GEORGIA DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Protection Branch

1999 Ambient Air Surveillance Report
1998 PAMS Network
1998 Toxic Network

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Ambient Air Monitoring

Ambient air monitoring in Georgia provides information on measured concentrations of criteria and non-criteria pollutants at selected locations. Criteria pollutants are those for which a standard has been adopted by the U.S. Environmental Protection Agency. Non-criteria pollutants, while having no standard, provide useful information on the quality and content of ambient air.

The current Georgia Air Sampling Network (G.A.S.N.), is comprised of 83 monitors at 57 locations in 29 counties. Monitoring takes place year round with the exception of ozone, which is sampled from April through October.

The monitoring network is composed of State and Local Air Monitoring Stations (SLAMS), National Air Monitoring Stations (NAMS), Special Purpose Monitoring (SPM), and Photochemical Assessment Monitoring Stations (PAMS) and air toxic monitoring stations. During 1999, the network contained 14 NAMS, 47 SLAMS, and 36 SPM monitors. The 1998 PAMS and air toxic networks consisted of 4 and 9 sites respectively.

The number and location of the individual sites vary from year to year, depending on a variety of reasons that include: availability of long-term space allocation; citizen complaint; regulatory need; etc. Once the site is established, it is our intention to monitor for long-term trends.

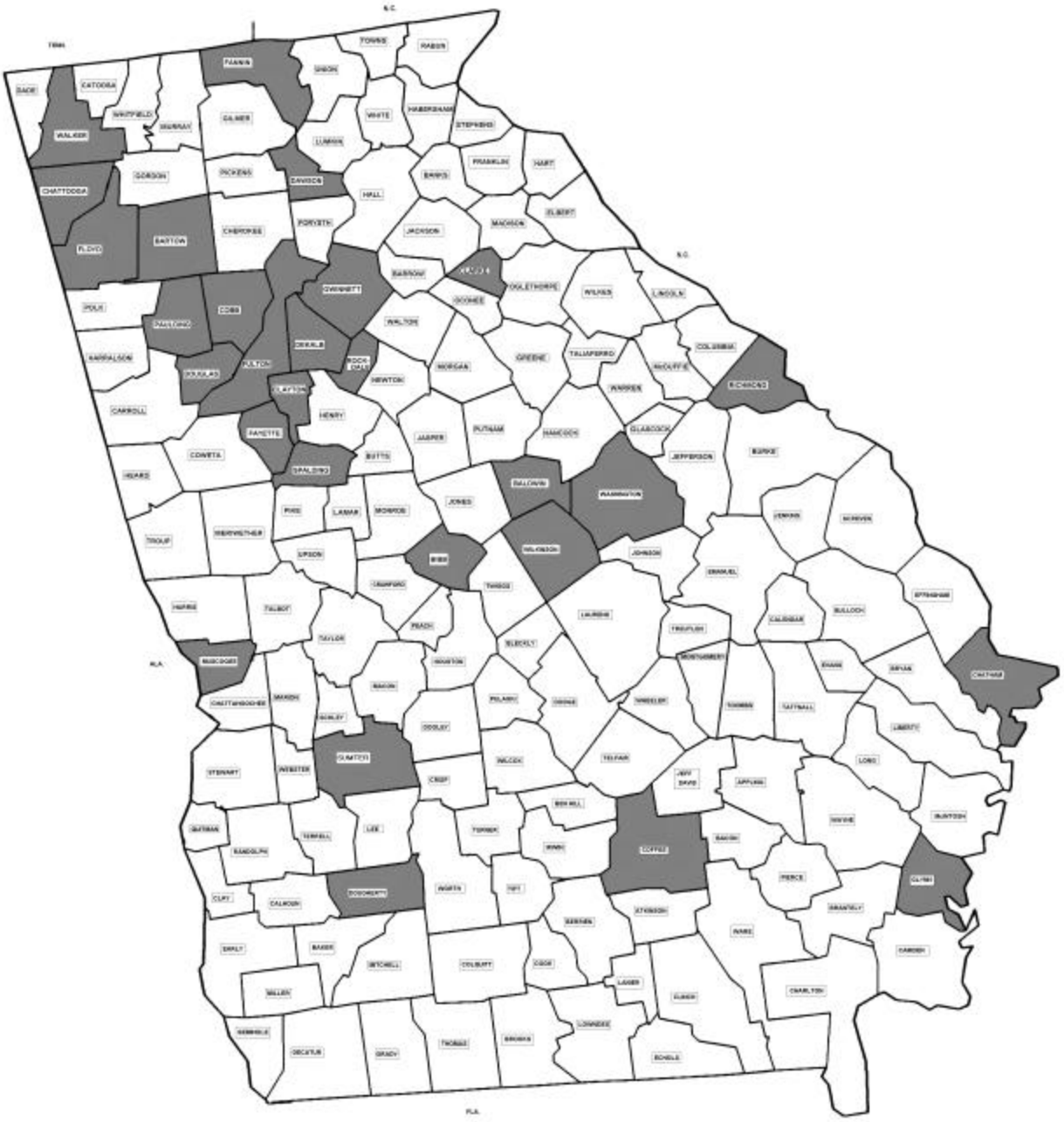
In general, the basic monitoring objectives that govern the selection of sites are: 1) to determine the highest concentration expected to occur; 2) to determine representative concentrations in areas of high population density; 3) to determine the impact on ambient pollution levels of significant sources or source categories; 4) to determine the general background concentration levels; and 5) to determine the concentration of a number of compounds which may aid in the generation of ground level ozone.

GEORGIA AMBIENT AIR STANDARDS SUMMARY

Criteria Pollutants

Compound	Standard	Units	Time Interval
Sulfur Dioxide	0.50	ppm	3 Hour
	0.14		24 Hour
	0.03		Annual Mean
Particulate Matter (PM-2.5)	15.0	micrograms per cubic meter	Annual Arithmetic Mean
	65.0		24 Hour
Particulate Matter (PM-10)	50.0	micrograms per cubic meter	Annual Arithmetic Mean
	150.0		24 Hour
Carbon Monoxide	35.0	ppm	1 Hour
	9.0		8 Hour Average
Ozone	0.125	ppm	1 Hour (Atlanta 13 County Non-Attainment Area)
	0.85		8 Hour Average (4^{th} Max) Statewide
Nitrogen Dioxide	.05	ppm	Annual Mean
Lead	1.5	micrograms per cubic meter	Calendar Quarter Average

1999 GEORGIA AIR MONITORING NETWORK



STATE OF GEORGIA
1999 AMBIENT AIR MONITORING NETWORK
FOR CRITERIA POLLUTANTS

SITE ID	CITY	COUNTY	SITE NAME	POLLUTANT
130150002	Stilesboro	Bartow	Stilesboro	Sulfur Dioxide
130210007	Macon	Bibb	Allied Chemical	PM-10
				PM-2.5
130210012			Macon SE Site (Forestry Service)	Ozone
				Sulfur Dioxide
				PM-2.5
130510019	Port Wentworth	Chatham	Farmers Market	Sulfur Dioxide
130510014	Savannah		Shuman Jr. High School	PM-10
130510021			E. President St.	Ozone
130510017			Scott School	Sulfur Dioxide
				PM-2.5
130511002			W. Lathrop & Augusta Ave.	PM-10
130510091			Mercer School	Sulfur Dioxide
				PM-2.5
130550001	Summerville	Chattooga	DNR Fish Hatchery	PM-10
130570001	Waleska	Cherokee	Reinhardt College	Ozone
130590001	Athens	Clarke	UGA-Poultry Bldg.	PM-2.5
130630091	Forest Park	Clayton	Dept. of Transportation	PM-2.5
130670003	Kennesaw	Cobb	Ga. National Guard	PM-2.5
130850001	Dawsonville	Dawson	Forestry Commission	Ozone
130891002	Clarkston	DeKalb	DeKalb Tech.	Carbon Monoxide
130890002	Decatur		South DeKalb	Ozone
				PM-2.5
				Nitrogen Dioxide
130890003			D.M.R.C.	Lead
130892001	Doraville		Doraville Health Center	PM-10
				PM-2.5
130893001	Tucker		Idlewood Road	Ozone
				Nitrogen Dioxide
130950006	Albany	Dougherty	Dougherty Middle School	Sulfur Dioxide
130950007			Turner Elementary Sch.	PM-10
				PM-2.5
130970003	Douglasville	Douglas	Beulah Pump Station	PM-10
130970004			Douglas Co. Water Auth.	Ozone
131110094	Cohutta Wilderness	Fannin	Jacks River Road	Ozone
131110091	McCaysville		McCaysville Elem. School	Sulfur Dioxide
131130001	Fayetteville	Fayette	DOT	Ozone
131150003	Rome	Floyd	Coosa Elementary School	Sulfur Dioxide
131150005			Coosa High School	PM-10
				PM-2.5
131210001	Atlanta	Fulton	Fulton Co. Health Dept.	PM-10
131210032			E. Rivers School	PM-10
				PM-2.5
131210039			Fire Station # 8	PM-10
				PM-2.5
131210048			GA. Tech	PM-10
				Sulfur Dioxide
				Nitrogen Dioxide
131210055			Confederate Ave.	Ozone
				Sulfur Dioxide
131210099			Roswell Road	Carbon Monoxide
131211001	East Point		East Point Health Ctr.	PM-2.5
131270004	Brunswick	Glynn	Arco Pump Station	PM-10
				PM-2.5
131270006			Risley Middle School	Ozone
				PM-2.5

131350002	Lawrenceville	Gwinnett	Gwinnett Tech.	Ozone
131390003	Gainesville	Hall	Fair St. Elem. School	PM-2.5
131510002	McDonough	Henry	D.O.T.	Ozone
132150001	Columbus	Muscogee	County Health Dept.	PM-2.5
132150008			Airport	Ozone
132150009			S.E. Site	Lead
132150010			Fort Benning Junction	Lead
132150011			Cussetta Road School	PM-2.5
				PM-10
				Lead
132151003			Crime Lab	Ozone
132230003	Yorkville	Paulding	King Farm	PM-2.5
				Ozone
				Nitrogen Dioxide
132450003	Augusta	Richmond	Regional YDC.	Sulfur Dioxide
132450005			Med. College of Ga.	PM-2.5
132450091			Bungalow Road School	Ozone
				PM-2.5
				PM-10
132470001	Conyers	Rockdale	Monastery	Ozone
				Nitrogen Dioxide
132550002	Griffin	Spalding	UGA Experiment Station	PM-10
132611001	Leslie	Sumter	Community Center	Ozone
132950002	Rossville	Walker	Health Center	PM-10
133030001	Sandersville	Washington	County Health Dept.	PM-2.5
				PM-10
133190001	Gordon	Wilkinson	County Police Dept	PM-2.5

STATE OF GEORGIA
1998 AMBIENT AIR MONITORING NETWORK
FOR PAMS and AIR TOXICS

SITE ID	CITY	COUNTY	SITE NAME	POLLUTANT
130210012	Macon	Bibb	Macon SE Site (Forestry Service)	Metals Semi-volatiles Volatile Organic Compounds
130510021	Savannah	Chatham	E. President St.	Carbonyl Metals Semi-volatiles Volatile Organic Compounds
130690002	Douglas	Coffee	General Coffee State Park	Metals Semi-Volatiles Volatile Organic Compounds
130850001	Dawsonville	Dawson	Forestry Commission	Carbonyl Metals Semi-volatiles Volatile Organic Compounds
130890002	Decatur	Dekalb	South Dekalb College Campus	Carbonyl Compounds Volatile Organic Compounds
130893001	Tucker		Idlewood Rd	Carbonyl Compounds Volatile Organic Compounds
131150004	Rome	Floyd	Floyd County Health Dept.	Metals Semi-volatiles Volatile Organic Compounds
131210020	Atlanta	Fulton	Utoy Creek (co-located site)	Metals Semi-volatiles Volatile Organic Compounds
131273001	Brunswick	Glynn	Brunswick College	Carbonyl Metals Semi-volatile Volatile Organic Compounds
131390003	Gainesville	Hall	Fair St. Elem. School	Metals Semi-volatiles Volatile Organic Compounds
132230003	Yorkville	Paulding	King Farm	Volatile Organic Compounds
132450092	Augusta	Richmond	Clara Jenkins School	Metals Semi-volatiles Volatile Organic Compounds
132470001	Conyers	Rockdale	Monastery	Volatile Organic Compounds

PARTICULATE MATTER
(PM-2.5)

Sources:

Particulate matter consists of the solid particles and liquid droplets found in the air. Individually, these particles and droplets are invisible to the naked eye. Collectively, however, they can appear as clouds or a fog-like haze.

Particulate matter less than 2.5 microns in diameter is referred to as "fine" particles. (In comparison, a human hair is about 70 microns in diameter.) Fine particles result from many different sources including industrial and residential combustion and vehicle exhaust so their composition varies widely. Fine particles can also be formed when combustion gases are chemically transformed into particles.

Particulate matter larger than 2.5 microns in diameter is referred to as coarse particles. Coarse particles have many sources, including wind-blown dust, vehicles traveling on unpaved roads, materials handling, and crushing and grinding operations.

Both coarse and fine particles are of health concern because they can penetrate into the sensitive regions of the respiratory tract. Fine particles are of greatest concern because they are linked to the most serious effects. They can cause persistent coughs, phlegm, wheezing, and physical discomfort.

Several recently published community health studies indicate that significant respiratory and cardiovascular-related problems are associated with exposure to particle levels well below the existing particulate matter standards. These negative effects include premature death, hospital admissions from respiratory causes, and increased respiratory symptoms. Long-term exposure to particulate matter may increase the rate of respiratory and cardiovascular illness and reduce life span.

Children, the elderly, and individuals with cardiovascular disease or lung diseases such as emphysema and asthma are especially vulnerable.

Fine particles can soil man-made materials, speed their deterioration, and impair visibility.

§ 50.7 National primary and secondary ambient air quality standards for particulate matter.

(a)The national primary and secondary ambient air quality standards for particulate matter are:

(1) 15.0 micrograms per cubic meter mg/m 3) annual arithmetic mean concentration, and 65 mg/m 3 24-hour average concentration measured in the ambient air as PM2.5 (particles with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers) by either:

i. A reference method based on appendix L of this part and designated in accordance with part 53 of this chapter; or

ii. An equivalent method designated in accordance with part 53 of this chapter.

(b) The annual primary and secondary PM2.5 standards are met when the annual arithmetic mean concentration, as determined in accordance with appendix N of this part, is less than or equal to 15.0 micrograms per cubic meter.

(b) The 24-hour primary and secondary PM2.5 standards are met when the 98th percentile 24-hour concentration, as determined in accordance with appendix N of this part, is less than or equal to 65 micrograms per cubic meter.

(c) [62 FR 38711, July 18, 1997]

STATE OF GEORGIA
PARTICULATE MATTER (PM-2.5)
1st MAX & ANNUAL ARITHMETIC MEAN

Units: micrograms per cubic meter

Site ID	City	County	Site Name	Number Measured (days)	1st Max	# Values 65	Annual Arithmetic Mean
130210007	Macon	Bibb	Allied Chemical	113	46.5	0	18.66
130210012	Macon	Bibb	Forestry Service	90	55.3	0	17.21
130510017	Savannah	Chatham	Scott School	95	57.8	0	18.05
130510091	Savannah	Chatham	Mercer School	73	57.8	0	16.85
130590001	Athens	Clarke	UGA-Poultry Bldg.	97	48.2	0	19.39
130630091	Forest Park	Clayton	Dept. of Transportation	102	45.6	0	21.06
130670003	Kennesaw	Cobb	Ga. National Guard	82	44.7	0	19.17
130890002	Decatur	Dekalb	South Dekalb	266	61.6	0	20.78
130892001	Doraville	Dekalb	Doraville Health Center	305	68.3	1	21.39
130892001	Doraville	Dekalb	Doraville Health Center	2	38.0	0	30.35
130950007	Albany	Dougherty	Turner Elem. School	87	39.6	0	18.44
131150005	Rome	Floyd	Coosa High School	93	63.8	0	22.31
131210032	Atlanta	Fulton	E. Rivers School	279	65.0	1	19.97
131210032	Atlanta	Fulton	E. Rivers School	1	29.6	0	29.60
131210039	Atlanta	Fulton	Fire Station # 8	101	50.4	0	22.81
131211001	East Point	Fulton	East Point Health Ctr,	102	38.3	0	19.22
131270004	Brunswick	Glynn	Arco Pump Station	34	34.3	0	17.47
131270006	Brunswick	Glynn	Risley Middle School	34	43.7	0	14.16
131390003	Gainesville	Hall	Fair St. Elem. School	95	43.4	0	18.40
132150001	Columbus	Muscogee	County Health Dept.	87	41.3	0	18.22
132150011	Columbus	Muscogee	Cussetta Rd. School	101	57.9	0	18.62
132230003	Yorkville	Paulding	King Farm	90	45.6	0	16.90
132450005	Augusta	Richmond	Med. College of Ga,	98	41.7	0	19.37
132450091	Augusta	Richmond	Bungalow Rd. School	80	42.3	0	20.37
133030001	Sandersville	Washington	Health Dept.	55	40.8	0	18.29
133190001	Gordon	Wilkinson	Police Dept.	76	42.5	0	18.70

PARTICULATE MATTER
(PM-10)

Sources: Particulate matter (PM) is solid matter or liquid droplets from smoke, dust, fly ash, or condensing vapors that can be suspended in the air for long periods of time. It represents a broad class of chemically diverse particles that range in size from molecular clusters of 0.005 micrometers (µm) to coarse particles of 50-100 µm in diameter (100 µm is about the thickness of an average human hair). PM results from all types of combustion. The carbon-based particles that result from incomplete burning of diesel fuel in buses, trucks and cars are of particular concern. Another important combustion source is the burning of wood in stoves and fireplaces in residential settings. Also of concern are the sulfate and nitrate particles that are formed as a byproduct of SO2 and NO2 emissions, primarily from fossil fuel-burning power plants and vehicular exhausts.

The U.S. national ambient air quality standard was originally based on particles up to 25-45 µm in size, termed "total suspended particles" (TSP). In 1987, EPA replaced TSP with an indicator that includes only those particles smaller than 10 µm, termed PM-10. These smaller particles cause most of the adverse health effects because of their ability to penetrate deeply into the lungs. Health effects. The observed human health effects of PM include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense system against inhaled materials and organisms, and damage to lung tissue. Groups that appear to be most sensitive to the effects of PM include individuals with chronic lung or cardiovascular disease, individuals with influenza, asthmatics, elderly people, and children.

Health Effects: Marked increases in daily mortality have been statistically associated with very high 24-hour concentrations of PM-10, with some increased risk of mortality at lower concentrations. Small increases in mortality appear to exist at even lower levels. Risks to sensitive individuals increase with consecutive, multi-day exposures to elevated PM concentrations. The research also indicates that aggravation of bronchitis occurs with elevated 24-hour PM-10 levels, and small decreases in lung function take place when children are exposed to lower 24-hour peak PM-10 levels. Lung function impairment persists for 2-3 weeks following exposure to PM.

National Primary and Secondary Ambient Air Quality Standards for Particulate Matter.

> (a) The annual primary and secondary PM-10 standards are met when the annual arithmetic mean concentration, as determined in accordance with appendix N of this part, is less than or equal to 50 micrograms per cubic meter.
> (b) The 24-hour primary and secondary PM-10 standards are met when the 99th percentile 24-hour concentration, is less than or equal to 150 micrograms per cubic meter.
> [62 FR 38711, July 18, 1997]

STATE OF GEORGIA
PARTICULATE MATTER (PM-10)
1ST MAX & ANNUAL ARITHMETIC MEAN

Units: micrograms per cubic meter

Site ID	City	County	Site Name	Number Measured (days)	1st Max	# Values 150	Annual Arithmetic Mean
130210007	Macon	Bibb	Allied Chem.	49	62	0	27
130510014	Savannah	Chatham	Shuman School	54	64	0	25
130511002	Savannah	Chatham	Lathrop & Augusta	332	60	0	27
130550001	Summerville	Chattooga	DNR Fish Hatchery	54	81	0	22
130892001	Doraville	DeKalb	Doraville Health Center	55	49	0	23
130950007	Albany	Dougherty	Turner Elem. Sch.	57	61	0	26
130970003	Douglasville	Douglas	Beulah Pump Station	49	49	0	23
131150005	Rome	Floyd	Coosa High School	43	51	0	23
131210001	Atlanta	Fulton	Fulton Co. Health Dept.	52	60	0	30
131210032	Atlanta	Fulton	E. Rivers School	57	49	0	25
131210039	Atlanta	Fulton	Fire Station # 8	54	75	0	35
131210048	Atlanta	Fulton	Ga. Tech.	273	53	0	23
131270004	Brunswick	Glynn	Arco Pump Station	57	55	0	26
132150011	Columbus	Muscogee	Cussetta Rd. Elem. School	55	46	0	24
132450091	Augusta	Richmond	Bungalow Rd. Elem. School	47	50	0	24

Site ID	City	County	Site Name	Number Measured (days)	1st Max	# Values 150	Annual Arithmetic Mean
132550002	Griffin	Spalding	UGA Experiment Station	44	50	0	23
132950002	Rossville	Walker	Health Dept.	58	69	0	26
133030001	Sandersville	Washington	Health Dept.	58	87	0	27

SULFUR DIOXIDE

Sources: Sulfur dioxide (SO2) is a colorless reactive gas that is ordorless at low concentrations, but pungent at very high concentrations. It is emitted primarily when fossil fuels and ores that contain sulfur are burned or processed. Major sources of SO2 are fossil fuel-burning power plants and industrial boilers.

Health Effects: Exposure to SO2 can cause impairment of respiratory function, aggravation of existing respiratory disease (especially bronchitis), and a decrease in the ability of the lungs to clear foreign particles. It can also lead to increased mortality, especially if elevated levels of particulate matter (PM) are also present. Groups that appear most sensitive to the effects of SO2 include asthmatics and other individuals with hyperactive airways, and individuals with chronic obstructive lung or cardiovascular disease. Elderly people and children are also likely to be sensitive to SO2.

Effects of short-term peak exposures have been evaluated in controlled human exposure studies. These studies show that SO2 generally increases airway resistance in the lungs, and can cause significant constriction of air passages in sensitive asthmatics. These impacts have been observed in subjects engaged in moderate to heavy exercise while exposed to relatively high peak concentrations. These changes in lung function are accompanied by perceptible symptoms such as wheezing, shortness of breath, and coughing in these sensitive groups.

The presence of PM appears to aggravate the impact of SO2 pollution. Several studies of chronic effects have found that people living in areas with high PM and SO2 levels have a higher incidence of respiratory illnesses and symptoms than people living in areas without such a synergistic combination of pollutants.

National Primary Ambient Air Quality Standards for Sulfur Oxides (Sulfur Dioxide).

(a) The level of the annual standard is 0.030 parts per million (ppm), not to be exceeded in a calendar year. The annual arithmetic mean shall be rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm shall be rounded up).

(b) The level of the 24-hour standard is 0.14 parts per million (ppm), not to be exceeded more than once per calendar year. The 24-hour averages shall be determined from successive nonoverlapping 24-hour blocks starting at midnight each calendar day and shall be rounded to two decimal places (fractional parts equal to or greater than 0.005 ppm shall be rounded up).

(c) Sulfur oxides shall be measured in the ambient air as sulfur dioxide by the reference method described in appendix A to this part or by an equivalent method designated in accordance with part 53 of this chapter.

(d) To demonstrate attainment, the annual arithmetic mean and the second-highest 24-hour averages must be based upon hourly data that are at least 75 percent complete in each calendar quarter. A 24-hour block average shall be considered valid if at least 75 percent of the hourly averages for the 24-hour period are available. In the event that only 18, 19, 20, 21, 22, or 23 hourly averages are available, the 24-hour block average shall be computed as the sum of the available hourly averages using 18, 19, etc. as the divisor. If fewer than 18 hourly averages are available, but the 24-hour average would exceed the level of the standard when zeros are substituted for the missing values, subject to the rounding rule of paragraph (b) of this section, then this shall be considered a valid 24-hour average. In this case, the 24-hour block average shall be computed as the sum of the available hourly averages divided by 24.
[61 FR 25579, May 22, 1996]

STATE OF GEORGIA
SULFUR DIOXIDE
3-HOUR & 24-HOUR MAXIMUM OBSERVATIONS

Units: parts per million

Site ID	City	County	Site Name	# Obs. (hours)	Max 24 - Hour		Obs > Std.	Max 3 - Hour		Obs > Std.
					1st	2nd		1st	2nd	
130150002	Stilesboro	Bartow	Stilesboro	8207	.015	.012	0	.056	.051	0
130510019	Port Wentworth	Chatham	Farmer's Market	7687	.011	.010	0	.034	.033	0
130510021	Savannah	Chatham	2500 East President St.	7400	.018	.018	0	.050	.049	0
131110091	McCaysville	Fannin	Elem. School	8594	.021	.018	0	.053	.052	0
131150003	Rome	Floyd	Coosa Elem. Sch.	8620	.023	.021	0	.122	.089	0
131210048	Atlanta	Fulton	GA Tech	8604	.024	.023	0	.064	.061	0
131210055	Atlanta	Fulton	Confederate Ave.	8177	.016	.015	0	.046	.039	0
131270006	Brunswick	Glynn	Risley Middle School	8679	.012	.009	0	.075	.057	0
132150008	Columbus	Muscogee	Columbus Airport	8555	.010	.010	0	.042	.030	0

OZONE

Sources: Ozone (O3), a colorless gas, is the major constituent of smog. It is produced by the chemical reaction of nitrogen dioxide with reactive organic substances such as hydrocarbons in automobile exhaust or vapors from cleaning solvents - in the presence of sunlight. This type of pollution first gained attention in the 1940's as Los Angeles "smog." Since then, photochemical smog has been observed frequently in many cities as well. (Note: In the upper atmosphere, naturally occurring ozone is beneficial in protecting us from the harmful solar rays.)

Health Effects: Ozone and other photochemical oxidants such as peroxyacyl nitrates and aldehydes are associated with health effects in humans. Peroxyacyl nitrates and aldehydes cause the irritation that is characteristic of photochemical pollution. Ozone has a greater impact on the respiratory system, where it irritates the mucous membranes of the nose, throat and airways; ninety percent of the ozone inhaled into the lungs is never exhaled. Symptoms associated with exposure include cough, chest pain, and throat irritation. Ozone can also increase susceptibility to respiratory infections. In addition, ozone impairs normal functioning of the lungs and reduces the ability to perform physical exercise. Recent studies also suggest that even at lower ozone concentrations some healthy individuals engaged in moderate exercise for 6 to 8 hours may experience symptoms. All of these effects are more severe in individuals with sensitive respiratory systems, and studies show that moderate levels may impair the ability of individuals with asthma or respiratory disease to engage in normal daily activities.

The potential chronic effects of repeated exposure to ozone are of even greater concern. Laboratory studies show that people exposed over a 6 to 8 hour period to relatively low ozone levels develop lung inflammation. Animal studies suggest that if exposures are repeated over a long period (e.g. months, years, lifetime), inflammation of this type may lead to permanent scarring of lung tissue, loss of lung function, and reduced lung elasticity.

National 1-hour primary and secondary ambient air quality standards for ozone:

(a) The level of the national 1-hour primary and secondary ambient air quality standards for ozone measured by a reference method based on appendix D to this part and designated in accordance with part 53 of this chapter is 0.12 parts per million (235 ug/m3). The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 parts per million (235 ug/m3) is equal to or less than 1, as determined by appendix H to this part.

(b) The 1-hour standards set forth in this section will no longer apply to an area, once EPA determines that the area has air quality meeting the 1-hour standard. Area designations are codified in 40 CFR part 81.

(62 FR 38894, July 18, 1997)

National 8-hour primary and secondary ambient air quality standards for ozone:

(a) The level of the national 8-hour primary and secondary ambient air quality standards for ozone measured by a reference method based on appendix D to this part and designated in accordance with part 53 of this chapter is 0.12 parts per million (235 ug/m3). The standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.08 parts per million (ppm), daily maximum 8- hour average

(b) The 8-hour primary and secondary ozone ambient air quality standards are met at an ambient air quality monitoring site when the average of the annual fourth-highest daily maximum 8-hour average ozone concentration is less than or equal to 0.08 ppm, as determined in accordance with appendix I to this part.

(62 FR 38894, July 18, 1997)

STATE OF GEORGIA
OZONE
1-HOUR AVERAGES

UNITS: PARTS PER MILLION

Site ID	City	County	Site Name	Number Measured (days)	1st Max	2nd Max	# of Values > 0.12
130210012	Macon	Bibb	Macon S.E.	212	.134	.133	5
130510021	Savannah	Chatham	2500 E. President St.	214	.120	.107	0
130570001	Waleska	Cherokee	Reinhardt College	92	.116	.098	0
130670003	Kennesaw	Cobb	Ga. National Guard	60	.118	.114	0
130770002	Newnan	Coweta	Univ. of West Ga.	166	.133	.133	3
130850001	Dawsonville	Dawson	Forestry Service	210	.105	.103	0
130890002	Decatur	DeKalb	So. DeKalb	208	.152	.145	9
130893001	Tucker	DeKalb	Idlewood Road	202	.150	.139	4
130970004	Douglasville	Douglas	Co. Water Authority	212	.131	.124	1
131110094	Cohutta	Fannin	Jack's River Road	201	.098	.096	0
131130001	Fayetteville	Fayette	D. O. T.	207	.145	.132	7
131210055	Atlanta	Fulton	Confederate Ave.	206	.157	.156	13
131270006	Brunswick	Glynn	Risley Middle School	214	.095	.091	0
131350002	Lawrenceville	Gwinnett	Gwinnett Tech.	212	.164	.129	3
131510002	McDonough	Henry	D. O. T.	146	.152	.151	10
132150008	Columbus	Muscogee	Columbus Airport	147	.117	.107	0
132151003	Columbus	Muscogee	Columbus Crime Lab.	209	.111	.110	0
132230003	Yorkville	Paulding	King Farm	186	.120	.118	0
132450091	Augusta	Richmond	Bungalow Elem. Sch.	205	.117	.108	0
132470001	Conyers	Rockdale	Conyers Monastery	211	.158	.155	13
132611001	Leslie	Sumter	Community Center	206	.103	.098	0

STATE OF GEORGIA
OZONE
8-HOUR AVERAGES

UNITS: PARTS PER MILLION

Site ID	City	County	Site Name	Number Measured (days)	1st Max	2nd Max	3rd Max	4th Max	# of 4th Max Values $ 0.085
130210012	Macon	Bibb	Forestry Comm.	201	0.110	0.108	0.106	0.106	18
130510021	Savannah	Chatham	E. President ST.	212	0.080	0.080	0.078	0.075	0
130570001	Waleska	Cherokee	Reinhardt College	92	0.100	0.088	0.086	0.084	3
130670003	Kennesaw	Cobb	Ga. Nat'l. Guard	60	0.102	0.096	0.096	0.095	8
130770002	Newnan	Coweta	Univ.of West Ga.	166	0.119	0.115	0.113	0.108	34
130850001	Dawsonville	Dawson	Forestry Comm.	214	0.102	0.099	0.098	0.096	12
130890002	Decatur	DeKalb	S. DeKalb	159	0.117	0.115	0.113	0.112	21
130893001	Tucker	DeKalb	Idlewood Road	176	0.114	0.113	0.112	0.111	19
130970004	Douglasville	Douglas	Co. Water Auth.	212	0.141	0.116	0.115	0.110	35
131110094	Cohutta	Fannin	Cohutta Wild. Area	214	0.093	0.088	0.086	0.081	3
131130001	Fayetteville	Fayette	D. O. T.	213	0.126	0.114	0.112	0.111	34
131210055	Atlanta	Fulton	Confederate Ave.	207	0.138	0.134	0.130	0.126	41
131270006	Brunswick	Glynn	Risley School	183	0.101	0.092	0.083	0.082	2
131350002	Lawrenceville	Gwinnett	Gwinnett Tech.	190	0.116	0.112	0.111	0.111	27
131510002	McDonough	Henry	D. O. T.	146	0.132	0.130	0.128	0.126	35
132150008	Columbus	Muscogee	Airport	199	0.102	0.097	0.095	0.091	8
132151003	Columbus	Muscogee	Crime Lab	210	0.104	0.095	0.094	0.089	8
132230003	Yorkville	Paulding	King Farm	212	0.123	0.122	0.112	0.104	26
132450091	Augusta	Richmond	Bungalow School	213	0.116	0.108	0.100	0.099	13
132470001	Conyers	Rockdale	Monastery	214	0.120	0.118	0.118	0.113	38
132611001	Leslie	Sumter	Union High School	213	0.090	0.084	0.083	0.081	1

CARBON MONOXIDE

Sources: Carbon Monoxide (CO) is an odorless, colorless gas that is a by-product of the incomplete burning of fuels. Industrial processes contribute to CO pollution levels, but the principal source of CO pollution in most large urban areas is the automobile. Cigarettes and other sources of incomplete burning in the indoor environment also produce CO. CO is inhaled and enters the blood stream; there it binds chemically to hemoglobin, the substance that carries oxygen to the cells, thereby reducing the amount of oxygen delivered to all tissues of the body. The percentage of hemoglobin inactivated by CO depends on the amount of air breathed, the concentration of CO in air, and length of exposure; this is indexed by the percentage of carboxyhemoglobin found in the blood.

Health Effects: CO weakens the contractions of the heart, thus reducing the amount of blood pumped to various parts of the body and, therefore, the oxygen available to the muscles and various organs. In a healthy person, this effect significantly reduces the ability to perform physical exercises. In persons with chronic heart diseases, these effects can threaten the overall quality of life, since their systems are unable to compensate for the decrease in oxygen. CO pollution is also likely to cause such individuals to experience angina during exercise. Adverse effects have also been observed in individuals with heart conditions who are exposed to CO pollution in heavy freeway traffic for 1 to 2 hours or more.

In addition, fetuses, young infants, pregnant women, elderly people, and individuals with anemia or emphysema are likely to be more susceptible to the effects of CO. For these individuals, the effects are more pronounced when exposure takes place at high altitude locations, where oxygen concentration is lower. CO can also affect mental function, visual activity, and alertness of healthy individuals, even at relatively low concentrations.

National primary ambient air quality standards for carbon monoxide:

(a) The national primary ambient air quality standards for carbon monoxide are:

(1) 9 parts per million (10 milligrams per cubic meter) for an 8-hour average concentration not to be exceeded more than once per year and

(2) 35 parts per million (40 milligrams per cubic meter) for a 1-hour average concentration not to be exceeded more than once a year.

(50 FR 37501, Sept. 13, 1985)

STATE OF GEORGIA
CARBON MONOXIDE
1-HOUR & 8-HOUR OBSERVATIONS

Units: parts per million

SITE ID	City	County	Site Name	# Observations (hours)	Max 1 - Hour		Obs. > 35	Max 8 -Hour		Obs. > 9
					1st	2nd		1st	2nd	
130891002	Clarkston	DeKalb	DeKalb Tech	8212	7.7	6.3	0	4.8	4.1	0
131210099	Atlanta	Fulton	Roswell Road	8615	5.5	5.1	0	3.2	3.0	0

NITROGEN DIOXIDE

Sources: Nitrogen dioxide (NO_2) is a light brown gas that can become an important component of urban haze. Nitrogen oxides usually enter the air as the result of high-temperature combustion processes, such as those occurring in automobiles and power plants. NO_2 plays an important role in the atmospheric reactions that generate ozone. Home heaters and gas stoves also produce substantial amounts of NO_2.

Health Effects: Healthy individuals experience respiratory problems when exposed to high levels of NO_2 for short durations (less than three hours). Asthmatics are especially sensitive, and changes in airway responsiveness have been observed in some studies of exercising asthmatics exposed to relatively low levels of NO_2. Studies also indicate a relationship between indoor NO_2 exposures and increased respiratory illness rates in young children, but definitive results are still lacking. Many animal studies suggest that NO_2 impairs respiratory defense mechanisms and increases susceptibility to infection.

Several studies also show that chronic exposure to relatively low NO_2 pollution levels may cause structural changes in the lungs of animals. These studies suggest that chronic exposure to NO_2 could lead to adverse health effects in humans, but specific levels and durations likely to cause such effects have not yet been determined.

National Primary and Secondary Ambient Air Quality Standards for Nitrogen Dioxide

(a) The level of the national primary ambient air quality standard for nitrogen dioxide is 0.053 parts per million (100 micrograms per cubic meter), annual arithmetic mean concentration.
(b) The level of national secondary ambient air quality standard for nitrogen dioxide is 0.053 parts per million (100 micrograms per cubic meter), annual arithmetic mean concentration.
(c) The levels of the standards shall be measured by:
    (1) A reference method based on appendix F and designated in accordance with part 53 of this chapter, or
    (2) An equivalent method designated in accordance with part 53 of this chapter.
(d) The standards are attained when the annual arithmetic mean concentration in a calendar year is less than or equal to 0.053 ppm, rounded to three decimal places (fractional parts equal to or greater than 0.0005 ppm must be rounded up). To demonstrate attainment, an annual mean must be based upon hourly data that are at least 75 percent complete or upon data derived from manual methods that are at least 75 percent complete for the scheduled sampling days in each calendar quarter.
[50 FR 25544, June 19, 1985]

State of Georgia
Nitrogen Dioxide
Annual Arithmetic Means

Units: parts per million

Site ID	City	County	Site Name	Number Measured (hours)	Annual Arithmetic Mean	# of Values > 0.053
130890002	Decatur	DeKalb	South DeKalb	7774	.020	0
130893001	Tucker	DeKalb	Idlewood Road	6552	.020	0
131210048	Atlanta	Fulton	Ga. Tech.	7754	.024	0
132230003	Yorkville	Paulding	King Farm	7248	.007	0
132470001	Conyers	Rockdale	Monastery	8345	.007	0

LEAD

Nature and Sources of the Pollutant: In the past, automotive sources were the major contributor of Pb emissions to the atmosphere. As a result of EPA's regulatory efforts to reduce the content of Pb in gasoline, the contribution from the transportation sector has declined over the past decade. Today, metals processing is the major source of Pb emissions to the atmosphere. The highest air concentrations of Pb are found in the vicinity of nonferrous and ferrous smelters, and battery manufacturers.

Health and Environmental Effects: Exposure to Pb occurs mainly through inhalation of air and ingestion of Pb in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues. Lead can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to Pb may cause neurological impairments, such as seizures, mental retardation, and behavioral disorders. Even at low doses, Pb exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ. Recent studies also show that Pb may be a factor in high blood pressure and subsequent heart disease. Lead can also be deposited on the leaves of plants, presenting a hazard to grazing animals.

National primary and secondary ambient air quality standards for lead: National primary and secondary ambient air quality standards for lead and its compounds, measured as elemental lead, are: 1.5 micrograms per cubic meter, maximum arithmetic mean averaged over a calendar quarter.
(Secs. 109, 301(a) Clean Air Act as amended (42 U.S.C. 7409, 7601(a))) [43 FR 46258, Oct. 5, 1978]

STATE OF GEORGIA
LEAD
QUARTERLY COMPOSITE AVERAGES

UNITS: MICROGRAMS PER CUBIC METER

Site ID	City	County	Site Name	Number Observations (months)	1st Quarter Composite Avg.	2nd Quarter Composite Avg.	3rd Quarter Composite Avg.	4th Quarter Composite Avg.	# of Values > 1.50 ug/M3
130890003	Atlanta	DeKalb	D.M.R.C.	12	.02	.01	.05	.02	0
132150009	Columbus	Muscogee	S.E. Site	12	.93	.28	1.04	.39	0
132150010	Columbus	Muscogee	Ft. Benning Jct.	12	.23	.41	.50	.20	0
132150011	Columbus	Muscogee	Cussetta School	12	.05	.36	.55	.07	0

PAMS

The Environmental Protection Agency (EPA) has revised the ambient air quality surveillance regulations in Title 40 Part 58 of the Code of Federal Regulations (40 CFR Part 58) to include provisions for enhanced monitoring of ozone, oxides of nitrogen, volatile organic compounds (VOCs), selected carbonyl compounds, and monitoring of meteorological parameters. The revisions require States to establish Photochemical Assessment Monitoring Stations (PAMS) as part of their existing State Implementation Plan (SIP) monitoring networks in ozone non-attainment areas classified as serious, severe, or extreme.

The principal reasons for requiring the collection of additional ambient air pollutant and meteorological data are the lack of successful attainment of the National Ambient Air Quality Standard (NAAQS) for ozone, and the need to obtain a more comprehensive air quality data base for ozone and its precursors. Analysis of the data will help the EPD understand the underlying causes of ozone pollution, devise effective controls, and measure improvement.

PINENE/P-ETHYLTOLUENE 43188

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	28.20	26.2	2.2110
Yorkville (1)	132230003	1998	205	ppb carbon	1.80	1.500	0.2065
Conyers (1)	132470001	1998	1308	ppb carbon	17.40	13.00	1.4750

BPINENE/1,2,3- TRIME 43189

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	20.00	19.90	3.3440
Yorkville (1)	132230003	1998	205	ppb carbon	5.20	5.00	0.1595
Conyers (1)	132470001	1998	1308	ppb carbon	35.40	35.00	2.2160

ETHANE AKA-METHYLMET 43202

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	37.90	35.60	6.9450
S. Dekalb (2)	130890002	1998	27	ppb carbon	12.00	10.80	4.8350
Yorkville (1)	132230003	1998	705	ppb carbon	6.00	4.20	0.1854
Yorkville (2)	132230003	1998	21	ppb carbon	52.00	5.30	4.2360
Conyers (1)	132470001	1998	1322	ppb carbon	29.30	12.00	3.8360
Conyers (2)	132470001	1998	34	ppb carbon	10.40	9.00	3.9490

ETHYLENE AKA-ETHENE 43203

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	36.20	30.50	3.3770
S. Dekalb (2)	130890002	1998	26	ppb carbon	13.70	9.70	3.7440
Yorkville (1)	132230003	1998	1298	ppb carbon	3.80	2.50	0.3111
Yorkville (2	132230003	1998	21	ppb carbon	44.00	6.80	3.9740
Conyers (1)	132470001	1998	1322	ppb carbon	8.80	5.40	0.1043
Conyers (2)	132470001	1998	34	ppb carbon	5.50	3.80	1.6510

PROPANE AKA-DIMETHYL 43204

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	40.10	36.30	4.710
S. Dekalb (2)	130890002	1998	27	ppb carbon	14.60	13.00	6.419
Yorkville (1)	132230003	1998	1298	ppb carbon	102.80	76.30	4.440
Yorkville (2)	132230003	1998	21	ppb carbon	18.00	15.50	7.676
Conyers (1)	132470001	1998	1322	ppb carbon	16.50	14.10	3.768
Conyers (2)	132470001	1998	34	ppb carbon	11.40	9.70	5.394

PROPYLENE AKA-PROPENE 43205

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	14.50	14.20	1.5100
S. Dekalb (2)	130890002	1998	27	ppb carbon	7.40	6.40	2.3760
Yorkville (1)	132230003	1998	1298	ppb carbon	2.30	2.00	0.4141
Yorkville (2)	132230003	1998	21	ppb carbon	5.20	4.30	2.2240
Conyers (1)	132470001	1998	1322	ppb carbon	5.40	3.50	0.7687
Conyers (2)	132470001	1998	34	ppb carbon	1.90	1.80	0.7850

ACETYLENE AKA-ETHYNE 43206

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	18.90	12.10	1.5020
S. Dekalb (2)	130890002	1998	27	ppb carbon	14.10	8.80	4.1310
Yorkville (1)	132230003	1998	1298	ppb carbon	1.90	1.40	0.4101
Yorkville (2)	132230003	1998	21	ppb carbon	6.90	6.70	2.7330
Conyers (1)	132470001	1998	1322	ppb carbon	5.10	3.70	0.6781
Conyers (2)	132470001	1998	34	ppb carbon	5.40	5.00	2.6500

N-BUTANE AKA-BUTANE 43212

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	19.30	18.30	3.0110
S. Dekalb (2)	130890002	1998	27	ppb carbon	35.00	32.00	9.5200
Yorkville (1)	132230003	1998	1298	ppb carbon	4.80	4.50	0.1079
Yorkville (2)	132230003	1998	21	ppb carbon	14.00	12.00	4.2830
Conyers (1)	132470001	1998	1322	ppb carbon	11.70	9.60	2.0960
Conyers (2)	132470001	1998	34	ppb carbon	13.00	13.00	4.2990

ISOBUTANE AKA-2-METH 43214

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	16.60	16.40	1.7060
S. Dekalb (2)	130890002	1998	27	ppb carbon	12.00	9.00	3.2720
Yorkville (1)	132230003	1998	1298	ppb carbon	6.80	2.20	0.5009
Yorkville (2)	132230003	1998	21	ppb carbon	4.70	3.70	1.1070
Conyers (1)	132470001	1998	1322	ppb carbon	6.90	5.60	0.9139
Conyers (2)	132470001	1998	34	ppb carbon	3.10	3.00	1.2380

TRANS-2-BUTENE 43216

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	3.00	2.90	0.1907
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.00	0.70	0.1760
Yorkville (1)	132230003	1998	1298	ppb carbon	0.20	0.20	0.0070
Yorkville (2)	132230003	1998	21	ppb carbon	1.00	0.20	0.1020
Conyers (1)	132470001	1998	1322	ppb carbon	1.20	1.10	0.3142
Conyers (2)	132470001	1998	34	ppb carbon	2.80	2.50	0.2100

CIS-2-BUTENE 43217

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	4.00	2.90	0.1066
S. Dekalb (2)	130890002	1998	27	ppb carbon	0.80	0.60	0.1300
Yorkville (1)	132230003	1998	1298	ppb carbon	0.90	0.80	0.0218
Yorkville (2)	132230003	1998	21	ppb carbon	0.90	0.30	0.1100
Conyers (1)	132470001	1998	1322	ppb carbon	2.20	0.70	0.0189
Conyers (2)	132470001	1998	34	ppb carbon	0.05	0.05	0.0500

N-PENTANE AKA-AMYL H 43220

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	21.00	20.50	3.4380
S. Dekalb (2)	130890002	1998	27	ppb carbon	10.50	9.90	4.4137
Yorkville (1)	132230003	1998	1298	ppb carbon	4.50	4.00	0.6846
Yorkville (2)	132230003	1998	21	ppb carbon	7.30	7.20	2.4400
Conyers (1)	132470001	1998	1322	ppb carbon	20.30	19.50	1.9570
Conyers (2)	132470001	1998	34	ppb carbon	5.50	5.30	2.1370

ISOPENTANE AKA-2-MET 43221

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	27	ppb carbon	70.00	43.10	1.339
Yorkville (1)	132230003	1998	1298	ppb carbon	11.10	10.60	1.631
Yorkville (2)	132230003	1998	21	ppb carbon	18.00	17.00	6.138
Conyers (1)	132470001	1998	1322	ppb carbon	33.80	23.90	4.103
Conyers (2)	132470001	1998	34	ppb carbon	14.00	10.00	4.588

1-PENTENE AKA-PROPYL 43224

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	3.80	3.60	0.2789
S. Dekalb (2)	130890002	1998	27	ppb carbon	7.10	2.00	0.5830
Yorkville (1)	132230003	1998	1298	ppb carbon	5.80	2.90	0.0282
Yorkville (2)	132230003	1998	21	ppb carbon	2.00	1.90	0.3900
Conyers (1)	132470001	1998	1322	ppb carbon	7.80	0.80	0.0611
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.40	0.0820

TRANS-2-PENTENE 43226

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	6.00	4.80	0.3369
S. Dekalb (2)	130890002	1998	27	ppb carbon	13.50	7.10	1.4480
Yorkville (1)	132230003	1998	1298	ppb carbon	1.00	1.00	0.0673
Yorkville (2)	132230003	1998	21	ppb carbon	6.00	3.80	0.5120
Conyers (1)	132470001	1998	1322	ppb carbon	0.70	0.60	0.0119
Conyers (2)	132470001	1998	34	ppb carbon	1.20	0.80	0.1060

CIS-2-PENTENE AKA-CI 43227

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	1.90	1.70	0.1082
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.20	0.80	0.2300
Yorkville (1)	132230003	1998	1298	ppb carbon	3.30	1.40	0.0120
Yorkville (2)	132230003	1998	21	ppb carbon	10.50	8.20	1.0430
Conyers (1)	132470001	1998	1322	ppb carbon	0.80	0.70	0.0092
Conyers (2)	132470001	1998	34	ppb carbon	0.30	0.05	0.0570

3-METHYLPENTANE AKA- 43230

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	23.20	20.90	1.7560
S. Dekalb (2)	130890002	1998	27	ppb carbon	5.70	4.40	2.0280
Yorkville (1)	132230003	1998	1298	ppb carbon	5.70	3.20	0.1529
Yorkville (2)	132230003	1998	21	ppb carbon	2.40	2.10	0.7170
Conyers (1)	132470001	1998	1322	ppb carbon	5.50	3.50	0.5662
Conyers (2)	132470001	1998	34	ppb carbon	6.80	2.40	0.8740

N-HEXANE 43231

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1025	ppb carbon	60.10	50.70	1.6820
S. Dekalb (2)	130890002	1998	27	ppb carbon	5.40	5.00	2.1670
Yorkville (1)	132230003	1998	205	ppb carbon	0.005	0.005	0.0050
Yorkville (2)	132230003	1998	21	ppb carbon	3.20	3.00	1.1310
Conyers (1)	132470001	1998	1308	ppb carbon	3.80	3.20	0.4696
Conyers (2)	132470001	1998	34	ppb carbon	2.40	2.30	0.8060

N-HEPTANE AKA-DIPROP 43232

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1025	ppb carbon	114.7	113.3	1.3800
S. Dekalb (2)	130890002	1998	27	ppb carbon	3.10	1.80	0.8610
Yorkville (1)	132230003	1998	205	ppb carbon	0.70	0.60	0.0552
Yorkville (2)	132230003	1998	21	ppb carbon	1.00	1.00	0.2640
Conyers (1)	132470001	1998	1308	ppb carbon	2.40	1.50	0.2349
Conyers (2)	132470001	1998	34	ppb carbon	3.10	0.70	0.2870

N-OCTANE 43233

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	138.1	118.1	1.5700
S. Dekalb (2)	130890002	1998	27	ppb carbon	0.90	0.70	0.2690
Yorkville (1)	132230003	1998	206	ppb carbon	0.10	0.005	0.0055
Yorkville (2)	132230003	1998	21	ppb carbon	0.80	0.80	0.1880
Conyers (1)	132470001	1998	1308	ppb carbon	0.90	0.80	0.8780
Conyers (2)	132470001	1998	34	ppb carbon	0.30	0.20	0.0620

N-NONANE AKA-NONYL H 43235

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	93.20	81.70	1.523
S. Dekalb (2)	130890002	1998	27	ppb carbon	3.10	0.80	0.404
Yorkville (1)	132230003	1998	205	ppb carbon	0.50	0.50	0.0175
Yorkville (2)	132230003	1998	21	ppb carbon	1.40	1.20	0.500
Conyers (1)	132470001	1998	1308	ppb carbon	1.20	0.80	0.0898
Conyers (2)	132470001	1998	34	ppb carbon	0.30	0.05	0.057

N-DECANE 43238

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	60.60	53.00	1.150
S. Dekalb (2)	130890002	1998	26	ppb carbon	2.70	1.30	0.602
Yorkville (1)	132230003	1998	205	ppb carbon	0.60	0.40	0.0156
Yorkville (2)	132230003	1998	21	ppb carbon	0.90	0.80	0.279
Conyers (1)	132470001	1998	1308	ppb carbon	1.20	0.90	0.0753
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.30	0.0840

CYCLOPENTANE AKA-PEN 43242

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.30	1.10	0.444
Yorkville (1)	132230003	1998	1298	ppb carbon	2.60	1.00	0.0532
Yorkville (2)	132230003	1998	21	ppb carbon	0.70	0.50	0.252
Conyers (1)	132470001	1998	1322	ppb carbon	1.00	0.80	0.1443
Conyers (2)	132470001	1998	34	ppb carbon	2.00	1.40	0.3260

ISOPRENE AKA-3-METHY 43243

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	29.50	28.10	4.598
S. Dekalb (2)	130890002	1998	27	ppb carbon	8.60	8.30	2.498
Yorkville (1)	132230003	1998	1298	ppb carbon	72.60	59.60	7.565
Yorkville (2)	132230003	1998	21	ppb carbon	9.00	8.70	2.202
Conyers (1)	132470001	1998	1322	ppb carbon	87.50	49.60	7.262
Conyers (2)	132470001	1998	34	ppb carbon	15.40	11.80	2.228

2,2-DIMETHYLBUTANE 43244

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	3.30	2.90	0.368
S. Dekalb (2)	130890002	1998	27	ppb carbon	5.00	3.70	0.704
Yorkville (1)	132230003	1998	1298	ppb carbon	4.20	0.80	0.0409
Yorkville (2)	132230003	1998	21	ppb carbon	0.50	0.30	0.102
Conyers (1)	132470001	1998	1322	ppb carbon	1.20	1.10	0.0977
Conyers (2)	132470001	1998	34	ppb carbon	1.40	0.40	0.122

2-METHYL-1-PENTENE A 43246

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	27	ppb carbon	3.10	1.50	0.328
Yorkville (2)	132230003	1998	21	ppb carbon	2.60	1.90	0.493
Conyers (2)	132470001	1998	34	ppb carbon	2.30	1.40	0.243

2,4-DIMETHYLPENTANE 43247

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	7.20	6.40	0.7458
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.60	1.70	0.733
Yorkville (1)	132230003	1998	205	ppb carbon	0.60	0.60	0.0518
Yorkville (2)	132230003	1998	21	ppb carbon	0.70	0.40	0.117
Conyers (1)	132470001	1998	1308	ppb carbon	2.70	1.60	0.1696
Conyers (2)	132470001	1998	34	ppb carbon	0.50	0.40	0.106

CYCLOHEXANE AKA-HEXA 43248

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	25.20	22.40	0.375
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.00	0.60	0.228
Yorkville (1)	132230003	1998	205	ppb carbon	1.00	0.80	0.0181
Yorkville (2)	132230003	1998	21	ppb carbon	1.30	0.70	0.283
Conyers (1)	132470001	1998	1308	ppb carbon	1.60	1.60	0.0358
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.05	0.060

3-METHYLHEXANE 43249

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	47.70	42.60	1.586
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.90	2.70	1.220
Yorkville (1)	132230003	1998	205	ppb carbon	1.20	1.10	0.4446
Yorkville (2)	132230003	1998	21	ppb carbon	1.30	1.20	0.350
Conyers (1)	132470001	1998	1308	ppb carbon	3.80	3.20	0.506
Conyers (2)	132470001	1998	34	ppb carbon	1.60	1.00	0.319

2,2,4-TRIMETHYLPENTA 43250

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	24.10	23.10	3.359
S. Dekalb (2)	130890002	1998	27	ppb carbon	11.00	9.70	4.485
Yorkville (1)	132230003	1998	205	ppb carbon	2.20	2.10	0.5075
Yorkville (2)	132230003	1998	21	ppb carbon	5.20	5.10	2.083
Conyers (1)	132470001	1998	1308	ppb carbon	10.20	6.40	1.003
Conyers (2)	132470001	1998	34	ppb carbon	4.50	2.80	1.015

2,3,4-TRIMETHYLPENTA 43252

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	8.80	8.60	0.1126
S. Dekalb (2)	130890002	1998	27	ppb carbon	3.40	2.70	1.272
Yorkville (1)	132230003	1998	205	ppb carbon	0.90	0.70	0.0784
Yorkville (2)	132230003	1998	21	ppb carbon	1.40	1.00	0.264
Conyers (1)	132470001	1998	1308	ppb carbon	3.30	2.10	0.3186
Conyers (2)	132470001	1998	34	ppb carbon	0.90	0.60	0.196

3-METHYLHEPTANE 43253

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1025	ppb carbon	41.80	30.10	0.580
S. Dekalb (2)	130890002	1998	27	ppb carbon	0.70	0.60	0.174
Yorkville (1)	132230003	1998	206	ppb carbon	0.50	0.40	0.0093
Yorkville (2)	132230003	1998	21	ppb carbon	0.40	0.40	0.083
Conyers (1)	132470001	1998	1308	ppb carbon	4.10	1.10	0.0738
Conyers (2)	132470001	1998	34	ppb carbon	0.20	0.05	0.054

METHYLCYCLOHEXANE 43261

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	64.40	51.30	1.005
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.00	1.00	0.374
Yorkville (1)	132230003	1998	205	ppb carbon	0.70	0.70	0.0615
Yorkville (2)	132230003	1998	21	ppb carbon	0.50	0.40	0.114
Conyers (1)	132470001	1998	1308	ppb carbon	4.20	3.90	0.4684
Conyers (2)	132470001	1998	34	ppb carbon	1.60	0.30	0.107

METHYLCYCLOPENTANE 43262

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	21.90	20.10	0.863
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.90	2.20	1.076
Yorkville (1)	132230003	1998	205	ppb carbon	0.60	0.60	0.0315
Yorkville (2)	132230003	1998	21	ppb carbon	1.20	1.10	0.345
Conyers (1)	132470001	1998	1308	ppb carbon	2.30	1.60	0.2221
Conyers (2)	132470001	1998	34	ppb carbon	1.10	0.90	0.271

2-METHYLHEXANE 43263

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	40.00	35.30	1.119
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.80	2.30	1.081
Yorkville (1)	132230003	1998	205	ppb carbon	0.60	0.60	0.0494
Yorkville (2)	132230003	1998	21	ppb carbon	1.30	1.20	0.281
Conyers (1)	132470001	1998	1308	ppb carbon	2.60	1.70	0.2839
Conyers (2)	132470001	1998	34	ppb carbon	1.60	1.00	0.265

1-BUTENE 43280

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	4.80	2.70	0.2573
S. Dekalb (2)	130890002	1998	27	ppb carbon	3.10	2.10	0.781
Yorkville (1)	132230003	1998	1298	ppb carbon	0.60	0.50	0.1342
Yorkville (2)	132230003	1998	21	ppb carbon	1.50	1.30	0.483
Conyers (1)	132470001	1998	1322	ppb carbon	1.20	1.00	0.2751
Conyers (2)	132470001	1998	34	ppb carbon	0.90	0.60	0.146

2,3-DIMETHYLBUTANE 43284

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	6.60	6.30	0.8564
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.90	2.30	0.996
Yorkville (1)	132230003	1998	1298	ppb carbon	5.00	3.90	0.0619
Yorkville (2)	132230003	1998	21	ppb carbon	1.50	1.50	0.436
Conyers (1)	132470001	1998	1322	ppb carbon	3.40	2.00	0.2549
Conyers (2)	132470001	1998	34	ppb carbon	3.60	1.40	0.482

2-METHYLPENTANE 43285

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	22.60	21.60	2.330
S. Dekalb (2)	130890002	1998	27	ppb carbon	9.30	7.20	3.213
Yorkville (1)	132230003	1998	1298	ppb carbon	4.10	3.20	0.2455
Yorkville (2)	132230003	1998	21	ppb carbon	4.00	3.60	1.081
Conyers (1)	132470001	1998	1322	ppb carbon	8.10	5.00	0.7705
Conyers (2)	132470001	1998	34	ppb carbon	18.80	4.20	1.518

2,3-DIMETHYLPENTANE 43291

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	20.10	18.60	1.276
S. Dekalb (2)	130890002	1998	26	ppb carbon	2.50	2.30	1.119
Yorkville (1)	132230003	1998	205	ppb carbon	1.10	1.10	0.2129
Yorkville (2)	132230003	1998	21	ppb carbon	0.70	0.60	0.174
Conyers (1)	132470001	1998	1308	ppb carbon	3.50	2.40	0.3721
Conyers (2)	132470001	1998	34	ppb carbon	0.80	0.60	0.196

ISOPENTANE & CYCLOPE 43341

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1175	ppb carbon	58.00	57.50	8.857

FORMALDEHYDE AKA-OXY 43502

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	21	ppb carbon	7.08	4.48	1.253

ACETALDEHYDE AKA-ACE 43503

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	31	ppb carbon	2.75	0.51	0.428

ACETONE AKA-DIMETHYL 43551

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	2	ppb carbon	211.7	7.8	10.98

N-UNDECANE 43954

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	14.30	13.40	0.628
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.10	1.00	0.380
Yorkville (1)	132230003	1998	206	ppb carbon	0.90	0.30	0.0112
Yorkville (2)	132230003	1998	21	ppb carbon	0.80	0.60	0.260
Conyers (1)	132470001	1998	1308	ppb carbon	1.40	1.00	0.0775
Conyers (2)	132470001	1998	34	ppb carbon	0.30	0.05	0.057

2-METHYLHEPTANE 43960

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	48.70	42.50	0.692
S. Dekalb (2)	130890002	1998	27	ppb carbon	0.70	0.70	0.187
Yorkville (1)	132230003	1998	206	ppb carbon	0.50	0.40	0.0203
Yorkville (2)	132230003	1998	21	ppb carbon	0.30	0.30	0.074
Conyers (1)	132470001	1998	1308	ppb carbon	1.20	0.90	0.0588
Conyers (2)	132470001	1998	34	ppb carbon	1.80	0.20	0.106

M/P X
YLENE 45109

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	61.30	52.10	4.538
S. Dekalb (2)	130890002	1998	27	ppb carbon	14.7	13.00	6.211
Yorkville (1)	132230003	1998	205	ppb carbon	4.40	3.20	0.6334
Yorkville (2)	132230003	1998	21	ppb carbon	6.80	6.10	2.490
Conyers (1)	132470001	1998	1308	ppb carbon	12.10	10.80	1.257
Conyers (2)	132470001	1998	34	ppb carbon	4.50	3.20	1.576

BENZENE 45201

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	14.20	13.30	2.205
S. Dekalb (2)	130890002	1998	27	ppb carbon	8.70	7.60	3.615
Yorkville (1)	132230003	1998	205	ppb carbon	2.30	2.30	0.9114
Yorkville (2)	132230003	1998	21	ppb carbon	6.10	5.50	2.205
Conyers (1)	132470001	1998	1308	ppb carbon	6.90	4.80	0.9868
Conyers (2)	132470001	1998	34	ppb carbon	3.50	2.60	1.576

TOLUENE 45202

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	68.00	63.40	8.039
S. Dekalb (2)	130890002	1998	27	ppb carbon	20.00	18.00	9.133
Yorkville (1)	132230003	1998	206	ppb carbon	6.50	6.20	0.1982
Yorkville (2)	132230003	1998	21	ppb carbon	10.00	9.00	3.329
Conyers (1)	132470001	1998	1308	ppb carbon	23.20	17.20	2.896
Conyers (2)	132470001	1998	34	ppb carbon	17.00	7.80	3.656

ETHYLBENZENE 45203

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	25.0	21.60	1.402
S. Dekalb (2)	130890002	1998	27	ppb carbon	4.60	4.50	1.726
Yorkville (1)	132230003	1998	205	ppb carbon	1.30	1.00	0.1477
Yorkville (2)	132230003	1998	21	ppb carbon	1.90	1.80	0.621
Conyers (1)	132470001	1998	1308	ppb carbon	3.50	3.50	0.4395
Conyers (2)	132470001	1998	34	ppb carbon	2.80	1.50	0.456

O-XYLENE 45204

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	27.00	23.50	1.786
S. Dekalb (2)	130890002	1998	27	ppb carbon	6.90	6.30	2.722
Yorkville (1)	132230003	1998	205	ppb carbon	1.50	1.40	0.1942
Yorkville (2)	132230003	1998	21	ppb carbon	3.10	2.90	1.255
Conyers (1)	132470001	1998	1308	ppb carbon	5.00	3.40	0.4763
Conyers (2)	132470001	1998	34	ppb carbon	2.70	2.10	0.685

1,3,5-TRIMETHYLBENZE 45207

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	26.60	12.10	0.746
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.70	2.40	0.952
Yorkville (1)	132230003	1998	205	ppb carbon	0.50	0.50	0.0132
Yorkville (2)	132230003	1998	21	ppb carbon	5.80	0.80	0.552
Conyers (1)	132470001	1998	1308	ppb carbon	1.50	1.20	0.1578
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.30	0.091

1,2,4-TRIMETHYLBENZE 45208

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	69.60	35.80	2.538
S. Dekalb (2)	130890002	1998	27	ppb carbon	16.40	8.50	4.085
Yorkville (1)	132230003	1998	205	ppb carbon	1.20	1.10	0.1292
Yorkville (2)	132230003	1998	21	ppb carbon	15.00	6.20	2.145
Conyers (1)	132470001	1998	1308	ppb carbon	4.70	3.40	0.5678
Conyers (2)	132470001	1998	34	ppb carbon	12.30	10.30	2.169

N-PROPYLBENZENE 45209

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	31.70	23.60	0.516
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.40	1.20	0.365
Yorkville (1)	132230003	1998	205	ppb carbon	0.50	0.40	0.0093
Yorkville (2)	132230003	1998	21	ppb carbon	3.40	0.40	0.255
Conyers (1)	132470001	1998	1308	ppb carbon	0.80	0.70	0.0507
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.30	0.068

ISOPROPYLBENZENE 45210

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	8.60	8.10	0.1922
S. Dekalb (2)	130890002	1998	27	ppb carbon	0.50	0.05	0.067
Yorkville (1)	132230003	1998	205	ppb carbon	0.005	0.005	0.005
Yorkville (2)	132230003	1998	21	ppb carbon	0.80	0.05	0.0867
Conyers (1)	132470001	1998	1308	ppb carbon	0.40	0.40	0.019
Conyers (2)	132470001	1998	34	ppb carbon	0.05	0.05	0.050

O-ETHYLTOLUENE 45211

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	16.50	11.80	0.560
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.30	1.90	0.781
Yorkville (1)	132230003	1998	205	ppb carbon	0.005	0.005	0.005
Yorkville (2)	132230003	1998	21	ppb carbon	4.70	1.20	0.419
Conyers (1)	132470001	1998	1308	ppb carbon	1.20	1.00	0.1103
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.30	0.088

M-ETHYLTOLUENE 45212

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	39.40	13.40	0.999
S. Dekalb (2)	130890002	1998	27	ppb carbon	5.90	5.20	2.374
Yorkville (1)	132230003	1998	205	ppb carbon	1.70	1.20	0.269
Yorkville (2)	132230003	1998	21	ppb carbon	4.50	2.00	0.869
Conyers (1)	132470001	1998	1308	ppb carbon	16.80	10.90	0.211
Conyers (2)	132470001	1998	34	ppb carbon	1.70	1.40	0.509

P-ETHYLTOLUENE 45213

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.20	2.00	0.937
Yorkville (2)	132230003	1998	21	ppb carbon	0.60	0.50	0.157
Conyers (2)	132470001	1998	34	ppb carbon	2.00	1.40	0.397

M-DIETHYLBENZENE 45218

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	6.60	6.50	0.2878
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.00	0.90	0.209
Yorkville (1)	132230003	1998	205	ppb carbon	0.005	0.005	0.005
Yorkville (2)	132230003	1998	21	ppb carbon	0.40	0.05	0.067
Conyers (1)	132470001	1998	636	ppb carbon	10.20	9.50	1.692
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.05	0.060

P-DIETHYLBENZENE 45219

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	7.30	6.60	0.4233
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.70	1.30	0.413
Yorkville (1)	132230003	1998	205	ppb carbon	0.005	0.005	0.005
Yorkville (2)	132230003	1998	21	ppb carbon	1.00	1.00	0.398
Conyers (1)	132470001	1998	636	ppb carbon	4.90	3.90	0.7221
Conyers (2)	132470001	1998	34	ppb carbon	0.50	0.50	0.094

STYRENE 45220

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1141	ppb carbon	5.90	4.00	0.6161
S. Dekalb (2)	130890002	1998	27	ppb carbon	1.60	1.50	0.480
Yorkville (1)	132230003	1998	205	ppb carbon	0.70	0.50	0.0229
Yorkville (2)	132230003	1998	21	ppb carbon	1.80	1.20	0.681
Conyers (1)	132470001	1998	1308	ppb carbon	2.00	1.80	0.3333
Conyers (2)	132470001	1998	34	ppb carbon	0.40	0.20	0.065

1,2,3-TRIMETHYLBENZE 45225

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (2)	130890002	1998	27	ppb carbon	2.40	2.10	1.119
Yorkville (2)	132230003	1998	21	ppb carbon	3.00	2.60	0.610
Conyers (2)	132470001	1998	34	ppb carbon	1.50	1.40	0.443

WIND SPEED 61101

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	5885	Knots	11.5	11.5	2.12
Tucker (1)	130893001	1998	8136	Knots	11.3	11.3	2.72
Yorkville (1)	132230003	1998	8612	Knots	21.2	20.6	5.35
Conyers (1)	132470001	1998	8691	Knots	11.3	11.1	2.27

WIND DIRECTION 61102

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	5581	Knots	360	360	198.6
Tucker (1)	130893001	1998	8125	Knots	360	360	206.3
Yorkville (1)	132230003	1998	8668	Knots	360	360	208.6
Conyers (1)	132470001	1998	8717	Knots	360	360	186.7

OUTDOOR TEMPERATURE 62101

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	5887	Deg. C.	36	35	18.8
Tucker (1)	130893001	1998	6838	Deg. C.	35	35	18.9
Yorkville (1)	132230003	1998	8627	Deg. C.	35	35	16.5
Conyers (1)	132470001	1998	6921	Deg. C.	37	37	18.0

RELATIVE HUMIDITY 62201

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	5887	%	100	100	80.8
Tucker (1)	130893001	1998	6808	%	100	100	78.0
Yorkville (1)	132230003	1998	8028	%	100	100	80.8
Conyers (1)	132470001	1998	6920	%	100	100	81.0

SOLAR RADIATION 63301

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	1882	Lang./min	1.43	1.43	1.413
Tucker (1)	130893001	1998	7693	Lang./min	1.34	1.30	0.244
Yorkville (1)	132230003	1998	7654	Lang./min	1.42	1.36	0.262
Conyers (1)	132470001	1998	8649	Lang./min	1.45	1.39	0.222

ULTRAVIOLET RADIATION 63302

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
Tucker (1)	130893001	1998	8190	Watts/sq m	0.05	0.05	0.009
Yorkville (1)	132230003	1998	8079	Watts/sq m	0.05	0.05	0.009
Conyers (1)	132470001	1998	2513	Watts/sq m	0.06	0.06	0.007

BAROMETRIC PRESSURE 64101

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	5885	Millibars	1010	1010	673.9
Tucker (2)	130893001	1998	8204	Millibars	999	998	979.5
Yorkville (1)	132230003	1998	8622	Millibars	996	996	972.3
Conyers (1)	132470001	1998	8570	Millibars	1012	1012	991.6

RAIN / MELT PRECIP. 65102

SITE NAME	SITE NUMBER	SAMPLING PERIOD	NO. OF OBS.	UNITS	1ST MAX	2ND MAX	ARITH. MEAN
S. Dekalb (1)	130890002	1998	5154	Millibars	.83	.70	.009
Tucker (2)	130893001	1998	8138	Millibars	.81	.72	.009

1998 Air Toxics Monitoring Results

Toxic air pollutants are also referred to as air toxics or hazardous air pollutants (HAPs). They are generally defined as those pollutants that are known or suspected to cause serious health problems. "Routine" toxic air pollutants are emitted by a variety of industrial sources and motor vehicles. In addition to routine releases, sudden accidental air releases of toxics potentially threaten many Americans. In response to public concern over the quality of Georgia's air, the Environmental Protection Division began an ambitious project in 1997 to establish, over the course of several years, nineteen sites to monitor non-criteria metals, semi volatiles, volatiles and carbonyl compounds. In 1998 there were a total of nine sites in nine counties monitoring for non-criteria pollutants. The following tables are the results of that monitoring

Carbonyl Compounds

ug/m^3

Compound	Site	No of Obs.	Mean	1st Max	2nd Max
Acetaldehyde	Brunswick	5	55.4	306.7	127.6
	Dawsonville	3	28.4	110.6	2.4
	Savannah	13	3.0	11.1	7.4
Acetone	Brunswick	2	10.2	51	30.9
	Dawsonville	2	2.4	9.3	0.4
	Savannah	9	5.01	45.9	6.6
Acrolein	Brunswick	2	1.1	7.3	1.7
	Dawsonville	1	0.2	0.8	ND
	Savannah	1	0.007	0.1	ND
Benzaldehyde	Brunswick	3	20.8	75	4.5
	Dawsonville	1	3.6	3.6	NS
	Savannah	1	0.1	1.2	ND
Butylaldehyde	Brunswick	3	43.5	117.9	55.8
	Dawsonville	NA	ND	ND	NA
	Savannah	2	0.2	1.2	0.2
Formaldehyde	Brunswick	4	37.4	220.2	75
	Dawsonville	2	11.05	40.8	3.4
	Savannah	12	3.7	9.7	5.7
Propionaldehyde	Brunswick	4	14.4	44	12.7
	Dawsonville	NA	ND	ND	NA
	Savannah	1	0.06	0.5	ND

ND - indicates non-detect
NA - indicates not applicable

Toxic Metals

ug/m^3

Compound	Site	No of Obs.	Mean	1st Max	2nd Max
Arsenic	Augusta	13	0.004	0.009	0.006
	Brunswick	16	0.003	0.007	0.005
	Dawsonville	9	0.002	0.008	0.004
	Douglas	3	0.003	0.003	0.003
	Gainesville	11	0.003	0.007	0.007
	Macon	2	0.002	0.003	0.002
	Rome	8	0.003	0.008	0.006
	Savannah	17	0.003	0.005	0.005
	Utoy Creek	19	0.007	0.021	0.01
Beryllium	Augusta	3	0.00002	0.0002	0.0001
	Brunswick	4	0.0001	0.001	0.0002
	Dawsonville	5	0.0001	0.0008	0.0001
	Gainesville	6	0.00004	0.0002	0.0002
	Savannah	8	0.0002	0.001	0.0002
	Utoy Creek	11	0.0001	0.001	0.0005
Cadmium	Augusta	14	0.0008	0.004	0.002
	Brunswick	14	0.0002	0.001	0.0006
	Dawsonville	5	0.0002	0.0008	0.0005
	Douglas	3	0.0002	0.0003	0.0001
	Gainesville	9	0.0001	0.0006	0.0003
	Macon	2	0.0002	0.0005	0.0001
	Rome	4	0.0001	0.0007	0.0001
	Savannah	10	0.0003	0.001	0.0005
	Utoy Creek	8	0.0002	0.001	0.001
Cobalt	Augusta	3	0.0001	0.0008	0.0003
	Brunswick	5	0.0002	0.001	0.001
	Dawsonville	4	0.0001	0.001	0.0003
	Gainesville	7	0.0004	0.004	0.005
	Savannah	6	0.0002	0.001	0.001
	Utoy Creek	11	0.001	0.006	0.003
Chromium	Augusta	13	0.002	0.005	0.003
	Brunswick	3	0.0001	0.001	0.0003
	Dawsonville	7	0.0005	0.001	0.0007
	Douglas	1	0.0004	0.001	ND
	Gainesville	8	0.0006	0.002	0.002
	Rome	1	0.0001	0.001	ND
	Savannah	15	0.005	0.02	0.02
	Utoy Creek	16	0.004	0.01	0.010

Toxic Metals

ug/m^3

Compound	Site	No of Obs.	Mean	1st Max	2nd Max
Lead	Augusta	13	0.008	0.02	0.02
	Brunswick	19	0.003	0.01	0.008
	Dawsonville	6	0.001	0.004	0.003
	Douglas	3	0.003	0.005	0.002
	Gainesville	10	0.002	0.006	0.006
	Macon	3	0.003	0.005	0.005
	Rome	7	0.006	0.02	0.01
	Savannah	16	0.003	0.01	0.007
	Utoy Creek	18	0.009	0.03	0.02
Manganese	Augusta	15	0.01	0.02	0.02
	Brunswick	22	0.005	0.04	0.010
	Dawsonville	10	0.005	0.01	0.007
	Douglas	3	0.002	0.003	0.002
	Gainesville	14	0.007	0.02	0.01
	Macon	2	0.004	0.006	0.006
	Rome	7	0.008	0.02	0.02
	Savannah	19	0.009	0.03	0.02
	Utoy Creek	20	0.03	0.10	0.07
Nickel	Augusta	14	0.001	0.002	0.002
	Brunswick	20	0.002	0.01	0.005
	Dawsonville	8	0.0009	0.003	0.001
	Douglas	3	0.001	0.003	0.0005
	Gainesville	12	0.002	0.01	0.002
	Macon	2	0.0007	0.002	0.0003
	Rome	7	0.002	0.007	0.002
	Savannah	18	0.002	0.005	0.003
	Utoy Creek	18	0.007	0.05	0.04
Selenium	Augusta	7	0.003	0.01	0.009
	Brunswick	15	0.02	0.2	0.03
	Dawsonville	7	0.02	0.1	0.04
	Douglas	1	0.0003	0.0008	ND
	Gainesville	11	0.02	0.09	0.09
	Macon	1	0.008	0.02	ND
	Rome	6	0.02	0.04	0.04
	Savannah	18	0.03	0.1	0.05
	Utoy Creek	13	0.02	0.07	0.04
Zinc	Augusta	15	0.04	0.06	0.05
	Brunswick	22	0.02	0.04	0.03
	Dawsonville	10	0.01	0.05	0.03
	Douglas	3	0.02	0.03	0.01
	Gainesville	13	0.03	0.06	0.06
	Macon	3	0.06	0.1	0.05
	Rome	8	0.03	0.07	0.07
	Savannah	19	0.02	0.04	0.04
	Utoy Creek	20	0.07	0.3	0.1

The reported metal concentrations are blank corrected using the average yearly blank.

Semi-Volatile Organic Compounds

The compounds listed below were monitored in 1998. These compounds include pesticides, herbicides, and polyaromatic hydrocarbons. In most cases significant reportable concentrations were either not detected or below the detection limit of the analytical method. Those compounds that did have reportable concentrations are presented on pages 56 and 57.

Acenapthene	**Endrin Aldehyde**
Acenapthylene	**Flopet**
Aldrin	**Fluoranthene**
Anthracene	**Flourene**
Benzo(a)anthracene	**Heptachlor**
Benzo(b)fluoranthene	**Heptachlor Epoxide**
Benzo(k)fluoranthene	**Hexachlorobenzene**
Benzo(g,h,I,)perylene	**Ideno(1,2,3-c,d)pyrene**
Benzo(a)pyrene	**Methoxychlor**
Benzo(e)pyrene	**Mirex**
alpha BHC	**Naphthalene**
beta BHC	**Trans-Nonachlor**
delta BHC	**Oxychlordane**
Captan	**PCB-1016**
Chlordane	**PCB-1221**
Chlorothalonil	**PCB-1232**
Chloropyrifos	**PCB-1242**
Chrysene	**PCB-1248**
DDD	**PCB-1254**
p,p'-DDE	**PCB-1260**
4,4'DDT	**Pentachlorobenzene**
Dibenz(a,h)anthracene	**Pentachlorophenol**
Dicofol	**Phenanthrene**
Dieldrin	**Pyrene**
Endosulfan I	**Ronnel**
Endosulfan II	**Toxaphene**
Endrin	**2,4,5-Trichlorophenol**

Semi-Volatile Organic Compounds

ug/m3

Compound	Site	No. of Obs.	Mean	1st Max	2nd Max
a-BHC	Brunswick	2	0.00009	0.00005	0.00003
	Savannah	2	0.000007	0.0001	0.00004
Acenapthene	Augusta	1	0.002	0.02	ND
	Brunswick	1	0.003	0.03	ND
	Utoy Creek	3	0.04	0.5	0.2
Acenapthylene	Augusta	2	0.008	0.06	0.02
	Brunswick	2	0.06	0.6	0.07
	Gainesville	2	0.003	0.04	0.02
	Utoy Creek	3	0.01	0.09	0.05
	Savannah	2	0.007	0.1	0.03
Aldrin	Brunswick	1	0.00002	0.0002	ND
	Utoy Creek	1	0.000004	0.00008	ND
Anthracene	Augusta	3	0.004	0.03	0.01
	Dawsonville	3	0.0006	0.006	0.002
	Gainesville	1	0.0002	0.004	ND
	Savannah	2	0.0007	0.007	0.0060
	Utoy Creek	5	0.002	0.02	0.007
Benzo(a)anthracene	Augusta	1	0.0001	0.001	ND
	Gainesville	2	0.00009	0.001	0.0007
	Savannah	2	0.0001	0.001	0.0002
	Utoy Creek	3	0.0001	0.001	0.0009
Benzo(b)fluoranthene	Augusta	5	0.0002	0.0009	0.0004
	Brunswick	2	0.00001	0.00004	0.00003
	Dawsonville	2	0.0001	0.001	0.0001
	Gainesville	3	0.00001	0.0001	0.00004
	Savannah	1	0.000003	0.0001	ND
	Utoy Creek	2	0.0002	0.004	0.00003
Benzo(g,h,i)perylene	Gainesville	1	0.00001	0.0002	ND
	Utoy Creek	1	0.00002	0.0003	ND
Benzo(k)fluoranthene	Augusta	2	0.00004	0.0003	0.0001
	Brunswick	1	0.00001	0.00006	ND
	Dawsonville	2	0.00001	0.00004	0.00003
	Gainesville	2	0.00002	0.0002	0.0002
	Utoy Creek	1	0.00001	0.0001	ND
Chlorpyrifos	Utoy Creek	1	0.00003	0.001	ND
Chrysene	Brunswick	1	0.0008	0.01	ND
	Utoy Creek	1	0.0002	0.004	ND
Dibenzo(a,h)anthracene	Utoy Creek	1	0.0001	0.001	ND
Dicofol	Brunswick	1	0.00001	0.0001	ND
Dieldrin	Augusta	8	0.00137	0.003	0.003
Eldrin Aldehyde	Savannah	1	0.00001	0.0002	ND
Fluoranthene	Brunswick	8	0.003	0.02	0.002
	Dawsonville	9	0.0005	0.004	0.0009
	Gainesville	11	0.001	0.01	0.005
	Macon	1	0.0002	0.0002	NA
	Savannah	15	0.002	0.008	0.005
	Utoy Creek	10	0.003	0.03	0.007

Semi-Volatile Organic Compounds

ug/m3

Compound	Site	No. of Obs.	Mean	1st Max	2nd Max
Fluorene	Brunswick	2	0.002	0.02	0.007
	Dawsonville	2	0.002	0.02	0.008
	Gainesville	1	0.001	0.01	ND
	Savannah	4	0.005	0.03	0.03
	Utoy Creek	5	0.03	0.4	0.08
Heptachlor	Augusta	1	0.00001	0.0001	ND
	Savannah	1	0.000004	0.0001	ND
	Utoy Creek	1	0.000004	0.0001	ND
Indeno(1,2,3-cd)pyrene	Augusta	1	0.0001	0.001	ND
Lindane	Brunswick	2	0.00001	0.00008	0.00004
	Savannah	1	0.000002	0.00003	ND
	Utoy Creek	2	0.00001	0.0001	0.00
Methoxychlor	Utoy Creek	1	0.00002	0.0003	ND
Naphthalene	Augusta	2	0.008	0.05	0.03
	Brunswick	2	0.01	0.07	0.03
	Dawsonville	2	0.01	0.08	0.05
	Gainesville	3	0.03	0.5	0.04
	Savannah	5	0.01	0.07	0.06
	Utoy Creek	7	0.05	0.5	0.1
Pentachlorobenzene	Savannah	1	0.0001	0.001	ND
Phenanthrene	Augusta	6	0.01	0.03	0.01
	Brunswick	7	0.002	0.01	0.004
	Dawsonville	3	0.002	0.02	0.02
	Gainesville	7	0.003	0.02	0.01
	Savannah	9	0.004	0.03	0.01
	Utoy Creek	9	0.006	0.04	0.01
p,p-DDE	Brunswick	1	0.000003	0.00003	ND
	Utoy Creek	1	0.000003	0.0001	ND
Pyrene	Augusta	4	0.002	0.003	0.002
	Brunswick	1	0.0001	0.00	ND
	Dawsonville	2	0.001	0.01	0.001
	Gainesville	4	0.001	0.01	0.003
	Savannah	10	0.002	0.006	0.005
	Utoy Creek	12	0.004	0.02	0.016
Ronnel	Utoy Creek	1	0.0001	0.00	ND

Volatile Organic Compounds

The compounds listed below were monitored in 1998. These compounds include emissions from vehicles and stationary sources. In most cases significant reportable concentrations were either not detected or below the detection limit of the analytical method. Those compounds that did have reportable concentrations are presented on pages 59 through 61.

Benzene	1,3-Dichlorobenzene	Hexachlorobutadiene
Benzyl Chloride	1,4-Dichlorobenzene	Methylene chloride
Bromomethane	1,1-Dichloroethane	Tetrachloroethene
Carbon tetrachloride	1,2-Dichloroethane	Toluene
Chlorobenzene	1,1-Dichloroethene	1,2,4-Trichlorobenzene
Chloroethane	cis-1,2-Dichloroethylene	1,1,1-Trichloroethane
Chloroform	trans-1,3-Dichloropropene	Trichloroethene
Chloromethane	cis-1,3-Dichloropropene	1,2,4-Trimethylbenzene
Cyclohexane	Ethyl benzene	1,3,5-Trimethylbenzene
1,2-Dibromoethane	1-Ethyl-4-Methylbenzene	1,3,5-Trimethylbenzene
Dichlorodifluoromethane	Freon 11	p,m-Xylene
1,2-Dichlorobenzene	Freon 114	o-Xylene

Volatile Organic Compounds

ug/m^3

Compound	Site	No. of Obs.	Average	1st Max	2nd Max
1,2,4-Trichlorobenzene	Augusta	1	0.2	4.5	ND
1,2,3-Trimethyl benzene	Conyers*	18	0.2	0.8	0.8
	Gainesville*	12	0.3	1.4	0.5
	South Dekalb*	15	0.6	1.3	1.1
	Yorkville*	6	0.3	1.6	1.4
1,2,4-Trimethylbenzene	Augusta	4	1.5	10.3	8.8
	Conyers*	21	1.2	6.7	5.6
	Gainesville*	14	1.0	6.0	2.3
	Rome	1	0.4	5.9	ND
	Savannah	1	0.2	2.9	ND
	South Dekalb*	16	2.2	9.0	4.6
	Yorkville*	12	1.2	8.2	3.4
1,3,5-Trimethylbenzene	Conyers*	5	0.05	0.2	0.2
	Gainesville*	9	0.3	1.9	0.5
	South Dekalb*	13	0.5	1.5	1.3
	Yorkville*	3	0.3	3.2	0.4
1,3-Butadiene	Augusta	2	0.4	2.2	2.0
	Gainesville	1	0.1	1.1	ND
	Rome	1	0.2	1.3	ND
1,4-Dichlorobenzene	Rome	3	1.6	10.2	7.8
	Utoy Creek	1	0.5	16.8	ND
Benzene	Augusta	11	3.04	14.4	14.1
	Brunswick	4	0.6	2.6	2.6
	Conyers*	21	0.8	1.9	1.4
	Dawsonville	3	0.4	2.2	1.6
	Douglas	1	5.1	5.1	NA
	Gainesville*	16	1.0	5.9	2.7
	Rome	10	2.4	7.3	5.1
	Savannah	7	0.9	4.8	2.2
	South Dekalb*	16	1.9	4.6	4.0
	Yorkville*	12	1.2	3.2	2.9
	Utoy Creek	36	0.6	4.5	2.9
Bromomethane	Rome	1	0.6	8.5	ND
Chlorobenzene	Utoy Creek	1	0.4	12.9	ND
Chloromethane	Augusta	15	2.2	5.8	4.1
	Brunswick	14	2.9	6.8	5.2
	Dawsonville	14	2.0	3.3	3.3
	Douglas	1	6.0	6.0	NA
	Gainesville	12	0.9	2.5	2.5
	Rome	10	2	5.8	3.7
	Savannah	11	2.2	7.6	6.8
	Utoy Creek	30	1.3	2.7	2.7

Volatile Organic Compounds

ug/m^3

Compound	Site	No. of Obs.	Average	1st Max	2nd Max
Cyclohexane	Augusta	6	5.4	48.5	34.4
	Brunswick	8	987.8	8192.3	6206.15
	Conyers*	1	0.03	0.2	ND
	Gainesville*	2	0.04	0.5	0.2
	Rome	2	6.5	70.2	21.3
	Savannah	2	97.6	1046.8	320.1
	South Dekalb*	6	0.1	0.6	0.3
	Yorkville*	5	0.2	0.7	0.4
	Utoy Creek	8	1.6	32.0	5.5
Dichlorodifluoromethane	Augusta	8	1.8	6.9	5.9
	Brunswick	6	1.5	5.4	4.5
	Dawsonville	6	1.6	5.4	4.5
	Douglas	1	5.9	5.9	NA
	Gainesville	9	1.5	5.4	4.9
	Rome	6	2.3	5.9	5.9
	Savannah	7	2.0	5.4	5.4
	Utoy Creek	11	1.1	5.9	5.9
Ethylbenzene	Augusta	3	0.7	5.6	5.6
	Conyers*	15	0.2	1.5	0.8
	Gainesville*	16	0.4	3.8	1.2
	Rome	1	0.3	4.8	ND
	Savannah	1	0.2	2.2	ND
	South Dekalb*	16	0.9	2.5	2.4
	Yorkville*	7	0.3	1.0	1.0
Freon 11	Augusta	6	1.2	4.5	3.9
	Brunswick	4	1.09	6.2	3.9
	Dawsonville	1	0.2	2.8	ND
	Gainesville	9	1.2	5.6	3.9
	Rome	1	0.2	3.4	ND
	Savannah	3	0.8	3.9	3.4
	Utoy Creek	2	0.2	3.9	3.4
Methylene Chloride	Augusta	6	0.9	3.1	3.1
	Brunswick	6	17.8	210.8	35.4
	Dawsonville	1	0.2	2.4	ND
	Douglas	1	2.8	2.8	NA
	Gainesville	1	0.2	5.9	ND
	Rome	7	3.0	12.5	9.4
	Savannah	3	4.7	59.7	3.8
	Utoy Creek	16	2.2	12.0	11.8

Volatile Organic Compounds

ug/m^3

Compound	Site	No. of Obs.	Average	1st Max	2nd Max
n-Hexane	Conyers*	18	0.5	1.4	1.4
	Gainesville*	14	2.1	10.5	10.0
	South Dekalb*	16	1.3	3.2	2.9
	Yorkville*	11	0.7	1.9	1.8
o-Dimethylbenzene	Augusta	4	1.2	6.9	6.9
	Conyers*	19	0.4	1.5	1.1
	Gainesville	16	0.7	6.0	1.9
	Rome	1	0.3	4.8	ND
	Savannah	1	0.2	2.6	ND
	South Dekalb*	16	1.5	3.7	3.4
	Yorkville*	12	0.7	1.7	1.6
p,m-Dimethylbenzene	Augusta	8	2.8	10.9	10.4
	Brunswick	1	0.2	2.6	ND
	Conyers*	21	0.9	2.4	1.7
	Gainesville	17	1.7	13.6	4.0
	Rome	4	1.1	8.3	2.6
	Savannah	4	1.0	3.9	3.5
	South Dekalb*	16	3.4	8.0	7.1
	Yorkville*	12	1.4	3.7	3.3
	Utoy Creek	5	0.4	3.0	3.0
Styrene	Conyers*	3	0.03	0.2	0.1
	Gainesville*	1	0.03	0.4	ND
	South Dekalb*	11	0.3	0.9	0.8
	Yorkville*	9	0.4	1.0	0.6
Tetrachloroethylene	Utoy Creek	4	1.0	14.9	14.2
Toluene	Augusta	13	7.7	37.7	36.9
	Brunswick	7	6.7	44.9	21.9
	Dawsonville	3	0.5	3.0	2.3
	Conyers*	21	2.0	9.2	4.2
	Douglas	1	9.0	9.0	NA
	Gainesville*	19	2.5	22.6	5.3
	Rome	13	6.1	30.2	9.8
	Savannah	12	5.2	20.7	19.6
	South Dekalb*	16	4.9	10.8	9.7
	Yorkville*	12	1.8	5.4	4.8
	Utoy Creek	24	3.7	12.8	11.7

* Indicates sites monitored under the PAMS network, but contain air toxic compound analyses

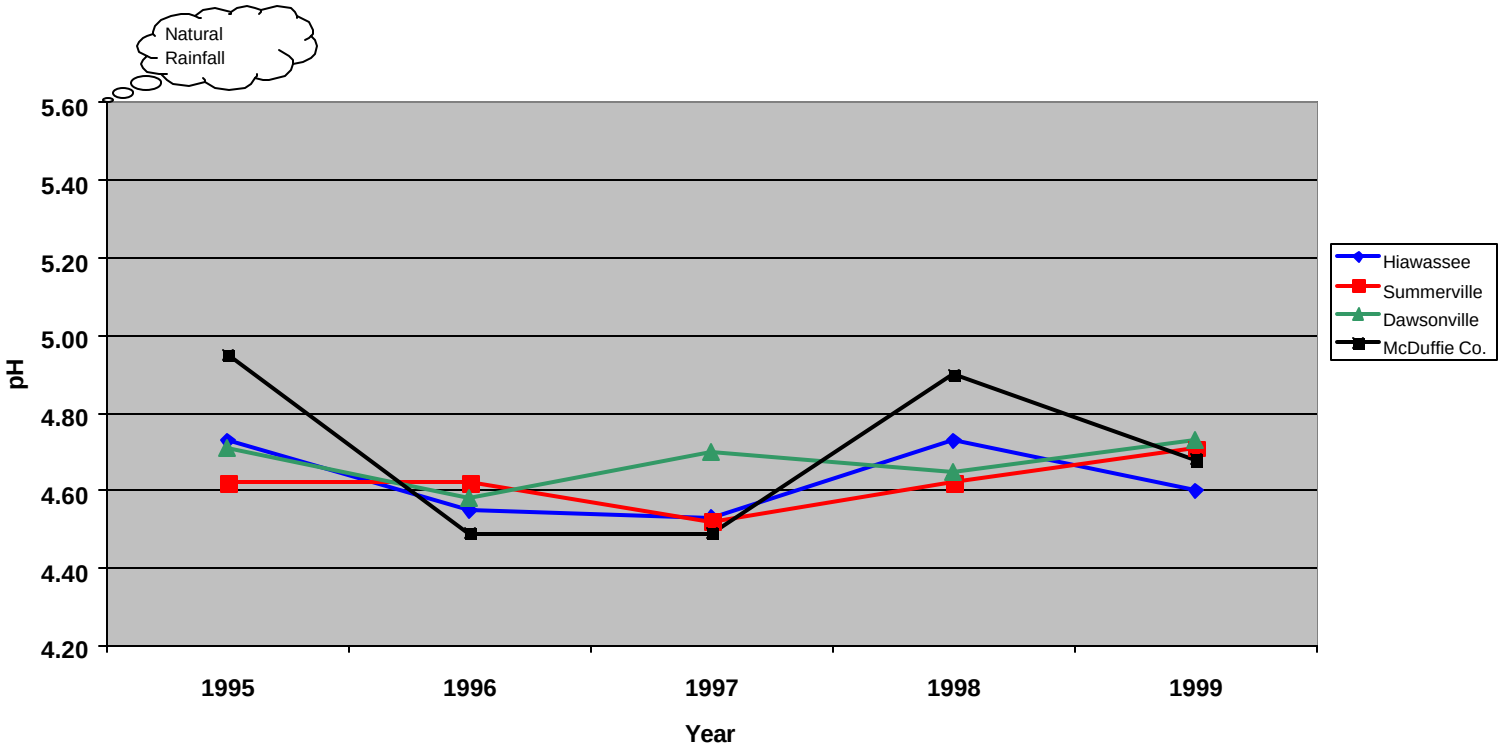
ND - indicates non-detect

NA - indicates not applicable

Acid Precipitation
1999 Network

Acid precipitation was monitored in 4 counties in 1999. The Air Protection Branch operated 3 of these sites and the Georgia Forestry Commission operated the remainder. There are no national or state standards for acid precipitation. A five-year analysis reveals no obvious trends.

Acid Precipitation Weighted Average Reported as pH 1995 - 1999					
Site	**1995**	**1996**	**1997**	**1998**	**1999**
Hiawassee	4.73	4.55	4.53	4.73	4.60
Summerville	4.62	4.62	4.52	4.62	4.71
Dawsonville	4.71	4.58	4.70	4.65	4.73
McDuffie Co.	4.95	4.49	4.49	4.90	4.68



Appendix " A"

TYPES OF SAMPLING METHODS

LEAD (Manual)

Samples are collected on 8" x 10" pre-weighed fiberglass filters with a high-volume sampler for 24 hours. Atomic absorption analysis is then performed on the samples

SULFUR DIOXIDE (Continuous)

Continuous analysis for sulfur dioxide is accomplished with the use of pulsed fluorescence (U.V. Light) method.

NITROGEN DIOXIDE (Continuous)

Continuous analysis for nitrogen dioxide is accomplished with the use of ozone phase chemiluminescent method.

CARBON MONOXIDE (Continuous)

Continuous analysis for carbon monoxide is accomplished with the use of non-dispersive infrared analysis and gas filter correlation methods.

OZONE (Continuous)

Continuous analysis for ozone is accomplished with the use of U.V. photometric method.

PARTICULATE MATTER 10 MICRON (PM-2.5)

Samples are collected on Teflon filters with a PM-2.5 sampler for 24 hours. Gravimetric analysis is performed on all samples after collection.

PARTICULATE MATTER 10 MICRON (PM-10)

Samples are collected on microquartz fiber filters with a PM-10 sampler for 24 hours. Gravimetric analysis is performed on all samples after collection.

ACID PRECIPITATION

Samples are collected weekly and analyzed gravimetrically and also for acidity and conductivity. Further analyses are performed for selected compounds.

PAMS VOC ANALYSIS

During June, July, and August samples are analyzed hourly using a gas chromatography unit using a Flame Ionization Detector (FID). Throughout the year, a 24 hour integrated sample is taken and analyzed in a State Laboratory.

PAMS Carbonyl Analysis

During June, July, and August four integrated three hour samples are taken every third day. In addition throughout the year, a 24 hr integrated sample is taken once every sixth day and analyzed in a State Laboratory.

Toxic Carbonyl Analysis

Once every 12 days a sample is collected on a DNPH coated paper cartridge for 24 hours. Liquid chromatographic analysis is performed on the samples in a State Laboratory.

Toxic Metals Analyses

Once every 12 days a sample is collected on 8" x 10" pre-weighed quartz filters with a high volume sampler for 24 hours. ICP analysis is then performed on the samples in a State Laboratory.

Toxic Semi-volatiles Analyses

Once every 12 days a sample is collected on a sandwiched polyurethane foam plug and XAD adsorbent resin with a high volume sampler for 24 hours. Gas chromatographic analysis is then performed on the samples in a State Laboratory.

Toxic Volatile Organic Compounds

Once every 12 days a sample is collected in an evacuated SUMMA® passivated canister. The canister is sampled for 24 hours and pressurized. An analysis is performed at a State Laboratory.

Appendix " B "

ABBREVIATIONS

Annual Mean	AM
Air Quality Control Region	AQCR
Arithmetic Mean	ARITH MEAN
Carbon Monoxide	CO
Environmental Protection Agency	EPA
Geometric Mean	GEO MEAN
Lead	Pb
Nitrogen Dioxide	NO_2
Number of Observations	NUM OBS
Ozone	O_3
Particles with an aerodynamic diameter of 10 microns or less	PM-10
Particles with an aerodynamic diameter of 2.5 microns or less	PM-2.5
Parts Per Million	PPM
Calendar Quarter	QTR
Sulfur Dioxide	SO_2
Total Suspended Particulate	TSP
Micrograms per Cubic Meter	:g/M^3
Ultraviolet	UV

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