
Harrisburg	H06	9.0	54	2	19.7	7	16.3	9	0	29.5	07/15	27.5	07/27
Lancaster Air Basin													
Lancaster West	L05	10.0	57	2	23.2	7	12.3	9	2	34.8	07/27	34.3	07/15
York Air Basin													
York Central	Y02	9.3	61	3	21.4	7	12.4	9	1	32.0	07/27	29.5	07/15
DEP Region 3 Non-Air Basin													
Perry County	305	7.1	60	1	15.7	7	8.2	9	0	28.7	07/15	22.5	07/27
Altoona Non-Air Basin													
Altoona East	308	8.4	61	3	14.8	7	11.5	9	0	23.9	08/02	23.1	09/01

***** Air Quality Standards *****
24 Hour Mean = 30 micrograms per cubic meter
30 Day Mean = 10 micrograms per cubic meter

COMMWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

SULFATE SUSPENDED PARTICULATE MATTER SUMMARY

(UNITS: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Annual Mean	Number Obs.	Number 30 Day > 10	1st Max 30 Day Mean	1st Max 30 Day MM	2nd Max 30 Day Mean	2nd Max 30 Day MM	Number 24 Hour > 30	1st Max 24 Hour Mean	1st Max 24 Hour MM/DD	2nd Max 24 Hour Mean	2nd Max 24 Hour MM/DD
Williamsport Non-Air Basin													
Williamsport Central	401	8.2	58	2	15.2	7	10.3	9	0	25.2	07/15	22.2	07/27
DEP Region 4 Non-Air Basin													
State College	408	9.6	59	4	16.5	7	11.3	9	0	26.7	07/15	22.6	07/27
Johnstown Air Basin													
East Conemaugh	J08	10.6	60	6	17.9	7	13.3	8	0	26.3	07/27	24.7	07/15
Monongahela Valley Air Basin													
Monessen	M16	11.8	51	8	18.0	7	16.4	9	0	25.0	07/15	24.3	09/01
Lower Beaver Valley Air Basin													
Ambridge	B07	10.2	57	6	14.4	8	13.6	7	0	25.1	08/26	23.6	07/15
DEP Region 5 Non-Air Basin													
Washingon	503	10.0	54	4	14.1	7	13.2	9	0	23.8	09/01	21.4	10/07
Upper Beaver Valley Air Basin													
Ellwood City	B16	8.9	60	2	12.7	8	11.0	7	0	20.2	08/02	19.8	07/15
Erie Air Basin													
Erie Central	E07	9.8	56	5	16.9	8	13.3	2	0	29.0	08/26	27.0	09/01
Shenango Valley Non-Air Basin													
Farrell	602	9.0	59	5	12.3	8	11.7	7	0	18.8	08/02	18.3	08/26

***** Air Quality Standards *****
24 Hour Mean = 30 micrograms per cubic meter
30 Day Mean = 10 micrograms per cubic meter

SULFATE PARTICULATE MATTER HISTORICAL TREND
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Southeast Pennsylvania Air Basin												
CONSHOHOCKEN	(P12)	20.9	16.4	16.0	25.3	17.1	23.1	21.1	16.3	16.7	23.9	Max 30-Day Mean
		38.7	33.8	28.6	25.3	18.2	26.8	41.8	19.8	36.3	34.9	Max 24-Hour Mean
Allentown-Bethlehem-Easton Air Basin												
BETHLEHEM EAST	(A12)	18.6	18.5	15.0	21.2	11.3	13.7	21.3	12.8	11.2	**	Max 30-Day Mean
		39.0	32.2	23.1	35.9	21.6	29.6	32.9	19.7	27.8	**	Max 24-Hour Mean
Scranton-Wilkes-Barre Air Basin												
WILKES-BARRE	(S07)	17.4	15.5	15.4	16.4	12.7	29.2	24.6	16.1	12.5	23.0	Max 30-Day Mean
		32.0	28.8	24.0	32.5	20.6	29.3	31.5	26.1	25.5	35.8	Max 24-Hour Mean
DEP Region 2 Non-Air Basin												
PALMERTON	(205)	19.2	16.9	14.7	16.1	12.0	16.3	20.1	13.8	11.2	20.0	Max 30-Day Mean
		36.4	25.0	22.6	33.1	18.9	23.4	26.7	18.7	25.9	28.4	Max 24-Hour Mean
Reading Air Basin												
LAURELDALE SOUTH	(R10)	20.1	17.0	18.6	18.4	14.6	13.0	22.4	19.1	13.4	24.2	Max 30-Day Mean
		36.3	32.6	31.3	36.7	21.5	28.5	35.1	22.6	25.8	35.1	Max 24-Hour Mean
Harrisburg Air Basin												
HARRISBURG	(H06)	18.2	16.3	17.0	18.3	13.3	13.6	21.7	13.5	11.4	19.7	Max 30-Day Mean
		46.7	32.4	30.8	33.3	19.7	26.1	32.7	22.0	22.6	29.5	Max 24-Hour Mean
Lancaster Air Basin												
LANCASTER WEST	(L05)	16.8	15.6	16.5	16.7	18.7	13.4	21.2	14.7	11.8	23.2	Max 30-Day Mean
		26.8	36.4	31.3	26.4	18.7	25.3	32.2	21.0	24.3	34.8	Max 24-Hour Mean
York Air Basin												
YORK CENTRAL	(Y02)	18.6	16.3	16.2	16.1	15.0	16.0	23.1	14.9	11.9	21.4	Max 30-Day Mean
		34.6	36.3	28.5	30.3	18.3	30.4	40.5	19.0	22.6	32.0	Max 24-Hour Mean
DEP Region 3 Non-Air Basin												
PERRY COUNTY	(305)	14.3	13.8	14.0	12.6	9.9	21.7	17.9	12.9	8.6	15.7	Max 30-Day Mean
		29.8	29.1	22.7	25.6	18.9	23.0	33.3	17.7	14.7	28.7	Max 24-Hour Mean
Altoona Non-Air Basin												
ALTOONA	(308)	18.5	**	15.5	14.3	12.0	14.3	20.7	15.1	11.7	14.8	Max 30-Day Mean
		45.0	**	27.8	32.1	16.6	23.2	35.0	23.7	18.9	23.9	Max 24-Hour Mean

** Indicates less than 30 samples collected during year

SULFATE PARTICULATE MATTER HISTORICAL TREND
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Williamsport Non-Air Basin												
WILLIAMSPORT	(401)	17.3	14.7	12.5	16.3	11.8	12.4	20.1	14.7	11.2	15.2	Max 30-Day Mean
		34.7	25.7	23.4	28.8	16.4	26.7	30.4	20.1	17.4	25.2	Max 24-Hour Mean
DEP Region 4 Non-Air Basin												
STATE COLLEGE	(408)	24.0	18.6	16.5	16.6	12.5	15.2	23.0	17.0	13.3	16.5	Max 30-Day Mean
		46.3	32.5	26.9	36.9	18.4	24.1	30.3	28.4	22.2	26.7	Max 24-Hour Mean
Johnstown Air Basin												
EAST CONEMAUGH	(J08)	**	**	**	**	**	**	**	**	12.7	17.9	Max 30-Day Mean
		**	**	**	**	**	**	**	**	19.5	26.3	Max 24-Hour Mean
Monongahela Valley Air Basin												
MONESSEN	(M16)	**	**	**	**	**	**	**	**	**	18.0	Max 30-Day Mean
		**	**	**	**	**	**	**	**	**	25.0	Max 24-Hour Mean
Lower Beaver Valley Air Basin												
AMBRIDGE	(B07)	18.4	19.1	18.6	21.0	13.9	19.7	23.9	**	16.1	14.4	Max 30-Day Mean
		41.6	29.5	33.5	31.6	25.6	33.1	36.5	**	46.9	25.1	Max 24-Hour Mean
DEP Region 5 Non-Air Basin												
WASHINGTON	(503)	24.6	20.4	18.9	18.7	16.5	19.3	28.8	15.3	**	14.1	Max 30-Day Mean
		52.9	39.8	34.9	29.5	27.2	26.4	37.1	22.2	**	23.8	Max 24-Hour Mean
Upper Beaver Valley Air Basin												
ELLWOOD CITY	(B16)	20.4	19.7	**	27.4	16.2	23.1	30.9	19.6	20.8	12.7	Max 30-Day Mean
		41.5	45.9	**	36.1	21.3	30.7	31.3	35.5	41.6	20.2	Max 24-Hour Mean
Erie Air Basin												
ERIE CENTRAL	(E07)	19.5	17.8	17.6	16.5	10.1	17.7	18.4	14.9	15.6	16.9	Max 30-Day Mean
		43.1	39.8	31.8	26.7	18.9	25.9	27.1	17.0	41.5	29.0	Max 24-Hour Mean
Shenango Valley Non-Air Basin												
FARRELL	(602)	19.4	16.2	20.0	16.2	14.3	15.5	16.7	12.9	18.0	12.3	Max 30-Day Mean
		44.2	34.2	39.2	28.5	28.5	25.9	27.0	23.0	39.4	18.8	Max 24-Hour Mean

** Indicates less than 30 samples collected during year

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

LEAD SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	1st Quarter Arithmetic Mean	1st Quarter Num. Obs.	2nd Quarter Arithmetic Mean	2nd Quarter Num. Obs.	3rd Quarter Arithmetic Mean	3rd Quarter Num. Obs.	4th Quarter Arithmetic Mean	4th Quarter Num. Obs.	Number Quarters > 1.5	Arithmetic Annual Mean	Num. Obs.
Southeast Pennsylvania Air Basin												
Chester	P11	0.03	14	0.04	14	0.05	15	0.04	16	0	0.04	59
Conshohocken	P12	0.03	15	0.04	15	0.04	15	0.03	14	0	0.03	59
Allentown-Bethlehem-Easton Air Basin												
Bethlehem East	A12	0.03	14	0.04	5	0.04	7	0.03	1	0	0.04	27
Northampton	A23	0.04	15	0.04	14	0.04	13	0.04	3	0	0.04	45
Scranton-Wilkes-Barre Air Basin												
Wilkes-Barre	S07	0.04	15	0.04	15	0.04	15	0.04	16	0	0.04	61
DEP Region 2 Non-Air Basin												
Palmerton	205	0.04	14	0.06	13	0.07	14	0.09	16	0	0.07	57
Reading Air Basin												
Laureldale South	R10	0.14	15	0.28	15	0.27	14	0.30	15	0	0.25	59
Harrisburg Air Basin												
Harrisburg	H06	0.03	13	0.04	14	0.03	13	0.03	14	0	0.03	54
Lancaster Air Basin												
Lancaster West	L05	0.04	15	0.04	14	0.04	14	0.04	14	0	0.04	57
York Air Basin												
York Central	Y02	0.04	15	0.04	15	0.04	15	0.04	16	0	0.04	61
DEP Region 3 Non-Air Basin												
Lyons East	301	0.19	15	0.09	15	0.29	13	0.10	16	0	0.16	59
Lyons South	370	0.13	15	0.16	15	0.10	15	0.10	16	0	0.12	61
Johnstown Air Basin												
East Conemaugh	J08	0.04	15	0.04	15	0.04	15	0.04	15	0	0.04	60
Monongahela Valley Air Basin												
Monessen	M16	0.05	12	0.04	15	0.04	10	0.03	14	0	0.04	51
Lower Beaver Valley Air Basin												
Vanport	B05	0.06	13	0.08	15	0.06	12	0.05	15	0	0.06	55
Erie Air Basin												
Erie Central	E07	0.04	12	0.04	15	0.04	15	0.04	14	0	0.04	56
Shenango Valley Non-Air Basin												
Farrell	602	0.04	15	0.04	14	0.04	14	0.04	16	0	0.04	59

***** Primary Quarterly Standard = 1.5 micrograms per cubic meter *****

LEAD PARTICULATE MATTER HISTORICAL TREND
MAXIMUM QUARTERLY MEANS
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Southeast Pennsylvania Air Basin											
CHESTER	(P11)	**	**	**	**	**	**	0.05	0.05	0.04	0.05
CONSHOHOCKEN	(P12)	**	**	**	**	0.04	0.04	0.04	0.04	0.04	0.04
Allentown-Bethlehem-Easton Air Basin											
BETHLEHEM EAST	(A12)	**	**	**	**	0.04	0.03	0.04	0.04	0.04	**
NORTHAMPTON	(A23)	**	**	**	**	**	**	**	**	0.04	0.04
Scranton-Wilkes-Barre Air Basin											
WILKES-BARRE	(S07)	0.10	0.06	0.06	0.06	0.05	0.05	0.05	0.06	0.04	0.04
DEP Region 2 Non-Air Basin											
PALMERTON	(205)	1.30	0.78	0.40	0.46	0.28	0.18	0.13	0.07	0.08	0.09
Reading Air Basin											
LAURELDALE	(R10)	0.57	0.50	0.59	0.60	0.43	0.59	0.56	0.29	0.27	0.30
Harrisburg Air Basin											
HARRISBURG	(H06)	0.07	0.05	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Lancaster Air Basin											
LANCASTER	(L05)	0.07	0.05	0.06	0.04	0.04	0.04	0.04	0.04	0.04	0.04
York Air Basin											
YORK	(Y02)	0.05	0.05	0.10	0.05	0.05	0.04	0.04	0.04	0.07	0.04
DEP Region 3 Non-Air Basin											
LYONS EAST	(301)	**	0.31	0.32	0.33	0.17	0.14	0.12	0.17	0.17	0.29
LYONS SOUTH	(370)	**	**	**	**	0.21	0.19	0.18	0.20	0.20	0.16
Johnstown Air Basin											
EAST CONEMAUGH	(J08)	**	**	**	**	**	**	**	**	0.04	0.04
Monongahela Valley Air Basin											
MONESSEN	(M16)	**	**	**	**	**	**	**	**	0.05	0.05
Lower Beaver Valley Air Basin											
VANPORT	(B05)	0.21	0.27	0.22	0.19	0.15	0.13	0.17	0.15	0.06	0.08
Erie Air Basin											
ERIE CENTRAL	(E07)	0.06	0.07	0.06	0.07	0.05	0.05	0.04	0.05	0.04	0.04
Shenango Valley Non-Air Basin											
FARRELL	(602)	0.22	0.12	0.10	0.09	0.07	0.05	0.05	0.05	0.07	0.04

** Indicates less than 30 samples collected during year

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

NITRATE SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Arithmetic Annual Mean	Num. Obs.	1st Max 24 Hour Mean	1st Max 24 Hour MM/DD	2nd Max 24 Hour Mean	2nd Max 24 Hour MM/DD	3nd Max 24 Hour Mean	3nd Max 24 Hour MM/DD	Minimum 24 Hour Mean
Southeast Pennsylvania Air Basin										
Conshohocken	P12	5.19	59	13.37	04/22	10.92	12/18	9.50	02/15	1.54
Allentown-Bethlehem-Easton Air Basin										
Bethlehem East	A12	5.16	27	12.25	03/29	9.16	02/15	8.91	04/16	1.56
Scranton-Wilkes-Barre Air Basin										
Wilkes-Barre	S07	3.90	61	8.85	02/21	8.57	01/04	8.47	01/22	0.67
DEP Region 2 Non-Air Basin										
Palmerton	205	3.99	57	11.03	02/21	9.80	01/22	9.13	04/22	0.96
Reading Air Basin										
Laureldale South	R10	5.27	59	16.99	04/22	10.70	02/03	10.62	04/16	1.16
Harrisburg Air Basin										
Harrisburg	H06	5.37	54	12.84	04/22	10.74	10/31	10.45	02/15	1.28
Lancaster Air Basin										
Lancaster West	L05	6.83	57	20.31	10/07	19.70	04/22	14.75	10/31	1.76
York Air Basin										
York Central	Y02	5.69	61	15.19	04/22	12.48	10/07	11.79	11/30	0.78
DEP Region 3 Non-Air Basin										
Perry County	305	2.56	60	6.26	04/22	6.21	11/30	5.92	02/03	0.62

***** No Long-Term or Short-Term Air Quality Standards *****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

NITRATE SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

Site Name	PA Site Code	Arithmetic Annual Mean	Num. Obs.	1st Max 24 Hour Mean	1st Max 24 Hour MM/DD	2nd Max 24 Hour Mean	2nd Max 24 Hour MM/DD	3nd Max 24 Hour Mean	3nd Max 24 Hour MM/DD	Minimum 24 Hour Mean
Altoona Non-Air Basin										
Altoona East	308	3.11	61	8.05	11/30	6.57	07/21	6.46	11/12	0.33
Williamsport Non-Air Basin										
Williamsport Central	401	3.75	58	10.47	11/30	9.41	10/31	9.01	10/13	0.81
DEP Region 4 Non-Air Basin										
State College	408	4.34	59	10.15	10/31	9.33	10/13	9.26	01/04	0.97
Johnstown Air Basin										
East Conemaugh	J08	3.11	60	8.10	04/04	7.44	02/15	6.46	11/12	0.83
Monongahela Valley Air Basin										
Monessen	M16	4.36	51	15.06	02/03	12.01	02/15	9.02	04/22	0.97
Lower Beaver Valley Air Basin										
Ambridge	B07	4.32	57	13.79	12/24	12.52	02/15	10.54	04/04	1.25
DEP Region 5 Non-Air Basin										
Washington	503	4.30	54	10.21	02/15	10.06	02/03	9.18	04/04	1.52
Erie Air Basin										
Erie Central	E07	5.52	56	27.35	02/03	12.93	10/07	12.00	03/05	1.10
Shenango Valley Non-Air Basin										
Farrell	602	4.26	59	12.75	04/04	10.98	02/15	8.63	12/18	0.98

***** No Long-Term or Short-Term Air Quality Standards *****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

PM-10 SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

				Daily Means										Number of 24 Hour Values In Ranges								
	PA	Arithmetic		1st Max		2nd Max		3rd Max		4th Max		Number	Minimum	0	26	51	76	101	126	151	176	
	Site	Annual	Number	24HR	Date	24HR	Date	24HR	Date	24HR	Date	Obs.	24 Hour	to	to	to	to	to	to	to	to	>
Site Name	Code	Mean	Obs.	Mean	MM/DD	Mean	MM/DD	Mean	MM/DD	Mean	MM/DD	>150	Mean	25	50	75	100	125	150	175	200	200
Southeast Pennsylvania Air Basin																						
Bristol (TEOM)	P01	20	358	80	07/15	61	07/14	60	07/27	59	07/16	0	5	272	80	5	1	0	0	0	0	0
Chester (TEOM)	P11	24	358	79	07/15	76	07/14	62	07/16	60	11/07	0	6	231	113	12	2	0	0	0	0	0
Norristown (TEOM)	P21	21	356	81	04/16	79	07/15	66	03/27	66	07/14	0	5	249	98	7	2	0	0	0	0	0
Coatesville	P26	35	59	105	07/05	79	10/07	65	11/18	63	06/21	0	10	18	31	8	1	1	0	0	0	0
Allentown-Bethlehem-Easton Air Basin																						
Allentown (TEOM)	A19	19	360	82	07/15	59	07/27	56	06/25	55	09/02	0	4	281	73	5	1	0	0	0	0	0
Nazareth	A24	24	49	59	07/27	51	08/08	46	08/26	44	04/16	0	9	28	19	2	0	0	0	0	0	0
Freemansburg (TEOM)	A25	19	127	54	09/02	50	10/06	45	10/09	43	09/01	0	3	91	35	1	0	0	0	0	0	0
Scranton-Wilkes-Barre Air Basin																						
Scranton (TEOM)	S01	20	352	84	07/15	69	06/25	65	07/27	61	07/14	0	4	257	88	6	1	0	0	0	0	0
Pittston	S04	26	58	82	07/15	53	06/21	49	02/03	45	12/18	0	10	33	23	1	1	0	0	0	0	0
Wilkes-Barre	S07	24	59	79	07/15	51	06/21	39	07/09	38	12/18	0	8	37	20	1	1	0	0	0	0	0
Scranton Central	S15	26	59	77	07/15	60	07/27	46	08/02	42	02/03	0	9	31	26	1	1	0	0	0	0	0
Wilkes-Barre (TEOM)	S28	21	350	86	07/15	67	06/25	67	11/21	62	09/02	0	3	256	86	7	1	0	0	0	0	0
Reading Air Basin																						
Reading (TEOM)	R01	21	360	77	07/15	61	07/27	60	06/25	59	07/14	0	6	272	83	4	1	0	0	0	0	0
Temple	R09	30	58	81	07/15	64	07/27	54	06/21	51	02/03	0	9	26	27	4	1	0	0	0	0	0
Reading Central	R15	29	60	79	07/15	67	04/22	63	07/27	59	10/07	0	10	28	27	4	1	0	0	0	0	0
Harrisburg Air Basin																						
Harrisburg (TEOM)	H11	22	347	77	07/15	67	07/14	63	09/02	62	10/07	0	3	240	98	8	1	0	0	0	0	0

**** Primary and Secondary Air Quality Standards ****
**** Annual Mean = 50 micrograms per cubic meter ****
**** 24 Hour Mean = 150 micrograms per cubic meter ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

PM-10 SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

				Daily Means										Number of 24 Hour Values In Ranges								
	PA	Arithmetic		1st Max		2nd Max		3rd Max		4th Max		Number	Minimum	0	26	51	76	101	126	151	176	
	Site	Annual	Number	24HR	Date	24HR	Date	24HR	Date	24HR	Date	Obs.	24 Hour	to	to	to	to	to	to	to	to	>
Site Name	Code	Mean	Obs.	Mean	MM/DD	Mean	MM/DD	Mean	MM/DD	Mean	MM/DD	>150	Mean	25	50	75	100	125	150	175	200	200
Lancaster Air Basin																						
Lancaster (TEOM)	L01	23	345	91	07/15	76	07/14	73	10/07	68	12/19	0	5	234	101	8	2	0	0	0	0	0
Lancaster West	L05	34	56	89	10/07	83	07/15	62	07/27	54	12/18	0	13	15	36	3	2	0	0	0	0	0
York Air Basin																						
York (TEOM)	Y01	23	348	86	07/15	75	07/14	72	10/07	70	06/23	0	5	229	104	14	1	0	0	0	0	0
West York	Y07	31	56	82	07/15	74	10/07	60	07/27	54	12/18	0	10	24	27	4	1	0	0	0	0	0
DEP Region 3 Non-Air Basin																						
Perry County	305	22	60	67	07/15	56	07/27	51	02/03	50	10/07	0	9	44	13	3	0	0	0	0	0	0
Altoona Non-Air Basin																						
Altoona East (TEOM)	308	21	362	71	06/25	67	07/14	64	10/08	59	07/15	0	4	261	95	6	0	0	0	0	0	0
Williamsport Non-Air Basin																						
Williamsport Central	401	26	57	57	07/15	48	06/21	46	08/02	45	07/27	0	9	30	26	1	0	0	0	0	0	0
Johnstown Air Basin																						
Johnstown (TEOM)	J01	24	352	75	07/14	67	06/25	67	07/15	66	07/13	0	5	216	121	15	0	0	0	0	0	0
Monongahela Valley Air Basin																						
Charleroi (TEOM)	M01	24	361	64	07/14	60	09/02	59	06/25	57	06/20	0	4	227	119	15	0	0	0	0	0	0
Monessen	M16	32	48	75	12/24	62	02/03	56	10/07	55	04/04	0	9	18	24	6	0	0	0	0	0	0

**** Primary and Secondary Air Quality Standards ****
**** Annual Mean = 50 micrograms per cubic meter ****
**** 24 Hour Mean = 150 micrograms per cubic meter ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

PM-10 SUSPENDED PARTICULATE MATTER SUMMARY

(Units: micrograms per cubic meter)

YEAR: 1997

				Daily Means										Number of 24 Hour Values In Ranges								
	PA	Arithmetic		1st Max		2nd Max		3rd Max		4th Max		Number	Minimum	0	26	51	76	101	126	151	176	
	Site	Annual	Number	24HR	Date	24HR	Date	24HR	Date	24HR	Date	Obs.	24 Hour	to	to	to	to	to	to	to	to	>
Site Name	Code	Mean	Obs.	Mean	MM/DD	Mean	MM/DD	Mean	MM/DD	Mean	MM/DD	>150	Mean	25	50	75	100	125	150	175	200	200
Lower Beaver Valley Air Basin																						
Baden (TEOM)	B01	28	362	77	10/08	72	12/18	70	06/25	67	06/24	0	8	187	150	24	1	0	0	0	0	0
Beaver Falls (TEOM)	B11	27	363	88	07/14	87	06/25	82	06/24	80	10/08	0	7	203	126	29	5	0	0	0	0	0
Baden	B17	27	52	59	07/15	56	08/26	55	10/07	47	06/21	0	10	28	21	3	0	0	0	0	0	0
Beaver Falls	B18	28	52	57	10/07	56	07/15	56	08/26	51	10/13	0	10	26	22	4	0	0	0	0	0	0
DEP Region 5 Non-Air Basin																						
Greensburg (TEOM)	513	20	74	55	10/08	52	10/07	52	12/17	47	10/06	0	6	58	13	3	0	0	0	0	0	0
Upper Beaver Valley Air Basin																						
New Castle	B21	37	53	79	07/15	77	12/18	74	10/07	69	10/13	0	14	15	25	11	2	0	0	0	0	0
New Castle (TEOM)	B21	33	360	96	02/26	94	10/08	91	06/25	90	02/18	0	5	171	126	48	15	0	0	0	0	0
Bessemer	B26	26	53	52	10/07	47	07/15	45	12/18	44	08/08	0	10	31	21	1	0	0	0	0	0	0
Erie Air Basin																						
Erie East (TEOM)	E10	20	353	77	06/25	68	07/14	61	10/08	59	06/16	0	5	286	58	8	1	0	0	0	0	0
Shenango Valley Non-Air Basin																						
Farrell	602	28	60	60	10/07	49	04/22	47	06/21	44	04/04	0	11	30	29	1	0	0	0	0	0	0

**** Primary and Secondary Air Quality Standards ****
**** Annual Mean = 50 micrograms per cubic meter ****
**** 24 Hour Mean = 150 micrograms per cubic meter ****

PM-10 PARTICULATE MATTER HISTORICAL TREND
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Southeast Pennsylvania Air Basin												
BRISTOL (TEOM)	(P01)	**	**	**	**	**	**	**	21	21	20	Annual Mean
		**	**	**	**	**	**	**	75	58	61	2nd Max 24-Hour Mean
CHESTER (TEOM)	(P11)	**	**	**	**	**	**	**	25	24	24	Annual Mean
		**	**	**	**	**	**	**	105	69	76	2nd Max 24-Hour Mean
NORRISTOWN (TEOM)	(P21)	**	**	**	**	**	**	**	**	22	21	Annual Mean
		**	**	**	**	**	**	**	**	64	79	2nd Max 24-Hour Mean
COATESVILLE	(P26)	**	**	34	36	27	31	34	32	28	35	Annual Mean
		**	**	87	91	47	78	71	83	69	79	2nd Max 24-Hour Mean
Allentown-Bethlehem-Easton Air Basin												
ALLENTOWN (TEOM)	(A19)	**	**	**	**	**	**	**	**	20	19	Annual Mean
		**	**	**	**	**	**	**	**	54	59	2nd Max 24-Hour Mean
NAZARETH	(A24)	**	**	**	**	**	**	**	**	26	24	Annual Mean
		**	**	**	**	**	**	**	**	44	51	2nd Max 24-Hour Mean
FREEMANSBURG (TEOM)	(A25)	**	**	**	**	**	**	**	**	**	**	Annual Mean
		**	**	**	**	**	**	**	**	**	**	2nd Max 24-Hour Mean
Scranton-Wilkes Barre Air Basin												
SCRANTON (TEOM)	(S01)	**	**	**	**	**	**	**	23	21	20	Annual Mean
		**	**	**	**	**	**	**	76	61	69	2nd Max 24-Hour Mean
PITTSTON	(S04)	30	32	26	30	29	28	30	26	25	26	Annual Mean
		70	63	64	64	50	71	64	65	44	53	2nd Max 24-Hour Mean
WILKES BARRE	(S07)	**	28	24	29	24	24	27	24	23	24	Annual Mean
		**	61	63	66	44	57	60	64	57	51	2nd Max 24-Hour Mean
SCRANTON	(S15)	29	26	26	28	23	27	29	26	24	26	Annual Mean
		67	51	56	65	41	72	60	64	49	60	2nd Max 24-Hour Mean
WILKES BARRE (TEOM)	(S28)	**	**	**	**	**	**	**	21	21	21	Annual Mean
		**	**	**	**	**	**	**	60	60	67	2nd Max 24-Hour Mean
Reading Air Basin												
READING (TEOM)	(R01)	**	**	**	**	**	**	**	**	22	21	Annual Mean
		**	**	**	**	**	**	**	**	52	61	2nd Max 24-Hour Mean
TEMPLE	(R09)	**	**	**	**	**	**	**	**	30	30	Annual Mean
		**	**	**	**	**	**	**	**	57	58	2nd Max 24-Hour Mean
READING CENTRAL	(R15)	**	**	**	**	**	**	**	**	29	29	Annual Mean
		**	**	**	**	**	**	**	**	66	67	2nd Max 24-Hour Mean

** Indicates less than 30 discrete samples collected or less than 50 percent continuous data (TEOM)

PM-10 PARTICULATE MATTER HISTORICAL TREND
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Harrisburg Air Basin												
HARRISBURG (TEOM)	(H11)	**	**	**	**	**	25	24	22	23	22	Annual Mean
		**	**	**	**	**	64	72	67	63	67	2nd Max 24-Hour Mean
Lancaster Air Basin												
LANCASTER (TEOM)	(L01)	**	**	**	**	**	**	**	27	24	23	Annual Mean
		**	**	**	**	**	**	**	72	69	76	2nd Max 24-Hour Mean
LANCASTER	(L05)	**	**	31	30	27	31	38	33	31	34	Annual Mean
		**	**	59	51	45	68	117	73	63	83	2nd Max 24-Hour Mean
York Air Basin												
YORK (TEOM)	(Y01)	**	**	**	**	**	**	**	**	**	23	Annual Mean
		**	**	**	**	**	**	**	**	**	75	2nd Max 24-Hour Mean
WEST YORK	(Y07)	33	31	30	32	27	31	32	30	29	31	Annual Mean
		81	57	63	69	47	77	80	66	51	74	2nd Max 24-Hour Mean
DEP Region 3 Non-Air Basin												
PERRY COUNTY	(305)	**	21	19	22	18	21	22	21	19	22	Annual Mean
		**	60	45	48	30	58	59	59	39	56	2nd Max 24-Hour Mean
Altoona Non-Air Basin												
ALTOONA (TEOM)	(308)	**	**	**	**	**	**	**	25	23	21	Annual Mean
		**	**	**	**	**	**	**	70	60	67	2nd Max 24-Hour Mean
Williamsport Non-Air Basin												
WILLIAMSPORT	(401)	**	29	26	31	24	24	28	28	25	26	Annual Mean
		**	62	60	67	42	58	61	59	46	48	2nd Max 24-Hour Mean
Johnstown Air Basin												
JOHNSTOWN (TEOM)	(J01)	**	**	**	**	**	**	**	**	28	24	Annual Mean
		**	**	**	**	**	**	**	**	63	67	2nd Max 24-Hour Mean
Monongahela Valley Air Basin												
CHARLEROI (TEOM)	(M01)	**	**	**	**	**	**	**	26	26	24	Annual Mean
		**	**	**	**	**	**	**	74	72	60	2nd Max 24-Hour Mean
MONESSEN	(M16)	**	**	**	**	**	**	**	**	**	32	Annual Mean
		**	**	**	**	**	**	**	**	**	62	2nd Max 24-Hour Mean

** Indicates less than 30 discrete samples collected or less than 50 percent continuous data (TEOM)

PM-10 PARTICULATE MATTER HISTORICAL TREND
(Units: micrograms/cubic meter)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Lower Beaver Valley Air Basin												
BADEN (TEOM)	(B01)	**	**	**	**	**	**	**	**	**	28	Annual Mean
		**	**	**	**	**	**	**	**	**	72	2nd Max 24-Hour Mean
BEAVER FALLS (TEOM)	(B11)	**	**	**	**	**	**	**	**	26	27	Annual Mean
		**	**	**	**	**	**	**	**	76	87	2nd Max 24-Hour Mean
BADEN	(B17)	**	31	24	27	20	22	27	**	22	27	Annual Mean
		**	66	51	60	50	64	58	**	50	56	2nd Max 24-Hour Mean
BEAVER FALLS	(B18)	**	33	26	30	24	28	32	**	28	28	Annual Mean
		**	64	55	66	61	57	67	**	52	56	2nd Max 24-Hour Mean
DEP Region 5 Non-Air Basin												
GREENSBURG (TEOM)	(513)	**	**	**	**	**	**	**	**	**	**	Annual Mean
		**	**	**	**	**	**	**	**	**	**	2nd Max 24-Hour Mean
Upper Beaver Valley Air Basin												
NEW CASTLE	(B21)	39	39	34	37	31	31	36	43	32	37	Annual Mean
		101	93	75	66	69	82	94	104	67	77	2nd Max 24-Hour Mean
NEW CASTLE (TEOM)	(B21)	**	**	**	**	**	**	**	**	33	33	Annual Mean
		**	**	**	**	**	**	**	**	91	94	2nd Max 24-Hour Mean
BESSEMER	(B26)	**	**	**	**	**	**	29	27	27	26	Annual Mean
		**	**	**	**	**	**	61	58	43	47	2nd Max 24-Hour Mean
Erie Air Basin												
ERIE (TEOM)	(E10)	**	**	**	**	**	**	**	**	20	20	Annual Mean
		**	**	**	**	**	**	**	**	61	68	2nd Max 24-Hour Mean
Shenango Valley Non-Air Basin												
FARRELL	(602)	37	35	30	36	27	28	30	28	29	28	Annual Mean
		84	88	68	73	58	56	68	72	52	49	2nd Max 24-Hour Mean

** Indicates less than 30 discrete samples collected or less than 50 percent continuous data (TEOM)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

SULFUR DIOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

				Block Averages					Daily Averages					Number of 24 Hour Values In Ranges							
	PA	Percent		Number	1st Max		2nd Max		Number	1st Max		2nd Max		.00	.05	.09	.13	.17	.21	.25	
	Site	Valid	Annual	3 HR	3 HR	Date	3 HR	Date	24 HR	24 HR	Date	24 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	Mean	> 0.50	Mean	MM/DD/HH	Mean	MM/DD/HH	> 0.14	Mean	MM/DD	Mean	MM/DD	.04	.08	.12	.16	.20	.24	.28	.28
Southeast Pennsylvania Air Basin																					
Bristol	P01	98.0	0.007	0	0.046	01/02/17	0.043	01/15/14	0	0.030	12/19	0.029	11/19	356	0	0	0	0	0	0	0
Chester	P11	98.1	0.008	0	0.070	01/31/14	0.063	01/31/11	0	0.030	01/15	0.026	11/26	363	0	0	0	0	0	0	0
Norristown	P21	97.3	0.008	0	0.054	01/15/11	0.048	12/17/11	0	0.035	01/15	0.025	12/17	355	0	0	0	0	0	0	0
Allentown-Bethlehem-Easton Air Basin																					
Allentown	A19	98.1	0.008	0	0.063	12/10/20	0.058	12/10/23	0	0.031	01/15	0.030	12/10	359	0	0	0	0	0	0	0
Freemansburg	A25	35.9	0.010	0	0.041	12/17/11	0.041	12/20/14	0	0.029	12/19	0.025	11/19	130	0	0	0	0	0	0	0
Easton	A41	98.0	0.010	0	0.054	10/07/11	0.045	10/07/14	0	0.029	11/19	0.027	11/18	357	0	0	0	0	0	0	0
Scranton-Wilkes-Barre Air Basin																					
Scranton	S01	99.1	0.006	0	0.053	12/16/14	0.050	12/16/17	0	0.046	12/16	0.031	12/19	362	1	0	0	0	0	0	0
Wilkes-Barre	S28	98.0	0.007	0	0.049	01/15/14	0.047	12/16/14	0	0.031	12/16	0.026	12/19	354	0	0	0	0	0	0	0
Reading Air Basin																					
Reading	R01	93.9	0.008	0	0.072	10/04/11	0.067	10/07/14	0	0.032	01/15	0.028	12/19	342	0	0	0	0	0	0	0
Reading	R20	99.3	0.009	0	0.095	07/08/08	0.090	09/02/08	0	0.037	01/15	0.031	01/20	364	0	0	0	0	0	0	0
Harrisburg Air Basin																					
Harrisburg	H11	95.9	0.007	0	0.083	11/05/17	0.049	04/05/14	0	0.024	02/07	0.022	11/05	348	0	0	0	0	0	0	0
Lancaster Air Basin																					
Lancaster	L01	95.5	0.007	0	0.052	12/16/14	0.051	12/23/14	0	0.025	10/23	0.023	12/16	348	0	0	0	0	0	0	0
York Air Basin																					

**** Primary Annual Mean = 0.03 parts per million ****
**** Primary 24 Hour Mean = 0.14 parts per million ****
**** Seconday 3 Hour Mean = 0.50 parts per million ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

SULFUR DIOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

					Block Averages					Daily Averages				Number of 24 Hour Values In Ranges							
	PA	Percent		Number	1st Max		2nd Max		Number	1st Max		2nd Max		.00	.05	.09	.13	.17	.21	.25	
	Site	Valid	Annual	3 HR	3 HR	Date	3 HR	Date	24 HR	24 HR	Date	24 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	Mean	> 0.50	Mean	MM/DD/HH	Mean	MM/DD/HH	> 0.14	Mean	MM/DD	Mean	MM/DD	.04	.08	.12	.16	.20	.24	.28	.28
York	Y01	97.9	0.009	0	0.076	06/14/11	0.073	02/13/11	0	0.026	01/14	0.026	09/01	360	0	0	0	0	0	0	0
DEP Region 3 Non-Air Basin																					
Perry County	305	96.0	0.004	0	0.035	07/15/11	0.033	01/19/11	0	0.024	01/14	0.021	01/12	342	0	0	0	0	0	0	0
Altoona Non-Air Basin																					
Altoona East	308	98.6	0.010	0	0.078	01/14/17	0.070	01/13/08	0	0.048	01/14	0.046	01/13	361	2	0	0	0	0	0	0
Williamsport Non-Air Basin																					
Williamsport	407	96.1	0.008	0	0.063	12/16/14	0.050	12/16/17	0	0.035	12/16	0.028	01/15	347	0	0	0	0	0	0	0
Johnstown Air Basin																					
Johnstown	J01	97.7	0.009	0	0.102	09/26/08	0.069	09/26/11	0	0.033	01/14	0.030	09/26	358	0	0	0	0	0	0	0
Monongahela Valley Air Basin																					
Charleroi	M01	99.5	0.009	0	0.090	01/14/02	0.074	02/20/14	0	0.051	01/14	0.035	01/12	364	1	0	0	0	0	0	0
Lower Beaver Valley Air Basin																					
Baden	B01	92.9	0.012	0	0.086	10/02/14	0.069	10/02/11	0	0.034	01/13	0.033	10/02	337	0	0	0	0	0	0	0
Beaver Falls	B11	97.8	0.009	0	0.089	10/02/14	0.082	10/02/17	0	0.039	10/02	0.034	11/25	357	0	0	0	0	0	0	0
Hookstown	B23	94.1	0.011	0	0.215	07/20/14	0.163	02/17/17	0	0.055	02/17	0.049	07/20	341	2	0	0	0	0	0	0
Brighton Township	B27	97.7	0.015	0	0.305	07/21/02	0.251	04/15/23	0	0.086	07/21	0.078	04/15	345	12	1	0	0	0	0	0

**** Primary Annual Mean = 0.03 parts per million ****
**** Primary 24 Hour Mean = 0.14 parts per million ****
**** Seconday 3 Hour Mean = 0.50 parts per million ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

SULFUR DIOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

				Block Averages					Daily Averages					Number of 24 Hour Values In Ranges							
	PA	Percent		Number	1st Max		2nd Max		Number	1st Max		2nd Max		.00	.05	.09	.13	.17	.21	.25	
	Site	Valid	Annual	3 HR	3 HR	Date	3 HR	Date	24 HR	24 HR	Date	24 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	Mean	> 0.50	Mean	MM/DD/HH	Mean	MM/DD/HH	> 0.14	Mean	MM/DD	Mean	MM/DD	.04	.08	.12	.16	.20	.24	.28	.28
Allegheny County Air Basin																					
Pittsburgh	D12	9.2	0.004	0	0.018	12/18/14	0.013	12/15/20	0	0.010	12/18	0.009	12/17	32	0	0	0	0	0	0	0
DEP Region 5 Non-Air Basin																					
Florence	504	98.7	0.012	0	0.132	10/02/11	0.127	10/09/11	0	0.061	02/18	0.050	12/18	359	4	0	0	0	0	0	0
Washington	508	99.1	0.010	0	0.096	12/17/14	0.086	01/14/14	0	0.050	12/19	0.047	12/16	361	2	0	0	0	0	0	0
Greensburg	513	21.0	0.010	0	0.094	12/18/14	0.054	12/18/23	0	0.034	12/18	0.029	12/19	74	0	0	0	0	0	0	0
Upper Beaver Valley Air Basin																					
New Castle	B21	98.6	0.008	0	0.116	10/08/14	0.114	10/02/14	0	0.039	02/17	0.033	01/30	361	0	0	0	0	0	0	0
Erie Air Basin																					
Erie	E10	97.2	0.009	0	0.109	03/19/05	0.097	11/21/20	0	0.040	06/01	0.035	02/08	353	0	0	0	0	0	0	0
Shenango Valley Non-Air Basin																					
Farrell	606	98.1	0.007	0	0.079	01/30/17	0.074	02/26/17	0	0.034	01/30	0.032	01/15	359	0	0	0	0	0	0	0
DEP Region 6 Non-Air Basin																					
Warren	611	94.9	0.009	0	0.093	10/02/02	0.083	06/25/08	0	0.043	12/16	0.038	12/19	344	0	0	0	0	0	0	0
Warren	612	95.0	0.015	0	0.352	04/30/05	0.291	04/27/05	0	0.109	04/30	0.069	04/27	323	15	1	0	0	0	0	0
Special Purpose Monitoring Sites																					
Kunkletown	212	25.5	0.004	0	0.022	09/07/14	0.020	08/09/11	0	0.010	09/07	0.009	06/06	92	0	0	0	0	0	0	0
Holbrook	514	29.7	0.007	0	0.048	07/22/17	0.045	09/16/14	0	0.021	07/22	0.020	09/15	108	0	0	0	0	0	0	0

**** Primary Annual Mean = 0.03 parts per million ****
**** Primary 24 Hour Mean = 0.14 parts per million ****
**** Seconday 3 Hour Mean = 0.50 parts per million ****

SULFUR DIOXIDE
HISTORICAL TREND
(Units: parts per million)

STATION & CODE	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Southeast Pennsylvania Air Basin											
BRISTOL	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.006	0.007	0.007	Annual Mean
P01	0.046	0.036	0.038	0.031	0.030	0.027	0.040	0.023	0.028	0.029	2nd Max 24-Hour Mean
	0.077	0.055	0.062	0.053	0.061	0.047	0.076	0.048	0.043	0.043	2nd Max 3-Hour Mean
CHESTER	0.012	0.010	0.009	0.008	0.008	0.009	0.010	0.008	0.008	0.008	Annual Mean
P11	0.050	0.035	0.029	0.027	0.031	0.026	0.035	0.028	0.025	0.026	2nd Max 24-Hour Mean
	0.115	0.085	0.067	0.065	0.057	0.046	0.074	0.054	0.048	0.063	2nd Max 3-Hour Mean
NORRISTOWN	0.010	0.009	0.008	0.008	0.008	0.008	0.010	0.009	0.008	0.008	Annual Mean
P21	0.044	0.039	0.032	0.031	0.026	0.029	0.045	0.025	0.028	0.025	2nd Max 24-Hour Mean
	0.061	0.067	0.066	0.058	0.051	0.049	0.066	0.037	0.043	0.048	2nd Max 3-Hour Mean
Allentown-Bethlehem-Easton Air Basin											
ALLENTOWN	0.010	0.010	0.008	0.007	0.006	0.007	0.008	0.006	0.006	0.008	Annual Mean
A19	0.047	0.055	0.037	0.041	0.028	0.034	0.053	0.028	0.035	0.030	2nd Max 24-Hour Mean
	0.078	0.086	0.064	0.082	0.042	0.050	0.079	0.050	0.052	0.058	2nd Max 3-Hour Mean
FREEMANSBURG	***	***	***	***	***	***	***	***	***	***	Annual Mean
A25	***	***	***	***	***	***	***	***	***	***	2nd Max 24-Hour Mean
	***	***	***	***	***	***	***	***	***	***	2nd Max 3-Hour Mean
EASTON	0.009	0.008	0.008	0.009	0.008	0.006	0.008	0.006	0.006	0.010	Annual Mean
A41	0.046	0.036	0.037	0.033	0.029	0.024	0.041	0.026	0.021	0.027	2nd Max 24-Hour Mean
	0.081	0.070	0.073	0.052	0.046	0.052	0.060	0.048	0.046	0.045	2nd Max 3-Hour Mean
Scranton-Wilkes Barre Air Basin											
SCRANTON	0.010	0.009	0.010	0.011	0.009	0.008	0.007	0.005	0.007	0.006	Annual Mean
S01	0.049	0.043	0.045	0.045	0.031	0.025	0.034	0.023	0.033	0.031	2nd Max 24-Hour Mean
	0.075	0.068	0.064	0.114	0.081	0.044	0.087	0.068	0.043	0.050	2nd Max 3-Hour Mean
WILKES BARRE	0.010	0.009	0.010	0.006	0.006	0.006	0.007	0.005	0.006	0.007	Annual Mean
S28	0.043	0.045	0.052	0.032	0.031	0.026	0.034	0.027	0.023	0.026	2nd Max 24-Hour Mean
	0.073	0.071	0.071	0.047	0.072	0.047	0.058	0.056	0.043	0.047	2nd Max 3-Hour Mean
Reading Air Basin											
READING	0.011	0.010	0.009	0.008	0.008	0.009	0.010	0.009	0.009	0.008	Annual Mean
R01	0.048	0.040	0.031	0.028	0.023	0.027	0.036	0.032	0.037	0.028	2nd Max 24-Hour Mean
	0.072	0.084	0.077	0.073	0.069	0.092	0.084	0.072	0.094	0.067	2nd Max 3-Hour Mean
READING CBD	0.014	0.014	0.012	0.011	0.009	0.010	0.012	0.009	0.010	0.009	Annual Mean
R20	0.051	0.052	0.055	0.039	0.030	0.038	0.043	0.026	0.035	0.031	2nd Max 24-Hour Mean
	0.093	0.097	0.084	0.076	0.052	0.064	0.078	0.069	0.069	0.090	2nd Max 3-Hour Mean

*** Indicates less than 50 percent valid data for the year

SULFUR DIOXIDE
HISTORICAL TREND
(Units: parts per million)

STATION & CODE	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Harrisburg Air Basin											
HARRISBURG	0.009	0.008	0.007	0.008	0.007	0.006	0.007	0.005	0.005	0.007	Annual Mean
H11	0.031	0.037	0.024	0.025	0.023	0.025	0.040	0.020	0.022	0.022	2nd Max 24-Hour Mean
	0.057	0.067	0.050	0.065	0.058	0.043	0.055	0.065	0.047	0.049	2nd Max 3-Hour Mean
Lancaster Air Basin											
LANCASTER	0.007	0.007	0.006	0.006	0.006	0.007	0.006	0.006	0.005	0.007	Annual Mean
L01	0.024	0.036	0.028	0.023	0.018	0.026	0.030	0.018	0.021	0.023	2nd Max 24-Hour Mean
	0.056	0.069	0.070	0.047	0.052	0.058	0.045	0.037	0.036	0.051	2nd Max 3-Hour Mean
York Air Basin											
YORK	0.007	0.007	0.007	0.007	0.007	0.008	0.009	0.006	0.007	0.009	Annual Mean
Y01	0.029	0.035	0.023	0.020	0.034	0.032	0.041	0.020	0.022	0.026	2nd Max 24-Hour Mean
	0.060	0.080	0.072	0.069	0.084	0.069	0.071	0.062	0.055	0.073	2nd Max 3-Hour Mean
DEP Region 3 Non-Air Basin											
PERRY COUNTY	0.004	0.004	0.004	0.004	0.004	0.005	0.007	0.004	0.005	0.004	Annual Mean
305	0.016	0.021	0.016	0.016	0.014	0.017	0.023	0.014	0.020	0.021	2nd Max 24-Hour Mean
	0.037	0.043	0.032	0.033	0.034	0.035	0.040	0.050	0.038	0.033	2nd Max 3-Hour Mean
Altoona Non-Air Basin											
ALTOONA	0.011	0.011	0.011	0.010	0.009	0.009	0.010	0.008	0.008	0.010	Annual Mean
308	0.051	0.059	0.062	0.044	0.046	0.052	0.057	0.037	0.033	0.046	2nd Max 24-Hour Mean
	0.101	0.102	0.117	0.082	0.093	0.073	0.108	0.067	0.071	0.070	2nd Max 3-Hour Mean
Williamsport Non-Air Basin											
WILLIAMSPORT	0.009	0.007	0.006	0.007	0.007	0.006	0.006	0.006	0.006	0.008	Annual Mean
407	0.035	0.042	0.025	0.025	0.026	0.025	0.042	0.021	0.028	0.028	2nd Max 24-Hour Mean
	0.056	0.069	0.049	0.047	0.072	0.045	0.063	0.046	0.052	0.050	2nd Max 3-Hour Mean
Johnstown Air Basin											
JOHNSTOWN	0.017	0.016	0.014	0.015	0.013	0.015	0.013	0.012	0.011	0.009	Annual Mean
J01	0.054	0.078	0.046	0.043	0.052	0.049	0.054	0.042	0.034	0.030	2nd Max 24-Hour Mean
	0.142	0.129	0.132	0.134	0.106	0.153	0.112	0.128	0.068	0.069	2nd Max 3-Hour Mean
Monongahela Valley Air Basin											
CHARLEROI	0.012	0.013	0.011	0.012	0.012	0.011	0.011	0.009	0.008	0.009	Annual Mean
M01	0.053	0.053	0.038	0.037	0.038	0.036	0.063	0.030	0.033	0.035	2nd Max 24-Hour Mean
	0.120	0.115	0.101	0.093	0.140	0.084	0.129	0.097	0.084	0.074	2nd Max 3-Hour Mean

*** Indicates less than 50 percent valid data for the year

SULFUR DIOXIDE
HISTORICAL TREND
(Units: parts per million)

STATION & CODE	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Lower Beaver Valley Air Basin											
BADEN	0.013	0.012	0.012	0.012	0.013	0.013	0.012	0.009	0.010	0.012	Annual Mean
B01	0.044	0.046	0.045	0.043	0.045	0.046	0.065	0.031	0.027	0.033	2nd Max 24-Hour Mean
	0.091	0.140	0.090	0.098	0.108	0.103	0.124	0.068	0.059	0.069	2nd Max 3-Hour Mean
BEAVER FALLS	0.013	0.013	0.013	0.013	0.012	0.012	0.012	0.009	0.007	0.009	Annual Mean
B11	0.057	0.056	0.046	0.048	0.068	0.040	0.059	0.030	0.038	0.034	2nd Max 24-Hour Mean
	0.123	0.118	0.116	0.117	0.125	0.095	0.127	0.075	0.078	0.082	2nd Max 3-Hour Mean
HOOKSTOWN	0.018	0.014	0.020	0.020	0.012	0.017	0.018	0.012	0.011	0.011	Annual Mean
B23	0.101	0.119	0.088	0.068	0.088	0.075	0.072	0.046	0.038	0.049	2nd Max 24-Hour Mean
	0.208	0.307	0.240	0.172	0.181	0.178	0.166	0.127	0.105	0.163	2nd Max 3-Hour Mean
BRIGHTON TWP	***	***	***	***	***	***	0.015	0.015	0.015	0.015	Annual Mean
B27	***	***	***	***	***	***	0.092	0.080	0.058	0.078	2nd Max 24-Hour Mean
	***	***	***	***	***	***	0.199	0.216	0.207	0.251	2nd Max 3-Hour Mean
Allegheny County Air Basin											
PITTSBURGH	***	***	***	***	***	***	***	***	***	***	Annual Mean
D12	***	***	***	***	***	***	***	***	***	***	2nd Max 24-Hour Mean
	***	***	***	***	***	***	***	***	***	***	2nd Max 3-Hour Mean
DEP Region 5 Non-Air Basin											
FLORENCE	0.012	0.015	0.014	0.013	0.015	0.013	0.012	0.009	0.010	0.012	Annual Mean
504	0.057	0.067	0.057	0.047	0.059	0.058	0.086	0.034	0.035	0.050	2nd Max 24-Hour Mean
	0.110	0.191	0.152	0.116	0.131	0.156	0.152	0.095	0.084	0.127	2nd Max 3-Hour Mean
WASHINGTON	0.013	0.013	0.012	0.012	0.012	0.012	0.012	0.009	0.008	0.010	Annual Mean
508	0.044	0.067	0.044	0.044	0.050	0.054	0.043	0.045	0.030	0.047	2nd Max 24-Hour Mean
	0.095	0.109	0.104	0.106	0.109	0.134	0.122	0.093	0.094	0.086	2nd Max 3-Hour Mean
GREENSBURG	***	***	***	***	***	***	***	***	***	***	Annual Mean
513	***	***	***	***	***	***	***	***	***	***	2nd Max 24-Hour Mean
	***	***	***	***	***	***	***	***	***	***	2nd Max 3-Hour Mean
Upper Beaver Valley Air Basin											
NEW CASTLE	0.011	0.011	0.011	0.010	0.008	0.008	0.008	0.007	0.008	0.008	Annual Mean
B21	0.057	0.055	0.045	0.042	0.048	0.036	0.037	0.032	0.035	0.033	2nd Max 24-Hour Mean
	0.118	0.103	0.129	0.110	0.099	0.103	0.077	0.070	0.064	0.114	2nd Max 3-Hour Mean

*** Indicates less than 50 percent valid data for the year

SULFUR DIOXIDE
HISTORICAL TREND
(Units: parts per million)

STATION & CODE	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Erie Air Basin											
ERIE	0.014	0.014	0.014	0.010	0.011	0.011	0.010	0.009	0.010	0.009	Annual Mean
E10	0.050	0.074	0.057	0.044	0.056	0.072	0.076	0.050	0.066	0.035	2nd Max 24-Hour Mean
	0.171	0.137	0.161	0.114	0.137	0.190	0.155	0.112	0.173	0.097	2nd Max 3-Hour Mean
Shenango Valley Non-Air Basin											
FARRELL	0.011	0.011	0.010	0.008	0.008	0.008	0.008	0.008	0.007	0.007	Annual Mean
606	0.054	0.043	0.036	0.032	0.030	0.029	0.047	0.032	0.029	0.032	2nd Max 24-Hour Mean
	0.108	0.088	0.120	0.082	0.074	0.085	0.086	0.064	0.060	0.074	2nd Max 3-Hour Mean
DEP Region 6 Non-Air Basin											
WARREN	***	***	***	***	***	***	***	***	0.008	0.009	Annual Mean
611	***	***	***	***	***	***	***	***	0.028	0.038	2nd Max 24-Hour Mean
	***	***	***	***	***	***	***	***	0.096	0.083	2nd Max 3-Hour Mean
WARREN	***	***	***	***	***	***	***	***	***	0.015	Annual Mean
612	***	***	***	***	***	***	***	***	***	0.069	2nd Max 24-Hour Mean
	***	***	***	***	***	***	***	***	***	0.291	2nd Max 3-Hour Mean

*** Indicates less than 50 percent valid data for the year

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

OZONE SUMMARY

(Units: parts per million)

YEAR: 1997 (APRIL-OCTOBER)

												Number of 1 Hour Values In Ranges							
	PA	Percent	Number	1st Daily Max		2nd Daily Max		3nd Daily Max		4th Daily Max		.00	.05	.09	.13	.17	.21	.25	
	Site	Valid	Daily 1 HR	1 HR	Date	1 HR	Date	1 HR	Date	1 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	>= 0.125	Mean	MM/DD/HH	Mean	MM/DD/HH	Mean	MM/DD/HH	Mean	MM/DD/HH	.04	.08	.12	.16	.20	.24	.28	.28
Southeast Pennsylvania Air Basin																			
Bristol	P01	99.3	1	0.144	07/15/16	0.119	07/14/15	0.114	08/09/17	0.112	07/08/13	66	114	31	1	0	0	0	0
Chester	P11	97.9	3	0.128	07/15/12	0.127	06/20/17	0.126	07/14/17	0.115	07/08/10	47	131	30	3	0	0	0	0
Norristown	P21	99.0	2	0.135	07/14/17	0.131	06/24/18	0.122	07/17/19	0.121	07/15/12	56	129	26	2	0	0	0	0
Allentown-Bethlehem-Easton Air Basin																			
Allentown	A19	98.3	1	0.127	07/15/17	0.116	06/20/21	0.112	07/08/19	0.110	07/14/18	53	133	22	1	0	0	0	0
Freemansburg	A25	33.3	0	0.084	09/02/16	0.080	09/07/14	0.080	10/06/14	0.077	09/01/14	41	30	0	0	0	0	0	0
Easton	A41	99.3	0	0.117	06/20/21	0.116	07/15/12	0.109	06/21/19	0.102	07/14/15	66	129	17	0	0	0	0	0
Scranton-Wilkes-Barre Air Basin																			
Scranton	S01	98.7	0	0.107	07/21/15	0.095	06/16/16	0.091	06/29/14	0.090	06/21/11	67	133	10	0	0	0	0	0
Nanticoke	S26	99.1	0	0.096	07/14/16	0.091	07/21/15	0.090	08/02/16	0.087	06/29/17	94	113	6	0	0	0	0	0
Wilkes-Barre	S28	96.8	0	0.114	07/14/17	0.111	07/15/11	0.111	07/21/16	0.110	08/02/16	71	126	12	0	0	0	0	0
Peckville	S29	99.7	0	0.108	07/15/10	0.106	07/21/15	0.101	07/08/21	0.097	06/21/10	70	127	17	0	0	0	0	0
Reading Air Basin																			
Reading	R01	98.2	1	0.131	07/15/15	0.120	07/14/16	0.118	07/08/17	0.108	06/24/15	82	108	21	1	0	0	0	0
Harrisburg Air Basin																			
Harrisburg	H11	99.3	0	0.114	07/15/13	0.112	07/14/14	0.097	07/13/16	0.095	06/24/13	69	131	14	0	0	0	0	0
Lancaster Air Basin																			
Lancaster	L01	98.3	3	0.139	07/15/17	0.133	07/14/13	0.128	07/08/16	0.116	08/10/15	47	131	27	3	0	0	0	0

**** Primary Daily 1 Hour Air Quality Standard of 0.12 parts per million ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

OZONE SUMMARY

(Units: parts per million)

YEAR: 1997 (APRIL-OCTOBER)

Site Name	PA Site Code	Percent Valid Data	Number Daily 1 HR >= 0.125	1st Daily Max 1 HR Mean	1st Daily Max Date MM/DD/HH	2nd Daily Max 1 HR Mean	2nd Daily Max Date MM/DD/HH	3nd Daily Max 1 HR Mean	3nd Daily Max Date MM/DD/HH	4th Daily Max 1 HR Mean	4th Daily Max Date MM/DD/HH	Number of 1 Hour Values In Ranges .00 to .04	.05 to .08	.09 to .12	.13 to .16	.17 to .20	.21 to .24	.25 to .28	> .28
York Air Basin																			
York	Y01	98.0	0	0.114	07/15/11	0.109	07/13/18	0.109	07/14/16	0.108	07/08/17	54	133	23	0	0	0	0	0
DEP Region 3 Non-Air Basin																			
Perry County	305	96.4	0	0.108	07/15/11	0.103	07/21/15	0.101	07/14/17	0.098	07/13/17	57	136	12	0	0	0	0	0
Hershey	306	99.2	0	0.119	07/15/12	0.116	07/14/15	0.106	06/24/14	0.103	07/13/16	66	127	19	0	0	0	0	0
Kutztown	310	99.5	0	0.116	07/15/17	0.109	07/08/18	0.105	06/24/15	0.105	07/14/17	65	134	15	0	0	0	0	0
Methodist Hill	313	97.3	0	0.120	07/14/00	0.114	07/13/23	0.108	07/15/15	0.100	07/21/15	33	154	21	0	0	0	0	0
Altoona Non-Air Basin																			
Altoona East	308	98.2	0	0.117	07/14/14	0.114	07/13/16	0.113	07/21/16	0.104	07/15/13	55	145	12	0	0	0	0	0
Williamsport Non-Air Basin																			
Williamsport	407	96.0	0	0.095	07/15/18	0.086	07/14/16	0.083	06/21/13	0.083	08/02/13	107	96	2	0	0	0	0	0
Johnstown Air Basin																			
Johnstown	J01	99.2	1	0.132	07/13/16	0.104	06/24/13	0.102	07/12/18	0.102	07/14/15	69	129	13	1	0	0	0	0
Monongahela Valley Air Basin																			
Charleroi	M01	99.5	0	0.119	07/12/13	0.118	07/21/15	0.117	07/13/13	0.114	07/14/13	41	135	35	0	0	0	0	0
Lower Beaver Valley Air Basin																			
Beaver Falls	B11	99.0	0	0.105	06/28/15	0.101	08/08/15	0.098	06/24/18	0.094	07/13/16	68	129	13	0	0	0	0	0
Hookstown	B23	98.7	0	0.105	06/24/18	0.098	08/09/14	0.095	07/12/16	0.095	08/08/14	54	149	9	0	0	0	0	0
Brighton Township	B27	99.1	0	0.102	06/24/18	0.096	07/12/21	0.095	07/13/14	0.092	06/28/16	67	138	8	0	0	0	0	0

**** Primary Daily 1 Hour Air Quality Standard of 0.12 parts per million ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

OZONE SUMMARY

(Units: parts per million)

YEAR: 1997 (APRIL-OCTOBER)

												Number of 1 Hour Values In Ranges							
	PA	Percent	Number	1st Daily Max		2nd Daily Max		3nd Daily Max		4th Daily Max		.00	.05	.09	.13	.17	.21	.25	
	Site	Valid	Daily 1 HR	1 HR	Date	1 HR	Date	1 HR	Date	1 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	>= 0.125	Mean	MM/DD/HH	Mean	MM/DD/HH	Mean	MM/DD/HH	Mean	MM/DD/HH	.04	.08	.12	.16	.20	.24	.28	.28
DEP Region 5 Non-Air Basin																			
Florence	504	99.4	0	0.113	06/24/16	0.111	07/13/13	0.098	07/12/14	0.096	07/21/13	58	140	15	0	0	0	0	0
Washington	508	99.2	0	0.111	06/24/15	0.107	07/14/16	0.104	07/13/11	0.099	07/21/14	62	136	15	0	0	0	0	0
Murrysville	510	96.5	1	0.128	07/12/14	0.123	07/13/14	0.100	07/14/13	0.098	06/24/15	85	113	8	1	0	0	0	0
Kittanning	512	31.5	0	0.090	10/08/14	0.078	10/07/15	0.077	10/12/15	0.072	10/04/15	38	27	1	0	0	0	0	0
Greensburg	513	14.5	0	0.069	10/07/15	0.056	10/05/15	0.048	10/06/15	0.047	10/04/15	26	5	0	0	0	0	0	0
Upper Beaver Valley Air Basin																			
New Castle	B21	99.3	0	0.110	07/12/14	0.109	06/28/15	0.098	08/09/16	0.096	08/08/17	91	111	11	0	0	0	0	0
Erie Air Basin																			
Erie	E10	96.7	0	0.117	07/14/16	0.103	06/13/17	0.102	09/16/15	0.101	07/13/12	71	116	16	0	0	0	0	0
Shenango Valley Non-Air Basin																			
Farrell	606	98.0	0	0.114	07/12/15	0.111	06/28/15	0.105	06/24/12	0.105	07/13/15	64	126	20	0	0	0	0	0
Special Purpose Monitoring Sites																			
Kunkletown	212	42.7	0	0.118	07/15/17	0.117	07/08/19	0.111	07/14/14	0.108	07/13/16	12	57	21	0	0	0	0	0
Holbrook	514	51.6	0	0.123	07/13/14	0.123	07/14/19	0.103	07/21/13	0.101	06/25/14	12	75	23	0	0	0	0	0
Moshannon	D09	96.6	0	0.124	07/23/21	0.117	07/14/16	0.116	06/24/21	0.109	06/20/17	72	115	21	0	0	0	0	0
Tiadaghton	D10	84.6	0	0.079	04/15/10	0.075	04/30/17	0.067	07/15/15	0.067	10/09/15	128	58	0	0	0	0	0	0
Penn Nursery	D11	94.3	1	0.126	07/14/15	0.124	07/21/15	0.118	07/15/11	0.105	07/17/11	61	130	10	1	0	0	0	0

**** Primary Daily 1 Hour Air Quality Standard of 0.12 parts per million ****

OZONE HISTORICAL TREND
(Units: parts per million)

STATION	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Southeast Pennsylvania Air Basin											
BRISTOL	0.183	0.135	0.132	0.138	0.117	0.129	0.128	0.137	0.120	0.119	2nd Max Daily 1 Hour Average
P01	13	5	4	9	0	2	2	5	1	1	Number Standard Exceedances
CHESTER	0.193	0.126	0.138	0.125	0.109	0.123	0.118	0.126	0.117	0.127	2nd Max Daily 1 Hour Average
P11	17	2	2	3	0	1	1	2	0	3	Number Standard Exceedances
NORRISTOWN	0.159	0.121	0.116	0.125	0.114	0.130	0.115	0.114	0.118	0.131	2nd Max Daily 1 Hour Average
P21	15	0	1	2	1	3	0	1	0	2	Number Standard Exceedances
Allentown-Bethlehem-Easton Air Basin											
ALLENTOWN	0.138	0.102	0.109	0.118	0.095	0.104	0.105	0.109	0.114	0.116	2nd Max Daily 1 Hour Average
A19	6	0	0	1	0	0	0	0	0	1	Number Standard Exceedances
FREEMANSBURG	***	***	***	***	***	***	***	***	***	***	2nd Max Daily 1 Hour Average
A25	***	***	***	***	***	***	***	***	***	***	Number Standard Exceedances
EASTON	0.163	0.098	0.111	0.120	0.096	0.110	0.105	0.108	0.099	0.116	2nd Max Daily 1 Hour Average
A41	10	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
Scranton-Wilkes Barre Air Basin											
SCRANTON	0.146	0.105	0.100	0.126	0.096	0.111	0.106	0.105	0.108	0.095	2nd Max Daily 1 Hour Average
S01	8	0	0	2	0	0	0	0	0	0	Number Standard Exceedances
NANTICOKE	0.128	0.085	0.088	0.108	0.094	0.105	0.083	0.100	0.087	0.091	2nd Max Daily 1 Hour Average
S26	3	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
WILKES BARRE	0.119	0.097	0.114	0.114	0.097	0.112	0.100	0.105	0.105	0.111	2nd Max Daily 1 Hour Average
S28	0	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
PECKVILLE	***	***	***	0.123	0.093	0.111	0.102	0.110	0.113	0.106	2nd Max Daily 1 Hour Average
S29	***	***	***	1	0	0	0	0	0	0	Number Standard Exceedances
Reading Air Basin											
READING	0.148	0.106	0.113	0.123	0.098	0.105	0.102	0.116	0.110	0.120	2nd Max Daily 1 Hour Average
R01	9	0	0	1	0	0	1	0	0	1	Number Standard Exceedances
Harrisburg Air Basin											
HARRISBURG	0.129	0.102	0.108	0.110	0.094	0.118	0.118	0.099	0.096	0.112	2nd Max Daily 1 Hour Average
H11	2	0	1	0	0	0	0	0	0	0	Number Standard Exceedances

*** Indicates less than 50 percent valid data for year

OZONE HISTORICAL TREND
(Units: parts per million)

STATION	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Lancaster Air Basin											
LANCASTER	0.127	0.101	0.101	0.119	0.106	0.118	0.111	0.124	0.101	0.133	2nd Max Daily 1 Hour Average
L01	3	0	0	0	0	1	0	1	0	3	Number Standard Exceedances
York Air Basin											
YORK	0.142	0.102	0.121	0.114	0.101	0.112	0.115	0.097	0.098	0.109	2nd Max Daily 1 Hour Average
Y01	4	0	1	0	0	0	0	0	0	0	Number Standard Exceedances
DEP Region 3 Non-Air Basin											
PERRY COUNTY	0.139	0.096	0.100	0.103	0.088	0.110	0.106	0.103	0.090	0.103	2nd Max Daily 1 Hour Average
305	6	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
HERSHEY	0.138	0.113	0.122	0.113	0.097	0.110	0.122	0.113	0.104	0.116	2nd Max Daily 1 Hour Average
306	4	0	1	0	0	0	0	0	0	0	Number Standard Exceedances
KUTZTOWN	0.143	0.105	0.108	0.119	0.100	0.110	0.106	0.107	0.100	0.109	2nd Max Daily 1 Hour Average
310	7	0	0	1	0	0	1	0	0	0	Number Standard Exceedances
METHODIST HILL	***	***	***	***	***	***	***	***	0.096	0.114	2nd Max Daily 1 Hour Average
313	***	***	***	***	***	***	***	***	0	0	Number Standard Exceedances
Altoona Non-Air Basin											
ALTOONA	0.136	0.099	0.097	0.106	0.095	0.100	0.106	0.112	0.101	0.114	2nd Max Daily 1 Hour Average
308	4	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
Williamsport Non-Air Basin											
WILLIAMSPORT	0.116	0.080	0.088	0.101	0.092	0.088	0.079	0.091	0.082	0.086	2nd Max Daily 1 Hour Average
407	0	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
Johnstown Air Basin											
JOHNSTOWN	0.144	0.098	0.103	0.113	0.089	0.099	0.094	0.101	0.098	0.104	2nd Max Daily 1 Hour Average
J01	7	0	0	0	0	0	0	0	0	1	Number Standard Exceedances
Monongahela Valley Air Basin											
CHARLEROI	0.128	0.102	0.102	0.119	0.085	0.115	0.112	0.116	0.102	0.118	2nd Max Daily 1 Hour Average
M01	6	0	0	0	0	0	0	0	0	0	Number Standard Exceedances

*** Indicates less than 50 percent valid data for year

OZONE HISTORICAL TREND
(Units: parts per million)

STATION	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Lower Beaver Valley Air Basin											
BEAVER FALLS	0.128	0.104	0.104	0.108	0.101	0.099	0.107	0.106	0.105	0.101	2nd Max Daily 1 Hour Average
B11	3	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
HOOKSTOWN	***	***	***	***	***	***	***	0.102	0.104	0.098	2nd Max Daily 1 Hour Average
B23	***	***	***	***	***	***	***	0	0	0	Number Standard Exceedances
BRIGHTON TWP	***	***	***	***	***	***	0.104	0.098	0.099	0.096	2nd Max Daily 1 Hour Average
B27	***	***	***	***	***	***	0	0	0	0	Number Standard Exceedances
DEP Region 5 Non-Air Basin											
FLORENCE	***	***	***	***	***	***	***	0.104	0.092	0.111	2nd Max Daily 1 Hour Average
504	***	***	***	***	***	***	***	0	0	0	Number Standard Exceedances
WASHINGTON	0.140	0.104	0.104	0.106	0.092	0.104	0.115	0.111	0.103	0.107	2nd Max Daily 1 Hour Average
508	4	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
MURRYSVILLE	***	0.081	0.103	0.105	0.073	0.120	0.118	0.127	0.104	0.123	2nd Max Daily 1 Hour Average
510	***	0	0	0	0	0	0	3	0	1	Number Standard Exceedances
KITTANNING	***	***	***	***	***	***	***	***	***	***	2nd Max Daily 1 Hour Average
512	***	***	***	***	***	***	***	***	***	***	Number Standard Exceedances
GREENSBURG	***	***	***	***	***	***	***	***	***	***	2nd Max Daily 1 Hour Average
513	***	***	***	***	***	***	***	***	***	***	Number Standard Exceedances
Upper Beaver Valley Air Basin											
NEW CASTLE	0.137	0.101	0.097	0.101	0.094	0.095	0.102	0.101	0.097	0.109	2nd Max Daily 1 Hour Average
B21	3	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
Erie Air Basin											
ERIE	0.148	0.116	0.100	0.113	0.098	0.107	0.101	0.105	0.100	0.103	2nd Max Daily 1 Hour Average
E10	6	0	0	0	0	0	0	0	0	0	Number Standard Exceedances
Shenango Valley Non-Air Basin											
FARRELL	0.143	0.105	0.103	0.107	0.100	0.105	0.111	0.113	0.103	0.111	2nd Max Daily 1 Hour Average
606	5	0	0	0	0	0	0	0	0	0	Number Standard Exceedances

*** Indicates less than 50 percent valid data for year

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

NITROGEN DIOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

Site Name	PA Site Code	Percent Valid Data	Annual Mean	1st Max 1 HR Mean	1st Max Date MM/DD/HH	2nd Max 1 HR Mean	2nd Max Date MM/DD/HH	Daily Means 1st Max 24 HR Mean	Daily Means 1st Max Date MM/DD	Daily Means 2nd Max 24 HR Mean	Daily Means 2nd Max Date MM/DD	Number of 1 Hour Values In Ranges 0.00 to 0.04	0.05 to 0.08	0.09 to 0.12	0.13 to 0.16	0.17 to 0.20	0.21 to 0.24	0.25 to 0.28	> 0.28
Southeast Pennsylvania Air Basin																			
Bristol	P01	99.2	0.020	0.106	12/17/08	0.096	12/17/09	0.049	12/17	0.048	11/19	8354	330	4	0	0	0	0	0
Chester	P11	97.9	0.020	0.116	09/06/06	0.095	09/06/23	0.048	09/06	0.046	03/19	8257	318	5	0	0	0	0	0
Norristown	P21	97.4	0.019	0.087	12/16/07	0.083	12/16/06	0.042	11/19	0.042	11/21	8224	303	1	0	0	0	0	0
Allentown-Bethlehem-Easton Air Basin																			
Allentown	A19	95.7	0.016	0.065	12/17/15	0.061	04/27/06	0.040	11/19	0.038	12/17	8316	69	0	0	0	0	0	0
Freemansburg	A25	35.7	0.018	0.100	11/24/09	0.068	11/24/08	0.036	12/19	0.035	11/19	3101	25	1	0	0	0	0	0
Scranton-Wilkes-Barre Air Basin																			
Scranton	S01	98.8	0.018	0.071	07/14/23	0.070	10/09/20	0.040	11/21	0.039	02/26	8463	191	0	0	0	0	0	0
Wilkes-Barre	S28	98.0	0.015	0.067	11/21/12	0.064	11/21/13	0.042	11/21	0.035	02/14	8547	37	0	0	0	0	0	0
Reading Air Basin																			
Reading	R01	97.5	0.021	0.077	12/17/09	0.072	07/14/22	0.042	12/19	0.040	12/17	8312	233	0	0	0	0	0	0
Harrisburg Air Basin																			
Harrisburg	H11	97.4	0.019	0.101	12/17/01	0.082	12/17/00	0.046	12/17	0.042	12/16	8403	131	1	0	0	0	0	0
Lancaster Air Basin																			
Lancaster	L01	97.9	0.016	0.070	11/19/10	0.065	11/19/11	0.040	12/19	0.036	11/19	8518	57	0	0	0	0	0	0
York Air Basin																			
York	Y01	97.0	0.019	0.103	01/31/04	0.086	01/31/05	0.071	01/31	0.045	12/16	8243	252	2	0	0	0	0	0
DEP Region 3 Non-Air Basin																			
Perry County	305	96.4	0.007	0.040	01/15/20	0.040	01/15/21	0.030	01/31	0.025	01/15	8442	0	0	0	0	0	0	0

Appendix A: Table A-14

**** Primary Annual Air Quality Standard of 0.053 parts per million ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

NITROGEN DIOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

								Daily Means				Number of 1 Hour Values In Ranges							
	PA	Percent		1st Max		2nd Max		1st Max		2nd Max		0.00	0.05	0.09	0.13	0.17	0.21	0.25	
	Site	Valid	Annual	1 HR	Date	1 HR	Date	24 HR	Date	24 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	Mean	Mean	MM/DD/HH	Mean	MM/DD/HH	Mean	MM/DD	Mean	MM/DD	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.28
Altoona Non-Air Basin																			
Altoona East	308	98.1	0.014	0.072	02/18/08	0.069	05/29/09	0.041	01/31	0.039	02/18	8553	37	0	0	0	0	0	0
Johnstown Air Basin																			
Johnstown	J01	98.5	0.016	0.073	01/22/15	0.072	01/22/16	0.038	01/22	0.034	02/18	8592	37	0	0	0	0	0	0
Monongahela Valley Air Basin																			
Charleroi	M01	99.4	0.016	0.053	04/05/09	0.053	04/05/20	0.035	02/26	0.035	04/05	8672	36	0	0	0	0	0	0
Lower Beaver Valley Air Basin																			
Beaver Falls	B11	98.7	0.017	0.064	04/30/21	0.060	03/28/09	0.043	02/26	0.041	01/15	8517	133	0	0	0	0	0	0
Allegheny County Air Basin																			
Pittsburgh	D12	8.8	0.017	0.052	12/16/11	0.046	12/18/13	0.029	12/17	0.028	12/18	770	3	0	0	0	0	0	0
DEP Region 5 Non-Air Basin																			
Washington	508	92.6	0.018	0.080	04/27/01	0.070	11/01/02	0.037	12/17	0.036	04/21	7954	157	0	0	0	0	0	0
Greensburg	513	21.0	0.017	0.053	10/06/18	0.051	10/08/18	0.032	10/08	0.031	12/19	1831	7	0	0	0	0	0	0
Upper Beaver Valley Air Basin																			
New Castle	B21	97.3	0.020	0.066	04/04/19	0.064	03/27/20	0.045	02/26	0.042	02/18	8332	195	0	0	0	0	0	0
Erie Air Basin																			
Erie	E10	96.8	0.015	0.072	08/08/20	0.063	06/11/21	0.032	12/19	0.031	01/31	8408	69	0	0	0	0	0	0
Special Purpose Monitoring Sites																			
Arendtsville	314	34.9	0.004	0.031	10/31/05	0.031	10/31/06	0.018	10/31	0.013	10/24	3061	0	0	0	0	0	0	0

Appendix A: Table A-14

**** Primary Annual Air Quality Standard of 0.053 parts per million ****

NITROGEN DIOXIDE HISTORICAL TREND
ANNUAL MEANS
(Units: parts per million)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Southeast Pennsylvania Air Basin											
BRISTOL	(P01)	0.026	0.024	0.022	0.022	0.021	0.019	0.023	0.020	0.021	0.020
CHESTER	(P11)	0.023	0.023	0.021	0.021	0.021	0.021	0.022	0.020	0.021	0.020
NORRISTOWN	(P21)	0.026	0.024	0.018	0.015	0.017	0.022	0.023	0.020	0.021	0.019
Allentown-Bethlehem-Easton Air Basin											
ALLENTOWN	(A19)	0.020	0.020	0.017	0.018	0.018	0.020	0.021	0.018	0.018	0.016
FREEMANSBURG	(A25)	***	***	***	***	***	***	***	***	***	***
Scranton-Wilkes Barre Air Basin											
SCRANTON	(S01)	0.017	0.021	0.020	0.018	0.017	0.018	0.020	0.018	0.018	0.018
WILKES BARRE	(S28)	0.019	0.016	0.016	0.017	0.016	0.018	0.016	0.014	0.018	0.015
Reading Air Basin											
READING	(R01)	0.024	0.023	0.022	0.022	0.020	0.021	0.023	0.021	0.022	0.021
Harrisburg Air Basin											
HARRISBURG	(H11)	0.021	0.022	0.020	0.020	0.018	0.015	0.022	0.020	0.021	0.019
Lancaster Air Basin											
LANCASTER	(L01)	0.020	0.018	0.017	0.018	0.015	0.015	0.019	0.016	0.017	0.016
York Air Basin											
YORK	(Y01)	0.023	0.022	0.022	0.021	0.020	0.022	0.024	0.021	0.021	0.019
DEP Region 3 Non-Air Basin											
PERRY COUNTY	(305)	0.006	0.007	0.007	0.008	0.007	0.008	0.008	0.007	0.009	0.007
Altoona Non-Air Basin											
ALTOONA	(308)	0.016	0.015	0.015	0.015	0.014	0.015	0.016	0.013	0.014	0.014
Johnstown Air Basin											
JOHNSTOWN	(J01)	0.019	0.019	0.018	0.019	0.018	0.017	0.018	0.015	0.018	0.016
Monongahela Valley Air Basin											
CHARLEROI	(M01)	0.019	0.020	0.018	0.019	0.018	0.018	0.018	0.017	0.017	0.016
Lower Beaver Valley Air Basin											
BEAVER FALLS	(B11)	0.020	0.020	0.020	0.019	0.020	0.020	0.020	0.018	0.018	0.017

*** Indicates less than 50 percent valid data for year

NITROGEN DIOXIDE HISTORICAL TREND
ANNUAL MEANS
(Units: parts per million)

STATION & SITE CODE		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Allegheny County Air Basin											
PITTSBURGH	(D12)	***	***	***	***	***	***	***	***	***	***
DEP Region 5 Non-Air Basin											
WASHINGTON	(508)	0.020	0.021	0.018	0.019	0.019	0.019	0.019	0.016	0.015	0.018
GREENSBURG	(513)	***	***	***	***	***	***	***	***	***	***
Upper Beaver Valley Air Basin											
NEW CASTLE	(B21)	0.023	0.019	0.020	0.020	0.021	0.021	0.021	0.019	0.024	0.020
Erie Air Basin											
ERIE	(E10)	0.016	0.015	0.015	0.014	0.014	0.014	0.015	0.015	0.015	0.015

*** Indicates less than 50 percent valid data for year

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

OXIDES OF NITROGEN SUMMARY

(Units: parts per million)

YEAR: 1997

Site Name	PA Site Code	Percent Valid Data	Annual Mean	1st Max 1 HR Mean	1st Max Date MM/DD/HH	2nd Max 1 HR Mean	2nd Max Date MM/DD/HH	Daily Means 1st Max 24 HR Mean	Daily Means 1st Max Date MM/DD	Daily Means 2nd Max 24 HR Mean	Daily Means 2nd Max Date MM/DD	Number of 1 Hour Values In Ranges 0.00 to 0.04	0.05 to 0.08	0.09 to 0.12	0.13 to 0.16	0.17 to 0.20	0.21 to 0.24	0.25 to 0.28	> 0.28
Southeast Pennsylvania Air Basin																			
Bristol	P01	99.2	0.043	0.922	12/17/08	0.852	12/17/07	0.320	12/17	0.281	11/19	6528	1060	440	218	142	96	61	142
Chester	P11	97.9	0.036	0.500	12/15/07	0.467	12/17/08	0.168	12/17	0.143	12/19	6558	1331	390	138	68	42	28	25
Norristown	P21	97.4	0.035	0.496	12/15/08	0.476	11/19/07	0.182	11/19	0.158	12/10	6535	1230	399	171	75	42	32	44
Allentown-Bethlehem-Easton Air Basin																			
Allentown	A19	95.8	0.024	0.308	12/17/03	0.292	11/19/08	0.129	11/19	0.113	12/10	7220	858	180	86	35	13	2	2
Freemansburg	A25	35.7	0.040	0.453	12/17/09	0.401	12/17/08	0.189	12/17	0.165	11/19	2251	526	153	106	53	17	7	14
Scranton-Wilkes-Barre Air Basin																			
Scranton	S01	98.8	0.028	0.373	11/19/19	0.355	11/19/20	0.168	12/17	0.146	11/19	7146	983	307	120	51	26	16	9
Wilkes-Barre	S28	97.8	0.028	0.358	11/21/21	0.348	11/21/20	0.251	11/21	0.189	12/17	7077	873	350	130	70	39	22	10
Reading Air Basin																			
Reading	R01	97.5	0.045	0.550	12/19/07	0.548	12/17/07	0.279	12/19	0.268	12/17	5863	1630	551	211	122	69	33	65
Harrisburg Air Basin																			
Harrisburg	H11	97.1	0.032	0.549	12/17/01	0.535	12/17/00	0.228	12/17	0.196	01/03	6725	1113	386	151	50	29	18	37
Lancaster Air Basin																			
Lancaster	L01	98.1	0.031	0.479	12/19/07	0.436	12/19/21	0.289	12/19	0.183	12/16	7095	941	274	117	77	20	22	44
York Air Basin																			
York	Y01	96.6	0.037	0.534	12/19/08	0.525	11/20/07	0.249	12/16	0.209	12/17	6559	1125	363	191	100	47	25	54
DEP Region 3 Non-Air Basin																			
Perry County	305	96.4	0.008	0.094	12/19/11	0.088	12/11/05	0.059	12/11	0.055	12/10	8309	134	3	0	0	0	0	0

**** No Long- or Short-Term Air Quality Standards ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

OXIDES OF NITROGEN SUMMARY

(Units: parts per million)

YEAR: 1997

								Daily Means				Number of 1 Hour Values In Ranges							
	PA	Percent		1st Max		2nd Max		1st Max		2nd Max		0.00	0.05	0.09	0.13	0.17	0.21	0.25	
	Site	Valid	Annual	1 HR	Date	1 HR	Date	24 HR	Date	24 HR	Date	to	to	to	to	to	to	to	>
Site Name	Code	Data	Mean	Mean	MM/DD/HH	Mean	MM/DD/HH	Mean	MM/DD	Mean	MM/DD	0.04	0.08	0.12	0.16	0.20	0.24	0.28	0.28
Altoona Non-Air Basin																			
Altoona East	308	98.1	0.020	0.316	02/18/08	0.259	01/31/09	0.115	12/18	0.096	01/31	7699	653	179	42	10	4	2	1
Johnstown Air Basin																			
Johnstown	J01	98.3	0.025	0.419	01/22/16	0.399	01/22/15	0.137	01/22	0.122	11/21	7584	729	210	50	27	4	4	6
Monongahela Valley Air Basin																			
Charleroi	M01	99.4	0.030	0.278	12/18/07	0.277	11/21/08	0.185	12/18	0.146	12/17	7057	966	405	179	68	24	9	0
Lower Beaver Valley Air Basin																			
Beaver Falls	B11	98.7	0.035	0.383	12/18/20	0.372	12/18/21	0.178	12/18	0.177	12/19	6645	1232	433	179	78	40	23	20
Allegheny County Air Basin																			
Pittsburgh	D12	8.8	0.063	0.355	12/16/09	0.355	12/17/10	0.275	12/18	0.255	12/17	471	143	42	23	30	11	21	31
DEP Region 5 Non-Air Basin																			
Washington	508	98.3	0.030	0.415	01/15/08	0.410	12/17/23	0.191	12/17	0.141	11/06	7221	922	265	102	56	23	17	8
Greenburg	513	21.0	0.036	0.372	12/19/20	0.349	12/19/19	0.167	12/17	0.129	12/16	1447	239	88	26	15	7	6	10
Upper Beaver Valley Air Basin																			
New Castle	B21	97.4	0.037	0.371	12/16/17	0.342	12/17/09	0.175	12/17	0.164	12/16	6463	1429	388	135	69	24	14	6
Erie Air Basin																			
Erie	E10	96.8	0.022	0.219	11/06/07	0.210	12/19/23	0.096	12/10	0.080	11/06	7579	729	127	30	10	3	0	0
Special Purpose Monitoring Sites																			
Arendtsville	314	34.9	0.005	0.050	10/31/08	0.040	10/31/07	0.023	10/31	0.019	10/24	3060	1	0	0	0	0	0	0

**** No Long- or Short-Term Air Quality Standards ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

CARBON MONOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

Site Name	PA Site Code	Percent Valid Data	Annual Mean	Number 1 HR > 35	1st Max 1 HR Mean	1st Max Date MM/DD/HH	2nd Max 1 HR Mean	2nd Max Date MM/DD/HH	Number 8 HR > 9	Running Averages 1st Max 8 HR Mean	1st Max Date MM/DD/HH	Running Averages 2nd Max 8 HR Mean	2nd Max Date MM/DD/HH	Number of 8 Hour Values In Ranges 0 to 4	5 to 8	9 to 12	13 to 16	17 to 20	21 to 24	25 to 28	> 28
Southeast Pennsylvania Air Basin																					
Bristol	P01	96.3	0.5	0	7.8	12/17/08	6.8	12/17/07	0	5.0	12/17/09	3.8	12/19/00	8409	3	0	0	0	0	0	0
Norristown	P21	97.2	0.6	0	3.5	12/20/08	3.2	11/19/08	0	2.3	10/31/00	2.2	11/19/02	8506	0	0	0	0	0	0	0
Allentown-Bethlehem-Easton Air Basin																					
Freemansburg	A25	36.2	0.6	0	3.9	11/19/07	3.8	12/15/07	0	3.3	12/17/09	2.8	12/17/11	3165	0	0	0	0	0	0	0
Allentown CBD	A51	97.4	0.6	0	5.3	12/16/22	4.8	12/16/21	0	3.5	12/17/03	2.7	11/19/09	8514	0	0	0	0	0	0	0
Scranton-Wilkes-Barre Air Basin																					
Scranton	S01	99.2	0.4	0	4.9	12/17/07	4.7	12/16/07	0	3.0	12/17/10	2.8	11/20/01	8692	0	0	0	0	0	0	0
Wilkes-Barre CBD	S27	99.1	0.7	0	5.0	12/16/18	4.6	11/21/16	0	3.4	11/21/19	3.3	12/16/23	8680	0	0	0	0	0	0	0
Reading Air Basin																					
Reading	R01	8.2	0.9	0	6.4	12/19/19	5.8	12/16/07	0	5.1	12/20/02	3.9	12/20/07	706	6	0	0	0	0	0	0
Reading CBD	R20	91.0	0.6	0	6.0	01/03/09	5.8	01/03/08	0	3.4	01/03/10	3.0	01/04/00	7987	0	0	0	0	0	0	0
Harrisburg Air Basin																					
Harrisburg CBD	H16	96.3	0.4	0	6.5	01/03/17	5.2	01/03/18	0	4.6	01/03/20	3.3	01/03/15	8397	2	0	0	0	0	0	0
Lancaster Air Basin																					
Lancaster	L01	98.9	0.4	0	5.2	12/19/23	5.1	12/20/00	0	3.9	12/20/03	3.3	12/20/07	8670	0	0	0	0	0	0	0
York Air Basin																					
York	Y01	97.0	0.5	0	6.3	12/16/08	5.7	12/19/08	0	3.9	12/16/10	3.4	12/17/09	8498	0	0	0	0	0	0	0
Altoona Non-Air Basin																					
Altoona	308	98.8	0.4	0	4.8	02/18/08	2.7	11/18/07	0	1.9	02/18/09	1.5	01/31/10	8669	0	0	0	0	0	0	0

**** Primary Air Quality Standards ****
**** 1 Hour Mean = 35 parts per million ****
**** 8 Hour Running Mean = 9 parts per million ****

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF AIR QUALITY

CARBON MONOXIDE SUMMARY

(Units: parts per million)

YEAR: 1997

Site Name	PA Site Code	Percent Valid Data	Annual Mean	Number 1 HR > 35	1st Max 1 HR Mean	1st Max Date MM/DD/HH	2nd Max 1 HR Mean	2nd Max Date MM/DD/HH	Number 8 HR > 9	Running Averages 1st Max 8 HR Mean	1st Max Date MM/DD/HH	Running Averages 2nd Max 8 HR Mean	2nd Max Date MM/DD/HH	Number of 8 Hour Values In Ranges 0 to 4	5 to 8	9 to 12	13 to 16	17 to 20	21 to 24	25 to 28	> 28
Johnstown Air Basin																					
Johnstown	J01	98.8	0.5	0	6.3	01/22/16	4.7	01/22/15	0	3.6	01/22/17	2.7	11/21/19	8664	0	0	0	0	0	0	0
Monongahela Valley Air Basin																					
Charleroi	M01	98.5	0.4	0	1.9	06/17/14	1.8	01/15/21	0	1.7	02/03/06	1.6	01/04/04	8598	0	0	0	0	0	0	0
Lower Beaver Valley Air Basin																					
Beaver Falls	B11	99.3	0.4	0	2.6	01/27/13	2.6	10/31/08	0	2.0	01/22/07	1.9	12/19/00	8719	0	0	0	0	0	0	0
Allegheny County Air Basin																					
Pittsburgh	D12	7.4	0.8	0	5.0	12/19/23	4.2	12/20/00	0	3.5	12/20/03	3.2	12/18/19	574	0	0	0	0	0	0	0
DEP Region 5 Non-Air Basin																					
Greensburg	513	16.7	0.5	0	4.2	12/17/20	4.0	12/16/18	0	3.4	12/18/00	2.5	12/16/23	1439	0	0	0	0	0	0	0
Upper Beaver Valley Air Basin																					
New Castle	B21	99.5	0.6	0	6.4	12/16/17	4.6	01/02/08	0	4.1	12/17/00	3.0	12/20/00	8729	0	0	0	0	0	0	0
Erie Air Basin																					
Erie CBD	E12	74.3	0.6	0	10.1	12/17/00	9.3	05/13/01	0	5.9	12/05/04	4.9	12/17/07	6485	14	0	0	0	0	0	0
Special Purpose Monitoring Sites																					
Kunkletown	212	25.5	0.3	0	1.5	07/14/06	1.4	07/15/05	0	1.1	07/15/09	0.9	07/14/09	2229	0	0	0	0	0	0	0
Arendtsville	314	25.1	0.3	0	2.2	09/04/10	2.2	09/04/11	0	1.7	09/04/15	1.4	09/04/19	2197	0	0	0	0	0	0	0
Holbrook	514	29.6	0.3	0	1.0	09/12/18	1.0	09/13/00	0	0.9	09/13/00	0.9	09/12/19	2590	0	0	0	0	0	0	0

**** Primary Air Quality Standards ****
**** 1 Hour Mean = 35 parts per million ****
**** 8 Hour Running Mean = 9 parts per million ****

CARBON MONOXIDE HISTORICAL TREND
(Units: parts per million)

STATION	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
Southeast Pennsylvania Air Basin											
BRISTOL	11.0	14.1	12.6	9.6	8.6	6.2	7.9	9.2	6.3	6.8	2nd Maximum 1 Hour Average
P01	7.9	7.0	5.4	6.1	5.7	4.0	5.2	5.0	4.7	3.8	2nd Maximum 8 Hour Average
NORRISTOWN	7.1	6.6	6.7	6.1	4.5	3.9	5.0	4.8	3.5	3.2	2nd Maximum 1 Hour Average
P21	4.1	4.0	4.7	3.8	3.1	2.8	3.9	4.1	2.9	2.2	2nd Maximum 8 Hour Average
Allentown-Bethlehem-Easton Air Basin											
FREEMANSBURG	***	***	***	***	***	***	***	***	***	***	2nd Maximum 1 Hour Average
A25	***	***	***	***	***	***	***	***	***	***	2nd Maximum 8 Hour Average
ALLENTOWN CBD	14.8	8.1	8.3	13.4	6.1	5.6	7.5	7.3	5.3	4.8	2nd Maximum 1 Hour Average
A51	7.2	4.7	5.8	6.5	3.9	3.5	4.7	4.8	3.2	2.7	2nd Maximum 8 Hour Average
Scranton-Wilkes Barre Air Basin											
SCRANTON	7.8	6.3	6.2	5.3	5.5	4.3	4.6	5.2	7.0	4.7	2nd Maximum 1 Hour Average
S01	4.1	3.4	3.7	3.5	3.1	2.8	2.8	2.6	3.5	2.8	2nd Maximum 8 Hour Average
WILKES BARRE CBD	7.9	7.5	8.0	13.7	7.0	3.7	6.9	5.7	7.4	4.6	2nd Maximum 1 Hour Average
S27	5.5	4.7	5.3	4.8	4.4	3.0	4.3	3.0	4.1	3.3	2nd Maximum 8 Hour Average
Reading Air Basin											
READING	8.9	6.2	***	***	***	***	***	***	***	***	2nd Maximum 1 Hour Average
R01	4.1	3.7	***	***	***	***	***	***	***	***	2nd Maximum 8 Hour Average
READING CBD	11.5	11.6	12.4	7.7	6.8	6.0	9.5	6.3	4.9	5.8	2nd Maximum 1 Hour Average
R20	5.2	5.0	6.4	4.6	4.6	3.8	5.4	3.9	3.4	3.0	2nd Maximum 8 Hour Average
Harrisburg Air Basin											
HARRISBURG CBD	***	***	***	***	***	***	***	***	4.2	5.2	2nd Maximum 1 Hour Average
H16	***	***	***	***	***	***	***	***	2.5	3.3	2nd Maximum 8 Hour Average
Lancaster Air Basin											
LANCASTER	5.5	5.3	5.0	4.2	3.9	4.7	5.2	4.4	3.6	5.1	2nd Maximum 1 Hour Average
L01	3.4	4.1	3.4	2.6	2.6	3.0	3.8	2.4	2.6	3.3	2nd Maximum 8 Hour Average

*** Indicates less than 50 percent valid data for year

CARBON MONOXIDE HISTORICAL TREND
(Units: parts per million)

STATION	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	
York Air Basin											
YORK	6.8	12.1	9.6	7.2	6.8	5.4	6.3	5.5	5.0	5.7	2nd Maximum 1 Hour Average
Y01	4.2	4.6	4.4	3.7	3.6	3.3	3.9	2.7	2.8	3.4	2nd Maximum 8 Hour Average
Altoona Non-Air Basin											
ALTOONA	5.3	5.5	3.7	3.5	4.7	3.2	3.5	3.1	2.7	2.7	2nd Maximum 1 Hour Average
308	2.2	3.2	2.6	1.7	2.8	2.0	2.4	1.7	1.9	1.5	2nd Maximum 8 Hour Average
Johnstown Air Basin											
JOHNSTOWN	7.5	6.2	5.9	8.4	8.5	5.8	5.4	5.4	7.0	4.7	2nd Maximum 1 Hour Average
J01	4.3	4.1	3.7	4.8	4.4	4.2	4.1	3.5	4.8	2.7	2nd Maximum 8 Hour Average
Monongahela Valley Air Basin											
CHARLEROI	3.3	3.0	3.9	4.0	3.1	2.4	3.5	3.5	2.8	1.8	2nd Maximum 1 Hour Average
M01	2.3	2.7	3.0	2.5	2.6	2.0	3.2	2.8	2.5	1.6	2nd Maximum 8 Hour Average
Lower Beaver Valley Air Basin											
BEAVER FALLS	4.3	4.2	5.0	4.8	3.4	2.7	3.4	3.2	3.2	2.6	2nd Maximum 1 Hour Average
B11	3.0	3.5	3.8	3.2	2.6	2.0	2.4	2.5	2.1	1.9	2nd Maximum 8 Hour Average
Allegheny County Air Basin											
PITTSBURGH	***	***	***	***	***	***	***	***	***	***	2nd Maximum 1 Hour Average
D12	***	***	***	***	***	***	***	***	***	***	2nd Maximum 8 Hour Average
DEP Region 5 Non-Air Basin											
GREENSBURG	***	***	***	***	***	***	***	***	***	***	2nd Maximum 1 Hour Average
513	***	***	***	***	***	***	***	***	***	***	2nd Maximum 8 Hour Average
Upper Beaver Valley Air Basin											
NEW CASTLE	10.0	7.3	7.0	8.2	7.6	5.9	6.7	6.1	6.5	4.6	2nd Maximum 1 Hour Average
B21	4.4	3.5	4.4	3.7	3.4	2.9	3.7	4.3	3.5	3.0	2nd Maximum 8 Hour Average
Erie Air Basin											
ERIE CBD	***	***	***	***	***	***	***	***	***	9.3	2nd Maximum 1 Hour Average
E12	***	***	***	***	***	***	***	***	***	4.9	2nd Maximum 8 Hour Average

*** Indicates less than 50 percent valid data for year

APPENDIX B

Air Pollution Control Agencies in Pennsylvania

Allegheny County Health Department
39th Street and Penn Avenue
Pittsburgh, PA 15201
(412) 578-8140

City of Philadelphia
Air Management Services
1501 East Lycoming Street
Philadelphia, PA 19124
(215) 685-1225

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

Related environmental information is available electronically via the Internet. Access the DEP Web Site at http://www.dep.state.pa.us (Choose information by Environmental Subject / choose Air Quality).

APPENDIX C

Monitoring Sites and Addresses

SOUTHEAST PENNSYLVANIA AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
P01	BRISTOL	42-017-0012	BUCKS	Roosevelt Junior High School Rockview Lane	40 06 27 74 52 57
P11	CHESTER	42-045-0002	DELAWARE	Front & Norris Streets	39 50 08 75 22 22
P12	CONSHOHOCKEN	42-091-0112	MONTGOMERY	Bell Telephone Building	40 04 37 75 18 15
P21	NORRISTOWN	42-091-0013	MONTGOMERY	State Armory 1046 Belvoir Road	40 06 45 75 18 34
P26	COATESVILLE	42-029-0116	CHESTER	Lukens Steel Research Building Modena Road & Penn Avenue	39 58 21 75 48 48

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
BUCKS	P01	X	X				X	X	X	X
DELAWARE	P11	X	X		X		X	X	X	
CHESTER	P26	X								
MONTGOMERY	P12		X	X	X	X				
	P21	X					X	X	X	X

ALLENTOWN - BETHLEHEM - EASTON AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
A12	BETHLEHEM EAST	42-095-0725	NORTHAMPTON	Sewage Treatment Plant Shimersville Road	40 37 03 75 20 00
A19	ALLENTOWN	42-077-0004	LEHIGH	Allentown State Hospital Rear 1600 Hanover Avenue	40 36 43 75 25 58
A23	NORTHAMPTON	42-095-1004	NORTHAMPTON	Northampton High School 1619 Laubach Avenue	40 41 18 75 29 32
A24	NAZARETH	42-095-0024	NORTHAMPTON	Holy Family School	40 44 35 75 19 15
A25	FREEMANSBURG	42-095-0025	NORTHAMPTON	Washington & Cambria Streets	40 37 41 75 20 28
A41	EASTON	42-095-0100	NORTHAMPTON	School District Warehouse Coal & Milton Streets	40 40 36 75 13 00
A51	ALLENTOWN	42-077-0100	LEHIGH	2 North Ninth Street Hamilton Street Side	40 35 57 75 28 28

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
NORTHAMPTON	A12		X	X	X	X				
	A23		X		X					
	A24	X	X							
	A25	X					X	X	X	X
	A41						X		X	
LEHIGH	A19	X					X	X	X	
	A51									X

SCRANTON - WILKES-BARRE AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
S01	SCRANTON	42-069-2006	LACKAWANNA	Behind Penn State Campus George Street	41 26 34 75 37 23
S04	PITTSTON	42-079-0204	LUZERNE	City Hall Broad Street	41 19 19 75 47 22
S07	WILKES-BARRE	42-079-1207	LUZERNE	Kirby Health Center 71 North Franklin Avenue	41 14 53 75 52 50
S15	SCRANTON	42-069-0208	LACKAWANNA	Jewish Community Center 601 Jefferson Avenue	41 24 43 75 39 21
S26	NANTICOKE	42-079-1100	LUZERNE	255 Lower Broadway	41 12 33 76 00 13
S27	WILKES-BARRE	42-079-2100	LUZERNE	North River Street	41 15 01 75 52 49
S28	WILKES-BARRE	42-079-1101	LUZERNE	Chilwick & Washington Streets	41 15 58 75 50 47
S29	PECKVILLE	42-069-0101	LACKAWANNA	Pleasant Avenue & Erie Street Wilson Fire Company No. 1	41 28 45 75 34 41

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
LACKAWANNA	S01	X					X	X	X	X
	S15	X								
	S29								X	
LUZERNE	S04	X								
	S07	X	X	X	X	X				
	S26								X	
	S27									X
	S28	X					X	X	X	

REGION II NON - AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
205	PALMERTON	42-025-0105	CARBON	New Jersey Zinc Research Bldg. Fourth Street & Franklin Avenue	40 48 12 75 36 31

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
CARBON	205		X	X	X	X				

READING AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
R01	READING	42-011-0009	BERKS	UGI Property 234 Morgantown Road	40 19 14 75 55 37
R09	TEMPLE	42-011-0716	BERKS	PennDOT Highway Garage 51 Water Street	40 24 12 75 55 43
R10	LAURELDALE	42-011-1717	BERKS	Muhlenberg Township Authority Spring Valley Road Substation	40 22 38 75 54 53
R15	READING	42-011-0015	BERKS	Northwest Junior High School North Front & West Spring Streets	40 21 04 75 56 08
R20	READING	42-011-0100	BERKS	700 Block of Penn Street Near Eighth Street	40 20 07 75 55 23

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
BERKS	R01	X					X	X	X	X
	R09	X								
	R10		X	X	X	X				
	R15	X								
	R20						X			X

HARRISBURG AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
H06	HARRISBURG	42-043-0306	DAUPHIN	U.S. Post Office 812 Martin Luther King Blvd.	40 15 47 76 52 38
H11	HARRISBURG	42-043-0401	DAUPHIN	1833 UPS Drive	40 14 42 76 50 41
H15	LEMOYNE	42-041-0305	CUMBERLAND	Seventh and Walnut Streets FAA Enclosure	40 14 47 76 54 02
H16	HARRISBURG CBD	42-043-0102	DAUPHIN	PA Dept. of Agriculture Parking Lot 2301 North Cameron Street	40 17 09 76 52 53

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
CUMBERLAND	H15		X							
DAUPHIN	H06		X	X	X	X				
	H11	X					X	X	X	
	H16									X

LANCASTER AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
L01	LANCASTER	42-071-0007	LANCASTER	Lincoln Junior High School	40 02 49 76 17 00
L04	LANCASTER	42-071-0314	LANCASTER	Days Inn 30 Keller Avenue	40 03 22 76 18 26
L05	LANCASTER	42-071-0315	LANCASTER	Alumax Inc. Manheim Pike	40 04 22 76 20 08

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
LANCASTER	L01	X					X	X	X	X
	L04		X							
	L05	X	X	X	X	X				

YORK AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
Y01	YORK	42-133-0008	YORK	Davis Junior High School Hill Street	39 57 56 76 41 59
Y02	YORK	42-133-0322	YORK	J.E. Baker Company 232 East Market Street	39 57 49 76 43 21
Y07	YORK	42-133-0321	YORK	West York Borough Building 1700 Philadelphia Street	39 57 16 76 45 55

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
YORK	Y01	X					X	X	X	X
	Y02		X	X	X	X				
	Y07	X								

REGION III NON - AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
301	LYONS EAST	42-011-0717	BERKS	Near State & Kemp Streets	40 28 36 75 45 33
305	PERRY COUNTY	42-099-0301	PERRY	Little Buffalo State Park	40 27 26 77 09 57
306	HERSHEY	42-043-1100	DAUPHIN	Hershey Foods Technical Center Sipe Avenue & Mae Street	40 16 21 76 40 53
308	ALTOONA	42-013-0801	BLAIR	Ward Trucking Corporation Second Avenue & Seventh Street	40 32 07 78 22 15
310	KUTZTOWN	42-011-0001	BERKS	Kutztown State College Grim Science Building	40 30 40 75 47 11
313	METHODIST HILL	42-055-0001	FRANKLIN	Forest Road (High Elevation Site)	39 57 40 77 28 31
370	LYONS SOUTH	42-011-0003	BERKS	Heffner & Deka Roads	40 28 06 75 45 51

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
BERKS	301		X		X					
	310								X	
	370		X		X					
PERRY	305	X	X	X		X	X	X	X	
DAUPHIN	306								X	
FRANKLIN	313								X	
BLAIR	308	X	X	X		X	X	X	X	X

REGION IV NON - AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
401	WILLIAMSPORT	42-081-0401	LYCOMING	Schwab Building 734 West Fourth Street	41 14 24 77 00 55
407	WILLIAMSPORT	42-081-0403	LYCOMING	East Third & Railway Streets	41 14 46 76 59 24
408	STATE COLLEGE	42-027-0106	CENTRE	Municipal Parking Garage East Beaver Avenue & South Pugh	40 47 38 77 51 35

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
LYCOMING	401	X	X	X		X				
	407						X		X	
CENTRE	408		X	X		X				

JOHNSTOWN AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
J01	JOHNSTOWN	42-021-0011	CAMBRIA	Miller Auto Body Crafts Shop One Messenger Street	40 18 35 78 54 54
J08	EAST CONEMAUGH	42-021-0808	CAMBRIA	Recreation Field Citron Alley & First Street	40 20 53 78 52 58

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
CAMBRIA	J01	X					X	X	X	X
	J08		X	X	X	X				

MONONGAHELA VALLEY AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
M01	CHARLEROI	42-125-0005	WASHINGTON	Borough Waste Treatment Plant Front Street	40 08 49 79 54 12
M16	MONESSEN	42-129-0007	WESTMORELAND	Monessen Community Center 435 Donner Avenue	40 10 00 79 52 30

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
WASHINGTON	M01	X					X	X	X	X
WESTMORELAND	M16	X	X	X	X	X				

LOWER BEAVER VALLEY AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
B01	BADEN	42-007-0004	BEAVER	Route 65 & Holmes Avenue	40 38 08 80 13 51
B05	VANPORT	42-007-0505	BEAVER	Vanport Water Works Tamaqui Drive	40 41 05 80 19 30
B07	AMBRIDGE	42-007-0507	BEAVER	U.S. Post Office 1020 Merchant Street	40 35 30 80 13 40
B11	BEAVER FALLS	42-007-0014	BEAVER	Eighth Street & River Alley	40 44 52 80 19 00
B17	BADEN	42-007-0509	BEAVER	Baden Elementary School State Street & Harmony Road	40 37 48 80 13 32
B18	BEAVER FALLS	42-007-0518	BEAVER	Beaver Falls Middle School Eighth Avenue & Sixteenth Street	40 45 54 80 19 18
B23	HOOKSTOWN	42-007-0002	BEAVER	FAA Microwave Relay Tower	40 33 45 80 30 15
B27	BRIGHTON TOWNSHIP	42-007-0005	BEAVER	1015 Sebring Road	40 41 05 80 21 35

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
BEAVER	B01	X					X			
	B05		X		X					
	B07		X	X		X				
	B11	X					X	X	X	X
	B17	X								
	B18	X								
	B23						X		X	
	B27						X		X	

REGION V NON - AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
503	WASHINGTON	42-125-0103	WASHINGTON	Washington Post Office 153 Jefferson Avenue	40 10 19 80 15 09
504	FLORENCE	42-125-5001	WASHINGTON	Hillman State Park	40 26 41 80 25 12
508	WASHINGTON	42-125-0200	WASHINGTON	McCarrell & Fayette Streets	40 10 12 80 15 42
510	MURRYSVILLE	42-129-0006	WESTMORELAND	Murrysville Volunteer Fire Co. Old William Penn Hwy & Sardis Ave.	40 25 41 79 41 35
512	KITTANNING	42-005-0001	ARMSTRONG	Glade Drive & Nolte Road PA State Police Barracks	40 48 51 79 33 54
513	GREENSBURG	42-129-0008	WESTMORELAND	Donohue Road PA Dept. of Transportation Bldg.	40 18 19 79 30 22
D12	PITTSBURGH	42-003-0010	ALLEGHENY	Carnegie Science Center	40 26 44 80 00 59

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
WASHINGTON	503		X	X		X				
	504						X		X	
	508						X	X	X	
WESTMORELAND	510								X	
	513	X					X	X	X	X
ARMSTRONG	512								X	
ALLEGHENY	D12						X	X	X	X

UPPER BEAVER VALLEY AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
B16	ELLWOOD CITY	42-073-0016	LAWRENCE	Municipal Building 525 Lawrence Avenue	40 51 29 80 17 19
B21	NEW CASTLE	42-073-0015	LAWRENCE	Croton Avenue & Jefferson Street	40 59 45 80 20 48
B26	BESSEMER	42-073-0505	LAWRENCE	Mohawk Area School Mohawk School Road & Route 317	40 58 46 80 27 11

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
LAWRENCE	B16		X	X						
	B21	X					X	X	X	X
	B26	X								

ERIE AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
E07	ERIE	42-049-0602	ERIE	Erie School Administration Building 1511 Peach Street	42 07 14 80 04 50
E10	ERIE	42-049-0003	ERIE	East 10th & Marne Streets	42 08 34 80 02 14
E12	ERIE	42-049-0101	ERIE	West 12th & Myrtle Streets	42 07 14 80 05 21

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
ERIE	E07		X	X	X	X				
	E10	X					X	X	X	
	E12									X

REGION VI NON - AIR BASIN SITES

SITE LOCATIONS

PA SITE CODE	SITE NAME	EPA-AIRS SITE CODE	COUNTY	STREET ADDRESS	LATITUDE LONGITUDE
602	FARRELL	42-085-0622	MERCER	Municipal Building	41 12 44 80 30 08
606	FARRELL	42-085-0100	MERCER	Farrell High School Field New Castle Road & Mercer Avenue	41 12 54 80 29 06
611	WARREN	42-123-0003	WARREN	School District Building 345 East 5th Avenue	41 51 26 79 08 15
612	WARREN	42-123-0004	WARREN	Overlook Site near Stone Hill Road	41 50 41 79 10 11

PARAMETERS MONITORED

COUNTY	PA SITE CODE	PM-10	TSP	SULFATES	LEAD	NITRATES	SULFUR DIOXIDE	NITROGEN DIOXIDE	OZONE	CARBON MONOXIDE
MERCER	602	X	X	X	X	X				
	606						X		X	
WARREN	611						X			
	612						X			