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.

To Obtain Additional Information

For additional information on air pollution, please call 217-782-7326, or write to:

Illinois Environmental Protection Agency
Bureau of Air
1021 N. Grand Ave., East
PO Box 19276
Springfield, IL 62794-9276

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.

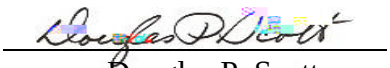
In 2005, Illinois as well as other Midwestern and Northeastern states experienced one of the most unusual air quality episodes in recent history. For the first time in Illinois, Air Pollution Action Days were called outside of the ozone season (May through September), with 3 action days being called 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

Contents

Tables

Figures

2005
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

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 one being used up.

Photochemicaairis pollati,ed and

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

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 N0.024 Tw (xid1w ((N) Tj 77.25 -3 TD 0 Tc 0 Tw (2) Tj 66j T*

s w ()941N3413 Tw (nitric oxhe aiTc 0 Tw ( ) Tj 0 -14 TD -0.4393 Tc 0 Tlor it iide odor it icoa(atm the ime pitya (c Tw (

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, economi

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

Pollutant	Averaging Time	Standard Primary	Standard 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	[illegible]	[illegible]	[illegible]

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 oror		

parts per million 0120 0.420 hour 0.30 hour 0340 hour 1-hour 1-hour

SECTION 2: STATEWIDE SUMMARY OF AIR QUALITY FOR 2005

OZONE

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 2 TD ( ) Tj0.3648 Tc 0.9005 Tw (. Valid annual average2aae22 3.918 vhTj -138.24) Tj 40.5 0 t Statejutm49 0 TD -0.3514 2 Tc7e14 2 (theide average of) e

primary sta

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

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

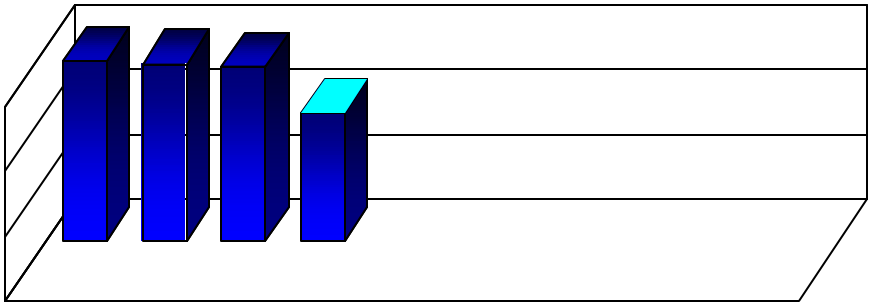
In order to present a more representative AQI, 24-hour calendar day $PM_{2.5}$ and PM_{10} values from the total network were used to determine the percentages in **Figure 9** even though some of these values were not available for issuing the

Candgöryzolaytelatlr oWiTjithe Illir Mall Srs is ihaTj T*

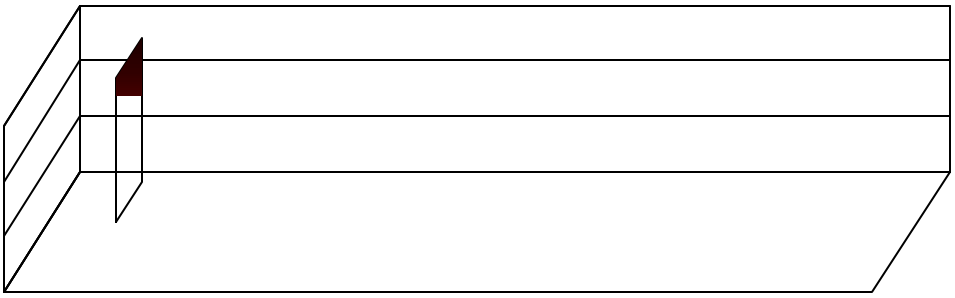
Table 4: AQI Sectors in Illinois	
Chicago Metropolitan Area:	
Lake County Sector	Lake County only
North and West Suburbs Sector	Parts of Cook, Du Page, and Mc Henry Counties north of I-

Figure 9: 2005 Air Quality Index Summaries by Sector

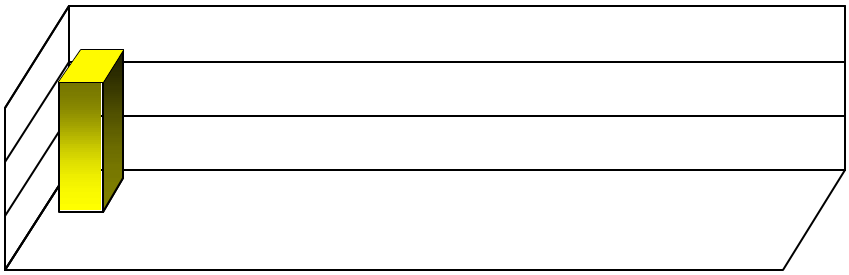
VOLATILE ORGANIC MATERIAL



CARBON MONOXIDE



SULFUR DIOXIDE



NITROGEN OXIDES

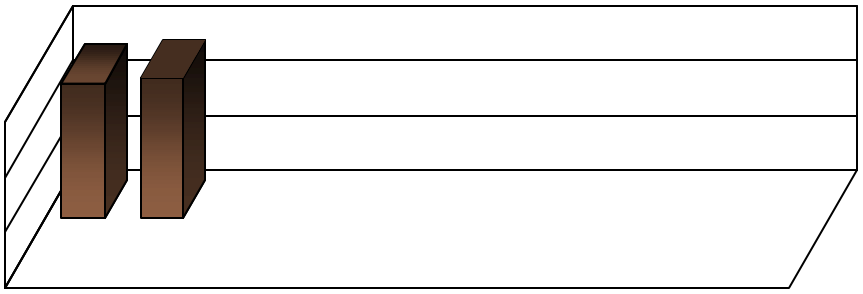


TABLE A1

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

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.

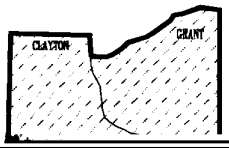
c. To provide data on noncriteria pollutants.

Table A3

DISTRIBUTION OF AIR MONITORING INSTRUMENTS

	PAMS	NAMS	SLAMS	SPMS	TOTALSLAMS

AIR QUALITY CONTROL REGIONS



Statewide Map of Air Monitoring Locations

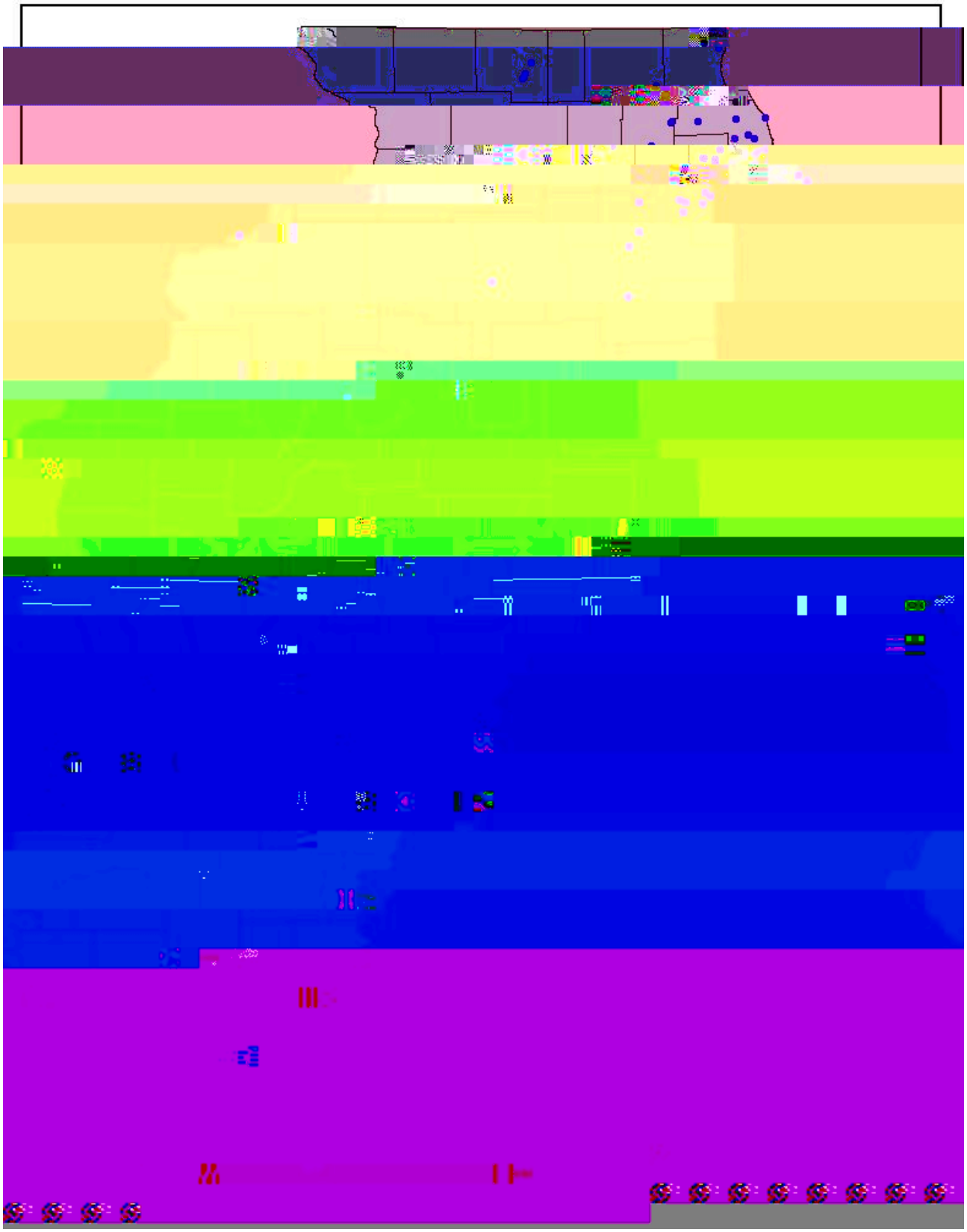


Table A4

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			

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	SPMS			

Table A4

2005
SITE DIRECTORY

CITY NAME	O

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				

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	Rock Island A			

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

SPMS	CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
	WABASH COUNTY				
	Mount Carmel	Division St.	Public Service	N. 4249.965	SPMS - SO

SPMS N 4249.965 SPMS SO

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 Temperature, Relative Humidity 24.5 0 TD 0 Tc ( ) Tj 4.5 0 TD -0.3927 uring 2005 407.25.75 12 r

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

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

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	1508 Dundee Rd.	0	0	0.104	0.099	0.094	0.093	0.085	0.085	0.085	0.081

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	1406 Maple	0	0	0.086	0.083	0.082	0.081	0.079	0.079	0.076	0.075
Rockford	1500 Post	0	0	0.079	0.076	0	0.075	0	0.081	0.081	0.081

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	KANE COUNTY		

0 0 Tc -0.0435 Tw ( ) Tj 20.25

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

Table B3

2005

PARTICULATE MATTER FINE ($PM_{2.5}$)

(micrograms per cubic meter)

	ANNUAL
NUMBER OF SAMPLES	

Table B4

2005

Table B4

2005

SHORT-TERM TRENDS

PARTICULATE MATTER ($PM_{2.5}$)

ANNUAL ARITHMETIC MEANS (ug/m^3

Table B5

2005

PARTICULATE MATTER (PM_{10})

(micrograms per cubic meter)

Table B5

2005

Table B6

2005

SHORT-TERM TRENDS

PARTICULATE MATTER (PM_{10})

		ANNUAL ARITHMETIC MEANS (ug/m^3)					
STATION	ADDRESS	2000	2001	2002	2003	2004	2005

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

2.0 BT 43.5 451.5 TD /F1 12 T82 Tw ( ) Ti 1815.5 TD -3.1721 T12 E.128ate7 Tc Tw (5.7) Ti 13.5 0 TD 0 Tc -

Table B9

2005
SULFUR DIOXIDE
(parts per million)

	NUMBER OF SAMPLES		HIGHEST SAMPLES		ANNUAL
	3-HR	24-HR	3-HR AVG.	24-HR AVG.	ARITHMETIC

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)							

0 TD -0.2864 Tc 0.1364 912 re f BT

IA 70 TD 0 Tc -0.049E (STAT5 60 S. 51st A20975e f BT 6817Jj 3e 0 TD18D 0 Tc -0.0442 Tw ( ) TTj 3783 7 153783 0 TTD 0.0

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 METROPOLITANTD 0 Tc -0.0435 Tw ( )T. LOF3J2 Tf -06rTERSTATE (IL0 Tw (77j 15.75 0 T2ark) Tj

0( ) Tj 44.25 0 TD -0.0783 Tc 0 Tw71.5 46185 0.75 12 re f BT 43.5 485 0.75 12 re f BT -0.2157 7 0.75 12D -2635 TD 0.2

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

S

Table B13

2005
LEAD
(micrograms per cubic meter)

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								

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

(

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
			IRON				**MANGANESE**		
65 BURLINGTON - KEOKUK INTERSTATE	**(IA - IL5**	**62**	**0.75**	**0.75**	**0.21**	**48**	**0.05**	**0.05**	**0.02**

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				

0.023

57 0 36c -0.0435 Tw ( ) 4 4 3 .736c -0.0435 Tw ( ) 0 0 1 2 0 0 1 0 3 6 . 750 Dund 0 F 0

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									

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

Tcc

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)

HIGHEST SAMPLES (ug/m3)

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 Ope7 BT0.01TD -0.035 Tw7 ( ) Tj . 56.250 0 TD -0.0761 TD 0 Tc -0.0435 Tw ( ) Tj ET 35.25 235.597TTD -0.07b/j 11.25 0 TD 0 Tc -0.					

Table C1

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

Category	2001	2002	2003	2004	2005

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

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		17,275.6 16,273.9

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

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

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

Table C5

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

Category

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

Table C8

Annual Source Reported Emissions Trends (Tons)

Year	Carbon Monoxide

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

BUREAU OF AIR

Laurel Kroack, Bureau Chief
(217) 785-4140

DIVISION OF AIR POLLUTION CONTROL

Jim Ross, Division Manager
(217) 785-4140

AIR MONITORING SECTION

Terry Sweitzer, Manager
(217) 782-5811

AIR QUALITY PLANNING SECTION