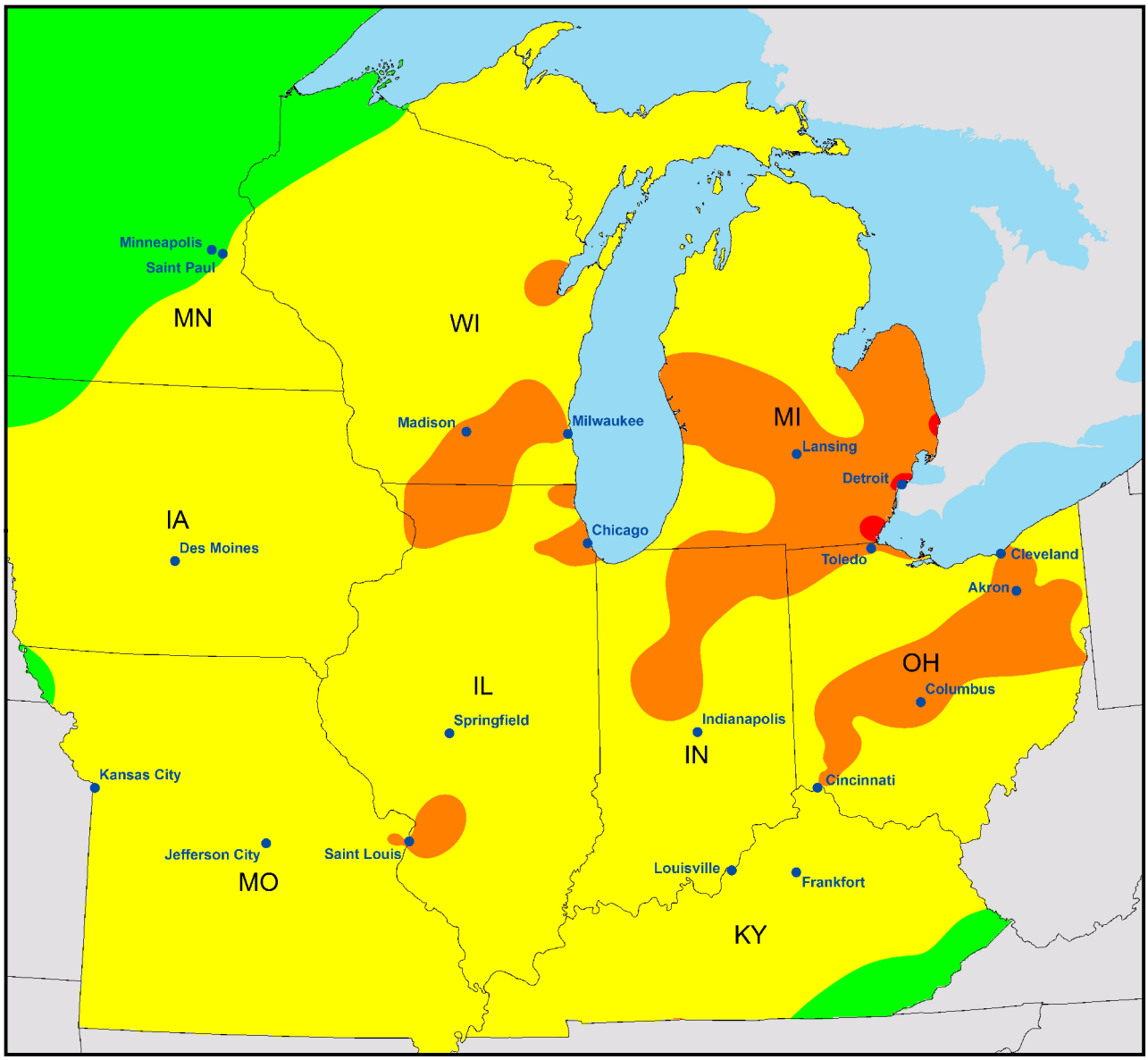
State of Illinois
Rod R. Blagojevich, Governor

Illinois Environmental Protection Agency
Douglas P. Scott, Director

Illinois Annual Air Quality Report 2005



December 2006

Cover: The map on the cover of the 2005 Air Quality Report depicts fine particulate matter (PM2.5) levels for much of the Midwest on February 4, 2005. The colors are associated with the federal Air Quality Index that classifies air quality from "Good" to "Hazardous." The following are the categories and the coinciding colors.

Good = Green
Moderate = Yellow
Unhealthy for Sensitive Groups = Orange
Unheathy = Red
Very Unhealthy = Purple
Hazardous = Maroon

Special thanks to Donna Kenski from the Lake Michigan Air Directors Consortium (LADCO) for providing the nationwide PM2.5 data used to create the map.

ILLINOIS ANNUAL AIR QUALITY REPORT 2005

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To Obtain Additional Information

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Acknowledgements

This document is produced by the Illinois Environmental Protection Agency; Douglas P. Scott, Director.

Illinois EPA Bureau of Air personnel contributed their time and expertise to the development of this publication.

A MESSAGE FROM THE DIRECTOR

Air quality in Illinois was either good or moderate 90 percent of the time throughout Illinois in 2005. This is a decrease from 2004; however, it is consistent with the air quality trends the state has experienced in the past. Air quality trends show air pollution well below the level of the standards on a statewide basis.

In 2005, Illinois as well as other Midwestern and Northeastern states experienced one of the most unusual air quality episodes in recent history. For the first time in Illinois, Air Pollution Action Days were called outside of the ozone season (May through September), with 3 action days being called for February 2nd, 3rd and 4th due to elevated levels of fine particulate matter ($PM_{2.5}$). This unusual episode provided the Illinois EPA with the opportunity to thoroughly discuss fine particulate matter with the media in the Northeastern region of the State, which led to the beginning of educating the public about this unfamiliar pollutant.

The graphic used on the cover of this report is a snapshot of the Midwest on February 4, 2005. That was the third consecutive day when fine particulate matter levels in most metropolitan areas reached the orange "unhealthy for sensitive groups" or red "unhealthy" category according to the Air Quality Index. Scientists determined that a combination of a stagnating regional air mass and region wide winter fuel combustion was the main cause of this incident.

The 35th Annual Air Quality Report consists of data collected from a large network of air monitoring equipment throughout the State of Illinois. The Illinois EPA operates and maintains more than 80 air monitoring sites featuring over 200 instruments, which measure air pollutants and toxic compounds.

While annual trends show the statewide levels well below the federal standards, there are still some areas in Illinois that do not meet these standards. The Illinois EPA continues its commitment to improve air quality throughout the State and the region.

The 2005 Annual Air Quality Report has been developed to provide information to businesses, organizations and individual citizens. The Illinois continue our commitment to work further with individuals, businesses and industry to build on our past successes and continue environmental gains in Illinois. Please contact the Illinois EPA with comments and/or questions regarding this report or air pollution control programs.

Douglas P. Scott
Director

Illinois Annual Air Quality Report 2005

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EXECUTIVE SUMMARY

This report presents a summary of air quality data collected throughout the State of Illinois during the calendar year - 2005. Data is presented for the six criteria pollutants (those for which air quality standards have been developed - particulate matter (PM_{10} and $PM_{2.5}$), ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead) along with some heavy metals, nitrates, sulfates, volatile organic and toxic compounds. Monitoring was conducted at over 80 different site locations collecting data from more than 200 instruments.

In terms of the Air Quality Index (AQI) air quality during 2005 was either good or moderate more than 90 percent of the time throughout Illinois. There were 2 days (all due to ozone) when air quality in some part of Illinois was considered Unhealthy (category Red). There were 32 days (25 for 8-hour ozone and 13 for $PM_{2.5}$, 6 days were high for both ozone and $PM_{2.5}$) when air quality in some part of Illinois was considered Unhealthy for Sensitive Groups (category Orange). This compares with 7 Unhealthy for Sensitive Groups days in 2004. Air quality trends for the criteria pollutants are continuing to show downward trends or stable trends well below the level of the standards. Percentage changes over the ten year period 1996 – 2005 are as follows: Particulate Matter (PM_{10}) 2 percent decrease, Sulfur Dioxide 33 percent decrease, Nitrogen Dioxide 14 percent decrease, Carbon Monoxide 25 percent decrease, Lead 36 percent decrease, and Ozone 15 percent decrease.

Stationary point source emission data has again been included. The data in the report reflects information contained in the Emission Inventory System (EIS) as of December 31, 2005. Emission estimates are for the calendar year 2005 and are for the pollutants: particulate matter, volatile organic material, sulfur dioxide, nitrogen oxides and carbon monoxide. Emission trends of these pollutants has been given for the years 1996 to the present. Emissions reported with the Annual Emissions Report have been provided starting with 1996 and are currently available through 2004. In general there has been a trend toward decreasing emissions over this time period.

SECTION 1: AIR POLLUTANTS: SOURCES, HEALTH AND WELFARE EFFECTS

Ozone (O_3)

Photochemical oxidants result from a complex series of atmospheric reactions initiated by sunlight. When reactive (non-methane) hydrocarbons and nitrogen oxides accumulate in the atmosphere and are exposed to the ultraviolet component of sunlight, the formation of new compounds, including ozone and peroxyacetylnitrate, takes place.

Absorption of ultraviolet light energy by nitrogen dioxide results in its dissociation into nitric oxide and an oxygen atom. The oxygen atoms, for the most part, react with atmospheric molecular oxygen (O_2) to form ozone (O_3). In general, nitric oxide will react with ozone to re-form nitrogen dioxide, completing the cycle. A build-up of ozone above the equilibrium concentration defined by the reaction cycle given above results when nitrogen oxide reacts with non-methane hydrocarbons. Oxygen atoms from the hydrocarbon radical oxidize nitric oxide to nitrogen dioxide without ozone being used up. Thus ozone concentrations are not depleted and can build up quickly.

Ozone can also be formed naturally in the atmosphere by electrical discharge, and in the stratosphere by solar radiation. The former process is not capable of producing significant urban concentrations of this pollutant; however, there is some belief that incursion of ozone from the stratosphere can contribute significantly to elevated ground level concentrations of ozone under certain meteorological conditions.

Injury to vegetation is one of the earliest manifestations of photochemical air pollution, and sensitive plants are useful biological indicators of this type of pollution. The visible symptoms of photochemical oxidant produced injury to plants may be classified as:

- Acute injury, identified by cell collapse with subsequent development of necrotic patterns.
- Chronic injury, identified by necrotic patterns or with other pigmented patterns.
- Physiological effects, identified by growth alterations, reduced yields, and changes in the quality of plant products. The acute symptoms are generally characteristic of a specific photochemical oxidant; though chronic injury patterns are not. Ozone injury to leaves is identified as a stripling or flecking. Adverse effects on sensitive vegetation have been observed from exposure to photochemical oxidant concentrations of about 100 ug/m^3 (0.05 ppm) for 4 hours.

Adverse effects on materials (rubber products and fabrics) from exposure to photochemical oxidants have not been precisely quantified, but have been observed at the levels presently occurring in many urban atmospheres.

Ozone accelerates the aging of many materials, resulting in rubber cracking, dye fading and paint erosion. These effects are linearly related to the total dose of ozone and can occur at very low levels, given long duration exposures.

Ozone is a pulmonary irritant that affects the respiratory mucous membranes, other lung tissues and respiratory functions. Clinical and epidemiological studies have demonstrated that ozone impairs the normal mechanical function of the lung, causing alterations in respiration; the most characteristic of which are shallow, rapid breathing and a decrease in pulmonary compliance. Exposure to ozone results in clinical symptoms such as chest tightness, coughing, and wheezing.

Alterations in airway resistance can occur, especially to those with respiratory diseases (asthma, bronchitis, emphysema). These effects may occur in sensitive individuals, as well as in healthy exercising persons, at short-term ozone concentrations between 0.15 and 0.25 ppm.

Ozone exposure increases the sensitivity of the lung to bronchoconstrictive agents such as histamine, acetylcholine and allergens, as well as increasing the individual's susceptibility to bacterial infection. Simultaneous exposure to ozone and SO_2 can produce larger changes in pulmonary function than exposure to either pollutant alone.

Peroxyacetylnitrate (PAN) is an eye irritant, and its effects often occur in conjunction with the effects of ozone.
Two characteristics of ozone and oxidant exposures should be cited:

- Ozone itself is a primary cause of most of the health effects reported in toxicological and experimental human studies and the evidence for attributing many health effects to this substance alone is very compelling.

- The complex of atmospheric photochemical substances is known to produce health effects, some of which are not attributable to pure ozone but may be caused by other photochemical substances in combination with ozone.

Particulate Matter (PM)

Not all air pollutants are in the gaseous form. Small solid particles and liquid droplets, collectively called particulates or aerosols, are also present in the air in great numbers and may constitute a pollution problem. Particulates entering the atmosphere differ in size and chemical composition. The effects of particulates on health and welfare are directly related to their size and chemical composition.

Particulate matter in the atmosphere consists of solids, liquids, and liquids-solids in combination. Suspended particulates generally refer to particles less than 100 micrometers in diameter (human hair is typically 100 micrometers thick). Particles larger than 100 micrometers will settle out of the air under the influence of gravity in a short period of time.

Typical sources emitting particles into the atmosphere are combustion of fossil fuels (ash and soot), industrial processes (metals, fibers, etc.), fugitive dust (wind and mechanical erosion of local soil) and photochemically produced particles (complex chain reactions between sunlight and gaseous pollutants). Combustion and photochemical products tend to be smaller in size (less than 1 micrometer); fugitive dust and industrial products are typically larger in size (greater than 1 micrometer).

Particles which cause the most health and visibility difficulties are those less than 1.0 micrometer in size. These particles are also the most difficult to reduce in numbers by the various industrial removal techniques. Rainfall accounts for the major removal of these smaller particles from the air.

One of the major problems associated with high concentrations of particulates is that the interaction between the particles, sunlight and atmospheric moisture can potentially result in the climatic effects and diminished visibility (haze). Particles play a key role in the formation of clouds, and emissions of large numbers of particles can, in some instances, result in local increases in cloud formation and, possibly, precipitation. Particles in the size range of 0.1 to 1.0 micrometers are the most efficient in scattering visible light (wave length 0.4 to 0.7 micrometers) thereby reducing visibility. Particles combined with high humidity can result in the formation of haze which can cause hazardous conditions for the operation of motor vehicles and aircraft.

Particulate pollutants enter the human body by way of the respiratory system and their most immediate effects are upon this system. The size of the particle determines its depth of penetration into the respiratory system. Particles over 5 micrometers are generally deposited in the nose and throat. Those that do penetrate deeper in the respiratory system to the air ducts (bronchi) are often removed by ciliary action. Particles ranging in size from 0.5 - 5.0 micrometers in diameter can be deposited in the bronchi, with few reaching the air sacs (alveoli). Most particles

deposited in the bronchi are removed by the cilia within hours. Particles less than 0.5 micrometer in diameter reach and may settle in the alveoli. The removal of particles from the alveoli is much less rapid and complete than from the larger passages. Some of the particles retained in the alveoli are absorbed into the blood.

Besides particulate size, the oxidation state, chemical composition, concentration and length of time in the respiratory system contribute to the health effects of particulates. Particulates have been associated with increased respiratory diseases (asthma, bronchitis, emphysema), cardiopulmonary disease (heart attack) and cancer.

Plant surfaces and growth rates may be adversely affected by particulate matter. Particulate air pollution also causes a wide range of damage to materials including corrosion of metals and electrical equipment and the soiling of textiles and buildings.

Sulfur Dioxide (SO_2)

Sulfur dioxide is an atmospheric pollutant which results from combustion processes (mainly burning of fossil fuels containing sulfur compounds), refining of petroleum, manufacture of sulfuric acid and smelting of ores containing sulfur. Reduction of sulfur dioxide pollution levels can generally be achieved through the use of low sulfur content fuels or the use of chemical sulfur removal systems.

Once in the atmosphere some sulfur dioxide can be oxidized (either photochemically or in the presence of a catalyst) to SO_3 (sulfur trioxide). In the presence of water vapor, SO_3 is readily converted to sulfuric acid mist. Other basic oxides combine with SO_3 to form sulfate aerosols. Sulfuric acid droplets and other sulfates are thought to account for about 5 to 20 percent of the total suspended particulate matter in urban air. These compounds can be transported large distances and come back to earth as a major constituent of acid precipitation. Many of the resultant health problems attributed to SO_2 may be a result of the oxidation of SO_2 to other compounds.

The effects of SO_2 on health are irritation and inflammation of tissue that it directly contacts. Inhalation of SO_2 causes bronchial constriction resulting in an increased resistance to air flow, reduction of air volume and an increase of respiratory rate and heart rate.

SO_2 can exacerbate pre-existing respiratory diseases (asthma, bronchitis, emphysema). The enhancement (synergism) by particulate matter of the toxic response to sulfur dioxide has been observed under conditions which would promote the conversion of sulfur dioxide to sulfuric acid. The degree of enhancement is related to the concentration of particulate matter. A twofold to threefold increase of the irritant response to sulfur dioxide is observed in the presence of particulate matter capable of oxidizing sulfur dioxide to sulfuric acid.

Sulfuric acid (H_2SO_4) inhalation causes an increase in the respiratory system's mucous secretions, which reduces the system's ability to remove particulates via mucociliary clearance. This can result in an increase incidence of respiratory infection.

Carbon Monoxide (CO)

The major source of carbon monoxide (CO) is motor vehicles. The USEPA has kept under its jurisdiction the regulation of emission control equipment on new motor vehicles while the State's responsibility for reducing excessive ambient carbon monoxide levels is exercised by developing transportation plans for congested urban areas.

The toxic effects of high concentrations of CO on the body are well known. Carbon monoxide is absorbed by the lungs and reacts with hemoglobin (the oxygen carrying molecule in the blood) to form carboxyhemoglobin (COHb). This reaction reduces the oxygen carrying capacity of blood because the affinity of hemoglobin for CO is over 200 times that for oxygen. The higher the percentage of hemoglobin bound up in the form of carboxyhemoglobin, the more serious is the health effect.

The level of COHb in the blood is directly related to the CO concentration of the inhaled air. For a

given ambient air CO concentration, the COHb level in the blood will reach an equilibrium concentration after a sufficient time period. This equilibrium COHb level will be maintained in the blood as long as the ambient air CO level remains unchanged. However, the COHb level will slowly change in the same direction as the CO concentration of the ambient air as a new equilibrium of CO in the blood is established.
The lowest CO concentrations shown to produce adverse health effects result in aggravation of cardiovascular disease. Studies demonstrate that these concentrations have resulted in decreased exercise time before the onset of pain in the chest and extremities of individuals with heart or circulatory disease. Slightly higher CO levels have been associated with decreases in vigilance, the ability to discriminate time intervals and exercise performance.

Evidence also exists indicating a possible relationship between CO and heart attacks, the development of cardiovascular disease and fetal development.

Studies on the existing ambient levels of CO do not indicate any adverse effects on vegetation, materials, or other aspects of human welfare.

Nitrogen Dioxide (NO_2)

Nitrogen gas (N_2) is an abundant and inert gas which makes up almost 80 percent of the earth's atmosphere. In this form, it is harmless to man and essential to plant metabolism. Due to its abundance in the air, it is a frequent reactant in many combustion processes. When combustion temperatures are extremely high, as in the burning of coal, oil, gas and in automobile engines, atmospheric nitrogen (N_2) may combine with molecular oxygen (O_2) to form various oxides of nitrogen (NO_x). Of these, nitric oxide (NO) and nitrogen dioxide (NO_2) are the most important contributors to air pollution; NO_x generally is used to represent these. Nitric oxide (NO) is a colorless and odorless gas. It is the primary form of NO_x resulting from the combustion process. NO_x contributes to haze and visibility reduction. NO_x is also known to cause deterioration and fading of certain fabrics and damage to vegetation. Depending on concentration and extent of exposure, plants may suffer leaf lesions and reduced crop yield.

Sensitivity of plants to nitrogen oxides depends on a variety of factors including species, time of day, light, stage of maturity and the presence or absence of other air pollutants such as sulfur dioxide and ozone.

There is a lack of strong evidence associating health effects with most nitrogen oxide compounds. NO_2, a secondary derivative of atmospheric nitric oxide, however, has been clearly established as exerting detrimental effects on human health and welfare.

NO_2 can cause an impairment of dark adaptation at concentrations as low as 0.07 ppm. NO_2 can cause an increase in airway resistance, an increase in respiratory rate, an increase in sensitivity to bronchoconstrictors, a decrease in lung compliance and an enhanced susceptibility to respiratory infections. NO_2 is a deep lung irritant capable of producing pulmonary edema if inhaled in sufficient concentrations. When NO_2 is inhaled in concentrations with other pollutants, the effects are additive.
NO_x may also react with water to form corrosive nitric acids, a major component of acid precipitation. Additionally, NO_x and various other pollutants (e.g., hydrocarbons) may react in the presence of sunlight to product photochemical oxidants. These are extremely unstable compounds which damage plants and irritate both the eyes and respiratory system of people. Ozone (O_3) and a group of chemicals called peroxyacetylnitrates (PAN) are the major constituents of photochemical oxidants.

Lead (Pb)

Historically atmospheric lead came primarily from combustion of leaded gasoline. However, the use of unleaded gas since 1975 has reduced mobile source lead emissions by over 90%. Currently stationary sources, such as lead smelters, battery manufacturers, iron and steel producers and others can contribute significant amounts of lead to their immediate vicinity.

Lead is a stable compound which persists and accumulates both in the environment and in the human body. Lead enters the human body through ingestion and inhalation with consequent absorption into the blood stream and distribution to all body tissues. Clinical, epidemiological and toxicological studies have demonstrated exposure to lead adversely affects human health.

Low level lead exposure has been found to interfere with specific enzyme systems and blood production. Kidney and neurological cell damage has also been associated with lead exposure. Animal studies have demonstrated that lead can contribute to reduced fertility and birth defects. Children are the population segment most sensitive to many of lead's adverse effects.

Other serious potential effects from lead exposure are behavioral. Brain damage has been well documented in cases of severe lead poisoning in children. Restlessness, headaches, tremors and general symptoms of mental retardation have been noted. The brain seems to be particularly sensitive to lead poisoning, yet it is unclear whether low level exposure will result in brain dysfunction. Although evidence exists which indicates that children with above-normal blood lead levels are more likely to demonstrate poor academic performance, the studies remain inconclusive.

Illinois Ambient Air Quality Standards and Episode Levels

Consistent with the intent of the Environmental Protection Act of the State of Illinois, Illinois has adopted ambient air quality and episode standards that specify maximum permissible short-term and long-term concentrations of various contaminants in the atmosphere. Ambient air quality and episode standards are limits on atmospheric concentrations of air contaminants established for the purpose of protecting the public health and welfare.

The Illinois and National Ambient Air Quality Standards consist of a primary and secondary standard for each pollutant (contaminant) as presented in **Table 1**. The Illinois Air Pollution Episode Levels are presented in **Table 2**. The primary standard and episode criteria represents the level of air quality which is necessary to protect the public health. Air entering the respiratory tract must not menace health. Therefore, the air quality standards must, as a minimum, provide air which will not adversely affect, through acute or chronic symptoms, the public health. Air contaminants increase the aggravation and the production of respiratory and cardio-pulmonary diseases. The secondary standard defines the level of air quality which is necessary to protect the public welfare. This includes, among other things, effects on crops, vegetation, wildlife, visibility and climate, as well as effects on materials, economic values and on personal comfort and well-being. The standards are legally enforceable limitations, and any person causing or contributing to a violation of the standards is subject to enforcement proceedings under the Environmental Protection Act. The standards have also been designed for use as a basis for the development of implementation plans by State and local agencies for the abatement and control of pollutant emissions from existing sources, and for the determination of air contaminant emission limitations to ensure that population, industry and economic growth trends do not add to the region's air pollution problems.

Table 1: Summary of National and Illinois Ambient Air Quality Standards

Pollutant	Averaging Time	Standard	
		Primary	**Secondary**
Standard units are micrograms per cubic meter (ug/m^3) and parts per million (ppm)			
Particulate Matter 10 micrometers (PM_{10})	Annual Arithmetic Mean	50 ug/m^3	Same as Primary
	24-hour	150 ug/m^3	Same as Primary
Particulate Matter 2.5 micrometers ($PM_{2.5}$)	Annual Arithmetic Mean	15.0 ug/m^3	Same as Primary
	24-hour	65 ug/m^3	Same as Primary
Sulfur dioxide	Annual Arithmetic Mean	0.03 ppm	None
	24-hour	0.14 ppm	None
	3-hour	None	0.5 ppm
Carbon Monoxide	1-hour	35 ppm	Same as Primary
	8-hour	9 ppm	Same as Primary
Ozone	1-hour/day	0.12 ppm	Same as Primary
	8-hour/day	0.08 ppm	Same as Primary
Nitrogen Dioxide	Annual Arithmetic Mean	0.053 ppm	Same as Primary
Lead	Quarterly Arithmetic Mean	1.5 ug/m^3	Same as Primary

The $PM_{2.5}$ standards are referenced to local conditions of temperature and pressure rather than standard conditions (760 mm and 25 deg C).
Note: The State of Illinois has not adopted the $PM_{2.5}$ or 8-hour ozone standards at this time.

Table 2: Illinois Air Pollution Episode Levels

Pollutant	Advisory	Yellow alert	Red Alert	Emergency
Particulate Matter	2-hour	24-hour	24-hour	24-hour
micrograms per cubic meter	420	350	420	500
Sulfur Dioxide	2-hour	4-hour	4-hour	4-hour
parts per million	0.30	0.30	0.35	0.40
Carbon Monoxide	2-hour	8-hour	8-hour	8-hour
parts per million	30	15	30	40
Nitrogen Dioxide	2-hour	1-hour	1-hour	1-hour
parts per million	0.40	0.60	1.20	1.60
		or	or	or
		24-hour	24-hour	24-hour
		0.15	0.30	0.40
Ozone	1-hour	1-hour	1-hour	1-hour
parts per million	0.12	0.20	0.30	0.50

SECTION 2: STATEWIDE SUMMARY OF AIR QUALITY FOR 2005

OZONE

Monitoring was conducted at 36 locations during at least part of the April-October "ozone season" and at least 75 percent data capture was obtained at all 36 sites. The Edwardsville site was discontinued and the South Lockport site was temporarily discontinued..

A total of five sites recorded hourly concentrations above the 0.12 parts per million (ppm) 1-hour standard. The highest 1-hour concentration was 0.144 ppm at Chicago - SWFP compared with a statewide high 1-hour value of 0.105 ppm in 2004. The highest value recorded in the Metro - East was 0.132 ppm recorded in East St. Louis compared with a high in 2004 of 0.105 ppm in Maryville.

Data is also presented to compare with the 8-hour standard of 0.08 ppm. The appropriate statistic for comparison with the 8-hour Standard is the fourth highest value, which is averaged over a three year period. Ten sites in Illinois had a fourth high value above 0.08 ppm in 2005 compared with 0 sites in 2004. The highest fourth high value was 0.094 ppm at East St. Louis. The highest level in the Chicago area was 0.090 ppm in Zion. For the three year period 2003 – 2005, no sites had fourth high averages above 0.08 ppm.

Figure 1 shows for each year the statewide average of each site's highest hourly ozone value for the ten year period 1996-2005. The graph shows a great deal of year-to-year fluctuation and a generally flat 10-year trend since 1996 even with high years of 1999, 2002, and 2005 and low years in 2000 and 2004. The Statewide average for 2005 was

0.103 ppm compared with 0.086 ppm in 2004 and 0.097 ppm in 2003.

Statewide, the total number of excursion days in 2005 was four compared with zero in 2004 and two in 2003.

Figure 1
Average 1-Hour Ozone Maximum (ppm)

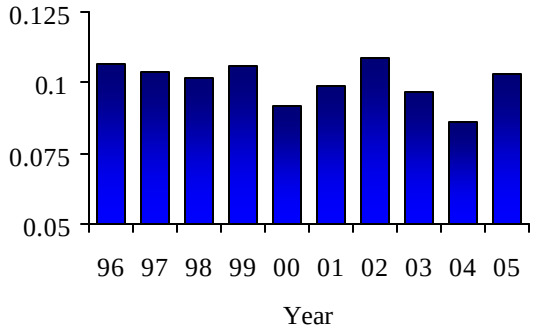


Figure 2
Average 8-Hour Ozone 4th High (ppm)

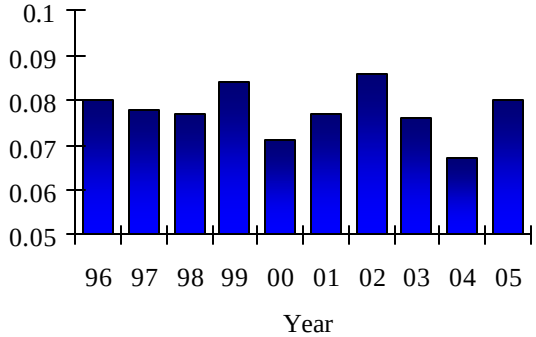


Figure 2 shows for each year the statewide average of the 4th highest 8-hour ozone value for the same period 1996-2005. This trend is generally flat since 1996 as well.

Overall, Illinois's weather was much above normal in terms of meteorological conditions favorable to ozone formation and transport Statewide.

June, august and September were the most conducive months in terms of meteorological conditions Statewide. In terms of conducive days, the Chicago area and the Metro-East area both had 50 percent above the average number.

PARTICULATE MATTER

Monitoring was conducted at 38 sites for $PM_{2.5}$. Valid annual averages were obtained for 36 of the 38 sites. A total of 22 sites recorded averages above 15.0 ug/m^3, the level of the annual standard compared with 6 sites in 2004 and 9 sites in 2003. The Statewide average of annual averages was 15.5 ug/m^3 in 2005 compared with 12.5 ug/m^3 in 2004 and 14.1 ug/m^3 in 2003. **Figure 3** shows the trend of the Statewide annual averages for $PM_{2.5}$ for the period 2000-2005. There were no exceedances of the 24-hour standard of 65 ug/m^3 in 2005. The Statewide peak of 62.6 ug/m^3 was recorded at Chicago - Mayfair. The Statewide average of the 98th percentile of 24-hour averages was 42.1 ug/m^3 in 2005 compared with 30.9 ug/m^3 in 2005 and 34.1 ug/m^3 in 2003.

In 2005 there were 18 sites monitoring PM_{10}. The Statewide average in 2005 was 29 ug/m^3 compared with 26 ug/m^3 in 2004 and 27 ug/m^3 in 2003.

For PM_{10} the Statewide average of the maximum 24-hour averages in 2005 was 74 ug/m^3 compared with 70 ug/m^3 in 2004 and 75 ug/m^3 in 2003. **Figure 4** depicts this trend for the period 1996-2005.

No sites exceeded the primary annual standard of 50 ug/m^3. The highest annual average was 38 ug/m^3 in Granite City - 2040 Washington. The lowest annual was 19 ug/m^3 in Carbondale. There were no exceedances of the 24-hour primary standard of 150 ug/m^3. The highest 24-hour average was recorded in Lyons township with a value of 120 ug/m^3 compared with a high 24-hour value of 138 ug/m^3 at Granite City - 2040 Washington in 2001.

Figure 3
Particulate Matter (PM2.5)
Annual Trends (ug/m3)

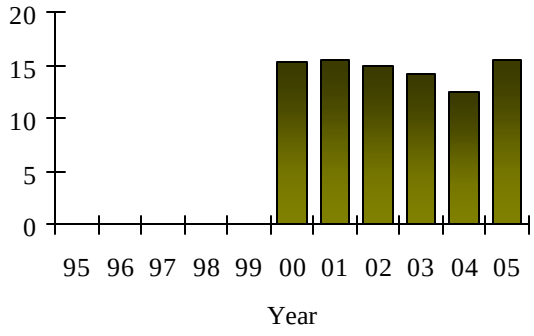
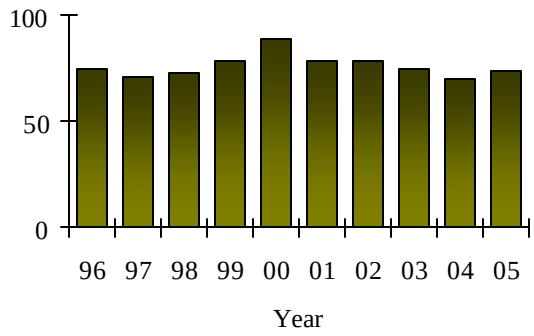


Figure 4
Particulate Matter (PM10) 24-Hour Trends (ug/m3)



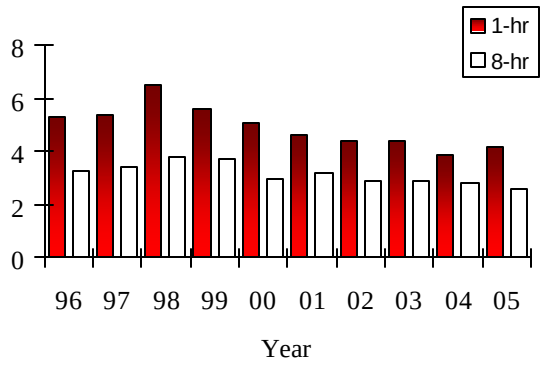
CARBON MONOXIDE

There were no exceedances of either the 1-hour primary standard of 35 ppm or the 8-hour

primary standard of 9 ppm in 2003. The highest 1-hour average was 5.7 ppm recorded in East St. Louis. The highest 8-hour average was 3.8 ppm recorded in Peoria and East St. Louis.

Figure 5 shows the trend for the period 1996-2005 for the statewide average of the 1-hour and 8-hour high CO values. The overall trend for both averages is downward. The statewide average of the 1-hour high was 4.2 ppm in 2005 compared with 3.9 ppm in 2004. The statewide average for the 8-hour high was 2.6 ppm in 2005 compared with 2.8 ppm in 2004.

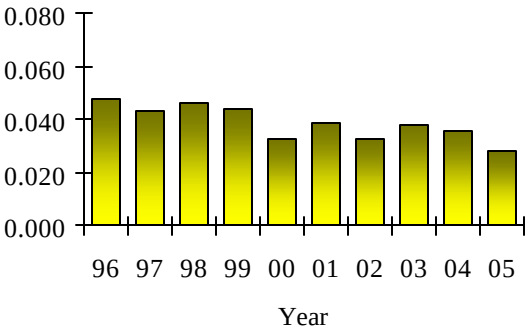
Figure 5
Carbon Monoxide Trends (ppm)



SULFUR DIOXIDE

There were no exceedances of the the annual primary standard of 0.03 ppm, the 24-hour primary standard of 0.14 ppm or the 3-hour secondary standard of 0.5 ppm in 2005. The maximum 24-hour average was 0.067 ppm recorded in Pekin. This compares with a high 24-hour average in 2004 of 0.087 ppm. The highest 3-hour average of 0.188 ppm was also recorded in Pekin. The Statewide annual average for 2005 was 0.004 ppm. The Statewide average in 2004 was also 0.004 ppm.

Figure 6
Sulfur Dioxide 24-Hour Trends
(ppm)



Since 1990 that Statewide trend of annual averages has been flat, ranging from 0.006 ppm to 0.004 ppm. **Figure 6** shows the statewide trend for the maximum 24-hour averages for the period 1996-2005. The 24-hour average trend has been overall downward; however a greater degree of year-to-year fluctuations have occurred. The statewide average for 2005 was 0.026 ppm compared with the 2004 average of 0.036 ppm.

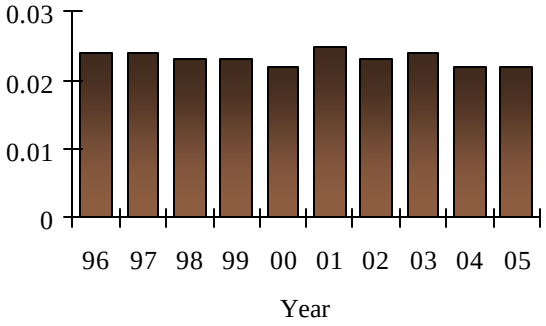
NITROGEN DIOXIDE

There were no violations of the annual primary standard of 0.053 ppm recorded in Illinois during 2005. The highest annual average of 0.030 ppm was recorded at Chicago - CTA. The Statewide average for 2005 was 0.022 ppm compared with 0.022 ppm in 2004 and 0.024 ppm in 2003.

Two sites operated only during part of the ozone season as PAMS. **Figure 7** depicts the trend of statewide averages from 1996-2005. The trend has been generally stable for the period ranging

from 0.022 ppm to 0.025 ppm. There have been no violations of the annual standard since 1980.

Figure 7
Nitrogen Dioxide Annual Trend
(ppm)



LEAD

Perhaps the greatest success story in controlling criteria pollutants is lead. As a direct result of the Federal Motor Vehicle Control Program which has required the use of unleaded gas in automobiles since 1975, lead levels have decreased by more than 90 percent statewide.

There were no violations of the Quarterly lead Standard of 1.5 ug/m3. The highest quarterly lead average in 2004 was 0.10 ug/m3 recorded at Granite City - 15th & Madison during the 1st quarter.

Figure 8
Lead Maximum Quarterly Trend
(ug/m3)

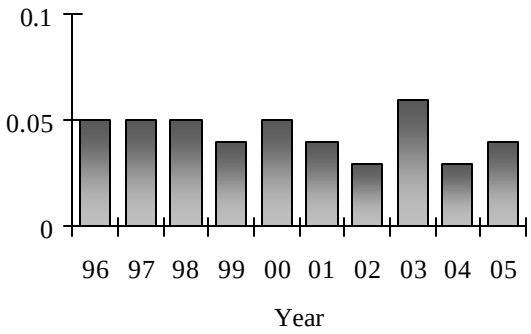


Figure 8 shows the trend of the statewide maximum quarterly average from 1996-2005 The trend shows that ambient lead levels have generally decreased during the period.

FILTER ANALYSIS RESULTS

The TSP samples analyzed, in addition to lead, for specific metals, sulfates and nitrates. Several of the metals analyzed (arsenic, beryllium, cadmium, chromium, manganese, and nickel) have known toxic properties. Other metals such as iron can be used as tracers to help identify sources of high particulate values. Sulfates and nitrates are precursors of acid precipitation/deposition and add to the understanding of this inter-regional problem. They are also important constituents of the $PM_{2.5}$ values. There are currently no State or Federal ambient air quality standards for these parameters.

The areas with the highest metals concentrations in Illinois are generally the heavy industrialized areas of the Metro-East (Granite City and East St. Louis) and South Chicago, especially for iron and manganese. The highest 24-hour average for arsenic was 0.392 ug/m^3 measured in East St. Louis. The highest annual average of 0.011

ug/m^3 was recorded at the same site . There were no measurable beryllium 24-hour averages recorded statewide. East St. Louis recorded the highest cadmium concentrations with a maximum 24-hour average of 0.042 ug/m^3 and the highest annual average of 0.005 ug/m^3 . The highest 24-hour chromium average was 0.045 ug/m^3 recorded at Maywood. Maywood also had the highest annual average at 0.015 ug/m^3. The highest iron and manganese values were recorded in the industrial areas of Granite City and South Chicago and the high traffic areas of Chicago - Cermak and Maywood. The highest 24-hour average for nickel was recorded at Summit with a value of 0.036 ug/m^3. The highest annual average was in Maywood with an average of 0.011 ug/m^3. For nitrates the highest 24-hour average was 30.2 ug/m^3 recorded at Maywood. The highest annual average was 8.0 ug/m^3 at Schiller Park. For sulfates the highest 24-hour average was 35.5 ug/m^3 recorded at Chicago - Washington. The highest annual average was 12.3 ug/m^3 at East St. Louis. In general metals, nitrate, and sulfate values were higher in 2005 than in 2004.

VOLATILE ORGANIC COMPOUNDS

Sampling for volatile organic compounds (VOCs) continues as part of the photochemical assessment monitoring site (PAMS) network. The network consists of three sites: Chicago - Jardine - Type 2 source area and Northbrook - Type 3 peak ozone area. The Zion - Type 4 domain edge site was temporarily discontinued in 2003.

Sampling was conducted for the period June - August. Automated Gas Chromatograph (GC) systems providing hourly data were located at both sites. In addition, continuous formaldehyde data was collected in Northbrook and manual carbonyl samples were taken every six days at Northbrook. Every six day samples were also taken at Chicago-Jardine during PAMS season. The data is presented as parts per billion carbon (ppbc). This process reduces all of the results to a common basis in terms of single carbon atoms. The carbonyls are expressed in regular parts per billion volume.

In general VOC levels were higher in 2005 than in 2004 at both Chicago-Jardine and Northbrook. The highest compounds in terms of 24-hour and seasonal averages at Chicago - Jardine were Isopentane, Ethane, Propane, Toluene, 2,2,4 Trimethylpentane, and N-Butane. The lowest compounds were Isoprene, Methylheptanes, Ethyltoluenes, Diethylbenzenes, Butenes, and Pentenes. The highest compounds for 24-hour and seasonal averages at Northbrook were Ethane, Isopentane, Toluene, Propane, 2,2,4 Trimethylpentane, Isoprene, and N-Butane. The lowest compounds were Butenes, Pentenes, Styrene, Diethylbenzenes, and Propylbenzenes.

TOXIC COMPOUNDS

Sampling for toxic compounds other than metals (see Filter Analysis Section) was conducted at two locations - Northbrook and Schiller Park. Most compounds were below the method detection limits. The highest compounds were formaldehyde, acetaldehyde, toluene, and benzene. Concentrations were somewhat higher in Schiller Park than Northbrook.

$PM_{2.5}$ SPECIATION

PM2.5 samples are also analyzed for numerous constituents at 6 sites. The major constituents (inorganic elements, ammonium, nitrate, sulfate, elemental and organic carbon) are listed in **Table B17**. In general, approximately 60% is ammonium nitrate and ammonium sulfate, 35% is elemental and organic carbon and 5% is inorganic elements.

SECTION 3: AIR QUALITY INDEX

The Air Quality Index (AQI) is the national standard method for reporting air pollution levels to the general public in 2005. An index such as the AQI is necessary because there are several air pollutants, each with different typical ambient concentrations and each with different levels of harm, and to report actual concentrations for all of them would be confusing. The AQI uses a single number and a short descriptor to define the air quality in an easy-to-remember and easy-to-understand way, taking all the pollutants into account.

The AQI is based on the short-term Federal National Ambient Air Quality Standards (NAAQS), the Federal episode criteria, and the Federal Significant Harm levels for six of the "criteria pollutants", namely:

- Ozone (O_3)
- Sulfur dioxide (SO_2)
- Carbon monoxide (CO)
- Particulate matter (PM_{10})
- Particulate matter ($PM_{2.5}$)
- Nitrogen dioxide (NO_2)

In each case (except $PM_{2.5}$ which uses a lower value), the short-term primary NAAQS corresponds to an AQI of 100 and a descriptor of Unhealthy for Sensitive Groups, the Significant Harm level corresponds to an AQI of 500 and a descriptor of Hazardous, and the episode criteria correspond to intermediate hundreds. NO_2 does not have short-term NAAQSs; AQI begins at 201 for it. For the AQI the health effects and cautionary statements are pollutant-specific. **Table 3** lists those for 8-hour ozone as an example.

Unhealthy for Sensitive Groups occurs on occasion for 8-hour ozone and $PM_{2.5}$. Unhealthy air quality is uncommon in Illinois, and Very Unhealthful air quality is rare. There has never been an occurrence of Hazardous air quality in Illinois.

The AQI is computed as follows: data from pollution monitors in an area are collected, and the AQI subindex for each pollutant is computed using formulas derived from the index/concentration relations noted above. Nomograms and tables are also available for this purpose. The data used are:

- O_3 estimate of the highest 8-hour average for that calendar day
- SO_2 the most recent 24-hour average
- CO the highest 8-hour average so far that calendar day
- PM_{10} the most recent 24-hour average
- $PM_{2.5}$ estimate of the 24-hour average for that calendar day
- NO_2 the highest 1-hour average (if above 600 ppb)

Continuous monitors are utilized for all the pollutants including PM_{10} and $PM_{2.5}$.

Table 3: AQI Descriptor Categories and Health Effects

AQI Range	Descriptor Category
0-50	Good (G)
51-100	Moderate (M)
101-150	Unhealthy for Sensitive Groups (USG)
151-200	Unhealthy (UH)
201-300	Very Unhealthy (VUH)
301 and above	Hazardous (HAZ)

Index & Category	Health Effects	Cautionary Statements
101-150, Unhealthy for Sensitive Groups	Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor activity.
151-200, Unhealthy	Greater likelihood of respiratory symptoms and breathing difficulties in active children and adults and people with respiratory disease, such as asthma. Possible respiratory effects in general population.	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children should limit prolonged outdoor exertion.
201-300, Very Unhealthful	Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma: increasing likelihood of respiratory effects in general population.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
301-500, Hazardous	Severe respiratory effects and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma: increasingly severe respiratory effects likely in general population.	Everyone should avoid all outdoor exertion.

Once all the subindices for the various pollutants have been computed, the highest is chosen by inspection. That is the AQI for the area, and the pollutant giving rise to it is the "critical pollutant". Thus if, for Anytown, Illinois, we obtained the following subindices:

O_3 = 45
SO_2 = 23
CO = 19
PM_{10} = 41
$PM_{2.5}$ = 61

Anytown's AQI for that day would be 61, which is in the Moderate category, and the Critical Pollutant would be particulates ($PM_{2.5}$). If data for one of the pollutants used in computing AQI is missing, the AQI is computed using the data available, ignoring the missing datum. It occasionally happens that two pollutants have the same subindex; in such cases there are two critical pollutants.

The Illinois EPA issues the AQI for 14 areas, or Sectors, in Illinois (**Table 4**). These correspond to metropolitan areas with populations greater than 100,000.

Illinois AQIs are computed from data up to and including the 3 PM local time readings (4 PM during the May – September portion of the Ozone Season) every weekday. A bulletin giving the AQI numbers, descriptors, critical pollutants, and a forecast of the category for the next day's AQI for each of the sectors is issued over the Illinois Weatherwire, a service of the National Weather Service, about 3:30 PM each work day (4:30 PM during the summer). Almost all TV stations and many radio stations and newspapers receive the Illinois Weatherwire, and are therefore able to inform the public about the AQI either immediately or on the evening news. Also the AQI is available on IEPA's web site (URL http://www.epa.state.il.us/air/aqi/index.html) In the Chicago and Cook County area, AQIs are available on phone recordings maintained by the Cook County Department of Environmental Control and the Chicago Department of the Environment.

If the AQI subindex for any pollutant in any sector should reach or exceed the Unhealthy (or any higher) category late in the afternoon or on weekends when the AQI is not published, the IEPA puts out a special bulletin on the Illinois Weatherwire.

2005 Illinois AQI Summary

In order to present a more representative AQI, 24-hour calendar day $PM_{2.5}$ and PM_{10} values from the total network were used to determine the percentages in **Figure 9** even though some of these values were not available for issuing the daily AQI. Air quality was still in the "Good" category most often in 2005. Most Sectors had a higher frequency of "Good" than "Moderate" and "Unhealthy for Sensitive Groups". The exceptions were the Chicago sector, the South and West Suburbs sector and the Metro-East sector. Lake County, Aurora & Elgin, Rockford and Quad Cities sectors had 65 percent or more of the days in the "Good" category. Within AQI sectors there were 2 occurrences of “Unhealthy” and 105 occurrences of “Unhealthy for Sensitive Groups” air quality in 2005. The sector breakdown for “Unhealthy” was 1 in Chicago and 1 in Metro-East. The sector breakdown for “Unhealthy for Sensitive Groups” was 18 in Metro-East, 14 in the South & West Suburbs, 14 in the North & West Suburbs, 12 in Chicago, 11 in Lake County, 11 in Aurora & Elgin, 6 in Rockford, 5 in Will County, 3 in Quad Cities, 3 in Decatur, 2 in Peoria, 2 in Champaign, 2 in Normal and 2 in Springfield. Outside of AQI sectors there were 10 additional occurrences of “Unhealthy for Sensitive Groups” and no additional occurrences of “Unhealthy”. **Figure 9** presents the AQI statistics for each sector. The pie chart shows the percent of time each sector was in a particular category.

In 2005 one Ozone Advisory was issued in the State. The Ozone Advisory was issued for the Chicago Metropolitan area on July 10th. An Advisory is declared when ozone levels have reached the level of the 1-hour standard (0.12 ppm) on a particular day and meteorological conditions are such that these levels are expected again the next day.

Table 4: AQI Sectors in Illinois

Chicago Metropolitan Area:	
Lake County Sector	Lake County only
North and West Suburbs Sector	Parts of Cook, Du Page, and Mc Henry Counties north of I-290 (the Eisenhower Expressway) and outside of Chicago city limits.
Chicago Sector	All areas within the city limits of Chicago
South and West Suburbs Sector	Parts of Cook and DuPage Counties south of I-290 and outside of Chicago city limits
Will County/Joliet Sector	Will County only
Aurora-Elgin Sector	The eastern part of Kane County
Downstate areas:	
Rockford Sector	Approximately 10 mile diameter circle centered on downtown Rockford
Quad Cities Sector	Illinois portion of the Quad Cities Area
Peoria Sector	Approximately 10 mile diameter circle centered on downtown Peoria in parts of Peoria, Woodford and Tazewell Counties
Champaign Sector	Champaign-Urbana Metropolitan Area
Normal Sector	Bloomington-Normal Metropolitan Area
Decatur Sector	Decatur Metropolitan Area
Springfield Sector	Springfield Metropolitan Area
Metro East Sector	Illinois portion of the St. Louis Metropolitan Area approximately 15 miles wide east of the Mississippi River in Madison and St. Clair Counties

Figure 9: 2005 Air Quality Index Summaries by Sector

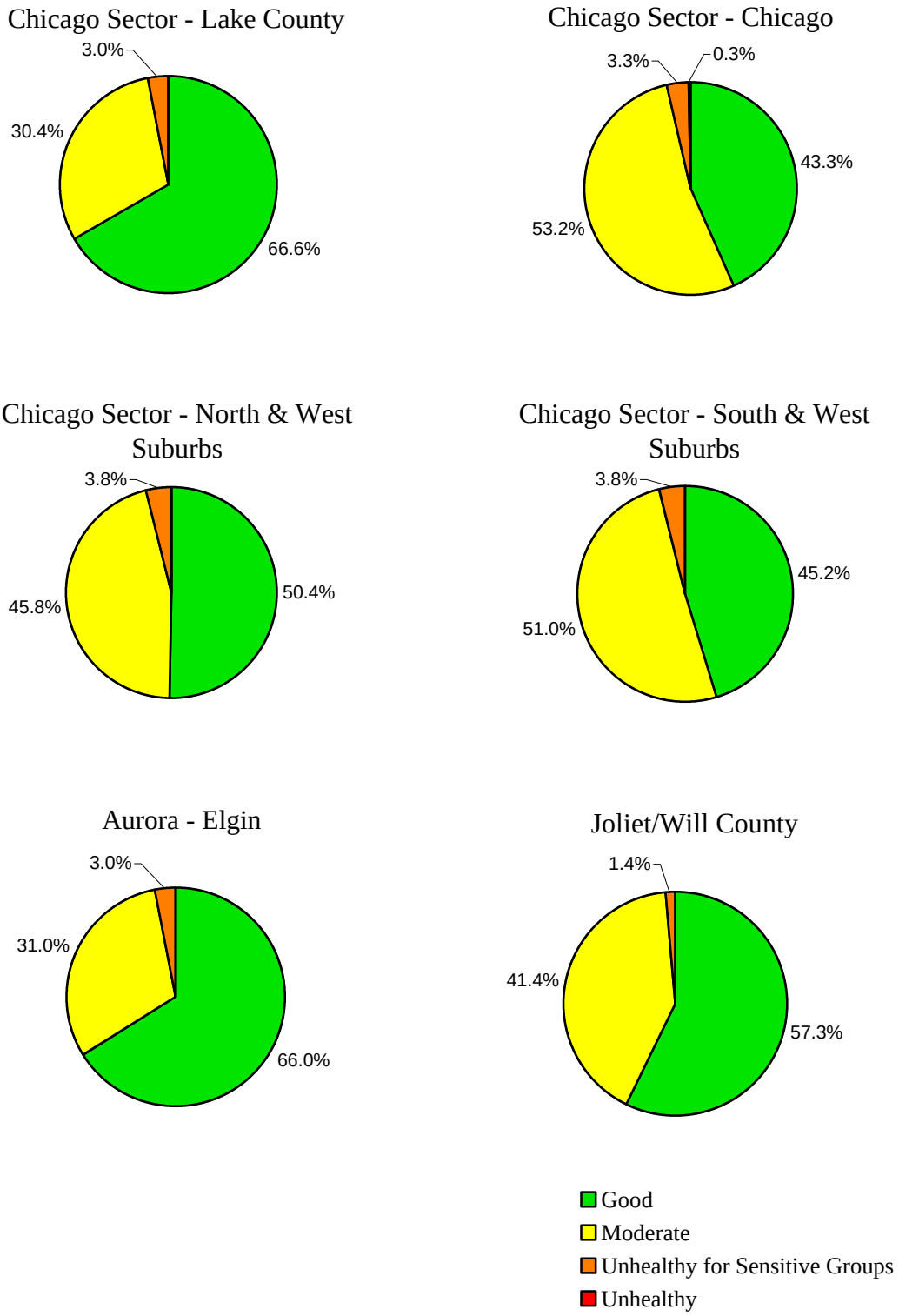


Figure 9: 2005 Air Quality Index Summaries by Sector

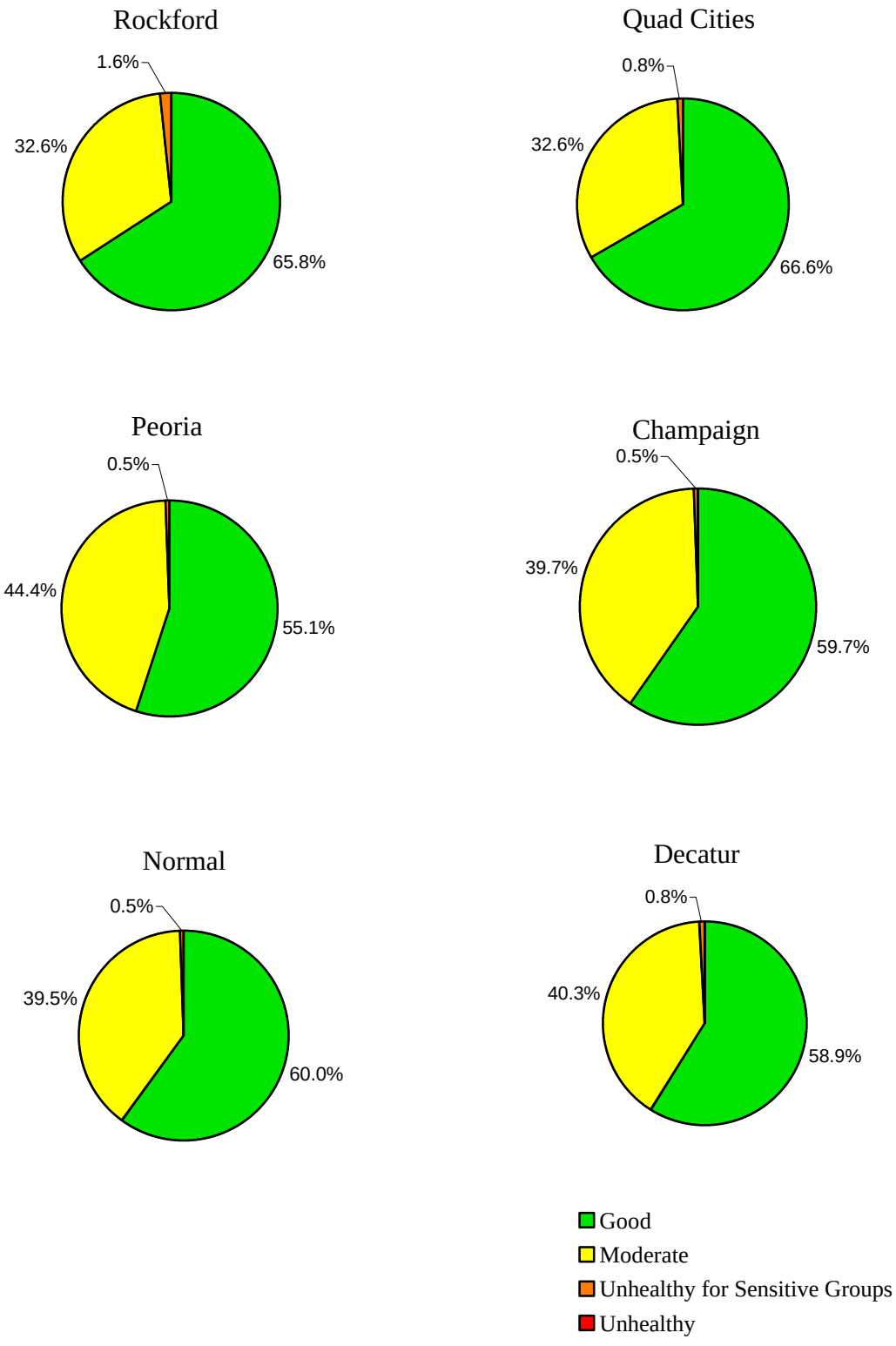
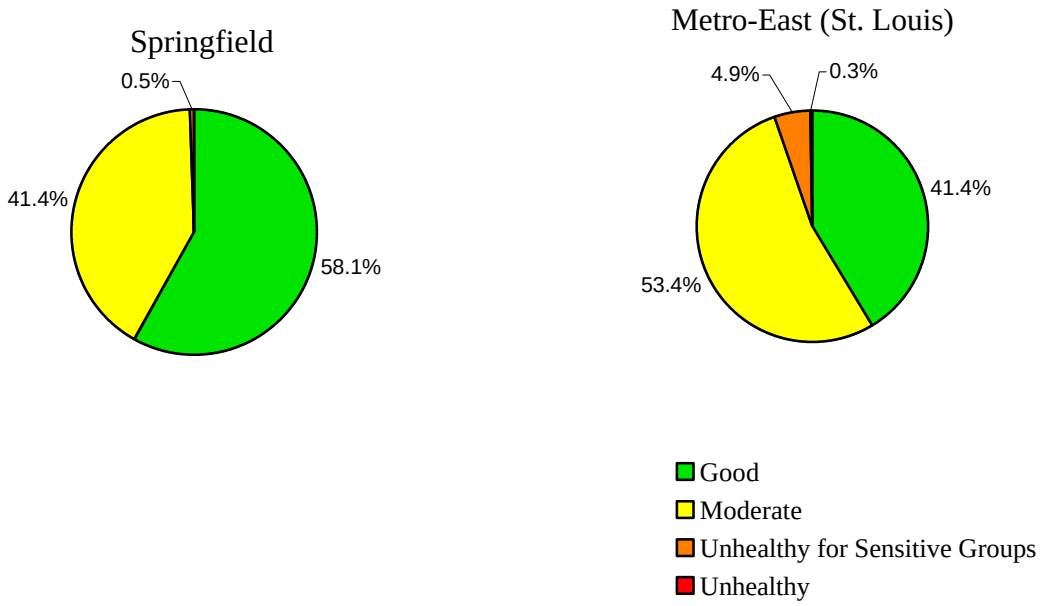


Figure 9: 2005 Air Quality Index Summaries by Sector



SECTION 4: STATEWIDE SUMMARY OF POINT SOURCE EMISSIONS

Since the late 1970's, the Division of Air Pollution Control has maintained a database of stationary point source emissions for the entire State. 40 CFR 51.211 requires Illinois to include in its State Implementation Plan "... procedures for requiring owners or operators of stationary sources to maintain records of... a) Information on the nature and amount of emissions from the stationary source and b) other information as may be necessary..." The emission database maintained by the Division of Air Pollution Control was originally called the Total Air System (TAS). Updates to the database were made through batch transactions every two weeks. In June 1989, the TAS was replaced with an on-line system known as the Emission Inventory System (EIS). Very few new data items to be stored were added when the Division switched to the EIS. The change was mainly to get to an on-line system and to enhance the structure of the database to make it more flexible.

In March, 1999, the Bureau of Air introduced a new emission inventory system known as ISSIS (Illinois Stationary Source Inventory System). This new inventory system, which was developed in Oracle, built upon the structure of the annual emission reporting system (CAERS - Computerized Annual Emission Reporting System) previously developed. Up until then, inventory data resided both in EIS and CAERS. Data from EIS was loaded annually into CAERS. ISSIS did away with this requirement. Now inventory data resides in one database.

ISSIS currently includes emission data on approximately 7,000 active sources throughout the State. The ISSIS data includes source addresses, source emission totals, permit data such as expiration date and status, emission unit data such as name, hours of operation, operating rate, fuel parameters and emissions, control equipment data such as control device name, type and removal efficiencies, and stack parameters. Reported emissions and Agency calculated emissions are stored separately.

Also in March, 1999, the group responsible for the entry of emission inventory data was switched from the Permit Section to the Inventory Unit of the Compliance and Systems Management Section. The Inventory Unit, now in the Air Quality Planning Section, uses permit applications, the issued permit and data reported on annual emission reports to compile the inventory.

The following tables and graphs are an analysis of the emissions data contained in ISSIS at the end of 2005. It is important to note emissions contained in the ISSIS are not necessarily the actual emissions that entered the atmosphere. This is due to the fact that when an air pollution permit is applied for, the applicant provides maximum and average emission rates. The maximum emission rate reflects what the applicant believes the emission rate would be at maximum production. The average emission rate reflects emissions at the applicant's most probable production rate. In the future, more and more reported data will be incorporated into the inventory.

To calculate the distribution of emissions for the individual categories, the source classification code (SCC) field was used from the ISSIS. The SCC is an eight digit code that breaks emission units into logical categories. SCCs are provided by the USEPA and are included in the Aerometric Information Retrieval System (AIRS) Facility Subsystem (AFS). Currently there are approximately 7,000 of these SCCs.

To produce the following tables, the first three digits of the SCC were used. Only categories that contributed significantly to the overall total are listed in the following sections. The complete category breakdown can be found in **Appendix C.**

VOLATILE ORGANIC MATERIAL

Figure 10
Volatile Organic Material
Emission Trend (1000's of Tons/Year)

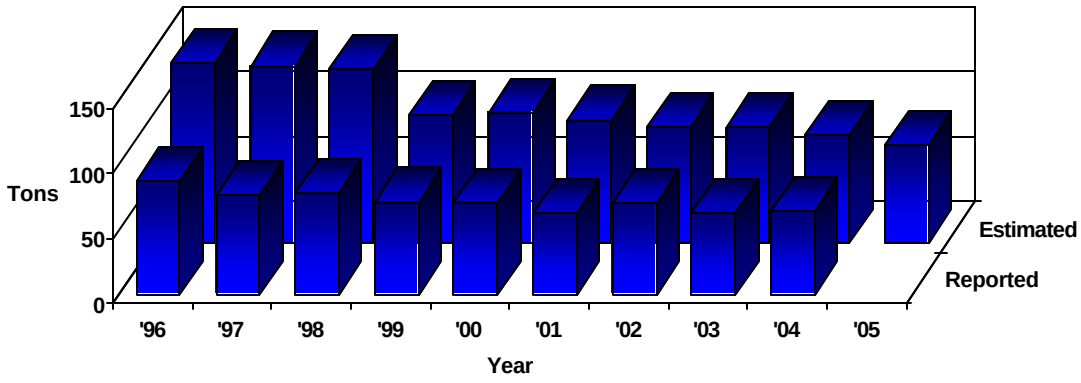


Table 5: Volatile Organic Material Emissions - 2005

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Chemical Manufacturing	16,942.5	22.38%	22.38%
Food/Agriculture	14,608.5	19.30%	41.68%
Surface Coating Operations	10,435.0	13.79%	55.47%
Printing/Publishing	5,915.1	7.81%	63.29%
Fuel Combustion	4,099.9	5.42%	68.70%
Petroleum Product Storage	3,925.3	5.19%	73.89%
Rubber and Plastic Products	2,710.9	3.58%	77.47%
Mineral Products	2,075.0	2.74%	80.21%
Bulk Terminal/Plants	1,760.4	2.33%	82.54%
Petroleum Industry	1,755.3	2.32%	84.86%
Organic Chemical Storage	1,289.6	1.70%	86.56%
Secondary Metal Production	1,232.0	1.63%	88.19%
Fabricated Metal Products	1,131.9	1.50%	89.68%
Site Remediation	1,006.8	1.33%	91.01%
Petroleum Marketing/Transport	800.3	1.06%	92.07%
All Other Categories	6,001.4	7.93%	100.00%

PARTICULATE MATTER

Figure 11
Particulate Emission Trend
(1000's of Tons/Year)

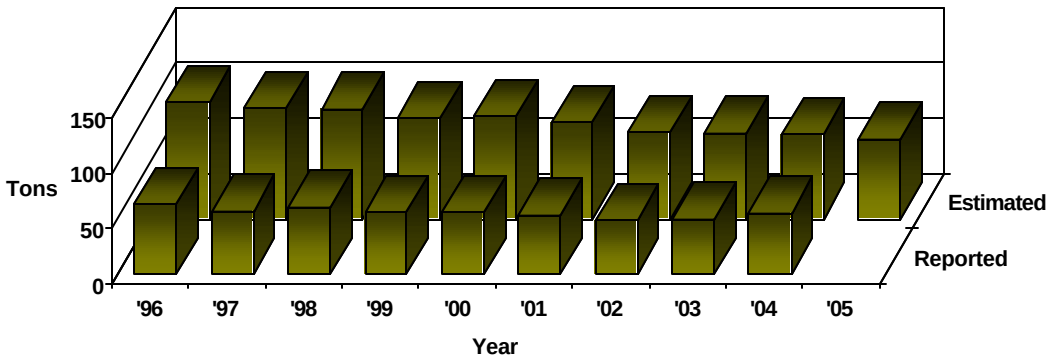


Table 6: Distribution of Particulate Matter Emissions - 2005

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	20,651.8	28.57%	28.57%
Mineral Products	18,627.3	25.77%	54.35%
Food/Agriculture	17,917.2	24.79%	79.14%
Secondary Metal Production	3,047.3	4.22%	83.35%
Petroleum Industry	2,473.3	3.42%	86.78%
Primary Metal Production	2,380.0	3.29%	90.07%
Chemical Manufacturing	2,309.3	3.20%	93.26%
Solid Waste Disposal	1,432.4	1.98%	95.25%
Fabricated Metal Products	631.2	0.87%	96.12%
Rubber and Plastic Products	496.5	0.69%	96.81%
Surface Coating Operations	416.9	0.58%	97.38%
All Other Categories	1,891.4	2.62%	100.00%

CARBON MONOXIDE

Figure 12
Carbon Monoxide Emission Trend (1000's of Tons/Year)

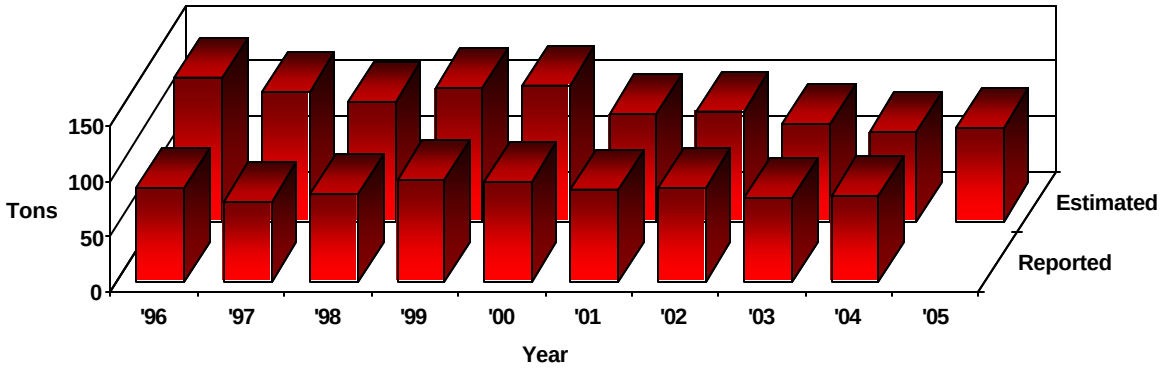


Table 7: Distribution of Carbon Monoxide Emissions - 2005

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	34,449.7	41.17%	41.17%
Primary Metal Production	14,508.4	17.34%	58.51%
Food/Agriculture	8,454.2	10.10%	68.62%
Mineral Products	8,453.9	10.10%	78.72%
Petroleum Industry	7,011.2	8.38%	87.10%
Secondary Metal Production	2,588.5	3.09%	90.19%
Solid Waste Disposal	2,575.6	3.08%	93.27%
Chemical Manufacturing	2,061.3	2.46%	95.73%
Fabricated Metal Products	1,512.6	1.81%	97.54%
In-Process Fuel Use	1,004.2	1.20%	98.74%
All Other Categories	1,051.8	1.26%	100.00%

SULFUR DIOXIDE

Figure 13
Sulfur Dioxide Emission
Trend (1000's of Tons/Year)

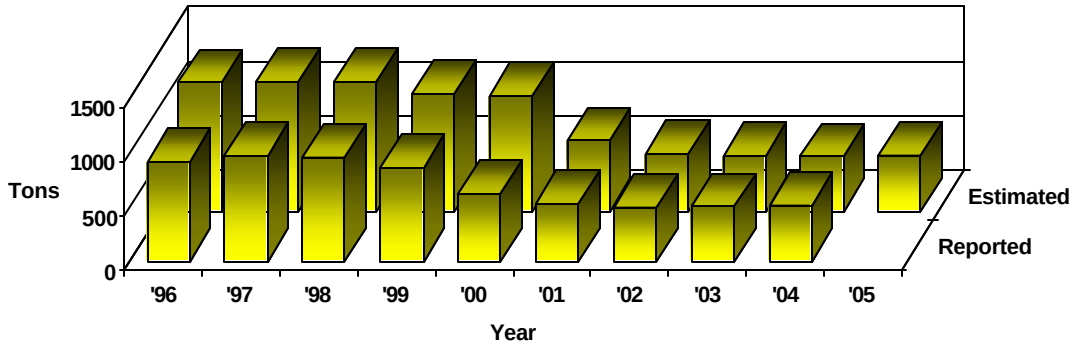


Table 8: Distribution of Sulfur Dioxide Emissions - 2005

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	435,012.7	83.23%	83.23%
Petroleum Industry	51,990.4	9.95%	93.17%
Mineral Products	13,913.7	2.66%	95.84%
Chemical Manufacturing	12,819.1	2.45%	98.29%
Primary Metal Production	3,954.1	0.76%	99.05%
Food/Agriculture	1,855.7	0.36%	99.40%
In-Process Fuel Use	1,484.7	0.28%	99.68%
All Other Categories	1,646.9	0.32%	100.00%

NITROGEN OXIDES

Figure 14
Nitrogen Oxide Emission
Trend (1000's of Tons/Year)

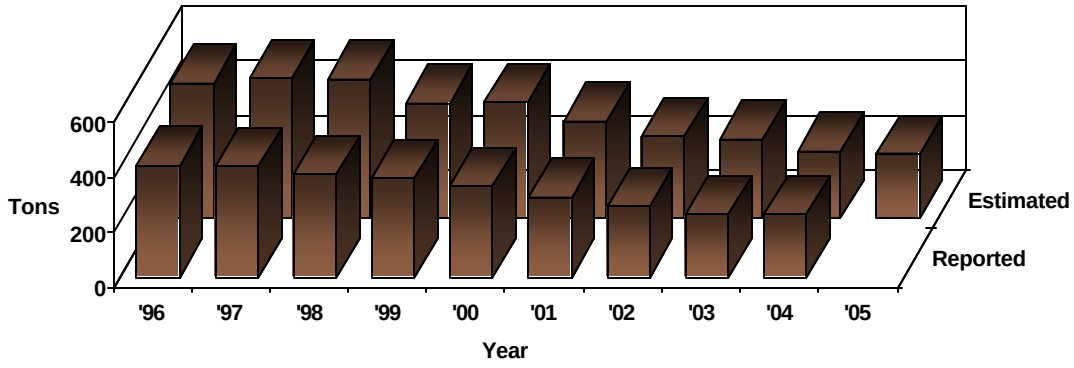


Table 9: Distribution of Nitrogen Oxide Emissions - 2005

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Fuel Combustion	197,042.3	82.78%	82.78%
Mineral Products	15,555.4	6.54%	89.32%
Petroleum Industry	12,578.9	5.28%	94.60%
Primary Metal Production	3,040.7	1.28%	95.88%
In-Process Fuel Use	2,071.9	0.87%	96.75%
Food/Agriculture	1,733.8	0.73%	97.48%
Chemical Manufacturing	1,277.3	0.54%	98.01%
Solid Waste Disposal	1,081.0	0.45%	98.47%
Secondary Metal Production	1,011.0	0.42%	98.89%
All Other Categories	2,633.8	1.11%	100.00%

APPENDIX A
AIR SAMPLING NETWORK

DESCRIPTION OF THE AIR SAMPLING NETWORK

The Illinois air monitoring network is composed of instrumentation owned and operated by both the Illinois Environmental Protection Agency and by cooperating local agencies. A directory of local agencies within Illinois and the environmental agencies of adjacent states can be found in **Table A1**. This network has been designed to measure ambient air quality levels in the various Illinois Air Quality Control Regions (AQCR). Historically, each AQCR was classified on the basis of known air pollutant concentrations or, where these were not known, estimated air quality. A map of the AQCR's in Illinois and overlapping into surrounding states can be found at the end of this section.

Many local agencies and volunteers cooperate and support the operation of the Illinois air monitoring network. The network contains both continuous and intermittent instruments. The continuous instruments operate throughout the year, while noncontinuous instruments operate intermittently based on the schedule shown in **Table A2**. This is the official noncontinuous sampling schedule used by the Illinois EPA during 2005.

The Illinois network is deployed along the lines described in the Illinois State Implementation Plan. An updated air monitoring plan is submitted to USEPA each year for review. In accordance with USEPA air quality monitoring requirements as set forth in Title 40 of the Code of Federal Regulations, Part 58 (40 CFR 58), four types of monitoring stations are used to collect ambient air data. The types of stations are distinguished from one another on the basis of the general monitoring objectives they are designed to meet

The SLAMS /NAMS /PAMS/ SPMS designations for the sites operated within the State of Illinois are provided by site in the Site Directory (**Table A4**). All of the industrial sites are considered to be SPMS. **Table A3** is a summary of the distribution of SLAMS/NAMS/PAMS/SPMS by pollutant.

1. **State/Local Air Monitoring Station (SLAMS) Network** - The SLAMS network is designed to meet a minimum of four basis monitoring objectives:

   a. To determine the highest concentrations expected to occur in the area covered by the network.

   b. To determine representative concentrations in areas of high population density.

   c. To determine the air quality impact of significant sources or source categories.

   d. To determine general background concentration levels.

2. **National Air Monitoring Station (NAMS) Network** - The NAMS network is a subset of stations selected from the SLAMS network with emphasis given to urban and multisource areas. The primary objectives of the NAMS network are:

   a. To measure expected maximum concentrations.

TABLE A1

DIRECTORY OF REGIONAL AIR POLLUTION AGENCIES

Chicago Department of the
Environment
30 N. LaSalle Street, 25th Floor
Chicago, Illinois 60602
312/744-7606
Fax 312/744-6451

Cook County Department of
Environmental Control
69 W. Washington, Suite 1900
Chicago, Illinois 60602
312/603-8200
Fax 312/603-9828

Indiana Dept. of Environmental Management
100 N. Senate Ave.
Indianapolis, Indiana 46204
317/232-8611
Fax 317/233-6647

Iowa Dept. of Natural Resources
Air Quality Bureau
7900 Hickman Road
Suite 1
Urbandale, Iowa 50322
515/242-5100

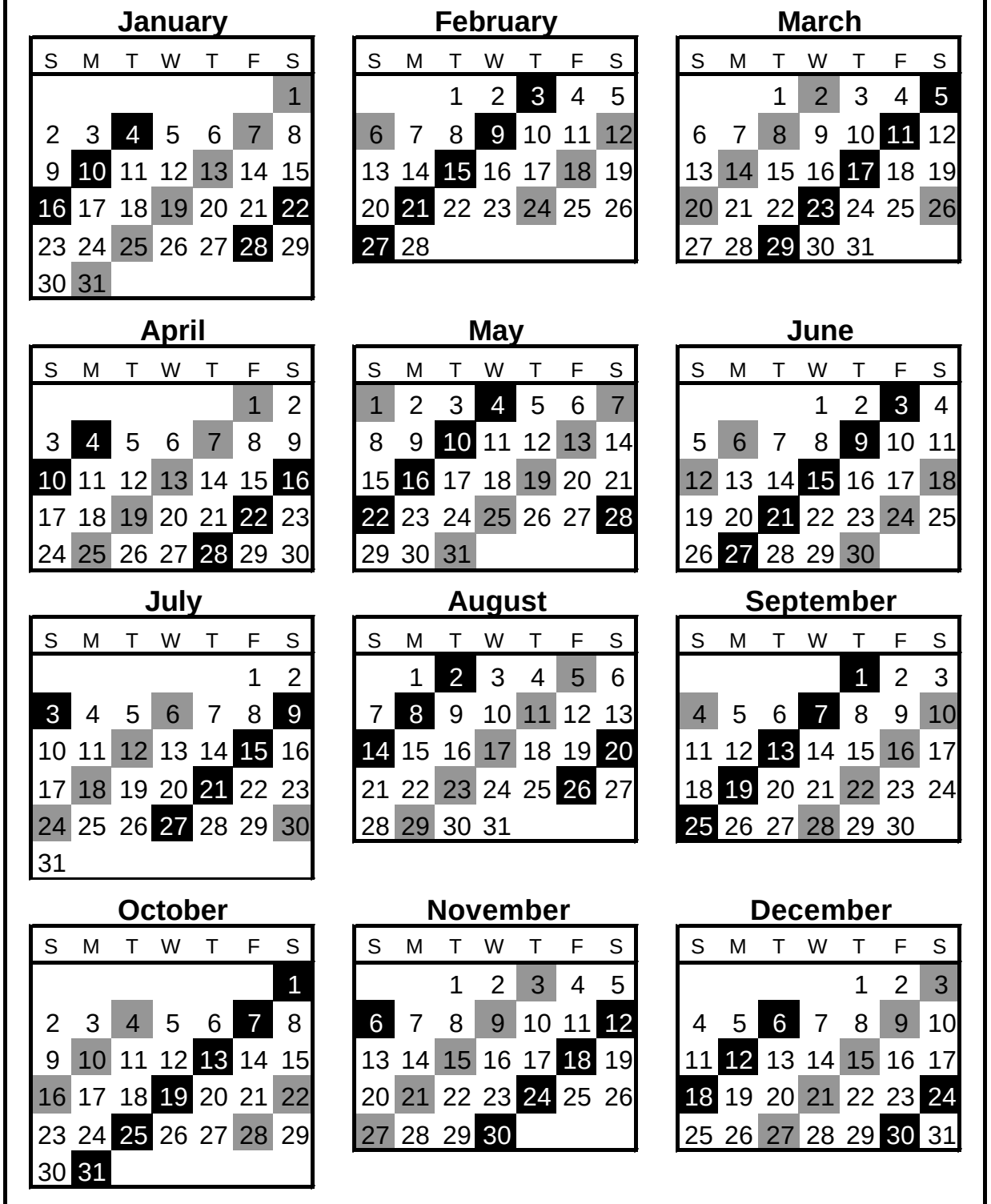
Kentucky Dept. for Environmental
Protection
Air Quality Division
803 Schenkel Lane
Frankfort, Kentucky 40601
502/573-3382
Fax 502/573-3787

Michigan Dept. of Natural Resources
Air Quality Division
P.O. Box 30260
Lansing, Michigan 48909
517/373-7023
Fax 517/373-1265

Missouri Dept. of Natural Resources
Division of Environmental Quality
P.O. Box 176
205 Jefferson Street
Jefferson City, Missouri 65102
573/751-4817
Fax 573/751-2706

Wisconsin Dept. of Natural Resources
Bureau of Air Management
P.O. Box 7921
101 S. Webster
Madison, Wisconsin 53707
608/266-7718
Fax 608/267-0560

2005 - Noncontinous Sampling Schedule



b. To measure concentrations in areas where poor air quality is combined with high population exposure.

c. To provide data useable for the determination of national trends.

d. To provide data necessary to allow the development of nationwide control strategies.

3. Photochemical Assessment Monitoring Station (PAMS) Network - The PAMS network is required in serious, severe, and extreme ozone non-attainment areas to obtain detailed data for ozone, precursors (NOx and VOC), and meteorology. VOC and NOx sampling is required for the period June - August each year. Ozone sampling occurs during the ozone season, April - October. Network design is based on four monitoring types. In Illinois PAMS are required in the Chicago metropolitan area only.

a. Type 1 sites are located upwind of the non-attainment area and are located to measure background levels of ozone and precursors coming into the area

b. Type 2 sites are located slightly downwind of the major source areas of ozone precursors.

c. Type 3 sites are located at the area of maximum ozone concentrations.

d. Type 4 sites are located at the domain edge of the non-attainment area and measure ozone and precursors leaving the area.

4. Special Purpose Monitoring Station (SPMS) Network - Any monitoring site that is not a designated SLAMS or NAMS is considered a special purpose monitoring station. Some of the SPMS network objectives are as follows:

a. To provide data as a supplement to stations used in developing local control strategies, including enforcement actions.

b. To verify the maintenance of ambient standards in areas not covered by the SLAMS/NAMS network.

c. To provide data on noncriteria pollutants.

Table A3

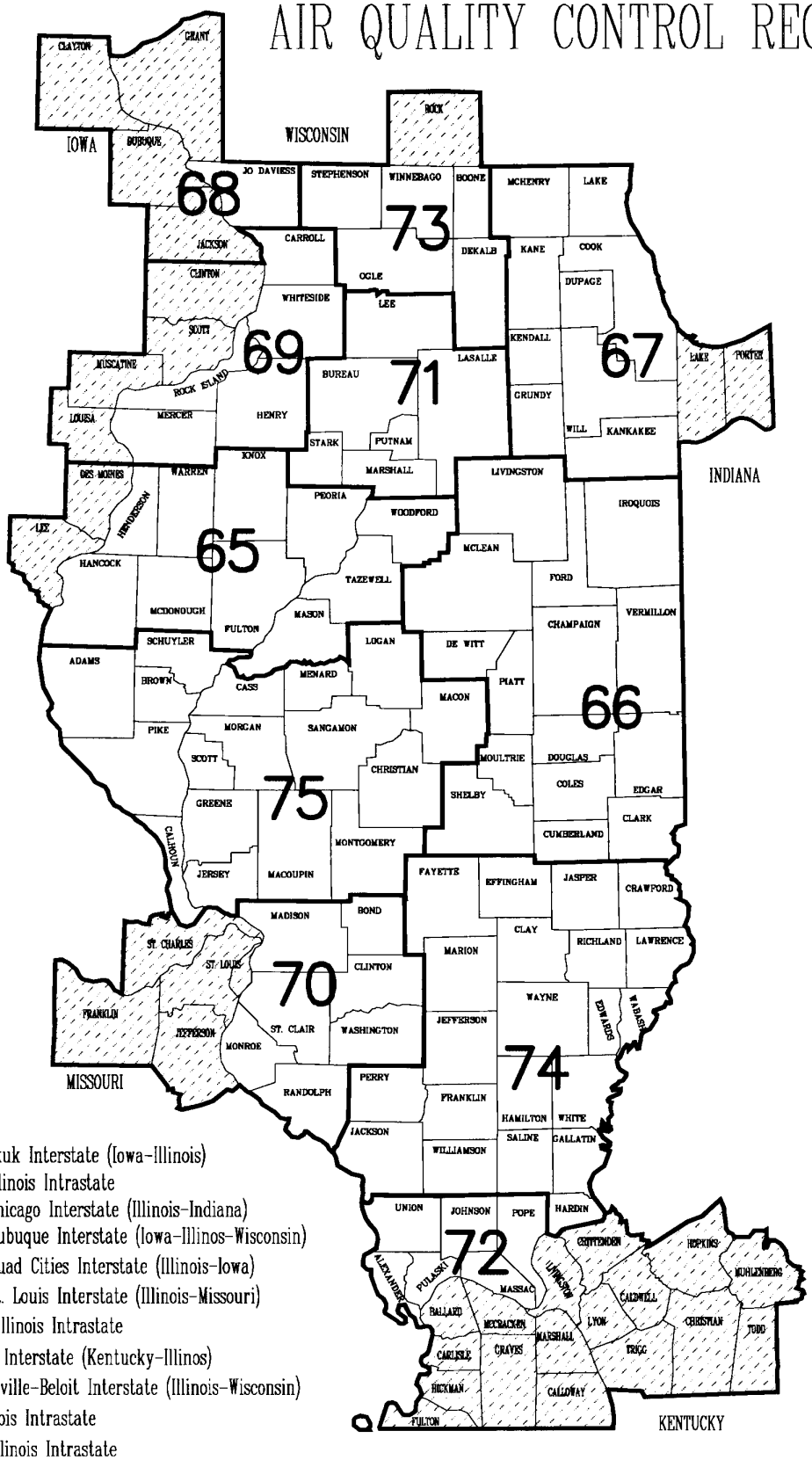
DISTRIBUTION OF AIR MONITORING INSTRUMENTS

	PAMS	NAMS	SLAMS	SPMS	TOTAL
Particulate Matter ($PM_{2.5}$)	0	0	38	13	51
$PM_{2.5}$ Speciation	0	0	6	2	8
Particulate Matter (PM_{10})	0	8	8	2	18
Total Suspended Particulates (TSP)	0	0	0	12	12
Lead	0	2	11	0	13
Sulfur Dioxide	0	10	8	3	21
Nitrogen Dioxide	3	2	3	0	8
Ozone	4	10	22	1	37
Carbon Monoxide	0	2	6	0	8
Volatile Organic Compounds/Toxics	2	0	0	2	4
Wind Systems	4	0	0	15	19
Solar Radiation	4	0	0	5	9
Meteorological	4	0	0	0	4
Total	21	34	102	53	210

There were a several changes to the monitoring network from 2004 to 2005. The site moves are a result of loss of site access or consolidation. The discontinued sites are a part of the five year Regional Monitoring Strategy.

Normal - HS $PM_{2.5}$ was moved to Normal - ISU. Bedford Park SO_2 was discontinued. Chicago - Farr $PM_{2.5}$ was discontinued. A new PM10 was established at Maywood. South Lockport O_3 was temporarily discontinued. Edwardsville O_3 was discontinued. Rockford $PM_{2.5}$ was moved from Firestation to Health Department. Dale O_3 was discontinued and a new site established at Knight Prairie Twp.

AIR QUALITY CONTROL REGIONS



65 - Bulington-Keokuk Interstate (Iowa-Illinois)
66 - East Central Illinois Intrastate
67 - Metropolitan Chicago Interstate (Illinois-Indiana)
68 - Metropolitan Dubuque Interstate (Iowa-Illinos-Wisconsin)
69 - Metropolitan Quad Cities Interstate (Illinois-Iowa)
70 - Metropolitan St. Louis Interstate (Illinois-Missouri)
71 - North Central Illinois Intrastate
72 - Paducah-Cairo Interstate (Kentucky-Illinos)
73 - Rockford-Janesville-Beloit Interstate (Illinois-Wisconsin)
74 - Southeast Illinois Intrastate
75 - West Central Illinois Intrastate

Statewide Map of Air Monitoring Locations

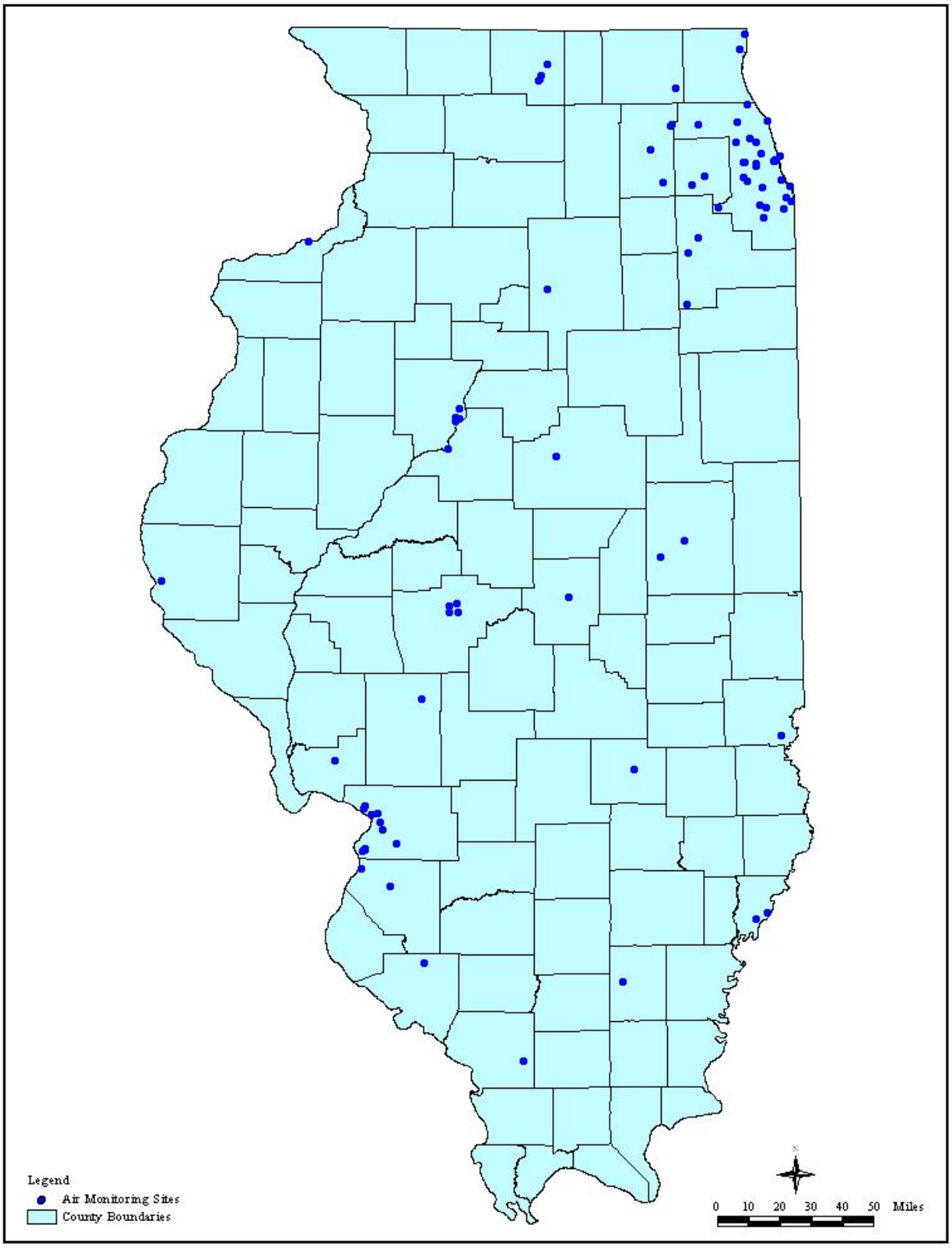


Table A4

2005
SITE DIRECTORY

CITY NAME / AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)				
PEORIA COUNTY				
Peoria	Fire Station #8	Ill. EPA	N. 4507.113	NAMS - SO_2, O_3
(1430024)	MacArthur & Hurlburt		E. 279.709	SPMS - WS/WD
Peoria	Commercial Building	Ill. EPA	N. 4508.748	SLAMS - CO
(1430036)	1005 N. University		E. 279.203	
Peoria	City Office Building	Ill. EPA	N. 4508.336	NAMS - PM_{10}
(1430037)	613 N.E. Jefferson		E. 281.616	SLAMS - Pb, $PM_{2.5}$
				SPMS - TSP, $PM_{2.5}$ [n]
Peoria Heights	Peoria Heights H.S.	Ill. EPA	N. 4513.723	NAMS - O_3
(1431001)	508 E. Glen Ave.		E. 281.679	
TAZEWELL COUNTY				
Pekin	Fire Station #3	Ill. EPA	N. 4492.693	NAMS - SO_2
(1790004)	272 Derby		E. 275.291	
66 EAST CENTRAL ILLINOIS INTRASTATE				
CHAMPAIGN COUNTY				
Bondville	SWS Climate Station	Ill. EPA/SWS	N. 4434.458	SLAMS - $PM_{2.5}$
(0191001)	Twp. Rd. 500 E.		E. 382.927	
Champaign	Booker T. Washington Elem. Sch.	Ill. EPA	N. 4442.222	SLAMS - O_3, $PM_{2.5}$
(0190004)	606 E. Grove		E. 395.236	
McLEAN COUNTY				
Normal	ISU Physical Plant	Ill. EPA	N. 4487.250	SLAMS – O_3, $PM_{2.5}$
(1132003)	Main & Gregory		E. 330.837	
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)				
COOK COUNTY				
Alsip	Village Garage	Cook County DEC	N. 4613.507	SLAMS - O_3, Pb, PM_{10}
(0310001)	4500 W. 123rd St.		E. 439.028	SPMS - TSP,WS/WD,$PM_{2.5}$
Blue Island	Eisenhower H.S.	Cook County DEC	N. 4612.496	NAMS - PM_{10}
(0312001)	12700 Sacramento		E. 442.016	SLAMS - $PM_{2.5}$

Table A4

2005
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
COOK COUNTY				
Chicago (0310060)	Carver H.S. 13100 S. Doty	Cook County DEC	N. 4611.594 E. 450.911	NAMS - PM_{10}
Chicago (0310026)	Cermak Pump Sta. 735 W. Harrison	Cook County DEC	N. 4635.707 E. 446.469	SLAMS - Pb SPMS - TSP
Chicago (0310063)	CTA Building 320 S. Franklin	Ill. EPA	N. 4636.096 E. 447.365	NAMS - CO, NO/NO_2, SO2
Chicago (0310076)	Com Ed Maintenance Bldg. 7801 Lawndale	Cook County DEC	N. 4622.217 E. 440.658	SLAMS - $PM_{2.5}$/SPEC, O_3, NO/NO_2, SO_2 SPMS – WS/WD,$PM_{2.5}$/SPEC
Chicago (0310072)	Jardine Water Plant 1000 E. Ohio	Ill. EPA	N. 4638.169 E. 449.597	PAMS - NO/NO_2, O_3, VOC WS/WD, SOL, MET, UV
Chicago (0310052)	Mayfair Pump Sta. 4850 Wilson Ave.	Cook County DEC	N. 4646.216 E. 437.859	NAMS - Pb SLAMS - $PM_{2.5}$ SPMS - TSP
Chicago (0310042)	Sears Tower Wacker @ Adams	Ill. EPA	N. 4636.320 E. 447.265	SPMS - O_3
Chicago (0310050)	Southeast Police Sta. 103rd & Luella	Cook County DEC	N. 4617.465 E. 452.697	NAMS - SO_2 SLAMS - $PM_{2.5}$
Chicago (0310032)	South Water Filtration Plant 3300 E. Cheltenham Pl.	Cook County DEC	N. 4622.596 E. 454.663	SLAMS - O_3
Chicago (0310057)	Springfield Pump Sta. 1745 N. Springfield. Ave.	Cook County DEC	N. 4640.354 E. 440.064	SLAMS - $PM_{2.5}$/SPEC SPMS - $PM_{2.5}$/SPEC[d]
Chicago (0311003)	Taft H.S. 6545 W. Hurlbut St.	Cook County DEC	N. 4648.125 E. 434.392	SLAMS - O_3
Chicago (0310064)	University of Chicago 5720 S. Ellis Ave.	Cook County DEC	N. 4626.508 E. 450.010	SLAMS - O_3 SPMS - SOL
Chicago (0310022)	Washington H.S. 3535 E. 114th St.	Cook County DEC	N. 4615.184 E. 455.117	SLAMS - Pb, $PM_{2.5}$, PM_{10} SPMS - TSP, $PM_{2.5}$
Cicero (0316005)	Liberty School 13^{th} St. & 50^{th} Ave.	Cook County DEC	N. 4634.780 E. 437.846	SLAMS - $PM_{2.5}$

Table A4

2005
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
COOK COUNTY				
Cicero	Trailer	Cook County DEC	N. 4633.763	NAMS - SO_2, NO/NO_2
(0314002)	1820 S. 51st Ave.		E. 437.541	SLAMS - O_3, CO
Des Plaines	Regional Office Building	Ill EPA	N. 4656.615	SLAMS - O_3, $PM_{2.5}$
(0314007)	9511 W. Harrison St.		E. 428.577	SPMS - $PM_{2.5}$
Evanston	Water Pumping Sta.	Ill. EPA	N. 4656.649	NAMS - O_3
(0317002)	531 E. Lincoln		E. 444.221	SPMS - WS/WD
Hoffman Estates (DISC)	Hoffman Estates H.S.	Cook County DEC	N. 4656.069	SPMS - $PM_{2.5}$
(0314101)	1100 W. Higgins Rd.		E. 408.304	
Lemont	Trailer	Cook County DEC	N. 4613.403	SLAMS - SO_2, O_3
(0311601)	729 Houston		E. 417.538	
Lyons Township	Village Hall	Ill. EPA	N. 4627.820	SLAMS - PM_{10}, $PM_{2.5}$
(0311016)	50th St. & Glencoe		E. 430.886	
Maywood	4th District Court Bldg	Cook County DEC	N. 4635.994	NAMS - Pb
(0316003)	1500 Maybrook Dr.		E. 431.467	
Maywood	Com Ed Maintenance	Cook County DEC	N. 4635.695	NAMS - CO
(0316004)	1505 S. First Ave.		E. 431.200	
Maywood	4th District Court Bldg	Cook County DEC	N. 4635.994	SPMS - PM_{10}, $PM_{2.5}$
(0316006)	1500 Maybrook Dr.		E. 431.467	
Midlothian	Bremen High Sch.	Cook County DEC	N. 4607.283	SLAMS - PM_{10}
(0311901)	15205 Crawford Ave.		E. 440.383	
Northbrook	Northbrook Water Plant	Ill. EPA	N. 4665.414	PAMS - O_3, NO/NO_2, VOC
(0314201)	750 Dundee Rd.		E. 433.955	WS/WD, SOL, MET SLAMS - $PM_{2.5}$/SPEC, SO_2, Pb SPMS - Hg, TOX, TSP
Schiller Park	IEPA Trailer	Ill. EPA	N. 4646.084	SLAMS - CO, NO/NO_2, Pb,
(0313103)	4743 Mannheim Rd.		E. 427.387	$PM_{2.5}$ SPMS - TSP, TOX, WS/WD
Summit	Graves Elem. Sch.	Cook County DEC	N. 4625.756	SLAMS - PM_{10}, Pb, $PM_{2.5}$
(0313301)	60th St. & 74th Ave.		E. 433.074	SPMS - TSP

Table A4

2005
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
DUPAGE COUNTY				
Lisle	Morton Arboretum	Ill. EPA	N. 4629.361	SLAMS - O_3
(0436001)	Route 53		E. 410.891	SPMS - WS/WD
Naperville	City Hall	Ill. EPA	N. 4624.786	SLAMS - $PM_{2.5}$/SPEC
(0434002)	400 S. Eagle St.		E. 404.208	SPMS - $PM_{2.5}$
KANE COUNTY				
Aurora	Health Department	Ill. EPA	N. 4626.728	SLAMS - $PM_{2.5}$
(0890007)	1240 N. Highland		E. 389.533	
Elgin	Larsen Junior H.S.	Ill. EPA	N. 4655.844	NAMS - O_3
(0890005)	665 Dundee Rd.		E. 394.654	
Elgin	McKinley School	Ill. EPA	N. 4655.941	SLAMS - $PM_{2.5}$
(0890003)	258 Lovell St.		E. 394.048	
Wasco	Wasco School	Ill. EPA	N. 4643.751	SPMS - PM_{10}
(0893001)	4N782 School St.		E. 383.636	
LAKE COUNTY				
Waukegan	North Fire Station	Ill. EPA	N. 4692.854	NAMS - O_3
(0971002)	Golf & Jackson Sts.		E. 430.744	
Zion	Camp Logan	Ill. EPA	N. 4701.795	PAMS - O_3, WS/WD, SOL,
(0971007)	Illinois Beach State Park		E. 433.407	MET
				SLAMS - $PM_{2.5}$
Mc HENRY COUNTY				
Cary	Cary Grove H.S.	Ill. EPA	N. 4674.900	NAMS - O_3
(1110001)	1st St. & Three Oaks Rd.		E. 397.486	SLAMS - $PM_{2.5}$
				SPMS - $PM_{2.5}$ [n]
WILL COUNTY				
Braidwood	Com Ed Training Center	Ill. EPA	N. 4563.825	PAMS - O_3, NO/NO_2,
(1971011)	36400 S. Essex Road		E. 400.172	WS/WD, SOL, MET
				SLAMS - $PM_{2.5}$
Joliet	Pershing Elem. Sch.	Ill. EPA	N. 4597.636	NAMS - PM_{10}
(1971002)	Midland & Campbell Sts.		E. 406.854	SLAMS - $PM_{2.5}$
Joliet	Water Plant West	Ill. EPA	N. 4590.279	NAMS - SO_2
(1970013)	Rte. 6 & Young Rd.		E. 401.284	
South Lockport (DISC)	Fitness Forum	Ill. EPA	N. 4602.982	SLAMS - O_3
(1971008)	2021 Lawrence		E. 412.039	

Table A4

2005
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)				
ROCK ISLAND COUNTY				
Rock Island (1613002)	Rock Island Arsenal 32 Rodman Ave.	Ill. EPA	N. 4598.661 E. 707.185	NAMS - O_3 SLAMS - $PM_{2.5}$ SPMS - WS/WD, SOL
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)				
MADISON COUNTY				
Alton (1190008)	Clara Barton Elem. Sch. 409 Main St.	Ill. EPA	N. 4308.245 E. 747.375	SLAMS - O_3
Alton (1192009)	SIU Dental Clinic 1700 Annex. St.	Ill. EPA	N. 4309.690 E. 747.752	SLAMS - $PM_{2.5}$/SPEC
Edwardsville (1192007)	RAPS Trailer Poag Road	Ill. EPA	N. 4297.793 E. 757.118	SPMS - WS/WD
Granite City (1191007)	Fire Station #1 23rd & Madison	Ill. EPA	N. 4287.661 E. 748.745	SLAMS - $PM_{2.5}$
Granite City (1190010)	Air Products 15th & Madison	Ill. EPA	N. 4286.516 E. 747.561	NAMS - PM_{10} SLAMS - Pb SPMS - TSP
Granite City (1190023)	VFW Building 2040 Washington	Ill.EPA	N. 4287.099 E. 748.427	NAMS - PM_{10} SLAMS - $PM_{2.5}$
Maryville (1191009)	Southwest Cable TV 200 W. Division	Ill. EPA	N. 4290.382 E. 242.680	SLAMS - O_3
South Roxana (1191010)	S. Roxana Grade Sch. Michigan St.	Ill. EPA	N. 4301.623 E. 755.369	SLAMS - SO_2
Wood River (1193007)	Water Treatment Plant 54 N. Walcott	Ill. EPA	N. 4305.084 E. 751.138	NAMS - SO_2, O_3, PM_{10} SLAMS - Pb, $PM_{2.5}$ SPMS – TSP
Wood River (1193009)	VIM Test Station 1710 Vaughn Road	Ill. EPA	N. 4305.786 E. 754.204	SLAMS - SO_2
RANDOLPH COUNTY				
Houston (1570001)	Baldwin Site #2 County Rds. 25.0 N. & 23.5 E.	Ill. EPA	N. 4229.049 E. 255.745	SLAMS - SO_2, O_3, $PM_{2.5}$

Table A4

2005
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
ST. CLAIR COUNTY				
East St. Louis (1630010)	RAPS Trailer 13th & Tudor	Ill. EPA	N. 4277.363 E. 747.251	NAMS - SO_2, PM_{10} SLAMS - NO/NO_2, Pb, O_3, $PM_{2.5}$, CO SPMS - TSP,WS/WD,$PM_{2.5}$, SOL
Swansea (1634001)	Village Maintenance Bldg. 1500 Caseyville Ave.	Ill. EPA	N. 4268.615 E. 239.086	SLAMS - $PM_{2.5}$
71 NORTH CENTRAL ILLINOIS INTRASTATE				
LA SALLE COUNTY				
Oglesby (0990007)	308 Portland Ave.	Ill. EPA	N. 4573.311 E. 328.401	SLAMS - PM_{10}, $PM_{2.5}$ SPMS - SO_2, WS/WD, $PM_{2.5}$
73 ROCKFORD - JANESVILLE - BELOIT INTERSTATE (IL - WI)				
WINNEBAGO COUNTY				
Loves Park (2012003)	Maple Elem. Sch. 1405 Maple Ave.	Ill. EPA	N. 4688.756 E. 332.098	NAMS - O_3 SPMS - WS/WD
Rockford (2010009)	Walker Elem. Sch. 1500 Post St.	Ill. EPA	N. 4683.537 E. 328.760	NAMS - O_3
Rockford (NEW) (2010013)	Health Department 201 Division St.	Ill. EPA	N. 4681.107 E. 327.394	SLAMS - $PM_{2.5}$
Rockford (2010011)	City Hall 425 E. State	Ill. EPA	N. 4681.390 E. 327.817	SLAMS - CO
74 SOUTHEAST ILLINOIS INTRASTATE				
EFFINGHAM COUNTY				
Effingham (0491001)	Central Junior H.S. Route 45 South	Ill. EPA	N. 4325.158 E. 365.999	SLAMS - O_3
HAMILTON COUNTY				
Knight Prairie Township (NEW) (0650002)	Ten Mile Creek DNR Office SR 14	Ill. EPA	N. 4216.177 E. 357.489	SLAMS - O_3, $PM_{2.5}$ SPMS - WS/WD, SOL, $PM_{2.5}$
JACKSON COUNTY				
Carbondale (0770004)	Maintenance Bldg. 607 E. College	Ill. EPA SIU	N. 4177.180 E. 305.291	SLAMS - PM_{10}

Table A4

2005
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
WABASH COUNTY				
Mount Carmel (1850001)	Division St.	Public Service of Indiana	N. 4249.965 E. 432.444	SPMS - SO_2
Rural Wabash County (1851001)	South of SR-1	Public Service of Indiana	N. 4246.929 E. 427.104	SPMS - SO_2
75 WEST CENTRAL ILLINOIS INTRASTATE				
ADAMS COUNTY				
Quincy (0010006)	St. Boniface Elem. Sch. 732 Hampshire	Ill. EPA	N. 4421.541 E. 636.350	SLAMS - $PM_{2.5}$, SO_2, O_3 SPMS - WS/WD
JERSEY COUNTY				
Jerseyville (0831001)	Illini Jr. H.S. Liberty St. & County Rd.	Ill. EPA	N. 4332.242 E. 731.368	SLAMS - O_3 ,$PM_{2.5}$
MACON COUNTY				
Decatur (1150013)	IEPA Trailer 2200 N. 22nd	Ill. EPA	N. 4414.538 E. 335.308	NAMS - SO_2 SLAMS - O_3, $PM_{2.5}$/SPEC SPMS - WS/WD, $PM_{2.5}$
MACOUPIN COUNTY				
Nilwood (1170002)	IEPA Trailer Heaton & Dubois	Ill. EPA	N. 4364.498 E. 258.043	SLAMS - O_3, SO_2, Pb, PM_{10} SPMS - TSP, WS/WD, SOL CO_2, UV
SANGAMON COUNTY				
Springfield (1670006)	Sewage Treatment Plant 3300 Mechanicsburg Rd.	Ill. EPA	N. 4408.840 E. 278.158	NAMS - SO_2
Springfield (1670008)	Federal Building 6th St. & Monroe	Ill. EPA	N. 4408.623 E. 273.327	SLAMS - CO
Springfield (1670010)	Public Health Warehouse 2875 N. Dirksen Pkwy.	Ill. EPA	N. 4413.490 E. 277.134	SLAMS - O_3
Springfield (1670012)	Agriculture Building State Fair Grounds	Ill. EPA	N. 4412.448 E. 273.728	SLAMS - $PM_{2.5}$

Table A4

2005
SITE DIRECTORY

CITY NAME / AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT

Summary of Equipment Codes for the Site Directory

TSP	- Total Suspended Particulates
PM_{10}	- Particulate Matter (10 microns or smaller)
$PM_{2.5}$	Particulate Matter (2.5 microns or smaller)
SPEC	- $PM_{2.5}$ Speciation
SO_2	- Sulfur Dioxide
NO	- Nitric Oxide
NO_2	- Nitrogen Dioxide
CO	- Carbon Monoxide
CO_2	- Carbon Dioxide
O_3	- Ozone
Pb	- Lead
VOC	- Volatile Organic Compounds
TOX	- Toxic Compounds
Hg	- Mercury
WS/WD	- Wind Speed and Wind Direction
SOL	- Total Solar Radiation
MET	- Temperature, Relative Humidity, Barometric Pressure
UV	- Ultra-violet Radiation
RAIN	- Rainfall
(n)	- Instrument installed during 2005
(d)	- Instrument removed during 2005
NEW	- Site started during 2005
DISC	- Site discontinued during or at the end of 2005

SLAMS Designations

NAMS	- National Air Monitoring Site
PAMS	- Photochemical Assessment Monitoring Site
SLAMS	- State and Local Air Monitoring Site
SPMS	- Special Purpose Air Monitoring Site

UTM Coordinates

N.	- Northing Coordinate (in kilometers)
E.	- Easting Coordinate (in kilometers)

APPENDIX B
AIR QUALITY DATA SUMMARY TABLES

B.1 AIR QUALITY DATA INTERPRETATION

In order to provide a uniform procedure for determining whether a sufficient amount of air quality data has been collected by a sensor in a given time period (year, quarter, month, day, etc.) to accurately represent air quality during that time period, a minimum statistical selection criteria was developed.

In order to calculate an annual average for noncontinuous parameters, a minimum of 75% of the data that was scheduled to be collected must be available, i.e., 45 samples per year for an every-six-day schedule (total possible of 60 samples). Additionally, in order to have proper quarterly balance, each site on an every sixth day schedule should have at least 10 samples per calendar quarter. This provides for a 20% balance in each quarter if the minimum required annual sampling is achieved.

For lead results which must be compared to a quarterly standard, 75% of the possible samples in each quarter must be obtained. Thus for a valid lead quarterly average, a total of 12 values must be available.

PM_{10} and $PM_{2.5}$ samplers operate on one of three sampling frequencies:

- Every-day sampling (68 samples required each quarter for 75% data capture)
- Every-third-day sampling (23 samples required each quarter for 75% data capture)
- Every-six-day sampling (12 samples required each quarter for 75% data capture).

To calculate an annual PM_{10} or $PM_{2.5}$ mean, arithmetic means are calculated for each quarter in which valid data is recorded in at least 75% of the possible sampling periods. The annual mean is then the arithmetic average of the four quarterly means.

To determine an annual average for continuous data 75% of the total possible yearly observations are necessary, i.e., a minimum of 6570 hours (75% of the hours available) were needed in 2005. In order to provide a balance between the respective quarters, each quarter should have at least 1300 hours which is 20% of the 75% minimum annual requirement. To calculate quarterly averages at sites which do not meet the annual criteria, 75% of the total possible observations in a quarter are needed, i.e., a minimum of 1647 hours of 2200 hours available. Monthly averages also require 75% of the total possible observations in a month, i.e., 540 hours as a minimum. Additionally, for short-term running averages (24 hour, 8 hour, 3 hour) 75% of the data during the particular time period is needed, i.e, 18 hours for a 24-hour average, 6 hours for an 8-hour average and 3 hours for a 3-hour average.

For ozone, a valid day for 1-hour samples must have 75% of the hours between 9 a.m. and 9 p.m. otherwise it is considered missing. A missing day can be considered valid if the peak ozone concentration on the preceding and succeeding days is less than 0.090 ppm. The expected exceedences are actual exceedences adjusted for the percent of missing days. For 8-hour samples, forward running averages are computed for each hour which includes the next seven hours as well. A valid 8-hour average has at least 6 valid 1-hour averages within the 8-hour period. A valid 8-hour day contains at least 75% (18) of the possible 8-hour running averages. Complete sampling over a three year period requires an average of 90% valid days with each year having at least 75% valid days.

Data listed as not meeting the minimum statistical selection criteria in this report were so noted after evaluation using the criteria above. Although short term averages (3, 8, 24 hours) have been computed for certain sites not meeting the annual criteria, these averages may not be representative of an entire year's air quality. In certain circumstances where even the 75% criteria is met, the number and/or magnitude of short term averages may not be directly comparable from one year to the next because of seasonal distributional differences.

For summary purposes, the data is expressed in the number of figures to which the raw data is validated. Extra figures may be carried in the averaging technique, but the result is rounded to the appropriate number of figures. For example, the values 9, 9, 10 are averaged to give 9; whereas the values 9.0, 9.0, 10.0 are averaged to 9.3. The raw data itself should not be expressed to more significant figures than the sensitivity of the monitoring methodology allows.

In comparing data to the various air quality standards, the data are implicitly rounded to the number of significant figures specified by that standard. For example, to exceed the 0.12 ppm hourly ozone standard, an hourly value must be 0.125 ppm or higher, to exceed the 9 ppm CO 8-hour standard, an 8-hour average must be 9.5 ppm or higher. Peak averages, though, will be expressed to the number of significant figures appropriate to that monitoring methodology.

National Ambient Air Quality Standards (NAAQS) for sulfur dioxide (SO_2) and carbon monoxide (CO) have short-term standards for ambient air concentrations (24 hours or less) not to be exceeded more than once per year. Particulate Matter (PM_{10}) has a 24-hour standard which cannot average more than 1 over a three year period (total of 3 in three years). Particulate Matter ($PM_{2.5}$) has a 24-hour standard which is a 3-year average of each year's 98^{th} percentile values. In the case of ozone, the expected number of exceedances (one hour per day greater than 0.12 ppm) may not average more than one per year in any period of three consecutive years. The 8-hour ozone standard is concentration based and as such is the average of the fourth highest value each year over a three year period. The standards are promulgated in this manner in order to protect the public from excessive levels of pollution both in terms of acute and chronic health effects.

The following data tables detail and summarize air quality in Illinois in 2005. The tables of short term exceedences list those sites which exceeded any of the short term primary standards (24 hours or less). The detailed data tables list averages and peak concentrations for all monitoring sites in Illinois.

Table B1

2005
OZONE IN EXCESS OF THE PRIMARY STANDARD OF ONE HOUR PER DAY GREATER THAN 0.12 PARTS PER MILLION

STATION	ADDRESS	DATE	MAXIMUM VALUE (PPM)
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)			
COOK COUNTY			
Alsip	4500 W. 123rd St.	June 25	0.127
Chicago - SWFP	3300 E. Cheltenham Pl.	July 10	0.144
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)			
MADISON COUNTY			
Maryville	200 W. Division	August 10	0.130
ST. CLAIR COUNTY			
East St. Louis	13th & Tudor	June 28	0.127
		August 10	0.132

Table B1

2005
OZONE IN EXCESS OF THE 8-HOUR PRIMARY STANDARD OF 0.08 PARTS PER MILLION

DATE	STATION	ADDRESS	MAXIMUM VALUE (PPM)
Jun 20	Lemont	729 Houston	0.085
Jun 21	East St. Louis	13th & Tudor	0.101
	Maryville	200 W. Division	0.095
Jun 22	East St. Louis	13th & Tudor	0.094
Jun 23	Alton	409 Main St.	0.092
	Wood River	54 N. Walcott	0.087
Jun 24	Alton	409 Main St.	0.096
	East St. Louis	13th & Tudor	0.085
	Maryville	200 W. Division	0.092
	Wood River	54 N. Walcott	0.093
Jun 25	Alsip	4500 W. 123rd St.	0.101
	Alton	409 Main St.	0.091
	Wood River	54 N. Walcott	0.091
Jun 26	Cary	1st. St. & Three Oaks	0.087
	Elgin	665 Dundee	0.086
Jun 27	Alsip	4500 W. 123rd St.	0.088
	Chicago - Com Ed	7801 Lawndale	0.086
	Chicago - Jardine	1000 E. Ohio	0.096
	Chicago - SWFP	3300 E. Cheltenham	0.086
	Chicago - University	5720 S. Ellis	0.086
	Evanston	531 Lincoln	0.104
	Jerseyville	Liberty St.	0.087
	Lemont	729 Houston	0.086
	Northbrook	750 Dundee Rd.	0.085
Jun 28	East St. Louis	13th & Tudor	0.110
	Maryville	200 W. Division	0.088
Jun 29	Alton	409 Main St.	0.102
	Elgin	665 Dundee	0.091
	Jerseyville	Liberty St.	0.087
	Maryville	200 W. Division	0.086
	Wood River	54 N. Walcott	0.099
Jun 30	East St. Louis	13th & Tudor	0.086
Jul 9	Cary	1st. St. & Three Oaks	0.093
	Elgin	665 Dundee	0.088
	Lemont	729 Houston	0.087
Jul 10	Alsip	4500 W. 123rd St.	0.098
	Cary	1st. St. & Three Oaks	0.094
	Chicago - Com Ed	7801 Lawndale	0.089
	Chicago - Jardine	1000 E. Ohio	0.087
	Chicago - SWFP	3300 E. Cheltenham	0.108
	Chicago - University	5720 S. Ellis	0.095
	Elgin	665 Dundee	0.092
	Evanston	531 Lincoln	0.088
	Lemont	729 Houston	0.097
	Lisle	Morton Arboretum	0.091
	Waukegan	Golf & Jackson	0.092
	Zion	Camp Logan	0.097

Table B1

2005
OZONE IN EXCESS OF THE 8-HOUR
PRIMARY STANDARD OF 0.08 PARTS PER MILLION

DATE	STATION	ADDRESS	MAXIMUM VALUE (PPM)
Jul 11	Cary	1st. St. & Three Oaks	0.087
	Elgin	665 Dundee	0.087
	Lemont	729 Houston	0.092
Jul 16	Lemont	729 Houston	0.085
Jul 17	Waukegan	Golf & Jackson	0.087
	Zion	Camp Logan	0.088
Aug 1	Chicago - University	5720 S. Ellis	0.097
	Waukegan	Golf & Jackson	0.091
	Zion	Camp Logan	0.090
Aug 2	Zion	Camp Logan	0.090
Aug 7	Chicago - Taft	6545 W. Hurlbut	0.087
	Des Plaines	9511 W. Harrison	0.089
	Northbrook	750 Dundee Rd.	0.085
Aug 8	Alton	409 Main St.	0.087
	Des Plaines	9511 W. Harrison	0.085
	Northbrook	750 Dundee Rd.	0.085
	Waukegan	Golf & Jackson	0.087
	Wood River	54 N. Walcott	0.086
Aug 9	Alton	409 Main St.	0.089
	Waukegan	Golf & Jackson	0.089
	Wood River	54 N. Walcott	0.085
	Zion	Camp Logan	0.094
Aug 10	East St. Louis	13th & Tudor	0.103
	Maryville	200 W. Division	0.104
Sep 6	Maryville	200 W. Division	0.085
Sep 8	Maryville	200 W. Division	0.088
Sep 9	Alton	409 Main St.	0.089
	Jerseyville	Liberty St.	0.089
Sep 10	Jerseyville	Liberty St.	0.086
Sep 12	Nilwood	Heaton & DuBois	0.086

Table B2

2005
OZONE

STATION	ADDRESS	NUMBER OF DAYS GREATER THAN 0.12 PPM	NUMBER OF DAYS GREATER THAN 0.08 PPM	HIGHEST SAMPLES (parts per million) 1-HOUR 1ST	1-HOUR 2ND	1-HOUR 3RD	1-HOUR 4TH	8-HOUR 1ST	8-HOUR 2ND	8-HOUR 3RD	8-HOUR 4TH
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)											
PEORIA COUNTY											
Peoria	Hurlburt & MacArthur	0	0	0.090	0.084	0.080	0.079	0.080	0.076	0.075	0.073
Peoria Heights	508 E. Glen	0	0	0.095	0.087	0.082	0.082	0.080	0.077	0.077	0.077
66 EAST CENTRAL ILLINOIS INTRASTATE											
CHAMPAIGN COUNTY											
Champaign	606 E. Grove	0	0	0.082	0.082	0.081	0.080	0.079	0.075	0.073	0.073
McLEAN COUNTY											
Normal	Main & Gregory	0	0	0.093	0.090	0.084	0.083	0.082	0.080	0.078	0.077
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)											
COOK COUNTY											
Alsip	4500 W. 123rd St.	1	3	0.127	0.112	0.093	0.092	0.101	0.098	0.088	0.084
Chicago - Com Ed	7801 Lawndale	0	2	0.101	0.097	0.095	0.091	0.089	0.086	0.084	0.084
Chicago - Jardine	1000 E. Ohio	0	2	0.110	0.104	0.099	0.095	0.096	0.087	0.081	0.081
Chicago - SWFP	3300 E Cheltenham	1	2	0.144	0.092	0.091	0.090	0.108	0.086	0.077	0.076
Chicago - Taft	6545 W. Hurlbut	0	1	0.106	0.104	0.099	0.094	0.087	0.084	0.083	0.083
Chicago - University	5720 S. Ellis	0	3	0.114	0.110	0.091	0.091	0.097	0.095	0.086	0.084
Cicero	1830 S. 51st Ave.	0	0	0.091	0.091	0.088	0.085	0.080	0.077	0.075	0.075
Des Plaines	9511 W. Harrison	0	2	0.101	0.095	0.093	0.090	0.089	0.085	0.082	0.079
Evanston	531 Lincoln	0	2	0.109	0.100	0.096	0.096	0.104	0.088	0.083	0.082
Lemont	729 Houston	0	6	0.114	0.113	0.102	0.102	0.097	0.092	0.087	0.086
Northbrook	750 Dundee Rd.	0	3	0.104	0.099	0.094	0.093	0.085	0.085	0.085	0.081
DuPAGE COUNTY											
Lisle	Morton Arboretum	0	1	0.106	0.104	0.091	0.089	0.091	0.082	0.080	0.078
KANE COUNTY											
Elgin	665 Dundee	0	5	0.112	0.106	0.105	0.094	0.092	0.091	0.088	0.087
LAKE COUNTY											
Waukegan	Golf & Jackson	0	5	0.107	0.106	0.106	0.101	0.092	0.091	0.089	0.087
Zion	Camp Logan	0	5	0.117	0.110	0.109	0.108	0.097	0.094	0.090	0.090
McHENRY COUNTY											
Cary	1st St. & Three Oaks	0	4	0.109	0.102	0.097	0.094	0.094	0.093	0.087	0.087
WILL COUNTY											
Braidwood	36400 S. Essex Rd.	0	0	0.093	0.091	0.089	0.087	0.082	0.081	0.080	0.077

Primary 1-Hour Standard 0.12 ppm; 8-Hour Standard 0.08 ppm

Table B2

2005
OZONE

STATION	ADDRESS	NUMBER OF DAYS GREATER THAN 0.12 PPM	NUMBER OF DAYS GREATER THAN 0.08 PPM	HIGHEST SAMPLES (parts per million) 1-HOUR 1ST	1-HOUR 2ND	1-HOUR 3RD	1-HOUR 4TH	8-HOUR 1ST	8-HOUR 2ND	8-HOUR 3RD	8-HOUR 4TH
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)											
ROCK ISLAND COUNTY											
Rock Island	32 Rodman Ave.	0	0	0.095	0.085	0.078	0.072	0.081	0.078	0.071	0.065
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)											
MADISON COUNTY											
Alton	409 Main St.	0	7	0.116	0.110	0.110	0.106	0.102	0.096	0.092	0.091
Maryville	200 W. Division	1	7	0.130	0.114	0.111	0.111	0.104	0.095	0.092	0.088
Wood River	54 N. Walcott	0	6	0.116	0.109	0.108	0.108	0.099	0.093	0.091	0.087
RANDOLPH COUNTY											
Houston	Twp Rds. 150 & 45	0	0	0.090	0.086	0.082	0.080	0.079	0.078	0.076	0.074
ST. CLAIR COUNTY											
East St. Louis	13th & Tudor	2	6	0.132	0.127	0.120	0.104	0.110	0.103	0.101	0.094
73 ROCKFORD - JANESVILLE - BELOIT INTERSTATE (IL - WI)											
WINNEBAGO COUNTY											
Loves Park	1405 Maple	0	0	0.086	0.083	0.082	0.081	0.079	0.079	0.076	0.075
Rockford	1500 Post	0	0	0.089	0.082	0.081	0.080	0.080	0.079	0.076	0.075
74 SOUTHEAST ILLINOIS INTRASTATE											
EFFINGHAM COUNTY											
Effingham	Route 45 South	0	0	0.080	0.080	0.078	0.077	0.076	0.075	0.073	0.073
HAMILTON COUNTY											
Knight Prairie Twp.	Route 14	0	0	0.087	0.086	0.086	0.085	0.081	0.081	0.080	0.077
75 WEST CENTRAL ILLINOIS INTRASTATE											
ADAMS COUNTY											
Quincy	732 Hampshire	0	0	0.090	0.089	0.085	0.084	0.077	0.076	0.076	0.076
JERSEY COUNTY											
Jerseyville	Liberty St.	0	4	0.108	0.108	0.102	0.102	0.089	0.087	0.087	0.086
MACON COUNTY											
Decatur	2200 N. 22nd St.	0	0	0.093	0.093	0.092	0.089	0.081	0.080	0.077	0.076
MACOUPIN COUNTY											
Nilwood	Heaton & DuBois	0	1	0.097	0.095	0.087	0.087	0.086	0.080	0.078	0.077
SANGAMON COUNTY											
Springfield	2875 N. Dirksen	0	0	0.089	0.088	0.087	0.084	0.078	0.077	0.076	0.075

Primary 1-Hour Standard 0.12 ppm; 8-Hour Standard 0.08 ppm

Table B3

2005

PARTICULATE MATTER FINE ($PM_{2.5}$)

(micrograms per cubic meter)

STATION	ADDRESS	NUMBER OF SAMPLES TOTAL	>65 ug/m^3	>40 ug/m^3	HIGHEST SAMPLES 1st	2nd	3rd	4th	ANNUAL ARITHMETIC MEAN
65 BURLINGTON-KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	120	0	2	47.8	43.7	35.8	35.1	14.5
66 EAST CENTRAL ILLINOIS INTRASTATE									
CHAMPAIGN COUNTY									
Bondville	Twp. Rd. 500 E.	61	0	1	46.3	36.0	31.3	30.7	14.5
Champaign	606 E. Grove	58	0	1	45.1	38.7	36.5	30.4	14.0
Mc LEAN COUNTY									
Normal	Main & Gregory	56	0	2	44.8	43.2	30.8	29.5	13.4
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Blue Island	12700 Sacramento	113	0	4	54.5	47.7	43.8	42.6	16.4
Chicago-Com Ed	7801 Lawndale	118	0	4	52.8	49.3	45.1	42.4	16.6
Chicago-Mayfair	4850 Wilson Ave.	319	0	8	62.6	61.5	56.5	52.0	17.0
Chicago-SE Police	103rd & Luella	115	0	4	52.1	46.1	45.0	42.1	16.6
Chicago-Springfield	1745 N. Springfield Ave.	111	0	3	53.7	51.0	46.5	39.5	16.7
Chicago-Washington HS	3535 E. 114th St.	61	0	3	49.2	45.7	42.7	34.2	16.9
Cicero	13th St. & 50th Ave.	111	0	5	49.9	47.0	44.6	43.6	16.3
Des Plaines	9511 W. Harrison	119	0	2	50.7	45.0	38.5	33.2	13.9
Lyons Township	50th St. & Glencoe Ave.	109	0	5	59.2	55.2	51.5	48.3	18.3
Northbrook	750 Dundee Road	121	0	2	50.0	42.8	37.7	35.8	14.5
Schiller Park	4743 Mannheim Rd.	109	0	5	52.5	52.2	50.3	47.0	17.6
Summit	60th St. & 74th Ave.	122	0	4	55.5	50.9	49.1	43.3	17.0
Du PAGE COUNTY									
Naperville	400 S. Eagle St.	61	0	3	54.9	42.0	41.5	33.0	15.6
KANE COUNTY									
Aurora	1240 N. Highland	60	0	3	54.6	43.6	41.0	34.6	15.9
Elgin	258 Lovell St.	59	0	2	49.7	41.2	37.6	33.4	15.7
LAKE COUNTY									
Zion	Camp Logan	60	0	3	54.0	46.6	41.0	31.1	13.8

+ - Did not meet minimum statistical selection criteria (See Appendix B.1)

Primary 24-Hour Standard 65 ug/m^3; Primary Annual Standard 15.0 ug/m^3

Table B3

2005

PARTICULATE MATTER FINE ($PM_{2.5}$)

(micrograms per cubic meter)

STATION	ADDRESS	NUMBER OF SAMPLES TOTAL	>65 ug/m^3	>40 ug/m^3	HIGHEST SAMPLES 1st	2nd	3rd	4th	ANNUAL ARITHMETIC MEAN
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
Mc HENRY COUNTY									
Cary	1st St. & Three Oaks Rd.	115	0	1	46.4	38.6	37.6	35.4	13.9
WILL COUNTY									
Braidwood	36400 S. Essex Rd.	56	0	2	48.6	43.8	32.4	27.3	13.2
Joliet	Midland & Campbell	59	0	2	49.3	45.3	35.6	32.8	15.4
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)									
ROCK ISLAND COUNTY									
Rock Island	32 Rodman Ave.	52	0	1	46.0	39.3	34.9	25.9	13.9
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Alton	1700 Annex St.	49	0	1	45.1	39.4	38.3	35.5	16.0
Granite City	23rd & Madison	116	0	6	45.8	44.7	44.1	42.7	18.2
Granite City	2040 Washington	114	0	4	46.1	42.1	41.2	41.1	18.9
Wood River	54 N. Walcott	116	0	4	44.1	41.7	41.2	40.8	16.0
RANDOLPH COUNTY									
Houston	Twp Rds. 150 & 45	54	0	0	34.3	32.4	32.1	31.3	15.3
ST. CLAIR COUNTY									
East St. Louis	13th & Tudor	57	0	0	40.4	39.6	39.5	38.6	17.2
Swansea	1500 Caseyville Ave.	117	0	1	44.7	37.9	37.9	37.0	16.0
71 NORTH CENTRAL ILLINOIS INTRASTATE									
LA SALLE COUNTY									
Oglesby	308 Portland Ave.	112	0	2	47.2	46.2	32.8	32.4	14.1
73 ROCKFORD - JANESVILLE - BELOIT INTERSTATE (IL - WI)									
WINNEBAGO COUNTY									
Rockford	201 Division St.	58	0	3	49.3	46.5	41.9	36.7	16.0

+ - Did not meet minimum statistical selection criteria (See Appendix B.1)

Primary 24-Hour Standard 65 ug/m^3; Primary Annual Standard 15.0 ug/m^3

Table B3

2005

PARTICULATE MATTER FINE ($PM_{2.5}$)

(micrograms per cubic meter)

STATION	ADDRESS	NUMBER OF SAMPLES TOTAL	>65 ug/m^3	>40 ug/m^3	HIGHEST SAMPLES 1st	2nd	3rd	4th	ANNUAL ARITHMETIC MEAN
74 SOUTHEAST ILLINOIS INTRASTATE									
HAMILTON COUNTY									
Knight Prairie Township	State Route 14	36	0	0	39.1	29.3	28.0	26.9	+
75 WEST CENTRAL ILLINOIS INTRASTATE									
ADAMS COUNTY									
Quincy	732 Hampshire	57	0	1	40.5	40.4	33.7	32.4	14.7
JERSEY COUNTY									
Jerseyville	Liberty St.	56	0	2	43.7	40.9	37.2	33.1	+
MACON COUNTY									
Decatur	2200 N. 22nd	57	0	2	42.3	41.5	31.8	26.5	14.5
SANGAMON COUNTY									
Springfield	State Fair Grounds	59	0	1	44.8	38.5	37.0	36.6	15.1

+ - Did not meet minimum statistical selection criteria (See Appendix B.1)

Primary 24-Hour Standard 65 ug/m^3; Primary Annual Standard 15.0 ug/m^3

Table B4

2005
SHORT-TERM TRENDS
PARTICULATE MATTER ($PM_{2.5}$)

STATION	ADDRESS	ANNUAL ARITHMETIC MEANS (ug/m^3) 2000	2001	2002	2003	2004	2005
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)							
PEORIA COUNTY							
Peoria	613 N.E. Jefferson	14.9	13.9	13.9	13.7	12.8	14.5
66 EAST CENTRAL ILLINOIS INTRASTATE							
CHAMPAIGN COUNTY							
Bondville	Twp. Rd. 500 E.	14.5	+	12.2	+	10.6	14.5
Champaign	606 E. Grove	14.8	12.6	12.2	13.1	10.4	14.0
McLEAN COUNTY							
Normal	Main & Gregory	14.9	14.8	12.9	13.2	11.5	13.4
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Blue Island	12700 Sacramento	16.8	17.1	+	14.9	14.1	16.4
Chicago-Com Ed	7801 Lawndale	16.6	+	15.7	14.9	14.1	16.6
Chicago-Farr	3300 S. Michigan Ave.	+	17.1	15.5	15.1	13.2	-
Chicago-Mayfair	48500 Wilson Ave.	18.3	19.4	16.5	15.8	15.3	17.0
Chicago-SE Police	103rd & Luella	+	+	15.5	15.3	13.8	16.6
Chicago-Springfield	1745 N. Springfield Ave.	17.3	16.2	15.2	15.6	13.7	16.7
Chicago - Washington HS	3535 E. 114th St.	17.9	17.1	15.3	15.6	14.2	16.9
Cicero	13th St. & 50th Ave.	+	17.4	16.0	+	15.2	16.3
Des Plaines	9511 W. Harrison	15.3	14.8	14.4	13.2	12.4	13.9
Lyons Township	50th St. & Glencoe Ave.	20.2	20.8	17.7	16.7	16.7	18.3
Northbrook	750 Dundee Road	14.3	14.7	13.2	12.2	11.2	14.5
Schiller Park	4743 Mannheim Rd.	-	-	-	-	16.0	17.6
Summit	60th St. & 74th Ave.	16.9	16.5	16.1	15.6	14.3	17.0
Du PAGE COUNTY							
Naperville	400 S. Eagle St.	15.3	15.5	14.7	13.1	12.7	15.6
KANE COUNTY							
Elgin 258 Lovell St.	+	15.1	14.3	13.3	11.5	15.7	
Aurora	1240 N. Highland	-	-	-	-	-	15.9
LAKE COUNTY							
Zion	Camp Logan	12.2	+	13.5	11.3	10.3	13.8

- Station not in operation during the year.
+ Did not meet minimum statistical selection criteria (See Appendix B.1).

Primary Annual Standard 15.0 ug/m^3

Table B4

2005
SHORT-TERM TRENDS
PARTICULATE MATTER ($PM_{2.5}$)

STATION	ADDRESS	ANNUAL ARITHMETIC MEANS (ug/m^3) 2000	2001	2002	2003	2004	2005
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
Mc HENRY COUNTY							
Cary	1st St. & Three Oaks Rd.	14.8	13.7	12.3	12.2	11.3	13.9
WILL COUNTY							
Braidwood	36400 S. Essex Rd.	14.2	12.9	13.5	11.9	10.3	13.2
Joliet	Midland & Campbell Sts.	16.0	16.1	14.4	13.8	+	15.4
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)							
ROCK ISLAND COUNTY							
Rock Island	32 Rodman Ave.	13.6	12.8	11.8	12.8	10.4	13.9
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
MADISON COUNTY							
Alton	1700 Annex St.	16.0	15.8	14.7	14.1	11.5	16.0
Granite City	23rd & Madison	17.4	17.3	17.7	17.5	15.4	18.2
Granite City	2040 Washington	20.6	19.7	19.6	18.1	16.2	18.9
Wood River	54 N. Walcott	15.9	15.0	15.1	14.0	13.2	16.0
RANDOLPH COUNTY							
Houston	Twp Rds. 150 & 45	15.2	12.1	11.6	13.4	10.9	15.3
ST. CLAIR COUNTY							
East St. Louis	13th St. & Tudor Ave.	17.4	17.0	16.7	14.8	14.7	17.2
Swansea	1500 Caseyville Ave.	15.0	15.5	15.1	+	13.2	16.0
71 NORTH CENTRAL ILLINOIS INTRASTATE							
LA SALLE COUNTY							
Oglesby	308 Portland Ave.	15.2	14.5	14.8	13.0	11.4	14.1
73 ROCKFORD - JANESVILLE - BELOIT INTERSTATE (IL - WI)							
WINNEBAGO COUNTY							
Rockford	201 Division St.	-	-	-	-	-	16.0

- Station not in operation during the year.
+ Did not meet minimum statistical selection criteria (See Appendix B.1).

Primary Annual Standard 15.0 ug/m^3

Table B4

2005
SHORT-TERM TRENDS
PARTICULATE MATTER ($PM_{2.5}$)

STATION	ADDRESS	ANNUAL ARITHMETIC MEANS (ug/m^3) 2000	2001	2002	2003	2004	2005
75 WEST CENTRAL ILLINOIS INTRASTATE							
ADAMS COUNTY							
Quincy	732 Hampshire	13.1	12.3	13.7	13.4	10.7	14.7
JERSEY COUNTY							
Jerseyville	Libery St.	-	-	-	-	11.5	+
MACON COUNTY							
Decatur	2200 N. 22nd	15.0	14.3	14.1	13.6	11.9	14.5
SANGAMON COUNTY							
Springfield	State Fair Grounds	13.4	13.3	13.6	13.0	11.8	15.1

- Station not in operation during the year.
+ Did not meet minimum statistical selection criteria (See Appendix B.1).

Primary Annual Standard 15.0 ug/m^3

Table B5

2005

PARTICULATE MATTER (PM_{10})

(micrograms per cubic meter)

STATION	ADDRESS	SAMPLING FREQUENCY	NUMBER OF SAMPLES TOTAL	NUMBER OF SAMPLES >150 ug/m^3	HIGHEST SAMPLES 1st	HIGHEST SAMPLES 2nd	HIGHEST SAMPLES 3rd	HIGHEST SAMPLES 4th	ANNUAL ARITHMETIC MEAN
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	6-day	55	0	83	75	68	64	31
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd St.	6-day	60	0	49	49	49	45	23
Blue Island	12700 Sacramento	6-day	59	0	72	66	59	59	30
Chicago - Carver	13100 S. Doty	6-day	59	0	85	74	65	61	36
Chicago - Washington HS	3535 E. 114th St.	1-day	360	0	87	81	74	68	26
Lyons Township	50th St. & Glencoe Ave.	1-day	345	0	89	88	88	86	32
Maywood	1500 Maybrook Dr	1-day	365	0	68	61	58	57	22
Midlothian	15205 Crawford Ave.	6-day	58	0	78	59	58	56	28
Summit	60th St. & 74th Ave.	6-day	57	0	63	61	59	56	+
KANE COUNTY									
Wasco	Wasco Elementary Sch.	6-day	59	0	71	56	48	45	21
WILL COUNTY									
Joliet	Midland & Campbell Sts.	6-day	59	0	70	65	64	59	24
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	6-day	59	0	74	72	71	68	40
Granite City	2040 Washington	1-day	365	0	108	107	105	101	41
Wood River	54 N. Walcott	6-day	60	0	63	61	60	57	30
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	6-day	61	0	76	75	67	66	35
71 NORTH CENTRAL ILLINOIS INTRASTATE									
LASALLE COUNTY									
Oglesby	308 Portland Ave.	1-day	363	0	84	81	79	76	27
74 SOUTHEAST ILLINOIS INTRASTATE									
JACKSON COUNTY									
Carbondale	607 E. College	6-day	57	0	56	42	42	41	24

Primary 24-Hour Standard 150 ug/m^3; Primary Annual Standard 50 ug/m^3

Table B5

2005

PARTICULATE MATTER (PM_{10})

(micrograms per cubic meter)

STATION	ADDRESS	SAMPLING FREQUENCY	NUMBER OF SAMPLES TOTAL	NUMBER OF SAMPLES >150 ug/m^3	HIGHEST SAMPLES 1st	2nd	3rd	4th	ANNUAL ARITHMETIC MEAN
75 WEST CENTRAL ILLINOIS INTRASTATE									
MACOUPIN COUNTY									
Nilwood	Heaton & Dubois	6-day	57	0	53	48	43	37	22

Primary 24-Hour Standard 150 ug/m^3; Primary Annual Standard 50 ug/m^3

Table B6

2005
SHORT-TERM TRENDS
PARTICULATE MATTER (PM_{10})

STATION	ADDRESS	ANNUAL ARITHMETIC MEANS (ug/m^3) 2000	2001	2002	2003	2004	2005
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)							
PEORIA COUNTY							
Peoria	613 N.E. Jefferson	24	22	21	25	22	31
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Alsip	4500 W. 123rd St.	26	27	23	23	24	23
Blue Island	12700 Sacramento	30	28	27	30	26	30
Chicago - Carver	13100 S. Doty	+	35	31	33	30	36
Chicago - Washington HS	3535 E. 114th St.	-	28	24	23	23	26
Lyons Township	50th St. & Glencoe Ave.	35	38	36	32	33	32
Maywood	1500 Maybrook Dr	-	-	-	-	-	22
Midlothian	15205 Crawford Ave.	24	26	23	24	21	28
Summit	60th St. & 74th Ave.	32	+	31	31	30	+
KANE COUNTY							
Wasco	Wasco Elementary Sch.	-	-	-	-	-	22
WILL COUNTY							
Joliet	Midland & Campbell Sts.	+	24	21	27	19	24
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
MADISON COUNTY							
Granite City	15th & Madison	36	39	35	32	34	40
Granite City	2040 Washington	46	47	46	38	38	41
Wood River	54 N. Walcott	29	27	23	24	25	30
ST. CLAIR COUNTY							
East St. Louis	13th St. & Tudor Ave.	32	30	30	34	29	35
71 NORTH CENTRAL ILLINOIS INTRASTATE							
LASALLE COUNTY							
Oglesby	308 Portland Ave.	26	22	26	22	25	27
74 SOUTHEAST ILLINOIS INTRASTATE							
JACKSON COUNTY							
Carbondale	607 E. College	23	19	19	19	20	24

- Station not in operation during the year.
+ Did not meet minimum statistical selection criteria (See Appendix B.1).

Primary Annual Standard 50 ug/m^3

Table B6

2005
SHORT-TERM TRENDS
PARTICULATE MATTER (PM_{10})

STATION	ADDRESS	ANNUAL ARITHMETIC MEANS (ug/m^3) 2000	2001	2002	2003	2004	2005
75 WEST CENTRAL ILLINOIS INTRASTATE							
MACOUPPIN COUNTY							
Nilwood	Heaton & Dubois	23	19	18	21	17	22

\- Station not in operation during the year.

\+ Did not meet minimum statistical selection criteria (See Appendix B.1).

Primary Annual Standard 50 ug/m^3

Table B7

2005
CARBON MONOXIDE
(parts per million)

STATION	ADDRESS	NUMBER OF SAMPLES TOTAL	1-HR >35 PPM	8-HR >9 PPM	HIGHEST SAMPLES (ppm) 1-HOUR AVERAGE 1ST	2ND	3RD	8-HOUR AVERAGE 1ST	2ND	3RD
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)										
PEORIA COUNTY										
Peoria	1005 N. University	8696	0	0	4.8	4.6	4.4	3.8	3.1	2.7
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)										
COOK COUNTY										
Chicago - CTA Building	320 S. Franklin	8679	0	0	2.7	2.4	2.1	1.5	1.5	1.4
Cicero	1830 S. 51st Ave.	8704	0	0	3.8	3.4	3.3	2.5	2.5	2.3
Maywood	1505 S. First Ave	8531	0	0	3.6	3.5	3.3	2.9	2.4	2.3
Schiller Park	4743 N. Mannheim	8651	0	0	3.4	2.7	2.4	2.2	1.9	1.8
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)										
St. CLAIR COUNTY										
East St. Louis	13th & Tudor	8583	0	0	5.7	5.4	4.6	3.8	2.2	2.0
73 ROCKFORD - JANESVILLE - BELOIT INTERSTATE (IL - WI)										
WINNEBAGO COUNTY										
Rockford	425 E. State	8479	0	0	5.1	3.2	3.1	2.4	2.3	2.1
75 WEST CENTRAL ILLINOIS INTRASTATE										
SANGAMON COUNTY										
Springfield	6th & Monroe	8258	0	0	4.5	3.7	3.1	1.6	1.4	1.3

Primary 1-Hour Standard 35 ppm; Primary 8-Hour Standard 9 ppm

Table B9

2005
SULFUR DIOXIDE
(parts per million)

STATION	ADDRESS	NUMBER OF SAMPLES TOTAL	3-HR > 0.5	24-HR > 0.14	HIGHEST SAMPLES 3-HR AVG. 1ST	3-HR AVG. 2ND	24-HR AVG. 1ST	24-HR AVG. 2ND	ANNUAL ARITHMETIC MEAN
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	Hurlburt & MacArthur	8701	0	0	0.079	0.074	0.028	0.025	0.004
TAZEWELL COUNTY									
Pekin	272 Derby	8580	0	0	0.188	0.180	0.067	0.056	0.005
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Chicago - CTA	320 S. Franklin	8632	0	0	0.041	0.036	0.028	0.027	0.003
Chicago – Com Ed	780 Lawndale	8648	0	0	0.062	0.044	0.023	0.021	0.004
Chicago - SE Police	103rd & Luella	8597	0	0	0.056	0.053	0.020	0.019	0.003
Cicero	1830 S. 51st Ave.	8706	0	0	0.090	0.082	0.028	0.024	0.005
Lemont	729 Houston	8693	0	0	0.094	0.079	0.035	0.031	0.005
Northbrook	750 Dundee Rd.	8422	0	0	0.033	0.025	0.013	0.012	0.002
WILL COUNTY									
Joliet	Rte 6 & Young Rd.	8600	0	0	0.075	0.060	0.020	0.016	0.004
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
South Roxana	Michigan Ave.	8669	0	0	0.069	0.068	0.033	0.033	0.005
Wood River	54 N. Walcott	8703	0	0	0.052	0.052	0.017	0.016	0.004
Wood River	1710 Vaughn Rd.	8519	0	0	0.140	0.115	0.058	0.054	0.005
RANDOLPH COUNTY									
Houston	Twp Rd 150 & Twp Rd 45	8694	0	0	0.057	0.033	0.014	0.012	0.002
ST. CLAIR COUNTY									
East St. Louis	13th & Tudor	8670	0	0	0.190	0.153	0.050	0.045	0.005
71 NORTH CENTRAL ILLINOIS INTRASTATE									
LASALLE COUNTY									
Oglesby	508 Portland	8507	0	0	0.160	0.124	0.045	0.044	0.004
74 SOUTHEAST ILLINOIS INTRASTATE									
WABASH COUNTY									
Mount Carmel	Division St	7932	0	0	0.187	0.160	0.039	0.038	0.006
Rural Wabash County	South of SR-1	8351	0	0	0.165	0.112	0.038	0.024	0.004

Primary 24-Hour Standard 0.14 ppm; Primary Annual Standard 0.03 ppm

Table B9

2005
SULFUR DIOXIDE
(parts per million)

STATION	ADDRESS	NUMBER OF SAMPLES TOTAL	3-HR > 0.5	24-HR > 0.14	HIGHEST SAMPLES 3-HR AVG. 1ST	3-HR AVG. 2ND	24-HR AVG. 1ST	24-HR AVG. 2ND	ANNUAL ARITHMETIC MEAN
75 WEST CENTRAL ILLINOIS INTRASTATE									
ADAMS COUNTY									
Quincy	732 Hampshire	8695	0	0	0.033	0.029	0.015	0.014	0.002
MACON COUNTY									
Decatur	2200 N. 22nd St.	8693	0	0	0.040	0.039	0.024	0.021	0.004
MACOUPIN COUNTY									
Nilwood	Heaton & DuBois	8464	0	0	0.033	0.025	0.016	0.016	0.002
SANGAMON COUNTY									
Springfield	Sewage Plant	8681	0	0	0.078	0.071	0.024	0.022	0.003

Primary 24-Hour Standard 0.14 ppm; Primary Annual Standard 0.03 ppm

Table B10

2005
SHORT-TERM TRENDS
SULFUR DIOXIDE

STATION	ADDRESS	ANNUAL MEANS (ppm) 2000	2001	2002	2003	2004	2005
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)							
PEORIA COUNTY							
Peoria	Hurlburt & MacArthur	0.006	0.005	0.005	0.004	0.004	0.004
TAZEWELL COUNTY							
Pekin	272 Derby	0.005	0.006	0.005	0.005	0.005	0.005
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Chicago -CTA	320 S. Franklin	0.005	0.005	0.004	0.003	0.003	0.003
Chicago – Com Ed	780 Lawndale	-	-	-	-	0.006	0.004
Chicago - SE Police	103rd & Luella	0.004	0.003	0.002	0.003	0.003	0.003
Cicero	1830 S. 51st Ave.	0.005	0.005	0.004	0.005	0.005	0.005
Lemont	729 Houston	0.006	0.005	0.005	0.004	0.006	0.005
Northbrook	750 Dundee Rd.	-	-	-	-	0.002	0.002
WILL COUNTY							
Joliet	Rte 6 & Young Rd.	0.005	0.005	0.004	0.004	0.003	0.004
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
MADISON COUNTY							
South Roxanna	Michigan Ave.	0.004	0.007	0.005	0.004	0.005	0.005
Wood River	54 N. Walcott	0.006	0.006	0.004	0.004	0.004	0.004
Wood River	1710 Vaughn Rd.	0.008	0.004	0.005	0.006	0.005	0.005
RANDOLPH COUNTY							
Houston	Twp Rd 150 & Twp Rd 45	0.002	0.002	0.002	0.002	0.002	0.002
ST. CLAIR COUNTY							
East St. Louis	13th & Tudor	0.007	0.007	0.005	0.005	0.003	0.005
71 NORTH CENTRAL ILLINOIS INTRASTATE							
LASALLA COUNTY							
Oglesby	508 Portland	-	-	-	+	0.004	0.004
74 SOUTHEAST ILLINOIS INTRASTATE							
WABASH COUNTY							
Mount Carmel	Division St.	0.005	0.005	0.004	0.004	0.004	0.006
Rural Wabash County	South of SR-1	0.006	0.005	0.003	0.003	0.003	0.004

Primary Annual Standard 0.03 ppm

Table B10

2005
SHORT-TERM TRENDS
SULFUR DIOXIDE

STATION	ADDRESS	ANNUAL MEANS (ppm) 2000	2001	2002	2003	2004	2005
75 WEST CENTRAL ILLINOIS INTRASTATE							
ADAMS COUNTY							
Quincy	732 Hampshire	0.003	0.003	0.003	0.002	0.002	0.002
MACON COUNTY							
Decatur	2200 N. 22nd St.	0.005	0.005	0.004	0.003	0.004	0.004
MACOUPIN COUNTY							
Nilwood	Heaton & DuBois	0.002	0.002	0.002	0.002	0.002	0.002
SANGAMON COUNTY							
Springfield	Sewage Plant	0.005	0.003	0.003	0.003	0.003	0.003

\- Station not in operation during year shown

\+ Did not meet minimum statistical selection criteria (See Section B.1)

Primary Annual Standard 0.03 ppm

Table B11

2005
NITROGEN DIOXIDE
(parts per million)

STATION	ADDRESS	NUMBER OF SAMPLES	HIGHEST SAMPLES 1-HOUR 1ST	1-HOUR 2ND	24-HOUR 1ST	24-HOUR 2ND	ANNUAL ARITHMETIC MEAN
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Chicago - CTA	320 S. Franklin	8386	0.095	0.089	0.062	0.053	0.030
Chicago - Com Ed	7801 Lawndale	8608	0.089	0.080	0.053	0.049	0.020
Chicago - Jardine [1]	1000 E. Ohio	4007	0.074	0.074	0.039	0.037	+
Cicero	1830 S. 51st Ave.	8602	0.088	0.086	0.051	0.048	0.024
Northbrook	750 Dundee Rd.	8381	0.070	0.067	0.044	0.040	0.017
Schiller Park	4743 N. Mannheim	8530	0.106	0.097	0.057	0.055	0.028
WILL COUNTY							
Braidwood [1]	36400 S. Essex Rd.	4325	0.042	0.031	0.017	0.015	+
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
ST. CLAIR COUNTY							
East St. Louis	13th & Tudor	8364	0.061	0.053	0.033	0.030	0.015

[1] PAMS monitor operated only during "ozone season"

\+ Did not meet minimum statistical selection criteria (See Appendix B.1)

Primary Annual Standard 0.053 ppm

Table B12

2005
SHORT-TERM TRENDS
NITROGEN DIOXIDE

STATION	ADDRESS	ANNUAL MEANS (ppm) 2000	2001	2002	2003	2004	2005
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Chicago - CTA	320 S. Franklin	0.032	0.032	0.032	0.031	0.029	0.030
Chicago - Com Ed	7801 Lawndale	-	-	0.022	0.022	0.020	0.020
Cicero	1820 S. 51st St.	0.027	0.028	0.023	0.027	0.024	0.024
Northbrook	750 Dundee Rd.	0.018	0.018	0.017	0.018	0.016	0.017
Schiller Park	4743 N. Mannheim	0.029	0.028	0.030	0.030	0.029	0.028
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
ST. CLAIR COUNTY							
East St. Louis	13th & Tudor	0.018	0.019	0.017	0.016	0.016	0.015

- Station not in operation during year shown

+ Did not meet minimum statistical selection criteria (See Section B.1)

Primary Annual Standard 0.053 ppm

Table B13

2005
LEAD
(micrograms per cubic meter)

STATION	ADDRESS	NUMBER OF QUARTERS >1.5	QUARTERLY AVERAGES 1st	2nd	3rd	4th	ANNUAL MEAN
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)							
PEORIA COUNTY							
Peoria	613 N.E. Jefferson	0	0.01	0.03	0.03	0.01	0.02
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Alsip	4500 W. 123rd St.	0	0.01	0.02	0.01	0.01	0.01
Chicago - Cermak	735 W. Harrison	0	0.04	0.03	0.04	0.03	0.03
Chicago - Mayfair	4850 Wilson Ave.	0	0.02	0.02	0.03	0.02	0.02
Chicago - Washington	3535 E. 114th St.	0	0.03	0.04	0.02	0.03	0.03
Maywood	1500 Maybrook Dr.	0	0.02	0.04	0.03	0.02	0.03
Northbrook	750 Dundee Rd.	0	0.01	0.01	0.01	0.01	0.01
Schiller Park	4243 N. Mannheim Rd.	0	0.03	0.02	0.02	0.01	0.02
Summit	60th St. & 74th Ave.	0	0.01	0.03	0.02	0.01	0.02
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
MADISON COUNTY							
Granite City	15th & Madison	0	0.10	0.04	0.04	0.09	0.06
Wood River	54 N. Walcott	0	0.02	0.02	0.02	0.01	0.02
ST. CLAIR COUNTY							
East St. Louis	13th St. & Tudor Ave.	0	0.05	0.07	0.06	0.07	0.06
75 WEST CENTRAL ILLINOIS INTRASTATE							
MACOUPIN COUNTY							
Nilwood	Heaton & DuBois	0	0.01	0.01	0.01	0.01	0.01

+ Did not meet minimum statistical selection criteria (See Section B.1)

Primary Quarterly Standard 1.5 ug/m3

Table B14

2005
FILTER ANALYSIS DATA
(micrograms per cubic meter)

STATION	ADDRESS	TOTAL SAMPLES	HIGHEST 1st	HIGHEST 2nd	ARITH. MEAN	TOTAL SAMPLES	HIGHEST 1st	HIGHEST 2nd	ARITH. MEAN
			ARSENIC				**BERYLLIUM**		
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	57	0.004	0.003	0.001	57	0.000	0.000	0.000
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	500 W. 123rd. St.	60	0.046	0.012	0.003	NA			
Chicago - Cermak	735 W. Harrison	59	0.009	0.007	0.002	NA			
Chicago - Mayfair	4850 Wilson Ave	60	0.009	0.008	0.003	NA			
Chicago - Washington	3535 E. 114th St.	58	0.011	0.011	0.003	NA			
Maywood	1500 Maybrook Dr.	57	0.009	0.008	0.003	NA			
Northbrook	750 Dundee Rd.	60	0.002	0.002	0.001	60	0.000	0.000	0.000
Schiller Park	4743 N. Mannheim Rd.	60	0.004	0.004	0.001	60	0.000	0.000	0.000
Summit	60th St. & 74th Ave.	59	0.014	0.011	0.003	NA			
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	60	0.087	0.065	0.005	60	0.000	0.000	0.000
Wood River	54 N. Walcott	59	0.029	0.010	0.002	59	0.000	0.000	0.000
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	58	0.392	0.083	0.011	58	0.000	0.000	0.000
75 WEST CENTRAL ILLINOIS INTRASTATE									
MACOUPIN COUNTY									
Nilwood	Heaton & DuBois	60	0.008	0.005	0.002	60	0.000	0.000	0.000

Table B14

2005
FILTER ANALYSIS DATA
(micrograms per cubic meter)

STATION	ADDRESS	CADMIUM TOTAL SAMPLES	CADMIUM HIGHEST 1st	CADMIUM HIGHEST 2nd	CADMIUM ARITH. MEAN	CHROMIUM TOTAL SAMPLES	CHROMIUM HIGHEST 1st	CHROMIUM HIGHEST 2nd	CHROMIUM ARITH. MEAN
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	57	0.000	0.000	0.000	57	0.010	0.006	0.001
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd. St.	60	0.004	0.004	0.002	60	0.013	0.011	0.004
Chicago - Cermak	735 W. Harrison	59	0.004	0.004	0.002	59	0.021	0.018	0.008
Chicago - Mayfair	4850 Wilson Ave	58	0.004	0.003	0.002	58	0.019	0.014	0.005
Chicago - Washington	3535 E. 114th St.	58	0.004	0.004	0.002	58	0.025	0.022	0.006
Maywood	1500 Maybrook Dr.	57	0.005	0.004	0.002	57	0.045	0.040	0.015
Northbrook	750 Dundee Rd	61	0.001	0.000	0.000	61	0.006	0.004	0.003
Schiller Park	4743 N. Mannheim Rd.	61	0.000	0.000	0.000	61	0.007	0.007	0.002
Summit	60th St. & 74th Ave.	60	0.002	0.000	0.000	57	0.015	0.013	0.006
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	60	0.005	0.005	0.001	58	0.025	0.023	0.006
Wood River	54 N. Walcott	59	0.002	0.000	0.000	59	0.004	0.003	0.000
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	57	0.042	0.026	0.005	63	0.006	0.005	0.001
75 WEST CENTRAL ILLINOIS INTRASTATE									
MACOUPIN COUNTY									
Nilwood	Heaton & DuBois	60	0.000	0.000	0.000	60	0.004	0.004	0.000

Table B14

2005
FILTER ANALYSIS DATA
(micrograms per cubic meter)

STATION	ADDRESS	IRON TOTAL SAMPLES	IRON HIGHEST 1st	IRON HIGHEST 2nd	IRON ARITH. MEAN	MANGANESE TOTAL SAMPLES	MANGANESE HIGHEST 1st	MANGANESE HIGHEST 2nd	MANGANESE ARITH. MEAN
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	57	2.44	1.88	0.60	57	0.104	0.084	0.024
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd. St.	60	2.28	1.74	0.59	60	0.127	0.094	0.027
Chicago - Cermak	735 W. Harrison	59	3.27	2.69	1.43	59	0.161	0.129	0.052
Chicago - Mayfair	4850 Wilson Ave	58	3.67	2.44	1.19	58	0.135	0.111	0.046
Chicago - Washington	3535 E. 114th St.	58	12.05	6.95	1.64	58	0.501	0.442	0.147
Maywood	1500 Maybrook Dr.	57	15.53	14.56	3.75	57	0.245	0.185	0.080
Northbrook	750 Dundee Rd.	NA				61	0.055	0.041	0.014
Schiller Park	4743 N. Mannheim Rd.	60	3.63	3.56	1.70	60	0.115	0.112	0.041
Summit	60th St. & 74th Ave.	59	2.89	2.16	0.76	59	0.239	0.206	0.034
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	60	6.38	5.67	1.87	60	0.533	0.412	0.114
Wood River	54 N. Walcott	59	1.55	1.46	0.50	59	0.071	0.059	0.022
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	58	2.83	2.49	1.15	58	0.111	0.102	0.042
75 WEST CENTRAL ILLINOIS INTRASTATE									
MACOUPIN COUNTY									
Nilwood	Heaton & DuBois	60	0.81	0.60	0.23	60	0.042	0.029	0.009

Table B14

2005
FILTER ANALYSIS DATA
(micrograms per cubic meter)

STATION	ADDRESS	TOTAL SAMPLES	HIGHEST 1st	HIGHEST 2nd	ARITH. MEAN	TOTAL SAMPLES	HIGHEST 1st	HIGHEST 2nd	ARITH. MEAN
				NICKEL					
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	57	0.004	0.003	0.000				
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd. St.	60	0.017	0.013	0.006				
Chicago - Cermak	735 W. Harrison	59	0.022	0.016	0.009				
Chicago - Mayfair	4850 Wilson Ave	58	0.015	0.013	0.008				
Chicago - Washington	3535 E. 114th St.	58	0.020	0.019	0.008				
Maywood	1500 Maybrook Dr.	57	0.023	0.019	0.011				
Northbrook	750 Dundee Rd.	61	0.012	0.005	0.002				
Schiller Park	4743 N. Mannheim Rd.	60	0.011	0.010	0.003				
Summit	60th St. & 74th Ave.	57	0.036	0.017	0.008				
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	60	0.012	0.011	0.002				
Wood River	54 N. Walcott	60	0.027	0.017	0.002				
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	57	0.010	0.004	0.001				
75 WEST CENTRAL ILLINOIS INTRASTATE									
MACOUPIN COUNTY									
Nilwood	Heaton & DuBois	60	0.000	0.000	0.000				

Table B14

2005
FILTER ANALYSIS DATA
(micrograms per cubic meter)

STATION	ADDRESS	NITRATES TOTAL SAMPLES	NITRATES HIGHEST 1st	NITRATES HIGHEST 2nd	NITRATES ARITH. MEAN	SULFATES TOTAL SAMPLES	SULFATES HIGHEST 1st	SULFATES HIGHEST 2nd	SULFATES ARITH. MEAN
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	57	16.1	11.9	5.1	57	34.1	33.2	8.9
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd. St.	60	18.6	16.9	5.5	60	25.9	21.7	8.3
Chicago - Cermak	735 W. Harrison	59	29.2	20.6	6.1	59	28.7	27.1	9.2
Chicago - Mayfair	4850 Wilson Ave	58	29.2	20.6	7.0	58	32.9	24.2	9.4
Chicago - Washington	3535 E. 114th St.	58	22.4	22.3	6.8	58	35.5	35.0	10.3
Maywood	1500 Maybrook Dr.	57	30.2	11.4	5.4	57	31.1	22.4	10.2
Northbrook	750 Dundee Rd.	61	25.5	18.5	6.4	61	32.1	29.4	9.7
Schiller Park	4743 N. Mannheim Rd.	60	26.1	23.7	8.0	60	33.0	30.6	11.2
Summit	60th St. & 74th Ave.	59	19.2	18.0	6.4	59	32.7	31.4	9.8
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	60	21.5	12.7	5.9	60	26.6	25.9	10.8
Wood River	54 N. Walcott	59	16.1	11.7	4.9	59	26.5	26.2	9.7
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	58	22.4	17.3	6.0	58	33.5	32.2	12.3
75 WEST CENTRAL ILLINOIS INTRASTATE									
MACOUPIN COUNTY									
Nilwood	Heaton & DuBois	60	16.6	13.6	5.1	60	24.8	24.0	8.5

Table B15

2005
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS
(parts per billion carbon)

STATION	ADDRESS	HIGHEST SAMPLES (ppbc) 24-HOUR 1ST	2ND	3RD	4TH	JUN - AUG AVERAGE
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)						
COOK COUNTY						
Chicago	1000 E. Ohio					
COMPOUNDS						
Ethane		4.4	4.2	3.4	3.4	2.3
Ethylene		5.0	3.7	3.2	3.1	1.1
Propane		7.0	6.3	4.9	4.8	2.6
Propylene		3.6	3.6	2.5	1.8	0.9
Acetylene		3.8	2.2	1.7	1.7	0.6
N - Butane		5.4	5.3	4.8	4.7	1.8
Isobutane		2.7	2.2	2.0	1.9	0.8
Trans - 2 - Butene		1.0	0.9	0.9	0.9	0.6
Cis - 2 - Butene		0.3	0.3	0.2	0.2	0.1
N - Pentane		4.4	3.9	3.7	3.3	1.4
Isopentane		9.3	9.0	8.3	6.4	2.9
1 - Pentene		0.2	0.2	0.1	0.1	0.0
Trans - 2 - Pentene		0.3	0.2	0.2	0.1	0.0
Cis - 2 - Pentene		0.1	0.1	0.0	0.0	0.0
3 - Methylpentane		1.9	1.3	1.1	1.1	0.4
N - Hexane		2.3	2.0	1.8	1.7	0.6
N - Heptane		1.2	0.9	0.9	0.8	0.2
N - Octane		0.4	0.3	0.3	0.2	0.0
N - Nonane		0.5	0.4	0.3	0.3	0.1
N - Decane		0.6	0.5	0.4	0.4	0.2
Cyclopentane		0.5	0.3	0.3	0.3	0.1
Isoprene		0.4	0.4	0.4	0.3	0.1
2,2 - Dimethylbutane		0.4	0.2	0.2	0.2	0.0
2,4 - Dimethylpentane		1.9	1.0	0.9	0.9	0.1
Cyclohexane		0.4	0.3	0.3	0.2	0.0
3 - Methylhexane		1.6	1.1	1.0	0.9	0.2
2,2,4 - Trimethylpentane		9.4	5.6	4.9	4.2	1.4
2,3,4 - Trimethylpentane		3.1	1.8	1.6	1.2	0.4
3 - Methylheptane		0.6	0.4	0.3	0.2	0.0
Methylcyclohexane		0.6	0.5	0.4	0.4	0.1
Methylcyclopentane		1.5	1.1	1.0	0.8	0.2
2 - Methylhexane		1.3	0.9	0.8	0.7	0.2
1 - Butene		0.7	0.6	0.6	0.5	0.1
2,3 - Dimethylbutane		1.5	1.0	1.0	0.8	0.3
2 - Methylpentane		3.4	2.4	2.3	1.9	0.8
2,3 - Dimethylpentane		2.8	1.6	1.4	1.4	0.3
N - Undecane		0.8	0.8	0.8	0.6	0.2

Table B15

2005
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS
(parts per billion carbon)

STATION	ADDRESS	HIGHEST SAMPLES (ppbc) 24-HOUR 1ST	2ND	3RD	4TH	JUN - AUG AVERAGE
COMPOUNDS						
2 - Methylheptane		0.3	0.2	0.2	0.2	0.0
M/P Xylene		6.9	3.9	3.8	3.5	1.0
Benzene		4.8	4.2	3.4	2.5	0.9
Toluene		9.7	8.2	7.1	6.2	2.3
Ethylbenzene		2.0	1.2	1.1	1.0	0.2
O - Xylene		2.0	1.3	1.1	1.0	0.3
1,3,5 - Trimethylbenzene		0.5	0.3	0.3	0.2	0.0
1,2,4 - Trimethylbenzene		1.6	0.8	0.8	0.8	0.2
N - Propylbenzene		0.2	0.1	0.1	0.1	0.0
Isopropylbenzene		0.3	0.2	0.2	0.2	0.0
O-Ethyltolune		0.2	0.1	0.1	0.1	0.0
M-Ethyltolune		1.1	0.6	0.5	0.5	0.1
P-Ethyltolune		0.4	0.1	0.1	0.1	0.0
M-Diethylbenzene		0.2	0.0	0.0	0.0	0.0
P-Diethylbenzene		0.3	0.2	0.1	0.1	0.0
Styrene		0.1	0.1	0.1	0.0	0.0
1,2,3 - Trimethylbenzene		0.5	0.4	0.3	0.3	0.1
Northbrook	750 Dundee Rd.					
COMPOUNDS						
Ethane		8.7	8.3	7.9	7.7	4.7
Ethylene		1.6	1.6	1.5	1.5	0.6
Propane		7.4	5.6	5.3	5.2	3.1
Propylene		1.8	1.6	1.5	1.4	0.8
Acetylene		0.9	0.5	0.4	0.4	0.1
N - Butane		5.4	5.1	4.7	4.4	2.1
Isobutane		2.0	1.9	1.8	1.8	0.8
Trans - 2 - Butene		0.1	0.1	0.0	0.0	0.0
Cis - 2 - Butene		0.1	0.0	0.0	0.0	0.0
N - Pentane		5.1	3.8	3.7	3.5	1.7
Isopentane		9.3	8.1	7.5	7.5	3.0
1 - Pentene		0.2	0.2	0.2	0.2	0.0
Trans - 2 - Pentene		0.5	0.4	0.3	0.3	0.1
Cis - 2 - Pentene		0.2	0.2	0.2	0.2	0.0
3 - Methylpentane		3.2	1.8	1.7	1.7	0.8
N - Hexane		2.0	1.8	1.8	1.7	0.7
N - Heptane		1.0	0.9	0.8	0.8	0.3
N - Octane		0.4	0.4	0.4	0.4	0.1
N - Nonane		0.9	0.6	0.5	0.4	0.2
N - Decane		1.5	0.6	0.6	0.5	0.2

Table B15

2005
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS
(parts per billion carbon)

STATION	ADDRESS	HIGHEST SAMPLES (ppbc) 24-HOUR 1ST	2ND	3RD	4TH	JUN - AUG AVERAGE
COMPOUNDS						
Cyclopentane		1.2	0.3	0.3	0.3	0.1
Isoprene		8.7	7.1	6.5	6.4	2.6
2,2 - Dimethylbutane		0.3	0.2	0.2	0.2	0.0
2,4 - Dimethylpentane		1.0	0.9	0.9	0.8	0.3
Cyclohexane		0.4	0.4	0.3	0.3	0.1
3 - Methylhexane		1.2	1.0	1.0	0.9	0.4
2,2,4 - Trimethylpentane		4.6	4.0	3.7	3.6	1.6
2,3,4 - Trimethylpentane		1.5	1.2	1.2	1.1	0.5
3 - Methylheptane		0.4	0.3	0.3	0.2	0.1
Methylcyclohexane		1.0	0.5	0.5	0.5	0.2
Methylcyclopentane		1.2	1.1	1.1	1.0	0.4
2 - Methylhexane		0.9	0.8	0.7	0.6	0.3
1 - Butene		0.3	0.3	0.2	0.2	0.1
2,3 - Dimethylbutane		1.1	1.0	1.0	1.0	0.3
2 - Methylpentane		2.3	2.0	1.9	1.8	0.7
2,3 - Dimethylpentane		1.4	1.4	1.3	1.2	0.5
N - Undecane		1.1	1.1	1.1	1.0	0.3
2 - Methylheptane		0.2	0.2	0.2	0.2	0.1
M/P Xylene		13.6	3.3	2.7	2.3	1.2
Benzene		1.9	1.9	1.9	1.8	0.8
Toluene		6.2	6.0	5.8	5.4	2.6
Ethylbenzene		4.7	0.9	0.9	0.8	0.4
O - Xylene		3.7	1.2	1.0	0.8	0.4
1,3,5 - Trimethylbenzene		0.9	0.7	0.4	0.3	0.1
1,2,4 - Trimethylbenzene		2.9	2.3	1.5	0.9	0.4
N - Propylbenzene		0.5	0.3	0.2	0.2	0.1
Isopropylbenzene		0.2	0.1	0.1	0.1	0.0
O-Ethyltolune		0.6	0.4	0.3	0.2	0.1
M-Ethyltolune		1.3	1.1	0.8	0.8	0.3
P-Ethyltolune		2.5	1.0	0.6	0.3	0.1
M-Diethylbenzene		0.6	0.3	0.2	0.2	0.1
P-Diethylbenzene		0.3	0.2	0.2	0.1	0.1
Styrene		0.3	0.2	0.2	0.2	0.1
1,2,3 Trimethylbenzene		3.9	1.2	1.1	1.0	0.4
Formaldehyde [1]		1.1	1.1	1.0	1.0	0.6

[1] Values in ppb (volume)

Table B16

2005

TOXIC COMPOUNDS[1]
(parts per billion volume)

STATION	ADDRESS	HIGHEST SAMPLES (ppbv) 24-HOUR 1ST	2ND	3RD	4TH	AVERAGE
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)						
COOK COUNTY						
Northbrook	750 Dundee Rd.					
COMPOUNDS						
1,3 Butadiene		0.15	0.09	0.09	0.08	0.02
Methylene Chloride		0.51	0.32	0.32	0.28	0.13
Chlorform		0.22	0.21	0.21	0.21	0.08
Carbon Tetrachloride		0.17	0.15	0.14	0.14	0.11
Tetrachloroethylene		0.14	0.13	0.10	0.10	0.04
Trichlorethylene		0.17	0.15	0.14	0.14	0.03
1,2 Dichloropropane		0.00	0.00	0.00	0.00	0.00
Vinyl Chloride		0.01	0.01	0.00	0.00	0.00
Benzene		0.98	0.97	0.67	0.62	0.31
Toluene		2.09	1.41	1.26	0.97	0.50
Formaldehyde		18.30	6.90	4.40	3.70	2.19
Acetaldehyde		7.40	1.40	1.20	1.10	0.75
Mercury[2]		2.53	2.39	2.27	2.22	1.44
Chromium VI[2]		0.09	0.06	0.05	0.05	0.00
Schiller Park	4743 Mannheim Rd.					
COMPOUNDS						
1,3 Butadiene		0.58	0.29	0.16	0.14	0.06
Methylene Chloride		1.50	0.52	0.45	0.42	0.16
Chlorform		0.25	0.07	0.07	0.06	0.02
Carbon Tetrachloride		0.19	0.16	0.16	0.14	0.11
Tetrachloroethylene		0.39	0.25	0.21	0.18	0.05
Trichlorethylene		1.28	1.12	0.66	0.44	0.14
1,2 Dichloropropane		0.00	0.00	0.00	0.00	0.00
Vinyl Chloride		0.05	0.03	0.01	0.00	0.00
Benzene		1.67	1.57	0.97	0.81	0.42
Toluene		3.95	2.39	1.84	1.41	0.69
Formaldehyde		9.20	8.20	7.80	6.40	2.71
Acetaldehyde		1.80	1.60	1.60	1.50	0.79

[1] - Toxic metals data (As,Be,Cd,Cr,Mn,Ni) summarized in Section B14 Filter analysis Data

[2] - Units of nanograms per cubic meter

Table B17

2005

$PM_{2.5}$ SPECIATION
(micrograms per cubic meter)

STATION	ADDRESS	HIGHEST SAMPLES (ug/m3) 24-HOUR 1ST	2ND	3RD	4TH	ANNUAL AVERAGE
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)						
COOK COUNTY						
Chicago - Com Ed	7801 Lawndale					
MAJOR CONSTITUENTS						
Inorganic Elements		3/0	1.9	1.4	1.0	0.5
Ammonium		7.7	6.9	6.3	5.4	2.0
Nitrate		13.2	12.2	9.0	7.9	2.3
Sulfate		20.8	18.7	12.8	12.0	3.9
Elemental Carbon		2.8	1.9	1.7	1.6	0.7
Organic Carbon		8.3	6.8	6.4	6.0	3.2
Chicago - Springfield	1745 N. Springfield Ave.					
MAJOR CONSTITUENTS						
Inorganic Elements		2.2	2.0	1.8	1.8	0.7
Ammonium		8.1	7.6	4.9	4.8	2.1
Nitrate		17.0	13.6	9.5	8.7	3.7
Sulfate		24.7	14.6	13.8	9.1	4.0
Elemental Carbon		3.1	2.2	2.0	2.0	0.8
Organic Carbon		8.9	7.9	7.7	7.2	4.4
Northbrook	750 Dundee Rd.					
MAJOR CONSTITUENTS						
Inorganic Elements		1.6	1.0	0.9	0.8	0.4
Ammonium		8.6	8.3	6.3	6.2	2.4
Nitrate		16.0	11.4	10.2	8.6	3.1
Sulfate		24.7	23.2	16.3	13.9	4.7
Elemental Carbon		4.1	2.1	1.7	1.7	0.7
Organic Carbon		19.0	8.0	7.3	6.5	3.8
DuPAGE COUNTY						
Naperville	400 S. Eagle St.					
MAJOR CONSTITUENTS						
Inorganic Elements		1.1	0.9	0.8	0.8	0.4
Ammonium		8.4	8.1	7.3	6.4	2.3
Nitrate		14.8	14.1	8.9	8.6	3.1
Sulfate		25.5	21.1	12.5	12.3	4.3
Elemental Carbon		1.4	1.3	1.1	1.1	0.6
Organic Carbon		7.6	7.5	7.4	6.8	3.9

Table B17

2005

$PM_{2.5}$ SPECIATION
(micrograms per cubic meter)

STATION	ADDRESS	HIGHEST SAMPLES (ug/m3) 24-HOUR 1ST	2ND	3RD	4TH	ANNUAL AVERAGE
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)						
MADISON COUNTY						
Alton	1700 Annex St.					
MAJOR CONSTITUENTS						
Inorganic Elements		1.3	1.2	1.1	1.1	0.5
Ammonium		8.5	6.3	6.0	5.8	2.4
Nitrate		13.2	12.1	8.2	6.9	2.6
Sulfate		21.8	18.4	18.2	14.7	5.3
Elemental Carbon		2.5	1.3	1.2	1.1	0.6
Organic Carbon		8.2	7.8	7.6	7.0	4.2
75 WEST CENTRAL ILLINOIS INTRASTATE						
MACON COUNTY						
Decatur	2200 N. 22nd St.					
MAJOR CONSTITUENTS						
Inorganic Elements		1.6	1.3	1.1	0.9	0.5
Ammonium		7.8	6.4	6.3	5.8	2.5
Nitrate		16.7	9.0	8.1	7.8	2.8
Sulfate		22.9	19.5	15.5	14.6	5.1
Elemental Carbon		1.1	1.0	0.9	0.9	0.5
Organic Carbon		7.5	7.3	7.1	7.1	3.7

APPENDIX C
POINT SOURCE EMISSION INVENTORY SUMMARY TABLES

Table C1

Carbon Monoxide Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
External Fuel Combustion					
Electric Generation	13,208.0	12,939.3	14,120.6	13,247.4	14,630.6
Industrial	9,714.8	10,833.3	11,330.7	10,276.5	8,968.0
Commercial/Institutional	2,504.1	2,713.8	2,667.7	2,822.1	2,448.2
Space Heating	88.9	64.7	54.5	48.4	32.9
Internal Fuel Combustion					
Electric Generation	3,811.0	2,302.7	5,622.9	5,356.3	2,698.5
Industrial	6,564.4	4,653.2	5,642.9	4,818.2	4,805.1
Commercial/Institutional	735.3	629.4	451.5	652.2	588.1
Engine Testing	366.8	886.4	811.7	589.5	278.3
Fugitive Emissions	0.0	0.5	0.5	0.0	0.0
Industrial Processes					
Chemical Manufacturing	13,780.8	12,618.8	4,172.7	3,514.1	2,061.3
Food/Agriculture	1,000.3	1,063.5	1,093.9	1,329.0	8,454.2
Primary Metal Production	24,201.9	23,021.0	13,969.3	10,028.6	14,508.4
Secondary Metal Production	2,866.4	3,198.0	3,154.6	1,729.8	2,588.5
Mineral Products	4,087.2	9,158.7	9,835.7	9,178.8	8,453.9
Petroleum Industry	5,992.5	5,363.6	5,319.6	7,812.1	7,011.2
Paper and Wood Products	10.9	26.6	26.6	33.4	10.2
Rubber and Plastic Products	35.9	127.2	18.7	21.0	24.5
Fabricated Metal Products	1,266.7	1,307.3	1,380.6	1,527.4	1,512.6
Oil and Gas Production	98.4	92.2	332.3	413.1	268.8
Building Construction	0.0	0.0	0.0	0.0	0.0
Miscelaneous Machinery	3.9	3.7	3.7	0.1	0.0
Electrical Equipment	2.2	2.7	2.3	2.3	2.3
Transportation Equipment	1.2	1.2	5.8	5.8	5.8
Health Services	18.8	28.4	102.9	169.8	176.9
Leather and Leather Products	0.0	0.0	0.0	0.0	0.0
Textile Products	0.1	0.1	0.0	0.0	0.0
In-Process Fuel Use	964.4	1,258.4	1,267.9	1,102.1	1,004.2
Miscellaneous Manufacturing	197.0	361.0	134.3	88.1	91.6
Organic Solvent Emissions					
Organic Solvent Use	0.1	0.0	0.0	0.0	0.0
Surface Coating Operations	197.5	179.2	200.8	230.6	221.0
Petroleum Product Storage	76.4	3.1	3.3	3.3	0.0
Bulk Terminals/Plants	17.7	11.8	10.7	27.8	45.1
Printing/Publishing	71.4	63.5	48.2	26.2	43.0
Petroleum Marketing/Transport	0.0	0.0	0.0	0.0	0.0
Organic Chemical Storage (large)	0.0	0.0	0.0	0.0	0.4
Organic Chemical Transportation	0.7	0.1	0.1	0.0	0.0
Organic Solvent Evaporation	301.7	215.1	101.8	119.3	131.9
Solid Waste Disposal					
Government	1,585.4	2,036.7	3,623.3	3,383.0	1,757.7
Commercial/Institutional	421.3	309.7	284.7	259.4	157.5
Industrial	2,595.6	2,465.0	2,549.3	1,641.5	660.4
Site Remediation	1.0	10.4	20.2	19.3	26.2

Table C1

Historical Carbon Monoxide Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
MACT Processes					
Food and Agriculture Processes	0.0	0.0	0.0	0.0	2.0
Vinyl Based Resins	0.0	0.0	0.0	0.6	0.6
Totals	**96,970.4**	**99,173.4**	**88,366.6**	**80,478.6**	**83,671.4**

Table C2

Nitrogen Oxides Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
External Fuel Combustion					
Electric Generation	221,518.3	183,590.6	170,471.8	144,454.8	143,485.1
Industrial	41,230.8	35,474.1	34,001.0	27,510.7	21,717.3
Commercial/Institutional	5,197.8	6,074.8	5,645.5	3,873.6	3,462.6
Space Heating	426.0	319.2	276.5	248.5	165.4
Internal Fuel Combustion					
Electric Generation	5,996.0	3,932.9	7,294.4	6,997.0	4,886.0
Industrial	32,154.3	21,551.8	21,536.9	18,329.5	22,009.7
Commercial/Institutional	2,453.7	2,519.0	692.1	1,047.8	867.7
Engine Testing	519.8	1,152.9	1,098.3	1,400.9	448.5
Fugitive Emissions	0.0	2.4	2.4	0.0	0.0
Industrial Processes					
Chemical Manufacturing	2,953.0	1,362.1	1,575.5	2,204.2	1,277.3
Food/Agriculture	990.5	924.8	984.4	1,245.4	1,733.8
Primary Metal Production	4,188.0	3,620.2	2,250.5	1,897.9	3,040.7
Secondary Metal Production	1,111.2	1,853.9	2,359.6	1,156.8	1,011.0
Mineral Products	11,845.3	15,278.5	18,755.3	17,615.3	15,555.4
Petroleum Industry	20,239.8	15,737.0	14,794.2	14,059.6	12,578.9
Paper and Wood Products	12.7	31.0	30.3	30.8	4.3
Rubber and Plastic Products	57.3	134.0	26.3	29.8	32.7
Fabricated Metal Products	420.3	414.7	471.0	499.4	435.1
Oil and Gas Production	80.4	270.1	834.1	644.8	929.7
Miscelaneous Machinery	6.3	5.1	5.1	3.8	2.9
Electrical Equipment	5.9	5.0	4.7	4.7	4.7
Transportation Equipment	1.9	1.9	0.2	0.2	0.2
Health Services	2.0	1.6	5.5	7.5	6.9
Textile Products	1.4	1.4	0.9	0.9	0.9
In-Process Fuel Use	3,037.3	2,665.2	2,439.7	1,597.6	2,071.9
Miscellaneous Manufacturing	246.4	278.1	62.5	45.4	44.1
Organic Solvent Emissions					
Organic Solvent Use	1.5	1.5	1.4	1.4	0.0
Surface Coating Operations	1,106.0	866.1	945.5	1.3	778.5
Petroleum Product Storage	7.7	6.7	6.1	957.0	0.0
Bulk Terminals/Plants	9.3	12.3	22.0	6.1	37.5
Printing/Publishing	205.9	180.6	123.8	28.9	71.0
Petroleum Marketing/Transport	2.3	2.3	2.3	66.2	2.3
Organic Chemical Storage (large)	0.5	0.4	0.4	2.3	0.0
Organic Chemical Transportation	10.8	0.0	0.0	0.4	1.0
Organic Solvent Evaporation	307.9	343.6	230.2	233.6	239.5

Table C2

Nitrogen Oxides Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
Solid Waste Disposal					
Government	1,108.1	1,248.2	2,015.1	1,417.4	777.2
Commercial/Institutional	99.9	98.3	105.9	110.4	44.2
Industrial	706.1	669.2	826.0	486.2	259.8
Site Remediation	1.1	7.0	23.9	22.8	35.7
MACT Processes					
Vinyl Based Resins	0.0	0.0	0.0	4.1	3.4
Totals	**358,263.3**	**301,215.7**	**289,921.3**	**248,245.3**	**238,026.13**

Table C3

Particulate Matter Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
External Fuel Combustion					
Electric Generation	17,275.6	16,273.9	15,336.4	15,167.5	16,163.6
Industrial	3,116.0	2,980.2	2,938.6	2,961.6	3,513.7
Commercial/Institutional	714.9	773.7	746.6	684.4	362.8
Space Heating	22.8	20.0	10.8	9.7	5.2
Internal Fuel Combustion					
Electric Generation	624.2	188.2	634.4	784.5	223.9
Industrial	176.3	245.3	509.0	314.5	282.1
Commercial/Institutional	43.7	41.7	28.8	133.5	46.9
Engine Testing	39.6	62.0	46.6	324.1	53.6
Fugitive Emissions	0.0	0.0	0.1	0.0	0.0
Industrial Processes					
Chemical Manufacturing	3,299.0	3,253.8	2,876.1	3,419.6	2,309.3
Food/Agriculture	18,950.1	18,919.3	16,373.6	17,280.1	17,917.2
Primary Metal Production	5,408.2	3,897.2	2,942.3	2,690.3	2,380.0
Secondary Metal Production	6,334.8	4,728.6	4,788.1	2,989.1	3,047.3
Mineral Products	23,458.7	19,984.3	22,432.0	21,164.3	18,627.3
Petroleum Industry	3,061.1	2,442.1	2,540.6	2,924.8	2,473.3
Paper and Wood Products	451.7	327.5	306.9	282.3	395.8
Rubber and Plastic Products	663.8	580.4	521.2	522.5	496.5
Fabricated Metal Products	992.5	943.0	861.7	756.6	631.2
Oil and Gas Production	3.3	11.9	18.4	11.2	14.0
Building Construction	1.5	1.5	1.9	1.8	1.5
Miscelaneous Machinery	94.3	91.2	69.6	61.7	65.6
Electrical Equipment	37.9	24.3	21.4	14.8	19.7
Transportation Equipment	54.7	54.7	73.2	73.6	82.1
Health Services	14.8	31.4	858.0	88.0	90.9
Leather and Leather Products	50.5	4.3	4.3	4.2	4.2
Textile Products	10.4	12.4	2.9	12.8	12.8
Printing/Publishing (typesetting)	0.3	0.3	1.9	1.8	0.0
Process Cooling	259.9	342.3	352.1	416.9	451.9
In-Process Fuel Use	228.9	341.8	356.0	260.0	266.3
Miscellaneous Manufacturing	236.0	142.1	118.0	104.7	91.5
Organic Solvent Emissions					
Organic Solvent Use	9.3	20.0	16.1	16.3	0.0
Surface Coating Operations	564.5	642.0	744.7	635.6	416.9
Petroleum Product Storage	50.9	36.3	31.7	34.9	0.0
Bulk Terminals/Plants	3.0	3.2	3.0	0.0	1.3
Printing/Publishing	100.1	68.3	62.9	75.0	49.4
Petroleum Marketing/Transport	2.2	10.4	13.7	13.6	7.4
Organic Chemical Storage (large)	19.4	17.6	16.7	14.8	16.4
Organic Chemical Transportation	10.8	0.1	0.1	0.0	0.0
Dry Cleaning (petroleum based)	0.0	0.0	0.0	1.9	0.0
Organic Solvent Evaporation	67.0	109.9	74.1	64.8	23.6

Table C3

Particulate Matter Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
Solid Waste Disposal					
Government	432.9	331.0	1,364.0	1,623.4	1,153.1
Commercial/Institutional	208.6	38.0	106.7	79.0	59.0
Industrial	217.2	386.9	331.6	242.2	220.3
Site Remediation	45.9	26.6	84.6	83.6	83.2
MACT Processes					
Food and Agriculture Processes	0.0	0.0	0.0	0.0	0.1
Agricultural Chemical Production	0.0	0.0	0.0	0.0	0.0
Styrene or Methacrylate Based Resins	5.4	5.5	5.5	5.6	0.5
Cellulose Based Resins	0.2	0.2	0.2	0.1	0.1
Alkyd Resin Production	2.1	3.4	3.9	4.2	4.3
Vinyl Based Resins	285.3	240.0	243.1	397.5	172.5
Miscellaneous Polymers	1.2	3.2	3.4	25.5	28.4
Fibers Production	0.0	0.2	0.0	0.0	0.0
Consumer Product Mfg Facilities	0.0	0.3	0.3	0.2	0.2
Paint Stripper Use	0.9	0.9	0.9	0.8	0.8
Phthalate Plasticizers Production	0.0	0.0	0.0	4.6	4.6
Totals	**87,652.5**	**79,140.9**	**78,078.4**	**76,787.1**	**72,274.6**

Table C4

Sulfur Dioxide Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
External Fuel Combustion					
Electric Generation	444,940.4	359,266.7	348,602.0	367,821.2	371,925.7
Industrial	64,292.1	59,419.5	54,386.4	41,186.7	57,281.9
Commercial/Institutional	11,556.4	11,303.3	9,917.7	8,739.7	5,357.7
Space Heating	43.4	42.4	2.4	2.1	1.7
Internal Fuel Combustion					
Electric Generation	660.1	188.2	633.7	571.2	189.5
Industrial	216.4	245.3	415.2	233.8	159.5
Commercial/Institutional	39.9	41.7	29.9	47.2	65.8
Engine Testing	28.2	62.0	62.7	180.9	30.9
Industrial Processes					
Chemical Manufacturing	17,134.5	13,946.0	12,892.9	12,698.2	12,819.1
Food/Agriculture	1,037.8	1,648.1	1,695.7	2,249.3	1,855.7
Primary Metal Production	6,804.5	6,342.7	3,243.0	2,442.7	3,954.1
Secondary Metal Production	150.3	113.4	2,235.8	585.0	152.8
Mineral Products	14,183.8	13,918.1	14,046.1	14,022.8	13,913.7
Petroleum Industry	87,866.5	62,241.0	60,558.6	53,085.8	51,990.4
Paper and Wood Products	0.1	0.2	0.2	0.6	0.0
Rubber and Plastic Products	1.1	0.7	0.8	0.8	5.1
Fabricated Metal Products	212.1	20.4	21.2	26.6	18.2
Oil and Gas Production	103.9	292.3	651.8	651.6	598.1
Miscelaneous Machinery	2.3	2.3	2.3	0.0	0.0
Electrical Equipment	0.9	2.0	0.9	0.5	0.5
Transportation Equipment	0.0	0.0	0.1	0.1	0.1
Health Services	0.7	0.7	7.3	8.7	7.5
Leather and Leather Products	0.0	7.6	0.0	0.0	0.0
Process Cooling	0.0	0.0	0.0	2.0	38.0
In-Process Fuel Use	3,608.5	707.8	1,006.0	949.2	1,484.7
Miscellaneous Manufacturing	33.3	97.1	84.3	63.1	73.8
Organic Solvent Emissions					
Surface Coating Operations	56.5	49.2	23.8	23.3	14.4
Petroleum Product Storage	7.9	31.4	43.9	43.9	0.0
Printing/Publishing	0.2	0.2	0.5	0.2	0.2
Organic Chemical Transportation	0.0	1.1	1.1	1.0	0.0
Organic Solvent Evaporation	59.5	61.7	39.6	30.4	3.1

Table C4

Sulfur Dioxide Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
Solid Waste Disposal					
Government	301.0	331.0	640.8	372.8	415.8
Commercial/Institutional	37.6	38.0	45.4	37.0	11.6
Industrial	395.3	386.9	528.6	503.8	155.1
Site Remediation	22.4	26.6	27.1	5.6	5.5
MACT Processes					
Food and Agriculture Processes	0.0	472.6	472.6	541.6	145.0
Miscellaneous Processes	0.0	0.0	0.0	11.0	0.3
Totals	**653,797.5**	**531,342.7**	**512,320.6**	**507,142.1**	**522,677.3**

Table C5

Volatile Organic Material Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
External Fuel Combustion					
Electric Generation	1,337.5	1,342.2	1,461.3	1,413.5	1,517.4
Industrial	1,130.6	854.1	814.4	745.4	553.1
Commercial/Institutional	258.2	380.8	344.9	159.8	143.5
Space Heating	18.2	13.4	14.8	13.1	9.2
Internal Fuel Combustion					
Electric Generation	709.2	292.9	639.8	468.5	740.4
Industrial	1,932.4	1,022.2	1,066.1	954.9	979.4
Commercial/Institutional	139.1	122.1	78.1	104.9	90.5
Engine Testing	72.5	236.9	232.5	216.7	66.4
Fugitive Emissions	37.9	19.6	0.3	0.1	0.0
Industrial Processes					
Chemical Manufacturing	12,504.9	12,698.4	12,405.2	15,798.3	16,942.5
Food/Agriculture	9,942.7	10,503.8	10,885.9	11,020.4	14,608.5
Primary Metal Production	1,756.9	674.2	645.3	559.1	648.2
Secondary Metal Production	1,178.0	1,914.9	1,829.4	1,076.0	1,232.0
Mineral Products	1,476.9	1,694.3	2,543.6	2,225.1	2,075.0
Petroleum Industry	6,027.9	5,197.5	4,292.0	3,029.1	1,755.3
Paper and Wood Products	198.5	177.0	240.1	269.9	192.4
Rubber and Plastic Products	4,096.4	5,061.1	4,607.2	4,322.0	2,710.9
Fabricated Metal Products	1,743.6	1,545.4	1,290.8	1,388.5	1,131.9
Oil and Gas Production	564.0	252.5	465.7	273.6	382.1
Miscelaneous Machinery	31.3	28.7	25.8	23.8	84.2
Electrical Equipment	200.4	185.7	142.2	102.6	103.0
Transportation Equipment	26.3	40.4	267.8	267.5	331.3
Health Services	75.2	81.2	70.6	52.0	54.4
Leather and Leather Products	90.0	108.6	107.0	105.8	106.5
Textile Products	4.9	4.9	7.3	6.2	6.5
Process Cooling	10.1	11.6	12.6	117.6	238.0
In-Process Fuel Use	329.7	180.4	141.5	221.3	145.2
Miscellaneous Manufacturing	332.8	287.5	261.7	213.8	306.1
Organic Solvent Emissions					
Organic Solvent Use	1,484.4	1,403.8	1,371.0	1,141.8	752.5
Surface Coating Operations	20,049.9	17,979.3	16,512.2	13,480.0	10,435.0
Petroleum Product Storage	5,214.4	5,058.6	4,684.1	4,973.4	3,925.3
Bulk Terminals/Plants	2,117.9	2,402.2	2,967.0	2,799.1	1,760.4
Printing/Publishing	11,517.9	9,012.0	10,062.2	8,296.9	5,915.1
Petroleum Marketing/Transport	1,319.1	1,519.7	1,413.0	1,565.6	800.3
Organic Chemical Storage (large)	1,147.5	1,222.3	1,042.7	1,188.5	1,289.6
Organic Chemical Transportation	40.2	38.6	29.0	84.7	81.3
Dry Cleaning (petroleum based)	380.7	457.7	550.9	585.6	555.3
Organic Chemical Storage (small)	1.9	2.9	1.0	0.9	0.0
Organic Solvent Evaporation	4,027.4	3,537.6	3,147.4	1,011.8	608.7

Table C5

Volatile Organic Material Point Source Emission Distribution (Tons/Year)

Category	2001	2002	2003	2004	2005
Solid Waste Disposal					
Government	253.8	352.3	685.8	1,009.6	637.5
Commercial/Institutional	57.2	32.5	46.5	108.2	17.5
Industrial	292.1	226.1	325.9	214.0	156.4
Site Remediation	659.0	990.7	1,131.0	1,438.5	1,006.8
MACT Processes					
Food and Agriculture Processes	3.0	42.8	42.8	79.5	19.5
Agricultural Chemical Production	1.8	1.7	0.0	1.1	1.0
Styrene or Methacrylate Based Resins	63.6	68.2	55.7	41.6	37.9
Cellulose Based Resins	0.0	0.0	0.0	0.0	0.0
Alkyd Resin Production	221.8	228.5	239.8	233.0	65.6
Vinyl Based Resins	112.7	124.0	123.3	319.4	179.9
Miscellaneous Polymers	18.0	16.7	13.8	13.7	13.7
Fibers Production	0.3	0.3	0.0	0.0	0.0
Inorganic Chemicals Manufacturing	0.0	0.0	0.0	3.1	3.1
Consumer Product Mfg Facilities	6.5	57.0	235.3	231.4	253.1
Paint Stripper Use	3.8	1.0	3.8	2.8	2.8
Miscellaneous Processes	6.5	3.8	1.4	1.4	10.7
Phthalate Plasticizers Production	0.6	0.7	0.0	3.4	4.3
Totals	**95,221.1**	**90,013.5**	**89,579.3**	**84,080.3**	**75,689.9**

Table C6

2005
Estimated County Stationary Point Source Emissions (Tons/Year)

County	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Dioxide	Volatile Organic Material
Adams	225.7	360.7	653.8	1,023.4	918.6
Alexander	81.3	184.9	125.6	607.6	209.1
Bond	24.6	14.9	136.8	3.1	50.9
Boone	110.1	131.2	188.8	1.9	389.6
Brown	35.8	15.6	37.3	3.0	9.3
Bureau	31.3	53.6	264.4	4.0	115.9
Calhoun	0.6	0.7	44.7	0.0	0.0
Carroll	148.3	128.4	201.4	20.4	64.3
Cass	59.5	46.2	97.8	50.7	36.0
Champaign	603.4	1,317.5	697.6	1,090.0	592.8
Christian	1,198.7	19,564.6	650.7	22,059.8	455.4
Clark	11.8	9.8	183.3	1.1	127.1
Clay	16.9	28.3	78.1	16.3	148.4
Clinton	235.4	721.9	167.6	301.3	141.9
Coles	191.3	184.2	288.7	122.5	605.6
Cook	8,804.5	17,340.1	9,836.4	36,722.0	12,129.4
Crawford	977.6	3,634.6	906.5	20,382.0	1,186.7
Cumberland	16.7	3.2	27.3	0.4	16.4
DeKalb	86.6	95.8	273.9	10.8	302.4
DeWitt	128.6	39.6	228.1	5.5	28.9
Douglas	854.1	6,420.7	755.7	8,591.8	527.1
DuPage	1,035.7	1,277.0	809.3	144.5	1,855.4
Edgar	48.8	74.6	215.6	38.6	332.6
Edwards	5.4	12.3	55.4	0.1	121.8
Effingham	76.2	60.1	195.8	4.8	401.1
Fayette	105.7	329.3	219.5	416.0	155.9
Ford	47.9	71.1	390.6	2.5	661.7
Franklin	23.4	58.0	162.0	0.4	330.8
Fulton	334.1	3,460.2	169.6	10,062.3	64.2
Gallatin	4.5	18.1	167.0	64	7.4
Greene	0.0	0.0	76.6	0.1	5.4
Grundy	1,120.5	1,044.1	790.8	131.6	1,423.0
Hamilton	1.2	5.6	43.5	0.0	8.4
Hancock	2.2	13.8	173.0	4.6	5.6

Table C6

2005

Estimated County Stationary Point Source Emissions (Tons/Year)

County	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Dioxide	Volatile Organic Material
Hardin	24.8	21.4	213.4	15.0	2.9
Henderson	19.9	8.3	165.1	1.7	7.0
Henry	651.0	2,647.3	315.8	17.4	289.7
Iroquois	113.4	87.8	378.4	32.9	451.3
Jackson	164.6	183.9	170.5	778.0	64.8
Jasper	1,063.5	4,737.0	1,149.5	17,651.6	167.9
Jefferson	32.2	0.1	197.6	4.9	206.5
Jersey	0.7	0.0	56.0	0.0	29.5
Jo Daviess	744.7	368.9	497.3	1.9	946.6
Johnson	40.0	0.0	83.8	336.8	19.6
Kane	710.6	12.1	907.6	59.1	1,531.7
Kankakee	1,281.4	18.1	517.0	23.8	1,165.4
Kendall	488.5	7.8	376.4	31.0	377.5
Knox	112.8	2.1	194.6	44.5	204.5
Lake	2,045.6	13.4	1,559.8	15,636.2	1,203.4
La Salle	3,858.1	13.5	2,859.0	3631.4	1,559.2
Lawrence	8.9	0.3	60.0	2.7	157.9
Lee	424.1	1.1	644.6	974.5	359.5
Livingston	406.6	3.7	666.4	12.3	516.2
Logan	83.9	0.8	384.9	464.3	70.0
McDonough	147.3	114.4	238.3	750.3	95.0
McHenry	408.8	401.7	670.3	54.9	746.2
McLean	339.9	761.7	576.6	40.6	1,237.6
Macon	8,850.9	8,966.6	5,616.9	12,966.2	15,329.0
Macoupin	9.8	16.9	182.3	3.3	110.6
Madison	18,165.3	13,466.4	3,836.3	24,687.9	3,268.6
Marion	32.0	48.4	140.0	0.2	770.7
Marshall	30.1	135.7	478.8	4,021.8	568.6
Mason	248.8	2,223.4	464.3	8,588.9	35.9
Massac	1,989.3	10,910.6	2,273.2	28,840.2	515.6
Menard	0.6	0.8	74.3	0.0	68.1
Mercer	0.4	0.4	94.4	0.0	15.9
Monroe	4.2	10.9	111.8	0.0	25.9
Montgomery	760.8	11,438.3	492.2	46,375.0	127.9

Table C6

2005

Estimated County Stationary Point Source Emissions (Tons/Year)

County	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Dioxide	Volatile Organic Material
Morgan	509.1	3,583.7	494.4	13,501.6	346.0
Moultrie	3.5	6.4	147.3	0.2	252.1
Ogle	370.5	175.1	583.5	24.4	1,276.6
Peoria	2,900.8	10,063.3	2,580.8	49,694.1	4,628.6
Perry	65.5	58.3	132.8	2.4	49.7
Piatt	169.3	2,195.7	172.4	0.3	88.6
Pike	254.1	2,655.0	383.9	1,694.6	68.3
Pope	0.0	0.0	0.0	0.0	0.0
Pulaski	85.8	48.2	144.4	91.7	14.8
Putnam	367.9	2,105.6	629.5	5,756.6	160.9
Randolph	1,954.1	15,692.5	3,754.5	27,013.5	343.5
Richland	0.6	2.5	27.1	0.0	13.2
Rock Island	870.8	809.5	787.8	1,266.7	901.7
St. Clair	585.2	615.9	1,090.6	2,112.0	1,298.5
Saline	39.8	14.9	341.6	1.0	17.6
Sangamon	781.6	8,382.7	830.9	10,148.2	357.2
Schuyler	5.4	6.1	126.0	0.0	12.6
Scott	43.1	24.5	126.6	17.8	7.2
Shelby	19.7	30.6	168.5	1.0	112.4
Stark	0.0	0.0	76.4	0.0	7.0
Stephenson	158.5	131.8	179.3	6.4	353.3
Tazewell	1,904.1	27,531.1	2,926.1	35,909.0	901.1
Union	73.6	53.6	70.0	689.5	38.5
Vermilion	808.2	2,907.4	1,348.3	16,296.7	3,124.2
Wabash	6.2	6.6	146.3	2.4	15.3
Warren	29.6	28.0	231.6	163.1	21.8
Washington	10.6	38.7	171.2	0.2	76.4
Wayne	175.7	347.0	65.3	188.5	91.3
White	315.3	885.8	75.0	3.0	170.1
Whiteside	1,545.4	413.9	557.2	191.5	247.8
Will	7,899.9	19,304.6	5,936.3	80,861.9	3,528.7
Williamson	1,078.1	6,186.2	489.2	9,036.6	308.8
Winnebago	715.1	674.1	1,279.9	119.5	1,085.4
Woodford	7.5	11.9	234.2	0.0	90.1

Table C7

Annual Estimated Emissions Trends (Tons)

Year	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Dioxide	Volatile Organic Material
1981	240,421	826,427	276,529	1,577,992	270,814
1982	163,704	693,054	184,716	1,404,040	233,951
1983	144,622	759,453	185,931	1,363,292	207,405
1984	110,922	746,367	204,490	1,435,066	197,418
1985	107,876	715,556	174,102	1,406,300	191,070
1986	109,777	676,181	164,246	1,400,761	180,148
1987	98,213	644,511	166,292	1,379,407	176,406
1988	127,758	653,521	162,124	1,393,628	165,792
1989	132,214	610,214	212,778	1,254,474	193,499
1990	134,744	623,466	266,888	1,272,445	170,378
1991	148,667	619,161	220,903	1,239,690	154,008
1992	129,054	610,214	163,529	1,228,949	156,867
1993	130,097	556,460	142,123	1,170,549	152,288
1994	127,848	555,893	133,275	1,158,555	140,492
1995	127,661	505,966	119,726	1,273,786	141,381
1996	130,040	495,267	105,842	1,183,278	139,445
1997	117,046	510,729	100,038	1,197,404	136,541
1998	108,117	509,676	99,619	1,196,461	134,924
1999	120,906	421,993	90,316	1,085,828	99,121
2000	122,702	424,609	93,710	1,070,058	101,147
2001	96,970	358,263	87,652	653,797	95,221
2002	99,173	301,216	79,141	531,343	90,014
2003	88,367	289,921	78,078	512,321	89,579
2004	80,479	248,245	76,787	507,142	84,080
2005	83,671	238,026	72,274	522,677	75,690

Table C8

Annual Source Reported Emissions Trends (Tons)

Year	Carbon Monoxide	Nitrogen Oxides	Particulate Matter	Sulfur Dioxide	Volatile Organic Material
1992	112,403	381,938	95,329	1,045,113	143,853
1993	113,781	418,209	89,830	1,001,123	108,847
1994	116,192	404,486	88,505	967,213	108,897
1995	160,256	366,978	67,032	814,229	103,144
1996	84,258	407,683	63,686	914,295	87,271
1997	71,408	404,289	57,135	974,232	76,350
1998	79,147	377,191	61,077	964,262	77,952
1999	91,153	360,850	56,717	863,759	71,514
2000	90,315	329,141	55,944	620,592	71,063
2001	83,453	291,778	53,603	531,504	62,647
2002	83,795	261,202	49,343	498,754	70,703
2003	75,511	230,068	49,874	507,338	63,495
2004	77,847	229,127	55,379	521,808	64,594

APPENDIX D

THE BUREAU OF AIR/ DIVISION OF AIR POLLUTION CONTROL

Organization and Programs

The Bureau of Air consists of two divisions: the Division of Air Pollution Control and the Division of Vehicle Inspection and Maintenance. The focus of this section is on the programs of the Division of Air Pollution Control which is responsible for developing, implementing and enforcing regulations to assure that the air we breathe is clean and healthful. This mission is accomplished by finding, correcting and controlling air pollution hazards. The Division of Air Pollution Control also works to prevent air quality problems from occurring in areas which have clean air.

The basic strategy to improve air quality is to control the pollutants which are emitted by industry and motor vehicles. This strategy requires the IEPA to monitor the air, identify emission sources, impose limitations on the amount of emissions which can be released to the air and take the necessary enforcement action against violators.

The Division of Air Pollution Control is divided into five sections: Air Monitoring, Air Quality Planning, Compliance and Enforcement, Permits, and Field Operations. Each of these sections is briefly described below.

Air Monitoring

The Division of Air Pollution Control operates a statewide air quality monitoring network which includes more than 200 monitors. The Air Monitoring Section is responsible for the maintenance of this network, which operates year round monitoring the quality of the air that we breathe.

The IEPA monitors the air for a variety of pollutants including particulate matter, sulfur dioxide, ozone, carbon monoxide, lead and nitrogen dioxide. Specialized sampling projects for other hazardous pollutants are also conducted by the Air Monitoring Section.

Illinois residents can be proud of the IEPA's record of efficiency in data collection. The system ranks as one of the best in the nation with over 90 percent efficiency in the collection of high quality data. This high efficiency rate guarantees that the network is operating with a minimum amount of "down-time" thereby providing the IEPA with a complete and accurate description of air quality in Illinois.

The Air Monitoring Section is also responsible for validating and summarizing the data in this report. It provides notification of air quality exceedances and issues any episodes as required. Special air quality studies are performed which identify pollution trends and evaluate special air quality problems.

Air Quality Planning

The Air Quality Planning Section is responsible for developing Agency programs which are designed to achieve and maintain National Ambient Air Quality Standards and to prevent deterioration of air quality. This is accomplished by:

- Assessment of strategies and technologies for the elimination or reduction of air pollutant emissions.
- Conducting and reviewing detailed air quality studies using computerized air quality models.
- Proposing and supporting regulatory revisions where they are necessary to attain or maintain healthful air quality.

- Coordination with local planning agencies to ensure compatibility of air quality programs between state and local jurisdictions.

- Coordination of the Bureau's Stationary Source Inventory.

Compliance and Enforcement

The Compliance and Enforcement Section provides Management oversight for all aspects of the compliance program.

The work of the section is currently focused on the following areas:

- Formulating and interpreting policy regarding the Bureau's Air Pollution Compliance and Enforcement Program.

- Coordinating the Air Pollution Compliance and Enforcement Program with USEPA's Compliance and Enforcement Program.

- Coordinating, through the Bureau's Compliance Decision Group, the work of the Bureau's staff in order to provide an effective and efficient compliance program.

- Evaluate the Annual Emission Reports provided by Illinois industry.

- Oversees the source emissions monitoring program including continuous emission monitors (cems), stack testing, and escess emissions reporting

Permits

Permits are required in Illinois prior to construction and operation of emission sources and control equipment. The permit program provides a consistent and systemic way of ensuring that air emission sources are built and operated in compliance with air pollution control regulations.

In a permit application the IEPA requires: a description of the emission source, a list of types and amounts of the contaminants which will be emitted, and a description of the emission control equipment to be utilized. This information is used to determine if the emissions comply with standards adopted by the Illinois Pollution Control Board. Operating permits are granted for periods up to five years, after which they must be renewed. Operating permits for smaller facilities may run indefinitely. When a facility constructs a new emission source or makes modifications to existing emission sources, it must apply for a new construction permit.

Large sources also need a Federal Operating Permit which is administered by the IEPA. Under the Clean Air Act Permit Program (CAAPP) these large sources will be required to consolidate all of their existing State operating permits into one permit which will be available for public review and is subject to Federal oversight.

Field Operations

The Field Operations Section investigates sources of air pollution and works with industry to control air pollution. The major functions of the Field Operations Section include locating and identifying sources of air pollution, determining the amount of pollution emitted and verifying the information which industry submits when applying for a permit. Field Operations also initiates much of the IEPA's enforcement activities when violations are discovered. Approximately 3,000 investigations and inspections are conducted each year.

Table D1

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