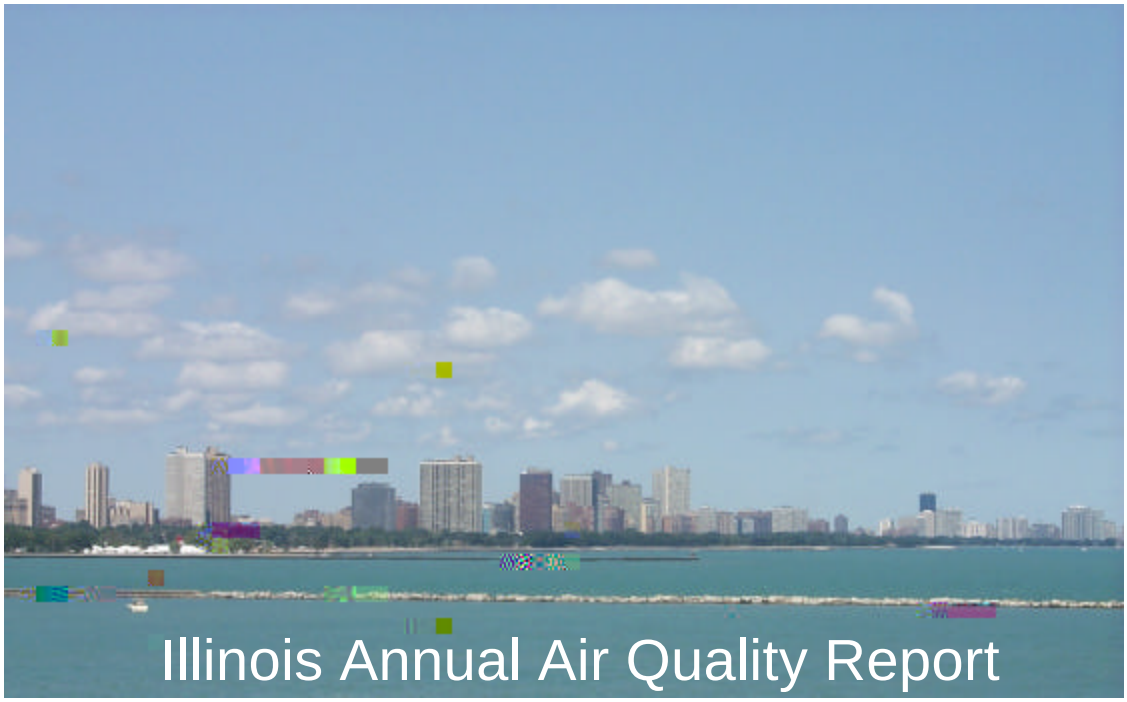
Illinois
Environmental
Protection Agency

Bureau of Air
1021 N. Grand Ave., East
P.O. Box 19276
Springfield, IL 62794-9276

May 2001

IEPA/BOA 01-007



Illinois Annual Air Quality Report

2000

Illinois Environmental Protection Agency
Bureau of Air

Cover: the cover pictures were taken with a visibility camera at the Chicago – Jardine Water Plant (just north of Navy Pier) looking north-northwest toward the Oak Street and North Avenue beaches. The top picture was taken on August 26, 2000 during a period of reduced visibility. $PM_{2.5}$ concentrations on that day averaged around 35.0 ug/m^3. In contrast the bottom picture was taken on August 16, 2000 depicting a period of good visibility. $PM_{2.5}$ concentrations on that day averaged less than 10 ug/m^3.

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

Since 1970, the Illinois Environmental Protection Agency (EPA) has been working to combat air pollution. To comply with the federal Clean Air Act and its amendments, the Agency issues permits to air pollution sources and works to reduce air pollutants. Clean air efforts have progressed to creating partnerships that encourage both voluntary pollution-reducing activities and that promote preventing pollution before it starts.

Outdoor air quality in Illinois is good most of the t

TABLES

FIGURES

2000
EXECUTIVE SUMMARY

This report presents a summary of air quality data collected throughout the State of Illinois during the calendar year - 2000. 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, and volatile organic compounds. Monitoring was conducted at over 100 different site locations collecting data from more than 200 instruments.

In terms of the Air Quality Index (AQI) air quality during 2000 was either good or moderate more than 93% of the time throughout Illinois. This is the first year since monitoring has been conducted in Illinois that there were no exceedances of the 1-hour ozone standard. There were 25 days when air quality in some part of Illinois was considered Unhealthy for Sensitive Groups (9 for 8-hour ozone and 18 for $PM_{2.5}$, 2 days were common) 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 1991 – 2000 are as follows: Particulate Matter (PM_{10}) 16% decrease, Sulfur Dioxide 25% decrease, Nitrogen Dioxide 5% increase, Carbon Monoxide 42% decrease, Lead 60% decrease, and Ozone 7% decrease.

In 2000 the monitoring network was completed for $PM_{2.5}$ using Federal Reference Method (FRM) monitors at a total of 35 locations Statewide in the final phase of fine particulate (less than 2.5 microns) sampling implementation.

SECTION 1:

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

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,

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

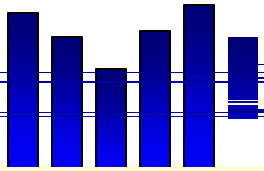
Table 2: Illinois Air Pollution Episode Levels

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 2000

OZONE

Monitoring was conducted at 42 locations during at least part of the April-October "ozone season" and at least 75% data capture was obtained at all 42 sites. There were no network changes in 2000.



For the first time since ozone monitoring has been conducted in Illinois, no site recorded hourly concentrations above the 0.12 parts per million (ppm) 1-hour standard. The highest 1-hour concentration was 0.122 ppm in Maryville

0.139 ppm in 1999. The highest value recorded in the Chicago area was 0.100 ppm recorded in Waukegan compared with a high in 1999 of 0.119 ppm in Cary.

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. No sites in Illinois had fourth high values above 0.08 ppm in 2000. The highest fourth high value was 0.084 ppm at East St. Louis. The highest fourth high in the Chicago area was 0.082 ppm at Chicago - SWFP. For the three year period 1998 – 2000, three sites (Chicago-SWFP, Edwardsville, and Jerseyville) 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 1991-2000. The graph shows a great deal of year-to-year fluctuation and a fairly flat 10-year trend and slightly downward since 1995. The Statewide average for 2000 was 0.092 ppm compared with 0.106 ppm in 1999 and 0.102 ppm in 1998. Statewide, the total number of excursion days in 2000 was zero compared with four in 1999 and three in 1998.

1991-2000. This trend is generally flat with the conducive years of 1991 and 1995 standing out.

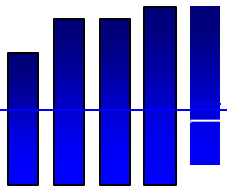
Overall, Illinois's weather was below above normal in terms of meteorological conditions favorable to ozone formation and transport in the Chicago area in 2000 and near normal downstate.

August and September were the most conducive months in terms of meteorological conditions Statewide. In terms of conducive days, the

NITROGEN DIOXIDE

There were no violations of the annual primary standard of 0.053 ppm recorded in Illinois during 2000. The highest annual average of 0.032 ppm was recorded at Chicago - CTA. The Statewide average for 2000 was 0.022 ppm compared with 0.023 ppm in 1999 and 0.023 ppm in 1998.

Two sites only operated during part of the ozone season as PAMS. **Figure 7** depicts the trend of statewide averages from 1991-2000. The trend has been generally stable for the period ranging from 0.020 ppm to 0.027 ppm. There have been no violations of the annual standard since 1980.



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 0.010 ug/m^3 measured in Granite City. The highest annual average of 0.002 ug/m^3 was recorded at the same site and East St. Louis. 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 0.106 ug/m^3 and the highest annual average of 0.007 ug/m^3 . The highest 24-hour chromium average was 0.072 ug/m^3 recorded at Maywood. Chicago - Mayfair had the highest annual average at 0.011 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 Wood River with a value of 0.082 ug/m^3. The highest annual average was in Chicago – Cermak and summit with an average of 0.009 ug/m^3. All selenium 24-hour averages were less than 0.010 ug/m^3 . The highest 24-hour value for vanadium was 0.012 ug/m^3 recorded at Granite City – 15th & Madison. The highest annual average was 0.002 ug/m^3 also recorded at 15th & Madison in Granite City. For nitrates the highest 24-hour average was 17.0 ug/m^3 recorded in Schiller Park. The highest annual average was 5.0 ug/m^3 also at Schiller Park. For sulfates the highest 24-hour average was 32.5 ug/m^3 recorded at East St. Louis. The highest annual average was 10.0 ug/m^3 also at East St. Louis.

VOLATILE ORGANIC COMPOUNDS

Sampling for volatile organic compounds (VOCs) continues as part of the photochemical assessment monitoring site (PAMS) network. The network consists of four sites: Braidwood - Type 1 background, Chicago - Jardine - Type 2 source area, Northbrook - Type 3 peak ozone area, and Zion - Type 4 domain edge.

Sampling was conducted for the period June - August. Automated Gas Chromatograph (GC) systems providing hourly data were located at all four sites. In addition at all four sites, manual carbonyl samples were taken every six days at Chicago - Jardine through March and then moved to Northbrook. There were no supplemental high ozone days during 2000 so the 3-hour cartridge data was not available. 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.

The highest compounds in terms of 24-hour and seasonal averages at Chicago - Jardine were Isopentane, Ethane, Propane, Toluene, 2,2,4 Trimethylpentane, and Formaldehyde. The lowest compounds were Isoprene, Methylheptanes, ethyltoluenes, and pentenes. The highest compounds for 24-hour and seasonal averages at Northbrook were Isopentane, Ethane, Toluene, 2,2,4 Trimethylpentane, Isoprene, N-Butane, and N-Pentane. The lowest compounds were Butenes, Pentenes, Methylheptanes, Diethylbenzenes, and Ethyltoluenes. The highest compounds for 24-hour and seasonal averages at Zion were Ethane, Isoprene, Propane, Isoprene, Toluene, Isopentane, N-Butane, and M/P Xylene. The lowest compounds were Butenes, Pentenes, Methylheptanes, Diethylbenzenes, and Ethyultoluenes. The highest 24-hour and seasonal compounds at Braidwood were Ethane, Propane, Isopentane, Isoprene, N-Butane, and Toluene. There were numerous compounds that had minimal detection at Braidwood.

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 2000. This index replaced the previously used Pollutant Standards Index. Major changes include the addition of a new category "Unhealthy for Sensitive Groups"

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 ($PM_{2.5}$).

The Illinois EPA issues the AQI for 10 areas, or Sectors, in Illinois (**Table 4**). These correspond to metropolitan areas with populations greater than 100,000.

Illinois AQI's 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 audience about the AQI either immediately or on the evening news. In the Chicago and Cook County area, AQI's 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

I17 pol43 Tf Tc -0.75 Tw Tc 1.2147nment. f

Figure 9: 2000 Air Quality Index Summaries by Sector

Chicago Sector - Lake County

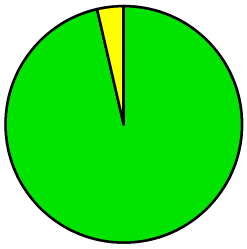
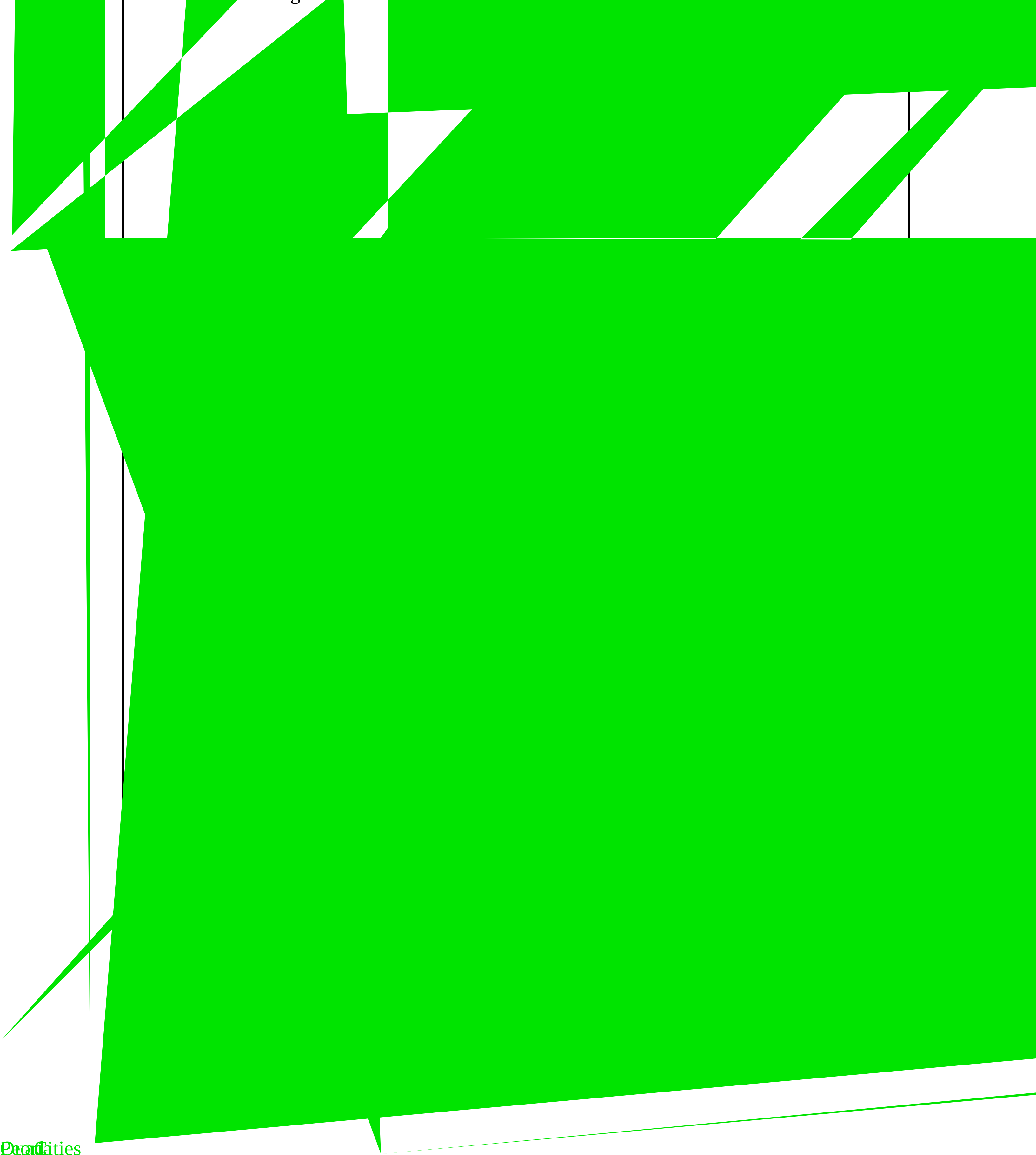


Figure 8: 200



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.

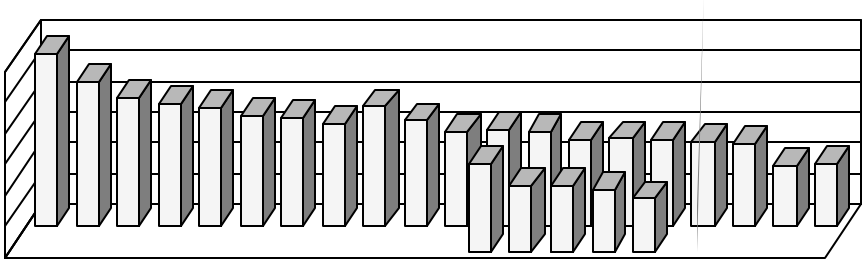
ISSIS currently includes emission data on approximately 8,000 active sources throughout the State. The ISSIS data includes source addresses, source emission totals, permit data such as expiration date and status, emission unit data such as name, hours of operation, operating rate, fuel parameters and 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 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 2000. 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 Tc 1.3538 Tw 04SSIS cur90ported db12 TDUSEPAon ratrej (
2ERS.TD -0.4389 Tc 1.9389 Tw3SC5obable 46the

VOLATILE ORGANIC MATERIAL



CARBON MONOXIDE

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

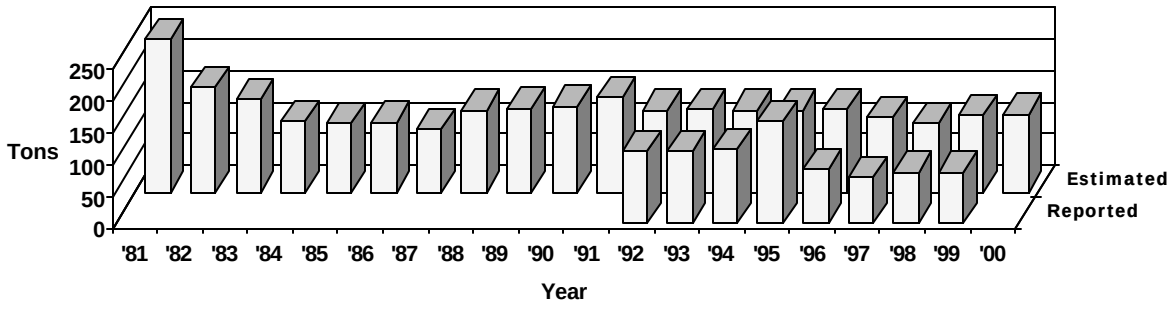
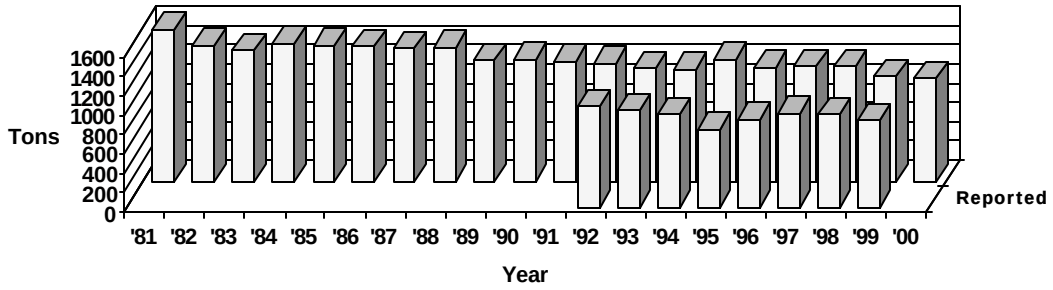


Table 7: Distribution of Carbon Monoxide Emissions - 2000

Category	Estimated Emissions (tons)	Category Contribution	Cumulative Percent
Primary Metal Production	51,029.4	41.6%	41.6% Perc76 -15 TD -0.0784 Tc 0

SULFUR DIOXIDE

Figure 13



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 2000.

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.

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
1500 Maybrook Drive, Room 202
Maywood, Illinois 60153
708/865-6165
Fax 708/865-6361

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

Iowa Dept. of Natural Resources
Wallace State Office Building
900 E. Grand Ave.
Des Moines, Iowa 50319-0034
515/281-5145
Fax 515/281-8895

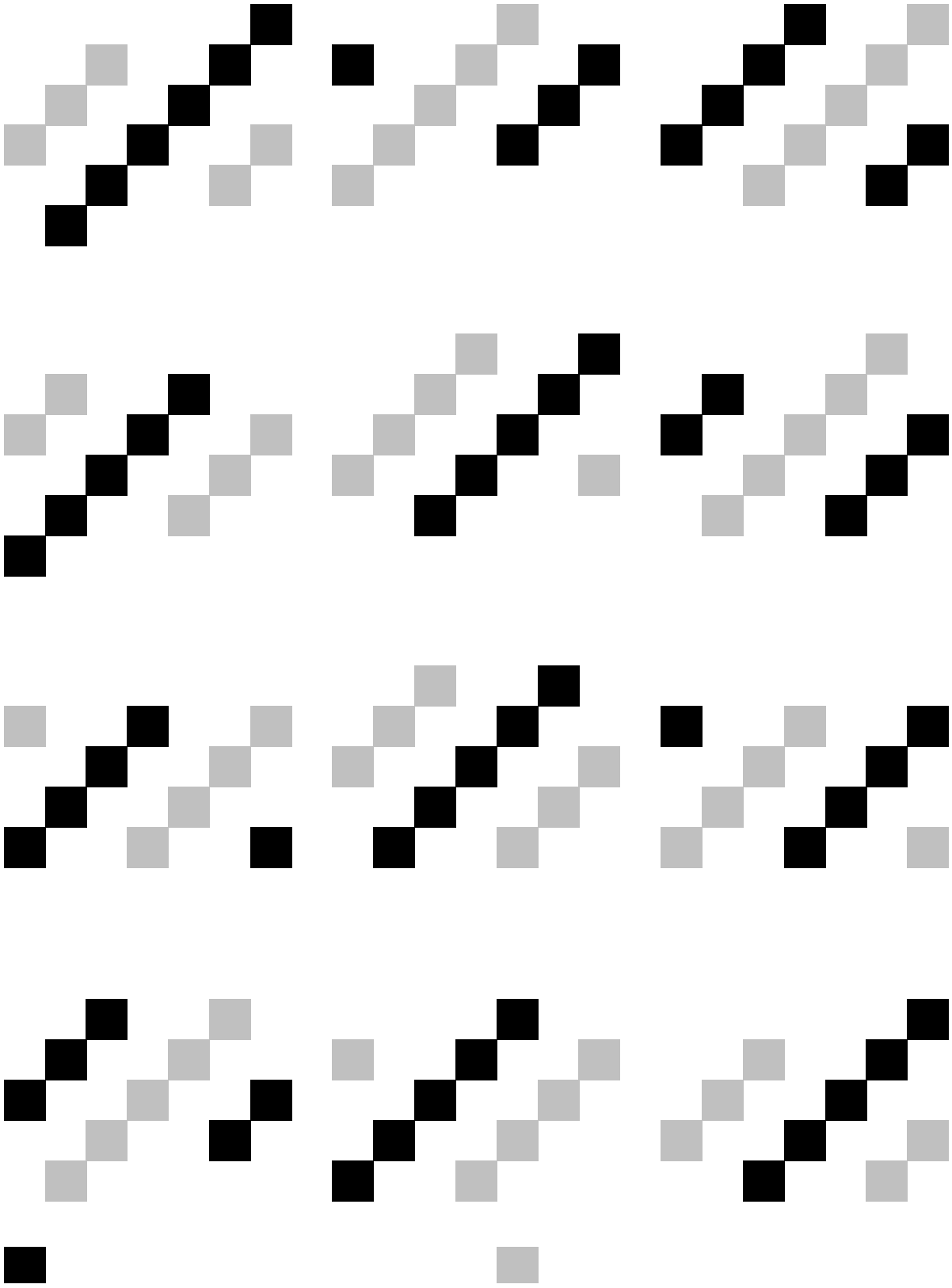
Kentucky Dept. for Environmental
Protection
Air Quality Division
803 Schenkel Lane
Frankfort, Kentucky 40601
502/573-3382
Fax 502/573-3787

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

2000 - Noncontinous Sampling Schedule



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

c.

Table A3

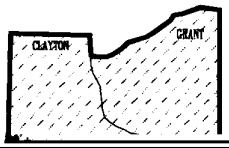
DISTRIBUTION OF AIR MONITORING INSTRUMENTS

	PAMS	NAMS	SLAMS	SPMS	TOTAL
Particulate Matter ($PM_{2.5}$)	0	0	35	3	38
Particulate Matter (PM_{10})	0	8	11	1	20
Total Suspended Particulates (TSP)	0	0	0	11	11
Lead	0	2	10	3	15
Sulfur Dioxide	0	12	15	2	29
Nitrogen Dioxide	4	2	5	0	11
Ozone	4	11	27	1	43
Carbon Monoxide	0	2	8	0	10
Volatile Organic Compounds	4	0	0	0	4
Wind Systems	4	0	0	22	26
Solar Radiation	4	0	0	6	10
Meteorological	4	0	0	0	4
Total	24	37	111	49	221

There were several changes to the monitoring network from 1999 to 2000. Continuing changes in the particulate network occurred at the end of 1999. A total of 8 PM_{10} sites were discontinued as part of the development of the $PM_{2.5}$ network. A total of 2 existing $PM_{2.5}$ sites were discontinued (Lyons and Nilwood) and a total of 12 new $PM_{2.5}$ sites were begun in the second phase of the $PM_{2.5}$ network implementation for a net gain of 10 sites. Also the ozone site in Hamilton County (Dale) was designated a SLAMS. Previously it had been a SPMS.

A map depicting the locations of the Statewide air monitoring network sites follows the AQCR map.

AIR QUALITY CONTROL REGIONS



Statewide Map of Air Monitoring Locations

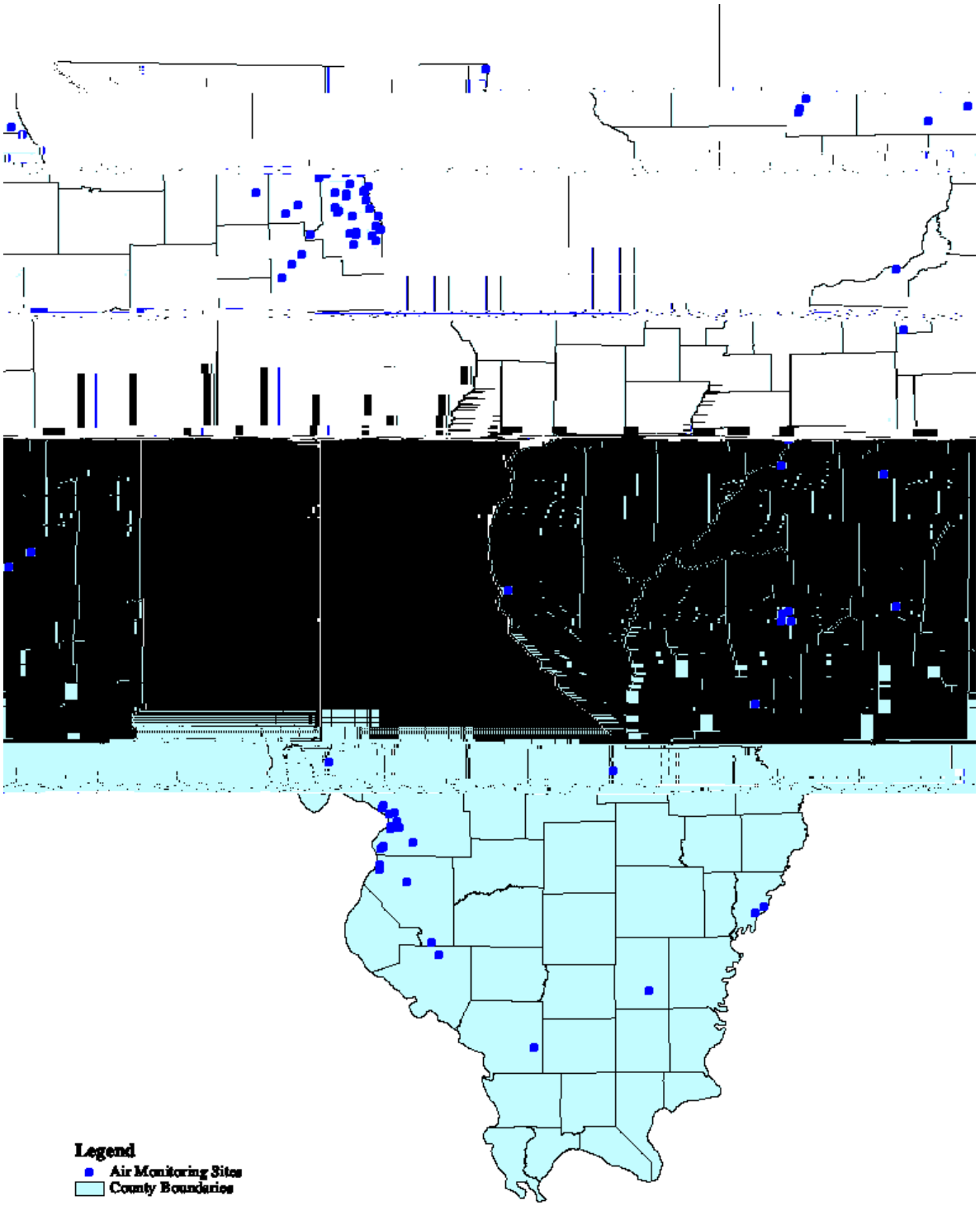


Table A4

2000
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. 4507.050	NAMS - SO_2, O_3
(1430024)	MacArthur & Hurlburt		E. 279.679	SPMS - WS/WD
Peoria	Commercial Building	Ill. EPA	N. 4508.585	SLAMS - CO
(1430036)	1005 N. University		E. 279.196	
Peoria	City Office Building	Ill. EPA	N. 4508.197	NAMS - PM_{10}
(1430037)	613 N.E. Jefferson		E. 281.675	SLAMS - Pb, $PM_{2.5}$
				SPMS - TSP
Peoria Heights	Peoria Heights H.S.	Ill. EPA	N. 4513.476	NAMS - O_3
(1431001)	508 E. Glen Ave.		E. 281.660	
66 EAST CENTRAL ILLINOIS INTRASTATE				
CHAMPAIGN COUNTY				
Bondville	SWS Climate Station	Ill. EPA/SWS	N. 4434.201	SLAMS - $PM_{2.5}$
(0191001)	Twp. Rd. 500 E.		E. 382.959	
Champaign	Booker T. Washington Elem. Sch.	Ill. EPA	N. 4442.017	SLAMS - SO_2,[d] O_3,
(0190004)	606 E. Grove		E. 395.248	$PM_{2.5}$[n]
McLEAN COUNTY				
Normal (NEW)	University H.S.	Ill. EPA	N. 4486.625	SLAMS - $PM_{2.5}$
(1132002)	Main & Gregory		E. 330.925	
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)				
COOK COUNTY				
Alsip	Village Garage	Cook County DEC	N. 4613.287	SLAMS - O_3, Pb, PM_{10}
(0310001)	4500 W. 123rd St.		E. 439.015	SPMS - TSP, WS/WD,
				$PM_{2.5}$

Table A4

2000
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
COOK COUNTY				
Calumet City (0318003)	Trailer 1703 State St.	Cook County DEC	N. 4608.775 E. 452.673	SLAMS - SO_2, NO/NO_2, O_3, CO
Chicago (0310060)	Carver H.S. 13100 S. Doty	Cook County DEC	N. 4611.597 E. 451.007	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 SLAMS - O_3 [d]
Chicago (NEW) (0310076)	Com Ed Maintenance Bldg. 7801 Lawndale	Cook County DEC	N. 4622.575 E. 440.655	SLAMS - $PM_{2.5}$
Chicago (0310014)	Farr Dormitory 3300 S. Michigan Ave.	Cook County DEC	N. 4631.393 E. 448.232	SLAMS - $PM_{2.5}$
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, RAIN
Chicago (0310052)	Mayfair Pump Sta. 4850 Wilson Ave.	Cook County DEC	N. 4645.900 E. 437.878	NAMS - Pb SLAMS - $PM_{2.5}$ SPMS - TSP
Chicago	Sears Tower	Ill. EPA	N. 4636.320	SPMS - O_3

PM(0310042)TD 0.12-0.032 .4297 Tc 0.3862 Tw (Ill. EPA) Tj0765 Tc 0l0w (PM) Tj 2)TD 0.125 351.75 0lk5T 47.25 315.75

Table A4

2000
SITE DIRECTORY

CITY NAME AIRS CODE	OWNER/

Table A4

2000
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
COOK COUNTY				
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
DUPAGE COUNTY				
Lisle	Morton Arboretum	Ill. EPA	N. 4629.361	SLAMS - SO_2^d,O_3
(0436001)	Route 53		E. 410.891	SPMS - WS/WD
Naperville	City Hall	Ill. EPA	N. 4624.841	SLAMS - $PM_{2.5}$
(0434002)	400 S. Eagle St.		E. 404.230	
KANE COUNTY				
Elgin	Larsen Junior H.S.	Ill. EPA	N. 4655.844	NAMS - O_3
(0890005)	665 Dundee Rd.		E. 394.654	
Elgin (NEW)	McKinley School	Ill. EPA	N. 4655.941	SLAMS - $PM_{2.5}$
(0890003)	258 Lovell St.		E. 394.048	
Geneva (DISC)	Delnor Comm. Hosp.	Ill. EPA/	N. 4636.982	SPMS - PM_{10}
(0892001)	300 Randall Rd.	Kane Co. Health Dept.	E. 388.691	
LAKE COUNTY				
Deerfield (DISC)	Woodland Park Sch.	Ill. EPA	N. 4669.608	NAMS - O_3
(0970001)	1321 Wilmont Rd.		E. 428.584	
Libertyville	Butterfield Elem. Sch.	Ill. EPA	N. 4682.279	SLAMS - O_3
(0973001)	1441 Lake St.		E. 419.062	SPMS - WS/WD
Waukegan	North Fire Station	Ill. EPA	N. 4693.854	NAMS - O_3
(0971002)	Golf & Jackson Sts.		E. 430.744	SPMS - WS/WD
Zion	Camp Logan	Ill. EPA	N. 4701.735	PAMS - O_3, NO/NO_2, VOC
(0971007)	Illinois Beach State Park		E. 433.384	WS/WD, SOL, MET
				SLAMS - $PM_{2.5}^n$
Mc HENRY COUNTY				
Cary	Cary Grove H.S.	Ill. EPA	N. 4674.862	NAMS - O_3
(1110001)	1st St. & Three Oaks Rd.		E. 397.562	SLAMS - $PM_{2.5}^n$
WILL COUNTY				
Braidwood	Com Ed Training Center	Ill. EPA	N. 4563.890	PAMS - O_3, NO/NO_2, VOC
(1971011)	36400 S. Essex Road		E. 400.198	WS/WD, SOL, MET
				SLAMS - CO^d, $PM_{2.5}$
Joliet	Pershing Elem. Sch.	Ill. EPA	N. 4597.636	NAMS - PM10
(1971002)	Midland & Campbell Sts.		E. 406.854	SLAMS - $PM_{2.5}$

Table A4

2000
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
WILL COUNTY				
Joliet	Water Plant West	Ill. EPA	N. 4590.279	NAMS - SO_2
(1970013)	Rte. 6 & Young Rd.		E. 401.284	SPMS - WS/WD
South Lockport	Fitness Forum	Ill. EPA	N. 4603.045	SLAMS - O_3
(1971008)	2021 Lawrence		E. 412.075	
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)				
ROCK ISLAND COUNTY				
Moline	Water Treatment Plant	Ill. EPA	N. 4598.361	NAMS - SO_2[d], O_3
(1610003)	30 18th St.		E. 707.461	SLAMS - $PM_{2.5}$
				SPMS - WS/WD, SOL
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)				
MADISON COUNTY				
Alton	Clara Barton Elem. Sch.	Ill. EPA	N. 4308.245	SLAMS - SO_2, O_3
(1190008)	409 Main St.		E. 747.375	SPMS - WS/WD
Alton	SIU Dental Clinic	Ill. EPA	N. 4309.690	SLAMS - $PM_{2.5}$
(1192009)	1700 Annex. St.		E. 747.752	
Edwardsville	RAPS Trailer	Ill. EPA	N. 4297.793	SLAMS - O_3
(1192007)	Poag Road		E. 757.118	SPMS - WS/WD, SOL
Granite City	Fire Station #1	Ill. EPA	N. 4287.661	SLAMS - $PM_{2.5}$
(1191007)	23rd & Madison		E. 748.745	
Granite City	Air Products	Ill. EPA	N. 4286.516	NAMS - PM_{10}
(1190010)	15th & Madison		E. 747.561	SLAMS - Pb
				SPMS - TSP
Granite City (DISC)	YMCA Building	Ill. EPA	N. 4287.364	SLAMS - CO, SO_2
(1190017)	2001 Edison		E. 747.923	
Granite City	VFW Building	Ill.EPA	N. 4287.099	NAMS - PM_{10}
(1190023)	2040 Washington		E. 748.427	SLAMS - $PM_{2.5}$
Maryville	Southwest Cable TV	Ill. EPA	N. 4290.389	SLAMS - O_3
(1191009)	200 W. Division		E. 242.739	SPMS - WS/WD
South Roxana	S. Roxana Grade Sch.	Ill. EPA	N. 4301.635	SLAMS - SO_2
(1191010)	Michigan St.		E. 755.442	
Wood River	Water Treatment Plant	Ill. EPA	N. 4305.084	NAMS - SO_2, O_3, PM_{10}
(1193007)	54 N. Walcott		E. 751.138	SLAMS - Pb, $PM_{2.5}$
				SPMS - TSP

Table A4

2000
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
MADISON COUNTY				
Wood River (1193009)	VIM Test Station 1710 Vaughn Road	Ill. EPA	N. 4305.709 E. 754.190	SLAMS - SO_2
Rural Madison County (1191013)	Chemetco Site 2-E	Chemetco	N. 4297.892 E. 752.506	SPMS - Pb
Rural Madison County (1191015)	Chemetco Site 4-SE	Chemetco	N. 4297.470 E. 752.268	SPMS - Pb
Rural Madison County (1191016)	Chemetco Site 5-N	Chemetco	N. 4298.370 E. 751.935	SPMS - Pb
RANDOLPH COUNTY				
Houston	Baldwin Site #2	Ill. EPA		

Tj 6.71UeE2 2.51Tc Tj Tc0.307 Tw(Ill.E) Tj 1n7e.8435 Tc0 Tw(N.) Tj 7.50 TD0 Tc-0.043

Table A4

2000
SITE DIRECTORY

CITY NAME AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
WINNEBAGO COUNTY				
Rockford	Fire Dept. Administration Bldg.	Ill. EPA	N. 4681.324	SLAMS - $PM_{2.5}$
(2010010)	204 S. 1st St.		E. 327.670	
Rockford	City Hall	Ill. EPA	N. 4681.390	SLAMS - CO
(2010011)	425 E. State		E. 327.817	
74 SOUTHEAST ILLINOIS INTRASTATE				
EFFINGHAM COUNTY				
Effingham	Central Junior H.S.	Ill. EPA	N. 4325.131	SLAMS - O_3
(0491001)	Route 45 South		E. 366.053	SPMS - WS/WD, SOL
HAMILTON COUNTY				
Dale	Dale Elem. School	Ill. EPA	N. 4206.378	SLAMS - O_3
(0650001)	SR 142		E. 368.939	
JACKSON COUNTY				
Carbondale	Maintenance Bldg.	Ill. EPA	N. 4177.177	SLAMS - PM_{10}
(0770004)	607 E. College	SIU	E. 305.348	
WABASH COUNTY				
Mount Carmel	Division St.	Public Service	N. 4249.965	SPMS - SO_2
(1850001)		of Indiana	E. 432.444	
Rural Wabash County	South of SR-1	Public Service	N. 4246.929	SPMS - SO_2
(1851001)		of Indiana	E. 427.104	
75 WEST CENTRAL ILLINOIS INTRASTATE				
ADAMS COUNTY				
Quincy	St. Boniface Elem. Sch.	Ill. EPA	N. 4421.320	SLAMS - $PM_{2.5}{}^{n}$, SO_2, O_3
(0010006)	732 Hampshire		E. 636.351	SPMS - WS/WD
JERSEY COUNTY				
Jerseyville	Illini Jr. H.S.	Ill. EPA	N. 4332.169	SLAMS - O_3
(0831001)	Liberty St. & County Rd.		E. 730.997	
MACON COUNTY				
Decatur	IEPA Trailer	Ill. EPA	N. 4414.538	NAMS - SO_2
(1150013)	2200 N. 22nd		E. 335.308	SLAMS - O_3, $PM_{2.5}$
				SPMS - WS/WD
MACOUPIN COUNTY				
Nilwood	IEPA Trailer	Ill. EPA	N. 4364.287	SLAMS - O_3, SO_2, Pb,PM_{10}
(1170002)	Heaton & Dubois		E. 258.053	SPMS - TSP, WS/WD, SOL
				CO_2, UV

Table A4

2000
SITE DIRECTORY

CITY NAME / AIRS CODE	ADDRESS	OWNER/ OPERATOR	UTM COORD. (km)	EQUIPMENT
SANGAMON COUNTY				
Springfield	Sewage Treatment Plant	Ill. EPA	N. 4408.650	NAMS - SO_2
(1670006)	3300 Mechanicsburg Rd.		E. 278.194	SPMS - WS/WD
Springfield	Federal Building	Ill. EPA	N. 4408.623	SLAMS - CO
(1670008)	6th St. & Monroe		E. 273.327	
Springfield	Public Health Warehouse	Ill. EPA	N. 4413.490	SLAMS - O_3
(1670010)	2875 N. Dirksen Pkwy.		E. 277.134	
Springfield	Agriculture Building	Ill. EPA	N. 4412.240	SLAMS - PM_{10}, $PM_{2.5}$
(1670012)	State Fair Grounds		E. 273.720	

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)
SO_2	- Sulfur Dioxide
NO	- Nitric Oxide
NO_2	- Nitrogen Dioxide
CO	- Carbon Monoxide
CO_2	- Carbon Dioxide
O_3	- Ozone
Pb	- Lead
WS/WD	- Wind Speed and Wind Direction
SOL	- Total Solar Radiation
MET	- Temperature, Relative Humidity, Barometric Pressure
UV	- Ultra-violet Radiation
RAIN	- Rainfall
VOC	- Volatile Organic Compounds
(n)	- Instrument installed during 2000
(d)	- Instrument removed during 2000
NEW	- Site started during 2000
DISC	- Site discontinued during or at the end of 2000

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

AIR QUALITY DATA INTERPRETATION

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 and 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 in pollution both in terms of acute and chronic health effects.

The following data tables detail and summarize air quality in Illinois in 2000. 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

2000
OZONE IN EXCESS OF THE 8-HOUR
PRIMARY STANDARD OF 0.08 PARTS PER MILLION

DATE	STATION	ADDRESS	MAXIMUM VALUE (PPM)
May 31	Nilwood	Heaton & DuBois	0.089
June 8	Dale	Route 142	0.088
	Nilwood	Heaton & DuBois	0.088
June 9	Braidwood	36400 S. Essex Rd.	0.086
	Dale	Route 142	0.085
	Nilwood	Heaton & DuBois	0.091
	Springfield	2875 N. Dirksen	0.091
August 15	East St. Louis	13th & Tudor	0.087
	Maryville	200 W. Division	0.089
August 22	Jerseyville	Liberty St.	0.087

Table B2

2000
OZONE

STATION	ADDRESS	VALID APR-OCT	NUMBER OF DAYS GREATER THAN 0.12 PPM	HIGHEST SAMPLES (parts per million) 1-HOUR 1ST	2ND	3RD	4TH	8-HOUR 1ST	2ND	3RD	4TH
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)											
PEORIA COUNTY											
Peoria	Hurlburt & MacArthur	211	0	0.084	0.083	0.081	0.080	0.075	0.073	0.071	0.071
Peoria Heights	508 E. Glen	213	0	0.086	0.082	0.081	0.080	0.074	0.074	0.073	0.073
66 EAST CENTRAL ILLINOIS INTRASTATE											

Table B2

2000
OZONE

STATION	ADDRESS	VALID APR-OCT	NUMBER OF DAYS GREATER THAN 0.12 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											
Moline	30 18th St.	204	0	0.081	0.074	0.072	0.067	0.070	0.068	0.067	0.064
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)											
MADISON COUNTY											
Alton	409 Main St.	198	0	0.111	0.107	0.104	0.093	0.085	0.082	0.079	0.077
Edwardsville	Poag Road	208	0	0.112	0.098	0.094	0.091	0.091	0.079	0.078	0.078
Maryville	200 W. Division	214	0	0.122	0.112	0.103	0.101	0.090	0.089	0.088	0.078
Wood River	54 N. Walcott	214	0	0.116	0.099	0.099	0.095	0.089	0.081	0.079	0.078
RANDOLPH COUNTY											
Houston	Twp Rds. 150 & 45	214	0	0.092	0.091	0.089	0.088	0.086	0.078	0.078	0.076
ST. CLAIR COUNTY											
East St. Louis	13th & Tudor	214	0	0.110	0.105	0.103	0.102	0.090	0.087	0.086	0.084
73 ROCKFORD - JANESVILLE - BELOIT INTERSTATE (IL - WI)											
WINNEBAGO COUNTY											
Loves Park	1405 Maple	213	0	0.084	0.082	0.080	0.079	0.076	0.075	0.075	0.070
Rockford	1500 Post	214	0	0.086	0.084	0.081	0.078	0.078	0.076	0.075	0.069
74 SOUTHEAST ILLINOIS INTRASTATE											
EFFINGHAM COUNTY											
Effingham	Route 45 South	213	0	0.086	0.085	0.085	0.080	0.084	0.082	0.079	0.074
HAMILTON COUNTY											
Dale	Route 142	211	0	0.097	0.096	0.095	0.093	0.088	0.085	0.081	0.080
75 WEST CENTRAL ILLINOIS INTRASTATE											
ADAMS COUNTY											
Quincy	732 Hampshire	213	0	0.094	0.088						

Table B3

2000
PARTICULATE MATTER (PM_{10}) VALUES IN EXCESS OF THE 24-HOUR PRIMARY STANDARD OF 150 MICROGRAMS PER CUBIC METER

STATION	ADDRESS	DATE	VALUE (ug/m^3)
75 NORTH CENTRAL ILLINOIS INTRASTATE			
LASALLE COUNTY			
Oglesby	308 Portland	December 25	159

Table B4

2000

PARTICULATE MATTER (PM_{10})

(micrograms per cubic meter)

STATION	ADDRESS	SAMPLING FREQUENCY	NUMBER OF SAMPLES TOTAL	>150 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	6-day	56	0	83	54	49	48	24
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd St.	6-day	60	0	64	50	42	41	26
Blue Island	12700 Sacramento	6-day	60	0	85	66	58	51	30
Chicago - Carver	13100 S. Doty	6-day	55	0	92	75	66	51	+
Chicago - Washington ES	3611 E. 114th St.	1-day	366	0	129	91	73	70	27
Hoffman Estates	1100 W. Higgins Rd.	6-day	54	0	60	50	47	32	21
Lyons Township	50th St. & Glencoe Ave.	1-day	356	0	133	128	109	105	35
Merrionette Park	1800 Meadow Lane Dr.	6-day	57	0	72	52	49	44	27
Midlothian	15205 Crawford Ave.	6-day	60	0	49	46	43	39	24
Summit	60th St. & 74th Ave.	6-day	58	0	85	77	64	62	32
KANE COUNTY									
Geneva	300 Randall Rd.	6-day	40	0	41	38	34	32	+
WILL COUNTY									
Joliet	Midland & Campbell Sts.	6-day	57	0	72	59	46	38	+
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	6-day	58	0	88	82	70	65	36
Granite City	2040 Washington	1-day	329	0	120	116	115	115	46
Wood River	54 N. Walcott	6-day	60	0	99	76	53	51	29
ST. CLAIR COUNTY									
East St. Louis	13th St. & Tudor Ave.	6-day	60	0	81	54	49	49	32
71 NORTH CENTRAL ILLINOIS INTRASTATE									
LASALLE COUNTY									
Oglesby	308 Portland Ave.	1-day	362	1	159	140	83	83	26
74 SOUTHEAST ILLINOIS INTRASTATE									
JACKSON COUNTY									
Carbondale	607 E. College	1-day	60	0	56	55	51	48	23

74 SOUTHEAST I4n.c -L25 12 re f BT 50.25 106.30.2j 57.7574j 9 0 +

Table B4

2000

PARTICULATE MATTER (PM_{10})

(micrograms per cubic meter)

ANNUAL

Table B5

2000
SHORT-TERM TRENDS
PARTICULATE MATTER (PMPM

Table B5

2000
SHORT-TERM TRENDS
PARTICULATE MATTER (PM_{10})

ANNUAL ARITHMETIC MEANS (ug/m^3)

STATION	ADDRESS	1995	1996	1997	1998	1999	2000
75 WEST CENTRAL ILLINOIS INTRASTATE							
MACOUPPIN COUNTY							
Nilwood	Heaton & Dubois	18	17	19	22	-	23
SANGAMON COUNTY							
Springfield	State Fair Grounds	-	-	23	25	20	26

See Appendix B.1)

- Station not in operation during the year.

Table B6

2000

PARTICULATE MATTER FINE ($PM_{2.5}$)

Table B6

2000

PARTICULATE MATTER FINE ($PM_{2.5}$)

(micrograms per cubic meter)

STATION	ADDRESS	SAMPLING FREQUENCY	NUMBER OF SAMPLES TOTAL	NUMBER OF SAMPLES >65 ug/m^3	HIGHEST SAMPLES 1st	2nd	3rd	4th	ANNUAL ARITHMETIC MEAN
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)									
ROCK ISLAND COUNTY									
Moline	30 18th St.	6-day	59	0	33.4	27.8	27.3	27.0	13.6
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Alton	1700 Annex St.	3-day	120	0	37.5	36.6	36.3	36.0	16.0
Granite city	23rd & Madison	3-day	119	0	41.3	37.1	33.5	31.5	17.4
Granite City	2040 Washington	3-day	115	0	42.6	38.4	37.4	37.2	- 1

0 1

20.25 0 TD -0.076 3286 0 Tw (37.4) Ti 15.75 0 TD 0 Tc -0.0435 Tw ( ) Ti 20.275 0 Ti 9 0 T2.9c 0 Tw (37.4) Ti 15.75 0 TD 0 Tc -0.0435 Tw ( ) Ti 20.25 0 TD

Table B7

2000
CARBON MONOXIDE
(parts per million)

3.4

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	8414	0	0	7.9	6.7	3.6.96 Tw 0.73 ROCKFORD TD -080 TD -0.08 6.6	4.9	3.4	3.2
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)										
COOK COUNTY				3.66114.21	4.4	4.4	3.6			
Calumet City 8667 0	1703 State St. 4.3	4.48667	3.6 0	0	4.5	4.4	4.3	4.1	3.6	3.4
Chicago - CTA Building	320 S. Franklin	8588	0	0	3.0		3. Tc 0 Tw (4.1) Tj 11.25 0 7 -0-3w (3.4 0 TD 75			

Table B9

2000
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	8673	0	0	0.094	0.094	0.045	0.045	0.006
TAZEWELL COUNTY									
Pekin	272 Derby	8660	0	0	0.372	0.187	0.069	0.064	0.005
66 EAST CENTRAL ILLINOIS INTRASTATE									
CHAMPAIGN COUNTY									
Champaign	606 E. Grove	8646	0	0	0.048	0.043	0.017	0.016	0.002
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Bedford Park	7800 W. 65th St.	8594	0	0	0.056	0.056	0.049	0.032	0.006
Blue Island	12700 Sacramento	8595	0	0	0.109	0.105	0.078	0.078	0.011
Calumet City	1703 State Sr.	8529	0	0	0.114	0.103	0.042	0.037	0.010
Chicago - CTA	320 S. Franklin	8650	0	0	0.067	0.067	0.028	0.028	0.005
Chicago - SE Police	103rd & Luella	8716	0	0	0.077	0.045	0.022	0.022	0.004
Chicago - Washington ES	3611 E. 114th St.	8484	0	0	0.053	0.048	0.019	0.019	0.006
Cicero	1830 S. 51st Ave.	8710	0	0	0.061	0.055	0.027	0.027	0.005
Lemont	729 Houston 0.027								

Table B9

2000
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
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Alton	409 Main St.	8629	0	0	0.099	0.091	0.026	0.025	0.005
Granite City	2001 Edison	8157	0	0	0.061	0.050	0.031	0.020	0.004
South Roxana	Michigan Ave.	8704	0	0	0.104	0.079	0.039	0.037	0.004
Wood River	54 N. Walcott	8670	0	0	0.100	0.071	0.027	0.026	0.006
Wood River	1710 Vaughn Rd.	8696	0	0	0.141	0.124	0.043	0.042	0.008

Table B10

2000
SHORT-TERM TRENDS
SULFUR DIOXIDE

STATION	ADDRESS	ANNUAL MEANS (ppm) 1995	1996	1997	1998	1999	2000
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)							
PEORIA COUNTY							
Peoria	Hurlburt & MacArthur	0.007	0.007	0.007	0.007	0.007	0.006
TAZEWELL COUNTY							
Pekin	272 Derby	0.008	0.006	0.007	0.006	0.005	0.005
66 EAST CENTRAL ILLINOIS INTRASTATE							
CHAMPAIGN COUNTY							
Champaign	606 E. Grove	0.003	0.003	0.004	0.003	0.002	0.002
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Bedford Park	7800 W. 65th St.	0.009	0.007	0.008	0.007	0.008	0.006
Blue Island	12700 Sacramento	0.005	0.005	0.007	0.008	0.009	0.011
Calumet City	1703 State St.	0.005	0.003	0.004	0.004	0.009	0.010
Chicago -CTA	320 S. Franklin	+	0.005	0.005	0.005	0.004	0.005
Chicago - SE Police	103rd & Luella	0.003	0.002	0.002	0.002	0.003	0.004
Chicago - Washington ES	3611 E. 114th St.	0.006	0.005	0.006	0.005	0.006	0.006
Cicero	1830 S. 51st Ave.	0.004	0.004	0.006	0.005	0.006	0.005
Lemont	729 Houston	0.005	0.006	0.005	0.006	0.006	0.006
DuPAGE COUNTY							
Lisle	Morton Arboretum	0.003	0.003	0.004	0.003	0.003	0.003
WILL COUNTY							
Joliet	Rte 6 & Young Rd.	0.004	0.004	0.005	0.004	0.005	0.005
69 METROPOLITAN QUAD CITIES INTERSTATE (IA - IL)							
ROCK ISLAND COUNTY							
Moline	0.003						

Table B10

Table B11

2000
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 INTER Tw 0.75 0.75 re f 41.25 6 (IL Tc 0 T7 Tw (1ST) Tj 4j 33 0 TD 0 Tc							

Table B12

2000
SHORT-TERM TRENDS
NITROGEN DIOXIDE

ANNUAL MEANS (ppm)

Table B13

2000
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		1					
Peoria	613 N.E. Jefferson	0	0.02	0.02	0.01	0.01	0.01
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)							
COOK COUNTY							
Alsip	4500 W. 123rd St.	0	0.01	0.01	0.01	0.02	0.01
Chicago - Cermak	735 W. Harrison	0	0.04	0.08	0.15	0.06	0.08
Chicago - Mayfair	4850 Wilson Ave.	0	0.02	0.02	0.02	0.02	0.02
Chicago - Washington	3535 E. 114th St.	0	0.03	0.04	0.03	0.04	0.04
Maywood	1500 Maybrook Dr.	0	+	0.05	0.04	0.03	+
Schiller Park	4243 N. Mannheim Rd.	0	0.01	0.02	0.02	0.01	0.01
Summit	60th St. & 74th Ave.	0	0.02	0.02	0.02	0.02	0.02
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)							
MADISON COUNTY							
Granite City	15th & Madison	0	0.08	0.05	0.08	0.07	0.07
Wood River	54 N. Walcott	0	0.07	0.08	0.09	0.03	0.07
Chemetco - 2E	Rural County	1	0.98	0.76	0.06	1.57	0.84
Chemetco - 4SE	Rural County	0	0.76	0.52	0.29	0.39	0.49
Chemetco - 5N	Rural County	1	0.90	1.76	0.88	0.35	0.97
ST. CLAIR COUNTY							

Table B14

2000
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	56	0.003	0.003	0.001	56	0.000	0.000	0.000
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	500 W. 123rd. St.	60	0.005	0.003	0.001	NA			
Chicago - Cermak	735 W. Harrison	60	0.003	0.003	0.001	NA			
Chicago - Mayfair	4850 Wilson Ave	57	0.007	0.004	0.001	NA			
Chicago - Washington	3535 E. 114th St.	59	0.004	0.004	0.001	NA			
Maywood	1500 Maybrook Dr.	39	0.004	0.003	+	NA			
Schiller Park	4743 N. Mannheim Rd.	60	0.003	0.002	0.001	60	0.000	0.000	0.000
Summit	60th St. & 74th Ave.	60	0.007	0.004	0.001	NA			
70 METROPOLITAN ST. LOUIS INTERSTATE (IL - MO)									
MADISON COUNTY									
Granite City	15th & Madison	59	0.010	0.008	0.002	59	0.000	0.000	0.000
Wood River	54 N. Walcott	60	0.005	0.004	0.001	60	0.000	0.000	0.000

Table B14

2000
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
			CADMIUM				**CHROMIUM**		
65 BURLINGTON - KEOKUK INTERSTATE (IA - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	56	0.000	0.000	0.000	56	0.006	0.003	0.000

67 METROPOLITAN CHICAG05 0.75 12 re f 570.75 554sTc -0.0435 Tw ( ) Tj 20.25 0 TD -0. Tc2TD -0.306 Tc

Table B14

2000
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 - IL)									
PEORIA COUNTY									
Peoria	613 N.E. Jefferson	56	2.31	1.60	0.50	56	0.111	0.082	0.021
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd. St.	60	1.44	1.43	0.51	60	0.127	0.112	0.029
Chicago - Cermak	735 W. Harrison	60	6.16	2.54	1.58	60	0.111	0.110	0.053
Chicago - Mayfair	4850 Wilson Ave	57	3.40	3.02	0.95	57	0.098	0.086	0.034
Chicago - Washington	3535 E. 114th St.	59	37.09	13.18	2.00	59	1.292	0.675	0.172
Maywood	1500 Maybrook Dr.	39	29.31						

Table B14

2000
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				**SELENIUM**		

Table B14

2000
FILTER ANALYSIS DATA
(micrograms per cubic meter)

re 306 Tw	STATION	ADDRESS	TOTAL SAMPLES	HIGHEST 1st	2nd	ARITH. MEAN	TOTAL SAMPLES	HIGHEST 1st	2nd	ARITH. MEAN
						VANADIUM				
65	**BURLINGTON - KEOKUK INTERSTATE (IA - IL)**									**(MEAN -0.1461**

Table B14

2000
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	13.7	10.6	4.3	57	19.3	17.2	7.3
67 METROPOLITAN CHICAGO INTERSTATE (IL - IN)									
COOK COUNTY									
Alsip	4500 W. 123rd. St.	60	14.9	14.5	5.2	60	14.2	13.8	7.2
Chicago - Cermak	735 W. Harrison	60	16.6	14.0	4.8	60	24.4	23.7	8.1
Chicago - Mayfair	4850 Wilson Ave	57	16.7	12.2	4.9	57	17.3	14.5	7.2
Chicago - Washington	3535 E. 114th St.	57	TD -8.1114thATSt.0.0479 Tw (1160th r144TATc BT1150th25 450 StDton4) Tj 14.9125 0 TD 1114th S7(						

Table B15

2000
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS
(parts per billion carbon)

		HIGHEST SAMPLES (ppbc)						
						24-HOUR		JUN - AUG
STATION	ADDRESS	1ST	2ND	1ST	2ND	1ST	2ND	AVERAGE
COMPOUNDS								

Table B15

2000
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS
(parts per billion carbon)

		HIGHEST SAMPLES (ppbc)						
		1-HOUR		3-HOUR		24-HOUR		JUN - AUG
STATION	ADDRESS	1ST	2ND	1ST	2ND	1ST	2ND	AVERAGE
N - Hexane		42.7	20.2			8.6	4.5	1.2
N - Heptane		31.4	24.3			4.7	2.8	0.6
N - Octane		10.1	6.6			2.2	1.2	0.1
N - Nonane		10.7	9.7			2.2	1.7	0.2
Cyclopentane		5.6	2.5			1.0	0.3	0.1
Isoprene		13.4	13.2			5.6	3.9	1.7
2,2 - Dimethylbutane		12.1	5.1			1.0	0.9	0.1
2,4 - Dimethylpentane		36.8	18.8			6.8	3.7	0.6
Cyclohexane		7.8	5.3			1.4	0.6	0.1
3 - Methylhexane		37.9	16.2			6.4	3.3	0.7
2,2,4 - Trimethylpentane		153.5	87.7			29.8	18.1	3.1
2,3,4 - Trimethylpentane		43.7	26.8			9.2	5.6	0.9
3 - Methylheptane		8.0	7.8			1.6	1.2	0.1
Methylcyclohexane		57.3	33.4			3.6	3.5	0.3
Methylcyclopentane		33.5	16.1			5.8	3.3	0.6
2 - Methylhexane		31.3	15.4			3.1	2.7	0.5
1 - Butene		1.8	1.7			0.3	0.3	0.1
2,3 - Dimethylbutane		23.0	9.7			4.4	1.6	0.5
2 - Methylpentane		59.4	24.6			10.6	4.5	1.3
2,3 - Dimethylpentane		43.4	22.9			9.1	4.7	1.0
2 - Methylheptane		9.6	5.8			2.0	0.7	0.1
Benzene		14.6	10.1			5.2	2.8	1.1
Toluene		112.1	54.6			31.1	13.0	4.2
Ethylbenzene		9.9	3.7			3.8	2.4	0.3
O - Xylene		29.2	21.4			6.2	3.3	0.6
M/P Xylene		70.4	50.8			13.0	8.5	1.6
1,3,5 - Trimethylbenzene		14.4	12.1			2.6	1.6	0.2
1,2,4 - Trimethylbenzene		39.6	38.1			6.3	4.8	0.6
N - Propylbenzene		3.8	2.8			0.7	0.5	0.1
Isopropylbenzene		3.5	2.7			0.8	0.4	0.1
Styrene		3.9	2.7			0.9	0.4	0.1
N-Decane		4.3	2.4			0.3	0.2	0.0
N-Undecane		3.8	3.5			1.3	0.7	0.1
O-Ethyltolune		7.5	6.4			1.4	0.4	0.1
M-Ethyltolune		23.8	10.5			4.1	1.3	0.1
P-Ethyltolune		11.5	5.3			1.8	0.6	0.1
M-Diethylbenzene		5.7	2.9			1.0	0.5	0.1
P-Diethylbenzene		14.0	9.3			1.8	1.4	0.1
1,2,3 Trimethylbenzene		15.0	9.7			3.8	1.9	0.5
Formaldehyde[1]				NA	NA	3.2	2.6	1.8
Acetaldehyde[1]				NA	NA	1.1	0.8	0.5

[1] Values in ppb (volume)
NA – data not available

Table B15

2000
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS

[redacted]

Table B15

2000
(JUNE - AUGUST)

VOLATILE ORGANIC COMPOUNDS
(parts per billion carbon)

STATION	HIGHEST SAMPLES (ppbc) 1-HOUR	3-HOUR	24-HOUR	JUN - AUG

APPENDIX C
PRECISION AND ACCURACY DATA SUMMARY AND TABLES

C.1 PRECISION AND ACCURACY DATA SUMMARY

The U.S. Environmental Protection Agency (USEPA) regulations governing the SLAMS/NAMS network were published in 40 CFR, Part 58. These regulations specify, in addition to other criteria, the minimum quality assurance requirements for monitoring of pollutants for which National Ambient Air Quality Standards (NAAQS) have been established. This section summarizes one aspect of the quality assurance program, that being, the assessment of the quality of the monitoring data by the determination of the accuracy and precision of the monitoring equipment. Each agency that is responsible for a portion of the SLAMS network is required to perform this precision and accuracy testing. Illinois EPA and Cook County DEC are responsible for the testing of their respective parts of the Illinois SLAMS network. USEPA has established guidelines for evaluating the upper and lower 95% probability limits. The quarterly probability limits Twed.11 to +r5% and the quarterly probability limits k i accuracy T2d3292 Twi0.78 Tc 1.905g1 um 905g16.7195.75 0

Table C1

2000
PRECISION DATA SUMMARY

PARAMETER	SUMMARY PERIOD	NUMBER OF SITES	TOTAL SAMPLES	PROBABILITY LIMITS (percent) UPPER 95%	LOWER 95%
SITES OPERATED BY ILLINOIS EPA					
Sulfur Dioxide	1st Quarter	21	247	3	-5
	2nd Quarter	21	240	5	-7
	3rd Quarter	21	231	6	-7
	4th Quarter	21	220	4	-7
	Year		938	4	-6
Ozone	1st Quarter	32	311	7	-6
	2nd Quarter	33	406	5	-8
	3rd Quarter	33	379	5	-6
	4th Quarter	32	272	7	-9
	Year		1368	6	-7
Carbon Monoxide	1st Quarter	7	80	8	-4
	2nd Quarter	7	81	9	-3
	3rd Quarter	7	76	5	-5
	4th Quarter	7	77	6	-5
	Year		314	7	-4
Nitrogen Dioxide	1st Quarter	5	56	5	-8
	2nd Quarter	7	72	5	-14
	3rd Quarter	7	70	7	-13
	4th Quarter	5	46	4	-6
	Year		246	6	-11
Inhalable Particulate PM_{10}	1st Quarter	1	14	23	-16
	2nd Quarter	1	13	17	-14
	3rd Quarter	1	14	5	-11
	4th Quarter	1	9	6	-14
	Year		50	13	-14
Inhalable Particulate	1st Quarter				

Table C1

2000
PRECISION DATA SUMMARY

PARAMETER	SUMMARY PERIOD	NUMBER OF SITES	TOTAL SAMPLES	PROBABILITY LIMITS (percent) UPPER 95%	LOWER 95%
SITES OPERATED BY COOK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL					
Sulfur Dioxide	1st Quarter	6	82	4	-4
	2nd Quarter	6	76	2	-3
	3rd Quarter	6	78	4	-5
	4th Quarter	6	79	5	-7
	Year		315	4	-5
Ozone	1st Quarter	3	38	4	-5
	2nd Quarter	10	117	4	-4
	3rd Quarter	10	123	3	-4
	4th Quarter	10	65	4	-5
	Year		343	4	-4
Carbon Monoxide	1st Quarter	3	38	3	-4
	2nd Quarter	3	41	2	-4
	3rd Quarter	3	38	0	-4
	4th Quarter	3	37	4	-5
	Year		154	2	-4
Nitrogen Dioxide	1st Quarter	4	53	6	-4
	2nd Quarter	4	47	5	-3
	3rd Quarter	4	46	5	-5
	4th Quarter	4	46	4	-6
	Year		192	5	-4
Inhalable Particulate PM_{10}	1st Quarter	1	14	16	-9
	2nd Quarter	1	15	24	-6
	3rd Quarter	1	15	4	-11
	4th Quarter	1	15	14	-26
	Year		59	14	-13
Inhalable Particulate $PM_{2.5}$	1st Quarter	3	33	22	-25
	2nd Quarter	3	34	12	-11
	3rd Quarter	3	38	9	-8
	4th Quarter	3	25	18	-10
	Year		130	15	-14
Lead	1st Quarter	1	15	(1)	(1)
	2nd Quarter	1	14	(1)	(1)
	3rd Quarter	1	13	(1)	(1)
	4th Quarter	1	15	(1)	(1)
	Year		57	(1)	(1)

1. All collected samples were below USEPA established minimums. Probability Limits could not be calculated.

Table C2

2000
ACCURACY DATA SUMMARY

PARAMETER	SUMMARY PERIOD	NUMBER OF AUDITS	PROBABILITY LIMITS LEVEL 1 +95%	LEVEL 1 -95%	LEVEL 2 +95%	LEVEL 2 -95%	LEVEL 3 +95%	LEVEL 3 -95%
SITES OPERATED BY ILLINOIS EPA								
Sulfur Dioxide	1st Quarter	6	6	-11	5	-11	1	-10
	2nd Quarter	5	4	-16	5	-14	5	-10
	3rd Quarter	5	-5	-14	-4	-11	-2	-11
	4th Quarter	4	9	-13	3	-12	4	-15
	Year	20	4	-14	2	-12	2	-12
Ozone	1st Quarter	9	10	-7	9	-10	6	-10
	2nd Quarter	8	9	-12	7	-12	8	-11
	3rd Quarter	9	15	-9	9	-6	-1	-9
	4th Quarter	7	12	-16	7	-9	5	-8
	Year	33	12	-11	8	-9	4	-10
Carbon Monoxide	1st Quarter	2	9	-8	4	-5	3	-7
	2nd Quarter	2	9	-11	8	-7	8	-7
	3rd Quarter	2	9	-4	3	+3	6	0
	4th Quarter	2	7	-1	4	-6	0	-2
	Year	8	8	-6	5	-4	4	-4
Nitrogen Dioxide	1st Quarter	1[(1)]	NA	NA	NA	NA	NA	NA
	2nd Quarter	2	6	-3	8	-4	7	-4
	3rd Quarter	2	22	-18	6	+1	2	+1
	4th Quarter	2	11	+2	19	-9	11	-10
	Year	7	13	-6	11	-4	7	-4
Inhalable Particulate PM_{10}	1st Quarter	3			-3	-10		

Table C2

2000
ACCURACY DATA SUMMARY

PARAMETER	SUMMARY PERIOD	NUMBER OF AUDITS	PROBABILITY LIMITS LEVEL 1 +95%	LEVEL 1 -95%	LEVEL 2 +95%	LEVEL 2 -95%	LEVEL 3 +95%	LEVEL 3 -95%
SITES OPERATED BY COOK COUNTY DEPARTMENT OF ENVIRONMENTAL CONTROL								
Sulfur Dioxide	1st Quarter	6	9	-2	11	-2	8	-5
	2nd Quarter	5	9	-5	7	-5	4	-5
	3rd Quarter	6	4	+1	3	-2	5	-1
	4th Quarter	6	8	-3	6	-3	5	-2
	Year	23	8	-2	7	-3	6	-3
Ozone	1st Quarter	3	9	-7	2	0	2	-1
	2nd Quarter	10	8	-5	5	-12	8	-11
	3rd Quarter	10	3	-6	5	-5	5	-5
	4th Quarter	10	5	-7	6	-6	6	-3
	Year	33	6	-6	4	-6	5	-5
Carbon Monoxide	1st Quarter	3	6	-2	2	-1	2	-1
	2nd Quarter	2	9	-2	2	0	6	-4
	3rd Quarter	3	8	0	2	-1	8	-4
	4th Quarter	3	8	0	2	-1	8	-4
	Year	11	8	-1	2	-1	6	-3
Nitrogen Dioxide	1st Quarter	3	4	-1	4	-3	2	-2
	2nd Quarter	2	4	-9	5	-9	5	-9
	3rd Quarter	2	0	-4	-2	-5	-4	-5
	4th Quarter	4	6	-3	5	-3	4	-3
	Year	11	4	-4	3	-5	2	-5
Inhalable Particulate PM_{10}	1st Quarter	7			9	-4		
	2nd Quarter	3			8	+5		
	3rd Quarter	3			5	-2		
	4th Quarter	3			14	-11		
	Year	15			9	-3		
Inhalable Particulate $PM_{2.5}$	1st Quarter	10			8	-10		
	2nd Quarter	10			4	-8		
	3rd Quarter	10			7	-3		
	4th Quarter	10			2	-3		
	Year	40			5	-6		
Lead	1st Quarter	3	4	-6	4	-2		
	2nd Quarter	3	1	0	-4	-5		
	3rd Quarter	3	-6	-8	-5	-5		
	4th Quarter	3	-6	-7	-6	-7		
	Year	12	-2	-5	-3	-5		

1. Less than two audits were performed for this parameter during the quarter. Probability Limits could not be calculated.

APPENDIX D
POINT SOURCE EMISSION INVENTORY SUMMARY TABLES

Table D1

2000
Point Source Emission Distribution (Tons/Year)

Category	Particulate Matter	Sulfur Dioxide	Nitrogen Oxides	Volatile Organic Material	Carbon Monoxide
External Fuel Combustion					
Electric Generation	17,042.7	856,754.9	294,672.3	1,235.9	12,119.2
Industrial	3,788.7	69,164.5	49,443.5	1,232.2	11,175.2
Commercial/Institutional	861.6	12,922.1	6,056.1	250.0	2,655.1
Space Heating	22.4	157.1	568.2	26.0	118.3
Internal Fuel Combustion					
Electric Generation	392.0	460.2	6,237.0	443.3	3,728.5
Industrial	114.2	226.5	18,605.0	1,979.2	4,165.9
Commercial/Institutional	43.0	34.3	686.0	79.8	601.1
Engine Testing	39.6	28.6	518.6	93.8	411.8
Off Highway 2-stroke Gasoline Engines	0.1	0.3	4.3	4.5	20.0
Fugitive Emissions	0.0	0.0	1.1	0.0	1.5
Industrial Processes					
Chemical Manufacturing	3,934.0	16,414.6	1,538.7	14,441.9	15,642.5
Food/Agriculture	20,140.4	1,073.2	1,121.7	10,503.5	1,114.8
Primary Metal Production	6,539.9	4,301.3	4,601.5	3,098.3	51,029.4
Secondary Metal Production	7,599.3	1,130.4	1,821.7	1,439.0	2,912.6
Mineral Products	23,872.1	14,560.9	11,725.0	1,661.9	3,487.5
Petroleum Industry	2,930.1	87,880.9	20,703.7	6,049.7	6,052.8
Paper and Wood Products	800.3	0.0	1.6	146.4	1.1
Rubber and Plastic Products	688.1	1.1	49.5	4,487.4	34.1
Fabricated Metal Products	1,254.5	214.4	476.0	1,470.1	1,236.4
Oil and Gas Production	7.2	147.6	164.0	720.9	195.9
Miscelaneous Machinery	126.0	2.7	8.6	114.7	5.0
Electrical Equipment	13.0	0.7	3.1	224.5	1.9
Transportation Equipment	72.7	0.0	1.9	26.3	1.2
Health Services	4.2	0.6	1.7	86.6	6.4
Leather and Leather Products	48.7	0.0	0.0	69.2	0.0
Textile Products	10.2	0.0	3.9	4.9	0.4
Printing/Publishing (typesetting)	0.3	0.0	0.0	0.0	0.0
Process Cooling	24.3	0.0	0.0	0.0	0.0
In-Process Fuel Use	201.6	3,517.5	2,305.2	235.1	675.1
Miscellaneous Manufacturing	266.4	92.2	288.0	354.5	207.7
Organic Solvent Emissions					
Organic Solvent Use	14.7	0.0	0.1	1,914.4	0.0
Surface Coating Operations	996.5	58.6	1,112.7	22,338.8	174.1
Petroleum Product Storage	51.1	8.9	3.1	5,773.7	74.8
Bulk Terminals/Plants	3.4	0.0	1.3	1,755.8	7.0
Printing/Publishing	86.4	0.1	145.2	11,028.1	14.8
Petroleum Marketing/Transport	0.6	0.0	3.1	1,250.8	0.4
Organic Chemical Storage (large)	21.3	0.0	0.6	1,184.3	0.4
Organic Chemical Transportation	12.4	0.0	10.8	69.8	0.7
Dry Cleaning (petroleum based)	0.0	0.0	0.0	389.0	0.0
Organic Chemical Storage (small)	0.0	0.0	0.0	1.9	0.0
Organic Solvent Evaporation	46.6	77.3	105.3	3,590.0	218.5

Table D1

2000
Point Source Emission Distribution (Tons/Year)

Category	Particulate Matter	Sulfur Dioxide	Nitrogen Oxides	Volatile Organic Material	Carbon Monoxide
Solid Waste Disposal					
Government	280.4	218.5	820.3	232.0	1,345.0
Commercial/Institutional	378.9	36.1	125.2	64.9	608.8
Industrial	675.3	569.0	666.4	305.2	2,655.6
Site Remediation	19.3	3.2	4.5	595.9	0.5
***MACT Processes**					
Food and Agriculture Processes	0.0	0.0	0.0	3.2	0.0
Agricultural Chemical Production	0.0	0.0	0.0	1.7	0.0
Styrene or Methacrylate Based Resins	5.0	0.0	0.0	18.3	0.0
Cellulose Based Resins	0.2	0.0	0.0	0.0	0.0
Alkyd Resin Production	1.8	0.0	0.0	32.5	0.0
Vinyl Based Resins	276.3	0.0	0.0	95.1	0.0
Miscellaneous Polymers	1.2	0.0	0.0	13.3	0.0
Fibers Production	0.0	0.0	0.0	0.3	0.0
Consumer Product Manufacturing	0.0	0.0	0.0	3.9	0.0
Facilities					
Paint Stripper Use	0.9	0.0	0.0	3.8	0.0
Phthalate Plasticizers Production	0.0	0.0	0.0	0.6	0.0
Totals	**93,709.9**	**1,070,058.3**	**424,609.4**	**101,146.9**	**122,702.0**

* MACT stands for Maximum Achievable Control Technology.

Table D2

2000

Estimated County Stationary Point Source Emissions (Tons/Year)

County	Particulate Matter	Sulfur Dioxide	Nitrogen Oxides	Volatile Organic Material	Carbon Monoxide
Adams	575.8	6,294.8	1,076.0	2,285.4	358.8
Alexander	478.8	460.4	278.8	63.3	37.2
Bond	97.4	5.7	37.2	70.7	146.3
Boone	243.6	617.7	285.3	1,235.6	108.5
Brown	7.5	0.0	1.6	0.3	0.2
Bureau	35 re	35 re	1	37.2	285.3	1,235.6

Table D2

2000
Estimated County Stationary Point Source Emissions (Tons/Year)

County	Particulate Matter	Sulfur Dioxide	Nitrogen Oxides	Volatile Organic Material	Carbon Monoxide
Hardin	85.0	47.6	22.7	4.6	12.9
Henderson	194.4	0.1	9.3	9.5	4.9
Henry	312.5	32.5	5,057.8	790.1	1,354.9
Iroquois	756.1	16.7	105.8	272.1	162.6
Jackson	520.4	27,626.0	3,697.9	1,003.8	542.5
Jasper	1,111.6	15,173.8	10,965.8	121.7	686.3
Jefferson	546.1	200.2	178.7	386.7	52.5
Jersey	73.2	0.0	0.0	17.5	0.0
Jo Daviess	667.1	5.6	425.9	1,654.5	1,982.2
Johnson	120.5	379.9	41.8	24.1	32.4
Kane	912.9	307.3	1,212.2	1,866.7	595.6
Kankakee	893.8	58.0	1,771.6	1,384.9	731.0
Kendall	194.2	150.7	1,275.4	297.6	309.7
Knox	295.6	57.0	314.0	230.5	95.8
Lake	2,454.2	22,822.2	12,892.4	2,031.3	1,722.9
La Salle	2,963.7	1,257.0	5,941.2	1,869.3	780.8
Lawrence	90.4	32.0	38.5	166.9	8.2
Lee	667.7	3,009.5	859.2	486.4	442.5

Table D2

2000
Estimated County Stationary Point Source Emissions (Tons/Year)

County	Particulate Matter	Sulfur Dioxide	Nitrogen Oxides	Volatile Organic Material	Carbon Monoxide
Morgan	1,128.9	27,851.3	4,994.3	791.6	409.4
Moultrie	130.2	66.1	130.9	291.5	31.7
Ogle	411.0	25.3	607.0	1,212.5	319.7
Peoria	2,402.0	84,656.9	17,627.5	2,620.9	1,211.9
Perry	67.4	1.7	19.5	129.0	9.9
Piatt	262.5	0.5	1,877.5	123.0	276.1
Pike	279.4	2,771.1	845.6	48.2	129.7
Pope	0.0	0.0	0.0	2.0	0.0
Pulaski	114.4	416.5	53.4	0.2	0.2
Putnam	727.2	51,164.0	5,465.0	151.7	528.7
Randolph	3,285.2	273,965.7	58,099.6	237.7	1,223.7
Richland	49.2	0.4	3.1	108.3	0.6
Rock Island	1,003.6	1,718.6	998.2	2,735.0	1,115.2
St. Clair	1,776.6	3,126.8	676.1	1,538.2	219.7
Saline	286.1	0.7	15.5	15.6	39.1
Sangamon	1,232.9	49,709.9	12,454.5	608.1	899.3
Schuyler	77.4	0.0	2.1	12.2	0.4
Scott	166.5	7.5	20.9	26.8	7.1
Shelby	220.5	3.8	6.7	76.1	4.3
Stark	63.8	0.0	0.2	9.6	0.2
Stephenson	183.5	3.3	131.3	213.2	136.9
Tazewell	3,008.6	28,758.0	34,097.0	657.6	1,157.7
Union	73.8	865.3	67.3	21.7	53.7
Vermilion	1,419.9	12,551.2	3,320.1	1,626.2	752.1
Wabash	291.0	195.2	104.0	26.8	28.5
Warren	301.2	290.2	85.9	55.0	66.8
Washington	285.9	0.1	35.8	190.8	16.8
Wayne	56.5	88.3	499.9	203.3	76.4
White	76.7	1.6	5.9	70.1	1.2
Whiteside					

Table D3

Annual Estimated Emissions Trends (Tons)

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

Table D4

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Annual Source Reported Emissions Trends (Tons)

APPENDIX E

THE BUREAU OF AIR/
DIVISION OF AIR POLLUTION CONTROL

- 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

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.

A directory of the Division of Air Pollution Control follows.

Table E1

BUREAU OF AIR

Dave Kolaz, Bureau Chief
(217) 785