Figure 60. Averages by day of week for mold by size

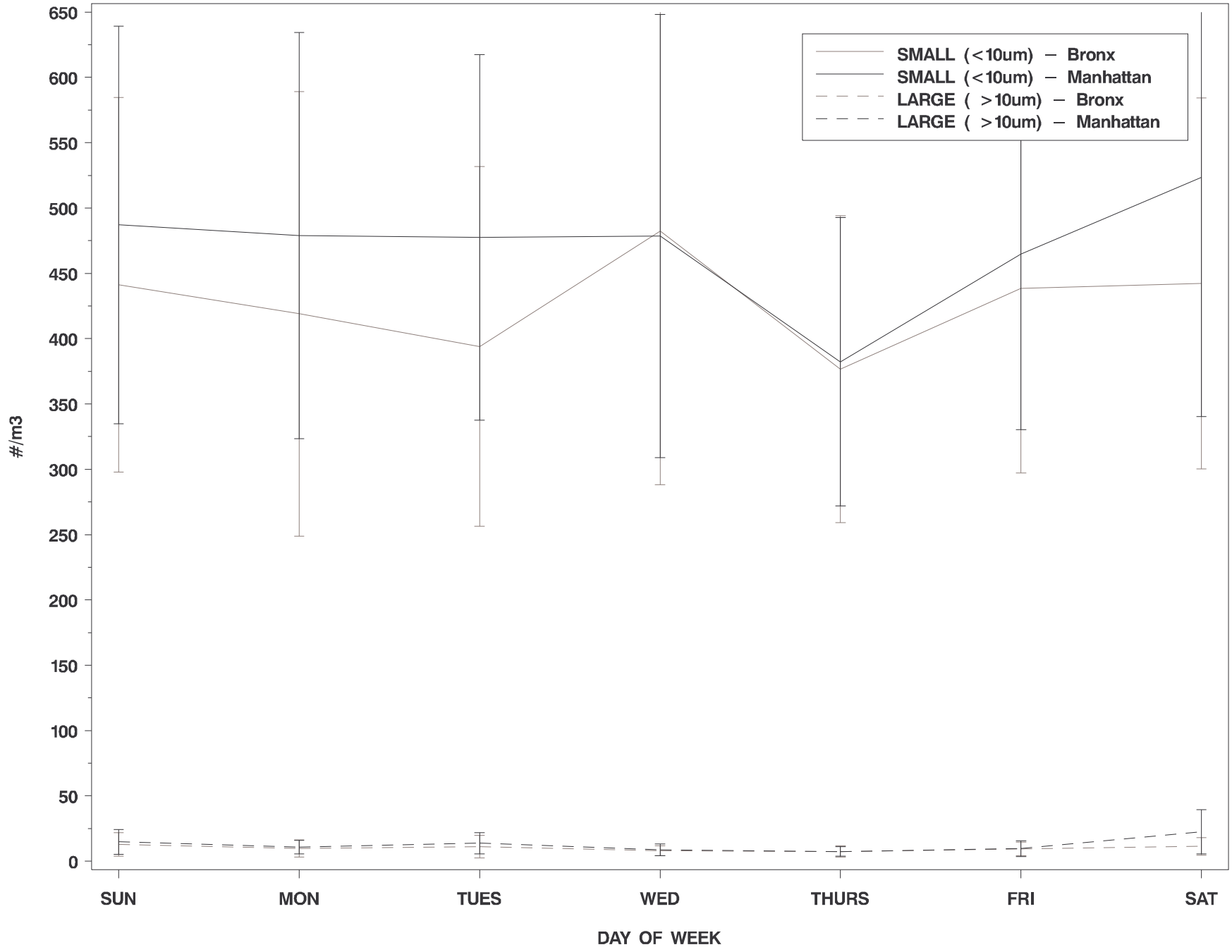


Figure 61. Averages by day of week for aldehydes and acetone

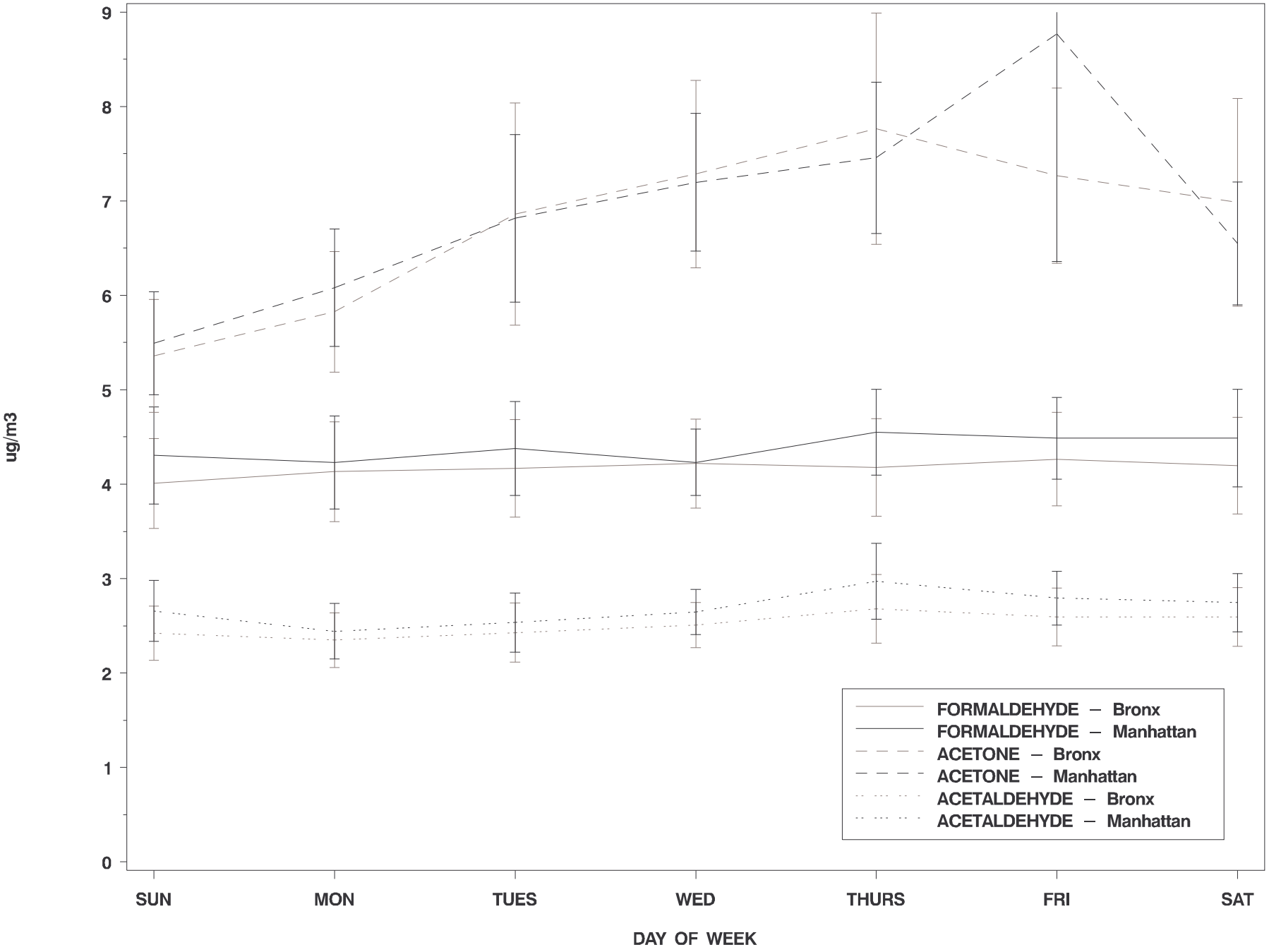


Figure 62. Averages by day of week for hydrochloric acid

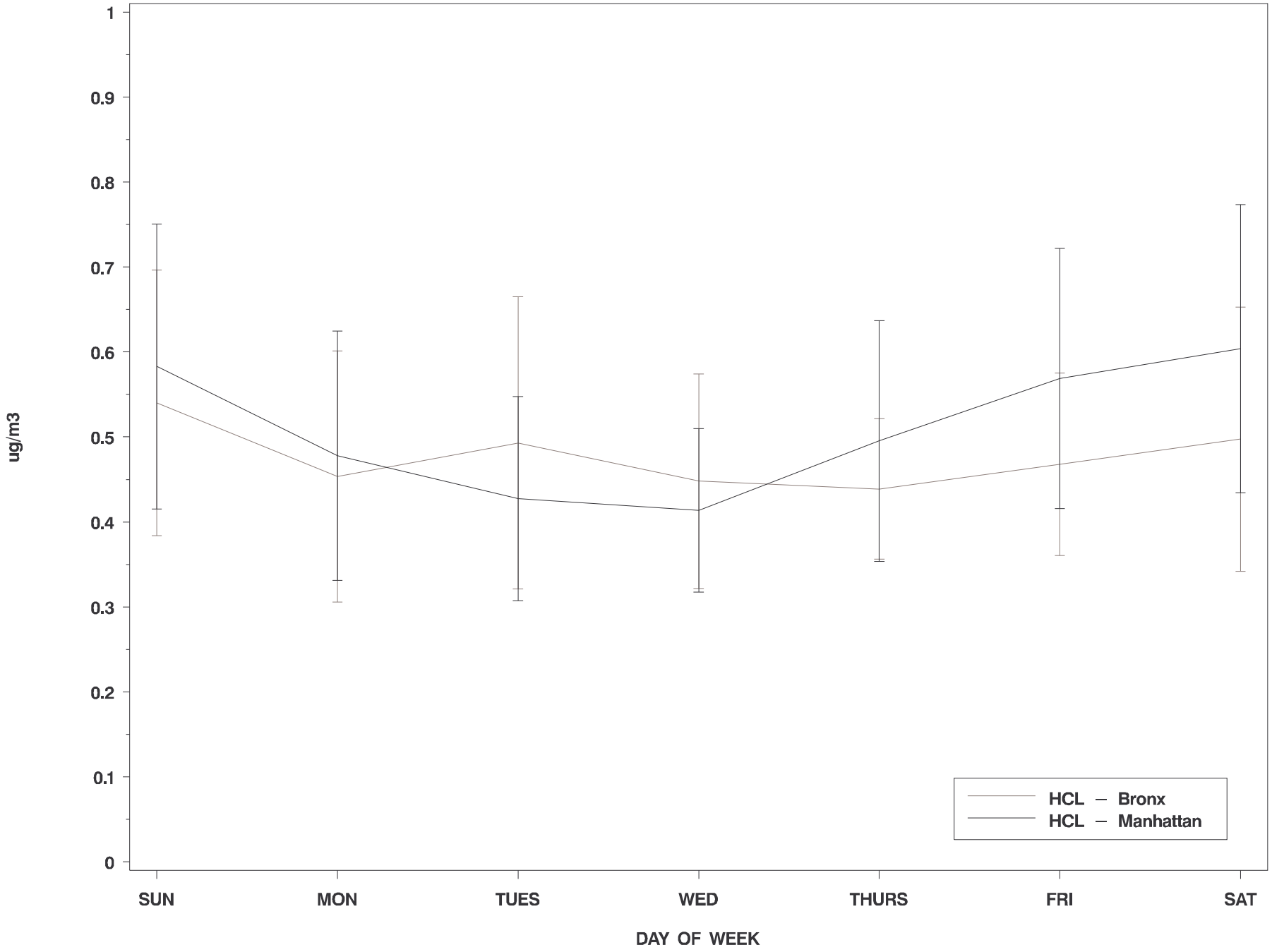


Figure 63. Averages by day of week for nitrous and nitric acid

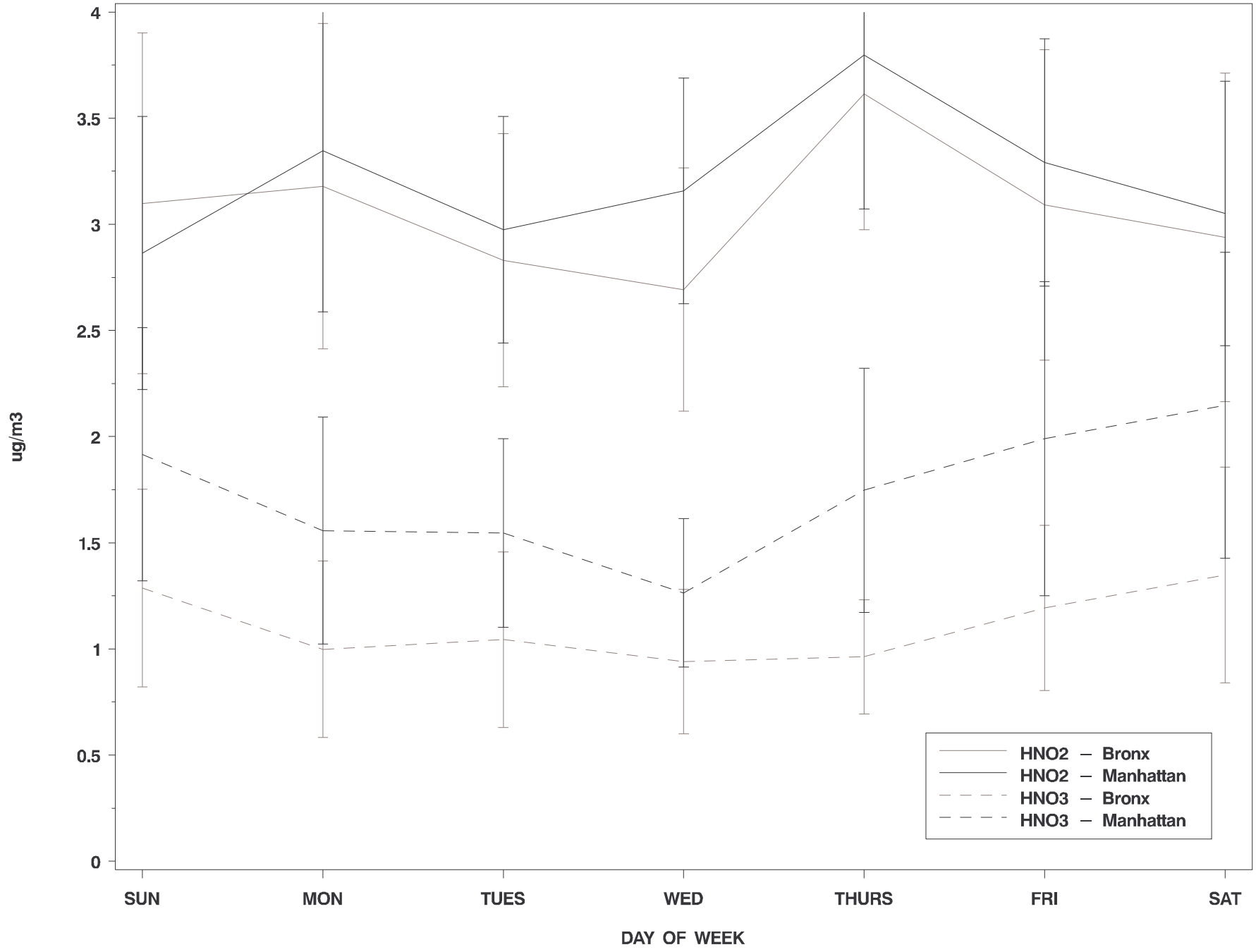


Figure 64. Averages by day of week for ammonia

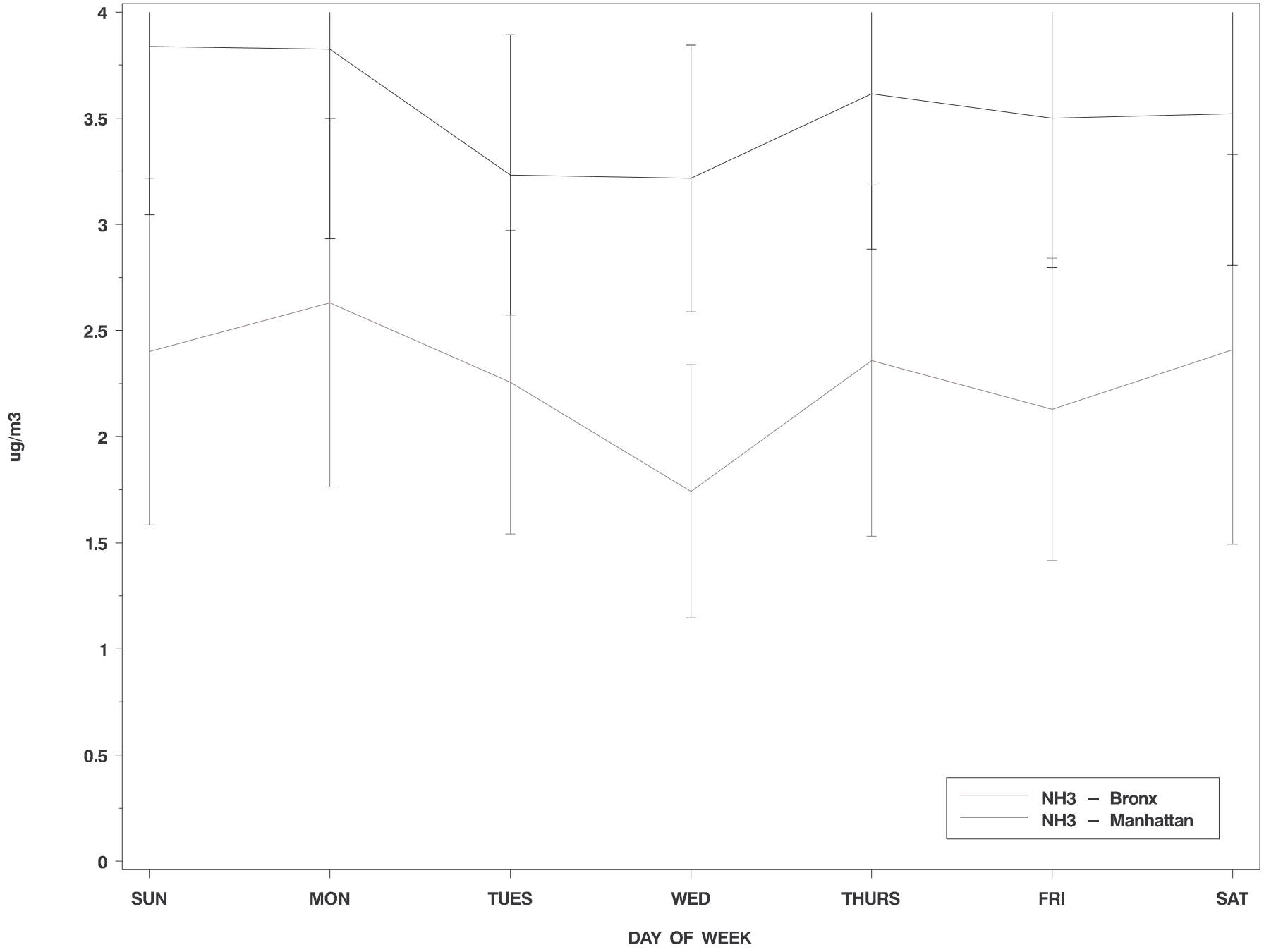


Figure 65. Averages by day of week for ozone

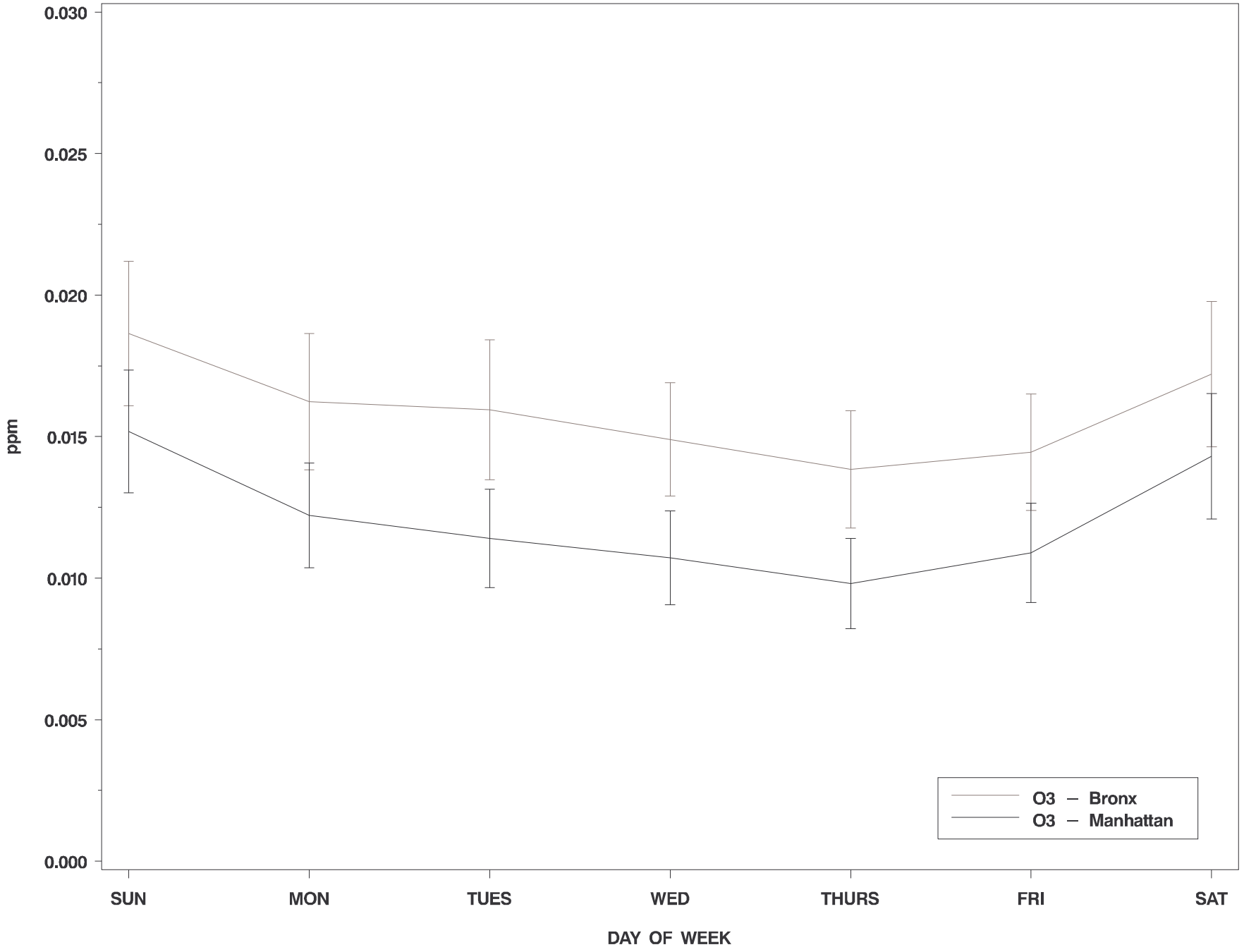


Figure 66. Averages by hour of day for ozone

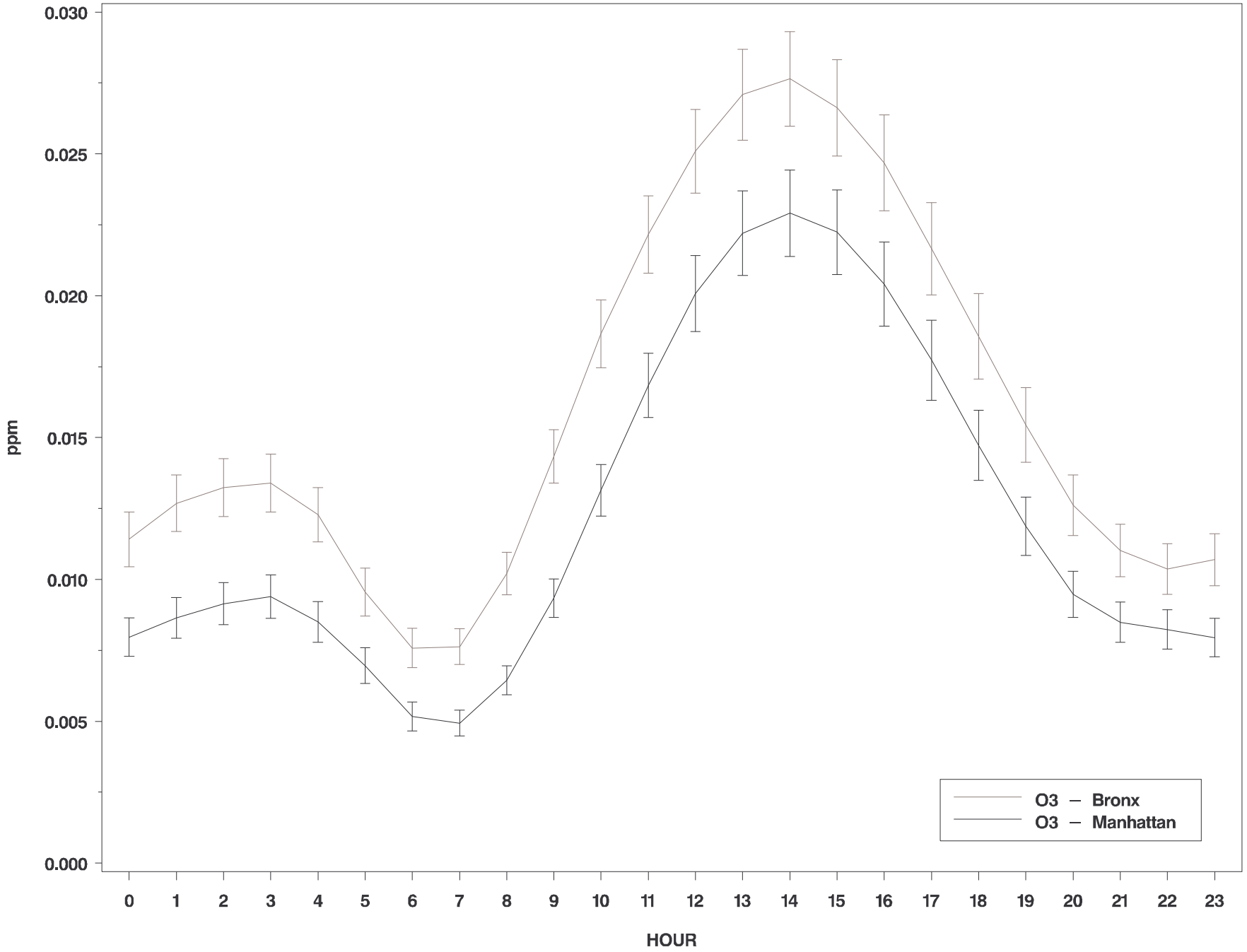


Figure 67. Averages by day of week for sulfur dioxide

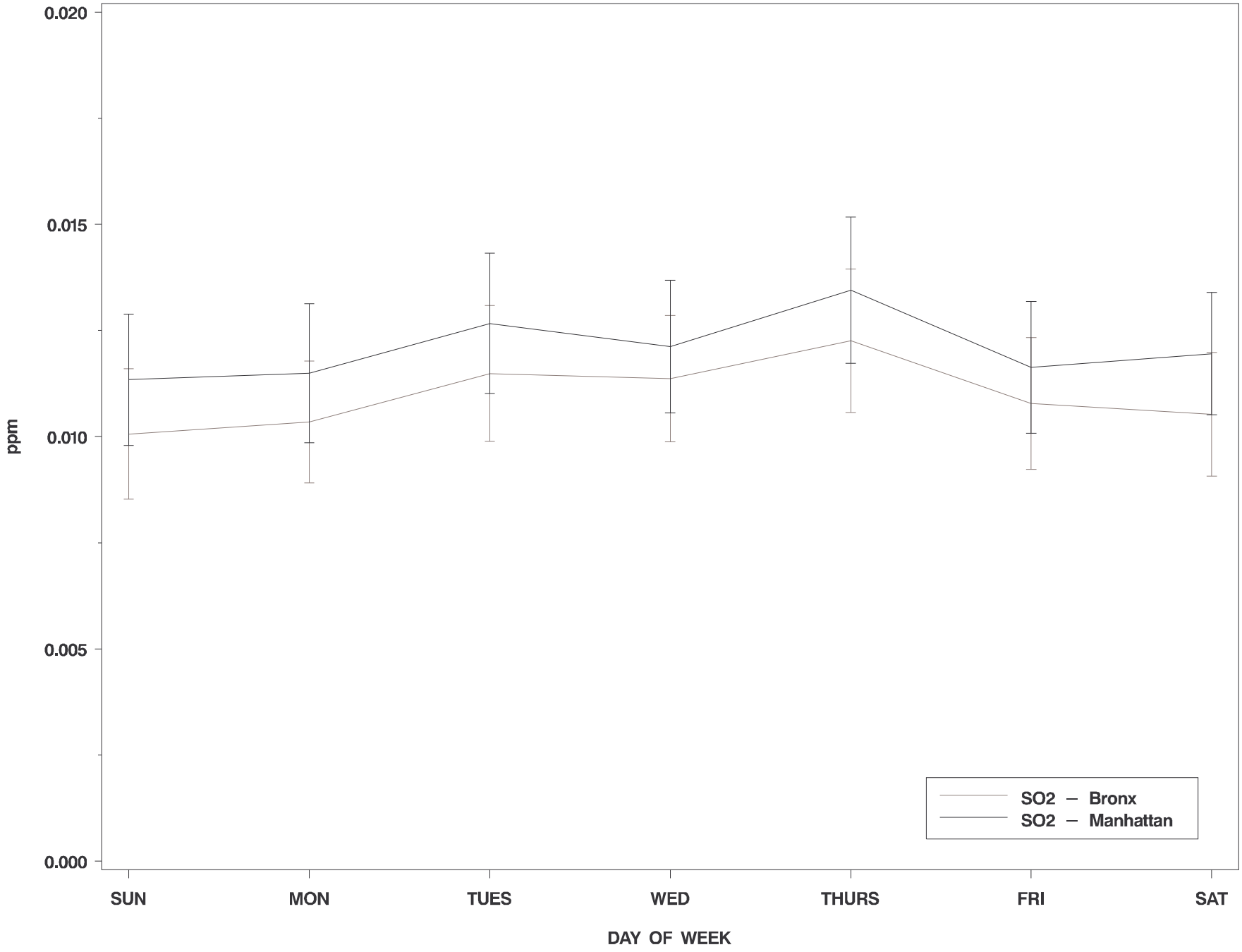


Figure 68. Averages by hour of day for sulfur dioxide

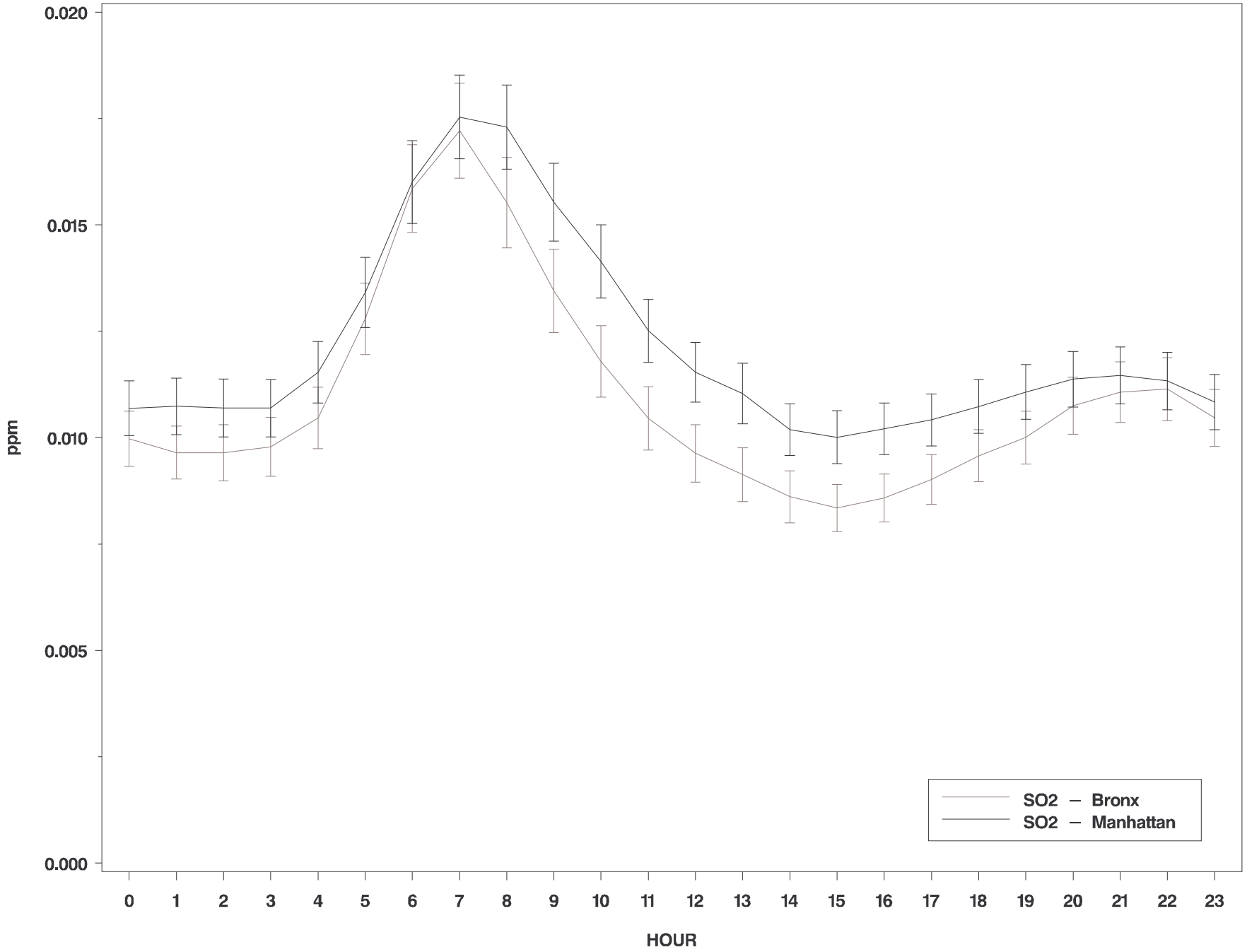


Figure 69. Averages by day of week for nitrogen oxides

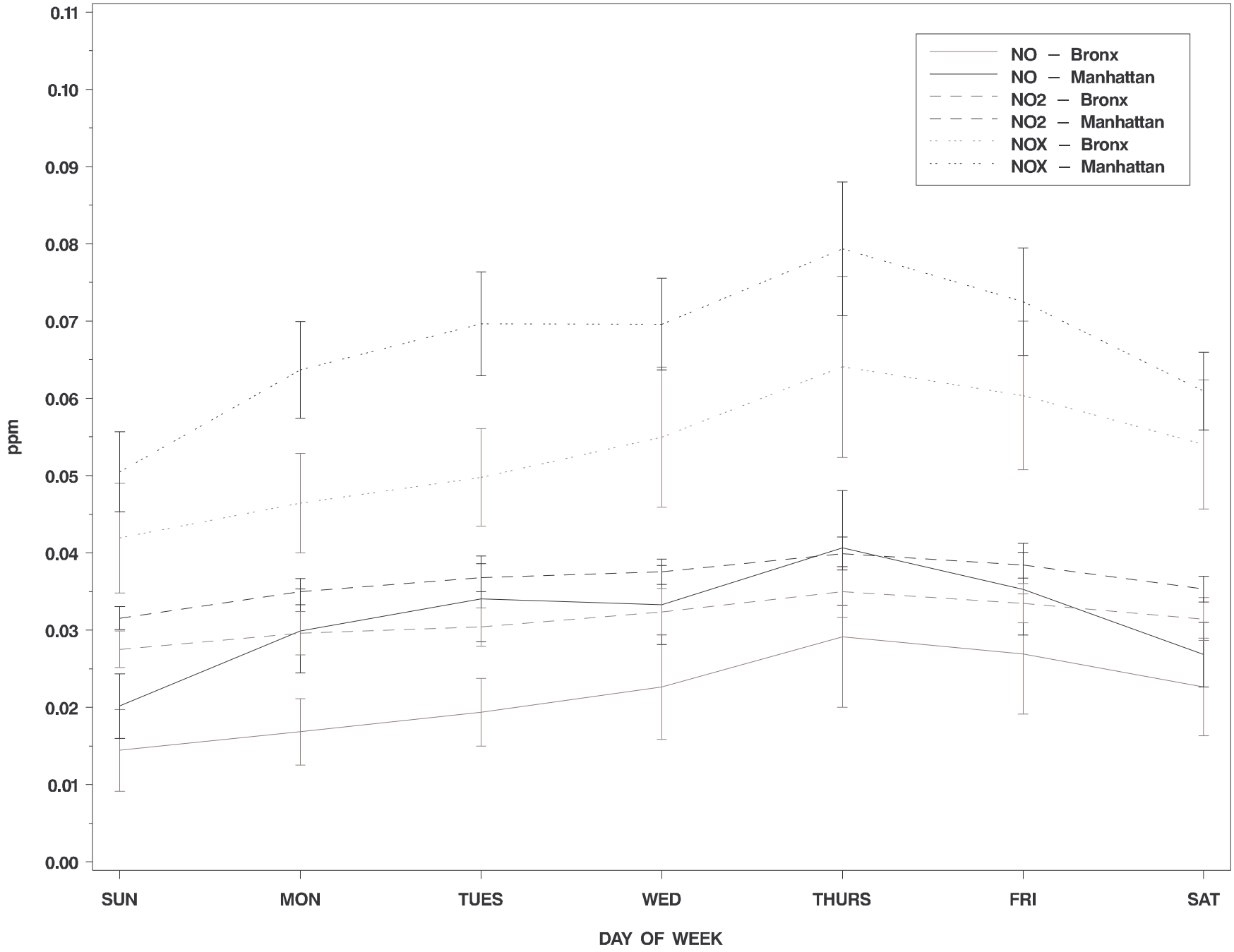
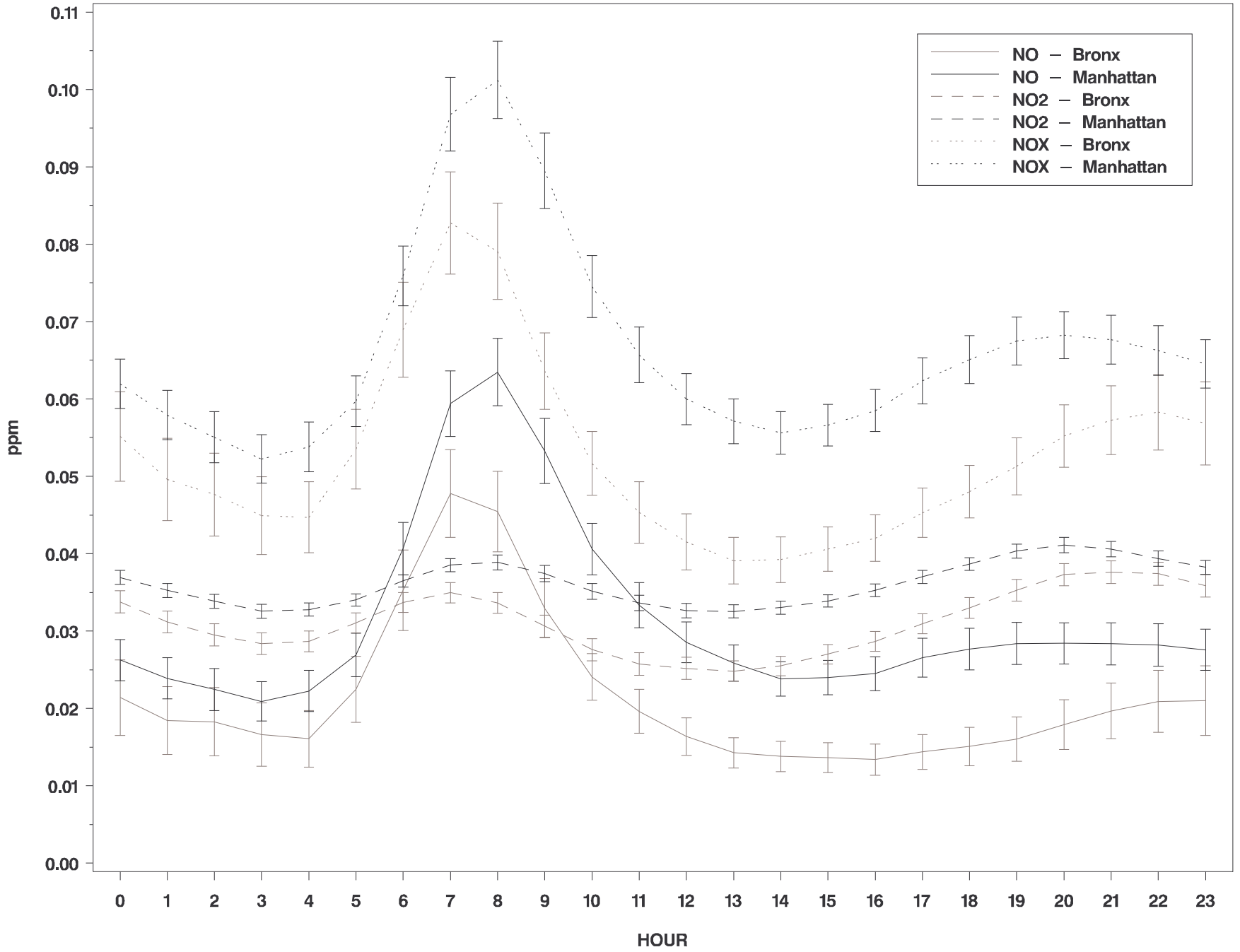


Figure 70. Averages by hour of day for nitrogen oxides



APPENDICES

APPENDIX 1. DETAILS OF ANALYTICAL AND STATISTICAL METHODS

QA/QC Protocols

The quality assurance and quality control measures instituted for this sampling program followed standard laboratory and field practices for calibrations, running blanks, flow audits, servicing of equipment, etc. The schedule for performing the various QA/QC measures was at least as rigorous as that required in EPA protocols; where no EPA protocol existed, the schedule was as rigorous as the most widely accepted protocol. A list of the various approved methods and associated protocols used for each of the measurements is provided in Table A1.

Table A1. Measurement Technologies and Associated Protocols

Measurement Technology/Field Instrument	EPA-Approved Method/Protocol
Acid Aerosols, Ammonia and Acid Gases	EPA Method IO-4.2
Aldehydes	EPA Method TO-11
Elemental Carbon, Organic Carbon, Total Carbon	Rupprecht and Patashnick 5400 Series Carbon analyzer
FRM10	Wedding &Assoc PM10 High Vol Sampler RFPS-1087-062
FRM2.5	Rupprecht and Patashnick Partisol Plus Model 2025 RFPS-0498-118
Metals	Inductively Couple Plasma/Mass Spectrometry/ Swami et al (2001) Journal of Analytical Chemistry (2001) 369:63-70
Molds and Pollen	Burkard Bioaerosol Sampler/No EPA Protocol Issued
$NO/NO_2/NO_x$	Thermo Environmental Instruments Model 42 EPA Equivalence Number (RFNA-1289-074)
Ozone	Thermo Environmental Instruments Model –49, EPA Equivalence Number (EQOA-0880-047)
Particle Number	TSI Inc. Model 1022 Condensation Particle Counter
PM_{10} (particulate matter 10 microns or less)	Rupprecht and Patashnick TEOM Particulate Analyzer EPA Equivalence Number (EQPM-10900079)
$PM_{2.5}$ (particulate matter 2.5 microns or less)	Rupprecht and Patashnick TEOM Particulate Analyzer EPA Equivalence Number (EQPM-10900079)
SO_2	Thermo Environmental Instruments Model 43 C SO_2 Pulsed Fluoresence.Analyzer EPA Equivalence Number (EQSA-0486-060)_

Our study implementation required staff to travel every Wednesday from Albany to New York City to collect samples, download data, and service equipment. Every piece of equipment associated with the study was reviewed and serviced to make sure that it was performing to pre-established QA/QC standards. All of the self-diagnostics tools in the various pieces of equipment were reviewed. After being downloaded, the data were reviewed to see if any noticeable issues could be identified. All flow audits were performed at least as frequently as required by EPA protocols and manufacturers' recommendations with a NIST traceable flow meter. All of the work required was documented on field forms as well as many of the parameters from the self-diagnostics. At the conclusion of each sampling event on Wednesday, a supervisor reviewed the work documented on each field form.

Because the monitoring stations were also part of the DEC air monitoring network, DEC staff were on-site more frequently than once a week. They serviced the NO_x, SO_2 and ozone meters as required by EPA. DEC staff also reported to us any problems with the additional equipment, and staff were then deployed to make the appropriate corrections.

More detail on the methodology used for each measurement appears in the narrative for each analyte.

Analytical Methods

PM_{10} and $PM_{2.5}$

Two TEOM® Series 1400a Ambient Particulate Monitors (Rupprecht & Patashnick Co., Inc., Albany, NY) were deployed at each location, with one unit measuring PM_{10} and the other measuring $PM_{2.5}$. The TEOM® Series 1400a was used to measure particulate mass concentrations continuously. The instrument incorporates the patented tapered element oscillating microbalance (TEOM), a microweighing technology. Using a choice of sample inlets (either inertial or cyclonic), the same hardware can be configured to measure either PM_{10} or $PM_{2.5}$. This microprocessor-based unit provides internal data storage and advanced analog and serial data input/output capabilities. The TEOM® Series 1400a monitor has received the EPA PM_{10} equivalency approval EQPM-1090-079. $PM_{2.5}$ measurements are within the context of a EPA-correlated acceptable continuous monitor (40 CFR 58).

The Series 1400a monitor incorporates an inertial balance that directly measures the mass collected on an exchangeable Teflon®-coated borosilicate glass filter cartridge by monitoring the corresponding frequency changes of a tapered element. The sample flow passes through the filter, where particulate matter collects, and then continues through the hollow tapered element on its way to an active volumetric flow control system and vacuum pump. Active volumetric flow control is maintained by mass flow controllers whose set points are constantly adjusted in accordance with the measured ambient temperature and pressure. Both the mass and the flow rate measurements are verifiable using NIST-traceable standards. R&P PM_{10} and Teflon® coated $PM_{2.5}$ size-selective inlets were used for particle cutoff. Sample inlet flow was 16.7 l/min, with the main flow rate through the sensor unit maintained at 3.0 l/min. Sample stream temperature was heated to 50°C, and the filter unit was held at 50°C to prevent condensation. A measure of change in the mass concentration was made every two seconds and used to calculate hourly averages.

Data were logged by the instruments and downloaded every Wednesday by project staff. Sample filters were exchanged when the filter's percent loading (capacity) reached 75% or greater, which was about every three weeks. Approximately every two months, inlet heads were either cleaned on-site or replaced with clean heads. TEOM® units were kept in temperature- controlled rooftop enclosures. A supplemental ACCU system was attached to the $PM_{2.5}$ units at each location (described below).

FRM 10 and 2.5

Particle Number

The Model 3022A Condensation Particle Counter (TSI Inc., Shoreview, MN) was used to measure the number of airborne particles between 0.007 and 2.5 micrometers in diameter. This instrument detects and counts particles with an optical detector. The butanol vapor is introduced into the air stream and condenses on particulates. This condensation enlarges the particle so that it can be measured with the optical detector. Approximate sampling flow was 300 cm^3/min. Data were logged by the instrument at one-minute intervals and downloaded once per week. Maintenance of the instrument included weekly draining of the interior butanol reservoir, as well as replacement of old butanol to prevent interference due to saturation of the reservoir wick by water. Wicks were replaced at six-month intervals.

Organic and Elemental Carbon

A Series 5400 Ambient Carbon Particulate Monitor (Rupprecht & Patashnick Co., Inc., Albany, NY) was used to measure organic and elemental carbon. The instrument uses a direct thermal-CO_2 measurement to provide an indirect measure of the amount of carbon in the collected particulate. Outdoor air was drawn from the glass manifold (described earlier) at 16.7 lpm through a Teflon® coated, $PM_{2.5}$ size-selective inlet. The particulate was collected for three hours on a filter, which was then heated. The instruments were programmed to heat the filter to 250, 340, 550 and 750°C. The fraction volatilized or oxidized to CO_2 at 250°C is considered the volatile organic fraction. The semi-volatile organic fraction is oxidized at 340°C, and the elemental carbon is the difference in the amount oxidized to CO_2 at 750°C minus that oxidized to CO_2 340°C. Data were logged by the instrument and downloaded weekly.

EPA's Environmental Technology Verification Program reviewed R&P's 5400 Carbon Analyzer in 2000–2001 and issued a verification statement, which reads, in part,

> The program evaluates the performance of innovative technologies by developing test plans that are responsive to the needs of stakeholders, conducting field or laboratory tests (as appropriate), collecting and analyzing data, and preparing peer-reviewed reports. All evaluations are conducted in accordance with rigorous quality assurance protocols to ensure that data of known and adequate quality are generated and that the results are defensible.

Field testing was conducted in two phases. The first took place at the DOE National Energy Technology Laboratory in Pittsburgh, from August 1 through September 1, 2000. The second phase was at the California Air Resources Board's ambient air monitoring station in Fresno from December 18, 2000, through January 17, 2001. Performance characteristics verified included inter-unit precision, agreement with and correlation to time-integrated reference methods, effect of meteorological conditions, and influence of precursor gases. OC, EC, and TC results from the 5400 were compared with laboratory thermal/optical reflectance (TOR) analysis of filter-based reference samples.

Technological Description

See report at http://www.epa.gov/etv/verifications/vcenter1-3.html.

Verification of Performance

Inter-unit precision

PHASE I RESULTS

Linear Regression Hourly Average	Organic Carbon (OC)	Elemental Carbon (EC)	Total Carbon (TC)
r2	0.94	0.93	0.95
Slope (95% C.I.)	1.063 (0.021)	1.037 (0.022)	1.069 (0.020)
Linear Regression 24-hr Average	Organic Carbon (OC)	Elemental Carbon (EC)	Total Carbon (TC)
r2	0.97	0.94	0.97
Slope (95% C.I.)	1.094 (0.081)	1.038 (0.113)	1.098 (0.088)

PHASE II RESULTS

Linear Regression Hourly Average	Organic Carbon (OC)	Elemental Carbon (EC)	Total Carbon (TC)
r2	0.94	0.92	0.86
Slope (95% C.I.)	0.971 (0.019)	1.029 (0.024)	1.074 (0.035)
Linear Regression 24-hr Average	Organic Carbon (OC)	Elemental Carbon (EC)	Total Carbon (TC)
r2	> 0.97	> 0.97	> 0.97
Slope (95% C.I.)	1.027 (0.072)	1.164 (0.083)	1.090 (0.070)

Comparability and Predictability

In both Phase I and Phase II, 24-hour averages from the 5400 showed a negative bias when compared with OC, EC, and TC reference measurements. Phase I regression slopes were below 0.4 for the OC, EC, and TC, and r2 values were between 0.43 and 0.52. Phase II regression slopes fell between 0.2 and 0.7 and between 0.2 and 0.9 for monitors 1 and 2, respectively, for all three carbon fractions, and r2 values were between 0.65 and 0.90.

Meteorological Effects

For Phase I, the multivariable model ascribed a small but significant effect on the 5400's readings relative to the reference for vertical and horizontal wind speed, wind direction, and ambient air temp at 2 and 10 meters. In general, the combined effect of these parameters was small. (For example, the model predicts a Phase I average OC value that differs from the linear regression model by about 5%.) For Phase II, small but significant effects were ascribed to wind speed, wind direction, standard deviation of wind direction, solar radiation, relative humidity, and barometric pressure.

Influence of Precursor Gases

For Phase I, the model ascribed statistical influence to O_3, H_2S, and NO_2 on the readings of one or both 5400 monitors relative to the reference results. For Phase II, NO and total NO_x were ascribed a statistical influence to both monitors relative to the reference EC and TC, and to NO_2 an influence on one monitor relative to the reference OC. The combined effect of the multiple parameters was typically a few percent, relative to the linear regression of the 5400 and reference results.

Other Parameters

In general, these monitors required little maintenance and could be largely operated unattended. Data recovery was about 90% over both phases of testing.

Metals

In conjunction with the TEOM® $PM_{2.5}$ systems at each location, an Automatic Cartridge Collection Unit, or ACCU (Rupprecht & Patashnick Co., Inc., Albany, NY), was used to collect particulates for metals analysis. The ACCU attached to the 13.7 l/min bypass flow line of the TEOM® monitor and permitted filter-based sampling. The system's eight internal flow channels allowed for daily collection of particulate samples through the use of a bank of solenoid valves. These valves were electronically controlled by the Series 1400a monitor. The airflow was directed through filter holders fitted with 47-mm, 2.0-μm pore size Zeflour™ supported PTFE filters (Pall Corp., Ann Arbor, MI). The following metals were included in the analysis (detection limits are in parentheses): Cr (5 ng/m3), Fe (22 ng/m3), Pb (12 ng/m3), Mn (3 ng/m3), Ni (4 ng/m3), and Zn (77 ng/m3).

Acid Aerosols, Ammonia, and Acid Gases

The URG-2000-01J Weekly Air Particulate Sampler (URG, Chapel Hill, NC), an 8-channel annular denuder system, was used to characterize five reactive gases (NH_3, HCl, HNO_2, HNO_3, and SO_2), particulate sulfate, and aerosol pH (EPA Method IO-4.2). Each channel was fitted with two 120-mm glass heavy-wall annular denuders connected in series, followed by a 47-mm, 2.0-μm supported PTFE filter (Pall Corp., Ann Arbor, MI). The first annular denuder was coated with sodium carbonate to collect acid gases, and the second with citric acid to collect NH_3. The flush end of the citric acid-coated denuder was attached directly to the filter module. The filters were positioned on the Teflon-

coated stainless steel screen such that the air stream particulates were trapped on the Teflon-coated side of the filter. The denuders were coated with appropriate coating solutions (citric acid: 1%weight/volume in methanol; sodium carbonate: 1% w/v, 1% w/v glycerol in a 1:1 methanol/water solution). The coated tubes were dried with "zero" air at a rate of 3 L/min. The denuder trains were assembled and leak-checked in clean laboratory conditions. A blank denuder assembly was included with each batch of seven denuder assemblies sent out in the field. It was left for seven days inside the sampler but was not connected to the airflow.

Ambient air was drawn through aluminum, Teflon®-coated PM_{10} and $PM_{2.5}$ size-selective inlet, then through the denuder and filter. Daily (24-hour) samples were collected beginning at midnight, at a flow rate of 10 L/min. Inlets were cleaned and replaced when necessary. After exchanging the denuders, leak checks were performed to assure system integrity.

The coated annular denuders from the exposed assemblies and field blanks were extracted with 10 ml ultra-pure water (Millipore, Milli-Q UV Plus water systems), and stored at 4°C for analysis. The water extract from sodium carbonate-coated denuders was used for the determination of HONO, HNO_3, and HCl. For SO_2 analysis, 5 ml of the water extracts from the sodium carbonate-coated denuders were oxidized with 0.05 ml of 30% aqueous H_20_2 solution to completely oxidize the collected SO_2 to SO_4 before analysis. The water extract from citric acid-coated denuders was used to determine ammonia. The measurement of chloride, nitrite, nitrate, sulfate, and ammonium was made with a DIONEX 500 Ion Chromatography System. The results were calculated for gaseous HCl, HONO, HNO_3, SO_2, and NH_3. The separation of chloride, nitrite, nitrate and sulfate was accomplished using an IonPac AS 14 (4 x 250 mm) analytical column, AG 14 guard column, with a 10 µl sample loop, and an anion self-regenerating suppressor-ultra. A solution of 3.5 mM Na_2CO_3/1.0 mM $NaHCO_3$ was used as eluent at a flow rate of 1 ml/min. The separation of ammonium was accomplished using an IonPac CS14 (4 x 250 mm) analytical column and a CG 14 guard column with a 50 µl sample loop, and a cation self-regenerating suppressor-ultra. A solution of 10 mM methanesulfonic acid was used as eluent at a flow rate of 1ml/min.

The Zefluor filters were ultrasonically extracted for one hour in 5 ml of ultra-pure water, the pH was measured, and the samples were stored at 4°C for analysis of particulate sulfate. The filter extracts were analyzed for particulate sulfate by ion chromatography using the DIONEX 100 Ion Chromatography System. Selenium was also determined in some of the filter extracts using inductively coupled plasma mass spectrometry (ICP-MS). Concentrations in the field blanks for the target species were subtracted on a batch-to-batch basis. Accuracy of calibration curves was checked by analyzing the quality control samples containing the analytes of interest at a concentration in the low and high concentration range provided by an independent QA/QC laboratory within the Wadsworth Center. For all the analytes, the controls were within ±10%. The percent standard deviation of measurements, evaluated on duplicate runs of several samples, was found to be better than ± 3.0 %.

Particulate nitrate was originally included in the analyte list but was later dropped because of concerns about the accuracy of the reported concentrations. During the study, research was published that called into question particulate nitrate concentrations collected on Teflon filters. (The ADS used in the study collected samples on Teflon filters.) Higher temperatures experienced during the daytime in the summer months may lead to a loss of particulate nitrate from the sample. Temperatures inside the ADS enclosure on some days exceeded 108°F. Because the ADS was serviced only once per week, samples collected after servicing were subject to more high-temperature periods than those collected the day prior to servicing, likely increasing the potential for particulate nitrate volatilization. This information, along with inconsistencies found in the concentrations of some co-located samples, led to the removal of particulate/aerosol nitrate from the analyte list.

Pollen and Mold

Weekly pollen and mold samples were collected with a Burkard Recording Volumetric Spore Trap (Burkard Manufacturing Co., Ltd, Rickmansworth, England). Particles were impacted on adhesive-coated Melinex transparent plastic tape, supported on a clockwork-driven drum. After a thin film of 10% Gelvatol was applied to the tape and allowed to dry, the adhesive (Vaseline and 10% paraffin wax in toluene) was then applied. The clockwork drum allowed for a seven-day sample to be collected, with the sampling volume ranging between 9 and 12 lpm. After removal of the drum, the tape was sectioned and viewed as individual days. Each slide was mounted with glycerin jelly and phenosafranin stain.

Individual bioaerosol categories were grouped into larger aggregations of pollen or mold types based on taxonomic or aerodynamic relationships. The pollen and spore aggregations used in statistical analyses are as follows:

Table A2. Bioaerosol Aggregate Categories

Pollen	Mold
Tree Pollens *Abies, Acer, Alnus, Betula, Carya, Cupressa, Fagus, Fraxinus, Gingko, Juglans, Liquidaum, Morus, Olea, Picea, Pinus, Platanus, Populus, Quercus, Salix, Tilia, Tsuga, Ulmus*	Basidiospores *Ganoderma, Coprinus*, unidentified basidiospores
Grass Pollens Graminea	Ascospores *Diatrype, Leptosphaeria, Sporormiella*, unidentified ascospores
Ragweed Pollen *Ambrosia*	Dark Mitospores *Alternaria, Arthrinium, Cladosporium, Curvularia, Epicoccum, Helminthosporium, Nigrospora, Periconium, Pithomyces, Torula, Stemphylium*
Total Pollens Tree pollen + Grass pollen + Ragweed pollen + Unidentified pollens	Non-dark Mitospores *Penicillium/Aspergillus, Botrytis, Cercospora, Fusarium, Oidium, Peronospora, Pestalotiopsis, Polythrincium*
	Small spores all fungal spores < 10 μm
	Large spores all fungal spores > 10 μm
	Total Molds Basidiospores + Ascospores + Dark mitospores + Non-dark mitospores + Unidentified mold spores

Acetone and Aldehydes

An ATEC Model 1600 automated multi-port sampler (Atmospheric Technology, Calabasas, CA) was used in the collection of samples for acetone and aldehyde analysis, according to EPA Method TO-11. The ATEC was programmed with a week-long run schedule to collect seven daily 24-hour samples. Channels ran consecutively from midnight to midnight. Air was drawn through cartridges containing 2,4-dinitrophenylhydrazine- (DNPH-) coated silica (Waters Corp., Milford, MA). Following collection, the samples were eluted from the cartridge as the DNPH derivative, then analyzed by HPLC with UV detection. Flows varied between 0.28 and 0.29 lpm, yielding

approximate sample volumes of 403 to 417 liters. Actual sample volumes and run times were recorded by the instrument and were used for concentration calculations. After the installation of the new cartridges, and prior to resumption of the sampling run, all ports were checked for leaks. A denuder box was attached to the inlet port to remove ozone from the sample stream (using a potassium iodide-coated copper coil). These boxes were replaced at three- to four-week intervals. The analytes measured were acetaldehyde, acetone, acrolein, benzaldehyde, butyraldehyde, crotonaldehyde, 2,5-dimethylbenzaldehyde, formaldehyde, hexaldehyde, isovaleraldehyde, propionaldehyde, m-tolualdehyde, o-tolualdehyde, p-tolualdehyde and valeraldehyde. Detection limit was 1 $\mu g/m^3$.

SO_2 Determination

The Thermo Environmental Instruments (TEI) Model 43C SO_2 Pulsed Fluorescence Analyzer has been designated by EPA as Equivalent SO_2 Analyzer (No. EQSA-0486-060). Pulsating UV light is focused through a narrow band pass of 190 nanometers that directs it into the fluorescence chamber. Sampled ambient air containing SO_2 flows continuously through the chamber, where the UV light excites the SO_2 molecules causing them to emit their characteristic decay radiation. This SO_2-specific radiation passes through a second filter and onto a sensitive photo-multiplier tube. Incoming light energy is transformed electronically into a 0-5VDC output signal that is directly proportional to the concentration of SO_2 in the sample air.

$NO/NO_2/NO_x$ Determination

The Thermo Environmental Instruments (TEI) Model 42 $NO/NO_2/NO_x$ analyzers utilize the technique of photometric detection of chemiluminescent light resulting from the flameless reaction of nitric oxide (NO) with ozone (O_3) for interference-free measurement of NO_2. The analyzer includes a NO_x-to-NO heated molybdenum converter to change NO_2 into NO for subsequent measurement via the chemiluminescent detection method. The ambient air sample enters Model 42 through a single flow-control capillary and is directed to a solenoid valve. The solenoid valve routes the sample either through the NO_2-to-NO converter (NO_x mode) or around the converter (NO mode). When flowing through the converter, the chemiluminescence measured within the reaction chamber represents the NO_x concentration. Bypassing the converter allows measurement of the NO level only. The signals generated in the two modes are stored and held in memory by the instrument's microcomputer, where the difference between them is used to generate a NO_2 signal. The digital-to-analog converter then converts the three stored values into analog signals that are output to the rear of the instrument. The NO and NO_x concentrations calculated in the NO and NO_x modes are stored in memory. The difference between the concentrations is used to calculate the NO_2 concentration.

Ozone Determination

The Thermo Environmental Instruments (TEI) Model 49-Ultraviolet Photometer ozone analyzer has been designated by U.S. EPA as an equivalent method for the measurement of ambient concentration of ozone pursuant to the requirements defined in 40 CFR Part 53. Its designated equivalence method number is EQQA-0880-047. The UV photometer determines ozone concentrations by measuring the attenuation of light due to ozone in the absorption

cell, at a wavelength of 254 nanometers. The concentration of ozone is directly related to the magnitude of the attenuation. The reference ozone-free gas passes into the absorption cell to establish a "zero" light intensity reading (I_o). The solenoid then switches, and the sample passes through the absorption cell to establish a "sample" light intensity reading (I). The ratio of these readings (I/I_o) is a measure of the light absorbed by ozone in the sample at 254nm. It is directly related to the concentration of ozone in the sample through the Beer-Lambert Law. A second detector is used to monitor the changes in light intensity and to correct for these changes. This system is basically two photometers utilizing two separate but similar absorption cells and detector systems. They share the same source. These two photometers operate 180 degrees out of phase but synchronously and integrate the signals simultaneously: thus I in cell B (I(B)) is determined at the identical time I_o in cell A (I_o(A)) is determined. The solenoids then switch, and after an appropriate flush time (approximately 7 seconds), I_o (B) and I(A) are determined. Taking the average value of these two readings factors out the fluctuation in lamp intensity. The microcomputer in the TEI Model 49 solves the Beer-Lambert equation directly for each cell and outputs the average concentration in both the front panel digital display and the recorder analog output.

Meteorological Data

Temperature, relative humidity, and wind speed and direction were logged with a Young 27600 Programmable Translator (R.M. Young Co., Traverse City, MI). The unit logged the data from the roof-mounted wind monitor and relative humidity/temperature probe (Models 05305 and 41372LC, respectively, from R.M. Young Co.).

Flow Rates

Flow rates for the TSI, URG, and TEOM-ACCU were checked and calibrated with a DryCal DC-1 digital flow calibrator (BIOS International, Pompton Plains, NJ). The NIST-traceable DryCal DC-1 has an accuracy of ±1%, with a worst-case resolution of 0.2%.

Statistical Methods

Multivariate procedures

Square Spearman correlation matrices were used as input to the MDS procedure implemented in SYSTAT v. 9 (SPSS Inc.). The SYSTAT procedure creates dissimilarity matrices from correlation matrices by taking the negative of all correlation coefficients. MDS distances are then computed from dissimilarities. Two-dimensional MDS configurations were generated for each correlation matrix using SYSTAT defaults for number of iterations and for convergence criteria. Among the three possible loss functions (Kruskal, Guttman, Young) available in the SYSTAT procedure, the Guttman loss function (Wilkinson 1999) generally explained the greatest proportion of variance in preliminary analyses and therefore was used throughout. Shepard diagrams and output of the Guttman coefficient of alienation at each iteration step were used as diagnostics for degenerate solutions.

MDS configuration plots were constructed for each correlation matrix. Non-metric MDS re-scales measures of dissimilarity between variables so that the rank order of distances between variables in the MDS plot correspond as

closely as possible to the rank order of dissimilarities between variables in the original multi-dimensional space. When dissimilarities between variables are measured with correlation coefficients, the distance between variables in the MDS plot indicates the strength of their correlation. The plots were interpreted qualitatively by observing whether points representing the pollutant analytes clustered closely together (indicating strong positive correlation among variables) or whether points were far apart (indicating large negative correlations). Intermediate distances between variables were indicative of relatively weak associations.

Rectangular data matrices were used as input to the HC procedure implemented in SYSTAT v. 9 (SPSS Inc.). Pearson correlations (r) were used to calculate the distance metric (d) between variables, where $d = 1 - r$. Complete-linkage hierarchical clustering was used to construct a tree diagram representing distances between clusters of variables. As in MDS, the tree diagrams were interpreted qualitatively by observing which variables tended to be strongly associated with each other and whether consistent clustering of variables could be observed. In the cluster trees, distances between variables or clusters near zero represent strong positive correlations, while distances near two represent strong negative correlations. Intermediate distances represent weak correlations between variables or clusters.

Appendix 2 – Detailed Data Summary

Appendix 2 - Summary of Data

Descriptive Statistics																	
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
pH	Winter99	Bronx		---	---	---	0	79	5.5	0.4	6.8	6.3	5.7	5.5	5.3	4.9	4.5
		Manhattan		---	---	---	0	79	5.5	0.6	10.0	6.0	5.6	5.4	5.2	4.9	4.8
	Spring99	Bronx		---	---	---	0	92	5.2	0.5	7.1	6.0	5.5	5.2	4.8	4.3	4.0
		Manhattan		---	---	---	0	92	5.1	0.4	5.9	5.7	5.3	5.1	4.8	4.4	4.2
	Summer99	Bronx		---	---	---	58	36	4.8	0.5	6.0	6.0	5.0	4.6	4.4	4.2	4.1
		Manhattan		---	---	---	3	91	4.6	0.4	5.6	5.5	4.9	4.6	4.3	3.9	3.5
	Fall99	Bronx		---	---	---	0	90	5.2	0.5	6.6	6.5	5.5	5.2	4.8	4.4	4.2
		Manhattan		---	---	---	0	90	5.1	0.4	5.9	5.7	5.4	5.1	4.9	4.4	4.3
	Winter00	Bronx		---	---	---	0	89	5.3	0.4	6.3	6.0	5.6	5.3	5.0	4.7	4.5
		Manhattan		---	---	---	0	89	5.2	0.3	5.8	5.7	5.5	5.3	5.0	4.7	4.6
	Spring00	Bronx		---	---	---	0	92	5.1	0.5	6.5	5.9	5.4	5.0	4.8	4.3	4.0
		Manhattan		---	---	---	0	92	5.0	0.4	5.6	5.5	5.2	5.0	4.8	4.3	4.0
	Summer00	Bronx		---	---	---	7	87	4.8	0.4	6.3	5.6	5.0	4.8	4.5	4.3	4.1
		Manhattan		---	---	---	7	87	4.8	0.4	5.7	5.5	5.0	4.7	4.5	4.3	4.1
	Fall00	Bronx		---	---	---	0	62	5.1	0.4	6.4	5.8	5.4	5.1	4.8	4.6	4.5
		Manhattan		---	---	---	2	60	5.1	0.3	5.8	5.6	5.3	5.1	4.9	4.5	4.4
Sulfate (ug/m^3)	Winter99	Bronx	---	---	---	0	0	79	2.93	1.56	7.36	6.45	3.38	2.65	1.74	1.04	0.80
		Manhattan	---	---	---	0	0	79	3.01	1.63	8.84	6.56	3.54	2.78	1.89	0.74	0.60
	Spring99	Bronx	---	---	---	0	1	91	3.22	2.93	15.60	9.59	3.68	2.20	1.36	0.94	0.51
		Manhattan	---	---	---	0	0	92	3.35	2.87	14.43	10.15	3.92	2.38	1.51	0.84	0.77
	Summer99	Bronx	---	---	---	1	58	35	5.16	4.54	17.49	15.63	7.28	3.60	1.74	0.44	0.12
		Manhattan	---	---	---	0	5	89	6.32	5.66	23.88	17.65	8.63	4.07	1.87	0.77	0.41
	Fall99	Bronx	---	---	---	1	0	89	3.05	2.70	19.47	7.38	3.89	2.17	1.36	0.73	0.12
		Manhattan	---	---	---	0	2	88	3.16	2.21	9.61	8.18	4.18	2.40	1.56	0.78	0.64
	Winter00	Bronx	---	---	---	0	7	82	2.92	1.81	7.78	7.16	3.75	2.37	1.55	1.09	0.86
		Manhattan	---	---	---	0	1	88	3.14	1.93	9.44	7.46	4.07	2.46	1.68	1.11	0.89
	Spring00	Bronx	---	---	---	0	0	92	4.01	3.25	15.71	11.95	5.01	2.91	1.73	0.93	0.67
		Manhattan	---	---	---	0	1	91	4.10	3.10	15.23	11.11	5.12	2.99	2.06	0.94	0.50
	Summer00	Bronx	---	---	---	0	7	87	4.97	3.65	13.82	12.58	7.09	4.25	2.01	0.60	0.40
		Manhattan	---	---	---	0	7	87	5.05	3.52	13.50	12.16	6.94	4.32	2.07	0.51	0.30
	Fall00	Bronx	---	---	---	0	0	62	3.30	2.96	13.57	9.65	4.00	2.43	1.38	0.47	0.36
		Manhattan	---	---	---	0	2	60	3.37	2.86	12.17	9.70	4.08	2.62	1.31	0.55	0.28
Carbon 250 (ug/m^3)	Winter99	Bronx	---	2	---	---	96	534	2.478	0.791	6.958	3.988	2.852	2.285	1.965	1.508	1.126
		Manhattan	32	8	---	---	67	525	2.736	0.795	7.282	4.095	3.127	2.665	2.236	1.626	1.196
	Spring99	Bronx	---	6	---	---	7	723	2.975	0.918	7.640	4.931	3.307	2.726	2.361	1.938	1.427
		Manhattan	89	6	---	---	16	625	2.738	1.074	6.489	4.779	3.303	2.650	2.085	1.202	1.071
	Summer99	Bronx	1	14	---	---	467	270	3.710	0.935	5.884	5.389	4.419	3.650	2.995	2.445	1.712
		Manhattan	5	2	---	---	3	742	3.471	1.050	9.856	5.332	3.987	3.299	2.752	2.149	1.803
	Fall99	Bronx	3	2	---	---	119	596	3.637	0.672	9.486	4.757	3.898	3.480	3.190	2.940	2.364
		Manhattan	4	---	---	---	14	702	2.959	0.955	8.680	4.541	3.439	2.769	2.263	1.770	1.199
	Winter00	Bronx	3	1	---	---	15	693	3.206	0.763	6.276	4.844	3.515	3.043	2.737	2.228	1.720
		Manhattan	---	3	---	---	18	691	2.631	1.045	8.626	4.552	3.021	2.399	1.949	1.409	1.064
	Spring00	Bronx	1	---	---	---	65	670	3.697	0.470	5.670	4.661	3.848	3.642	3.432	3.001	2.647
		Manhattan	---	---	---	---	69	667	3.327	1.121	10.755	5.588	3.837	3.001	2.581	2.076	1.674
	Summer00	Bronx	---	4	---	---	10	738	3.182	0.822	7.528	4.393	3.735	3.201	2.564	1.881	1.306
		Manhattan	---	5	---	---	8	739	3.333	0.447	5.520	4.135	3.595	3.271	3.026	2.719	2.354
	Fall00	Bronx	---	11	---	---	4	481	2.525	0.801	5.590	3.778	3.055	2.588	1.917	1.305	1.089
		Manhattan	4	13	---	---	5	474	3.471	0.581	6.606	4.561	3.753	3.388	3.080	2.765	1.591

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Soot Carbon (ug/m^3)	Winter99	Bronx	---	18	---	---	98	516	1.592	1.185	9.528	3.943	1.970	1.263	0.844	0.477	0.281
		Manhattan	32	119	---	---	67	414	1.689	1.019	9.646	3.395	2.061	1.438	1.063	0.661	0.280
	Spring99	Bronx	3	12	---	---	7	714	1.146	0.824	6.494	2.774	1.298	0.904	0.640	0.428	0.242
		Manhattan	90	172	---	---	17	457	1.477	1.151	10.200	3.412	1.777	1.159	0.768	0.500	0.288
	Summer99	Bronx	---	19	---	---	467	266	1.069	0.613	3.913	2.232	1.352	0.959	0.616	0.368	0.281
		Manhattan	2	84	---	---	4	662	1.413	0.974	9.993	3.031	1.761	1.197	0.810	0.491	0.217
	Fall99	Bronx	3	13	---	---	120	584	1.338	0.995	7.157	3.577	1.529	1.021	0.721	0.462	0.288
		Manhattan	2	7	---	---	14	697	1.427	0.974	8.703	3.273	1.724	1.141	0.835	0.522	0.332
	Winter00	Bronx	---	5	---	---	15	692	1.401	1.047	6.890	3.689	1.629	1.014	0.714	0.521	0.386
		Manhattan	---	5	---	---	18	689	1.353	0.860	9.080	3.144	1.597	1.111	0.809	0.550	0.332
	Spring00	Bronx	1	19	---	---	66	650	0.924	0.715	5.873	2.268	1.079	0.690	0.507	0.355	0.255
		Manhattan	---	3	---	---	69	664	1.228	0.837	5.662	2.812	1.533	0.971	0.662	0.414	0.259
	Summer00	Bronx	---	5	---	---	13	734	1.027	0.690	6.900	2.154	1.250	0.859	0.580	0.396	0.255
		Manhattan	---	1	---	---	13	738	0.974	0.446	2.867	1.859	1.212	0.874	0.649	0.409	0.259
	Fall00	Bronx	---	---	---	---	17	479	1.063	0.820	5.290	2.693	1.231	0.832	0.536	0.344	0.258
		Manhattan	6	---	---	---	20	470	1.182	0.736	6.356	2.435	1.457	0.989	0.702	0.480	0.372
O_3 (ppm)	Winter99	Bronx	---	0	---	---	1289	607	0.017	0.011	0.046	0.033	0.026	0.017	0.007	0.002	0.000
		Manhattan	---	0	---	---	882	1014	0.006	0.006	0.033	0.018	0.009	0.004	0.002	0.000	-0.001
	Spring99	Bronx	---	0	---	---	143	2065	0.021	0.015	0.105	0.045	0.030	0.020	0.008	0.002	0.000
		Manhattan	---	0	---	---	84	2124	0.016	0.013	0.090	0.038	0.023	0.013	0.005	0.001	-0.001
	Summer99	Bronx	---	0	---	---	1975	281	0.034	0.020	0.104	0.066	0.046	0.030	0.020	0.008	0.003
		Manhattan	---	0	---	---	49	2207	0.021	0.019	0.122	0.056	0.030	0.015	0.006	0.001	-0.001
	Fall99	Bronx	---	0	---	---	857	1303	0.007	0.007	0.036	0.022	0.011	0.004	0.001	0.000	-0.001
		Manhattan	---	0	---	---	81	2079	0.005	0.006	0.047	0.018	0.007	0.003	0.001	0.000	-0.001
	Winter00	Bronx	---	34	---	---	7	2095	0.010	0.009	0.037	0.026	0.016	0.007	0.002	0.001	-0.001
		Manhattan	---	51	---	---	2	2083	0.006	0.006	0.030	0.017	0.009	0.004	0.001	-0.001	-0.002
	Spring00	Bronx	---	51	---	---	0	2157	0.020	0.016	0.110	0.049	0.028	0.017	0.008	0.001	0.000
		Manhattan	---	198	---	---	0	2010	0.016	0.014	0.087	0.041	0.022	0.012	0.005	0.000	-0.002
	Summer00	Bronx	---	46	---	---	0	2210	0.021	0.017	0.080	0.056	0.031	0.017	0.007	0.001	0.000
		Manhattan	---	134	---	---	0	2122	0.016	0.015	0.072	0.046	0.025	0.012	0.004	0.001	-0.001
	Fall00	Bronx	---	35	---	---	0	1453	0.009	0.009	0.061	0.027	0.014	0.005	0.002	0.001	0.000
		Manhattan	---	52	---	---	0	1436	0.006	0.007	0.056	0.020	0.009	0.004	0.001	0.000	-0.002
NO_X (ppm)	Winter99	Bronx	---	0	---	---	1896	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	0	---	---	79	1817	0.086	0.051	0.540	0.181	0.103	0.072	0.053	0.038	0.016
	Spring99	Bronx	---	0	---	---	331	1877	0.044	0.042	0.351	0.120	0.056	0.033	0.021	-0.002	-0.003
		Manhattan	---	0	---	---	744	1464	0.061	0.039	0.350	0.140	0.071	0.050	0.038	0.023	0.010
	Summer99	Bronx	---	0	---	---	1711	545	0.038	0.025	0.196	0.088	0.046	0.033	0.021	0.012	0.006
		Manhattan	---	0	---	---	58	2198	0.048	0.029	0.250	0.103	0.058	0.041	0.030	0.019	0.008
	Fall99	Bronx	---	0	---	---	1231	929	0.061	0.056	0.477	0.161	0.071	0.045	0.028	0.016	0.000
		Manhattan	---	0	---	---	76	2084	0.078	0.054	0.551	0.180	0.093	0.063	0.044	0.028	0.008
	Winter00	Bronx	---	275	---	---	240	1621	0.072	0.062	0.563	0.194	0.083	0.052	0.034	0.021	0.009
		Manhattan	---	63	---	---	5	2068	0.084	0.049	0.460	0.183	0.101	0.070	0.051	0.035	0.020
	Spring00	Bronx	---	58	---	---	0	2150	0.051	0.046	0.473	0.139	0.057	0.038	0.025	0.014	0.006
		Manhattan	---	384	---	---	0	1824	0.057	0.036	0.334	0.120	0.069	0.048	0.035	0.020	0.009
	Summer00	Bronx	---	749	---	---	0	1507	0.037	0.022	0.159	0.080	0.046	0.032	0.022	0.013	0.005
		Manhattan	---	157	---	---	0	2099	0.048	0.024	0.216	0.092	0.059	0.042	0.031	0.020	0.009
	Fall00	Bronx	---	45	---	---	0	1443	0.062	0.057	0.467	0.167	0.072	0.045	0.029	0.018	0.008
		Manhattan	---	62	---	---	0	1426	0.074	0.051	0.461	0.175	0.089	0.062	0.040	0.025	0.011

Appendix 2 - Summary of Data (continued)

Descriptive Statistics																	
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
NO (ppm)	Winter99	Bronx	---	0	---	---	1896	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	0	---	---	79	1817	0.048	0.045	0.445	0.132	0.061	0.034	0.019	0.009	0.001
	Spring99	Bronx	---	0	---	---	331	1877	0.015	0.030	0.271	0.062	0.015	0.004	0.000	-0.002	-0.002
		Manhattan	---	0	---	---	745	1463	0.023	0.030	0.278	0.081	0.027	0.013	0.006	0.002	-0.001
	Summer99	Bronx	---	0	---	---	1711	545	0.008	0.017	0.153	0.037	0.008	0.002	-0.001	-0.002	-0.003
		Manhattan	---	0	---	---	58	2198	0.014	0.021	0.209	0.056	0.017	0.007	0.003	0.000	-0.001
	Fall99	Bronx	---	0	---	---	1231	929	0.030	0.049	0.415	0.116	0.032	0.012	0.005	-0.001	-0.003
		Manhattan	---	0	---	---	88	2072	0.045	0.048	0.472	0.138	0.055	0.030	0.015	0.004	0.000
	Winter00	Bronx	---	275	---	---	240	1621	0.036	0.051	0.452	0.138	0.039	0.017	0.008	0.002	-0.001
		Manhattan	---	63	---	---	5	2068	0.047	0.042	0.392	0.131	0.060	0.034	0.019	0.008	0.001
	Spring00	Bronx	---	60	---	---	0	2148	0.018	0.035	0.398	0.082	0.016	0.006	0.002	0.000	0.000
		Manhattan	---	384	---	---	0	1824	0.021	0.027	0.262	0.066	0.025	0.012	0.006	0.003	0.001
	Summer00	Bronx	---	749	---	---	0	1507	0.009	0.013	0.100	0.037	0.011	0.003	0.001	0.000	0.000
		Manhattan	---	157	---	---	0	2099	0.016	0.018	0.170	0.050	0.020	0.010	0.005	0.001	0.000
	Fall00	Bronx	---	45	---	---	0	1443	0.032	0.048	0.391	0.121	0.034	0.017	0.007	0.002	0.000
		Manhattan	---	62	---	---	0	1426	0.041	0.044	0.402	0.129	0.051	0.027	0.013	0.004	-0.001
NO_2 (ppm)	Winter99	Bronx	---	0	---	---	1896	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	0	---	---	79	1817	0.039	0.009	0.117	0.054	0.044	0.037	0.032	0.026	0.015
	Spring99	Bronx	---	0	---	---	331	1877	0.029	0.017	0.112	0.059	0.040	0.029	0.019	0.000	-0.001
		Manhattan	---	0	---	---	744	1464	0.039	0.012	0.088	0.061	0.047	0.038	0.030	0.020	0.011
	Summer99	Bronx	---	0	---	---	1711	545	0.031	0.013	0.094	0.054	0.039	0.030	0.021	0.013	0.008
		Manhattan	---	0	---	---	59	2197	0.036	0.013	0.094	0.061	0.043	0.034	0.025	0.017	0.009
	Fall99	Bronx	---	0	---	---	1231	929	0.031	0.012	0.085	0.052	0.039	0.031	0.022	0.013	0.000
		Manhattan	---	0	---	---	74	2086	0.034	0.009	0.079	0.051	0.040	0.034	0.028	0.021	0.000
	Winter00	Bronx	---	274	---	---	240	1622	0.036	0.014	0.114	0.060	0.045	0.034	0.024	0.017	0.000
		Manhattan	---	63	---	---	5	2068	0.038	0.010	0.118	0.056	0.043	0.037	0.031	0.025	0.005
	Spring00	Bronx	---	58	---	---	0	2150	0.033	0.015	0.098	0.060	0.041	0.030	0.022	0.013	0.007
		Manhattan	---	385	---	---	0	1823	0.037	0.014	0.102	0.061	0.046	0.035	0.028	0.017	0.009
	Summer00	Bronx	---	749	---	---	0	1507	0.028	0.013	0.082	0.052	0.035	0.027	0.019	0.011	0.006
		Manhattan	---	157	---	---	0	2099	0.033	0.011	0.079	0.053	0.040	0.032	0.025	0.018	0.010
	Fall00	Bronx	---	45	---	---	0	1443	0.030	0.014	0.101	0.058	0.038	0.026	0.020	0.013	0.008
		Manhattan	---	62	---	---	0	1426	0.034	0.012	0.082	0.059	0.041	0.032	0.026	0.017	0.013
SO_2 (ppm)	Winter99	Bronx	---	0	---	---	42	1854	0.015	0.010	0.078	0.035	0.019	0.013	0.007	0.004	0.001
		Manhattan	---	0	---	---	49	1847	0.020	0.010	0.096	0.038	0.025	0.018	0.013	0.009	0.004
	Spring99	Bronx	---	0	---	---	49	2159	0.008	0.006	0.053	0.019	0.010	0.006	0.004	0.002	0.001
		Manhattan	---	0	---	---	51	2157	0.010	0.006	0.058	0.023	0.012	0.008	0.006	0.004	0.003
	Summer99	Bronx	---	0	---	---	1704	552	0.007	0.004	0.036	0.015	0.009	0.005	0.003	0.002	0.001
		Manhattan	---	0	---	---	53	2203	0.008	0.006	0.092	0.017	0.010	0.006	0.004	0.002	0.001
	Fall99	Bronx	---	0	---	---	333	1827	0.013	0.010	0.098	0.033	0.016	0.010	0.007	0.004	0.000
		Manhattan	---	0	---	---	72	2088	0.013	0.009	0.082	0.030	0.016	0.010	0.007	0.003	0.001
	Winter00	Bronx	---	36	---	---	5	2095	0.018	0.012	0.112	0.041	0.022	0.015	0.010	0.005	0.002
		Manhattan	---	54	---	---	3	2079	0.020	0.012	0.097	0.043	0.025	0.017	0.012	0.007	0.003
	Spring00	Bronx	---	45	---	---	0	2163	0.007	0.006	0.053	0.018	0.009	0.006	0.004	0.002	0.001
		Manhattan	---	365	---	---	0	1843	0.008	0.006	0.056	0.019	0.011	0.006	0.004	0.002	-0.008
	Summer00	Bronx	---	42	---	---	0	2214	0.006	0.005	0.057	0.016	0.007	0.005	0.003	0.002	0.001
		Manhattan	---	492	---	---	0	1764	0.006	0.005	0.088	0.016	0.008	0.005	0.003	0.001	0.001
	Fall00	Bronx	---	35	---	---	0	1453	0.013	0.008	0.068	0.029	0.016	0.010	0.007	0.004	0.002
		Manhattan	---	43	---	---	0	1445	0.012	0.009	0.053	0.028	0.017	0.010	0.006	0.003	0.001

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
$PM_{2.5}$ (TEOM) (ug/m^3)	Winter99	Bronx	---	---	---	---	17	1879	14.98	9.27	75.60	31.94	20.21	13.35	8.39	2.68	-0.08
		Manhattan	---	---	---	---	17	1879	15.29	7.63	75.91	28.78	19.31	13.64	10.22	5.72	-0.06
	Spring99	Bronx	---	---	---	---	34	2174	14.02	9.16	68.13	32.29	17.34	12.10	8.06	2.46	-0.09
		Manhattan	---	---	---	---	78	2130	14.91	9.27	68.80	33.71	18.22	12.76	8.67	4.58	-0.09
	Summer99	Bronx	---	---	---	---	1701	555	21.17	12.85	61.37	45.27	29.79	20.33	10.57	3.36	-0.09
		Manhattan	---	39	---	---	2	2215	20.42	14.47	94.76	47.97	28.53	17.42	9.56	1.77	-0.10
	Fall99	Bronx	---	---	---	---	792	1368	15.22	10.15	74.10	34.06	21.46	13.01	7.69	2.76	-0.49
		Manhattan	---	407	---	---	3	1750	15.54	9.73	76.92	33.71	21.20	13.40	8.40	3.70	-4.63
	Winter00	Bronx	---		---	---	76	2060	14.45	9.61	77.98	33.17	18.73	12.35	7.83	2.90	-0.78
		Manhattan	---	3	---	---	20	2113	14.72	8.47	70.70	31.60	18.76	12.65	8.60	5.36	-1.16
	Spring00	Bronx	---	---	---	---	92	2116	15.50	11.63	91.80	39.60	19.96	12.22	7.65	3.03	-7.12
		Manhattan	---	---	---	---	397	1811	15.14	11.07	78.38	38.29	19.04	12.58	8.25	3.10	-21.82
	Summer00	Bronx	---	192	---	---	4	2060	16.71	10.83	86.43	37.40	23.55	14.14	8.58	3.12	-6.13
		Manhattan	---	375	---	---	2	1879	17.62	12.23	57.13	41.80	25.05	15.12	8.92	1.86	-29.64
	Fall00	Bronx	---	229	---	---	0	1259	14.44	10.17	52.60	37.04	18.33	11.72	7.34	2.80	-0.40
		Manhattan	---	109	---	---	0	1379	15.08	10.02	74.26	36.37	19.88	12.43	7.91	3.97	-1.18
PM_{10} (TEOM) (ug/m^3)	Winter99	Bronx	---	---	---	---	988	908	19.78	10.95	109.86	40.20	23.16	17.16	12.79	8.36	-0.06
		Manhattan	---	20	---	---	14	1862	19.55	8.77	95.92	35.64	23.91	17.88	13.96	8.57	1.54
	Spring99	Bronx	---	---	---	---	31	2177	22.35	11.75	101.43	45.71	27.55	19.50	14.06	9.28	-0.07
		Manhattan	---	---	---	---	26	2182	21.63	10.37	71.50	42.32	26.81	19.31	14.38	9.06	-0.04
	Summer99	Bronx	---	167	---	---	1698	391	27.30	14.71	91.88	56.40	35.69	25.94	15.77	8.62	3.04
		Manhattan	---	30	---	---	3	2223	26.11	14.45	93.84	53.63	34.84	23.14	15.15	7.46	0.61
	Fall99	Bronx	---	140	---	---	756	1264	19.42	12.72	91.80	44.19	26.48	15.31	10.06	6.13	0.59
		Manhattan	---	1258	---	---	0	902	22.12	13.19	111.30	47.66	26.46	18.56	13.01	8.35	-3.41
	Winter00	Bronx	---	---	---	---	216	1920	20.56	13.39	150.76	45.17	24.58	16.90	12.06	7.56	0.98
		Manhattan	---	3	---	---	25	2108	22.35	12.18	125.11	42.88	27.01	19.76	14.55	8.90	-1.89
	Spring00	Bronx	---	---	---	---	570	1638	24.64	16.14	105.85	58.87	32.01	19.69	12.80	7.26	-0.70
		Manhattan	---	---	---	---	476	1732	23.82	15.09	120.61	56.97	29.16	20.03	13.72	7.70	-32.34
	Summer00	Bronx	---	13	---	---	5	2238	23.50	12.48	98.03	47.62	31.50	20.44	13.74	8.20	0.20
		Manhattan	---	139	---	---	2	2115	25.33	15.26	345.51	47.87	32.24	23.01	15.50	9.13	-12.21
	Fall00	Bronx	---	10	---	---	0	1478	21.78	13.60	79.74	50.02	28.14	17.70	11.96	7.09	2.98
		Manhattan	---	24	---	---	0	1464	22.59	13.64	106.48	49.87	29.25	19.11	12.77	7.12	1.88
Acetaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	1	1	78	2.2	1.2	7.7	4.7	2.8	1.7	1.4	1.0	0.5
		Manhattan	---	---	0	0	0	79	2.1	0.9	5.5	4.0	2.6	2.0	1.4	1.0	1.0
	Spring99	Bronx	---	---	0	0	8	84	2.2	1.1	6.9	4.2	2.7	1.9	1.6	1.1	1.0
		Manhattan	---	---	0	0	0	92	2.7	1.0	5.9	4.8	3.2	2.5	2.0	1.5	1.1
	Summer99	Bronx	---	---	0	0	65	29	2.9	1.0	4.5	4.3	3.5	3.1	2.1	1.4	1.3
		Manhattan	---	---	5	1	8	86	3.8	2.7	13.6	9.5	5.2	3.0	1.9	0.5	0.5
	Fall99	Bronx	---	---	0	0	13	77	2.5	1.3	7.4	4.9	3.4	2.1	1.5	1.2	0.9
		Manhattan	---	---	0	0	1	89	2.7	1.2	7.1	5.2	3.2	2.3	1.8	1.3	1.0
	Winter00	Bronx	---	---	0	1	0	89	2.3	1.4	10.4	4.6	2.7	1.9	1.5	1.1	0.5
		Manhattan	---	---	0	0	0	89	2.6	1.4	10.7	4.6	2.9	2.2	1.8	1.4	1.2
	Spring00	Bronx	---	---	0	0	8	84	4.4	2.5	12.7	8.9	5.4	4.1	2.6	1.5	0.1
		Manhattan	---	---	0	0	0	92	2.6	1.3	6.2	5.4	3.1	2.3	1.7	1.2	0.1
	Summer00	Bronx	---	---	0	0	2	92	2.3	0.9	4.8	3.8	3.0	2.2	1.6	1.0	0.9
		Manhattan	---	---	2	0	1	93	2.4	0.9	4.8	3.9	2.9	2.3	1.6	1.1	0.5
	Fall00	Bronx	---	---	1	0	7	55	2.1	1.4	6.6	5.5	3.0	1.6	1.1	1.0	0.5
		Manhattan	---	---	0	0	8	54	2.4	1.5	7.0	5.8	3.2	1.9	1.3	1.0	1.0

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Acetone (ug/m^3)	Winter99	Bronx	---	---	0	0	1	78	9.6	8.1	35.3	30.0	9.1	6.6	4.7	3.3	1.3
		Manhattan	---	---	0	0	0	79	7.0	3.7	22.0	15.0	7.8	6.2	4.8	2.3	1.9
	Spring99	Bronx	---	---	0	0	8	84	8.0	3.3	18.0	13.4	10.1	7.7	5.7	3.7	1.0
		Manhattan	---	---	0	0	0	92	8.8	11.6	116.0	13.3	9.0	7.2	6.0	4.4	1.1
	Summer99	Bronx	---	---	0	0	65	29	7.0	3.5	15.3	13.0	9.8	6.2	4.3	2.0	1.7
		Manhattan	---	---	2	11	8	86	7.6	6.9	40.4	22.2	9.9	6.4	2.9	0.5	0.5
	Fall99	Bronx	---	---	0	0	13	77	5.6	2.8	14.7	10.7	7.5	5.0	3.4	2.1	1.5
		Manhattan	---	---	0	0	1	89	6.8	2.7	16.1	12.6	8.0	6.5	5.0	3.2	2.1
	Winter00	Bronx	---	---	0	1	0	89	4.5	2.5	12.9	10.4	5.2	3.6	2.8	2.1	0.5
		Manhattan	---	---	0	0	0	89	5.4	2.5	15.8	10.8	6.2	4.8	3.9	2.8	1.4
	Spring00	Bronx	---	---	0	0	8	84	9.7	6.2	38.5	21.1	11.8	7.8	5.8	3.5	0.2
		Manhattan	---	---	0	0	0	92	6.6	2.3	13.3	10.9	7.8	6.5	5.0	3.2	0.2
	Summer00	Bronx	---	---	0	0	2	92	5.9	3.7	34.1	9.9	7.4	5.7	3.8	1.6	1.0
		Manhattan	---	---	2	0	1	93	6.1	2.8	15.3	10.8	7.9	5.8	4.2	1.4	0.5
	Fall00	Bronx	---	---	0	0	7	55	6.0	3.2	15.9	12.0	8.3	4.9	3.7	2.7	2.3
		Manhattan	---	---	0	0	8	54	7.0	3.6	21.2	13.0	9.4	5.9	4.4	3.3	2.6
Acrolein (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	0	84	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	0	29	65	29	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	5	73	8	86	1.5	3.4	17.3	11.7	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	0	77	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	89	1	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	0	88	0	89	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	0	84	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	5	87	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	7	86	1	93	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	0	55	7	55	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	54	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Benzaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	7	77	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	2	90	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	12	17	65	29	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	40	34	8	86	0.7	0.5	2.3	2.0	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	44	31	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	63	22	1	89	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	33	53	0	89	0.5	0.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	42	46	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	20	11	8	84	0.7	0.3	2.2	1.3	0.7	0.5	0.5	0.5	0.4
		Manhattan	---	---	57	30	0	92	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	88	3	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	89	3	1	93	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	37	16	7	55	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	34	19	8	54	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Butyraldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	75	0	79	0.8	1.2	7.4	4.0	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	8	42	8	84	0.8	0.4	2.4	1.4	1.1	0.5	0.5	0.5	0.5
		Manhattan	---	---	5	14	0	92	1.8	1.2	6.0	3.8	2.8	1.3	1.0	0.5	0.5
	Summer99	Bronx	---	---	13	7	65	29	0.7	0.4	1.5	1.4	1.1	0.5	0.5	0.5	0.5
		Manhattan	---	---	48	5	8	86	1.0	0.9	4.3	3.1	1.2	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	41	36	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	62	24	1	89	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	27	59	0	89	0.5	0.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	27	28	0	89	0.6	0.3	1.5	1.3	0.6	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	12	10	8	84	1.6	0.9	4.1	3.3	2.1	1.7	0.5	0.5	0.5
		Manhattan	---	---	59	22	0	92	0.5	0.0	0.7	0.6	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	68	2	2	92	0.5	0.1	1.1	0.8	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	53	4	1	93	0.6	0.2	1.5	1.2	0.6	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	39	15	7	55	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	36	15	8	54	0.5	0.1	1.0	1.0	0.5	0.5	0.5	0.5	0.5
Crotonaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	0	61	8	84	1.0	0.9	3.3	2.9	1.3	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	74	0	92	0.8	0.7	3.5	2.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	3	18	65	29	0.9	0.8	3.3	3.0	1.1	0.5	0.5	0.5	0.5
		Manhattan	---	---	38	18	8	86	1.4	1.5	7.1	4.5	1.6	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	21	20	13	77	0.9	0.6	2.6	2.1	1.2	0.5	0.5	0.5	0.5
		Manhattan	---	---	15	10	1	89	1.0	0.6	3.2	2.1	1.3	0.8	0.5	0.5	0.5
	Winter00	Bronx	---	---	19	1	0	89	0.8	0.4	2.1	1.6	1.0	0.7	0.5	0.5	0.5
		Manhattan	---	---	10	0	0	89	0.9	0.4	2.3	1.7	1.0	0.8	0.6	0.5	0.5
	Spring00	Bronx	---	---	0	82	8	84	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	90	0	92	0.5	0.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	0	92	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	93	1	93	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	0	55	7	55	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	54	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Formaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	0	1	78	3.0	1.3	7.8	6.2	3.5	2.7	2.2	1.4	1.2
		Manhattan	---	---	0	0	0	79	3.3	1.5	10.0	6.7	3.9	3.0	2.2	1.6	1.4
	Spring99	Bronx	---	---	0	0	8	84	3.9	2.0	12.7	8.3	4.7	3.3	2.7	2.2	1.8
		Manhattan	---	---	0	0	0	92	4.5	1.7	9.7	7.8	5.1	4.2	3.3	2.5	2.2
	Summer99	Bronx	---	---	0	0	65	29	6.4	2.3	10.9	10.8	7.7	5.9	4.7	3.5	3.5
		Manhattan	---	---	0	1	8	86	7.5	3.0	15.4	12.6	9.9	7.2	5.3	3.6	0.5
	Fall99	Bronx	---	---	0	0	13	77	3.9	1.7	9.9	6.8	4.9	3.6	2.5	1.9	1.1
		Manhattan	---	---	0	0	1	89	4.0	1.5	8.9	6.7	4.9	3.9	2.7	2.1	1.7
	Winter00	Bronx	---	---	0	0	0	89	3.0	1.7	11.5	6.4	3.7	2.4	1.9	1.5	1.3
		Manhattan	---	---	0	0	0	89	3.2	1.6	9.8	5.8	3.7	2.7	2.3	1.8	1.4
	Spring00	Bronx	---	---	0	1	8	84	11.8	15.0	63.2	53.9	10.2	6.5	5.0	2.1	0.5
		Manhattan	---	---	0	1	0	92	4.1	2.2	10.5	9.3	4.7	3.4	2.6	1.8	0.5
	Summer00	Bronx	---	---	0	0	2	92	4.8	1.5	8.5	7.5	6.1	4.6	3.6	2.6	2.1
		Manhattan	---	---	0	0	1	93	4.6	1.5	8.0	7.2	5.6	4.5	3.5	2.5	2.3
	Fall00	Bronx	---	---	0	0	7	55	3.3	1.8	8.8	7.0	4.6	2.6	2.0	1.4	1.2
		Manhattan	---	---	0	0	8	54	3.5	1.8	8.9	7.0	4.4	3.0	2.3	1.6	1.4

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Hexaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	8	64	8	84	0.6	0.3	2.8	0.8	0.5	0.5	0.5	0.5	0.4
		Manhattan	---	---	6	63	0	92	0.5	0.2	1.3	1.0	0.5	0.5	0.5	0.4	0.1
	Summer99	Bronx	---	---	13	15	65	29	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	61	9	8	86	2.3	4.4	23.3	11.6	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	47	25	13	77	0.5	0.0	0.8	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	68	12	1	89	0.5	0.1	0.9	0.7	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	13	74	0	89	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	25	59	0	89	0.5	0.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	8	11	8	84	2.4	3.5	22.0	9.9	2.0	1.2	0.7	0.5	0.5
		Manhattan	---	---	52	17	0	92	0.6	0.2	2.2	1.0	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	74	4	2	92	0.5	0.2	1.7	0.9	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	55	4	1	93	0.6	0.4	2.5	1.6	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	38	15	7	55	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	43	8	8	54	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
Isovaleraldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	0	84	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	1	24	65	29	0.7	0.6	3.3	1.7	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	29	45	8	86	0.8	1.1	6.4	3.4	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	18	58	13	77	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	22	66	1	89	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	16	70	0	89	0.5	0.0	0.7	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	21	62	0	89	0.5	0.1	0.9	0.6	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	12	50	8	84	0.7	0.4	2.2	1.6	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	16	64	0	92	0.5	0.1	1.2	0.9	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	68	11	2	92	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	65	11	1	93	0.5	0.1	0.8	0.6	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	30	23	7	55	0.5	0.1	1.0	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	22	32	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
m-Tolualdehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	1	83	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	4	25	65	29	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	3	83	8	86	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	2	75	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	2	87	1	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	1	83	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	3	89	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	0	92	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	93	1	93	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	3	52	7	55	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	1	53	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
o-Tolualdehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	1	83	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	3	89	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	2	23	65	29	0.7	0.4	2.1	2.0	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	29	55	8	86	0.5	0.2	2.0	0.5	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	8	69	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	8	80	1	89	0.5	0.0	0.9	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	6	77	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	3	89	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	4	88	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	7	85	1	93	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	0	55	7	55	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	1	53	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
p-Tolualdehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	2	82	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	7	22	65	29	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	24	58	8	86	0.5	0.2	1.7	0.5	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	16	59	13	77	0.5	0.1	1.1	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	22	67	1	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	10	69	0	89	0.5	0.1	1.3	0.6	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	16	63	0	89	0.5	0.1	1.5	0.8	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	20	18	8	84	0.8	0.5	2.8	1.8	0.9	0.5	0.5	0.5	0.5
		Manhattan	---	---	34	37	0	92	0.7	0.5	3.4	1.9	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	55	12	2	92	0.6	0.2	1.4	1.1	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	56	8	1	93	0.6	0.1	1.3	0.9	0.6	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	43	3	7	55	0.6	0.3	1.7	1.3	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	46	1	8	54	0.6	0.2	1.4	1.2	0.5	0.5	0.5	0.5	0.5
Propionaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	69	1	78	0.8	1.1	6.9	3.8	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	8	37	8	84	1.6	2.3	14.8	5.7	1.6	0.5	0.5	0.5	0.4
		Manhattan	---	---	9	45	0	92	1.5	2.5	16.3	6.9	1.3	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	10	0	65	29	2.3	2.8	12.1	9.0	2.0	1.5	0.5	0.5	0.5
		Manhattan	---	---	34	3	8	86	2.2	2.1	8.7	6.6	3.1	1.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	51	5	13	77	0.6	0.2	1.4	1.0	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	61	4	1	89	0.6	0.2	1.8	1.1	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	69	1	0	89	0.6	0.2	1.3	1.0	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	69	0	0	89	0.5	0.1	1.4	0.8	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	25	1	8	84	1.0	0.8	6.2	2.2	1.1	0.7	0.5	0.5	0.5
		Manhattan	---	---	58	1	0	92	0.6	0.2	1.3	1.1	0.6	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	57	2	2	92	0.6	0.1	1.4	0.8	0.6	0.5	0.5	0.5	0.5
		Manhattan	---	---	53	2	1	93	0.6	0.1	1.1	0.9	0.6	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	42	6	7	55	0.6	0.2	1.4	1.1	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	41	5	8	54	0.6	0.2	1.5	1.1	0.5	0.5	0.5	0.5	0.5

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Valeraldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	2	78	8	84	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.3
		Manhattan	---	---	2	85	0	92	0.5	0.2	2.5	0.5	0.5	0.5	0.5	0.5	0.3
	Summer99	Bronx	---	---	7	22	65	29	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	16	62	8	86	0.7	0.6	3.9	2.1	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	20	57	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	44	45	1	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	2	86	0	89	0.5	0.0	0.6	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	13	76	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	28	19	8	84	0.9	0.8	4.2	3.2	0.7	0.5	0.5	0.5	0.5
		Manhattan	---	---	35	57	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	49	43	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	56	36	1	93	0.5	0.1	1.3	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	11	44	7	55	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	12	42	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
2,5-Dimethylbenzaldehyde (ug/m^3)	Winter99	Bronx	---	---	0	78	1	78	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	79	0	79	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring99	Bronx	---	---	0	84	8	84	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer99	Bronx	---	---	0	29	65	29	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	86	8	86	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall99	Bronx	---	---	5	72	13	77	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	5	84	1	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Winter00	Bronx	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	89	0	89	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Spring00	Bronx	---	---	2	77	8	84	0.5	0.1	0.9	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	92	0	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Summer00	Bronx	---	---	2	90	2	92	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	4	88	1	93	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	Fall00	Bronx	---	---	0	55	7	55	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
		Manhattan	---	---	0	54	8	54	0.5	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Total Aldehydes (ug/m^3)	Winter99	Bronx	---	---	---	---	1	78	15.1	10.1	53.6	38.7	17.5	10.6	8.5	6.3	5.7
		Manhattan	---	---	---	---	0	79	12.7	5.8	27.5	27.3	15.5	11.5	8.7	5.2	4.7
	Spring99	Bronx	---	---	---	---	8	84	16.7	8.0	43.8	32.0	21.2	15.0	10.5	7.5	6.5
		Manhattan	---	---	---	---	0	92	19.6	12.8	122.9	34.8	22.1	17.1	14.2	8.9	6.7
	Summer99	Bronx	---	---	---	---	65	29	19.9	6.1	30.0	29.5	25.2	20.1	14.4	10.7	10.2
		Manhattan	---	---	---	---	9	85	26.7	18.9	93.9	66.4	32.9	20.2	15.6	8.3	5.8
	Fall99	Bronx	---	---	---	---	13	77	12.9	6.3	33.4	24.6	17.0	10.5	7.5	6.6	4.5
		Manhattan	---	---	---	---	1	89	14.7	6.1	38.6	27.7	17.0	13.7	9.9	7.7	6.8
	Winter00	Bronx	---	---	---	---	0	89	10.9	6.6	40.3	24.5	12.9	8.7	6.7	4.9	2.3
		Manhattan	---	---	---	---	0	89	12.7	6.0	37.8	23.5	13.3	11.2	8.9	6.8	6.3
	Spring00	Bronx	---	---	---	---	8	84	32.4	29.8	134.1	104.0	32.6	22.7	15.5	6.9	0.3
		Manhattan	---	---	---	---	0	92	14.3	6.7	34.9	29.9	16.8	12.4	9.7	6.6	0.3
	Summer00	Bronx	---	---	---	---	2	92	13.8	5.4	39.1	22.8	17.7	13.0	9.7	7.2	5.9
		Manhattan	---	---	---	---	1	93	14.3	5.1	27.0	22.6	18.1	13.8	10.0	6.9	4.8
	Fall00	Bronx	---	---	---	---	7	55	11.8	7.4	36.8	25.1	16.2	9.0	6.8	4.9	3.8
		Manhattan	---	---	---	---	8	54	13.4	7.4	39.9	25.8	16.9	10.9	8.0	6.3	5.2

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Chromium (ng/m^3)	Winter99	Bronx	---	---	---	77	0	79	5.1	16.5	107.6	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	77	0	79	2.7	1.3	13.7	2.5	2.5	2.5	2.5	2.5	2.5
	Spring99	Bronx	---	---	---	91	0	92	2.5	0.4	6.5	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	91	1	91	2.5	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Summer99	Bronx	---	---	---	35	59	35	2.5	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	84	8	86	2.6	0.5	5.9	2.5	2.5	2.5	2.5	2.5	2.5
	Fall99	Bronx	---	---	---	86	2	88	2.6	0.5	6.0	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	89	1	89	2.5	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Winter00	Bronx	---	---	---	77	9	80	2.7	0.9	9.0	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	84	4	85	2.6	1.2	13.5	2.5	2.5	2.5	2.5	2.5	2.5
	Spring00	Bronx	---	---	---	82	7	85	2.6	0.7	7.5	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	89	3	89	2.5	0.0	2.5	2.5	2.5	2.5	2.5	2.5	2.5
	Summer00	Bronx	---	---	---	91	2	92	2.6	0.8	10.0	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	81	11	83	2.9	3.1	30.0	2.5	2.5	2.5	2.5	2.5	2.5
	Fall00	Bronx	---	---	---	49	11	51	3.0	3.0	23.1	2.5	2.5	2.5	2.5	2.5	2.5
		Manhattan	---	---	---	55	3	59	3.2	4.0	32.9	7.2	2.5	2.5	2.5	2.5	2.5
Iron (ng/m^3)	Winter99	Bronx	---	---	---	6	0	79	107.9	141.2	885.8	357.9	116.0	79.2	38.8	11.0	11.0
		Manhattan	---	---	---	4	0	79	97.6	68.9	408.6	236.0	127.9	76.4	49.2	11.0	11.0
	Spring99	Bronx	---	---	---	10	0	92	67.4	49.2	302.0	176.9	87.8	55.8	39.0	11.0	11.0
		Manhattan	---	---	---	4	1	91	77.0	40.9	180.2	156.0	99.7	67.5	45.2	23.4	11.0
	Summer99	Bronx	---	---	---	2	59	35	93.0	62.3	261.4	196.4	133.8	70.8	47.2	11.0	11.0
		Manhattan	---	---	---	3	8	86	88.4	63.1	423.9	190.9	119.3	74.0	48.2	23.6	11.0
	Fall99	Bronx	---	---	---	4	2	88	93.3	68.4	332.5	258.9	115.1	71.5	50.8	22.3	11.0
		Manhattan	---	---	---	7	1	89	72.5	54.0	302.0	191.1	89.8	56.3	39.6	11.0	11.0
	Winter00	Bronx	---	---	---	25	9	80	80.3	195.4	1720.0	172.4	82.2	37.7	11.0	11.0	11.0
		Manhattan	---	---	---	21	4	85	65.0	55.3	290.6	176.1	83.2	58.9	23.1	11.0	11.0
	Spring00	Bronx	---	---	---	26	7	85	60.2	51.6	253.6	159.4	85.0	55.8	11.0	11.0	11.0
		Manhattan	---	---	---	32	3	89	57.0	52.1	230.9	171.3	87.0	38.7	11.0	11.0	11.0
	Summer00	Bronx	---	---	---	50	2	92	43.6	45.2	236.5	130.6	67.5	11.0	11.0	11.0	11.0
		Manhattan	---	---	---	47	11	83	49.4	56.5	293.1	161.4	81.8	11.0	11.0	11.0	11.0
	Fall00	Bronx	---	---	---	15	11	51	64.2	58.6	272.1	166.9	94.7	43.3	11.0	11.0	11.0
		Manhattan	---	---	---	20	3	59	69.1	70.5	356.4	187.9	119.6	41.1	11.0	11.0	11.0
Lead (ng/m^3)	Winter99	Bronx	---	---	---	73	0	79	6.7	2.9	25.9	13.6	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	74	0	79	6.7	2.9	23.7	13.6	6.0	6.0	6.0	6.0	6.0
	Spring99	Bronx	---	---	---	92	0	92	6.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	87	1	91	6.4	2.1	21.5	6.0	6.0	6.0	6.0	6.0	6.0
	Summer99	Bronx	---	---	---	35	59	35	6.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	83	8	86	6.3	1.6	16.3	6.0	6.0	6.0	6.0	6.0	6.0
	Fall99	Bronx	---	---	---	79	2	88	7.2	3.8	23.1	18.7	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	82	1	89	7.1	4.1	26.8	19.8	6.0	6.0	6.0	6.0	6.0
	Winter00	Bronx	---	---	---	68	9	80	9.7	19.2	175.0	21.0	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	77	4	85	6.9	3.0	21.0	14.5	6.0	6.0	6.0	6.0	6.0
	Spring00	Bronx	---	---	---	82	7	85	6.3	1.5	15.0	6.0	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	87	3	89	6.2	1.3	15.2	6.0	6.0	6.0	6.0	6.0	6.0
	Summer00	Bronx	---	---	---	85	2	92	6.7	2.6	18.3	14.6	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	80	11	83	6.5	2.7	26.1	6.0	6.0	6.0	6.0	6.0	6.0
	Fall00	Bronx	---	---	---	51	11	51	6.0	0.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
		Manhattan	---	---	---	57	3	59	6.3	1.6	16.8	6.0	6.0	6.0	6.0	6.0	6.0

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Manganese (ng/m^3)	Winter99	Bronx	---	---	---	73	0	79	2.6	5.5	35.5	4.7	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	74	0	79	1.7	1.0	8.1	4.3	1.5	1.5	1.5	1.5	1.5
	Spring99	Bronx	---	---	---	91	0	92	1.6	0.5	6.3	1.5	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	90	1	91	1.5	0.3	4.0	1.5	1.5	1.5	1.5	1.5	1.5
	Summer99	Bronx	---	---	---	34	59	35	1.6	0.4	3.8	1.5	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	83	8	86	1.6	0.4	3.8	1.5	1.5	1.5	1.5	1.5	1.5
	Fall99	Bronx	---	---	---	80	2	88	1.8	1.1	6.7	4.8	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	83	1	89	1.8	1.2	7.6	4.3	1.5	1.5	1.5	1.5	1.5
	Winter00	Bronx	---	---	---	75	9	80	1.7	0.6	5.3	3.4	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	76	4	85	1.8	1.1	7.1	4.4	1.5	1.5	1.5	1.5	1.5
	Spring00	Bronx	---	---	---	83	7	85	1.5	0.2	3.0	1.5	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	83	3	89	1.7	0.6	4.5	3.4	1.5	1.5	1.5	1.5	1.5
	Summer00	Bronx	---	---	---	80	2	92	1.8	1.0	8.1	3.7	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	53	11	83	2.7	2.5	19.5	6.1	3.4	1.5	1.5	1.5	1.5
	Fall00	Bronx	---	---	---	48	11	51	1.6	0.4	3.7	3.0	1.5	1.5	1.5	1.5	1.5
		Manhattan	---	---	---	49	3	59	2.0	1.2	6.4	4.8	1.5	1.5	1.5	1.5	1.5
Nickel (ng/m^3)	Winter99	Bronx	---	---	---	6	0	79	30.7	36.1	190.6	85.3	34.0	22.6	11.6	2.0	2.0
		Manhattan	---	---	---	1	0	79	35.1	26.6	119.9	83.5	51.5	30.5	9.9	6.0	2.0
	Spring99	Bronx	---	---	---	45	0	92	5.5	6.8	37.6	20.4	5.2	4.0	2.0	2.0	2.0
		Manhattan	---	---	---	28	1	91	10.3	20.0	140.4	35.3	8.9	5.5	2.0	2.0	2.0
	Summer99	Bronx	---	---	---	20	59	35	4.7	4.4	22.0	14.8	6.2	2.0	2.0	2.0	2.0
		Manhattan	---	---	---	47	8	86	5.5	5.1	20.2	17.1	7.9	2.0	2.0	2.0	2.0
	Fall99	Bronx	---	---	---	25	2	88	10.7	10.5	67.4	26.6	14.9	7.7	2.0	2.0	2.0
		Manhattan	---	---	---	28	1	89	11.8	12.8	63.2	35.3	18.9	5.5	2.0	2.0	2.0
	Winter00	Bronx	---	---	---	14	9	80	16.4	16.8	103.9	40.0	21.4	12.4	6.2	2.0	2.0
		Manhattan	---	---	---	7	4	85	27.0	21.3	118.3	56.1	34.1	25.6	12.0	2.0	2.0
	Spring00	Bronx	---	---	---	31	7	85	8.6	8.4	49.5	22.4	12.0	6.7	2.0	2.0	2.0
		Manhattan	---	---	---	25	3	89	11.7	9.2	42.0	26.2	17.3	10.2	2.0	2.0	2.0
	Summer00	Bronx	---	---	---	14	29	65	8.9	6.7	29.1	22.2	12.9	7.0	4.3	2.0	2.0
		Manhattan	---	---	---	6	32	62	12.0	7.1	41.3	22.1	16.1	12.1	6.7	2.0	2.0
	Fall00	Bronx	---	---	---	24	11	51	6.1	10.9	78.9	11.4	6.4	4.3	2.0	2.0	2.0
		Manhattan	---	---	---	13	3	59	8.9	8.2	41.3	30.3	12.3	5.9	4.1	2.0	2.0
Zinc (ng/m^3)	Winter99	Bronx	---	---	---	76	0	79	41.0	12.9	118.8	38.5	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	77	0	79	39.8	8.3	92.9	38.5	38.5	38.5	38.5	38.5	38.5
	Spring99	Bronx	---	---	---	92	0	92	38.5	0.0	38.5	38.5	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	91	1	91	38.5	0.0	38.5	38.5	38.5	38.5	38.5	38.5	38.5
	Summer99	Bronx	---	---	---	35	59	35	38.5	0.0	38.5	38.5	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	84	8	86	40.4	12.8	134.0	38.5	38.5	38.5	38.5	38.5	38.5
	Fall99	Bronx	---	---	---	83	2	88	41.9	14.3	113.8	78.3	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	86	1	89	41.5	17.5	169.1	38.5	38.5	38.5	38.5	38.5	38.5
	Winter00	Bronx	---	---	---	77	9	80	40.8	12.0	118.0	38.5	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	81	4	85	42.0	19.0	196.0	38.5	38.5	38.5	38.5	38.5	38.5
	Spring00	Bronx	---	---	---	85	7	85	38.5	0.0	38.5	38.5	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	88	3	89	39.1	5.9	94.0	38.5	38.5	38.5	38.5	38.5	38.5
	Summer00	Bronx	---	---	---	86	2	92	46.3	31.2	209.7	122.1	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	82	11	83	39.0	4.5	79.5	38.5	38.5	38.5	38.5	38.5	38.5
	Fall00	Bronx	---	---	---	50	11	51	39.6	7.7	93.5	38.5	38.5	38.5	38.5	38.5	38.5
		Manhattan	---	---	---	59	3	59	38.5	0.0	38.5	38.5	38.5	38.5	38.5	38.5	38.5

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Total Metals (ng/m^3)	Winter99	Bronx	---	---	---	---	0	79	194.1	194.7	1264.0	480.9	200.5	152.1	103.2	64.7	61.5
		Manhattan	---	---	---	---	0	79	183.6	91.5	543.8	397.7	233.8	166.5	118.5	70.1	65.6
	Spring99	Bronx	---	---	---	---	0	92	121.4	53.2	389.6	230.5	141.6	108.4	91.1	61.5	61.5
		Manhattan	---	---	---	---	1	91	136.2	51.7	333.0	234.2	161.6	120.6	102.8	73.9	61.5
	Summer99	Bronx	---	---	---	---	59	35	146.3	64.6	313.9	255.9	191.6	121.3	97.7	61.5	61.5
		Manhattan	---	---	---	---	8	86	144.8	67.6	474.4	258.0	171.7	127.0	99.0	74.1	61.5
	Fall99	Bronx	---	---	---	---	2	88	157.5	86.6	504.5	348.0	173.1	132.7	104.3	72.8	61.5
		Manhattan	---	---	---	---	1	89	137.2	75.3	544.3	271.4	156.1	114.2	93.7	61.5	61.5
	Winter00	Bronx	---	---	---	---	9	80	151.5	234.5	2105.0	260.4	150.1	109.0	71.8	61.5	61.5
		Manhattan	---	---	---	---	4	85	145.3	73.8	390.7	302.7	167.5	137.9	88.1	61.5	61.5
	Spring00	Bronx	---	---	---	---	7	85	117.7	55.4	337.6	223.9	143.7	107.4	72.3	61.5	61.5
		Manhattan	---	---	---	---	3	89	118.2	57.7	297.5	235.7	155.2	101.5	74.6	61.5	61.5
	Summer00	Bronx	---	---	---	---	2	92	107.3	53.1	314.9	198.7	142.9	82.9	64.4	59.5	59.5
		Manhattan	---	---	---	---	11	83	109.5	63.5	363.2	220.6	143.2	76.0	64.7	59.5	59.5
	Fall00	Bronx	---	---	---	---	11	51	120.5	65.3	333.2	275.9	171.8	94.3	65.9	61.5	61.5
		Manhattan	---	---	---	---	3	59	128.0	75.8	457.4	253.2	172.8	99.5	71.5	61.5	61.5
SO_2 (Denuder) (ug/m^3)	Winter99	Bronx	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
	Spring99	Bronx	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
	Summer99	Bronx	---	---	---	---	60	34	14.0	9.4	30.2	29.6	23.7	10.9	5.5	2.7	1.6
		Manhattan	---	---	---	---	7	87	17.9	10.1	45.5	38.3	22.2	15.1	10.5	4.8	3.1
	Fall99	Bronx	---	---	---	---	2	88	27.4	16.5	94.1	56.5	32.9	23.6	15.7	8.8	1.7
		Manhattan	---	---	---	---	2	88	28.6	17.5	99.2	58.3	35.6	24.1	15.7	7.5	6.0
	Winter00	Bronx	---	---	---	---	5	84	41.6	21.2	132.7	78.5	54.0	35.1	25.9	16.7	6.7
		Manhattan	---	---	---	---	4	85	43.7	22.8	156.8	77.1	55.7	39.5	28.3	14.6	5.7
	Spring00	Bronx	---	---	---	---	0	92	16.5	9.1	50.7	30.8	22.0	14.6	9.9	6.3	4.1
		Manhattan	---	---	---	---	0	92	18.2	9.8	47.7	37.5	25.3	15.7	10.4	6.2	3.9
	Summer00	Bronx	---	---	---	---	72	22	16.8	10.3	43.9	35.8	19.5	12.7	9.6	7.7	6.3
		Manhattan	---	---	---	---	72	22	17.8	7.3	34.4	29.1	23.0	15.9	12.8	7.8	7.6
	Fall00	Bronx	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
HCl (ug/m^3)	Winter99	Bronx	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
	Spring99	Bronx	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
	Summer99	Bronx	---	---	---	---	60	34	0.9	0.7	2.5	2.4	1.2	0.6	0.4	0.1	0.1
		Manhattan	---	---	---	---	7	87	1.0	0.7	3.0	2.4	1.4	0.9	0.5	0.1	0.0
	Fall99	Bronx	---	---	---	---	2	88	0.3	0.2	1.1	0.7	0.4	0.3	0.2	0.1	0.0
		Manhattan	---	---	---	---	1	89	0.3	0.2	1.2	0.7	0.3	0.2	0.1	0.0	0.0
	Winter00	Bronx	---	---	---	---	5	84	0.4	0.3	1.4	0.9	0.5	0.3	0.2	0.1	0.0
		Manhattan	---	---	---	---	4	85	0.3	0.2	0.9	0.6	0.4	0.3	0.2	0.0	0.0
	Spring00	Bronx	---	---	---	---	0	92	0.4	0.5	2.7	1.6	0.4	0.3	0.1	0.1	0.0
		Manhattan	---	---	---	---	0	92	0.4	0.5	2.0	1.6	0.4	0.3	0.1	0.1	0.0
	Summer00	Bronx	---	---	---	---	72	22	1.0	0.3	1.6	1.6	1.2	0.9	0.7	0.6	0.5
		Manhattan	---	---	---	---	72	22	0.8	0.3	1.4	1.3	1.0	0.8	0.6	0.4	0.3
	Fall00	Bronx	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
HNO_2 (ug/m^3)	Winter99	Bronx	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
	Spring99	Bronx	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
	Summer99	Bronx	---	---	---	---	60	34	1.9	1.6	5.3	5.0	2.8	1.4	0.5	0.1	0.1
		Manhattan	---	---	---	---	8	86	1.9	1.5	6.4	4.8	3.0	1.6	0.6	0.3	0.1
	Fall99	Bronx	---	---	---	---	2	88	4.0	2.5	12.7	9.0	5.2	3.4	2.2	1.1	0.5
		Manhattan	---	---	---	---	1	89	4.4	2.2	10.4	8.3	5.7	4.1	2.7	1.6	1.2
	Winter00	Bronx	---	---	---	---	5	84	3.7	2.6	12.5	8.6	5.1	2.9	1.6	0.9	0.6
		Manhattan	---	---	---	---	4	85	4.0	2.7	16.8	8.8	4.6	3.2	2.2	1.6	1.2
	Spring00	Bronx	---	---	---	---	0	92	2.4	1.9	11.8	6.4	2.9	2.1	1.2	0.5	0.4
		Manhattan	---	---	---	---	0	92	2.9	2.0	11.8	7.3	3.7	2.7	1.6	0.7	0.5
	Summer00	Bronx	---	---	---	---	72	22	1.4	1.2	5.0	2.8	2.2	0.9	0.5	0.3	0.2
		Manhattan	---	---	---	---	72	22	1.5	1.1	3.9	3.5	2.4	1.1	0.6	0.5	0.5
	Fall00	Bronx	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
HNO_3 (ug/m^3)	Winter99	Bronx	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
	Spring99	Bronx	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
	Summer99	Bronx	---	---	---	---	60	34	2.5	2.0	6.4	6.4	3.7	1.8	0.7	0.3	0.1
		Manhattan	---	---	---	---	9	85	3.9	3.1	14.7	10.9	5.6	2.9	1.6	0.4	0.1
	Fall99	Bronx	---	---	---	---	2	88	0.6	0.6	3.1	1.6	0.6	0.4	0.2	0.1	0.0
		Manhattan	---	---	---	---	1	89	0.6	0.5	2.5	1.8	0.8	0.5	0.3	0.1	0.1
	Winter00	Bronx	---	---	---	---	5	84	0.5	0.3	1.8	1.0	0.6	0.5	0.3	0.2	0.1
		Manhattan	---	---	---	---	4	85	1.0	0.7	3.0	2.3	1.5	0.8	0.4	0.2	0.1
	Spring00	Bronx	---	---	---	---	0	92	1.2	1.4	7.2	4.4	1.1	0.7	0.4	0.2	0.1
		Manhattan	---	---	---	---	0	92	1.2	1.4	6.9	4.7	1.2	0.8	0.4	0.2	0.1
	Summer00	Bronx	---	---	---	---	72	22	3.1	1.1	5.0	4.9	3.9	3.2	2.3	1.4	1.3
		Manhattan	---	---	---	---	72	22	3.2	1.0	5.3	4.9	4.0	3.1	2.6	1.8	1.5
	Fall00	Bronx	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
NH_3 (ug/m^3)	Winter99	Bronx	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	79	0	---	---	---	---	---	---	---	---	---
	Spring99	Bronx	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	92	0	---	---	---	---	---	---	---	---	---
	Summer99	Bronx	---	---	---	---	74	20	4.5	1.2	6.7	6.4	5.4	4.6	3.5	2.7	2.7
		Manhattan	---	---	---	---	43	51	4.3	0.9	6.0	5.5	5.0	4.3	3.7	3.0	1.6
	Fall99	Bronx	---	---	---	---	90	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	90	0	---	---	---	---	---	---	---	---	---
	Winter00	Bronx	---	---	---	---	11	78	1.3	1.4	6.7	4.8	1.7	0.9	0.2	0.1	0.0
		Manhattan	---	---	---	---	9	80	2.8	1.8	8.3	7.0	3.7	2.3	1.2	0.8	0.6
	Spring00	Bronx	---	---	---	---	34	58	2.8	1.7	6.9	6.3	3.8	2.3	1.4	0.8	0.5
		Manhattan	---	---	---	---	37	55	4.0	2.2	10.8	7.2	5.3	3.4	2.2	1.5	1.1
	Summer00	Bronx	---	---	---	---	94	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	94	0	---	---	---	---	---	---	---	---	---
	Fall00	Bronx	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	62	0	---	---	---	---	---	---	---	---	---

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics															
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Total Pollen (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	0.9	2.0	11.0	5.7	0.4	0.2	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	0.4	0.9	4.4	2.6	0.4	0.1	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	33.4	49.5	233.2	192.5	44.4	15.8	4.3	1.0	0.6
		Manhattan	---	---	---	---	0	92	23.5	31.3	131.2	105.3	27.0	10.4	3.4	0.8	0.0
	Summer99	Bronx	---	---	---	---	53	41	8.2	10.7	44.0	33.2	8.0	4.6	2.2	0.4	0.2
		Manhattan	---	---	---	---	0	94	4.3	4.9	26.0	16.7	5.1	2.5	1.6	0.6	0.0
	Fall99	Bronx	---	---	---	---	0	90	0.7	1.5	7.8	3.5	0.6	0.2	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	90	0.3	0.8	4.2	2.2	0.2	0.0	0.0	0.0	0.0
	Winter00	Bronx	---	---	---	---	6	83	2.0	9.1	77.5	8.9	0.2	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	89	2.2	9.6	83.4	8.0	0.4	0.0	0.0	0.0	0.0
	Spring00	Bronx	---	---	---	---	0	92	106.5	358.2	2212.9	930.2	28.9	10.6	3.9	0.7	0.0
		Manhattan	---	---	---	---	0	92	64.7	222.8	1558.3	375.2	27.7	8.8	4.0	0.8	0.0
	Summer00	Bronx	---	---	---	---	0	94	6.2	11.3	65.9	25.8	5.8	2.2	0.9	0.0	0.0
		Manhattan	---	---	---	---	0	94	3.3	4.9	32.7	13.4	3.8	1.6	0.4	0.0	0.0
	Fall00	Bronx	---	---	---	---	1	61	0.4	0.7	3.4	1.3	0.5	0.2	0.0	0.0	0.0
		Manhattan	---	---	---	---	1	61	0.2	0.4	2.0	0.9	0.2	0.0	0.0	0.0	0.0
Pollen - Trees (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	0.9	2.0	11.2	5.9	0.4	0.2	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	0.4	0.9	4.4	2.6	0.4	0.1	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	32.6	48.4	232.0	165.7	42.7	15.8	4.2	1.0	0.6
		Manhattan	---	---	---	---	0	92	23.1	30.5	131.2	105.3	27.0	10.0	3.4	0.8	0.0
	Summer99	Bronx	---	---	---	---	48	46	1	2	7	5	2	1	0	0	0
		Manhattan	---	---	---	---	0	94	1	2	12	6	2	1	0	0	0
	Fall99	Bronx	---	---	---	---	0	90	0	0	1	0	0	0	0	0	0
		Manhattan	---	---	---	---	0	90	0	0	0	0	0	0	0	0	0
	Winter00	Bronx	---	---	---	---	6	83	2	9	78	9	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	2	10	83	8	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	106	358	2213	930	29	10	4	1	0
		Manhattan	---	---	---	---	0	92	64	223	1558	373	28	9	4	1	0
	Summer00	Bronx	---	---	---	---	0	94	1	3	25	2	0	0	0	0	0
		Manhattan	---	---	---	---	0	94	0	1	9	2	0	0	0	0	0
	Fall00	Bronx	---	---	---	---	1	61	0	0	1	0	0	0	0	0	0
		Manhattan	---	---	---	---	1	61	0	0	1	0	0	0	0	0	0
Pollen - Ragweed (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	2	4	25	9	1	0	0	0	0
		Manhattan	---	---	---	---	0	94	1	3	24	7	1	0	0	0	0
	Fall99	Bronx	---	---	---	---	0	90	0	1	6	1	0	0	0	0	0
		Manhattan	---	---	---	---	0	90	0	1	3	1	0	0	0	0	0
	Winter00	Bronx	---	---	---	---	6	83	0	0	0	0	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	0	0	0	0	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	0	0	0	0	0	0	0	0	0
		Manhattan	---	---	---	---	0	92	0	0	0	0	0	0	0	0	0
	Summer00	Bronx	---	---	---	---	0	94	2	3	15	9	3	0	0	0	0
		Manhattan	---	---	---	---	0	94	1	2	8	5	2	0	0	0	0
	Fall00	Bronx	---	---	---	---	1	61	0	0	1	0	0	0	0	0	0
		Manhattan	---	---	---	---	1	61	0	0	1	0	0	0	0	0	0

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Pollen - Grasses (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	0.0	0.1	0.4	0.2	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	0.7	3.1	26.9	2.9	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	0.4	1.5	12.4	3.2	0.0	0.0	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	2	3	12	7	2	1	0	0	0
		Manhattan	---	---	---	---	0	94	1	1	6	4	1	1	0	0	0
	Fall99	Bronx	---	---	---	---	0	90	0	0	0	0	0	0	0	0	0
		Manhattan	---	---	---	---	0	90	0	0	0	0	0	0	0	0	0
	Winter00	Bronx	---	---	---	---	6	83	0	0	0	0	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	0	0	0	0	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	1	2	12	6	0	0	0	0	0
		Manhattan	---	---	---	---	0	92	1	2	9	3	0	0	0	0	0
	Summer00	Bronx	---	---	---	---	0	94	1	2	9	5	1	0	0	0	0
		Manhattan	---	---	---	---	0	94	1	2	17	3	1	0	0	0	0
	Fall00	Bronx	---	---	---	---	1	61	0	0	0	0	0	0	0	0	0
		Manhattan	---	---	---	---	1	61	0	0	0	0	0	0	0	0	0
Total Mold (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	9.0	34.6	293.2	42.6	6.5	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	5.7	13.7	69.4	47.6	3.5	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	265.4	521.3	3539.0	1246.5	247.1	46.7	9.1	0.0	0.0
		Manhattan	---	---	---	---	0	92	231.7	414.4	2200.2	1244.2	253.9	34.7	8.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	53	41	1335.8	1006.6	3652.3	3030.9	1914.6	1284.7	499.7	87.6	29.2
		Manhattan	---	---	---	---	0	94	1424.6	1123.6	5357.6	3704.9	2109.8	1145.8	493.3	142.2	49.6
	Fall99	Bronx	---	---	---	---	0	90	449.5	828.3	6171.4	1520.8	502.6	219.4	36.4	0.0	0.0
		Manhattan	---	---	---	---	0	90	372.4	529.6	2843.9	1299.6	493.3	132.7	19.5	3.3	0.0
	Winter00	Bronx	---	---	---	---	6	83	10.7	20.6	119.4	48.9	13.2	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	89	3.6	6.7	31.3	21.9	6.0	0.0	0.0	0.0	0.0
	Spring00	Bronx	---	---	---	---	0	92	363.4	604.3	2450.4	2027.1	335.6	102.3	23.4	0.0	0.0
		Manhattan	---	---	---	---	0	92	475.7	831.8	4089.9	2228.0	470.0	93.0	12.7	0.0	0.0
	Summer00	Bronx	---	---	---	---	0	94	1041.2	881.4	6553.4	2452.5	1476.6	822.4	504.4	98.7	40.8
		Manhattan	---	---	---	---	0	94	832.3	730.2	5486.1	2052.1	1052.1	652.2	388.9	65.5	19.7
	Fall00	Bronx	---	---	---	---	1	61	499.7	550.4	2226.1	1655.7	771.2	335.6	49.1	16.4	9.8
		Manhattan	---	---	---	---	1	61	446.9	515.9	2860.4	1329.4	739.6	309.0	59.0	16.4	9.7
Basidospores (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	0.9	4.3	27.5	6.6	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	1.1	6.3	54.3	3.6	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	37.3	64.9	368.1	201.4	45.4	9.7	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	31.7	63.8	447.7	143.2	34.7	6.0	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	346	504	2488	1444	415	149	31	0	0
		Manhattan	---	---	---	---	0	94	372	350	1485	1214	522	259	113	20	7
	Fall99	Bronx	---	---	---	---	0	90	249	547	4694	959	291	100	7	0	0
		Manhattan	---	---	---	---	0	90	195	304	1605	853	259	72	3	0	0
	Winter00	Bronx	---	---	---	---	6	83	1	4	24	11	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	1	2	21	3	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	106	249	1665	581	86	21	4	0	0
		Manhattan	---	---	---	---	0	92	206	435	2775	1170	186	24	3	0	0
	Summer00	Bronx	---	---	---	---	0	94	554	440	2545	1367	757	446	249	41	0
		Manhattan	---	---	---	---	0	94	453	355	2316	1068	638	383	195	23	7
	Fall00	Bronx	---	---	---	---	1	61	220	274	1096	822	310	124	16	0	0
		Manhattan	---	---	---	---	1	61	188	224	819	669	227	117	14	3	0

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics															
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Ascospores (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	4.7	31.5	280.1	9.9	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	1.2	3.9	25.1	9.1	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	49.6	116.0	891.4	277.8	39.1	12.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	53.0	117.4	776.7	277.2	39.6	9.1	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	82	93	380	267	115	49	13	0	0
		Manhattan	---	---	---	---	0	94	61	80	467	195	65	39	19	3	0
	Fall99	Bronx	---	---	---	---	0	90	24	29	149	84	31	16	3	0	0
		Manhattan	---	---	---	---	0	90	17	29	205	65	19	6	0	0	0
	Winter00	Bronx	---	---	---	---	6	83	2	4	27	7	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	1	2	14	4	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	39	64	478	123	51	16	0	0	0
		Manhattan	---	---	---	---	0	92	39	75	431	231	31	8	0	0	0
	Summer00	Bronx	---	---	---	---	0	94	111	151	925	413	135	66	22	4	0
		Manhattan	---	---	---	---	0	94	94	115	590	354	115	57	13	3	0
	Fall00	Bronx	---	---	---	---	1	61	42	64	300	154	58	20	3	0	0
		Manhattan	---	---	---	---	1	61	39	48	201	142	59	18	7	0	0
Mitospores (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	3.4	9.0	43.8	26.1	3.3	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	3.1	9.8	52.5	35.5	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	176.8	389.3	2407.2	1006.9	146.5	15.4	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	143.2	302.5	1791.3	803.8	105.5	12.1	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	752	786	2676	2359	1209	483	60	0	0
		Manhattan	---	---	---	---	0	94	980	963	4837	2858	1392	713	215	45	0
	Fall99	Bronx	---	---	---	---	0	90	173	360	2474	677	179	49	7	0	0
		Manhattan	---	---	---	---	0	90	155	301	2133	521	179	41	7	0	0
	Winter00	Bronx	---	---	---	---	6	83	6	15	109	35	7	0	0	0	0
		Manhattan	---	---	---	---	0	89	2	5	26	15	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	216	468	2136	1656	108	33	7	0	0
		Manhattan	---	---	---	---	0	92	228	503	2431	1636	197	21	3	0	0
	Summer00	Bronx	---	---	---	---	0	94	365	558	4675	1093	453	204	91	7	0
		Manhattan	---	---	---	---	0	94	276	383	2611	1094	313	142	59	7	3
	Fall00	Bronx	---	---	---	---	1	61	229	327	1543	881	340	66	22	3	0
		Manhattan	---	---	---	---	1	61	212	370	2477	681	262	87	16	0	0
Mitospores - Dark Color (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	2.1	6.2	42.6	9.8	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	3.0	9.4	52.5	35.5	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	173.4	379.9	2320.4	1006.9	146.5	15.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	142.5	302.8	1791.3	803.8	105.5	10.9	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	749	784	2666	2356	1177	483	57	0	0
		Manhattan	---	---	---	---	0	94	968	953	4837	2858	1360	713	215	35	0
	Fall99	Bronx	---	---	---	---	0	90	168	360	2474	677	179	44	3	0	0
		Manhattan	---	---	---	---	0	90	142	279	1931	443	174	41	7	0	0
	Winter00	Bronx	---	---	---	---	6	83	5	13	87	35	3	0	0	0	0
		Manhattan	---	---	---	---	0	89	2	5	26	15	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	211	466	2136	1550	98	27	3	0	0
		Manhattan	---	---	---	---	0	92	220	501	2431	1636	153	17	3	0	0
	Summer00	Bronx	---	---	---	---	0	94	353	554	4664	1089	446	199	80	7	0
		Manhattan	---	---	---	---	0	94	270	382	2611	1094	313	138	56	3	0
	Fall00	Bronx	---	---	---	---	1	61	227	328	1543	881	340	62	16	3	0
		Manhattan	---	---	---	---	1	61	208	362	2391	681	242	85	16	0	0

Appendix 2 - Summary of Data (continued)

Descriptive Statistics																	
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Mitospores - Non-Dark Color (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	1.3	6.9	43.8	6.3	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	0.1	0.8	6.5	0.0	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	3.5	15.0	86.8	13.9	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	0.7	3.2	21.1	9.1	0.0	0.0	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	3	10	55	16	3	0	0	0	0
		Manhattan	---	---	---	---	0	94	12	31	178	81	3	0	0	0	0
	Fall99	Bronx	---	---	---	---	0	90	5	16	102	21	3	0	0	0	0
		Manhattan	---	---	---	---	0	90	13	50	354	120	0	0	0	0	0
	Winter00	Bronx	---	---	---	---	6	83	1	5	25	3	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	0	0	3	0	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	5	15	106	30	0	0	0	0	0
		Manhattan	---	---	---	---	0	92	9	27	156	47	0	0	0	0	0
	Summer00	Bronx	---	---	---	---	0	94	12	45	351	108	0	0	0	0	0
		Manhattan	---	---	---	---	0	94	6	17	129	36	3	0	0	0	0
	Fall00	Bronx	---	---	---	---	1	61	2	7	48	11	0	0	0	0	0
		Manhattan	---	---	---	---	1	61	4	18	111	20	0	0	0	0	0
Small (<10um) Spores (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	8.5	34.4	293.2	42.6	6.3	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	5.3	13.2	66.4	44.8	3.5	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	261.3	517.2	3519.0	1236.1	236.1	45.7	8.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	225.3	404.2	2180.7	1173.5	247.5	34.7	8.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	1108	969	3585	2781	1756	877	215	0	0
		Manhattan	---	---	---	---	0	94	1348	1041	4722	3417	2026	1109	465	129	33
	Fall99	Bronx	---	---	---	---	0	90	440	821	6148	1510	493	213	33	0	0
		Manhattan	---	---	---	---	0	90	361	518	2771	1280	474	133	19	0	0
	Winter00	Bronx	---	---	---	---	6	83	9	17	101	42	11	0	0	0	0
		Manhattan	---	---	---	---	0	89	3	6	28	22	6	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	349	584	2391	1901	313	93	20	0	0
		Manhattan	---	---	---	---	0	92	460	798	3863	2209	465	88	13	0	0
	Summer00	Bronx	---	---	---	---	0	94	1010	861	6374	2401	1458	800	497	95	33
		Manhattan	---	---	---	---	0	94	805	709	5378	1931	1042	645	370	56	10
	Fall00	Bronx	---	---	---	---	1	61	484	534	2141	1623	753	332	49	16	7
		Manhattan	---	---	---	---	1	61	433	502	2817	1304	733	299	58	16	10
Large (>10um) Spores (#/m^3)	Winter99	Bronx	---	---	---	---	0	79	0.5	1.7	9.8	6.5	0.0	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	79	0.1	0.6	3.5	0.0	0.0	0.0	0.0	0.0	0.0
	Spring99	Bronx	---	---	---	---	0	92	2.1	4.3	20.8	13.4	3.3	0.0	0.0	0.0	0.0
		Manhattan	---	---	---	---	0	92	2.6	6.9	38.2	19.3	3.0	0.0	0.0	0.0	0.0
	Summer99	Bronx	---	---	---	---	48	46	68	87	373	262	94	40	3	0	0
		Manhattan	---	---	---	---	0	94	61	99	635	183	65	25	10	0	0
	Fall99	Bronx	---	---	---	---	0	90	5	9	53	23	7	0	0	0	0
		Manhattan	---	---	---	---	0	90	5	9	46	24	7	0	0	0	0
	Winter00	Bronx	---	---	---	---	6	83	0	1	7	0	0	0	0	0	0
		Manhattan	---	---	---	---	0	89	0	0	3	0	0	0	0	0	0
	Spring00	Bronx	---	---	---	---	0	92	8	25	158	46	0	0	0	0	0
		Manhattan	---	---	---	---	0	92	8	34	227	21	3	0	0	0	0
	Summer00	Bronx	---	---	---	---	0	94	15	18	80	52	26	7	4	0	0
		Manhattan	---	---	---	---	0	94	13	19	97	63	13	7	0	0	0
	Fall00	Bronx	---	---	---	---	1	61	6	10	42	26	8	3	0	0	0
		Manhattan	---	---	---	---	1	61	5	9	56	20	7	0	0	0	0

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Total Particles (#)	Winter99	Bronx	---	---	---	---	1896	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	1896	0	---	---	---	---	---	---	---	---	---
	Spring99	Bronx	---	---	---	---	2208	0	---	---	---	---	---	---	---	---	---
		Manhattan	---	---	---	---	2208	0	---	---	---	---	---	---	---	---	---
	Summer99	Bronx	---	---	---	---	2247	9	2511592	511147	3293187	3293187	2978565	2426573	1986937	1958989	1958989
		Manhattan	---	---	---	---	2252	4	786065	41310	828917	828917	815119	792214	757010	730912	730912
	Fall99	Bronx	---	---	---	---	0	2160	1278806	837520	3664530	3138862	1655154	913698	693673	455757	216269
		Manhattan	---	---	---	---	1	2159	1252193	514714	3486562	2303163	1510293	1027820	898458	743602	453650
	Winter00	Bronx	---	---	---	---	279	1857	1285863	532023	3468775	2409326	1542867	1080677	917785	746155	359705
		Manhattan	---	---	---	---	446	1690	1523313	420305	2932349	2276606	1826742	1438253	1247570	887923	470780
	Spring00	Bronx	---	---	---	---	361	1847	1943252	844710	3535831	3129558	2703701	2049893	1032051	698632	394626
		Manhattan	---	---	---	---	374	1834	1441250	360839	3332480	2134929	1524628	1406442	1283332	954088	375369
	Summer00	Bronx	---	---	---	---	1285	971	1524672	738377	3371389	2838222	2044459	1425871	944918	461189	92949
		Manhattan	---	---	---	---	1441	815	1448814	508487	3446219	2768514	1566482	1354807	1147058	871408	339
	Fall00	Bronx	---	---	---	---	179	1309	1934484	848884	3545731	3183346	2718196	1963012	1076472	657683	322539
		Manhattan	---	---	---	---	311	1177	1806120	793697	3378155	3103462	2656988	1469457	1171154	827636	541951
$PM_{2.5}$ (FRM) (ug/m^3)	Winter99	Bronx	---	---	---	---	56	23	15.27	7.19	26.38	25.83	22.00	15.00	9.17	5.83	0.00
		Manhattan	---	---	---	---	14	65	17.70	8.57	41.46	32.00	21.04	16.50	12.54	2.29	0.92
	Spring99	Bronx	---	---	---	---	5	87	13.65	8.06	39.18	30.71	16.04	11.00	8.33	6.08	4.27
		Manhattan	---	---	---	---	9	83	13.08	8.62	39.08	30.92	16.83	11.50	7.79	0.38	-0.08
	Summer99	Bronx	---	---	---	---	63	31	16.65	10.08	39.00	36.68	23.88	16.27	8.36	4.11	2.02
		Manhattan	---	---	---	---	4	90	15.59	11.17	50.85	36.23	20.95	13.33	6.75	0.64	0.17
	Fall99	Bronx	---	---	---	---	37	53	12.01	6.79	33.80	26.40	14.60	9.79	7.30	4.81	3.13
		Manhattan	---	---	---	---	36	54	15.94	8.89	38.40	34.10	21.65	13.73	8.82	6.20	0.42
	Winter00	Bronx	---	---	---	---	24	65	17.17	11.14	47.30	40.50	21.90	13.20	8.10	6.00	4.10
		Manhattan	---	---	---	---	27	62	19.13	11.23	48.20	41.20	25.10	15.30	10.30	7.10	6.90
	Spring00	Bronx	---	---	---	---	8	84	13.82	8.60	40.60	31.50	17.90	11.00	7.85	5.30	3.50
		Manhattan	---	---	---	---	4	88	15.34	8.53	44.10	33.50	17.80	12.75	9.20	6.30	5.10
	Summer00	Bronx	---	---	---	---	5	89	15.03	7.92	37.30	30.40	20.50	12.90	9.10	5.40	3.60
		Manhattan	---	---	---	---	7	87	16.90	7.93	37.70	31.30	21.40	15.20	10.70	6.60	5.70
	Fall00	Bronx	---	---	---	---	5	57	13.99	8.51	53.00	29.00	17.50	11.80	7.80	4.70	3.80
		Manhattan	---	---	---	---	0	62	16.18	11.31	63.80	31.30	19.40	13.65	8.80	5.90	4.40
PM_{10} (FRM) (ug/m^3)	Winter99	Bronx	---	---	---	---	6	7	12	4	19	19	18	11	10	8	8
		Manhattan	---	---	---	---	10	3	12	1	13	13	13	12	12	12	12
	Spring99	Bronx	---	---	---	---	2	13	22	8	35	35	27	21	19	10	10
		Manhattan	---	---	---	---	1	14	22	7	36	36	27	22	17	11	11
	Summer99	Bronx	---	---	---	---	13	3	38	8	46	46	46	38	31	31	31
		Manhattan	---	---	---	---	1	15	27	14	46	46	40	25	15	7	7
	Fall99	Bronx	---	---	---	---	4	11	16	6	27	27	22	15	12	8	8
		Manhattan	---	---	---	---	0	15	17	6	30	30	21	18	10	9	9
	Winter00	Bronx	---	---	---	---	3	12	20	11	50	50	23	17	13	11	11
		Manhattan	---	---	---	---	0	15	19	9	43	43	22	16	14	13	13
	Spring00	Bronx	---	---	---	---	3	12	24	11	45	45	33	21	14	13	13
		Manhattan	---	---	---	---	0	15	22	11	49	49	28	17	13	7	7
	Summer00	Bronx	---	---	---	---	0	16	21	7	37	37	23	18	17	13	13
		Manhattan	---	---	---	---	0	16	22	7	39	39	25	23	17	13	13
	Fall00	Bronx	---	---	---	---	4	6	23	10	37	37	29	24	15	9	9
		Manhattan	---	---	---	---	1	9	28	17	61	61	34	30	15	9	9

Appendix 2 - Summary of Data (continued)

			Descriptive Statistics														
	Season	Site	SR's	RJ's	PL's	LT's	Missing	N	Mean	Std. Dev.	Max	95th	75th	Median	25th	5th	Min
Temperature (deg F)	Winter99	Bronx	5	2	---	---	0	1889	36.0	9.5	68.4	51.1	42.2	36.7	29.2	20.5	9.6
		Manhattan	0	3	---	---	0	1893	36.9	9.5	68.3	51.7	43.4	37.6	30.0	21.2	10.3
	Spring99	Bronx	2	6	---	---	110	2090	59.2	11.4	94.8	79.8	66.6	58.4	50.9	41.8	32.9
		Manhattan	11	4	---	---	106	2087	59.8	11.2	95.4	80.2	67.0	58.8	51.5	42.8	34.7
	Summer99	Bronx	31	7	---	---	1409	809	75.7	8.6	100.4	90.8	81.1	75.1	70.0	64.2	51.2
		Manhattan	13	13	---	---	443	1787	76.7	8.0	100.1	90.4	81.7	76.5	71.9	63.6	52.0
	Fall99	Bronx	13	1	---	---	0	2146	52.3	10.5	77.7	69.2	60.2	52.7	44.7	35.6	23.0
		Manhattan	34	52	---	---	2	2072	53.4	10.1	76.9	69.3	61.3	53.9	46.1	36.5	23.8
	Winter00	Bronx	6	1	---	---	0	2129	35.8	11.7	70.8	55.0	43.9	35.7	28.0	15.9	2.8
		Manhattan	8	2	---	---	170	1956	37.8	11.4	69.9	57.1	45.7	37.7	30.2	18.7	4.3
	Spring00	Bronx	2	3	---	---	0	2203	58.1	12.4	93.6	82.5	64.7	56.6	49.5	40.2	29.6
		Manhattan	2	0	---	---	0	2206	58.8	12.1	92.9	83.1	65.4	57.6	50.3	41.2	30.5
	Summer00	Bronx	53	0	---	---	65	2138	72.6	6.6	90.3	83.9	77.0	72.4	68.1	62.7	52.0
		Manhattan	82	19	---	---	1	2154	72.6	6.0	90.6	83.0	76.5	72.5	68.5	63.0	53.8
	Fall00	Bronx	146	1	---	---	10	1331	53.8	9.7	78.6	69.0	60.3	54.4	47.2	36.7	8.0
		Manhattan	4	2	---	---	7	1475	54.8	9.7	80.4	69.6	61.5	55.7	47.9	37.8	28.2
Relative Humidity (%)	Winter99	Bronx	5	3	---	---	0	1888	66	23	108	104	86	61	47	32	21
		Manhattan	2	3	---	---	0	1891	60	23	107	102	78	55	42	29	18
	Spring99	Bronx	90	5	---	---	110	2003	61	25	108	104	81	58	41	25	13
		Manhattan	11	5	---	---	106	2086	55	24	106	98	73	52	36	22	12
	Summer99	Bronx	3	30	---	---	1409	814	68	21	107	102	85	69	51	35	23
		Manhattan	20	10	---	---	443	1783	62	20	104	95	78	63	46	30	21
	Fall99	Bronx	14	1	---	---	0	2145	71	21	110	106	89	69	54	39	25
		Manhattan	7	4	---	---	2	2147	65	20	106	100	81	63	49	34	22
	Winter00	Bronx	6	1	---	---	0	2129	67	22	114	108	82	62	51	36	24
		Manhattan	5	1	---	---	170	1960	61	21	109	101	76	57	46	32	19
	Spring00	Bronx	2	6	---	---	0	2200	73	25	115	110	97	73	53	33	1
		Manhattan	1	0	---	---	0	2207	66	22	106	100	86	65	48	30	12
	Summer00	Bronx	75	0	---	---	65	2116	78	21	117	111	97	78	62	43	31
		Manhattan	4	3	---	---	1	2248	70	20	106	100	87	69	55	38	28
	Fall00	Bronx	102	23	---	---	10	1353	75	20	117	110	89	74	60	44	33
		Manhattan	3	2	---	---	7	1476	65	18	107	96	77	63	51	38	23

Appendix 3 – Detailed Statistical Results, Entire Study Period

Appendix 3 - Statistical Analyses - Entire Study Period

Statistics and Analyses - Daily Averages[a]																		
			Manhattan				Bronx				Difference[b]							
															Paired T-test with Autocorrelation Adjustment		
Analyte	Pearson Correlation	Detection Limit	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	# of lags	T	p-value
pH	0.6853	---	680	1.7%	---	5.04	627	9.4%	---	5.15	622	10.1%	-0.07	-1.4%	1	-4.32	<0.0001
Sulfate	0.9647	0.24	674	2.6%	0.0%	4.0	617	10.8%	0.3%	3.6	607	12.3%	0.1	3.4%	0	3.90	0.0001
Carb250	0.6155	---	650	6.1%	---	3.09	590	14.7%	---	3.17	556	19.7%	-0.15	-4.9%	44	-0.79	0.4293
Soot	0.7671	---	592	14.5%	---	1.32	582	15.9%	---	1.19	498	28.0%	0.08	6.5%	18	1.49	0.1380
Ozone	0.9235	---	630	9.0%	---	0.012	518	25.1%	---	0.016	482	30.3%	-0.004	-33.3%	9	-12.01	<0.0001
NOX	0.8652	---	625	9.7%	---	0.066	425	38.6%	---	0.053	367	47.0%	0.012	18.8%	8	6.51	<0.0001
NO	0.8794	---	625	9.7%	---	0.031	425	38.6%	---	0.022	367	47.0%	0.008	27.6%	3	7.72	<0.0001
NO2	0.7704	---	625	9.7%	---	0.036	425	38.6%	---	0.031	367	47.0%	0.005	13.9%	7	6.11	<0.0001
SO2	0.8967	---	648	6.4%	---	0.012	608	12.1%	---	0.011	566	18.2%	0.002	15.4%	27	2.94	0.0034
PM2.5 (TEOM)	0.9659	---	631	8.8%	---	16.2	567	18.1%	---	15.3	517	25.3%	0.8	4.8%	0	8.43	<0.0001
PM10 (TEOM)	0.9185	---	609	12.0%	---	23.1	497	28.2%	---	22.3	444	35.8%	0.9	4.1%	14	1.87	0.0616
Acetaldehyde*	0.8086	1.0	674	2.6%	1.2%	2.7	577	16.6%	0.4%	2.5	568	17.9%	0.0	1.3%	21	0.23	0.8198
Acetone*	0.2342	1.0	674	2.6%	2.2%	6.9	577	16.6%	0.1%	6.8	568	17.9%	0.0	-0.1%	2	-0.03	0.9786
Acrolein*	---	1.0	674	2.6%	96.2%	0.6	577	16.6%	83.2%	0.5	568	17.9%	0.0	0.0%	---	---	---
Benzaldehyde*	0.4232	1.0	674	2.6%	93.9%	0.5	577	16.6%	76.2%	0.5	568	17.9%	0.0	-1.8%	---	---	---
Butyraldehyde*	-0.0285	1.0	674	2.6%	68.9%	0.8	577	16.6%	66.0%	0.7	568	17.9%	0.1	14.9%	---	---	---
Crotonaldehyde*	0.5875	1.0	674	2.6%	69.5%	0.8	577	16.6%	63.4%	0.7	568	17.9%	0.0	2.0%	---	---	---
Formaldehyde*	0.7982	1.0	674	2.6%	0.3%	4.4	577	16.6%	0.1%	4.2	568	17.9%	-0.1	-2.8%	27	-0.47	0.6391
Hexaldehyde*	0.3813	1.0	674	2.6%	81.1%	0.8	577	16.6%	70.4%	0.6	568	17.9%	-0.1	-12.9%	---	---	---
Isovaleraldehyde*	0.0614	1.0	674	2.6%	90.5%	0.6	577	16.6%	78.5%	0.5	568	17.9%	0.0	-1.2%	---	---	---
m-Tolualdehyde*	---	1.0	674	2.6%	97.4%	0.5	577	16.6%	83.4%	0.5	568	17.9%	0.0	0.0%	---	---	---
o-Tolualdehyde*	-0.0038	1.0	674	2.6%	96.8%	0.5	577	16.6%	82.7%	0.5	568	17.9%	0.0	-0.8%	---	---	---
p-Tolualdehyde*	0.6907	1.0	674	2.6%	87.1%	0.5	577	16.6%	71.1%	0.6	568	17.9%	0.0	-1.6%	---	---	---
Propionaldehyde*	0.4719	1.0	674	2.6%	67.1%	0.9	577	16.6%	55.3%	0.8	568	17.9%	-0.1	-9.7%	---	---	---
Valeraldehyde*	0.0271	1.0	674	2.6%	95.4%	0.5	577	16.6%	78.9%	0.5	568	17.9%	0.0	-0.6%	---	---	---
2,5-dimethylbenzaldehyde*	---	1.0	674	2.6%	97.3%	0.5	577	16.6%	83.4%	0.5	568	17.9%	0.0	0.0%	---	---	---
Total Aldehydes*	0.5322	---	673	2.7%	---	16.2	588	16.6%	---	16.6	567	18.1%	-0.1	-0.7%	18	-0.11	0.9129
Chromium	-0.0068	5	661	4.5%	93.9%	3	602	13.0%	85.0%	3	575	16.9%	0	-13.8%	---	---	---
Iron	0.3656	22	661	4.5%	19.9%	72	602	13.0%	19.9%	75	575	16.9%	-4	-6.1%	1	-0.96	0.3369
Lead	0.0541	12	661	4.5%	90.6%	7	602	13.0%	81.6%	7	575	16.9%	0	-5.8%	---	---	---
Manganese	0.1166	3	661	4.5%	85.4%	2	602	13.0%	81.5%	2	575	16.9%	0	2.7%	---	---	---
Nickel	0.3835	4	640	7.5%	22.4%	15	575	16.9%	25.9%	12	548	20.8%	4	24.3%	0	4.43	<0.0001
Zinc	0.1283	77	661	4.5%	93.6%	40	602	13.0%	84.4%	41	575	16.9%	-2	-3.9%	---	---	---
Total Metals	0.3283	---	615	11.1%	---	94	532	23.1%	---	101	489	29.3%	-4	-4.6%	1	-0.68	0.4976
SO2	0.8973	---	374	46.0%	---	26.4	320	53.8%	---	25.8	310	55.2%	1.9	7.0%	0	3.93	0.0001
HCl	0.8364	---	375	45.8%	---	0.51	320	53.8%	---	0.48	311	55.1%	-0.05	-10.8%	3	-2.21	0.0278
HONO	0.8350	---	374	46.0%	---	3.21	320	53.8%	---	3.07	311	55.1%	0.38	10.9%	0	4.85	<0.0001
HNO3	0.9293	---	373	46.1%	---	1.75	320	53.8%	---	1.11	310	55.2%	0.19	15.0%	14	2.52	0.0124
NH3	0.9150	---	186	73.1%	---	3.536	156	77.5%	---	2.274	135	80.5%	1.331	39.8%	1	15.98	<0.0001
Total Pollen	0.9792	---	691	0.1%	---	13.2	632	8.7%	---	22.3	632	8.7%	-8.2	-58.1%	5	-1.42	0.1572
Tree Pollen	0.9795	---	691	0.1%	---	12.2	637	7.9%	---	20.5	637	7.9%	-7.4	-56.4%	5	-1.29	0.1981
Ragweed	0.8619	---	691	0.1%	---	0.4	637	7.9%	---	0.4	637	7.9%	-0.1	-48.8%	2	-2.45	0.0147
Grasses	0.7479	---	691	0.1%	---	0.4	637	7.9%	---	0.5	637	7.9%	-0.1	-31.3%	1	-2.15	0.0322
Total Mold	0.8381	---	691	0.1%	---	490.3	632	8.7%	---	447.8	632	8.7%	-35.0	-8.5%	4	-1.39	0.1660
Basidospores	0.7090	---	691	0.1%	---	186.0	637	7.9%	---	184.0	637	7.9%	-16.7	-10.0%	3	-1.10	0.2708
Ascospores	0.6789	---	691	0.1%	---	39.1	637	7.9%	---	43.2	637	7.9%	-4.1	-10.4%	0	-1.46	0.1454
Mitospores	0.8709	---	691	0.1%	---	259.9	637	7.9%	---	212.5	637	7.9%	-12.5	-6.2%	3	-1.02	0.3075
Mitospores (Dark)	0.8753	---	691	0.1%	---	254.1	637	7.9%	---	208.1	637	7.9%	-13.5	-7.0%	3	-1.14	0.2547
Mitospores (Non-Dark)	0.0538	---	691	0.1%	---	5.8	637	7.9%	---	4.4	637	7.9%	1.1	19.4%	0	0.84	0.4036
Small Spores (<10 um)	0.8304	---	691	0.1%	---	470.4	637	7.9%	---	427.8	637	7.9%	-31.4	-7.9%	3	-1.31	0.1904
Large Spores (>10 um)	0.7879	---	691	0.1%	---	12.5	637	7.9%	---	9.9	637	7.9%	-1.7	-20.0%	0	-2.14	0.0330
Particle Count	0.2231	---	308	55.5%	---	1463152	329	52.5%	---	1560780	288	58.4%	-100940	-7.0%	16	-1.01	0.3155
PM2.5 (FRM)	0.8979	---	571	17.5%	---	16.6	489	29.3%	---	14.5	413	40.3%	1.5	9.7%	3	8.83	<0.0001
PM10 (FRM)	0.9559	---	102	11.3%	---	22.0	80	30.4%	---	20.9	74	35.7%	0.8	3.8%	6	2.17	0.0329
Average Temperature	0.9989	---	649	6.2%	---	56.5	610	11.8%	---	53.9	593	14.3%	0.7	1.3%	7	12.01	<0.0001
Average Relative Humidity	0.9773	---	658	4.9%	---	63	603	12.9%	---	70	596	13.9%	-7	-10.8%	7	-19.49	<0.0001

[a] Difference=Manhattan - Bronx

[b] Non-detects were given values of 1/2 the detection limit for statistical calculations

[c] Mean Difference (%) =Mean Difference / Manhattan (using only days with daily averages available for both sites)

[d] For analytes collected on an hourly basis, daily averages were calculated for days with at least 75% valid data

* Data for April 20-30, 2000 at the Bronx site has been excluded from these analyses

Appendix 4 – Detailed Statistical Results by Season

Appendix 4 - Statistical Analyses - By Season

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]				Paired T-test with Autocorrelation Adjustment		
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	# of lags	T	p-value
pH	Winter99	0.0927	---	79	0.0%	---	5.47	79	0.0%	---	5.51	79	0.0%	-0.04	-0.7%	0	-0.57	0.5695
	Spring99	0.7454	---	92	0.0%	---	5.09	92	0.0%	---	5.18	92	0.0%	-0.09	-1.8%	0	-2.46	0.0160
	Summer99	0.9502	---	91	3.2%	---	4.62	36	61.7%	---	4.77	33	64.9%	-0.07	-1.5%	1	-1.46	0.1529
	Fall99	0.7365	---	90	0.0%	---	5.10	90	0.0%	---	5.23	90	0.0%	-0.12	-2.4%	0	-3.26	0.0016
	Winter00	0.5726	---	89	0.0%	---	5.25	89	0.0%	---	5.31	89	0.0%	-0.06	-1.1%	0	-1.80	0.0759
	Spring00	0.7658	---	92	0.0%	---	4.98	92	0.0%	---	5.07	92	0.0%	-0.09	-1.8%	0	-2.91	0.0046
	Summer00	0.8376	---	87	7.4%	---	4.79	87	7.4%	---	4.84	87	7.4%	-0.05	-1.0%	0	-1.95	0.0548
	Fall00	0.6964	---	60	3.2%	---	5.10	62	0.0%	---	5.12	60	3.2%	-0.02	-0.4%	0	-0.54	0.5904
Sulfate (ug/m^3)	Winter99	0.7968	0.24	79	0.0%	0.0%	3.01	79	0.0%	0.0%	2.93	79	0.0%	0.08	2.7%	0	0.70	0.4847
	Spring99	0.9769	0.24	92	0.0%	0.0%	3.35	91	1.1%	0.0%	3.22	91	1.1%	0.15	4.4%	0	2.26	0.0263
	Summer99	0.9954	0.24	89	5.3%	0.0%	6.32	35	62.8%	2.9%	5.16	31	67.0%	0.26	5.1%	1	2.62	0.0138
	Fall99	0.8813	0.24	88	2.2%	0.0%	3.16	89	1.1%	1.1%	3.05	87	3.3%	0.11	3.3%	0	0.75	0.4528
	Winter00	0.9547	0.24	88	1.1%	0.0%	3.14	82	7.9%	0.0%	2.92	81	9.0%	0.14	4.5%	0	2.23	0.0286
	Spring00	0.9857	0.24	91	1.1%	0.0%	4.10	92	0.0%	0.0%	4.02	91	1.1%	0.19	4.7%	1	2.92	0.0045
	Summer00	0.9823	0.24	87	7.4%	0.0%	5.05	87	7.4%	0.0%	4.97	87	7.4%	0.09	1.7%	0	1.17	0.2453
	Fall00	0.9903	0.24	60	3.2%	0.0%	3.37	62	0.0%	0.0%	3.30	60	3.2%	0.03	0.8%	0	0.51	0.6128
Carbon 250 (ug/m^3)	Winter99	0.9275	---	65	17.7%	---	2.746	67	15.2%	---	2.48	59	25.3%	0.277	10.0%	1	6.32	<0.0001
	Spring99	0.7737	---	79	14.1%	---	2.743	91	1.1%	---	2.977	78	15.2%	-0.308	-11.3%	4	-1.84	0.0701
	Summer99	0.7342	---	93	1.1%	---	3.461	32	66.0%	---	3.751	31	67.0%	-0.309	-9.1%	2	-1.68	0.1026
	Fall99	0.7887	---	90	0.0%	---	2.952	74	17.8%	---	3.628	74	17.8%	-0.639	-21.4%	1	-7.68	<0.0001
	Winter00	0.9133	---	86	3.4%	---	2.618	88	1.1%	---	3.207	85	4.5%	-0.570	-21.7%	1	-9.21	<0.0001
	Spring00	0.7888	---	84	8.7%	---	3.323	83	9.8%	---	3.698	76	17.4%	-0.508	-15.8%	1	-5.40	<0.0001
	Summer00	0.7466	---	93	1.1%	---	3.337	94	0.0%	---	3.183	93	1.1%	0.141	4.2%	6	0.95	0.3460
	Fall00	0.6602	---	60	3.2%	---	3.487	61	1.6%	---	2.524	60	3.2%	0.942	27.0%	3	6.71	<0.0001
Soot Carbon (ug/m^3)	Winter99	0.8184	---	50	36.7%	---	1.667	65	17.7%	---	1.587	44	44.3%	-0.031	-1.8%	1	-0.32	0.7540
	Spring99	0.7222	---	52	43.5%	---	1.482	91	1.1%	---	1.140	51	44.6%	0.249	17.0%	2	1.97	0.0549
	Summer99	0.8417	---	80	14.9%	---	1.403	30	68.1%	---	1.021	21	77.7%	0.199	15.3%	0	3.39	0.0029
	Fall99	0.8494	---	90	0.0%	---	1.421	73	18.9%	---	1.334	73	18.9%	0.137	9.3%	0	2.76	0.0074
	Winter00	0.8669	---	85	4.5%	---	1.351	87	2.2%	---	1.392	84	5.6%	-0.041	-3.1%	0	-0.97	0.3355
	Spring00	0.6654	---	84	8.7%	---	1.234	81	12.0%	---	0.930	74	19.6%	0.248	21.2%	2	2.92	0.0046
	Summer00	0.3886	---	93	1.1%	---	0.976	94	0.0%	---	1.029	93	1.1%	-0.059	-6.0%	4	-0.55	0.5843
	Fall00	0.8370	---	58	6.5%	---	1.190	61	1.6%	---	1.070	58	6.5%	0.120	10.1%	1	1.89	0.0640
O_3 (ppm)	Winter99	0.9462	---	41	48.1%	---	0.006	26	67.1%	---	0.017	9	88.6%	-0.008	-79.2%	0	-12.19	<0.0001
	Spring99	0.8300	---	88	4.3%	---	0.016	88	4.3%	---	0.021	84	8.7%	-0.005	-32.2%	1	-6.72	<0.0001
	Summer99	0.8632	---	93	1.1%	---	0.021	11	88.3%	---	0.035	11	88.3%	-0.011	-44.2%	0	-6.09	0.0001
	Fall99	0.9271	---	86	4.4%	---	0.005	56	37.8%	---	0.007	56	37.8%	-0.002	-56.2%	0	-8.92	<0.0001
	Winter00	0.9282	---	88	1.1%	---	0.006	89	0.0%	---	0.010	88	1.1%	-0.004	-76.7%	0	-13.33	<0.0001
	Spring00	0.9130	---	85	7.6%	---	0.016	92	0.0%	---	0.020	85	7.6%	-0.005	-30.8%	1	-7.44	<0.0001
	Summer00	0.8536	---	89	5.3%	---	0.016	94	0.0%	---	0.021	89	5.3%	-0.004	-26.2%	1	-7.53	<0.0001
	Fall00	0.9095	---	60	3.2%	---	0.006	62	0.0%	---	0.009	60	3.2%	-0.003	-42.4%	0	-9.07	<0.0001
NO_X (ppm)	Winter99	---	---	76	3.8%	---	0.085	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	0.3756	---	60	34.8%	---	0.061	79	14.1%	---	0.044	48	47.8%	0.022	37.7%	3	2.74	0.0086
	Summer99	0.7734	---	93	1.1%	---	0.049	23	75.5%	---	0.038	23	75.5%	0.008	17.5%	0	3.74	0.0011
	Fall99	0.8597	---	87	3.3%	---	0.078	38	57.8%	---	0.061	38	57.8%	0.013	17.5%	0	4.49	0.0001
	Winter00	0.9279	---	88	1.1%	---	0.084	69	22.5%	---	0.073	68	23.6%	0.011	13.0%	1	3.91	0.0002
	Spring00	0.8730	---	74	19.6%	---	0.057	91	1.1%	---	0.051	73	20.7%	0.008	13.8%	0	4.99	<0.0001
	Summer00	0.7474	---	88	6.4%	---	0.047	63	33.0%	---	0.037	58	38.3%	0.009	20.2%	1	6.36	<0.0001
	Fall00	0.9009	---	59	4.8%	---	0.074	62	0.0%	---	0.062	59	4.8%	0.012	15.9%	1	3.95	0.0002

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]						
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	Paired T-test with Autocorrelation Adjustment		
																# of lags	T	p-value
NO (ppm)	Winter99	---	---	76	3.8%	---	0.047	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	0.4929	---	60	34.8%	---	0.022	79	14.1%	---	0.015	48	47.8%	0.010	48.4%	2	2.81	0.0071
	Summer99	0.8271	---	93	1.1%	---	0.014	23	75.5%	---	0.007	23	75.5%	0.004	37.3%	0	3.97	0.0007
	Fall99	0.8262	---	87	3.3%	---	0.045	38	57.8%	---	0.030	38	57.8%	0.011	26.6%	0	4.22	0.0002
	Winter00	0.9049	---	88	1.1%	---	0.047	69	22.5%	---	0.037	68	23.6%	0.009	19.3%	1	3.72	0.0004
	Spring00	0.8729	---	74	19.6%	---	0.021	91	1.1%	---	0.018	73	20.7%	0.004	21.3%	0	4.16	0.0001
	Summer00	0.7089	---	88	6.4%	---	0.016	63	33.0%	---	0.008	58	38.3%	0.006	42.1%	0	9.14	<0.0001
	Fall00	0.8717	---	59	4.8%	---	0.040	62	0.0%	---	0.033	59	4.8%	0.009	21.1%	1	3.20	0.0022
NO_2 (ppm)	Winter99	---	---	76	3.8%	---	0.038	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	0.3619	---	60	34.8%	---	0.039	79	14.1%	---	0.030	48	47.8%	0.013	32.7%	4	2.67	0.0104
	Summer99	0.7272	---	93	1.1%	---	0.036	23	75.5%	---	0.031	23	75.5%	0.005	14.0%	0	3.87	0.0008
	Fall99	0.9442	---	87	3.3%	---	0.034	38	57.8%	---	0.031	38	57.8%	0.003	9.2%	0	5.78	<0.0001
	Winter00	0.9535	---	88	1.1%	---	0.038	69	22.5%	---	0.036	68	23.6%	0.004	9.5%	0	7.26	<0.0001
	Spring00	0.8365	---	74	19.6%	---	0.037	91	1.1%	---	0.033	73	20.7%	0.005	13.2%	1	5.32	<0.0001
	Summer00	0.8091	---	88	6.4%	---	0.033	63	33.0%	---	0.028	58	38.3%	0.005	14.1%	1	5.68	<0.0001
	Fall00	0.9623	---	59	4.8%	---	0.034	62	0.0%	---	0.030	59	4.8%	0.004	12.8%	0	10.67	<0.0001
SO_2 (ppm)	Winter99	0.7954	---	77	2.5%	---	0.020	79	0.0%	---	0.015	77	2.5%	0.006	27.4%	0	11.72	<0.0001
	Spring99	0.8495	---	91	1.1%	---	0.010	92	0.0%	---	0.008	91	1.1%	0.002	23.7%	1	8.06	<0.0001
	Summer99	0.5679	---	93	1.1%	---	0.008	23	75.5%	---	0.006	23	75.5%	0.002	20.9%	0	3.09	0.0054
	Fall99	0.9365	---	87	3.3%	---	0.013	77	14.4%	---	0.013	75	16.7%	0.000	2.1%	0	0.98	0.3297
	Winter00	0.9182	---	88	1.1%	---	0.020	89	0.0%	---	0.018	88	1.1%	0.002	8.4%	0	4.41	<0.0001
	Spring00	0.8168	---	78	15.2%	---	0.008	92	0.0%	---	0.007	78	15.2%	0.001	10.8%	1	2.60	0.0113
	Summer00	0.7620	---	74	21.3%	---	0.006	94	0.0%	---	0.006	74	21.3%	0.000	1.1%	0	0.27	0.7846
	Fall00	0.8508	---	60	3.2%	---	0.012	62	0.0%	---	0.013	60	3.2%	0.000	-3.8%	0	-1.04	0.3012
$PM_{2.5}$ (TEOM) (ug/m^3)	Winter99	0.9365	---	78	1.3%	---	15.27	79	0.0%	---	15.00	78	1.3%	0.33	2.2%	0	1.18	0.2414
	Spring99	0.9756	---	89	3.3%	---	14.83	92	0.0%	---	14.03	89	3.3%	0.92	6.2%	1	4.57	<0.0001
	Summer99	0.9899	---	93	1.1%	---	20.40	23	75.5%	---	21.22	23	75.5%	0.71	3.2%	0	1.97	0.0618
	Fall99	0.9627	---	71	21.1%	---	15.53	57	36.7%	---	15.01	48	46.7%	1.04	6.6%	0	3.26	0.0021
	Winter00	0.9610	---	89	0.0%	---	14.73	88	1.1%	---	14.34	88	1.1%	0.49	3.3%	0	2.23	0.0284
	Spring00	0.9705	---	76	17.4%	---	15.15	88	4.3%	---	15.60	72	21.7%	0.85	5.5%	0	3.37	0.0012
	Summer00	0.9750	---	78	17.0%	---	17.50	87	7.4%	---	16.58	71	24.5%	1.20	6.8%	0	4.93	<0.0001
	Fall00	0.9768	---	57	8.1%	---	15.21	53	14.5%	---	14.38	48	22.6%	0.66	4.3%	0	2.38	0.0216
PM_{10} (TEOM) (ug/m^3)	Winter99	0.9061	---	77	2.5%	---	19.54	38	51.9%	---	19.83	38	51.9%	0.19	1.0%	0	0.34	0.7334
	Spring99	0.9538	---	92	0.0%	---	21.66	92	0.0%	---	22.37	92	0.0%	-0.71	-3.3%	1	-1.87	0.0647
	Summer99	0.8854	---	93	1.1%	---	26.15	15	84.0%	---	28.14	15	84.0%	-6.25	-28.6%	1	-2.95	0.0105
	Fall99	0.9771	---	37	58.9%	---	21.82	52	42.2%	---	19.34	21	76.7%	3.42	15.2%	0	6.41	<0.0001
	Winter00	0.9638	---	89	0.0%	---	22.38	79	11.2%	---	20.64	79	11.2%	1.98	8.8%	0	6.00	<0.0001
	Spring00	0.9826	---	72	21.7%	---	23.91	65	29.3%	---	25.24	50	45.7%	1.60	6.2%	0	4.52	<0.0001
	Summer00	0.8329	---	88	6.4%	---	25.36	94	0.0%	---	23.47	88	6.4%	2.38	9.4%	1	3.01	0.0034
	Fall00	0.9740	---	61	1.6%	---	22.68	62	0.0%	---	21.83	61	1.6%	0.82	3.6%	0	2.50	0.0151
Acetaldehyde (ug/m^3)	Winter99	0.4465	1.0	79	0.0%	0.0%	2.1	78	1.3%	1.3%	2.2	78	1.3%	-0.1	-3.0%	2	-0.28	0.7815
	Spring99	0.7969	1.0	92	0.0%	0.0%	2.7	84	8.7%	0.0%	2.2	84	8.7%	0.5	18.2%	5	2.77	0.0070
	Summer99	0.8311	1.0	86	8.5%	7.0%	3.8	29	69.1%	0.0%	2.9	22	76.6%	-0.1	-3.9%	0	-0.77	0.4501
	Fall99	0.9337	1.0	89	1.1%	0.0%	2.7	77	14.4%	0.0%	2.5	76	15.6%	0.1	5.2%	0	2.64	0.0102
	Winter00	0.9453	1.0	89	0.0%	0.0%	2.6	89	0.0%	1.1%	2.3	89	0.0%	0.3	10.7%	0	5.63	<0.0001
	Spring00*	0.8892	1.0	92	0.0%	0.0%	2.6	73	20.7%	0.0%	3.7	73	20.7%	-1.0	-35.9%	8	-3.41	0.0011
	Summer00	0.8098	1.0	93	1.1%	2.2%	2.4	92	2.1%	0.0%	2.3	92	2.1%	0.1	3.3%	1	1.07	0.2870
	Fall00	0.9734	1.0	54	12.9%	0.0%	2.4	55	11.3%	1.8%	2.1	54	12.9%	0.3	10.5%	0	5.49	<0.0001

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]				Paired T-test with Autocorrelation Adjustment		
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	# of lags	T	p-value
Acetone (ug/m3)	Winter99	0.0058	1.0	79	0.0%	0.0%	7.0	78	1.3%	0.0%	9.6	78	1.3%	-2.6	-38.1%	2	-1.60	0.1147
	Spring99	0.0700	1.0	92	0.0%	0.0%	8.8	84	8.7%	0.0%	8.0	84	8.7%	1.0	11.3%	0	0.75	0.4529
	Summer99	0.6469	1.0	86	8.5%	15.1%	7.6	29	69.1%	0.0%	7.0	22	76.6%	-2.1	-43.8%	0	-3.10	0.0054
	Fall99	0.7769	1.0	89	1.1%	0.0%	6.8	77	14.4%	0.0%	5.6	76	15.6%	1.2	17.4%	0	5.45	<0.0001
	Winter00	0.6935	1.0	89	0.0%	0.0%	5.4	89	0.0%	1.1%	4.5	89	0.0%	0.9	16.7%	0	4.33	<0.0001
	Spring00*	0.8417	1.0	92	0.0%	0.0%	6.6	73	20.7%	0.0%	7.9	73	20.7%	-1.1	-16.4%	1	-3.82	0.0003
	Summer00	0.4152	1.0	93	1.1%	2.2%	6.1	92	2.1%	0.0%	5.9	92	2.1%	0.2	2.8%	0	0.45	0.6532
	Fall00	0.9198	1.0	54	12.9%	0.0%	7.0	55	11.3%	0.0%	6.0	54	12.9%	1.0	14.6%	0	5.38	<0.0001
Acrolein (ug/m3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	---	1.0	86	8.5%	90.7%	1.5	29	69.1%	100.0%	0.5	22	76.6%	0.0	0.0%	---	---	---
	Fall99	---	1.0	89	1.1%	100.0%	0.5	77	14.4%	100.0%	0.5	76	15.6%	0.0	0.0%	---	---	---
	Winter00	---	1.0	89	0.0%	100.0%	0.5	89	0.0%	98.9%	0.5	89	0.0%	0.0	-0.2%	---	---	---
	Spring00*	---	1.0	92	0.0%	94.6%	0.5	73	20.7%	100.0%	0.5	73	20.7%	0.0	0.0%	---	---	---
	Summer00	---	1.0	93	1.1%	100.0%	0.5	92	2.1%	100.0%	0.5	92	2.1%	0.0	0.0%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	100.0%	0.5	54	12.9%	0.0	0.0%	---	---	---
Benzaldehyde (ug/m3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	---	1.0	86	8.5%	86.0%	0.7	29	69.1%	100.0%	0.5	22	76.6%	0.0	0.0%	---	---	---
	Fall99	---	1.0	89	1.1%	95.5%	0.5	77	14.4%	97.4%	0.5	76	15.6%	0.0	0.5%	---	---	---
	Winter00	---	1.0	89	0.0%	98.9%	0.5	89	0.0%	96.6%	0.5	89	0.0%	0.0	-0.5%	---	---	---
	Spring00*	0.3435	1.0	92	0.0%	94.6%	0.5	73	20.7%	42.5%	0.6	73	20.7%	-0.1	-12.3%	---	---	---
	Summer00	---	1.0	93	1.1%	98.9%	0.5	92	2.1%	98.9%	0.5	92	2.1%	0.0	0.0%	---	---	---
	Fall00	0.7004	1.0	54	12.9%	98.1%	0.5	55	11.3%	96.4%	0.5	54	12.9%	0.0	-1.8%	---	---	---
Butyraldehyde (ug/m3)	Winter99	---	1.0	79	0.0%	94.9%	0.8	78	1.3%	100.0%	0.5	78	1.3%	0.3	36.0%	---	---	---
	Spring99	-0.3374	1.0	92	0.0%	20.7%	1.8	84	8.7%	59.5%	0.8	84	8.7%	1.0	55.2%	---	---	---
	Summer99	0.4501	1.0	86	8.5%	61.6%	1.0	29	69.1%	69.0%	0.7	22	76.6%	0.2	21.2%	---	---	---
	Fall99	---	1.0	89	1.1%	96.6%	0.5	77	14.4%	100.0%	0.5	76	15.6%	0.0	0.3%	---	---	---
	Winter00	-0.0276	1.0	89	0.0%	61.8%	0.6	89	0.0%	96.6%	0.5	89	0.0%	0.1	21.4%	---	---	---
	Spring00*	0.3511	1.0	92	0.0%	88.0%	0.5	73	20.7%	30.1%	1.3	73	20.7%	-0.8	-160.7%	---	---	---
	Summer00	0.0649	1.0	93	1.1%	61.3%	0.6	92	2.1%	76.1%	0.5	92	2.1%	0.1	11.0%	---	---	---
	Fall00	0.5664	1.0	54	12.9%	94.4%	0.5	55	11.3%	98.2%	0.5	54	12.9%	0.0	3.5%	---	---	---
Crotonaldehyde (ug/m3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	0.4884	1.0	92	0.0%	80.4%	0.8	84	8.7%	72.6%	1.0	84	8.7%	-0.2	-18.0%	---	---	---
	Summer99	0.3924	1.0	86	8.5%	65.1%	1.4	29	69.1%	72.4%	0.9	22	76.6%	0.1	15.9%	---	---	---
	Fall99	0.4708	1.0	89	1.1%	28.1%	1.0	77	14.4%	53.2%	0.9	76	15.6%	0.2	17.6%	---	---	---
	Winter00	0.9072	1.0	89	0.0%	11.2%	0.9	89	0.0%	22.5%	0.8	89	0.0%	0.0	5.5%	---	---	---
	Spring00*	0.9473	1.0	92	0.0%	97.8%	0.5	73	20.7%	97.3%	0.5	73	20.7%	0.0	0.2%	---	---	---
	Summer00	---	1.0	93	1.1%	100.0%	0.5	92	2.1%	100.0%	0.5	92	2.1%	0.0	0.0%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	100.0%	0.5	54	12.9%	0.0	0.0%	---	---	---
Formaldehyde (ug/m3)	Winter99	0.5596	1.0	79	0.0%	0.0%	3.3	78	1.3%	0.0%	3.0	78	1.3%	0.3	8.7%	1	1.49	0.1415
	Spring99	0.8336	1.0	92	0.0%	0.0%	4.5	84	8.7%	0.0%	3.9	84	8.7%	0.5	11.9%	5	2.01	0.0477
	Summer99	0.7641	1.0	86	8.5%	1.2%	7.5	29	69.1%	0.0%	6.4	22	76.6%	-0.1	-2.0%	0	-0.30	0.7641
	Fall99	0.9342	1.0	89	1.1%	0.0%	4.0	77	14.4%	0.0%	3.9	76	15.6%	0.1	2.0%	2	0.79	0.4321
	Winter00	0.9425	1.0	89	0.0%	0.0%	3.2	89	0.0%	0.0%	3.0	89	0.0%	0.2	5.2%	1	2.19	0.0314
	Spring00*	0.7740	1.0	92	0.0%	1.1%	4.1	73	20.7%	1.4%	6.3	73	20.7%	-1.9	-44.0%	3	-5.29	<0.0001
	Summer00	0.8001	1.0	93	1.1%	0.0%	4.6	92	2.1%	0.0%	4.8	92	2.1%	-0.2	-4.9%	1	-1.68	0.0961
	Fall00	0.9589	1.0	54	12.9%	0.0%	3.5	55	11.3%	0.0%	3.3	54	12.9%	0.2	7.0%	0	3.45	0.0011

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]				Paired T-test with Autocorrelation Adjustment		
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	# of lags	T	p-value
Hexaldehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	0.1970	1.0	92	0.0%	75.0%	0.5	84	8.7%	85.7%	0.6	84	8.7%	0.0	-1.3%	---	---	---
	Summer99	---	1.0	86	8.5%	81.4%	2.3	29	69.1%	96.6%	0.5	22	76.6%	0.0	0.0%	---	---	---
	Fall99	-0.0540	1.0	89	1.1%	89.9%	0.5	77	14.4%	93.5%	0.5	76	15.6%	0.0	2.0%	---	---	---
	Winter00	0.6620	1.0	89	0.0%	94.4%	0.5	89	0.0%	97.8%	0.5	89	0.0%	0.0	0.9%	---	---	---
	Spring00*	0.5842	1.0	92	0.0%	75.0%	0.6	73	20.7%	26.0%	1.2	73	20.7%	-0.6	-106.8%	---	---	---
	Summer00	0.6739	1.0	93	1.1%	63.4%	0.6	92	2.1%	84.8%	0.5	92	2.1%	0.1	10.6%	---	---	---
	Fall00	0.7004	1.0	54	12.9%	94.4%	0.5	55	11.3%	96.4%	0.5	54	12.9%	0.0	-1.8%	---	---	---
Isovaleraldhyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	-0.0907	1.0	86	8.5%	86.0%	0.8	29	69.1%	86.2%	0.7	22	76.6%	-0.2	-44.9%	---	---	---
	Fall99	-0.0133	1.0	89	1.1%	98.9%	0.5	77	14.4%	98.7%	0.5	76	15.6%	0.0	-1.0%	---	---	---
	Winter00	0.0578	1.0	89	0.0%	93.3%	0.5	89	0.0%	96.6%	0.5	89	0.0%	0.0	1.5%	---	---	---
	Spring00*	0.4054	1.0	92	0.0%	87.0%	0.5	73	20.7%	84.9%	0.5	73	20.7%	0.0	4.0%	---	---	---
	Summer00	-0.0385	1.0	93	1.1%	81.7%	0.5	92	2.1%	85.9%	0.5	92	2.1%	0.0	2.5%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	96.4%	0.5	54	12.9%	0.0	-3.7%	---	---	---
m-Tolualdehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	---	1.0	86	8.5%	100.0%	0.5	29	69.1%	100.0%	0.5	22	76.6%	0.0	0.0%	---	---	---
	Fall99	---	1.0	89	1.1%	100.0%	0.5	77	14.4%	100.0%	0.5	76	15.6%	0.0	0.0%	---	---	---
	Winter00	---	1.0	89	0.0%	100.0%	0.5	89	0.0%	100.0%	0.5	89	0.0%	0.0	0.0%	---	---	---
	Spring00*	---	1.0	92	0.0%	100.0%	0.5	73	20.7%	100.0%	0.5	73	20.7%	0.0	0.0%	---	---	---
	Summer00	---	1.0	93	1.1%	100.0%	0.5	92	2.1%	100.0%	0.5	92	2.1%	0.0	0.0%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	100.0%	0.5	54	12.9%	0.0	0.0%	---	---	---
o-Tolualdehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	-0.0841	1.0	86	8.5%	97.7%	0.5	29	69.1%	86.2%	0.7	22	76.6%	-0.1	-20.0%	---	---	---
	Fall99	---	1.0	89	1.1%	98.9%	0.5	77	14.4%	100.0%	0.5	76	15.6%	0.0	1.0%	---	---	---
	Winter00	---	1.0	89	0.0%	100.0%	0.5	89	0.0%	100.0%	0.5	89	0.0%	0.0	0.0%	---	---	---
	Spring00*	---	1.0	92	0.0%	100.0%	0.5	73	20.7%	98.6%	0.5	73	20.7%	0.0	0.0%	---	---	---
	Summer00	---	1.0	93	1.1%	98.9%	0.5	92	2.1%	100.0%	0.5	92	2.1%	0.0	0.2%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	100.0%	0.5	54	12.9%	0.0	0.0%	---	---	---
p-Tolualdehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	---	1.0	86	8.5%	95.3%	0.5	29	69.1%	100.0%	0.5	22	76.6%	0.1	9.8%	---	---	---
	Fall99	---	1.0	89	1.1%	100.0%	0.5	77	14.4%	97.4%	0.5	76	15.6%	0.0	-1.8%	---	---	---
	Winter00	0.5277	1.0	89	0.0%	88.8%	0.5	89	0.0%	88.8%	0.5	89	0.0%	0.0	1.7%	---	---	---
	Spring00*	0.7408	1.0	92	0.0%	77.2%	0.7	73	20.7%	46.6%	0.7	73	20.7%	0.0	-5.2%	---	---	---
	Summer00	0.4577	1.0	93	1.1%	68.8%	0.6	92	2.1%	72.8%	0.6	92	2.1%	0.0	-2.7%	---	---	---
	Fall00	0.8107	1.0	54	12.9%	87.0%	0.6	55	11.3%	83.6%	0.6	54	12.9%	0.0	-7.3%	---	---	---
Propionaldehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	88.5%	0.8	78	1.3%	-0.3	-60.3%	---	---	---
	Spring99	0.5269	1.0	92	0.0%	58.7%	1.5	84	8.7%	53.6%	1.6	84	8.7%	0.1	4.0%	---	---	---
	Summer99	0.1063	1.0	86	8.5%	43.0%	2.2	29	69.1%	34.5%	2.3	22	76.6%	-0.8	-47.8%	---	---	---
	Fall99	0.6081	1.0	89	1.1%	73.0%	0.6	77	14.4%	72.7%	0.6	76	15.6%	0.0	3.8%	---	---	---
	Winter00	0.7297	1.0	89	0.0%	77.5%	0.5	89	0.0%	78.7%	0.6	89	0.0%	0.0	-2.9%	---	---	---
	Spring00*	0.8591	1.0	92	0.0%	64.1%	0.6	73	20.7%	35.6%	0.7	73	20.7%	-0.1	-20.5%	---	---	---
	Summer00	0.6082	1.0	93	1.1%	59.1%	0.6	92	2.1%	64.1%	0.6	92	2.1%	0.0	3.0%	---	---	---
	Fall00	0.9396	1.0	54	12.9%	85.2%	0.6	55	11.3%	87.3%	0.6	54	12.9%	0.0	2.6%	---	---	---

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]						
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	Paired T-test with Autocorrelation Adjustment		
																# of lags	T	p-value
Valeraldehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	0.1539	1.0	92	0.0%	94.6%	0.5	84	8.7%	95.2%	0.5	84	8.7%	0.0	4.4%	---	---	---
	Summer99	---	1.0	86	8.5%	90.7%	0.7	29	69.1%	100.0%	0.5	22	76.6%	0.0	0.0%	---	---	---
	Fall99	---	1.0	89	1.1%	100.0%	0.5	77	14.4%	100.0%	0.5	76	15.6%	0.0	0.0%	---	---	---
	Winter00	---	1.0	89	0.0%	100.0%	0.5	89	0.0%	98.9%	0.5	89	0.0%	0.0	-0.2%	---	---	---
	Spring00*	---	1.0	92	0.0%	100.0%	0.5	73	20.7%	64.4%	0.6	73	20.7%	-0.1	-11.8%	---	---	---
	Summer00	---	1.0	93	1.1%	98.9%	0.5	92	2.1%	100.0%	0.5	92	2.1%	0.0	1.7%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	100.0%	0.5	54	12.9%	0.0	0.0%	---	---	---
2,5-Dimethylbenzaldehyde (ug/m^3)	Winter99	---	1.0	79	0.0%	100.0%	0.5	78	1.3%	100.0%	0.5	78	1.3%	0.0	0.0%	---	---	---
	Spring99	---	1.0	92	0.0%	100.0%	0.5	84	8.7%	100.0%	0.5	84	8.7%	0.0	0.0%	---	---	---
	Summer99	---	1.0	86	8.5%	100.0%	0.5	29	69.1%	100.0%	0.5	22	76.6%	0.0	0.0%	---	---	---
	Fall99	---	1.0	89	1.1%	100.0%	0.5	77	14.4%	100.0%	0.5	76	15.6%	0.0	0.0%	---	---	---
	Winter00	---	1.0	89	0.0%	100.0%	0.5	89	0.0%	100.0%	0.5	89	0.0%	0.0	0.0%	---	---	---
	Spring00*	---	1.0	92	0.0%	100.0%	0.5	73	20.7%	100.0%	0.5	73	20.7%	0.0	0.0%	---	---	---
	Summer00	---	1.0	93	1.1%	98.9%	0.5	92	2.1%	100.0%	0.5	92	2.1%	0.0	0.0%	---	---	---
	Fall00	---	1.0	54	12.9%	100.0%	0.5	55	11.3%	100.0%	0.5	54	12.9%	0.0	0.0%	---	---	---
Total Aldehydes (ug/m^3)	Winter99		---		#DIV/0!	---	12.7	78	1.3%	---	15.1	78	1.3%	-2.5	-19.5%	2	-1.17	0.2450
	Spring99		---		#DIV/0!	---	19.6	84	8.7%	---	16.7	84	8.7%	3.2	15.9%	0	2.18	0.0321
	Summer99		---		100.0%	---	26.7	29	69.1%	---	19.9	21	77.7%	-2.3	-14.1%	0	-1.56	0.1335
	Fall99		---		100.0%	---	14.7	77	14.4%	---	12.9	76	15.6%	1.8	12.5%	0	5.05	<0.0001
	Winter00		---		#DIV/0!	---	12.7	89	0.0%	---	10.9	89	0.0%	1.8	14.2%	0	5.73	<0.0001
	Spring00*		---		0.0%	---	14.3	73	20.7%	---	22.0	73	20.7%	-6.9	-45.8%	5	-4.15	<0.0001
	Summer00		---		100.0%	---	14.3	92	2.1%	---	13.8	92	2.1%	0.4	3.0%	0	0.94	0.3476
	Fall00		---		100.0%	---	13.4	55	11.3%	---	11.8	54	12.9%	1.5	11.1%	0	5.45	<0.0001
Chromium (ng/m^3)	Winter99	-0.0226	5	79	0.0%	97.5%	2.7	79	0.0%	97.5%	5.1	79	0.0%	-2.5	-91.8%	---	---	---
	Spring99	---	5	91	1.1%	100.0%	2.5	92	0.0%	98.9%	2.5	91	1.1%	0.0	-1.8%	---	---	---
	Summer99	---	5	86	8.5%	97.7%	2.6	35	62.8%	100.0%	2.5	28	70.2%	0.0	0.0%	---	---	---
	Fall99	---	5	89	1.1%	100.0%	2.5	88	2.2%	97.7%	2.6	87	3.3%	-0.1	-2.9%	---	---	---
	Winter00	-0.0215	5	85	4.5%	98.8%	2.6	80	10.1%	96.3%	2.7	77	13.5%	0.0	-0.8%	---	---	---
	Spring00	---	5	89	3.3%	100.0%	2.5	85	7.6%	96.5%	2.6	82	10.9%	-0.1	-5.6%	---	---	---
	Summer00	-0.0142	5	83	11.7%	97.6%	2.9	92	2.1%	98.9%	2.6	82	12.8%	0.3	10.4%	---	---	---
	Fall00	-0.0442	5	59	4.8%	93.2%	3.2	51	17.7%	96.1%	3.0	49	21.0%	-0.3	-10.8%	---	---	---
Iron (ng/m^3)	Winter99	0.1843	22	79	0.0%	5.1%	97.6	79	0.0%	7.6%	107.9	79	0.0%	-10.4	-10.6%	0	-0.63	0.5275
	Spring99	0.5778	22	91	1.1%	4.4%	77.0	92	0.0%	10.9%	67.4	91	1.1%	9.4	12.2%	0	2.13	0.0362
	Summer99	0.4647	22	86	8.5%	3.5%	88.4	35	62.8%	5.7%	93.0	28	70.2%	7.3	8.9%	0	0.54	0.5943
	Fall99	0.6004	22	89	1.1%	7.9%	72.5	88	2.2%	4.5%	93.3	87	3.3%	-20.7	-28.4%	0	-3.42	0.0010
	Winter00	0.2527	22	85	4.5%	24.7%	65.0	80	10.1%	31.3%	80.3	77	13.5%	-21.2	-34.4%	0	-0.97	0.3361
	Spring00	0.5387	22	89	3.3%	36.0%	57.0	85	7.6%	30.6%	60.2	82	10.9%	-4.6	-8.5%	2	-0.61	0.5437
	Summer00	0.7977	22	83	11.7%	56.6%	49.4	92	2.1%	54.3%	43.6	82	12.8%	5.3	11.5%	0	1.58	0.1176
	Fall00	0.8833	22	59	4.8%	33.9%	69.1	51	17.7%	29.4%	64.2	49	21.0%	14.4	19.2%	0	2.78	0.0077
Lead (ng/m^3)	Winter99	0.1948	12	79	0.0%	93.7%	6.7	79	0.0%	92.4%	6.7	79	0.0%	0.0	-0.4%	---	---	---
	Spring99	---	12	91	1.1%	95.6%	6.4	92	0.0%	100.0%	6.0	91	1.1%	0.4	6.4%	---	---	---
	Summer99	---	12	86	8.5%	96.5%	6.3	35	62.8%	100.0%	6.0	28	70.2%	0.0	0.0%	---	---	---
	Fall99	0.3442	12	89	1.1%	92.1%	7.1	88	2.2%	89.8%	7.2	87	3.3%	-0.1	-1.2%	---	---	---
	Winter00	-0.0115	12	85	4.5%	90.6%	6.9	80	10.1%	85.0%	9.7	77	13.5%	-3.0	-44.2%	---	---	---
	Spring00	-0.0306	12	89	3.3%	97.8%	6.2	85	7.6%	96.5%	6.3	82	10.9%	-0.1	-1.4%	---	---	---
	Summer00	-0.0551	12	83	11.7%	96.4%	6.5	92	2.1%	92.4%	6.7	82	12.8%	-0.3	-4.7%	---	---	---
	Fall00	---	12	59	4.8%	96.6%	6.3	51	17.7%	100.0%	6.0	49	21.0%	0.3	5.5%	---	---	---

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]				Paired T-test with Autocorrelation Adjustment		
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	# of lags	T	p-value
Manganese (ng/m^3)	Winter99	0.0774	3	79	0.0%	93.7%	1.7	79	0.0%	92.4%	2.6	79	0.0%	-0.9	-50.6%	---	---	---
	Spring99	1.0000	3	91	1.1%	98.9%	1.5	92	0.0%	98.9%	1.6	91	1.1%	0.0	-1.6%	---	---	---
	Summer99	-0.0370	3	86	8.5%	96.5%	1.6	35	62.8%	97.1%	1.6	28	70.2%	0.0	-1.9%	---	---	---
	Fall99	0.7584	3	89	1.1%	93.3%	1.8	88	2.2%	90.9%	1.8	87	3.3%	0.0	-0.8%	---	---	---
	Winter00	0.6654	3	85	4.5%	89.4%	1.8	80	10.1%	93.8%	1.7	77	13.5%	0.1	5.6%	---	---	---
	Spring00	0.4113	3	89	3.3%	93.3%	1.7	85	7.6%	97.6%	1.5	82	10.9%	0.1	4.8%	---	---	---
	Summer00	0.0238	3	83	11.7%	63.9%	2.7	92	2.1%	87.0%	1.8	82	12.8%	0.8	30.7%	---	---	---
	Fall00	0.3602	3	59	4.8%	83.1%	2.0	51	17.7%	94.1%	1.6	49	21.0%	0.4	21.7%	---	---	---
Nickel (ng/m^3)	Winter99	0.0729	4	79	0.0%	1.3%	35.1	79	0.0%	7.6%	30.7	79	0.0%	4.4	12.6%	0	0.91	0.3675
	Spring99	0.1674	4	91	1.1%	30.8%	10.3	92	0.0%	48.9%	5.5	91	1.1%	4.8	46.5%	0	2.28	0.0250
	Summer99	0.5196	4	86	8.5%	54.7%	5.5	35	62.8%	57.1%	4.7	28	70.2%	-0.8	-19.9%	1	-0.79	0.4382
	Fall99	0.6102	4	89	1.1%	31.5%	11.8	88	2.2%	28.4%	10.7	87	3.3%	1.0	8.4%	0	0.87	0.3877
	Winter00	0.5528	4	85	4.5%	8.2%	27.0	80	10.1%	17.5%	16.4	77	13.5%	10.5	38.2%	2	3.37	0.0012
	Spring00	0.4047	4	89	3.3%	28.1%	11.7	85	7.6%	36.5%	8.6	82	10.9%	2.8	24.6%	0	2.63	0.0102
	Summer00	0.2769	4	62	34.0%	9.7%	12.0	65	30.9%	21.5%	8.9	55	41.5%	3.2	24.5%	0	2.85	0.0061
	Fall00	-0.0325	4	59	4.8%	22.0%	8.9	51	17.7%	47.1%	6.1	49	21.0%	2.8	31.8%	0	1.38	0.1727
Zinc (ng/m^3)	Winter99	0.3183	77	79	0.0%	97.5%	39.8	79	0.0%	96.2%	41.0	79	0.0%	-1.2	-3.0%	---	---	---
	Spring99	---	77	91	1.1%	100.0%	38.5	92	0.0%	100.0%	38.5	91	1.1%	0.0	0.0%	---	---	---
	Summer99	---	77	86	8.5%	97.7%	40.4	35	62.8%	100.0%	38.5	28	70.2%	0.0	0.0%	---	---	---
	Fall99	0.3357	77	89	1.1%	96.6%	41.5	88	2.2%	94.3%	41.9	87	3.3%	-0.3	-0.8%	---	---	---
	Winter00	-0.0313	77	85	4.5%	95.3%	42.0	80	10.1%	96.3%	40.8	77	13.5%	-1.1	-2.9%	---	---	---
	Spring00	---	77	89	3.3%	98.9%	39.1	85	7.6%	100.0%	38.5	82	10.9%	0.7	1.7%	---	---	---
	Summer00	-0.0295	77	83	11.7%	98.8%	39.0	92	2.1%	93.5%	46.3	82	12.8%	-8.2	-21.0%	---	---	---
	Fall00	---	77	59	4.8%	100.0%	38.5	51	17.7%	98.0%	39.6	49	21.0%	-1.1	-2.9%	---	---	---
Total Metals (ng/m^3)	Winter99	0.1580	---	79	0.0%	---	136.0	76	3.8%	---	152.5	76	3.8%	-14.1	-10.2%	0	-0.59	0.5582
	Spring99	0.4753	---	88	4.3%	---	89.9	84	8.7%	---	77.5	81	12.0%	14.6	15.6%	0	2.43	0.0173
	Summer99	0.4136	---	83	11.7%	---	99.5	33	64.9%	---	101.9	25	73.4%	6.3	6.8%	0	0.41	0.6858
	Fall99	0.6825	---	83	7.8%	---	95.5	84	6.7%	---	116.2	79	12.2%	-24.3	-25.5%	0	-3.01	0.0035
	Winter00	0.1771	---	79	11.2%	---	103.9	68	23.6%	---	119.7	63	29.2%	-19.5	-18.5%	0	-0.59	0.5600
	Spring00	0.6010	---	79	14.1%	---	74.2	72	21.7%	---	77.3	64	30.4%	-1.0	-1.3%	2	-0.10	0.9214
	Summer00	0.6707	---	68	27.7%	---	68.2	73	22.3%	---	70.1	62	34.0%	-1.1	-1.5%	1	-0.14	0.8900
	Fall00	0.7310	---	56	9.7%	---	80.1	42	32.3%	---	83.5	39	37.1%	20.9	20.6%	0	2.25	0.0306
SO_2 (Denuder) (ug/m^3)	Winter99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Summer99	0.8138	---	87	7.4%	---	17.9	34	63.8%	---	14.0	29	69.1%	3.8	23.2%	0	3.53	0.0014
	Fall99	0.9337	---	88	2.2%	---	28.6	88	2.2%	---	27.4	87	3.3%	1.3	4.5%	0	1.93	0.0563
	Winter00	0.8137	---	85	4.5%	---	43.7	84	5.6%	---	41.6	80	10.1%	2.4	5.4%	0	1.60	0.1144
	Spring00	0.8190	---	92	0.0%	---	18.2	92	0.0%	---	16.5	92	0.0%	1.7	9.3%	0	2.86	0.0052
	Summer00	0.7395	---	22	76.6%	---	17.8	22	76.6%	---	16.8	22	76.6%	1.0	5.6%	0	0.68	0.5015
	Fall00	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
HCl (ug/m^3)	Winter99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Summer99	0.9228	---	87	7.4%	---	1.00	34	63.8%	---	0.92	29	69.1%	0.09	9.3%	0	1.71	0.0978
	Fall99	0.6053	---	89	1.1%	---	0.27	88	2.2%	---	0.31	88	2.2%	-0.04	-16.3%	1	-1.75	0.0837
	Winter00	0.1119	---	85	4.5%	---	0.30	84	5.6%	---	0.40	80	10.1%	-0.10	-34.0%	2	-1.83	0.0706
	Spring00	0.8742	---	92	0.0%	---	0.41	92	0.0%	---	0.42	92	0.0%	-0.02	-3.9%	0	-0.63	0.5323
	Summer00	0.8952	---	22	76.6%	---	0.81	22	76.6%	---	0.97	22	76.6%	-0.16	-19.9%	0	-4.96	0.0001
	Fall00	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan N	Manhattan Missing (%)	Manhattan Non-Detects (%)	Manhattan Mean[c]	Bronx N	Bronx Missing (%)	Bronx Non-Detects (%)	Bronx Mean[c]	Difference[b] N	Difference[b] Missing (%)	Difference[b] Mean[c]	Difference[b] Mean (%)[d]	Paired T-test with Autocorrelation Adjustment # of lags	Paired T-test with Autocorrelation Adjustment T	Paired T-test with Autocorrelation Adjustment p-value
HNO_2 (ug/m^3)	Winter99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Summer99	0.9135	---	86	8.5%	---	1.92	34	63.8%	---	1.92	29	69.1%	0.28	14.1%	0	2.22	0.0344
	Fall99	0.8774	---	89	1.1%	---	4.42	88	2.2%	---	4.04	88	2.2%	0.39	8.7%	0	2.97	0.0039
	Winter00	0.7815	---	85	4.5%	---	4.00	84	5.6%	---	3.66	80	10.1%	0.32	8.0%	0	1.64	0.1059
	Spring00	0.7409	---	92	0.0%	---	2.92	92	0.0%	---	2.42	92	0.0%	0.50	17.2%	0	3.44	0.0009
	Summer00	0.7559	---	22	76.6%	---	1.52	22	76.6%	---	1.37	22	76.6%	0.14	9.5%	0	0.86	0.4012
	Fall00	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
HNO_3 (ug/m^3)	Winter99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Summer99	0.9793	---	85	9.6%	---	3.85	34	63.8%	---	2.52	28	70.2%	0.33	11.5%	0	3.71	0.0009
	Fall99	0.7941	---	89	1.1%	---	0.62	88	2.2%	---	0.55	88	2.2%	0.07	11.9%	1	1.49	0.1409
	Winter00	0.5801	---	85	4.5%	---	1.00	84	5.6%	---	0.50	80	10.1%	0.50	50.1%	2	5.07	<0.0001
	Spring00	0.9494	---	92	0.0%	---	1.22	92	0.0%	---	1.20	92	0.0%	0.02	1.5%	0	0.38	0.7017
	Summer00	0.8754	---	22	76.6%	---	3.23	22	76.6%	---	3.13	22	76.6%	0.09	2.9%	0	0.82	0.4222
	Fall00	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	0		
NH_3 (ug/m^3)	Winter99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Summer99	0.6133	---	51	45.7%	---	4.316	20	78.7%	---	4.514	4	95.7%	0.551	10.4%	0	2.38	0.0976
	Fall99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Winter00	0.9282	---	80	10.1%	---	2.753	78	12.4%	---	1.329	76	14.6%	1.485	53.1%	0	17.31	<0.0001
	Spring00	0.9120	---	55	40.2%	---	3.953	58	37.0%	---	2.771	55	40.2%	1.174	29.7%	0	9.18	<0.0001
	Summer00	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Fall00	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
Total Pollen ($\#/m^3$)	Winter99	0.5555	---	79	0.0%	---	0.4	79	0.0%	---	0.9	79	0.0%	-0.5	-116.8%	0	-2.51	0.0141
	Spring99	0.8690	---	92	0.0%	---	23.5	92	0.0%	---	33.4	92	0.0%	-9.9	-42.3%	1	-2.58	0.0115
	Summer99	0.5541	---	94	0.0%	---	4.3	41	56.4%	---	8.2	41	56.4%	-2.5	-43.6%	1	-1.45	0.1535
	Fall99	0.8574	---	90	0.0%	---	0.3	90	0.0%	---	0.7	90	0.0%	-0.3	-106.6%	1	-3.12	0.0024
	Winter00	0.9770	---	89	0.0%	---	2.2	83	6.7%	---	2.0	83	6.7%	0.3	12.0%	0	1.13	0.2626
	Spring00	0.9806	---	92	0.0%	---	64.7	92	0.0%	---	106.5	92	0.0%	-41.7	-64.5%	3	-1.22	0.2261
	Summer00	0.6997	---	94	0.0%	---	3.3	94	0.0%	---	6.2	94	0.0%	-2.9	-87.3%	3	-1.70	0.0934
	Fall00	0.7618	---	61	1.6%	---	0.2	61	1.6%	---	0.4	61	1.6%	-0.2	-80.9%	0	-3.20	0.0022
Pollen - Trees ($\#/m^3$)	Winter99	0.5304	---	79	0.0%	---	0.4	79	0.0%	---	0.9	79	0.0%	-0.5	-117.9%	0	-2.45	0.0165
	Spring99	0.8670	---	92	0.0%	---	23.1	92	0.0%	---	32.6	92	0.0%	-9.5	-41.3%	1	-2.48	0.0149
	Summer99	0.2263	---	94	0.0%	---	1.3	46	51.1%	---	1.2	46	51.1%	0.3	19.9%	1	0.62	0.5410
	Fall99	-0.0391	---	90	0.0%	---	0.0	90	0.0%	---	0.1	90	0.0%	0.0	-63.1%	0	-1.15	0.2522
	Winter00	0.9770	---	89	0.0%	---	2.2	83	6.7%	---	2.0	83	6.7%	0.3	11.9%	0	1.11	0.2716
	Spring00	0.9805	---	92	0.0%	---	64.2	92	0.0%	---	105.7	92	0.0%	-41.5	-64.7%	3	-1.21	0.2286
	Summer00	0.0719	---	94	0.0%	---	0.4	94	0.0%	---	0.6	94	0.0%	-0.2	-52.1%	0	-0.71	0.4773
	Fall00	-0.0723	---	61	1.6%	---	0.0	61	1.6%	---	0.0	61	1.6%	0.0	5.9%	1	0.15	0.8816
Pollen - Ragweed ($\#/m^3$)	Winter99	-0.0297	---	79	0.0%	---	0.0	79	0.0%	---	0.0	79	0.0%	0.0	79.7%	0	1.65	0.1027
	Spring99	-0.0137	---	92	0.0%	---	0.0	92	0.0%	---	0.0	92	0.0%	0.0	1.0%	0	0.01	0.9937
	Summer99	0.8813	---	94	0.0%	---	1.4	46	51.1%	---	1.7	46	51.1%	-0.3	-20.5%	1	-0.60	0.5502
	Fall99	0.8181	---	90	0.0%	---	0.2	90	0.0%	---	0.3	90	0.0%	-0.1	-49.5%	0	-1.70	0.0932
	Winter00	-0.0122	---	89	0.0%	---	0.0	83	6.7%	---	0.0	83	6.7%	0.0	5.0%	0	0.04	0.9713
	Spring00	---	---	92	0.0%	---	0.0	92	0.0%	---	0.0	92	0.0%	0.0	---	0	-1.42	0.1584
	Summer00	0.7962	---	94	0.0%	---	1.1	94	0.0%	---	1.8	94	0.0%	-0.7	-67.5%	0	-3.63	0.0005
	Fall00	0.5930	---	61	1.6%	---	0.1	61	1.6%	---	0.1	61	1.6%	0.0	-60.0%	0	-1.99	0.0513

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]				Paired T-test with Autocorrelation Adjustment		
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	# of lags	T	p-value
Pollen - Grasses (#/m^3)	Winter99	0.1743	---	79	0.0%	---	0.0	79	0.0%	---	0.0	79	0.0%	0.0	-126.4%	0	-1.24	0.2175
	Spring99	0.8412	---	92	0.0%	---	0.4	92	0.0%	---	0.7	92	0.0%	-0.4	-100.2%	0	-1.78	0.0790
	Summer99	0.4835	---	94	0.0%	---	1.0	46	51.1%	---	1.6	46	51.1%	-0.1	-7.8%	2	-0.26	0.7945
	Fall99	0.1981	---	90	0.0%	---	0.0	90	0.0%	---	0.0	90	0.0%	0.0	27.2%	0	0.41	0.6846
	Winter00	---	---	89	0.0%	---	0.0	83	6.7%	---	0.0	83	6.7%	0.0	100.0%	0	1.42	0.1590
	Spring00	0.8609	---	92	0.0%	---	0.6	92	0.0%	---	0.8	92	0.0%	-0.2	-38.5%	0	-1.82	0.0723
	Summer00	0.7369	---	94	0.0%	---	0.9	94	0.0%	---	1.0	94	0.0%	-0.2	-18.1%	0	-1.10	0.2753
	Fall00	-0.0517	---	61	1.6%	---	0.0	61	1.6%	---	0.0	61	1.6%	0.0	-210.3%	0	-1.30	0.1998
Total Mold (#/m^3)	Winter99	0.1840	---	79	0.0%	---	5.7	79	0.0%	---	9.0	79	0.0%	-3.3	-57.9%	0	-0.84	0.4036
	Spring99	0.7962	---	92	0.0%	---	231.7	92	0.0%	---	265.4	92	0.0%	-33.8	-14.6%	1	-0.84	0.4043
	Summer99	0.8773	---	94	0.0%	---	1424.6	41	56.4%	---	1335.8	41	56.4%	31.9	2.3%	0	0.41	0.6838
	Fall99	0.8325	---	90	0.0%	---	372.4	90	0.0%	---	449.5	90	0.0%	-77.1	-20.7%	0	-1.50	0.1360
	Winter00	0.2690	---	89	0.0%	---	3.6	83	6.7%	---	10.7	83	6.7%	-7.2	-203.6%	0	-3.29	0.0015
	Spring00	0.6553	---	92	0.0%	---	475.7	92	0.0%	---	363.4	92	0.0%	112.3	23.6%	1	1.26	0.2099
	Summer00	0.8520	---	94	0.0%	---	832.3	94	0.0%	---	1041.2	94	0.0%	-208.8	-25.1%	0	-4.38	<0.0001
	Fall00	0.8593	---	61	1.6%	---	446.9	61	1.6%	---	499.7	61	1.6%	-52.8	-11.8%	0	-1.45	0.1530
Basidospores (#/m^3)	Winter99	0.6239	---	79	0.0%	---	1.1	79	0.0%	---	0.9	79	0.0%	0.1	14.0%	0	0.27	0.7870
	Spring99	0.4571	---	92	0.0%	---	31.7	92	0.0%	---	37.3	92	0.0%	-5.5	-17.5%	0	-0.79	0.4300
	Summer99	0.7346	---	94	0.0%	---	372.0	46	51.1%	---	345.8	46	51.1%	-63.2	-22.4%	1	-0.91	0.3683
	Fall99	0.8073	---	90	0.0%	---	194.6	90	0.0%	---	248.5	90	0.0%	-53.9	-27.7%	0	-1.46	0.1492
	Winter00	0.5790	---	89	0.0%	---	0.6	83	6.7%	---	1.4	83	6.7%	-0.8	-130.6%	0	-2.24	0.0281
	Spring00	0.3739	---	92	0.0%	---	205.8	92	0.0%	---	106.2	92	0.0%	99.6	48.4%	0	2.32	0.0227
	Summer00	0.6968	---	94	0.0%	---	452.8	94	0.0%	---	554.3	94	0.0%	-101.5	-22.4%	1	-2.51	0.0136
	Fall00	0.8097	---	61	1.6%	---	187.8	61	1.6%	---	220.0	61	1.6%	-32.2	-17.2%	0	-1.56	0.1233
Ascospores (#/m^3)	Winter99	0.0403	---	79	0.0%	---	1.2	79	0.0%	---	4.7	79	0.0%	-3.4	-276.6%	0	-0.96	0.3377
	Spring99	0.5139	---	92	0.0%	---	53.0	92	0.0%	---	49.6	92	0.0%	3.4	6.5%	0	0.29	0.7760
	Summer99	0.4360	---	94	0.0%	---	60.5	46	51.1%	---	81.8	46	51.1%	-2.3	-3.0%	0	-0.15	0.8820
	Fall99	0.6262	---	90	0.0%	---	16.5	90	0.0%	---	24.1	90	0.0%	-7.6	-45.7%	0	-2.85	0.0054
	Winter00	0.1396	---	89	0.0%	---	0.7	83	6.7%	---	1.6	83	6.7%	-0.8	-111.2%	0	-1.80	0.0758
	Spring00	0.6419	---	92	0.0%	---	39.0	92	0.0%	---	38.6	92	0.0%	0.4	1.0%	1	0.05	0.9603
	Summer00	0.8050	---	94	0.0%	---	93.8	94	0.0%	---	110.9	94	0.0%	-17.1	-18.2%	0	-1.85	0.0681
	Fall00	0.5409	---	61	1.6%	---	38.9	61	1.6%	---	42.1	61	1.6%	-3.2	-8.3%	1	-1.08	0.2858
Mitospores (#/m^3)	Winter99	0.3687	---	79	0.0%	---	3.1	79	0.0%	---	3.4	79	0.0%	-0.3	-9.8%	0	-0.26	0.7992
	Spring99	0.8438	---	92	0.0%	---	143.2	92	0.0%	---	176.8	92	0.0%	-33.6	-23.4%	1	-1.23	0.2223
	Summer99	0.9454	---	94	0.0%	---	980.0	46	51.1%	---	752.2	46	51.1%	117.3	13.5%	0	2.84	0.0068
	Fall99	0.8535	---	90	0.0%	---	155.2	90	0.0%	---	172.7	90	0.0%	-17.5	-11.2%	0	-0.88	0.3800
	Winter00	0.2297	---	89	0.0%	---	2.2	83	6.7%	---	6.2	83	6.7%	-4.2	-205.4%	0	-2.60	0.0112
	Spring00	0.8058	---	92	0.0%	---	228.2	92	0.0%	---	215.9	92	0.0%	12.4	5.4%	1	0.29	0.7698
	Summer00	0.8470	---	94	0.0%	---	275.8	94	0.0%	---	365.2	94	0.0%	-89.4	-32.4%	0	-2.80	0.0062
	Fall00	0.7759	---	61	1.6%	---	212.0	61	1.6%	---	229.1	61	1.6%	-17.1	-8.0%	0	-0.56	0.5755
Mitospores - Dark (#/m^3)	Winter99	0.5358	---	79	0.0%	---	3.0	79	0.0%	---	2.1	79	0.0%	0.9	29.1%	0	0.96	0.3391
	Spring99	0.8496	---	92	0.0%	---	142.5	92	0.0%	---	173.4	92	0.0%	-30.8	-21.6%	1	-1.20	0.2346
	Summer99	0.9449	---	94	0.0%	---	968.3	46	51.1%	---	748.7	46	51.1%	108.0	12.6%	0	2.65	0.0110
	Fall99	0.8637	---	90	0.0%	---	142.3	90	0.0%	---	167.8	90	0.0%	-25.5	-17.9%	0	-1.31	0.1935
	Winter00	0.1807	---	89	0.0%	---	2.1	83	6.7%	---	5.2	83	6.7%	-3.2	-159.4%	0	-2.22	0.0291
	Spring00	0.8123	---	92	0.0%	---	219.5	92	0.0%	---	211.0	92	0.0%	8.5	3.9%	1	0.21	0.8359
	Summer00	0.8544	---	94	0.0%	---	269.6	94	0.0%	---	353.3	94	0.0%	-83.7	-31.1%	0	-2.69	0.0085
	Fall00	0.7807	---	61	1.6%	---	207.9	61	1.6%	---	227.2	61	1.6%	-19.3	-9.3%	0	-0.65	0.5163

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan N	Manhattan Missing (%)	Manhattan Non-Detects (%)	Manhattan Mean[c]	Bronx N	Bronx Missing (%)	Bronx Non-Detects (%)	Bronx Mean[c]	Difference[b] N	Difference[b] Missing (%)	Difference[b] Mean[c]	Difference[b] Mean (%)[d]	Paired T-test with Autocorrelation Adjustment # of lags	Paired T-test with Autocorrelation Adjustment T	Paired T-test with Autocorrelation Adjustment p-value
Mitospores - Non-Dark (#/m^3)	Winter99	-0.0287	---	79	0.0%	---	0.1	79	0.0%	---	1.3	79	0.0%	-1.2	-959.5%	0	-1.49	0.1395
	Spring99	-0.0517	---	92	0.0%	---	0.7	92	0.0%	---	3.5	92	0.0%	-2.8	-392.5%	1	-1.36	0.1767
	Summer99	0.0435	---	94	0.0%	---	11.7	46	51.1%	---	3.5	46	51.1%	9.3	72.8%	0	1.69	0.0975
	Fall99	-0.0365	---	90	0.0%	---	12.9	90	0.0%	---	4.9	90	0.0%	8.0	62.0%	0	1.45	0.1519
	Winter00	0.5327	---	89	0.0%	---	0.0	83	6.7%	---	1.0	83	6.7%	-1.0	-2545.3%	0	-2.07	0.0420
	Spring00	0.1554	---	92	0.0%	---	8.7	92	0.0%	---	4.9	92	0.0%	3.9	44.3%	0	1.30	0.1978
	Summer00	0.0740	---	94	0.0%	---	6.2	94	0.0%	---	11.9	94	0.0%	-5.7	-92.5%	0	-1.18	0.2423
	Fall00	0.6535	---	61	1.6%	---	4.1	61	1.6%	---	1.9	61	1.6%	2.2	53.6%	0	1.17	0.2450
Small Spores (<10um) (#/m^3)	Winter99	0.1706	---	79	0.0%	---	5.3	79	0.0%	---	8.5	79	0.0%	-3.2	-60.7%	0	-0.82	0.4158
	Spring99	0.7984	---	92	0.0%	---	225.3	92	0.0%	---	261.3	92	0.0%	-36.0	-16.0%	1	-0.90	0.3722
	Summer99	0.8814	---	94	0.0%	---	1348.5	46	51.1%	---	1108.4	46	51.1%	70.3	6.0%	1	0.86	0.3949
	Fall99	0.8293	---	90	0.0%	---	360.6	90	0.0%	---	439.7	90	0.0%	-79.1	-21.9%	0	-1.54	0.1270
	Winter00	0.3441	---	89	0.0%	---	3.5	83	6.7%	---	9.1	83	6.7%	-5.7	-169.8%	0	-3.34	0.0013
	Spring00	0.6442	---	92	0.0%	---	460.2	92	0.0%	---	348.6	92	0.0%	111.6	24.2%	1	1.29	0.2000
	Summer00	0.8486	---	94	0.0%	---	804.8	94	0.0%	---	1009.7	94	0.0%	-204.8	-25.4%	0	-4.35	<0.0001
	Fall00	0.8489	---	61	1.6%	---	433.2	61	1.6%	---	483.7	61	1.6%	-50.5	-11.7%	2	-0.93	0.3570
Large Spores (>10um) (#/m^3)	Winter99	0.1772	---	79	0.0%	---	0.1	79	0.0%	---	0.5	79	0.0%	-0.3	-301.1%	0	-1.77	0.0802
	Spring99	0.4358	---	92	0.0%	---	2.6	92	0.0%	---	2.1	92	0.0%	0.4	17.3%	1	0.89	0.3751
	Summer99	0.7055	---	94	0.0%	---	60.6	46	51.1%	---	67.6	46	51.1%	-17.7	-35.5%	0	-1.91	0.0625
	Fall99	0.7024	---	90	0.0%	---	4.7	90	0.0%	---	5.0	90	0.0%	-0.3	-5.9%	0	-0.38	0.7020
	Winter00	-0.0199	---	89	0.0%	---	0.0	83	6.7%	---	0.2	83	6.7%	-0.1	-303.6%	0	-1.13	0.2620
	Spring00	0.9167	---	92	0.0%	---	8.1	92	0.0%	---	7.7	92	0.0%	0.4	4.6%	1	0.21	0.8357
	Summer00	0.6972	---	94	0.0%	---	13.3	94	0.0%	---	15.0	94	0.0%	-1.7	-12.4%	0	-1.11	0.2681
	Fall00	0.5883	---	61	1.6%	---	4.8	61	1.6%	---	6.4	61	1.6%	-1.6	-32.6%	0	-1.42	0.1609
Particle Count (#)	Winter99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Spring99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Summer99	---	---	0	100.0%	---	---	0	100.0%	---	---	0	100.0%	---	---	---	---	---
	Fall99	0.0058	---	89	1.1%	---	1255412	90	0.0%	---	1278806	89	1.1%	-30518	-2.4%	1	-0.36	0.7174
	Winter00	0.1092	---	66	25.8%	---	1515846	74	16.9%	---	1277994	65	27.0%	221627	14.7%	1	4.78	<0.0001
	Spring00	0.0761	---	75	18.5%	---	1442280	74	19.6%	---	1952556	66	28.3%	-450936	-31.1%	2	-5.03	<0.0001
	Summer00	-0.0999	---	31	67.0%	---	1451768	38	59.6%	---	1493997	29	69.1%	-140774	-9.8%	1	-1.12	0.2739
	Fall00	0.2066	---	47	24.2%	---	1823350	53	14.5%	---	1935310	39	37.1%	-177335	-10.0%	2	-1.28	0.2084
$PM_{2.5}$ (FRM) (ug/m^3)	Winter99	0.3269	---	65	17.7%	---	17.70	23	70.9%	---	15.28	16	79.7%	2.02	13.1%	0	0.83	0.4202
	Spring99	0.7468	---	75	18.5%	---	14.44	87	5.4%	---	13.65	70	23.9%	0.81	5.6%	0	1.20	0.2327
	Summer99	0.4443	---	78	17.0%	---	17.88	31	67.0%	---	16.65	21	77.7%	1.01	6.4%	3	0.48	0.6389
	Fall99	0.9319	---	54	40.0%	---	15.94	53	41.1%	---	12.01	37	58.9%	1.61	11.5%	0	3.50	0.0013
	Winter00	0.9812	---	62	30.3%	---	19.13	65	27.0%	---	17.17	49	44.9%	1.59	8.2%	0	4.78	<0.0001
	Spring00	0.9898	---	88	4.3%	---	15.34	84	8.7%	---	13.82	81	12.0%	1.67	11.0%	1	9.97	<0.0001
	Summer00	0.9751	---	87	7.4%	---	16.90	89	5.3%	---	15.03	82	12.8%	1.70	10.0%	0	8.62	<0.0001
	Fall00	0.9861	---	62	0.0%	---	16.18	57	8.1%	---	13.99	57	8.1%	2.02	12.6%	1	5.99	<0.0001
PM_{10} (FRM) (ug/m^3)	Winter99	-1.0000	---	3	76.9%	---	12.3	7	46.2%	---	12.4	3	76.9%	3.0	24.3%	3	3.00	0.0955
	Spring99	0.9734	---	14	6.7%	---	22.4	13	13.3%	---	22.2	12	20.0%	0.7	2.9%	1	0.99	0.3440
	Summer99	0.9512	---	15	6.3%	---	27.3	3	81.3%	---	38.3	3	81.3%	0.0	0.0%	0	0.00	1.0000
	Fall99	0.8903	---	15	0.0%	---	17.2	11	26.7%	---	16.2	11	26.7%	2.4	12.7%	3	2.83	0.0177
	Winter00	0.9785	---	15	0.0%	---	19.5	12	20.0%	---	20.3	12	20.0%	-0.2	-0.8%	0	-0.19	0.8499
	Spring00	0.9614	---	15	0.0%	---	22.3	12	20.0%	---	24.2	12	20.0%	-0.2	-0.7%	0	-0.12	0.9059
	Summer00	0.9178	---	16	0.0%	---	22.0	16	0.0%	---	20.7	16	0.0%	1.3	6.0%	2	1.85	0.0849
	Fall00	0.9661	---	9	10.0%	---	27.7	6	40.0%	---	23.0	5	50.0%	0.4	1.8%	0	0.28	0.7943

Appendix 4 - Statistical Analyses - By Season (continued)

Seasonal Statistics and Analyses - Daily Averages[a]

Analyte (units)	Season	Pearson Correlation	Detection Limit	Manhattan				Bronx				Difference[b]						
				N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Non-Detects (%)	Mean[c]	N	Missing (%)	Mean[c]	Mean (%)[d]	Paired T-test with Autocorrelation Adjustment		
																# of lags	T	p-value
Temperature (deg F)	Winter99	0.9973	---	79	0.0%	---	37.0	79	0.0%	---	36.0	79	0.0%	1.0	2.6%	0	13.93	<0.0001
	Spring99	0.9984	---	87	5.4%	---	59.8	87	5.4%	---	59.2	87	5.4%	0.6	1.0%	0	10.06	<0.0001
	Summer99	0.9904	---	73	22.3%	---	76.8	32	66.0%	---	76.1	31	67.0%	0.4	0.5%	0	2.10	0.0438
	Fall99	0.9983	---	86	4.4%	---	53.5	90	0.0%	---	52.4	86	4.4%	0.7	1.3%	0	11.03	<0.0001
	Winter00	0.9977	---	82	7.9%	---	37.8	89	0.0%	---	35.8	82	7.9%	1.1	2.8%	0	13.10	<0.0001
	Spring00	0.9978	---	92	0.0%	---	58.8	92	0.0%	---	58.1	92	0.0%	0.7	1.3%	0	9.41	<0.0001
	Summer00	0.9819	---	89	5.3%	---	72.6	87	7.4%	---	72.6	82	12.8%	0.1	0.2%	2	0.82	0.4120
	Fall00	0.9970	---	61	1.6%	---	55.1	54	12.9%	---	53.8	54	12.9%	0.8	1.4%	0	8.66	<0.0001
Relative Humidity (%)	Winter99	0.9925	---	79	0.0%	---	60	79	0.0%	---	66	79	0.0%	-5	-8.7%	1	-16.27	<0.0001
	Spring99	0.9934	---	87	5.4%	---	55	82	10.9%	---	61	82	10.9%	-6	-10.3%	0	-22.07	<0.0001
	Summer99	0.9025	---	73	22.3%	---	62	31	67.0%	---	67	31	67.0%	-5	-8.7%	0	-4.01	0.0004
	Fall99	0.9956	---	90	0.0%	---	65	90	0.0%	---	71	90	0.0%	-6	-9.0%	1	-24.18	<0.0001
	Winter00	0.9870	---	82	7.9%	---	61	89	0.0%	---	67	82	7.9%	-6	-9.7%	0	-16.88	<0.0001
	Spring00	0.9482	---	92	0.0%	---	66	92	0.0%	---	73	92	0.0%	-7	-11.2%	3	-5.57	<0.0001
	Summer00	0.9903	---	94	0.0%	---	70	84	10.6%	---	78	84	10.6%	-9	-13.7%	5	-15.90	<0.0001
	Fall00	0.9806	---	61	1.6%	---	65	56	9.7%	---	75	56	9.7%	-9	-14.1%	1	-13.46	<0.0001

[a] For analytes collected on an hourly basis, daily averages were calculated for days with at least 75% valid data

[b] Difference=Manhattan - Bronx

[c] Non-detects were given values of 1/2 the detection limit for statistical calculations

[d] Mean Difference (%) =Mean Difference / Manhattan (using only days with daily averages available for both sites)

*Data for April 20-30, 2000 at the Bronx site has been excluded from these analyses

Appendix 5 – Pearson Correlations Among All Analytes Within Sampling Location

Appendix 5 - Correlation Matrix
Bronx

	phb	sulfateb	carb250	sootb	o3b	noxb	nob	no2b	so2b	pm2_5_	pm10_3	acetalde	acetone	acrolein	benzald	butyrald	crotonal	formalde	hexalde	isovaler	m_tolua	o_tolual	p_tolual	propiona	valerald	_2_5_di	total_ald	metal_c	metal_fe	metal_p	metal_m	metal_n	metal_z	total_me	denu_so	hclb
phb	1	-0.661	-0.495	-0.174	-0.255	-0.147	-0.071	-0.288	0.064	-0.584	-0.601	-0.460	-0.149	0.018	-0.227	-0.308	-0.140	-0.558	-0.240	-0.109		-0.058	-0.280	-0.191	-0.143		-0.415	0.053	-0.034	0.019	-0.002	0.094	-0.078	0.003	0.018	-0.462
sulfateb	-0.661	1	0.559	0.343	0.294	0.234	0.134	0.410	0.133	0.861	0.809	0.576	0.225	-0.020	0.355	0.263	0.088	0.641	0.277	0.072		-0.017	0.418	0.272	0.245		0.506	-0.030	0.154	0.025	0.055	0.026	0.126	0.110	0.132	0.646
carb250b	-0.495	0.559	1	0.430	0.121	0.322	0.243	0.430	0.146	0.642	0.628	0.679	0.318	-0.019	0.238	0.362	0.225	0.686	0.296	0.028		-0.009	0.296	0.228	0.077		0.604	-0.067	0.222	0.116	0.025	-0.004	0.122	0.180	-0.001	0.400
sootb	-0.174	0.343	0.430	1	-0.345	0.796	0.761	0.694	0.585	0.637	0.655	0.537	0.405	-0.032	0.174	-0.084	0.172	0.304	-0.083	0.003		-0.064	0.184	0.125	-0.069		0.420	-0.007	0.400	0.174	0.154	0.328	0.250	0.418	0.568	-0.017
o3b	-0.255	0.294	0.121	-0.345	1	-0.497	-0.544	-0.271	-0.488	0.118	0.139	0.095	0.182	-0.003	0.102	0.335	-0.135	0.356	0.278	-0.003			0.206	0.165	0.203		0.266	-0.011	-0.129	-0.101	-0.046	-0.155	-0.021	-0.149	-0.445	0.560
noxb	-0.147	0.234	0.322	0.796	-0.497	1	0.969	0.825	0.654	0.527	0.585	0.543	0.335	-0.013	0.268	-0.028	0.086	0.273	-0.002	0.253		-0.025	0.285	0.044	0.036		0.352	0.068	0.486	0.291	0.371	0.475	0.319	0.491	0.586	-0.070
nob	-0.071	0.134	0.243	0.761	-0.544	0.969	1	0.662	0.650	0.420	0.468	0.440	0.254	-0.020	0.226	-0.110	0.065	0.175	-0.062	0.248		-0.032	0.255	0.007	-0.013		0.249	0.078	0.464	0.294	0.364	0.452	0.322	0.474	0.579	-0.145
no2b	-0.288	0.410	0.430	0.694	-0.271	0.825	0.662	1	0.502	0.649	0.707	0.644	0.441	0.004	0.300	0.167	0.115	0.430	0.133	0.203		0.000	0.284	0.123	0.140		0.503	0.031	0.417	0.210	0.293	0.406	0.233	0.409	0.500	0.142
so2b	0.064	0.133	0.146	0.585	-0.488	0.654	0.650	0.502	1	0.389	0.335	0.272	0.179	-0.011	-0.007	-0.246	0.150	-0.008	-0.153	0.000		-0.012	0.022	-0.059	-0.045		0.113	-0.011	0.266	0.189	0.090	0.422	0.171	0.309	0.957	-0.038
pm2_5_30b	-0.584	0.861	0.642	0.637	0.118	0.527	0.420	0.649	0.389	1	0.949	0.743	0.387	-0.014	0.368	0.221	0.148	0.695	0.236	0.198		0.040	0.450	0.247	0.238		0.634	-0.039	0.324	0.143	0.091	0.156	0.202	0.285	0.307	0.542
pm10_30b	-0.601	0.809	0.628	0.655	0.139	0.585	0.468	0.707	0.335	0.949	1	0.811	0.577	-0.019	0.401	0.342	0.197	0.755	0.305	0.216		0.043	0.500	0.218	0.259		0.738	-0.040	0.369	0.212	0.083	0.101	0.175	0.299	0.290	0.518
acetaldeb	-0.460	0.576	0.679	0.537	0.095	0.543	0.440	0.644	0.272	0.743	0.811	1	0.582	-0.061	0.528	0.519	0.132	0.850	0.507	0.065		-0.034	0.536	0.230	0.407		0.871	-0.039	0.282	0.146	0.071	0.101	0.129	0.250	0.124	0.376
acetoneb	-0.149	0.225	0.318	0.405	0.182	0.335	0.254	0.441	0.179	0.387	0.577	0.582	1	-0.058	0.226	0.275	0.093	0.437	0.185	-0.032		-0.073	0.225	0.187	0.163		0.824	-0.010	0.201	0.087	0.062	0.217	0.072	0.201	-0.022	0.301
acroleinb	0.018	-0.020	-0.019	-0.032	-0.003	-0.013	-0.020	0.004	-0.011	-0.014	-0.019	-0.061	-0.058	1	-0.008	-0.017	-0.016	-0.045	-0.012	-0.005		-0.003	-0.012	-0.012	-0.006		-0.062	0.017	-0.001	-0.005	-0.006	-0.004	-0.007	-0.004	-0.010	-0.027
benzaldeb	-0.227	0.355	0.238	0.174	0.102	0.268	0.226	0.300	-0.007	0.368	0.401	0.528	0.226	-0.008	1	0.486	-0.063	0.477	0.602	0.153		-0.014	0.667	0.056	0.572		0.466	-0.006	0.060	-0.010	0.008	-0.040	-0.014	0.035	-0.039	0.276
butyraldb	-0.308	0.263	0.362	-0.084	0.335	-0.028	-0.110	0.167	-0.246	0.221	0.342	0.519	0.275	-0.017	0.486	1	0.054	0.563	0.734	0.024		-0.019	0.416	0.252	0.503		0.591	-0.026	-0.058	-0.049	-0.046	-0.141	-0.036	-0.079	-0.266	0.267
crotonalb	-0.140	0.088	0.225	0.172	-0.135	0.086	0.065	0.115	0.150	0.148	0.197	0.132	0.093	-0.016	-0.063	0.054	1	0.108	-0.086	-0.026		0.001	-0.063	0.198	-0.049		0.206	-0.025	0.111	0.068	-0.006	-0.009	0.008	0.072	0.383	0.049
formaldeb	-0.558	0.641	0.686	0.304	0.356	0.273	0.175	0.430	-0.008	0.695	0.755	0.850	0.437	-0.045	0.477	0.563	0.108	1	0.578	0.095		0.002	0.540	0.260	0.393		0.821	-0.044	0.203	0.080	0.034	-0.029	0.093	0.154	-0.100	0.516
hexaldehb	-0.240	0.277	0.296	-0.083	0.278	-0.002	-0.062	0.133	-0.153	0.236	0.305	0.507	0.185	-0.012	0.602	0.734	-0.086	0.578	1	0.117		-0.011	0.523	0.067	0.706		0.509	-0.015	-0.054	-0.028	-0.022	-0.075	-0.049	-0.067	-0.187	0.256
isovalerb	-0.109	0.072	0.028	0.003	-0.003	0.253	0.248	0.203	0.000	0.198	0.216	0.065	-0.032	-0.005	0.153	0.024	-0.026	0.095	0.117	1		0.506	0.112	-0.010	0.074		0.063	-0.011	0.178	0.136	0.004	0.013	0.013	0.144	-0.142	-0.057
m_tolualb																																				
o_tolualb	-0.058	-0.017	-0.009	-0.064		-0.025	-0.032	0.000	-0.012	0.040	0.043	-0.034	-0.073	-0.003	-0.014	-0.019	0.001	0.002	-0.011	0.506		1	-0.022	-0.013	-0.010		-0.021	-0.003	0.039	-0.005	-0.006	0.005	-0.007	0.027	-0.118	-0.023
p_tolualb	-0.280	0.418	0.296	0.184	0.206	0.285	0.255	0.284	0.022	0.450	0.500	0.536	0.225	-0.012	0.667	0.416	-0.063	0.540	0.523	0.112		-0.022	1	0.025	0.454		0.485	-0.010	0.150	0.088	0.033	-0.017	0.059	0.117	-0.023	0.365
propionab	-0.191	0.272	0.228	0.125	0.165	0.044	0.007	0.123	-0.059	0.247	0.218	0.230	0.187	-0.012	0.056	0.252	0.198	0.260	0.067	-0.010		-0.013	0.025	1	0.015		0.401	-0.020	0.077	-0.011	-0.025	-0.044	-0.036	0.029	-0.049	0.489
valeraldb	-0.143	0.245	0.077	-0.069	0.203	0.036	-0.013	0.140	-0.045	0.238	0.259	0.407	0.163	-0.006	0.572	0.503	-0.049	0.393	0.706	0.074		-0.010	0.454	0.015	1		0.374	0.000	-0.057	-0.017	-0.010	-0.026	-0.022	-0.059	-0.042	0.318
_2_5_dimb																																				
total_aldehydesb	-0.415	0.506	0.604	0.420	0.266	0.352	0.249	0.503	0.113	0.634	0.738	0.871	0.824	-0.062	0.466	0.591	0.206	0.821	0.509	0.063		-0.021	0.485	0.401	0.374		1	-0.034	0.234	0.101	0.044	0.095	0.075	0.200	-0.038	0.444
metal_crb	0.053	-0.030	-0.067	-0.007	-0.011	0.068	0.078	0.031	-0.011	-0.039	-0.040	-0.039	-0.010	0.017	-0.006	-0.026	-0.025	-0.044	-0.015	-0.011		-0.003	-0.010	-0.020	0.000		-0.034	1	0.455	-0.004	0.907	0.578	-0.001	0.503	0.073	-0.047
metal_feb	-0.034	0.154	0.222	0.400	-0.129	0.486	0.464	0.417	0.266	0.324	0.369	0.282	0.201	-0.001	0.060	-0.058	0.111	0.203	-0.054	0.178		0.039	0.150	0.077	-0.057		0.234	0.455	1	0.687	0.523	0.572	0.191	0.973	0.131	0.023
metal_pbb	0.019	0.025	0.116	0.174	-0.101	0.291	0.294	0.210	0.189	0.143	0.212	0.146	0.087	-0.005	-0.010	-0.049	0.068	0.080	-0.028	0.136		-0.005	0.088	-0.011	-0.017		0.101	-0.004	0.687	1	0.046	0.293	0.281	0.695	0.093	-0.036
metal_mnb	-0.002	0.055	0.025	0.154	-0.046	0.371	0.364	0.293	0.090	0.091	0.083	0.071	0.062	-0.006	0.008	-0.046	-0.006	0.034	-0.022	0.004		-0.006	0.033	-0.025	-0.010		0.044	0.907	0.523	0.046	1	0.631	0.145	0.586	0.225	0.007
metal_nib	0.094	0.026	-0.004	0.328	-0.155	0.475	0.452	0.406	0.422	0.156	0.101	0.101	0.217	-0.004	-0.040	-0.141	-0.009	-0.029	-0.075	0.013		0.005	-0.017	-0.044	-0.026		0.095	0.578	0.572	0.293	0.631	1	0.448	0.684	0.505	-0.082
metal_znb	-0.078	0.126	0.122	0.250	-0.021	0.319	0.322	0.233	0.171	0.202	0.175	0.129	0.072	-0.007	-0.014	-0.036	0.008	0.093	-0.049	0.013		-0.007	0.059	-0.036	-0.022		0.075	-0.001	0.191	0.281	0.145	0.448	1	0.353	0.283	-0.062
total_metalsb	0.003	0.110	0.180	0.418	-0.149	0.491	0.474	0.409	0.309	0.285	0.299	0.250	0.201	-0.004	0.035	-0.079	0.072	0.154	-0.067	0.144		0.027	0.117	0.029	-0.059		0.200	0.503	0.973	0.695	0.586	0.684	0.353	1	0.192	-0.027
denu_so2b	0.018	0.132	-0.001	0.568	-0.445	0.586	0.579	0.500	0.957	0.307	0.290	0.124	-0.022	-0.010	-0.039	-0.266	0.383	-0.100	-0.187	-0.142		-0.118	-0.023	-0.049	-0.042		-0.038	0.073	0.131	0.093	0.225	0.505	0.283	0.192	1	0.078
hclb	-0.462	0.646	0.400	-0.017	0.560	-0.070	-0.145	0.142	-0.038	0.542	0.518	0.376	0.301	-0.027	0.276	0.267	0.049	0.516	0.256	-0.057		-0.023	0.365	0.489	0.318		0.444	-0.047	0.023	-0.036	0.007	-0.082	-0.062	-0.027	0.078	1
hno2b	-0.168	0.136	0.376	0.752	-0.661	0.778	0.783	0.627	0.510	0.376	0.370	0.316	0.192	-0.036	-0.110	-0.231	0.430	0.078	-0.201	-0.013		-0.036	-0.068	-0.069	-0.165		0.141	0.087	0.266	0.093	0.329	0.319	0.194	0.271	0.410	-0.175
hno3b	-0.581	0.726	0.507	-0.061	0.740	-0.141	-0.218	0.088	-0.174	0.606	0.584	0.433	0.358	-0.020	0.354	0.332	-0.013	0.651	0.362	-0.002		-0.012	0.458	0.530	0.325		0.537	-0.041	0.033	-0.052	0.025	-0.095	-0.052	-0.023	-0.047	0.821
nh3b	-0.560	0.394	0.631	0.176	0.175	0.173	0.089	0.386	-0.337	0.521	0.601	0.597	0.634	-0.065	0.339	0.409	0.221	0.656	0.331	0.241		0.274	0.395	0.278	0.303		0.686	0.095	0.127	-0.029	0.160	-0.202	0.005	0.069	-0.364	0.315
totalpolb	-0.154	0.190	0.182	-0.019	0.164	0.066	0.012	0.173	-0.060	0.189	0.226	0.343	0.166		0.457	0.474	-0.025	0.263	0.509	0.140		-0.006	0.275	0.063	0.701		0.315	-0.011	-0.060	-0.019	-0.002	-0.034	-0.025	-0.062	-0.025	0.228
tree_pollenb	-0.144	0.178	0.174	-0.015	0.157	0.069	0.016	0.173	-0.055	0.181	0.218	0.340	0.166		0.456	0.473	-0.024	0.256	0.508	0.037		-0.012	0.270	0.062	0.700		0.312	-0.010	-0.061	-0.018	-0.002	-0.031	-0.023	-0.061	-0.021	0.224
ragweedb	-0.203	0.226	-0.023	0.021	0.063	-0.033	-0.061	0.042	-0.101	0.152	0.154	0.023	-0.063		-0.041	-0.090	-0.083	0.095	-0.063	-0.017		-0.018	0.162	-0.049	-0.031		-0.016	-0.008	0.017	-0.018	0.009	-0.055	-0.027	-0.012	-0.044	0.022
grassesb	-0.286	0.390	0.280	-0.038	0.451	-0.124	-0.158	-0.013	-0.139	0.274	0.298	0.239	0.123		0.148	0.297	0.036	0.427	0.233	0.001		-0.016	0.271	0.222	0.143		0.307	-0.021	0.016	-0.022	-0.026	-0.081	-0.014	-0.020	-0.115	0.510
totalmolb	-0.438	0.413	0.219	-0.095	0.422	-0.131	-0.175	0.009	-0.230	0.319	0.327	0.207	0.031		0.151	0.149	-0.077	0.419	0.142	0.058		0.085	0.233	0.123	0.094		0.214	-0.037	0.015	-0.044	-0.003	-0.171	0.093	-0.031	-0.217	0.556
basidosporesb	-0.305	0.228	0.053	-0.091	0.203	-0.101	-0.106	-0.063	-0.236	0.153	0.143	0.046	-0.072		0.053	-0.008	-0.137	0.191	0.026	-0.021		-0.035	0.112	-0.025	-0.024		0.015	-0.030	-0.034	-0.028	0.000	-0.144	0.196	-0.039	-0.211	0.138
ascosporesb	-0.269	0.204	0.093	-0.105	0.224	-0.173	-0.187	-0.096	-0.245	0.067	0.090	0.055	-0.037		-0.003	0.118	-0.041	0.192	0.097	-0.032		-0.001	0.028	0.065	0.023		0.070	-0.033	-0.035	-0.026	-0.013	-0.126	0.088	-0.059	-0.207	0.304
mitosporesb	-0.390	0.431	0.288	-0.052	0.463	-0.092	-0.152	0.073	-0.130	0.361	0.382	0.277	0.114		0.197	0.218	-0.009	0.465	0.185	-0.011		-0.008	0.274	0.200	0.161		0.308	-0.028	0.059	-0.042	-0.003	-0.135	-0.025	-0.007	-0.128	0.687
dark_mitob	-0.392	0.433	0.288	-0.052	0.467	-0.090	-0.151	0.075	-0.127	0.363	0.386	0.279	0.116		0.195	0.217	-0.009	0.465	0.185	-0.010		-0.008	0.275	0.202	0.162		0.309	-0.027	0.060	-0.042	-0.003	-0.133	-0.029	-0.006	-0.128	0.690
non_dark_mitob	-0.025	0.028	0.042	-0.015	-0.002	-0.065	-0.067	-0.045	-0.083	0.002	0.005	0.016	-0.020		0.068	0.041	-0.010	0.067	0.022	-0.012		-0.015	0.019	-0.010	-0.002		0.016	-0.018	-0.011	-0.015	-0.003	-0.067	0.109	-0.017	-0.015	-0.009
small_sporesb	-0.426	0.403	0.211	-0.092	0.415	-0.128	-0.172	0.009	-0.230	0.312	0.322	0.203	0.033		0.152	0.149	-0.083	0.407	0.141	-0.022		-0.023	0.232	0.117	0.094		0.208	-0.036	0.013	-0.043	-0.003	-0.170	0.095	-0.032	-0.207	0.541
large_sporesb	-0.352	0.441	0.332	-0.018	0.413	-0.105	-0.146	0.018	-0.103	0.355	0.371	0.211	0.019		0.065	0.113	0.071	0.432	0.114	0.018		0.006	0.174	0.236	0.061		0.230	-0.021	0.079	-0.025	-0.008	-0.084	0.008	0.029	-0.082	0.636
parttotb	-0.198	0.149	-0.115	-0.287	0.369	-0.257	-0.273	-0.156	-0.316	0.003	0.061	0.139	0.175		0.206	0.482	-0.368	0.206	0.414	0.005			0.255	0.137	0.205		0.231	0.016	-0.173	-0.092	-0.144	-0.224	-0.071	-0.144	-0.326	0.143
frm2_5b	-0.572	0.838	0.624	0.678	0.030	0.575	0.478	0.633	0.501	0.920	0.868	0.678	0.361	-0.026	0.315	0.163	0.171	0.582	0.168	0.163		0.038	0.385	0.244	0.174		0.564	0.039	0.491	0.249	0.270	0.268	0.156	0.474	0.549	0.480
frm10b	-0.633	0.813	0.675	0.512	0.187	0.481	0.409	0.510	0.165	0.932	0.950	0.748	0.496		0.491	0.420	0.193	0.768	0.305	0.054			0.434	0.518	0.239		0.755	0.316	0.626	0.255	0.407	0.085	0.096	0.551	0.207	0.562
temp_aveb	-0.574	0.466	0.443	-0.091	0.518	-0.154	-0.222	0.048	-0.474	0.351	0.420	0.369	0.146	-0.049	0.187	0.354	0.070	0.623	0.283	0.112		0.072	0.289	0.218	0.154		0.415	-0.052	0.004	-0.048	-0.031	-0.297	0.015	-0.060	-0.450	0.534
rh_aveb	-0.292	0.257	0.200	0.155	-0.341	0.124	0.138	0.061	-0.139	0.165	0.108	0.064	-0.046	-0.005	0.058	0.005	0.040	0.069	0.043	0.110		0.010	0.073	0.086	-0.038		0.036	0.014	0.034	0.019	0.021	-0.005	0.014	0.036	-0.230	-0.187
max_250b	-0.475	0.534	0.907	0.558	0.099	0.416	0.346	0.480	0.190	0.671	0.657	0.666	0.407	-0.029	0.196	0.283	0.221	0.635	0.203	0.023		-0.017	0.269	0.249	0.014		0.618	-0.073	0.293	0.165	0.049	0.053	0.149	0.254	0.066	0.329
max_sootb	-0.161	0.278	0.403	0.928	-0.277	0.713	0.691	0.600	0.484	0.563	0.592	0.467	0.386	-0.026	0.105	-0.060	0.143	0.257	-0.083	-0.004		-0.052	0.141	0.135	-0.091		0.382	-0.009	0.403	0.223	0.145	0.301	0.235	0.423	0.456	-0.043
max_o3b	-0.403	0.454	0.262	-0.165	0.901	-0.327	-0.418	-0.041	-0.421	0.320	0.354	0.273	0.291	-0.005	0.174	0.375	-0.122	0.506	0.317	0.048			0.292	0.200	0.220		0.407	-0.015	-0.069	-0.084	-0.024	-0.132	0.035	-0.098	-0.400	0.632
max_8hrb	-0.367	0.407	0.230	-0.219	0.936	-0.366	-0.442	-0.103	-0.430	0.264	0.295	0.234	0.259	0.004	0.161	0.375	-0.136	0.468	0.323	0.040			0.282	0.172	0.240		0.370	-0.017	-0.095	-0.086	-0.033	-0.138	0.019	-0.122	-0.404	0.635
max_noxb	-0.144	0.180	0.318	0.704	-0.363	0.891	0.873	0.713	0.492	0.474	0.534	0.487	0.336	-0.023	0.183	0.021	0.072	0.265	0.016	0.148		-0.018	0.249	0.051	0.066		0.338	0.042	0.495	0.324	0.313	0.407	0.266	0.484	0.409	-0.039
max_nob	-0.112	0.139	0.278	0.697	-0.408	0.880	0.887	0.650	0.500	0.434	0.489	0.444	0.296	-0.030	0.169	-0.019	0.059	0.221	-0.010	0.142		-0.023	0.231	0.033	0.046		0.289	0.039	0.486	0.315	0.316	0.385	0.254	0.475	0.407	-0.080
max_no2b	-0.353	0.409	0.459	0.559	0.001	0.662	0.504	0.864	0.267	0.618	0.676	0.650	0.520	0.005	0.292	0.276	0.104	0.495	0.184	0.192		0.006	0.316	0.157	0.180		0.575	0.021	0.388	0.224	0.248	0.339	0.217	0.374	0.281	0.266
max_so2b	0.007	0.167	0.195	0.518	-0.353	0.591	0.574	0.485	0.875	0.401	0.380	0.282	0.160	-0.018	-0.008	-0.186	0.149	0.062	-0.111	-0.005		0.020	0.046	-0.038	-0.036		0.136	-0.014	0.253	0.155	0.081	0.369	0.166	0.281	0.851	-0.001
max_pm2_5b	-0.507	0.714	0.596	0.629	0.094	0.551	0.471	0.605	0.315	0.876	0.856	0.680	0.373	-0.019	0.305	0.208	0.146	0.623	0.198	0.160		0.020	0.433	0.222	0.202		0.585	-0.041	0.365	0.237	0.088	0.157	0.242	0.334	0.214	0.427
max_pm10b	-0.529	0.677	0.587	0.664	0.066	0.600	0.512	0.651	0.303	0.839	0.901	0.730	0.542	-0.025	0.312	0.293	0.242	0.662	0.221	0.158		0.022	0.434	0.221	0.182		0.671	-0.056	0.362	0.252	0.072	0.100	0.176	0.297	0.248	0.392
max_parttotb	-0.219	0.158	0.103	0.014	0.139	0.016	-0.005	0.072	-0.197	0.157	0.202	0.269	0.271		0.207	0.324	-0.180	0.255	0.287	0.122			0.253	0.237	0.169		0.296	0.052	-0.005	-0.030	-0.002	-0.153	0.052	0.007	-0.329	0.021
temp_maxb	-0.560	0.462	0.444	-0.071	0.537	-0.130	-0.203	0.074	-0.449	0.368	0.453	0.401	0.158	-0.048	0.210	0.373	0.072	0.642	0.304	0.122		0.071	0.309	0.218	0.168		0.436	-0.050	0.022	-0.036	-0.026	-0.285	0.024	-0.041	-0.423	0.544
rh_maxb	-0.298	0.254	0.211	0.151	-0.213	0.113	0.129	0.048	-0.164	0.177	0.149	0.108	-0.014	-0.021	0.088	0.072	0.014	0.120	0.108	0.116		0.030	0.121	0.055	0.007		0.080	0.048	0.049	0.010	0.061	0.018	0.034	0.052	-0.236	-0.120

Appendix 5 - Correlation Matrix (continued)
Bronx

	hno2b	hno3b	nh3b	totalpolt	tree_pol	ragweec	grasses	totalmol	basidos	ascospc	mitospo	dark_mi	non_dar	small_s	large_sp	parttotb	frm2_5b	frm10b	temp_av	rh_aveb	max_25	max_so	max_o3	max_8h	max_no	max_no	max_no	max_so	max_pn	max_pn	max_pa	temp_m	rh_maxb
phb	-0.168	-0.581	-0.560	-0.154	-0.144	-0.203	-0.286	-0.438	-0.305	-0.269	-0.390	-0.392	-0.025	-0.426	-0.352	-0.198	-0.572	-0.633	-0.574	-0.292	-0.475	-0.161	-0.403	-0.367	-0.144	-0.112	-0.353	0.007	-0.507	-0.529	-0.219	-0.560	-0.298
sulfateb	0.136	0.726	0.394	0.190	0.178	0.226	0.390	0.413	0.228	0.204	0.431	0.433	0.028	0.403	0.441	0.149	0.838	0.813	0.466	0.257	0.534	0.278	0.454	0.407	0.180	0.139	0.409	0.167	0.714	0.677	0.158	0.462	0.254
carb250b	0.376	0.507	0.631	0.182	0.174	-0.023	0.280	0.219	0.053	0.093	0.288	0.288	0.042	0.211	0.332	-0.115	0.624	0.675	0.443	0.200	0.907	0.403	0.262	0.230	0.318	0.278	0.459	0.195	0.596	0.587	0.103	0.444	0.211
sootb	0.752	-0.061	0.176	-0.019	-0.015	0.021	-0.038	-0.095	-0.091	-0.105	-0.052	-0.052	-0.015	-0.092	-0.018	-0.287	0.678	0.512	-0.091	0.155	0.558	0.928	-0.165	-0.219	0.704	0.697	0.559	0.518	0.629	0.664	0.014	-0.071	0.151
o3b	-0.661	0.740	0.175	0.164	0.157	0.063	0.451	0.422	0.203	0.224	0.463	0.467	-0.002	0.415	0.413	0.369	0.030	0.187	0.518	-0.341	0.099	-0.277	0.901	0.936	-0.363	-0.408	0.001	-0.353	0.094	0.066	0.139	0.537	-0.213
noxb	0.778	-0.141	0.173	0.066	0.069	-0.033	-0.124	-0.131	-0.101	-0.173	-0.092	-0.090	-0.065	-0.128	-0.105	-0.257	0.575	0.481	-0.154	0.124	0.416	0.713	-0.327	-0.366	0.891	0.880	0.662	0.591	0.551	0.600	0.016	-0.130	0.113
nob	0.783	-0.218	0.089	0.012	0.016	-0.061	-0.158	-0.175	-0.106	-0.187	-0.152	-0.151	-0.067	-0.172	-0.146	-0.273	0.478	0.409	-0.222	0.138	0.346	0.691	-0.418	-0.442	0.873	0.887	0.504	0.574	0.471	0.512	-0.005	-0.203	0.129
no2b	0.627	0.088	0.386	0.173	0.173	0.042	-0.013	0.009	-0.063	-0.096	0.073	0.075	-0.045	0.009	0.018	-0.156	0.633	0.510	0.048	0.061	0.480	0.600	-0.041	-0.103	0.713	0.650	0.864	0.485	0.605	0.651	0.072	0.074	0.048
so2b	0.510	-0.174	-0.337	-0.060	-0.055	-0.101	-0.139	-0.230	-0.236	-0.245	-0.130	-0.127	-0.083	-0.230	-0.103	-0.316	0.501	0.165	-0.474	-0.139	0.190	0.484	-0.421	-0.430	0.492	0.500	0.267	0.875	0.315	0.303	-0.197	-0.449	-0.164
pm2_5_30b	0.376	0.606	0.521	0.189	0.181	0.152	0.274	0.319	0.153	0.067	0.361	0.363	0.002	0.312	0.355	0.003	0.920	0.932	0.351	0.165	0.671	0.563	0.320	0.264	0.474	0.434	0.618	0.401	0.876	0.839	0.157	0.368	0.177
pm10_30b	0.370	0.584	0.601	0.226	0.218	0.154	0.298	0.327	0.143	0.090	0.382	0.386	0.005	0.322	0.371	0.061	0.868	0.950	0.420	0.108	0.657	0.592	0.354	0.295	0.534	0.489	0.676	0.380	0.856	0.901	0.202	0.453	0.149
acetaldeb	0.316	0.433	0.597	0.343	0.340	0.023	0.239	0.207	0.046	0.055	0.277	0.279	0.016	0.203	0.211	0.139	0.678	0.748	0.369	0.064	0.666	0.467	0.273	0.234	0.487	0.444	0.650	0.282	0.680	0.730	0.269	0.401	0.108
acetoneb	0.192	0.358	0.634	0.166	0.166	-0.063	0.123	0.031	-0.072	-0.037	0.114	0.116	-0.020	0.033	0.019	0.175	0.361	0.496	0.146	-0.046	0.407	0.386	0.291	0.259	0.336	0.296	0.520	0.160	0.373	0.542	0.271	0.158	-0.014
acroleinb	-0.036	-0.020	-0.065														-0.026		-0.049	-0.005	-0.029	-0.026	-0.005	0.004	-0.023	-0.030	0.005	-0.018	-0.019	-0.025		-0.048	-0.021
benzaldeb	-0.110	0.354	0.339	0.457	0.456	-0.041	0.148	0.151	0.053	-0.003	0.197	0.195	0.068	0.152	0.065	0.206	0.315	0.491	0.187	0.058	0.196	0.105	0.174	0.161	0.183	0.169	0.292	-0.008	0.305	0.312	0.207	0.210	0.088
butyraldb	-0.231	0.332	0.409	0.474	0.473	-0.090	0.297	0.149	-0.008	0.118	0.218	0.217	0.041	0.149	0.113	0.482	0.163	0.420	0.354	0.005	0.283	-0.060	0.375	0.375	0.021	-0.019	0.276	-0.186	0.208	0.293	0.324	0.373	0.072
crotonalb	0.430	-0.013	0.221	-0.025	-0.024	-0.083	0.036	-0.077	-0.137	-0.041	-0.009	-0.009	-0.010	-0.083	0.071	-0.368	0.171	0.193	0.070	0.040	0.221	0.143	-0.122	-0.136	0.072	0.059	0.104	0.149	0.146	0.242	-0.180	0.072	0.014
formaldeb	0.078	0.651	0.656	0.263	0.256	0.095	0.427	0.419	0.191	0.192	0.465	0.465	0.067	0.407	0.432	0.206	0.582	0.768	0.623	0.069	0.635	0.257	0.506	0.468	0.265	0.221	0.495	0.062	0.623	0.662	0.255	0.642	0.120
hexaldehb	-0.201	0.362	0.331	0.509	0.508	-0.063	0.233	0.142	0.026	0.097	0.185	0.185	0.022	0.141	0.114	0.414	0.168	0.305	0.283	0.043	0.203	-0.083	0.317	0.323	0.016	-0.010	0.184	-0.111	0.198	0.221	0.287	0.304	0.108
isovalerb	-0.013	-0.002	0.241	0.140	0.037	-0.017	0.001	0.058	-0.021	-0.032	-0.011	-0.010	-0.012	-0.022	0.018	0.005	0.163	0.054	0.112	0.110	0.023	-0.004	0.048	0.040	0.148	0.142	0.192	-0.005	0.160	0.158	0.122	0.122	0.116
m_tolualb																																	
o_tolualb	-0.036	-0.012	0.274	-0.006	-0.012	-0.018	-0.016	0.085	-0.035	-0.001	-0.008	-0.008	-0.015	-0.023	0.006		0.038		0.072	0.010	-0.017	-0.052			-0.018	-0.023	0.006	0.020	0.020	0.022		0.071	0.030
p_tolualb	-0.068	0.458	0.395	0.275	0.270	0.162	0.271	0.233	0.112	0.028	0.274	0.275	0.019	0.232	0.174	0.255	0.385	0.434	0.289	0.073	0.269	0.141	0.292	0.282	0.249	0.231	0.316	0.046	0.433	0.434	0.253	0.309	0.121
propionab	-0.069	0.530	0.278	0.063	0.062	-0.049	0.222	0.123	-0.025	0.065	0.200	0.202	-0.010	0.117	0.236	0.137	0.244	0.518	0.218	0.086	0.249	0.135	0.200	0.172	0.051	0.033	0.157	-0.038	0.222	0.221	0.237	0.218	0.055
valeraldb	-0.165	0.325	0.303	0.701	0.700	-0.031	0.143	0.094	-0.024	0.023	0.161	0.162	-0.002	0.094	0.061	0.205	0.174	0.239	0.154	-0.038	0.014	-0.091	0.220	0.240	0.066	0.046	0.180	-0.036	0.202	0.182	0.169	0.168	0.007
_2_5_dimb																																	
total_aldehydesb	0.141	0.537	0.686	0.315	0.312	-0.016	0.307	0.214	0.015	0.070	0.308	0.309	0.016	0.208	0.230	0.231	0.564	0.755	0.415	0.036	0.618	0.382	0.407	0.370	0.338	0.289	0.575	0.136	0.585	0.671	0.296	0.436	0.080
metal_crb	0.087	-0.041	0.095	-0.011	-0.010	-0.008	-0.021	-0.037	-0.030	-0.033	-0.028	-0.027	-0.018	-0.036	-0.021	0.016	0.039	0.316	-0.052	0.014	-0.073	-0.009	-0.015	-0.017	0.042	0.039	0.021	-0.014	-0.041	-0.056	0.052	-0.050	0.048
metal_feb	0.266	0.033	0.127	-0.060	-0.061	0.017	0.016	0.015	-0.034	-0.035	0.059	0.060	-0.011	0.013	0.079	-0.173	0.491	0.626	0.004	0.034	0.293	0.403	-0.069	-0.095	0.495	0.486	0.388	0.253	0.365	0.362	-0.005	0.022	0.049
metal_pbb	0.093	-0.052	-0.029	-0.019	-0.018	-0.018	-0.022	-0.044	-0.028	-0.026	-0.042	-0.042	-0.015	-0.043	-0.025	-0.092	0.249	0.255	-0.048	0.019	0.165	0.223	-0.084	-0.086	0.324	0.315	0.224	0.155	0.237	0.252	-0.030	-0.036	0.010
metal_mnb	0.329	0.025	0.160	-0.002	-0.002	0.009	-0.026	-0.003	0.000	-0.013	-0.003	-0.003	-0.003	-0.003	-0.008	-0.144	0.270	0.407	-0.031	0.021	0.049	0.145	-0.024	-0.033	0.313	0.316	0.248	0.081	0.088	0.072	-0.002	-0.026	0.061
metal_nib	0.319	-0.095	-0.202	-0.034	-0.031	-0.055	-0.081	-0.171	-0.144	-0.126	-0.135	-0.133	-0.067	-0.170	-0.084	-0.224	0.268	0.085	-0.297	-0.005	0.053	0.301	-0.132	-0.138	0.407	0.385	0.339	0.369	0.157	0.100	-0.153	-0.285	0.018
metal_znb	0.194	-0.052	0.005	-0.025	-0.023	-0.027	-0.014	0.093	0.196	0.088	-0.025	-0.029	0.109	0.095	0.008	-0.071	0.156	0.096	0.015	0.014	0.149	0.235	0.035	0.019	0.266	0.254	0.217	0.166	0.242	0.176	0.052	0.024	0.034
total_metalsb	0.271	-0.023	0.069	-0.062	-0.061	-0.012	-0.020	-0.031	-0.039	-0.059	-0.007	-0.006	-0.017	-0.032	0.029	-0.144	0.474	0.551	-0.060	0.036	0.254	0.423	-0.098	-0.122	0.484	0.475	0.374	0.281	0.334	0.297	0.007	-0.041	0.052
denu_so2b	0.410	-0.047	-0.364	-0.025	-0.021	-0.044	-0.115	-0.217	-0.211	-0.207	-0.128	-0.128	-0.015	-0.207	-0.082	-0.326	0.549	0.207	-0.450	-0.230	0.066	0.456	-0.400	-0.404	0.409	0.407	0.281	0.851	0.214	0.248	-0.329	-0.423	-0.236
hclb	-0.175	0.821	0.315	0.228	0.224	0.022	0.510	0.556	0.138	0.304	0.687	0.690	-0.009	0.541	0.636	0.143	0.480	0.562	0.534	-0.187	0.329	-0.043	0.632	0.635	-0.039	-0.080	0.266	-0.001	0.427	0.392	0.021	0.544	-0.120
hno2b	1	-0.303	0.188	-0.106	-0.104	0.011	-0.275	-0.250	-0.112	-0.173	-0.267	-0.268	0.009	-0.246	-0.200	-0.409	0.502	0.167	-0.162	0.448	0.482	0.703	-0.550	-0.579	0.681	0.692	0.434	0.491	0.407	0.443	-0.111	-0.158	0.379
hno3b	-0.303	1	0.413	0.209	0.204	0.050	0.637	0.639	0.194	0.402	0.755	0.755	0.072	0.621	0.701	0.276	0.504	0.646	0.701	-0.149	0.400	-0.079	0.837	0.820	-0.106	-0.145	0.243	-0.102	0.485	0.456	0.125	0.703	-0.070
nh3b	0.188	0.413	1	0.357	0.324	0.169	0.204	0.396	0.198	0.273	0.333	0.333	0.127	0.354	0.227	0.310	0.373	0.764	0.786	0.232	0.603	0.177	0.344	0.338	0.224	0.193	0.497	-0.206	0.496	0.570	0.535	0.789	0.245
totalpolb	-0.106	0.209	0.357	1	0.999	-0.005	0.066	0.047	-0.037	0.047	0.098	0.099	-0.024	0.048	0.000	0.143	0.156	0.240	0.174	-0.054	0.195	0.012	0.225	0.237	0.106	0.082	0.238	-0.051	0.179	0.170	0.125	0.199	-0.014
tree_pollenb	-0.104	0.204	0.324	0.999	1	-0.035	0.047	0.032	-0.050	0.034	0.087	0.089	-0.026	0.034	-0.013	0.145	0.150	0.232	0.162	-0.056	0.187	0.022	0.215	0.228	0.109	0.085	0.237	-0.047	0.173	0.164	0.128	0.188	-0.017
ragweedb	0.011	0.050	0.169	-0.005	-0.035	1	0.211	0.376	0.396	0.284	0.224	0.222	0.079	0.371	0.258	-0.005	0.124	0.190	0.259	0.113	-0.009	-0.021	0.180	0.138	-0.063	-0.063	0.044	-0.092	0.111	0.097	-0.024	0.252	0.127
grassesb	-0.275	0.637	0.204	0.066	0.047	0.211	1	0.333	0.082	0.242	0.424	0.423	0.068	0.325	0.364	0.113	0.255	0.376	0.400	-0.066	0.241	-0.044	0.465	0.452	-0.096	-0.115	0.049	-0.093	0.262	0.259	0.026	0.401	-0.032
totalmolb	-0.250	0.639	0.396	0.047	0.032	0.376	0.333	1	0.779	0.630	0.855	0.851	0.201	0.999	0.555	0.204	0.222	0.399	0.603	0.042	0.187	-0.109	0.505	0.490	-0.120	-0.132	0.126	-0.172	0.268	0.255	0.131	0.592	0.098
basidosporesb	-0.112	0.194	0.198	-0.037	-0.050	0.396	0.082	0.779	1	0.427	0.357	0.353	0.132	0.787	0.249	0.097	0.061	0.132	0.444	0.142	0.046	-0.091	0.314	0.283	-0.102	-0.096	-0.001	-0.183	0.144	0.105	0.050	0.421	0.170
ascosporesb	-0.173	0.402	0.273	0.047	0.034	0.284	0.242	0.630	0.427	1	0.471	0.462	0.269	0.635	0.228	0.095	0.059	0.181	0.460	0.133	0.069	-0.116	0.293	0.272	-0.157	-0.166	0.014	-0.181	0.063	0.082	-0.027	0.443	0.170
mitosporesb	-0.267	0.755	0.333	0.098	0.087	0.224	0.424	0.855	0.357	0.471	1	0.999	0.167	0.847	0.651	0.243	0.287	0.482	0.529	-0.072	0.244	-0.074	0.497	0.502	-0.080	-0.100	0.185	-0.092	0.293	0.299	0.185	0.532	-0.010
dark_mitob	-0.268	0.755	0.333	0.099	0.089	0.222	0.423	0.851	0.353	0.462	0.999	1	0.122	0.843	0.654	0.244	0.288	0.484	0.528	-0.075	0.245	-0.073	0.499	0.505	-0.077	-0.097	0.187	-0.089	0.296	0.301	0.184	0.530	-0.012
non_dark_mitob	0.009	0.072	0.127	-0.024	-0.026	0.079	0.068	0.201	0.132	0.269	0.167	0.122	1	0.204	0.018	0.006	0.004	0.035	0.112	0.063	0.017	-0.037	0.036	0.021	-0.079	-0.071	-0.020	-0.074	-0.016	0.013	0.043	0.109	0.044
small_sporesb	-0.246	0.621	0.354	0.048	0.034	0.371	0.325	0.999	0.787	0.635	0.847	0.843	0.204	1	0.525	0.203	0.215	0.391	0.598	0.042	0.179	-0.106	0.499	0.484	-0.118	-0.129	0.127	-0.172	0.264	0.250	0.132	0.586	0.100
large_sporesb	-0.200	0.701	0.227	0.000	-0.013	0.258	0.364	0.555	0.249	0.228	0.651	0.654	0.018	0.525	1	0.187	0.302	0.462	0.426	-0.023	0.275	-0.037	0.428	0.429	-0.103	-0.122	0.073	-0.076	0.271	0.296	0.099	0.425	-0.011
parttotb	-0.409	0.276	0.310	0.143	0.145	-0.005	0.113	0.204	0.097	0.095	0.243	0.244	0.006	0.203	0.187	1	-0.081	0.131	0.310	0.065	-0.118	-0.238	0.369	0.367	-0.240	-0.254	-0.029	-0.292	-0.050	0.019	0.682	0.303	0.125
frm2_5b	0.502	0.504	0.373	0.156	0.150	0.124	0.255	0.222	0.061	0.059	0.287	0.288	0.004	0.215	0.302	-0.081	1	0.886	0.225	0.188	0.635	0.571	0.210	0.170	0.462	0.424	0.554	0.485	0.822	0.778	0.051	0.236	0.192
frm10b	0.167	0.646	0.764	0.240	0.232	0.190	0.376	0.399	0.132	0.181	0.482	0.484	0.035	0.391	0.462	0.131	0.886	1	0.498	0.164	0.744	0.391	0.301	0.257	0.433	0.398	0.475	0.092	0.867	0.856	0.371	0.525	0.149
temp_aveb	-0.162	0.701	0.786	0.174	0.162	0.259	0.400	0.603	0.444	0.460	0.529	0.528	0.112	0.598	0.426	0.310	0.225	0.498	1	0.150	0.404	-0.065	0.658	0.615	-0.075	-0.107	0.223	-0.312	0.333	0.360	0.326	0.985	0.190
rh_aveb	0.448	-0.149	0.232	-0.054	-0.056	0.113	-0.066	0.042	0.142	0.133	-0.072	-0.075	0.063	0.042	-0.023	0.065	0.188	0.164	0.150	1	0.177	0.135	-0.246	-0.279	0.027	0.046	-0.060	-0.153	0.151	0.123	0.129	0.097	0.889
max_250b	0.482	0.400	0.603	0.195	0.187	-0.009	0.241	0.187	0.046	0.069	0.244	0.245	0.017	0.179	0.275	-0.118	0.635	0.744	0.404	0.177	1	0.607	0.256	0.221	0.475	0.436	0.562	0.245	0.690	0.678	0.082	0.416	0.196
max_sootb	0.703	-0.079	0.177	0.012	0.022	-0.021	-0.044	-0.109	-0.091	-0.116	-0.074	-0.073	-0.037	-0.106	-0.037	-0.238	0.571	0.391	-0.065	0.135	0.607	1	-0.105	-0.151	0.738	0.733	0.536	0.473	0.645	0.667	0.005	-0.043	0.148
max_o3b	-0.550	0.837	0.344	0.225	0.215	0.180	0.465	0.505	0.314	0.293	0.497	0.499	0.036	0.499	0.428	0.369	0.210	0.301	0.658	-0.246	0.256	-0.105	1	0.972	-0.192	-0.243	0.207	-0.262	0.287	0.267	0.163	0.683	-0.118
max_8hrb	-0.579	0.820	0.338	0.237	0.228	0.138	0.452	0.490	0.283	0.272	0.502	0.505	0.021	0.484	0.429	0.367	0.170	0.257	0.615	-0.279	0.221	-0.151	0.972	1	-0.221	-0.272	0.165	-0.279	0.245	0.222	0.162	0.639	-0.148
max_noxb	0.681	-0.106	0.224	0.106	0.109	-0.063	-0.096	-0.120	-0.102	-0.157	-0.080	-0.077	-0.079	-0.118	-0.103	-0.240	0.462	0.433	-0.075	0.027	0.475	0.738	-0.192	-0.221	1	0.991	0.679	0.507	0.587	0.612	-0.004	-0.043	0.044
max_nob	0.692	-0.145	0.193	0.082	0.085	-0.063	-0.115	-0.132	-0.096	-0.166	-0.100	-0.097	-0.071	-0.129	-0.122	-0.254	0.424	0.398	-0.107	0.046	0.436	0.733	-0.243	-0.272	0.991	1	0.592	0.512	0.550	0.572	-0.016	-0.077	0.061
max_no2b	0.434	0.243	0.497	0.238	0.237	0.044	0.049	0.126	-0.001	0.014	0.185	0.187	-0.020	0.127	0.073	-0.029	0.554	0.475	0.223	-0.060	0.562	0.536	0.207	0.165	0.679	0.592	1	0.296	0.653	0.671	0.119	0.266	-0.031
max_so2b	0.491	-0.102	-0.206	-0.051	-0.047	-0.092	-0.093	-0.172	-0.183	-0.181	-0.092	-0.089	-0.074	-0.172	-0.076	-0.292	0.485	0.092	-0.312	-0.153	0.245	0.473	-0.262	-0.279	0.507	0.512	0.296	1	0.366	0.373	-0.166	-0.283	-0.146
max_pm2_5b	0.407	0.485	0.496	0.179	0.173	0.111	0.262	0.268	0.144	0.063	0.293	0.296	-0.016	0.264	0.271	-0.050	0.822	0.867	0.333	0.151	0.690	0.645	0.287	0.245	0.587	0.550	0.653	0.366	1	0.914	0.147	0.358	0.188
max_pm10b	0.443	0.456	0.570	0.170	0.164	0.097	0.259	0.255	0.105	0.082	0.299	0.301	0.013	0.250	0.296	0.019	0.778	0.856	0.360	0.123	0.678	0.667	0.267	0.222	0.612	0.572	0.671	0.373	0.914	1	0.202	0.395	0.170
max_parttotb	-0.111	0.125	0.535	0.125	0.128	-0.024	0.026	0.131	0.050	-0.027	0.185	0.184	0.043	0.132	0.099	0.682	0.051	0.371	0.326	0.129	0.082	0.005	0.163	0.162	-0.004	-0.016	0.119	-0.166	0.147	0.202	1	0.338	0.173
temp_maxb	-0.158	0.703	0.789	0.199	0.188	0.252	0.401	0.592	0.421	0.443	0.532	0.530	0.109	0.586	0.425	0.303	0.236	0.525	0.985	0.097	0.416	-0.043	0.683	0.639	-0.043	-0.077	0.266	-0.283	0.358	0.395	0.338	1	0.153
rh_maxb	0.379	-0.070	0.245	-0.014	-0.017	0.127	-0.032	0.098	0.170	0.170	-0.010	-0.012	0.044	0.100	-0.011	0.125	0.192	0.149	0.190	0.889	0.196	0.148	-0.118	-0.148	0.044	0.061	-0.031	-0.146	0.188	0.170	0.173	0.153	1

Appendix 5 - Correlation Matrix (continued)
Manhattan

	phm	sulfatem	carb250	sootm	o3m	noxm	nom	no2m	so2m	pm2_5_	pm10_3	acetalde	acetone	acrolein	benzald	butyrald	crotonal	formald	hexalde	isovaler	m_tolua	o_tolual	p_tolual	propion	valerald	_2_5_di	total_alc	metal_c	metal_fe	metal_p	metal_m	metal_n	metal_z	total_me	denu_so	hclm
phm	1	-0.707	-0.671	-0.295	-0.488	0.042	0.124	-0.247	0.181	-0.627	-0.585	-0.432	-0.124	-0.053	-0.070	0.066	-0.143	-0.591	-0.109	-0.113		-0.036	-0.224	-0.234	-0.062		-0.350	0.056	-0.146	0.007	-0.121	0.186	-0.046	-0.077	0.097	-0.660
sulfatem	-0.707	1	0.642	0.421	0.421	0.100	-0.010	0.410	0.078	0.880	0.774	0.484	0.119	-0.033	0.004	0.005	0.090	0.617	0.100	0.151		-0.013	0.276	0.211	-0.028		0.340	-0.029	0.244	0.042	0.136	-0.018	0.057	0.182	0.139	0.694
carb250m	-0.671	0.642	1	0.614	0.277	0.304	0.220	0.452	0.047	0.728	0.716	0.576	0.227	-0.013	0.019	-0.089	0.122	0.669	0.080	0.112		-0.011	0.329	0.149	-0.010		0.416	-0.025	0.327	0.098	0.183	-0.082	0.067	0.246	0.076	0.569
sootm	-0.295	0.421	0.614	1	-0.057	0.758	0.669	0.720	0.504	0.651	0.642	0.575	0.473	-0.033	-0.003	0.137	0.216	0.502	0.036	0.074		-0.025	0.232	0.112	-0.050		0.449	-0.046	0.506	0.255	0.177	0.251	0.194	0.491	0.447	0.339
o3m	-0.488	0.421	0.277	-0.057	1	-0.486	-0.586	0.026	-0.404	0.267	0.247	0.126	0.086	0.010	0.036	0.081	-0.069	0.426	0.051	0.065		0.025	0.193	0.225	0.036		0.209	-0.038	0.007	-0.097	-0.091	-0.235	-0.019	-0.058	-0.330	0.670
noxm	0.042	0.100	0.304	0.758	-0.486	1	0.970	0.673	0.767	0.397	0.437	0.403	0.361	-0.061	-0.051	0.009	0.167	0.173	-0.058	-0.027		-0.040	0.112	-0.088	-0.080		0.233	0.002	0.452	0.280	0.210	0.428	0.207	0.512	0.729	-0.086
nom	0.124	-0.010	0.220	0.669	-0.586	0.970	1	0.474	0.757	0.267	0.300	0.296	0.268	-0.046	-0.052	-0.041	0.165	0.054	-0.068	-0.055		-0.041	0.043	-0.124	-0.065		0.138	0.018	0.384	0.281	0.199	0.425	0.211	0.465	0.707	-0.227
no2m	-0.247	0.410	0.452	0.720	0.026	0.673	0.474	1	0.473	0.636	0.682	0.572	0.499	-0.080	-0.023	0.144	0.112	0.473	0.001	0.071		-0.019	0.282	0.063	-0.088		0.432	-0.049	0.474	0.162	0.164	0.249	0.111	0.438	0.472	0.409
so2m	0.181	0.078	0.047	0.504	-0.404	0.767	0.757	0.473	1	0.255	0.240	0.180	0.049	-0.096	-0.119	-0.004	0.012	-0.004	-0.119	-0.077		-0.046	0.002	-0.122	-0.103		0.000	0.036	0.264	0.170	0.101	0.555	0.145	0.372	0.943	-0.049
pm2_5_30m	-0.627	0.880	0.728	0.651	0.267	0.397	0.267	0.636	0.255	1	0.907	0.607	0.200	-0.044	-0.011	0.025	0.135	0.654	0.068	0.120		-0.009	0.289	0.192	-0.043		0.404	-0.018	0.403	0.133	0.207	0.071	0.108	0.343	0.289	0.613
pm10_30m	-0.585	0.774	0.716	0.642	0.247	0.437	0.300	0.682	0.240	0.907	1	0.592	0.223	-0.064	-0.022	0.020	0.114	0.625	0.045	0.108		-0.033	0.363	0.153	-0.060		0.396	-0.019	0.437	0.205	0.260	0.070	0.156	0.382	0.347	0.588
acetaldem	-0.432	0.484	0.576	0.575	0.126	0.403	0.296	0.572	0.180	0.607	0.592	1	0.344	0.317	0.536	0.336	0.599	0.827	0.603	0.513		0.016	0.302	0.214	0.306		0.811	-0.039	0.338	0.173	0.122	-0.008	0.061	0.267	0.166	0.412
acetonem	-0.124	0.119	0.227	0.473	0.086	0.361	0.268	0.499	0.049	0.200	0.223	0.344	1	-0.114	0.097	0.088	0.235	0.301	0.148	0.217		-0.023	0.100	0.126	-0.103		0.708	-0.020	0.200	0.103	0.039	-0.016	0.078	0.167	0.081	0.307
acroleinm	-0.053	-0.033	-0.013	-0.033	0.010	-0.061	-0.046	-0.080	-0.096	-0.044	-0.064	0.317	-0.114	1	0.640	0.177	0.390	0.282	0.444	-0.013		-0.006	-0.021	0.095	0.873		0.335	-0.010	0.043	-0.020	-0.027	-0.066	-0.013	0.006	-0.110	0.035
benzaldem	-0.070	0.004	0.019	-0.003	0.036	-0.051	-0.052	-0.023	-0.119	-0.011	-0.022	0.536	0.097	0.640	1	0.308	0.651	0.407	0.808	0.559		-0.008	0.115	0.171	0.617		0.590	-0.013	0.028	-0.010	-0.024	-0.092	-0.018	-0.016	-0.137	0.061
butyraldm	0.066	0.005	-0.089	0.137	0.081	0.009	-0.041	0.144	-0.004	0.025	0.020	0.336	0.088	0.177	0.308	1	0.242	0.290	0.349	0.288		0.012	-0.008	0.118	0.176		0.375	-0.034	0.061	-0.010	-0.040	-0.031	-0.035	0.021	-0.038	0.116
crotonalm	-0.143	0.090	0.122	0.216	-0.069	0.167	0.165	0.112	0.012	0.135	0.114	0.599	0.235	0.390	0.651	0.242	1	0.417	0.753	0.622		0.152	0.041	0.293	0.377		0.666	-0.025	0.121	0.053	0.010	-0.056	0.052	0.081	0.107	0.039
formaldem	-0.591	0.617	0.669	0.502	0.426	0.173	0.054	0.473	-0.004	0.654	0.625	0.827	0.301	0.282	0.407	0.290	0.417	1	0.409	0.315		0.011	0.301	0.359	0.289		0.752	-0.037	0.312	0.116	0.097	-0.142	0.053	0.212	0.003	0.730
hexaldehm	-0.109	0.100	0.080	0.036	0.051	-0.058	-0.068	0.001	-0.119	0.068	0.045	0.603	0.148	0.444	0.808	0.349	0.753	0.409	1	0.855		-0.003	0.128	0.207	0.440		0.653	-0.014	-0.001	-0.027	-0.026	-0.098	-0.018	-0.044	-0.133	0.067
isovalerm	-0.113	0.151	0.112	0.074	0.065	-0.027	-0.055	0.071	-0.077	0.120	0.108	0.513	0.217	-0.013	0.559	0.288	0.622	0.315	0.855	1		0.065	0.218	0.170	-0.010		0.549	-0.012	-0.025	-0.019	-0.022	-0.077	-0.015	-0.054	-0.081	0.089
m_tolualm																																				
o_tolualm	-0.036	-0.013	-0.011	-0.025	0.025	-0.040	-0.041	-0.019	-0.046	-0.009	-0.033	0.016	-0.023	-0.006	-0.008	0.012	0.152	0.011	-0.003	0.065		1	-0.012	0.005	-0.006		0.019	0.070	0.007	-0.010	-0.013	-0.017	-0.006	0.007	-0.061	0.028
p_tolualm	-0.224	0.276	0.329	0.232	0.193	0.112	0.043	0.282	0.002	0.289	0.363	0.302	0.100	-0.021	0.115	-0.008	0.041	0.301	0.128	0.218		-0.012	1	0.019	-0.023		0.242	-0.020	0.059	0.059	0.088	-0.045	-0.009	0.019	0.005	0.265
propionam	-0.234	0.211	0.149	0.112	0.225	-0.088	-0.124	0.063	-0.122	0.192	0.153	0.214	0.126	0.095	0.171	0.118	0.293	0.359	0.207	0.170		0.005	0.019	1	0.116		0.403	-0.014	0.084	-0.005	-0.033	-0.103	0.043	0.044	-0.108	0.354
valeraldm	-0.062	-0.028	-0.010	-0.050	0.036	-0.080	-0.065	-0.088	-0.103	-0.043	-0.060	0.306	-0.103	0.873	0.617	0.176	0.377	0.289	0.440	-0.010		-0.006	-0.023	0.116	1		0.330	-0.010	0.032	-0.028	-0.030	-0.068	-0.014	-0.005	-0.109	0.055
_2_5_dimm																																				
total_aldehydesm	-0.350	0.340	0.416	0.449	0.209	0.233	0.138	0.432	0.000	0.404	0.396	0.811	0.708	0.335	0.590	0.375	0.666	0.752	0.653	0.549		0.019	0.242	0.403	0.330		1	-0.038	0.256	0.108	0.055	-0.092	0.064	0.179	0.011	0.421
metal_crm	0.056	-0.029	-0.025	-0.046	-0.038	0.002	0.018	-0.049	0.036	-0.018	-0.019	-0.039	-0.020	-0.010	-0.013	-0.034	-0.025	-0.037	-0.014	-0.012		0.070	-0.020	-0.014	-0.010		-0.038	1	0.056	-0.020	0.155	0.072	-0.012	0.081	0.007	-0.010
metal_fem	-0.146	0.244	0.327	0.506	0.007	0.452	0.384	0.474	0.264	0.403	0.437	0.338	0.200	0.043	0.028	0.061	0.121	0.312	-0.001	-0.025		0.007	0.059	0.084	0.032		0.256	0.056	1	0.288	0.345	0.356	0.166	0.936	0.250	0.246
metal_pbm	0.007	0.042	0.098	0.255	-0.097	0.280	0.281	0.162	0.170	0.133	0.205	0.173	0.103	-0.020	-0.010	-0.010	0.053	0.116	-0.027	-0.019		-0.010	0.059	-0.005	-0.028		0.108	-0.020	0.288	1	0.273	0.211	0.188	0.369	0.173	-0.034
metal_mnm	-0.121	0.136	0.183	0.177	-0.091	0.210	0.199	0.164	0.101	0.207	0.260	0.122	0.039	-0.027	-0.024	-0.040	0.010	0.097	-0.026	-0.022		-0.013	0.088	-0.033	-0.030		0.055	0.155	0.345	0.273	1	0.194	0.166	0.372	0.193	0.044
metal_nim	0.186	-0.018	-0.082	0.251	-0.235	0.428	0.425	0.249	0.555	0.071	0.070	-0.008	-0.016	-0.066	-0.092	-0.031	-0.056	-0.142	-0.098	-0.077		-0.017	-0.045	-0.103	-0.068		-0.092	0.072	0.356	0.211	0.194	1	0.155	0.560	0.564	-0.141
metal_znm	-0.046	0.057	0.067	0.194	-0.019	0.207	0.211	0.111	0.145	0.108	0.156	0.061	0.078	-0.013	-0.018	-0.035	0.052	0.053	-0.018	-0.015		-0.006	-0.009	0.043	-0.014		0.064	-0.012	0.166	0.188	0.166	0.155	1	0.393	0.127	0.043
total_metalsm	-0.077	0.182	0.246	0.491	-0.058	0.512	0.465	0.438	0.372	0.343	0.382	0.267	0.167	0.006	-0.016	0.021	0.081	0.212	-0.044	-0.054		0.007	0.019	0.044	-0.005		0.179	0.081	0.936	0.369	0.372	0.560	0.393	1	0.367	0.146
denu_so2m	0.097	0.139	0.076	0.447	-0.330	0.729	0.707	0.472	0.943	0.289	0.347	0.166	0.081	-0.110	-0.137	-0.038	0.107	0.003	-0.133	-0.081		-0.061	0.005	-0.108	-0.109		0.011	0.007	0.250	0.173	0.193	0.564	0.127	0.367	1	0.041
hclm	-0.660	0.694	0.569	0.339	0.670	-0.086	-0.227	0.409	-0.049	0.613	0.588	0.412	0.307	0.035	0.061	0.116	0.039	0.730	0.067	0.089		0.028	0.265	0.354	0.055		0.421	-0.010	0.246	-0.034	0.044	-0.141	0.043	0.146	0.041	1
hno2m	0.034	0.019	0.276	0.468	-0.588	0.661	0.678	0.309	0.403	0.232	0.227	0.248	0.124	-0.008	-0.031	-0.049	0.240	-0.026	-0.014	0.000		-0.012	-0.019	-0.139	-0.034		0.087	-0.003	0.242	0.177	0.246	0.166	0.068	0.293	0.376	-0.323
hno3m	-0.669	0.704	0.511	0.342	0.734	-0.120	-0.249	0.354	-0.005	0.588	0.532	0.317	0.258	-0.028	-0.008	0.080	-0.027	0.645	0.013	0.046		-0.002	0.176	0.285	-0.006		0.325	-0.005	0.197	-0.035	0.008	-0.057	0.033	0.114	0.064	0.856
nh3m	-0.527	0.323	0.737	0.427	0.272	0.077	-0.045	0.404	-0.278	0.459	0.473	0.516	0.452	0.055	0.309	-0.133	0.088	0.573	0.478	0.273		0.009	0.404	0.187			0.577	-0.049	0.340	0.035	0.252	-0.319	-0.001	0.193	-0.237	0.392
totalpolm	-0.135	0.132	0.209	0.123	0.120	0.053	-0.001	0.196	-0.033	0.169	0.215	0.163	0.089	-0.012	0.001	-0.011	-0.025	0.157	0.018	0.068		-0.008	0.390	0.056	0.000		0.138	-0.014	-0.068	-0.021	-0.026	-0.054	-0.012	-0.085	0.006	0.177
tree_pollenm	-0.125	0.121	0.203	0.124	0.113	0.058	0.006	0.195	-0.027	0.161	0.208	0.154	0.087	-0.014	-0.009	-0.015	-0.034	0.146	0.004	0.054		-0.008	0.384	0.051	-0.002		0.128	-0.013	-0.070	-0.019	-0.027	-0.049	-0.011	-0.084	0.009	0.167
ragweedm	-0.193	0.210	0.083	-0.061	0.116	-0.131	-0.144	-0.033	-0.139	0.146	0.148	0.193	0.054	0.040	0.200	0.091	0.268	0.214	0.364	0.382		-0.002	0.046	0.076	0.037		0.226	-0.002	0.012	-0.033	0.011	-0.121	-0.016	-0.037	-0.081	0.178
grassesm	-0.297	0.347	0.257	0.057	0.314	-0.151	-0.200	0.068	-0.132	0.219	0.215	0.129	0.001	-0.009	0.100	0.042	0.058	0.307	0.154	0.191		0.008	0.302	0.167	0.022		0.160	-0.021	0.055	-0.055	0.063	-0.128	-0.028	-0.006	-0.100	0.521
totalmolm	-0.463	0.413	0.363	0.036	0.443	-0.242	-0.300	0.049	-0.270	0.313	0.292	0.251	0.056	0.026	0.104	-0.032	0.110	0.497	0.170	0.185		0.073	0.127	0.237	0.036		0.260	0.003	0.070	-0.025	0.059	-0.259	-0.023	-0.023	-0.210	0.581
basidosporesm	-0.318	0.163	0.200	-0.125	0.222	-0.254	-0.266	-0.100	-0.337	0.091	0.112	0.134	0.023	0.051	0.122	-0.054	0.114	0.281	0.197	0.184		0.033	0.055	0.112	0.049		0.166	0.010	-0.020	-0.020	0.100	-0.238	-0.035	-0.075	-0.303	0.202
ascosporesm	-0.264	0.188	0.199	-0.048	0.231	-0.239	-0.257	-0.074	-0.271	0.143	0.137	0.066	0.012	-0.013	0.008	-0.002	0.005	0.178	0.101	0.108		0.037	0.037	0.236	0.045		0.115	-0.006	0.021	-0.041	0.039	-0.188	-0.027	-0.043	-0.236	0.202
mitosporesm	-0.435	0.464	0.367	0.132	0.462	-0.165	-0.237	0.134	-0.149	0.357	0.325	0.270	0.063	0.009	0.076	-0.012	0.089	0.520	0.113	0.140		0.079	0.146	0.238	0.016		0.257	0.000	0.106	-0.017	0.018	-0.198	-0.008	0.013	-0.107	0.658
dark_mitom	-0.437	0.467	0.367	0.134	0.464	-0.164	-0.237	0.135	-0.146	0.358	0.327	0.269	0.064	0.009	0.077	-0.010	0.090	0.520	0.113	0.142		0.080	0.149	0.240	0.016		0.258	0.000	0.106	-0.017	0.016	-0.196	-0.007	0.014	-0.105	0.660
non_dark_mitom	-0.075	0.063	0.071	-0.016	0.061	-0.062	-0.079	0.019	-0.094	0.069	0.025	0.070	0.004	0.010	-0.003	-0.052	-0.002	0.123	0.008	-0.004		-0.012	-0.024	0.020	0.012		0.034	0.006	0.017	-0.009	0.039	-0.088	-0.028	-0.013	-0.060	0.113
small_sporesm	-0.462	0.404	0.359	0.031	0.440	-0.245	-0.302	0.044	-0.277	0.304	0.287	0.246	0.054	0.028	0.104	-0.033	0.108	0.491	0.169	0.182		0.076	0.128	0.236	0.038		0.257	0.004	0.068	-0.027	0.058	-0.262	-0.023	-0.026	-0.219	0.575
large_sporesm	-0.344	0.442	0.294	0.105	0.343	-0.118	-0.176	0.114	-0.064	0.350	0.281	0.253	0.054	-0.015	0.074	0.015	0.100	0.440	0.135	0.169		-0.003	0.093	0.167	-0.005		0.225	-0.010	0.080	0.022	0.034	-0.106	-0.006	0.021	-0.024	0.521
parttotm	0.080	-0.003	0.085	0.014	-0.026	0.112	0.131	0.004	0.182	-0.030	0.005	-0.057	-0.004		0.013	0.182	-0.131	-0.082	0.006	0.003		-0.072	0.049	-0.015	-0.023		-0.042	-0.005	-0.002	0.052	0.072	0.115	0.027	0.032	0.451	-0.006
frm2_5m	-0.467	0.705	0.607	0.680	0.050	0.549	0.460	0.598	0.457	0.801	0.737	0.521	0.179	-0.057	-0.022	0.000	0.126	0.470	0.049	0.109		0.030	0.327	0.079	-0.064		0.321	0.022	0.361	0.181	0.196	0.153	0.108	0.341	0.511	0.418
frm10m	-0.667	0.751	0.741	0.702	0.179	0.428	0.306	0.598	0.221	0.827	0.832	0.597	0.429	-0.069	-0.084	0.054	0.180	0.588	0.221	0.285		-0.006	0.540	0.194	-0.087		0.503	0.057	0.515	0.260	0.365	0.046	-0.078	0.418	0.251	0.540
temp_avem	-0.657	0.479	0.567	0.067	0.614	-0.301	-0.382	0.089	-0.557	0.405	0.411	0.334	0.144	0.063	0.110	0.027	0.115	0.605	0.139	0.142		0.061	0.215	0.300	0.076		0.374	-0.034	0.079	-0.043	0.103	-0.438	-0.035	-0.041	-0.403	0.634
rh_avem	-0.210	0.174	0.189	0.000	-0.287	-0.033	0.021	-0.180	-0.203	0.123	0.013	0.013	-0.077	0.034	0.064	-0.107	0.077	-0.031	0.088	0.077		0.021	0.019	0.038	0.033		-0.013	-0.032	-0.134	0.045	0.081	-0.054	-0.019	-0.097	-0.259	-0.244
max_250m	-0.555	0.533	0.901	0.649	0.194	0.375	0.301	0.459	0.113	0.640	0.637	0.555	0.213	-0.004	0.021	-0.058	0.157	0.599	0.069	0.090		-0.016	0.262	0.159	-0.010		0.392	-0.035	0.351	0.124	0.164	-0.025	0.088	0.282	0.104	0.456
max_sootm	-0.254	0.350	0.542	0.934	-0.039	0.675	0.601	0.626	0.396	0.550	0.537	0.520	0.437	-0.007	0.021	0.124	0.227	0.448	0.056	0.078		-0.016	0.180	0.122	-0.028		0.420	-0.051	0.458	0.227	0.149	0.213	0.205	0.446	0.331	0.283
max_o3m	-0.584	0.533	0.421	0.077	0.921	-0.358	-0.492	0.204	-0.340	0.432	0.405	0.265	0.137	0.013	0.047	0.080	-0.016	0.556	0.086	0.102		0.006	0.212	0.259	0.026		0.303	-0.038	0.099	-0.094	-0.050	-0.225	-0.009	0.012	-0.250	0.780
max_8hrm	-0.541	0.483	0.382	0.046	0.947	-0.381	-0.505	0.164	-0.349	0.386	0.361	0.232	0.130	0.021	0.052	0.073	-0.032	0.515	0.074	0.083		0.010	0.222	0.238	0.048		0.280	-0.031	0.072	-0.097	-0.065	-0.222	0.008	-0.004	-0.251	0.747
max_noxm	-0.015	0.110	0.350	0.755	-0.346	0.892	0.854	0.634	0.582	0.387	0.427	0.422	0.376	-0.007	-0.007	0.064	0.198	0.241	-0.019	-0.015		-0.019	0.096	-0.035	-0.028		0.288	0.004	0.450	0.242	0.191	0.317	0.206	0.471	0.570	-0.017
max_nom	0.032	0.043	0.301	0.710	-0.428	0.887	0.879	0.544	0.586	0.322	0.360	0.365	0.330	-0.004	-0.017	0.032	0.192	0.174	-0.033	-0.036		-0.014	0.064	-0.068	-0.027		0.233	0.018	0.419	0.244	0.195	0.318	0.200	0.449	0.568	-0.105
max_no2m	-0.379	0.480	0.533	0.639	0.303	0.464	0.276	0.849	0.225	0.631	0.669	0.600	0.477	-0.051	0.012	0.164	0.130	0.591	0.046	0.110		0.008	0.303	0.193	-0.050		0.492	-0.041	0.437	0.155	0.153	0.105	0.125	0.388	0.246	0.561
max_so2m	0.077	0.108	0.151	0.505	-0.289	0.709	0.681	0.497	0.851	0.275	0.283	0.227	0.100	-0.093	-0.117	0.005	0.021	0.098	-0.109	-0.071		0.011	0.002	-0.079	-0.104		0.067	0.032	0.294	0.161	0.134	0.436	0.172	0.372	0.830	0.041
max_pm2_5m	-0.615	0.790	0.750	0.672	0.282	0.389	0.274	0.587	0.179	0.898	0.841	0.604	0.215	-0.033	0.021	0.012	0.173	0.674	0.088	0.130		0.025	0.262	0.210	-0.041		0.425	-0.024	0.411	0.157	0.229	0.042	0.142	0.354	0.226	0.590
max_pm10m	-0.421	0.511	0.543	0.526	0.145	0.375	0.278	0.523	0.164	0.658	0.813	0.436	0.175	-0.051	-0.014	0.011	0.113	0.442	0.042	0.087		-0.023	0.268	0.102	-0.056		0.297	-0.011	0.361	0.176	0.218	0.063	0.172	0.329	0.306	0.452
max_parttotm	-0.034	0.042	0.136	0.041	-0.106	0.095	0.114	-0.007	0.064	0.076	0.140	0.020	0.121		0.088	0.063	-0.058	0.053	0.028	-0.023		-0.020	-0.010	0.006	-0.036		0.064	-0.030	-0.004	0.146	0.066	-0.060	0.000	-0.002	0.139	-0.023
temp_maxm	-0.647	0.480	0.573	0.093	0.625	-0.275	-0.364	0.132	-0.525	0.415	0.436	0.353	0.156	0.059	0.101	0.040	0.108	0.620	0.129	0.131		0.052	0.221	0.293	0.071		0.384	-0.035	0.105	-0.044	0.109	-0.437	-0.026	-0.017	-0.371	0.649
rh_maxm	-0.193	0.163	0.209	0.058	-0.205	-0.018	0.018	-0.117	-0.203	0.114	0.023	0.038	-0.053	0.039	0.057	-0.068	0.051	-0.007	0.072	0.059		0.018	0.038	0.012	0.035		0.004	-0.017	-0.119	0.053	0.089	-0.051	-0.011	-0.087	-0.278	-0.199

Appendix 5 - Correlation Matrix (continued)
Manhattan

	hno2m	hno3m	nh3m	totalpolr	tree_pol	ragweec	grasses	totalmol	basidos	ascospc	mitospo	dark_mi	non_dar	small_sp	large_sp	parttotr	frm2_5n	frm10m	temp_av	rh_aven	max_25	max_so	max_o3	max_8h	max_no	max_no	max_no	max_so	max_pn	max_pn	max_pa	temp_m	rh_maxm
phm	0.034	-0.669	-0.527	-0.135	-0.125	-0.193	-0.297	-0.463	-0.318	-0.264	-0.435	-0.437	-0.075	-0.462	-0.344	0.080	-0.467	-0.667	-0.657	-0.210	-0.555	-0.254	-0.584	-0.541	-0.015	0.032	-0.379	0.077	-0.615	-0.421	-0.034	-0.647	-0.193
sulfatem	0.019	0.704	0.323	0.132	0.121	0.210	0.347	0.413	0.163	0.188	0.464	0.467	0.063	0.404	0.442	-0.003	0.705	0.751	0.479	0.174	0.533	0.350	0.533	0.483	0.110	0.043	0.480	0.108	0.790	0.511	0.042	0.480	0.163
carb250m	0.276	0.511	0.737	0.209	0.203	0.083	0.257	0.363	0.200	0.199	0.367	0.367	0.071	0.359	0.294	0.085	0.607	0.741	0.567	0.189	0.901	0.542	0.421	0.382	0.350	0.301	0.533	0.151	0.750	0.543	0.136	0.573	0.209
sootm	0.468	0.342	0.427	0.123	0.124	-0.061	0.057	0.036	-0.125	-0.048	0.132	0.134	-0.016	0.031	0.105	0.014	0.680	0.702	0.067	0.000	0.649	0.934	0.077	0.046	0.755	0.710	0.639	0.505	0.672	0.526	0.041	0.093	0.058
o3m	-0.588	0.734	0.272	0.120	0.113	0.116	0.314	0.443	0.222	0.231	0.462	0.464	0.061	0.440	0.343	-0.026	0.050	0.179	0.614	-0.287	0.194	-0.039	0.921	0.947	-0.346	-0.428	0.303	-0.289	0.282	0.145	-0.106	0.625	-0.205
noxm	0.661	-0.120	0.077	0.053	0.058	-0.131	-0.151	-0.242	-0.254	-0.239	-0.165	-0.164	-0.062	-0.245	-0.118	0.112	0.549	0.428	-0.301	-0.033	0.375	0.675	-0.358	-0.381	0.892	0.887	0.464	0.709	0.389	0.375	0.095	-0.275	-0.018
nom	0.678	-0.249	-0.045	-0.001	0.006	-0.144	-0.200	-0.300	-0.266	-0.257	-0.237	-0.237	-0.079	-0.302	-0.176	0.131	0.460	0.306	-0.382	0.021	0.301	0.601	-0.492	-0.505	0.854	0.879	0.276	0.681	0.274	0.278	0.114	-0.364	0.018
no2m	0.309	0.354	0.404	0.196	0.195	-0.033	0.068	0.049	-0.100	-0.074	0.134	0.135	0.019	0.044	0.114	0.004	0.598	0.598	0.089	-0.180	0.459	0.626	0.204	0.164	0.634	0.544	0.849	0.497	0.587	0.523	-0.007	0.132	-0.117
so2m	0.403	-0.005	-0.278	-0.033	-0.027	-0.139	-0.132	-0.270	-0.337	-0.271	-0.149	-0.146	-0.094	-0.277	-0.064	0.182	0.457	0.221	-0.557	-0.203	0.113	0.396	-0.340	-0.349	0.582	0.586	0.225	0.851	0.179	0.164	0.064	-0.525	-0.203
pm2_5_30m	0.232	0.588	0.459	0.169	0.161	0.146	0.219	0.313	0.091	0.143	0.357	0.358	0.069	0.304	0.350	-0.030	0.801	0.827	0.405	0.123	0.640	0.550	0.432	0.386	0.387	0.322	0.631	0.275	0.898	0.658	0.076	0.415	0.114
pm10_30m	0.227	0.532	0.473	0.215	0.208	0.148	0.215	0.292	0.112	0.137	0.325	0.327	0.025	0.287	0.281	0.005	0.737	0.832	0.411	0.013	0.637	0.537	0.405	0.361	0.427	0.360	0.669	0.283	0.841	0.813	0.140	0.436	0.023
acetaldem	0.248	0.317	0.516	0.163	0.154	0.193	0.129	0.251	0.134	0.066	0.270	0.269	0.070	0.246	0.253	-0.057	0.521	0.597	0.334	0.013	0.555	0.520	0.265	0.232	0.422	0.365	0.600	0.227	0.604	0.436	0.020	0.353	0.038
acetonem	0.124	0.258	0.452	0.089	0.087	0.054	0.001	0.056	0.023	0.012	0.063	0.064	0.004	0.054	0.054	-0.004	0.179	0.429	0.144	-0.077	0.213	0.437	0.137	0.130	0.376	0.330	0.477	0.100	0.215	0.175	0.121	0.156	-0.053
acroleinm	-0.008	-0.028	0.055	-0.012	-0.014	0.040	-0.009	0.026	0.051	-0.013	0.009	0.009	0.010	0.028	-0.015		-0.057	-0.069	0.063	0.034	-0.004	-0.007	0.013	0.021	-0.007	-0.004	-0.051	-0.093	-0.033	-0.051		0.059	0.039
benzaldem	-0.031	-0.008	0.309	0.001	-0.009	0.200	0.100	0.104	0.122	0.008	0.076	0.077	-0.003	0.104	0.074	0.013	-0.022	-0.084	0.110	0.064	0.021	0.021	0.047	0.052	-0.007	-0.017	0.012	-0.117	0.021	-0.014	0.088	0.101	0.057
butyraldm	-0.049	0.080	-0.133	-0.011	-0.015	0.091	0.042	-0.032	-0.054	-0.002	-0.012	-0.010	-0.052	-0.033	0.015	0.182	0.000	0.054	0.027	-0.107	-0.058	0.124	0.080	0.073	0.064	0.032	0.164	0.005	0.012	0.011	0.063	0.040	-0.068
crotonalm	0.240	-0.027	0.088	-0.025	-0.034	0.268	0.058	0.110	0.114	0.005	0.089	0.090	-0.002	0.108	0.100	-0.131	0.126	0.180	0.115	0.077	0.157	0.227	-0.016	-0.032	0.198	0.192	0.130	0.021	0.173	0.113	-0.058	0.108	0.051
formaldem	-0.026	0.645	0.573	0.157	0.146	0.214	0.307	0.497	0.281	0.178	0.520	0.520	0.123	0.491	0.440	-0.082	0.470	0.588	0.605	-0.031	0.599	0.448	0.556	0.515	0.241	0.174	0.591	0.098	0.674	0.442	0.053	0.620	-0.007
hexaldehm	-0.014	0.013	0.478	0.018	0.004	0.364	0.154	0.170	0.197	0.101	0.113	0.113	0.008	0.169	0.135	0.006	0.049	0.221	0.139	0.088	0.069	0.056	0.086	0.074	-0.019	-0.033	0.046	-0.109	0.088	0.042	0.028	0.129	0.072
isovalerm	0.000	0.046	0.273	0.068	0.054	0.382	0.191	0.185	0.184	0.108	0.140	0.142	-0.004	0.182	0.169	0.003	0.109	0.285	0.142	0.077	0.090	0.078	0.102	0.083	-0.015	-0.036	0.110	-0.071	0.130	0.087	-0.023	0.131	0.059
m_tolualm																																	
o_tolualm	-0.012	-0.002	0.009	-0.008	-0.008	-0.002	0.008	0.073	0.033	0.037	0.079	0.080	-0.012	0.076	-0.003	-0.072	0.030	-0.006	0.061	0.021	-0.016	-0.016	0.006	0.010	-0.019	-0.014	0.008	0.011	0.025	-0.023	-0.020	0.052	0.018
p_tolualm	-0.019	0.176	0.404	0.390	0.384	0.046	0.302	0.127	0.055	0.037	0.146	0.149	-0.024	0.128	0.093	0.049	0.327	0.540	0.215	0.019	0.262	0.180	0.212	0.222	0.096	0.064	0.303	0.002	0.262	0.268	-0.010	0.221	0.038
propionam	-0.139	0.285	0.187	0.056	0.051	0.076	0.167	0.237	0.112	0.236	0.238	0.240	0.020	0.236	0.167	-0.015	0.079	0.194	0.300	0.038	0.159	0.122	0.259	0.238	-0.035	-0.068	0.193	-0.079	0.210	0.102	0.006	0.293	0.012
valeraldm	-0.034	-0.006		0.000	-0.002	0.037	0.022	0.036	0.049	0.045	0.016	0.016	0.012	0.038	-0.005	-0.023	-0.064	-0.087	0.076	0.033	-0.010	-0.028	0.026	0.048	-0.028	-0.027	-0.050	-0.104	-0.041	-0.056	-0.036	0.071	0.035
_2_5_dimm																																	
total_aldehydesm	0.087	0.325	0.577	0.138	0.128	0.226	0.160	0.260	0.166	0.115	0.257	0.258	0.034	0.257	0.225	-0.042	0.321	0.503	0.374	-0.013	0.392	0.420	0.303	0.280	0.288	0.233	0.492	0.067	0.425	0.297	0.064	0.384	0.004
metal_crm	-0.003	-0.005	-0.049	-0.014	-0.013	-0.002	-0.021	0.003	0.010	-0.006	0.000	0.000	0.006	0.004	-0.010	-0.005	0.022	0.057	-0.034	-0.032	-0.035	-0.051	-0.038	-0.031	0.004	0.018	-0.041	0.032	-0.024	-0.011	-0.030	-0.035	-0.017
metal_fem	0.242	0.197	0.340	-0.068	-0.070	0.012	0.055	0.070	-0.020	0.021	0.106	0.106	0.017	0.068	0.080	-0.002	0.361	0.515	0.079	-0.134	0.351	0.458	0.099	0.072	0.450	0.419	0.437	0.294	0.411	0.361	-0.004	0.105	-0.119
metal_pbm	0.177	-0.035	0.035	-0.021	-0.019	-0.033	-0.055	-0.025	-0.020	-0.041	-0.017	-0.017	-0.009	-0.027	0.022	0.052	0.181	0.260	-0.043	0.045	0.124	0.227	-0.094	-0.097	0.242	0.244	0.155	0.161	0.157	0.176	0.146	-0.044	0.053
metal_mnm	0.246	0.008	0.252	-0.026	-0.027	0.011	0.063	0.059	0.100	0.039	0.018	0.016	0.039	0.058	0.034	0.072	0.196	0.365	0.103	0.081	0.164	0.149	-0.050	-0.065	0.191	0.195	0.153	0.134	0.229	0.218	0.066	0.109	0.089
metal_nim	0.166	-0.057	-0.319	-0.054	-0.049	-0.121	-0.128	-0.259	-0.238	-0.188	-0.198	-0.196	-0.088	-0.262	-0.106	0.115	0.153	0.046	-0.438	-0.054	-0.025	0.213	-0.225	-0.222	0.317	0.318	0.105	0.436	0.042	0.063	-0.060	-0.437	-0.051
metal_znm	0.068	0.033	-0.001	-0.012	-0.011	-0.016	-0.028	-0.023	-0.035	-0.027	-0.008	-0.007	-0.028	-0.023	-0.006	0.027	0.108	-0.078	-0.035	-0.019	0.088	0.205	-0.009	0.008	0.206	0.200	0.125	0.172	0.142	0.172	0.000	-0.026	-0.011
total_metalsm	0.293	0.114	0.193	-0.085	-0.084	-0.037	-0.006	-0.023	-0.075	-0.043	0.013	0.014	-0.013	-0.026	0.021	0.032	0.341	0.418	-0.041	-0.097	0.282	0.446	0.012	-0.004	0.471	0.449	0.388	0.372	0.354	0.329	-0.002	-0.017	-0.087
denu_so2m	0.376	0.064	-0.237	0.006	0.009	-0.081	-0.100	-0.210	-0.303	-0.236	-0.107	-0.105	-0.060	-0.219	-0.024	0.451	0.511	0.251	-0.403	-0.259	0.104	0.331	-0.250	-0.251	0.570	0.568	0.246	0.830	0.226	0.306	0.139	-0.371	-0.278
hclm	-0.323	0.856	0.392	0.177	0.167	0.178	0.521	0.581	0.202	0.202	0.658	0.660	0.113	0.575	0.521	-0.006	0.418	0.540	0.634	-0.244	0.456	0.283	0.780	0.747	-0.017	-0.105	0.561	0.041	0.590	0.452	-0.023	0.649	-0.199
hno2m	1	-0.401	0.327	-0.057	-0.052	-0.106	-0.300	-0.357	-0.235	-0.198	-0.340	-0.341	-0.066	-0.360	-0.232	-0.012	0.379	0.034	-0.245	0.435	0.298	0.430	-0.491	-0.518	0.601	0.624	0.130	0.394	0.231	0.274	0.069	-0.236	0.364
hno3m	-0.401	1	0.216	0.092	0.085	0.108	0.424	0.530	0.203	0.207	0.588	0.590	0.089	0.522	0.491	0.121	0.396	0.426	0.578	-0.255	0.416	0.309	0.823	0.787	-0.068	-0.153	0.497	0.053	0.551	0.382	0.003	0.584	-0.212
nh3m	0.327	0.216	1	0.292	0.290	0.077	0.262	0.251	0.181	0.258	0.239	0.238	0.150	0.253	0.151	-0.337	0.305	0.506	0.648	0.072	0.661	0.399	0.373	0.346	0.209	0.147	0.543	-0.107	0.513	0.457	0.003	0.665	0.095
totalpolm	-0.057	0.092	0.292	1	0.999	-0.008	0.056	0.007	-0.027	0.046	0.018	0.019	-0.009	0.007	-0.010	0.001	0.098	0.191	0.153	-0.060	0.193	0.118	0.171	0.177	0.077	0.051	0.214	-0.021	0.142	0.130	-0.072	0.173	-0.036
tree_pollenm	-0.052	0.085	0.290	0.999	1	-0.034	0.034	-0.009	-0.039	0.036	0.005	0.005	-0.011	-0.008	-0.023	0.002	0.093	0.181	0.142	-0.062	0.189	0.120	0.161	0.168	0.082	0.056	0.210	-0.016	0.134	0.125	-0.071	0.161	-0.038
ragweedm	-0.106	0.108	0.077	-0.008	-0.034	1	0.193	0.400	0.357	0.170	0.337	0.340	0.028	0.395	0.381	-0.167	0.113	0.339	0.257	0.112	0.040	-0.053	0.151	0.134	-0.103	-0.120	0.052	-0.077	0.163	0.116	-0.110	0.246	0.098
grassesm	-0.300	0.424	0.262	0.056	0.034	0.193	1	0.363	0.135	0.281	0.394	0.395	0.070	0.362	0.265	-0.008	0.129	0.338	0.385	0.010	0.181	0.026	0.362	0.358	-0.126	-0.159	0.151	-0.097	0.267	0.161	-0.010	0.388	0.009
totalmolm	-0.357	0.530	0.251	0.007	-0.009	0.400	0.363	1	0.745	0.529	0.907	0.903	0.310	0.999	0.690	-0.119	0.142	0.503	0.621	0.006	0.259	0.007	0.488	0.481	-0.170	-0.208	0.232	-0.180	0.376	0.206	0.010	0.618	0.049
basidosporesm	-0.235	0.203	0.181	-0.027	-0.039	0.357	0.135	0.745	1	0.473	0.408	0.400	0.267	0.758	0.255	-0.100	-0.002	0.257	0.476	0.135	0.110	-0.122	0.262	0.246	-0.185	-0.194	0.065	-0.224	0.180	0.094	0.045	0.461	0.156
ascosporesm	-0.198	0.207	0.258	0.046	0.036	0.170	0.281	0.529	0.473	1	0.326	0.325	0.102	0.535	0.195	0.033	0.024	0.316	0.433	0.092	0.122	-0.060	0.275	0.257	-0.210	-0.222	0.060	-0.221	0.192	0.082	0.097	0.423	0.141
mitosporesm	-0.340	0.588	0.239	0.018	0.005	0.337	0.394	0.907	0.408	0.326	1	0.999	0.269	0.897	0.802	-0.110	0.198	0.505	0.539	-0.086	0.285	0.091	0.496	0.498	-0.106	-0.154	0.281	-0.093	0.389	0.223	-0.039	0.544	-0.043
dark_mitom	-0.341	0.590	0.238	0.019	0.005	0.340	0.395	0.903	0.400	0.325	0.999	1	0.226	0.893	0.805	-0.101	0.202	0.505	0.538	-0.086	0.285	0.092	0.499	0.500	-0.106	-0.154	0.283	-0.092	0.390	0.221	-0.027	0.543	-0.042
non_dark_mitom	-0.066	0.089	0.150	-0.009	-0.011	0.028	0.070	0.310	0.267	0.102	0.269	0.226	1	0.312	0.138	-0.120	-0.035	0.211	0.160	-0.035	0.043	-0.011	0.074	0.072	-0.030	-0.042	0.025	-0.051	0.094	0.095	-0.131	0.165	-0.028
small_sporesm	-0.360	0.522	0.253	0.007	-0.008	0.395	0.362	0.999	0.758	0.535	0.897	0.893	0.312	1	0.661	-0.118	0.137	0.501	0.622	0.007	0.256	0.003	0.485	0.478	-0.171	-0.209	0.230	-0.184	0.370	0.204	0.012	0.618	0.052
large_sporesm	-0.232	0.491	0.151	-0.010	-0.023	0.381	0.265	0.690	0.255	0.195	0.802	0.805	0.138	0.661	1	-0.064	0.180	0.379	0.404	-0.028	0.222	0.063	0.377	0.371	-0.093	-0.134	0.205	-0.042	0.342	0.183	-0.028	0.405	-0.013
parttotm	-0.012	0.121	-0.337	0.001	0.002	-0.167	-0.008	-0.119	-0.100	0.033	-0.110	-0.101	-0.120	-0.118	-0.064	1	0.011	0.140	-0.084	-0.051	0.044	-0.018	-0.046	-0.024	0.066	0.071	-0.007	0.129	-0.031	-0.023	0.637	-0.081	-0.045
frm2_5m	0.379	0.396	0.305	0.098	0.093	0.113	0.129	0.142	-0.002	0.024	0.198	0.202	-0.035	0.137	0.180	0.011	1	0.791	0.168	0.179	0.551	0.581	0.171	0.135	0.456	0.417	0.533	0.421	0.724	0.527	0.036	0.182	0.182
frm10m	0.034	0.426	0.506	0.191	0.181	0.339	0.338	0.503	0.257	0.316	0.505	0.505	0.211	0.501	0.379	0.140	0.791	1	0.483	0.135	0.707	0.607	0.272	0.247	0.360	0.282	0.617	0.212	0.767	0.751	0.068	0.503	0.158
temp_avem	-0.245	0.578	0.648	0.153	0.142	0.257	0.385	0.621	0.476	0.433	0.539	0.538	0.160	0.622	0.404	-0.084	0.168	0.483	1	0.100	0.413	0.062	0.683	0.653	-0.167	-0.217	0.323	-0.345	0.459	0.310	0.081	0.987	0.111
rh_avem	0.435	-0.255	0.072	-0.060	-0.062	0.112	0.010	0.006	0.135	0.092	-0.086	-0.086	-0.035	0.007	-0.028	-0.051	0.179	0.135	0.100	1	0.120	0.007	-0.222	-0.249	-0.050	-0.014	-0.185	-0.223	0.128	0.036	0.027	0.049	0.892
max_250m	0.298	0.416	0.661	0.193	0.189	0.040	0.181	0.259	0.110	0.122	0.285	0.285	0.043	0.256	0.222	0.044	0.551	0.707	0.413	0.120	1	0.644	0.320	0.289	0.436	0.386	0.552	0.191	0.714	0.516	0.086	0.435	0.158
max_sootm	0.430	0.309	0.399	0.118	0.120	-0.053	0.026	0.007	-0.122	-0.060	0.091	0.092	-0.011	0.003	0.063	-0.018	0.581	0.607	0.062	0.007	0.644	1	0.083	0.053	0.763	0.722	0.608	0.441	0.636	0.489	0.032	0.087	0.070
max_o3m	-0.491	0.823	0.373	0.171	0.161	0.151	0.362	0.488	0.262	0.275	0.496	0.499	0.074	0.485	0.377	-0.046	0.171	0.272	0.683	-0.222	0.320	0.083	1	0.977	-0.210	-0.300	0.462	-0.202	0.435	0.263	-0.080	0.699	-0.149
max_8hrm	-0.518	0.787	0.346	0.177	0.168	0.134	0.358	0.481	0.246	0.257	0.498	0.500	0.072	0.478	0.371	-0.024	0.135	0.247	0.653	-0.249	0.289	0.053	0.977	1	-0.232	-0.321	0.430	-0.217	0.402	0.234	-0.088	0.667	-0.171
max_noxm	0.601	-0.068	0.209	0.077	0.082	-0.103	-0.126	-0.170	-0.185	-0.210	-0.106	-0.106	-0.030	-0.171	-0.093	0.066	0.456	0.360	-0.167	-0.050	0.436	0.763	-0.210	-0.232	1	0.988	0.539	0.636	0.462	0.421	0.074	-0.143	0.001
max_nom	0.624	-0.153	0.147	0.051	0.056	-0.120	-0.159	-0.208	-0.194	-0.222	-0.154	-0.154	-0.042	-0.209	-0.134	0.071	0.417	0.282	-0.217	-0.014	0.386	0.722	-0.300	-0.321	0.988	1	0.428	0.633	0.397	0.369	0.084	-0.197	0.026
max_no2m	0.130	0.497	0.543	0.214	0.210	0.052	0.151	0.232	0.065	0.060	0.281	0.283	0.025	0.230	0.205	-0.007	0.533	0.617	0.323	-0.185	0.552	0.608	0.462	0.430	0.539	0.428	1	0.322	0.663	0.530	-0.004	0.367	-0.093
max_so2m	0.394	0.053	-0.107	-0.021	-0.016	-0.077	-0.097	-0.180	-0.224	-0.221	-0.093	-0.092	-0.051	-0.184	-0.042	0.129	0.421	0.212	-0.345	-0.223	0.191	0.441	-0.202	-0.217	0.636	0.633	0.322	1	0.266	0.231	0.059	-0.314	-0.192
max_pm2_5m	0.231	0.551	0.513	0.142	0.134	0.163	0.267	0.376	0.180	0.192	0.389	0.390	0.094	0.370	0.342	-0.031	0.724	0.767	0.459	0.128	0.714	0.636	0.435	0.402	0.462	0.397	0.663	0.266	1	0.713	0.098	0.472	0.159
max_pm10m	0.274	0.382	0.457	0.130	0.125	0.116	0.161	0.206	0.094	0.082	0.223	0.221	0.095	0.204	0.183	-0.023	0.527	0.751	0.310	0.036	0.516	0.489	0.263	0.234	0.421	0.369	0.530	0.231	0.713	1	0.136	0.330	0.061
max_parttotm	0.069	0.003	0.003	-0.072	-0.071	-0.110	-0.010	0.010	0.045	0.097	-0.039	-0.027	-0.131	0.012	-0.028	0.637	0.036	0.068	0.081	0.027	0.086	0.032	-0.080	-0.088	0.074	0.084	-0.004	0.059	0.098	0.136	1	0.080	0.016
temp_maxm	-0.236	0.584	0.665	0.173	0.161	0.246	0.388	0.618	0.461	0.423	0.544	0.543	0.165	0.618	0.405	-0.081	0.182	0.503	0.987	0.049	0.435	0.087	0.699	0.667	-0.143	-0.197	0.367	-0.314	0.472	0.330	0.080	1	0.074
rh_maxm	0.364	-0.212	0.095	-0.036	-0.038	0.098	0.009	0.049	0.156	0.141	-0.043	-0.042	-0.028	0.052	-0.013	-0.045	0.182	0.158	0.111	0.892	0.158	0.070	-0.149	-0.171	0.001	0.026	-0.093	-0.192	0.159	0.061	0.016	0.074	1