# 2000 Auburn NC Tower Multi-Elevation Ozone and Hydrocarbon Monitoring Project Report


## Ambient Monitoring Section

## Division of Air Quality

## Department of Environment and Natural Resources



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## Abstract

The 2000 Multi-Elevation Ozone and Hydrocarbon Monitoring Project at the Auburn-TV Tower was conducted at 8 feet (ground), 250 feet, 420 feet, and 1420 feet elevations. Ozone was monitored continuously at the 8 feet, 250 feet, 420 feet, and 1420 feet levels. The ground level is monitored from April through October and the upper levels were monitored from April through mid-September. Morning and afternoon integrated 3-hour hydrocarbon samples were successfully collected in polished stainless steel canisters at the 8 feet and 1420 feet levels for analysis of PAMS hydrocarbons.

## Keywords

Ozone, Multi-elevation Ozone Monitoring, Diurnal Ozone Patterns, PAMS, Hydrocarbons

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### Previous Reports: 1993-1999 and Related Studies

The 1993 - 1999 reports published by the Division of Air Quality outlined the data collected, monitoring methods and daily ozone concentrations at three levels. The previous reports are available upon request.

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## 1. Introduction

The Ambient Monitoring Section is responsible for evaluating the ambient air quality of the State of North Carolina for the Division of Air Quality (DAQ) of the Department of Environment and Natural Resources. The Ambient Monitoring Section supports this evaluation through its operation of criteria pollutant ($O_3$, CO, $SO_2$, PM10, $PM_{2.5}$, $NO_2$, Pb) monitoring stations and special purpose (HAPs metals, $NO_y$, $NH_3$, TSP, Hydrocarbons) monitoring stations throughout the state. Ground level ozone and its associated health effects continue to be a primary concern of DAQ. In 2000, there were forty-five (45) ground level ozone monitoring sites in operation in North Carolina. Thirty-six (36) of these ozone monitoring sites were operated by Ambient Monitoring Section and the Regional Offices of DAQ with the remaining sites operated by four other agencies. These agencies are the Eastern Band of the Cherokee Nation (1 site), Forsyth County Environmental Affairs Department (4 sites), and Charlotte-Mecklenburg Department of Environmental Management (3 sites), and Western NC Regional Air Quality Agency (1 site). The Auburn-TV Tower (designated "Tower" in this report) is a Special Purpose Monitoring site (SPM) located in SSE corner of Wake County and is operated by the Raleigh Regional Office ambient air monitoring staff. The Tower is the only multi-elevation monitoring site in North Carolina. This report describes the ozone monitoring equipment, the operation and calibration procedures employed, the hydrocarbon sampling equipment, the hydrocarbon analytical procedures, and the data collected during the 2000 ozone season. In 2000, meteorological measurements of wind speed, wind direction, and temperature were planned, but due to operational difficulties these measurements were not made. Efforts are continuing to collect multi-level meteorological data.

### Ozone and Hydrocarbon Monitoring Study

The Ozone Season in North Carolina is from April 1 to October 31. In 1997, the National Ambient Air Quality Standard (NAAQS) for ozone was established at >0.08 parts per million (ppm) 8-hr average. In 2000, there were 239 verified ozone exceedances of the new ozone standard over 35 days across the monitoring network in North Carolina. In comparison to 1999 when there were 540 exceedances on 68 days, the magnitude and number of exceedances in North Carolina declined significantly in 2000. There were three (3) ozone exceedances at the Tower in 2000 for the ground level monitor. The upper level monitors at the tower (which do not conform to the siting criteria established for NAAQS) reported 27 8-hour average ozone concentrations greater than 0.084ppm over 7 different days between June 1 and September 13.

Morning and afternoon 3-hour integrated PAMS hydrocarbon samples were collected in Summa™ Canisters approximately once a week starting May 31 through September 8 at three levels for a total of 14 hydrocarbon sample sets. These samples were collected and analyzed in accordance with the Photochemical Assessment Monitoring Station procedures for 54, C2 - C12, hydrocarbon compounds. One of these compounds is biogenic, isoprene, and the other 53 compounds are directly related to man's activities.

## 2. Study Site

The Tower site is a Special Purpose Monitoring (SPM) site established in May 1993 by the DAQ. The site is located approximately 20 kilometers southeast of Raleigh, NC, at 35.68.33 Latitude and -78.55.00 Longitude, approximately 1000 meters southwest of US-70 a Type 2 Road (Expressway), and is 97.5 meters Elevation Above Sea level (Figure 1). It has a "suburban" Location Setting with "agricultural" Land Use. US-70 usage is 42,000 vehicles per day. The television and radio broadcasting tower at this site is 2,000 feet tall and was put into service in October 1990 as a replacement for the previous tower that collapsed in December 1989. In 1993 - 1995, the ozone determinations were performed at ground level, 820 feet level and 1420 feet level. In 1996, the ozone monitoring levels were changed to ground level, 250, 420, and 1420 feet levels and were continued to be used in 1997, 1998, 1999, and 2000. These levels were selected because of the presence of platforms. The platforms provide work space for the convenient installation of particulate (ozone pretreated) filters on the intake side of the Teflon FEP® ozone sampling lines. The filters prevent particulate matter from depositing on the inside of the sampling tubing. The upper levels of the tower are accessed by a two-person elevator in the center of the Tower.

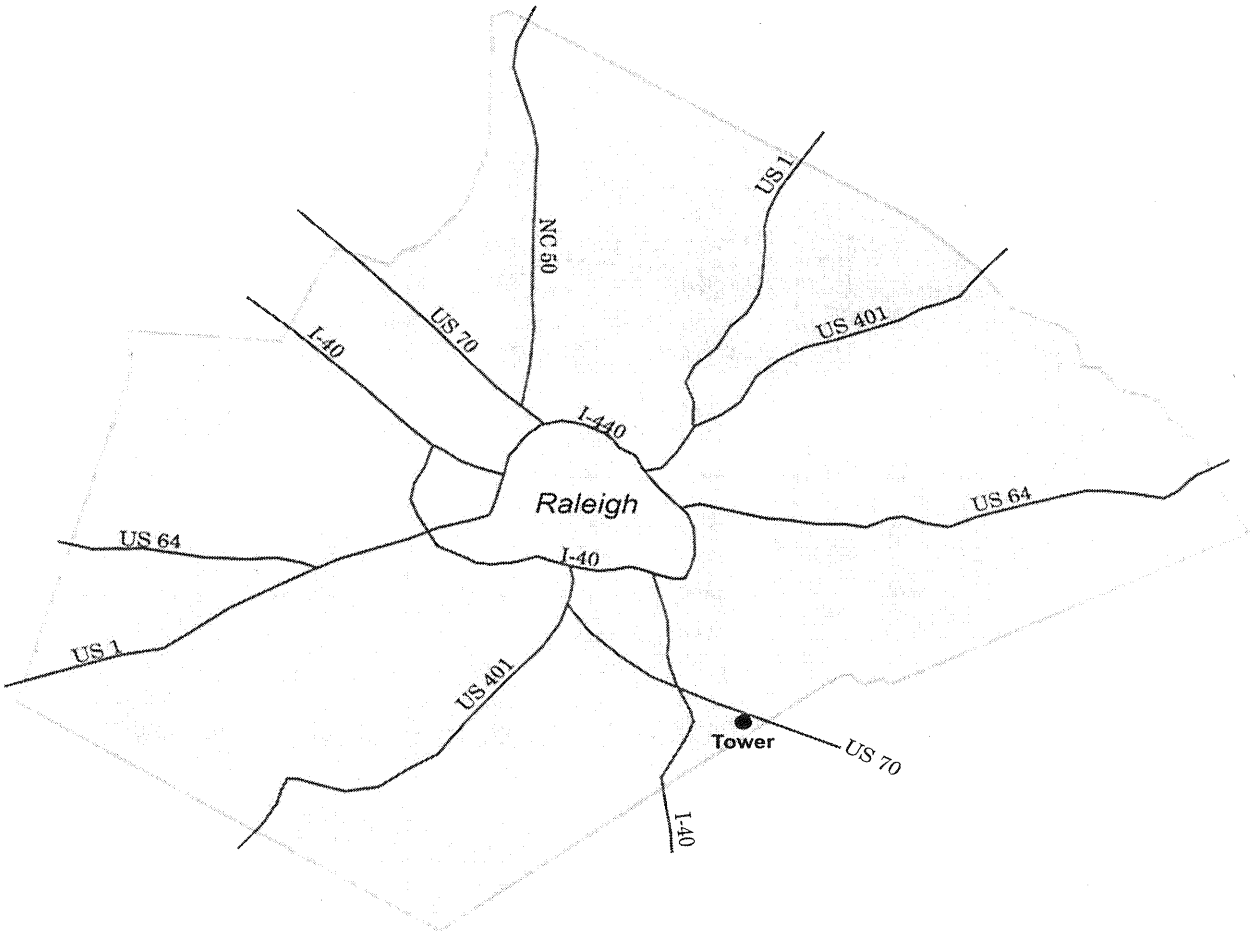



Figure 1. Auburn Tower Location in Wake County, North Carolina

## 3. Ozone Monitoring

The ozone sample assembly at each elevated level includes a 90 mm Teflon® filter holder with a 5 $\mu$m Teflon® particulate filter. The probes are located on the southwest part of the tower for unobstructive exposure to the predominant southwesterly summer winds. Each probe arm, made of stainless steel tubing, extends approximately 2 meters away from the tower platform with a 60 degree downward bend on the arm to minimize precipitation entering the probe line. To further minimize the moisture/precipitation problem, the FEP lines stop two feet inside the end of the stainless steel probe arm. The ends of the probe are covered with stainless steel screens. Before sampling began on the tower, the long sample lines were inspected for water and obvious breaks and repairs were performed. Each line was then disconnected at the 90 mm filter, capped off and pressure tested to check for leaks in the long sample lines. No leaks were detected and the lines were reattached to the filters and readied for sampling. The 90 mm particulate filter at each sampling platform was replaced with a new ozone conditioned filter and filter assemblies which was replaced monthly thereafter.

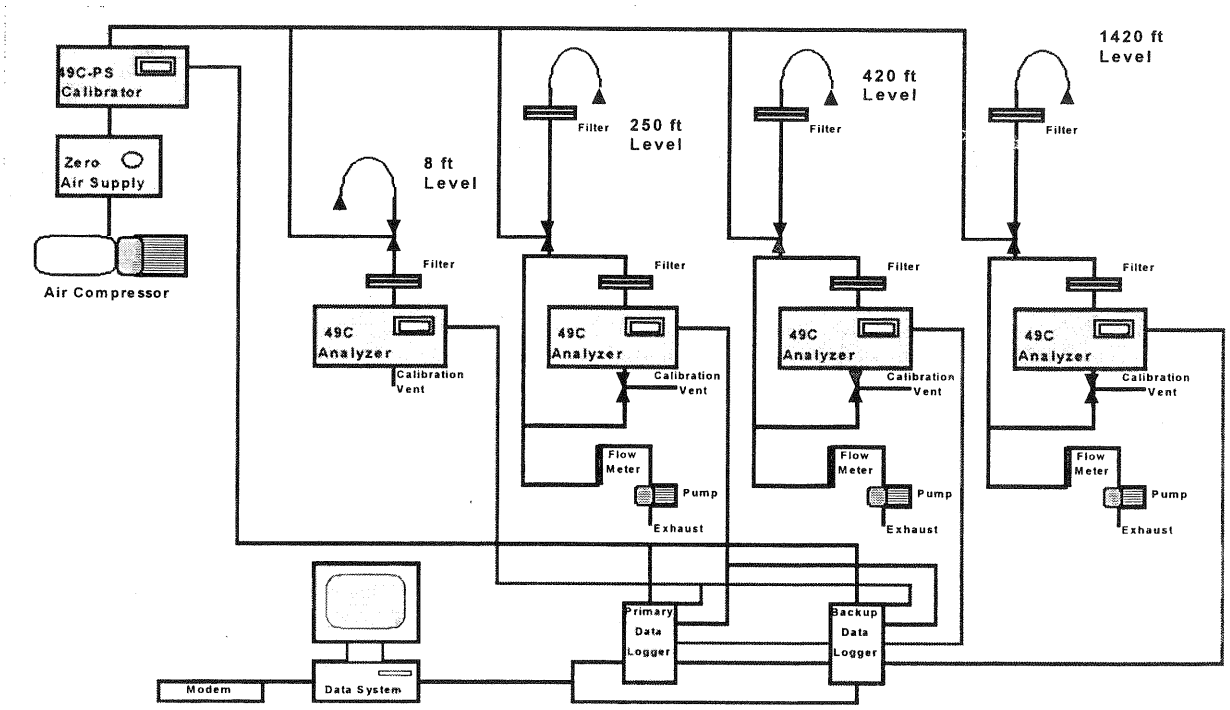



Figure 2. Ozone Monitoring, Calibration, and Data Collection System Configuration

Figure 2 presents the configuration of the ozone monitoring system at this special site. All of the ozone monitoring systems are housed in a 12' x 8' temperature controlled building located adjacent to the base of the tower. The upper level ozone sampling lines are attached to the superstructure of the tower connecting each level directly to a dedicated 10 liter per minute sampling pump to reduce the sample

residence time in the sampling lines. Each level has a dedicated ozone analyzer. The ozone analyzer, calibrator, zero air supply, air compressor, and the data collection system are also located in this building.

### 3.1 Ozone Monitoring Methods

Ozone was measured using the ultraviolet photometric principle. In 1998, the monitors and calibrators for the entire state-operated ozone monitoring network in North Carolina were replaced with Thermo Environmental Inc. Model 49C Ozone Analyzers and Model 49C-PS Ozone Calibrators. The TEI Model 49C is designated by

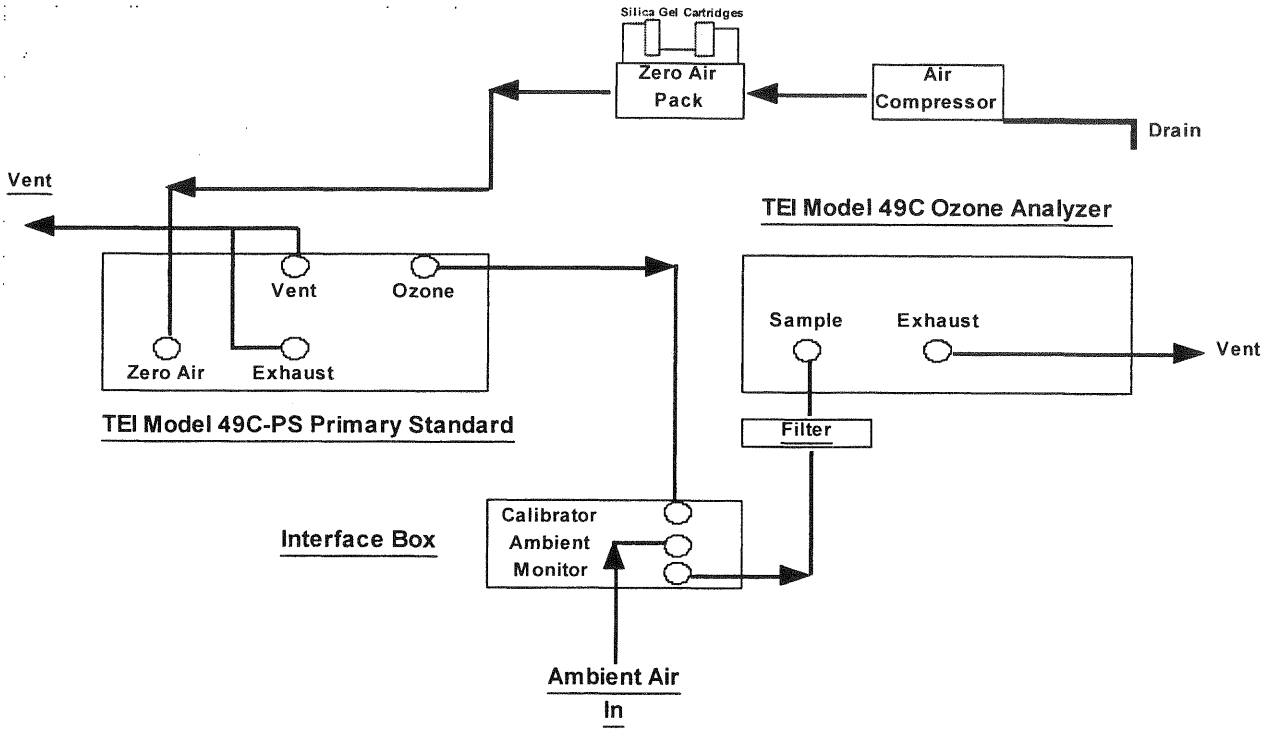



Figure 3. Ozone Calibration and Monitoring Schematic.

the USEPA as an Equivalent Method for the measurement of ambient concentrations of ozone pursuant with the requirements defined in the Code of Federal Regulations, Designated Equivalent Method Number, EQOA-0880-047. A single TEI Model 49C-PS calibrator traceable to the NC Primary Ozone Standard Photometer was used to perform all calibrations and precision checks for the four ozone monitors. This same calibrator was used to perform nightly autocalibrations of each of the analyzers. The outputs of the monitors were connected to a data logger and to a "back-up" data system. The Figure 3 is a schematic of the sampling and calibration pathways for each ozone analyzer.

## 3.2 Ozone Monitor Adjusted Calibration and Nightly Autocalibrations

The TEI Model 49C Ozone Analyzers are operated on the 0.000 to 0.250 parts per million range. Prior to the beginning of the ozone monitoring season, an adjusted calibration is performed on each of the four ozone analyzers per Section 2.7 "Ozone Monitoring Using the Thermo Environmental Continuous Monitor and Data Logger" of the North Carolina Standard Operating Procedures and Quality Assurance Plan Section (QASOP) 2.7, as approved by the EPA. This calibration adjusts the ozone analyzer to read exactly the same as the on-site Ozone Primary Standard Calibrator, which is traceable to the North Carolina Primary Ozone Standard Photometer, which has been verified by the EPA Region 4 Reference Photometer. The ozone analyzer is calibrated at 0.000, 0.050, 0.090, 0.160, and 0.225 ppm ozone. The acceptance criteria for an adjusted calibration are as follows:

| Primary Standard | Ozone Analyzer |
|---|---|
| 0.000 ppm | 0.000 ppm ±0.003 ppm |
| 0.050 ppm | 0.050 ppm ±0.003 ppm |
| 0.090 ppm | 0.090 ppm ±0.003 ppm |
| 0.160 ppm | 0.160 ppm ±0.003 ppm |
| 0.225 ppm | 0.225 ppm ±0.003 ppm |

Each night throughout the monitoring season, an unadjusted autocalibration is performed on each of the analyzers at 0.000, 0.050, 0.090, and 0.225 ppm ozone generated by the on-site Primary standard calibrator and recorded by the data collection system. Each autocalibration requires approximately 45 minutes to complete per analyzer. The nightly autocalibrations of the four ozone analyzers at this site occur between 3 am. and 7 am.

## 3.3 Unadjusted Calibrations and Site Operator Inspections

In accordance with Section 2.7 of QA/SOP the site operator performs a thorough site inspection, equipment evaluation, a full manual Unadjusted Calibration and Precision Check of each ozone analyzer, and backs up the data system on at least a biweekly basis. These site visits are to verify and document instrument operating parameters and performance and also to archive collected data. These site inspections and unadjusted calibrations are performed before 11 am due to the diurnal pattern of the formation of ground level ozone. During these visits the operator replaces and conditions the 5$\mu$m particulate filter (located at the back of each instrument), replaces silica gel cartridges on the zero air pack, and performs a "data backup" of all the data collected since the previous site visit. The operator records his activities in the Site Logbook and documents the site evaluation and unadjusted calibration results in the site and monitor specific Ozone Monitoring Logbook.

The site operator determines the ozone analyzer performance while challenging the monitor with 0.000, 0.050, 0.090, 0.160, and 0.225 ppm ozone generated by the onsite ozone primary standard. The following criteria have been established to

evaluate analyzer performance:

| Site Primary Standard | Ozone Analyzer |
|---|---|
| 0.000 ppm | 0.000 ppm ±0.003 ppm |
| 0.050 ppm | 0.050 ppm ±0.003 ppm |
| 0.090 ppm | 0.090 ppm ±0.003 ppm |
| 0.160 ppm | 0.160 ppm ±0.005 ppm |
| 0.225 ppm | 0.225 ppm ±0.010 ppm |

If the analyzer does not meet these performance criteria, the site operator first troubleshoots the analytical system and then performs an adjusted calibration.

### 3.4 Ozone Data Collection Period.

Ozone monitoring at the ground level of the Tower began on April 1 and continued through October 31, 2000. Monitoring at the upper levels began on April 26. The 2000 ozone monitoring periods for all levels at the Auburn Tower Site are listed below:

| Level | Start | End |
|---|---|---|
| Ground Level | April 21, 2000 at 0000 hr | Oct. 31, 2000 at 2300 hr |
| 250 Feet Level | April 26, 2000 at 1000 hr | Sept. 20, 2000 at 1200 hr |
| 420 Feet Level | April 26, 2000 at 1100 hr | Sept. 20, 2000 at 1200 hr |
| 1420 Feet Level | April 26, 2000 at 1300 hr | Sept. 20, 2000 at 1200 hr |

Ozone monitoring was performed at the Ground Level until the end of the ozone monitoring season (October 31, 2000). On September 20, 2000, the upper Tower ozone monitoring activities were completed for the 2000 season. The data completeness for 2000 exceeds 90% at all levels.

### 3.5 Ozone Monitor Accuracy Audits

Accuracy audits are performed to evaluate and document the performance of the site monitoring system. The State of North Carolina DAQ Ambient Monitoring Section independently conducts accuracy audits of all ozone monitoring sites operated by the state and also participates in the National Performance Audit Program (NPAP) conducted by the USEPA. In 2000 the NPAP audits were significantly reduced by the EPA. In past years North Carolina received up to four (4) audit devices and every ozone monitoring site across the state participated in the NPAP audit program. In 2000 only one audit device was received and 10 sites from across the state were selected by the EPA. The Auburn Tower site was not selected by the EPA.

The NC Accuracy Audits were performed on June 14 and August 22 at all 4 ozone monitors. The audits were performed by the Electronics and Calibration Branch (ECB) using a separate Thermo Environmental Model 49C-PS Primary Standard traceable to the NC Primary Ozone Standard Photometer. The audit device is taken to

the site and is plumbed directly to the ozone analyzer to be audited. After the analyzer and audit device have stabilized, the actual concentration generated by the audit device is compared to the analyzer's preliminary data logger response to this known concentration. This procedure is used for each audit point (0.000, 0.050 ppm, 0.090, 0.160, 0.225 ppm). The percent difference for each point is calculated as follows:

$$d_2 = \frac{(C_M - C_A) \times 100}{C_A}$$

Where:

$C_M$ = average ozone concentration measured

$C_A$ = average true concentration of audit gas produced by the audit calibrator.

Table 1. North Carolina 2000 Ozone Accuracy Audits

**June , 2000**

| Ground Level | | | 250 Ft Level | | | 420 Ft Level | | | 1420 Ft Level | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Audit Actual | Monitor Reading | % Diff | Audit Actual | Monitor Reading | % Diff | Audit Actual | Monitor Reading | % Diff | Audit Actual | Monitor Reading | % Diff |
| 0.002 | 0.003 | NA | 0.001 | 0.002 | NA | 0.002 | -0.002 | NA | 0.002 | 0.001 | NA |
| 0.050 | 0.049 | -2.0 | 0.050 | 0.051 | 2.0 | 0.050 | 0.048 | -4.0 | 0.050 | 0.046 | -8.0 |
| 0.090 | 0.089 | -1.1 | 0.090 | 0.091 | 1.1 | 0.089 | 0.090 | 1.1 | 0.090 | 0.086 | -4.4 |
| 0.159 | 0.160 | 0.6 | 0.160 | 0.161 | 0.6 | 0.159 | 0.162 | 1.9 | 0.159 | 0.157 | -1.3 |
| 0.224 | 0.225 | 0.4 | 0.225 | 0.226 | 0.4 | 0.224 | 0.229 | 2.2 | 0.224 | 0.223 | -0.4 |
| | Avg | -0.5 | | Avg | 1.0 | | Avg | 0.3 | | Avg | -3.5 |

**August 2000**

| Ground Level | | | 250 Ft Level | | | 420 Ft Level | | | 1420 Ft Level | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Audit Actual | Monitor Reading | % Diff | Audit Actual | Monitor Reading | % Diff | Audit Actual | Monitor Reading | % Diff | Audit Actual | Monitor Reading | % Diff |
| 0.002 | 0.000 | NA | 0.002 | 0.000 | NA | 0.002 | -0.001 | NA | 0.003 | 0.000 | NA |
| 0.050 | 0.046 | -8.0 | 0.050 | 0.049 | -2.0 | 0.050 | 0.048 | -4.0 | 0.050 | 0.047 | -6.0 |
| 0.089 | 0.086 | -3.4 | 0.090 | 0.089 | -1.1 | 0.090 | 0.089 | -1.1 | 0.090 | 0.087 | -3.3 |
| 0.159 | 0.157 | -1.3 | 0.160 | 0.161 | 0.6 | 0.159 | 0.161 | 1.3 | 0.159 | 0.157 | -1.3 |
| 0.224 | 0.223 | -0.4 | 0.224 | 0.228 | 1.8 | 0.224 | 0.227 | 1.3 | 0.225 | 0.223 | -0.9 |
| | Avg | -3.3 | | Avg | -0.2 | | Avg | -0.6 | | Avg | -2.9 |

## 4. Hydrocarbon Sampling and Analysis

Hydrocarbons are an important component in the ozone production cycle and a better understanding of the speciation and dispersal in the atmosphere is needed to better understand the complex ozone atmospheric chemistry. The Tower site provides a unique opportunity to collect ambient hydrocarbon samples simultaneously at

ground level and 1420 feet. Samples were collected at 6 - 9 am. and from 2 - 5 pm at all levels.

A schematic of the hydrocarbon sampling system is shown in Figure 4. The ground level hydrocarbon sampling system is housed within the same building adjacent to the tower as the ozone monitoring systems. The hydrocarbon collection system at the upper level (1420 feet) is housed in specially constructed weather proof enclosures. This upper level has electrical power available to operate the pump and the timing systems. The sampling system consist of two seven-day timers which activate a metal bellows pump, elapsed time meters, and a canister specific two-way solenoid valve. All sampling lines are

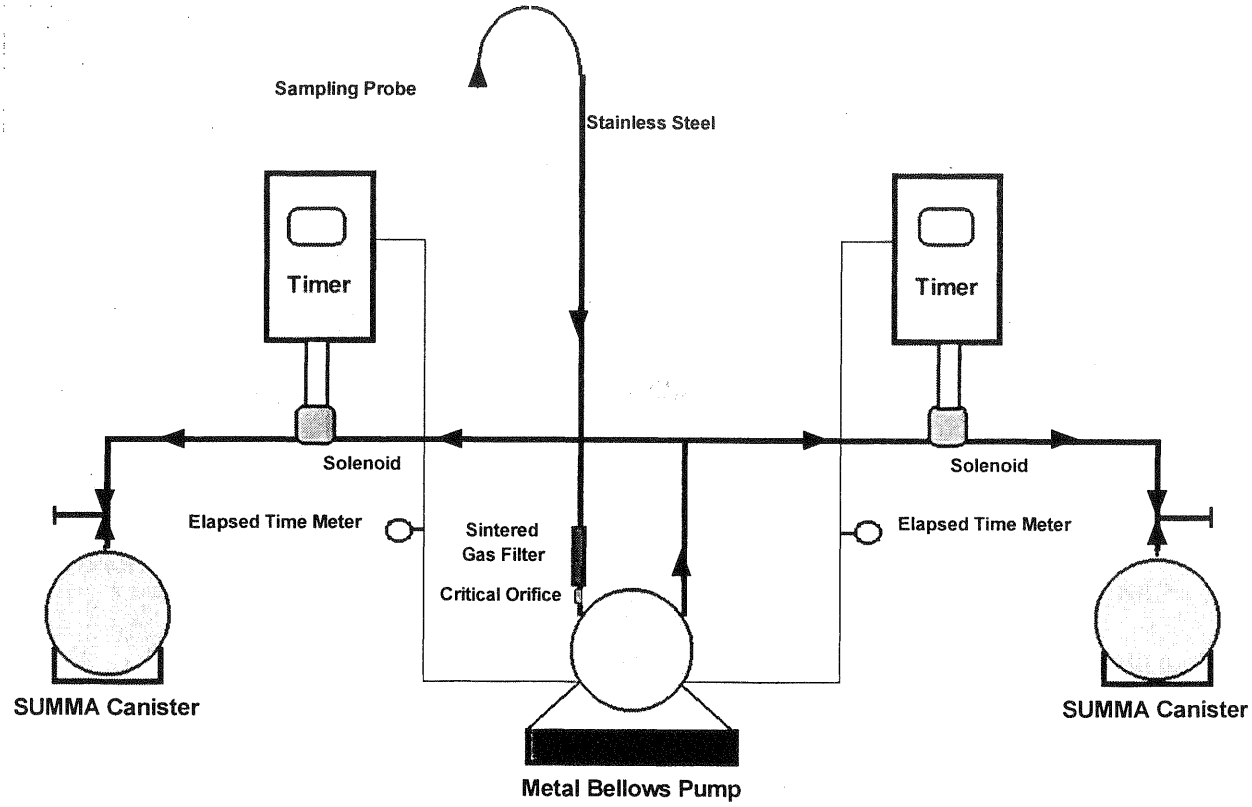



Figure 4. Hydrocarbon Sampling System

constructed of 1/8" ID gas chromatography grade stainless steel tubing. The upper level sampling probe extends 2 meters to the southwest from the tower and the ground level probe is probe is located 8 feet above the ground extending approximately 4 feet from the building located at the base of the tower.

## 4.1 Hydrocarbon Analytical Procedure

The ambient air samples collected in the passivated stainless steel Summa™ canisters using the sampler described above are analyzed at the Ambient Monitoring Section Hydrocarbon Speciation Laboratory in Raleigh. In addition to the PAMS

hydrocarbon sampling sites operated by NC, this laboratory also analyzes the samples collected by locally operated programs.

The instrumentation used to analyze the ambient air samples for the targeted C2 through C12 hydrocarbons (ethane through dodecane) is a two-column dual Flame Ionization Detector (FID) gas chromatograph. The target compounds are identified by comparison to retention times of the known compounds included in the calibration standard. This standard provided by the EPA is used for both peak identification and for determining the concentration of each respective compound. The two columns are a 50 m x 0.32 mm $Al_2O_3/Na_2SO_4$ Plot™ column and a 50 m x 0.22 mm Restec™ methyl silicone column each of which is directed to a dedicated FID for the efficient separation and identification of each compound. The Plot™ column is used to separate the ethane (C2) through 1-Hexene (C6) and the Methyl Silicone column is used to separate Hexane (C6) through Dodecane (C12).

The 600 cc sample passes through a Nafion Drier to remove the moisture from the sample. Moisture has a detrimental effect on the Plot™ column and must be removed prior to the column. The sample then is transferred into an automatic thermal desorption system that uses an electrically cooled packed cold trap to produce a concentrated sample prior to injection. The rapid heating (40 °C/sec.) of the cold trap ensures efficient injection of the sample onto the analytical column. The gas chromatograph oven is then temperature ramped in two stages up to 200 °C. The detectors are maintained in an isothermal condition at 250 °C. As compounds elute from each specific column, the dedicated detector response is proportional to the concentration of each compound. The greater the concentration of a compound in the sample, the greater the detector response. The detector response is then compared to the detector response to a known concentration of that compound found in the calibration standard to determine the concentration in the sample. The concentration of the compound in the sample is reported as parts per billion carbon (ppbc).

A total of 55 compounds are identified by this chromatographic technique. These compounds are methane and 54 PAMS target compounds. The results are reported for each individual PAMS target compound and grouped as Total Non-Methane Organic Compounds, NMOC, which includes any unknown compounds (which also are quantified as ppbc based upon detector response but not identified) and the total of known compounds. The list of PAMS 54 targeted organic compounds and each compounds Method Reporting Limit (MRL) in parts per billion carbon is presented in Table 2. The MRL was established for each identified compound using the average response factor for each compound for the summer sampling season with a peak area cut-off of 500 millivolt seconds. The MRL for unknown compounds are based upon average response factors for propane for compounds detected on the PLOT column and benzene for the methyl silicone column. The PAMs standard provided by the EPA does not contain Hexene or Dodecane, so these compounds are not reported.

Table 2. Target Hydrocarbons and ppbC Method Reporting Limit

| | | | | | |
|---|---|---|---|---|---|
| METHANE | 0.3 | 2-METHYLPENTANE | 0.3 | ETHYLBENZENE | 0.4 |
| ETHANE | 0.3 | 3-METHYLPENTANE | 0.3 | M/P-XYLENE | 0.4 |
| ETHYLENE | 0.4 | ISOPRENE | 0.3 | STYRENE | 0.6 |
| PROPANE | 0.3 | HEXANE | 0.3 | O-XYLENE | 0.3 |
| PROPYLENE | 0.3 | METHYLCYCLOPENTANE | 0.3 | NONANE | 0.4 |
| ISOBUTANE | 0.3 | 2,4-DIMETHYLPENTANE | 0.3 | ISOPROPYLBENZENE | 0.4 |
| BUTANE | 0.3 | BENZENE | 0.3 | N-PROPYLBENZENE | 0.4 |
| ACETYLENE | 0.6 | CYCLOHEXANE | 0.3 | M-ETHYLTOLUENE | 0.5 |
| TRANS-2-BUTENE | 0.3 | 2-METHYLHEXANE | 0.4 | P-ETHYLTOLUENE | 0.4 |
| 1-BUTENE | 0.3 | 2,3-DIMETHYLPENTANE | 0.3 | 1,3,5-TRIMETHYLBENZENE | 0.4 |
| CIS-2-BUTENE | 0.3 | 3-METHYLHEXANE | 0.3 | O-ETHYLTOLUENE | 0.4 |
| CYCLOPENTANE | 0.3 | 2,2,4-TRIMETHYLPENTANE | 0.3 | 1,2,4-TRIMETHYLBENZENE | 0.4 |
| ISOPENTANE | 0.3 | HEPTANE | 0.3 | DECANE | 0.4 |
| PENTANE | 0.3 | METHYLCYCLOHEXANE | 0.3 | 1,2,3-TRIMETHYLBENZENE | 0.4 |
| TRANS-2-PENTENE | 0.3 | 2,3,4-TRIMETHYLPENTANE | 0.3 | M-DIETHYLBENZENE | 0.4 |
| 1-PENTENE | 0.3 | TOLUENE | 0.3 | P-DIETHYLBENZENE | 0.4 |
| CIS-2-PENTENE | 0.3 | 2-METHYLHEPTANE | 0.3 | UNDECANE | 0.4 |
| 2,2-DIMETHYLBUTANE | 0.3 | 3-METHYLHEPTANE | 0.3 | | |
| 2,3-DIMETHYLBUTANE | 0.3 | OCTANE | 0.4 | | |

## 4.2 Hydrocarbon Calibration

The PAMS calibration standard is analyzed each day prior to analysis of the samples collected in the field. The standard obtained from Scott Specialty Gases is verified by The USEPA. Via this standard, which ranges in concentration from 21 ppbc to 62 ppbc, individual compound response factors are determined. The organic species response factors are used in subsequent sample analysis to determine the concentration of each compound in the sample.

## 4.3 Sampling Period

During 2000, PAMS Hydrocarbon samples were collected at eight different sites throughout NC. The Tower site is one of these sites. Due to limited access to the upper levels of the tower, samples were collected once per week from the period of June 2 through September 7, 2000. PAMS hydrocarbon samples were collected simultaneously at ground level and 1420 feet at the same time on the same day. Through the use of the seven-day timers the day of sampling was pre-programmed based on long range weather forecast in order to coincide with warm clear days with the greatest ozone formation potential. Three-hour integrated hydrocarbon samples were collected in the morning (6 am - 9 am) and the afternoon (2 pm - 5 pm) at all levels. The sampling days and samples collected are listed in Table 3.

Table 3. Hydrocarbon Samples Collected

| Date | Ground Level | | 1420 Feet Level | |
|---|---|---|---|---|
| 06/02 | AM | PM | AM | PM |
| 06/09 | AM | PM | AM | PM |
| 06/16 | AM | PM | AM | PM |
| 06/23 | AM | PM | -0- | -0- |
| 07/10 | AM | PM | AM | PM |
| 07/17 | AM | PM | AM | PM |
| 07/24 | AM | PM | -0- | -0- |
| 08/07 | AM | PM | AM | -0- |
| 08/18 | AM | PM | AM | -0- |
| 08/31 | AM | PM | -0- | PM |
| 09/07 | AM | PM | AM | PM |

note:" -0-" denotes sample not successfully collected

Continuing sample collection difficulty was experienced at the 1420 feet level throughout the season. The lost samples have been attributed to thunderstorm activity and power demand fluctuations at the tower.

## 5. Ozone and Hydrocarbon Monitoring Results

### 5.1 Ozone Monitoring Results

During 2000, ozone was monitored at the Tower site throughout the late spring, summer, and early fall. The Tower enabled the Ambient Monitoring Section to monitor ozone on a continuous basis at ground level, 250 feet, 420 feet, and 1420 feet simultaneously. The ground level ozone monitor began collecting data on April 1 and operated until October 31, 2000. The 250 feet, the 420 feet, and the 1420 feet levels operated from April 26 until they were shut down on September 20. For the period of operation at this site, data completeness for each level exceeded 94%. It should be noted that a valid ozone monitoring season completeness is established as being greater than 75%. Table 4 below presents the monthly hourly average (Avg) and monthly hourly maximum (Max) for each monitoring level in parts per million.

Table 4. Monthly Average and Maximum Hourly Ozone Concentration (ppm) All Levels

| | Ground | | 250 Ft | | 420 Ft | | 1420 Ft | |
|---|---|---|---|---|---|---|---|---|
| | Avg | Max | Avg | Max | Avg | Max | Avg | Max |
| **April** | 0.037 | 0.076 | 0.050 | 0.079 | 0.056 | 0.080 | 0.062 | 0.076 |
| **May** | 0.045 | 0.092 | 0.057 | 0.095 | 0.060 | 0.097 | 0.060 | 0.097 |
| **June** | 0.039 | **0.134** | 0.047 | **0.132** | 0.051 | **0.136** | 0.054 | **0.127** |
| **July** | 0.037 | 0.084 | 0.051 | 0.089 | 0.055 | 0.094 | 0.057 | 0.094 |
| **Aug** | 0.032 | 0.093 | 0.048 | 0.106 | 0.052 | 0.108 | 0.055 | 0.103 |
| **Sept** | 0.021 | 0.098 | 0.037 | 0.102 | 0.040 | 0.103 | 0.042 | 0.105 |
| **Oct** | 0.023 | 0.089 | NA | NA | NA | NA | NA | NA |

The monthly average ozone concentrations show a pattern of increasing concentration with height for each month for which data are available. The maximum concentrations generally exhibit the same pattern of increasing with height. This is expected, for the ozone maximums occur during the afternoon when the air column is well mixed. The historical 1-hour ozone standard (>0.125 ppm) was exceeded at the ground level of the Tower once in 2000 on June 1. The upper level 1 hour averages >0.125 ppm also occurred on June 1. The old 1-hour standard was exceeded 4 times across the state in 2000, including the Tower.

In 1997, the EPA revised the National Ambient Air Quality Standard for ozone to >0.08 ppm measured over eight hours. The standard is attained when the average of the fourth highest yearly concentration in a consecutive 3 year period is less than 0.085 ppm. Effectively the new ozone standard for an overlapping 8-hour average has been established at 0.085 ppm. In 2000 there were 239 exceedances of the new 8-hour ozone standard at the 45 statewide reporting monitoring sites on 35 days. Of these 239 exceedances, 24 were from the immediate Raleigh area on 9 days including 3 from the ground level ozone monitor located at the Tower. The other upper level (250 ft., 420 ft., and 1420 ft.) ozone monitoring at this site do not meet the ozone monitoring siting criteria as specified by the EPA, and thus are reported to the EPA as findings at a special purpose monitoring project and are not considered for attainment purposes. Table 5 provides a list of all the 8-hour exceedances at the ground level monitor and the 8-hour averages at the upper levels that were greater than 0.084 ppm ozone.

Table 5. 2000 Ozone Exceedances and Upper Level 8-Hr Averages >0.084 ppm.

| | Ground | 250' | 420' | 1420' |
|---|---|---|---|---|
| 26-May | 0.0820 | **0.0880** | **0.0900** | **0.0870** |
| 01-Jun | **0.1070** | **0.1120** | **0.1150** | **0.1110** |
| 02-Jun | **0.1020** | **0.1010** | **0.1060** | **0.0960** |
| 13-Jun | **0.0890** | **0.0850** | **0.0910** | 0.0840 |
| 18-Jul | 0.0800 | 0.0820 | **0.0860** | 0.0830 |
| 08-Aug | 0.0740 | **0.0890** | **0.0930** | **0.0870** |
| 09-Aug | 0.0770 | **0.0880** | **0.0910** | 0.0840 |
| 15-Aug | 0.0770 | **0.0930** | **0.0940** | **0.0880** |
| 16-Aug | 0.0740 | **0.0920** | **0.0960** | **0.0900** |
| 24-Aug | 0.0770 | 0.0830 | **0.0850** | 0.0790 |
| 13-Sep | 0.0810 | **0.0950** | **0.0940** | **0.0940** |
| Total # | 3 | 9 | 11 | 7 |

It should be noted that:

1. For 11 days, the 8-hour average concentration was greater than 0.084 ppm at one of the Tower monitoring levels.

2. On 5 days the 8-hour average at all three of the upper levels exceeded 0.084 ppm and the ground level was not greater than 0.084 ppm.

3. On 1 day the 8-hour average at the three lowest levels exceeded 0.084 ppm and the upper level was not greater than 0.084 ppm.

4. On 8 days, the 8-hour average concentration at the ground level did not exceed 0.084 ppm when at least one of the upper levels did exceed that concentration.

Table 6 presents 24-hour average ozone concentrations at the four levels monitored when at least one of the levels maintained an average 24-hour concentration greater than the new 8-hour average ozone standard of >0.084 ppm. It should be noted that ground level exceedances occurred at the tower on both these dates. On June 1 the maximum 1-hour average value at the ground level was 0.134 ppm.

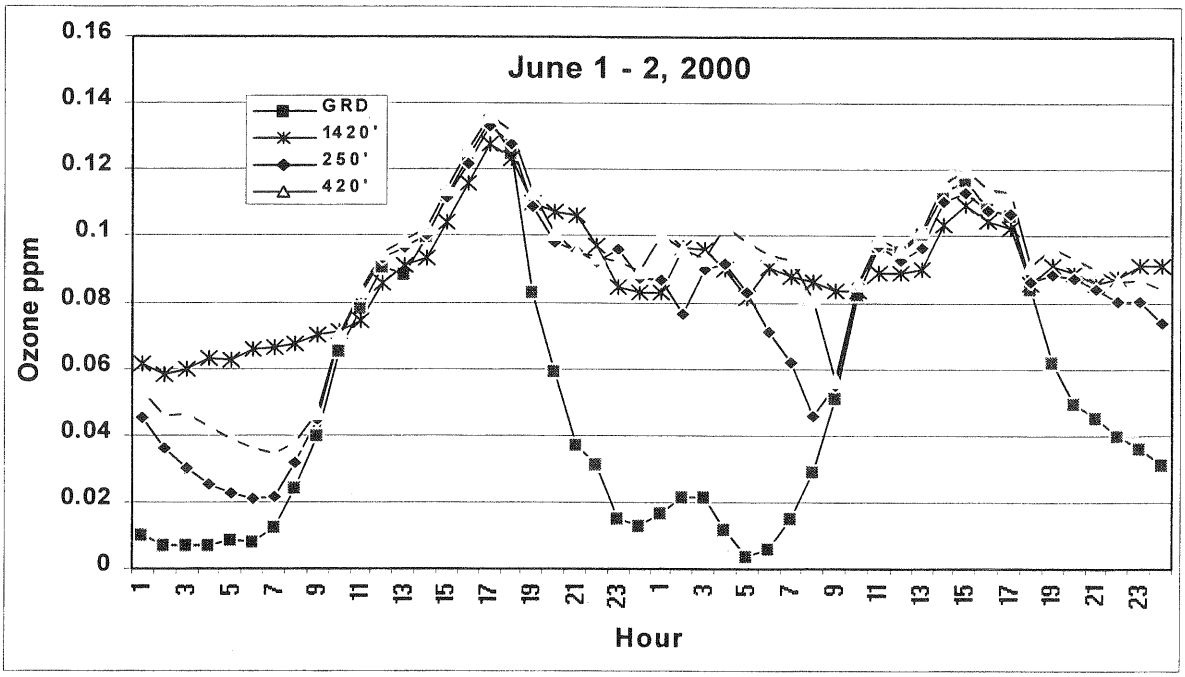
Table 6. Average 24-Hour Ozone Concentrations > 0.084 ppm

| | Ground | 250 Ft | 420 Ft | 1420 Ft |
|---|---|---|---|---|
| **June 1** | 0.058 | 0.077 | 0.081 | **0.086** |
| **June 2** | 0.057 | **0.086** | **0.095** | **0.091** |

There is a definite pattern of lowest to highest concentration when going from ground level to the 1420 feet level for these dates. For each of these days when the 24- hour average ozone concentration at the 1420 feet was greater than the new standard, there was an ozone exceedance reported for the ground level monitor. The average ground level exceedance for these dates was 0.098 ppm ozone.

Figure 5 shows the hourly ozone concentration data from 12 am June 1 through 11:59 pm June 2 for both the ground level and the upper levels. This is representative of the classical cycle of formation and depletion of ground level ozone. For presentation purposes only, the calibration cycles, 3 and 6 am, have been removed from this plot. The ground level ozone concentration begins increasing at 6 am, builds to a maximum value in the mid to late afternoon, and slowly declines throughout the evening hours. In contrast, the upper levels (especially the 1420 feet level) ozone concentration over this period remains relatively constant at a considerably higher concentration. From late morning through early afternoon, the ozone concentrations at both levels are virtually identical.

Figure 5. Ground and Upper Level Ozone Diurnal Cycle




A complete reporting set of Hourly Average Ozone data for each level and monitoring period is included in Appendix A. The following identifies the sampling elevation under the Parameter Identifier in the Hourly Average Report in these reports.

| | | |
|---|---|---|
| Parameter | O3 | Ground Level |
| " | M2 | 250 Feet |
| " | M4 | 420 Feet |
| " | Hi | 1420 Feet |

## 5.2 Hydrocarbon Compound Results

Ambient air samples were collected for Hydrocarbon (HC) analysis in the morning and afternoon from June 2 through September 7 at three levels of the Tower. These levels were ground level, 820 feet, and 1420 feet. The samples were analyzed the following week at the Ambient Monitoring Hydrocarbon Laboratory. The samples collected at the 820' level were found to be contaminated and are not included in this report. A total of 37 samples were successfully collected, analyzed, and are included in this report. There were 22 samples collected at ground level and 15 samples at the 1420 feet level. The data from the analysis of the ground level samples were reported to the EPA. The upper level samples are reported to the EPA and identified as the results from a special purpose monitoring project.

The hydrocarbons determined in a sample includes methane, the 54 PAMS Target Compounds, and all compounds detected and quantified but not identified. The Total Non-Methane Organic Compounds (NMOC) is reported after the methane

fraction has been removed from the Total Hydrocarbon determination. The Total Unknown is the sum of the reported but unidentified portion of the sample. A summary of the results for the 2000 sample set in 2000 is in Table 7.

Table 7. Total HC NMOC, and Unknown, Median Concentration (ppbC)

| | | Ground | | 1420 Feet | |
|---|---|---|---|---|---|
| | | am | pm | am | pm |
| **Number of Samples** | | **11** | **11** | **8** | **7** |
| **Total HC** | min | 51 | 56 | 32 | 53 |
| | max | 197 | 390 | 206 | 130 |
| | **Median** | **92** | **115** | **79** | **72** |
| **Total NMOC** | min | 23 | 29 | 12 | 22 |
| | max | 165 | 361 | 177 | 101 |
| | **Median** | **64** | **89** | **50** | **46** |
| **Total Unknown** | min | 5 | 5 | 3 | 2 |
| | max | 26 | 58 | 20 | 14 |
| | **Median** | **12** | **23** | **6** | **8** |

*note: results in ppbc

The median HC, NMOC, and Unknown concentrations show a distinct difference between the ground and upper level in both the morning and afternoon samples. In all cases the median ground level concentration is greater than the 1420' concentrations. The median concentration for the ground level samples is the highest in HC, NMOC, and unknowns. The maximum concentrations for HC, NMOC, and Unknowns for the ground level morning and both the morning and afternoon samples for the upper level occurred on June 2. For the ground level afternoon sample the maximum concentration occurred on July 10.

All samples were analyzed for the 54 PAMS Target Compounds and unidentified components. Of the compounds identified by this analytical technique, 29 different compounds were found over 50% of the time in at least one sampling level. Five (5) compounds were found in all samples analyzed. These compounds of highest frequency of detection range from methane (C1) through undecane (C11). The compounds that were detected at a frequency greater than 50% are presented in Table 8.

Table 8. Target Compounds Percent Found (>50%) in Year 2000 Samples

| | TG AM | TG PM | TT AM | TT PM |
|---|---|---|---|---|
| METHANE | 100.0 | 100.0 | 100.0 | 100.0 |
| ETHANE | 100.0 | 100.0 | 100.0 | 100.0 |
| ETHYLENE | 100.0 | 100.0 | 77.8 | 85.7 |
| PROPANE | 100.0 | 100.0 | 100.0 | 100.0 |
| PROPYLENE | 100.0 | 100.0 | 100.0 | 85.7 |
| ISOBUTANE | 90.9 | 90.9 | 33.3 | 42.9 |
| N-BUTANE | 100.0 | 100.0 | 77.8 | 85.7 |
| ACETYLENE | 90.9 | 81.8 | 55.6 | 57.1 |
| 1-BUTENE | 54.5 | 63.6 | 33.3 | 57.1 |
| ISOPENTANE | 100.0 | 100.0 | 77.8 | 85.7 |
| N-PENTANE | 100.0 | 100.0 | 66.7 | 57.1 |
| 2,3-DIMETHYLBUTANE | 63.6 | 27.3 | 11.1 | 0.0 |
| 2-METHYLPENTANE | 90.9 | 81.8 | 33.3 | 42.9 |
| 3-METHYLPENTANE | 81.8 | 54.5 | 22.2 | 28.6 |
| ISOPRENE | 90.9 | 90.9 | 44.4 | 85.7 |
| HEXANE | 81.8 | 72.7 | 0.0 | 14.3 |
| METHYLCYCLOPENTANE | 63.6 | 36.4 | 0.0 | 0.0 |
| BENZENE | 90.9 | 90.9 | 77.8 | 85.7 |
| 2,2,4-TRIMETHYLPENTANE | 90.9 | 90.9 | 66.7 | 57.1 |
| 2,3,4-TRIMETHYLPENTANE | 72.7 | 72.7 | 0.0 | 0.0 |
| TOLUENE | 100.0 | 100.0 | 100.0 | 100.0 |
| 2-METHYLHEPTANE | 9.1 | 72.7 | 0.0 | 0.0 |
| ETHYLBENZENE | 81.8 | 36.4 | 22.2 | 14.3 |
| META/PARA-XYLENE | 100.0 | 90.9 | 55.6 | 42.9 |
| O-XYLENE | 72.7 | 63.6 | 33.3 | 42.9 |
| M-ETHYLTOLUENE | 100.0 | 90.9 | 66.7 | 71.4 |
| 1,2,4-TRIMETHYLBENZENE | 100.0 | 100.0 | 100.0 | 100.0 |
| 1,2,3-TRIMETHYLBENZENE | 100.0 | 100.0 | 66.7 | 100.0 |
| UNDECANE | 63.6 | 45.5 | 44.4 | 28.6 |

The identified fraction (the PAMS 54 Target Compounds) can be further classified into the common compound structures of paraffinic, olefinic, and aromatic compounds (AOP). The PAMs target compounds includes 29 paraffins, 10 olefins, 16 aromatics, and acetylene an alkyne. The median concentration of each of these 4 classes of compounds is presented in Table 9. To further differentiate these classifications methane due to its constant concentration and isoprene which is non-anthropogenic are included separately in this table. The methane and paraffins in this data set exhibit minimal variability across all samples collected in the morning and afternoon at both the ground and upper level. Isoprene, olefinic compounds, aromatic compounds, acetylene, and the unknown fractions have a wide range of concentrations. As with the data presented in Table 7 (HC and NMOC) the maximum concentrations found in 2000 for methane, paraffins, isoprene, aromatics, acetylene,

Table 9. Paraffin, Olefin, Aromatic and Unknown Concentration of Targeted Compounds

| | | Ground Level | | 1420 Feet | |
|---|---|---|---|---|---|
| | | am | pm | am | pm |
| **Methane** | min | 27 | 25 | 21 | 26 |
| | max | 32 | 31 | 30 | 30 |
| | **Median** | **29** | **28** | **28** | **28** |
| **Paraffins** (1) | min | 11 | 10 | 1 | 2 |
| | max | 76 | 133 | 16 | 17 |
| | **Median** | **26** | **31** | **7** | **7** |
| **Isoprene** | min | 0 | 1 | 0 | 0 |
| | max | 9 | 35 | 2 | 6 |
| | **Median** | **5** | **12** | **1** | **2** |
| **Olefins** (2) | min | 1 | 1 | 0 | 2 |
| | max | 8 | 41 | 6 | 9 |
| | **Median** | **3** | **3** | **2** | **4** |
| **Aromatics** | min | 7 | 7 | 7 | 11 |
| | max | 43 | 70 | 133 | 57 |
| | **Median** | **18** | **12** | **37** | **24** |
| **Acetylene** | min | 0 | 0 | 0 | 0 |
| | max | 3 | 23 | 1 | 1 |
| | **Median** | **1** | **1** | **1** | **1** |
| **Unknowns** | min | 5 | 2 | 2 | 4 |
| | max | 26 | 59 | 20 | 14 |
| | **Median** | **12** | **23** | **6** | **9** |

(1) Total Paraffins less Methane, (2) Total Olefins less Isoprene

*note: results in ppbc

and unknowns for the ground level morning sample and both the morning and afternoon samples from the 1420 feet level are from the samples collected on June 2. Likewise the maximum concentrations found for the afternoon ground level sample for all classifications in Table 9 are from July 10. The acetylene concentration at the ground level during the afternoon on July 10 was exceptionally large at 23 parts per billion carbon. For the entire 2000 PAMS data set the afternoon ground level sample from July 10 also had the highest concentration of ethylene, propylene, N-butane, isopentane, benzene, and m&p-xylene. It is suspected that mowing was occurring in the surrounding fields or some combustion source was operating in close vicinity to the ground level sampling site. The minimum concentrations were found in the September 7 samples.

In Table 10 the median percent composition shows the relationships between classes of compounds. An interesting point presented here is the dominance of the aromatic fraction in the upper level samples collected in both the morning and afternoon and the lack of contribution at the upper level composition by paraffins, isoprene and the remaining olefins.

Table 10. AOP Median Percent Composition of Target Compounds and Unknowns

| | TG AM | TG PM | TT AM | TT PM |
|---|---|---|---|---|
| Methane | 29.4 | 25.3 | 34.7 | 35.5 |
| Paraffins | 25.7 | 27.7 | 7.9 | 8.9 |
| Isoprene | 4.4 | 8.9 | 0.0 | 2.5 |
| Olefins | 3.5 | 2.3 | 2.7 | 5.8 |
| Aromatic | 20.1 | 10.6 | 44.1 | 31.5 |
| Acetylene | 1.5 | 1.1 | 0.6 | 1.0 |
| Unknowns | 13.9 | 19.9 | 8.7 | 10.5 |

In the morning samples, 46 of the target compounds were detected above the MRL at the ground level and 40 at the 1420 foot level. In the afternoon samples, 51 of these compounds were detected and reported at the ground level and 38 compounds at the 1420 foot level.

Table 11 list the median concentration for each target compound detected above the MRL for all samples collected during 2000. The listing ND is for compounds that were not reported at or above the MRL in any of the samples successfully collected at a specific level and sampling period. The highest number of compounds not reported were from the upper level samples collected. Eight (8) compounds were not reported in any samples for the ground level morning and 3 compounds at the ground level afternoon whereas there were 14 compounds ND for the 1420' morning samples and 17 for the afternoon samples.

Review of the median concentration data presented in Table 11 reveals:

1. A substantial contribution by 2,2,4-Trimethylpentane and Isoprene to the ground level afternoon samples

2. Elevated concentrations of both Toluene and 1,2,4-Trimethylbenzene in both the morning and afternoon samples of the upper level

3. Seven compounds were reported at the ground level and not reported above the MRL at the upper level.

| | | |
|---|---|---|
| trans-2-pentene | cyclopentane | 2,2-dimethylbutane |
| methylcyclopentane | 2-methylheptane | 3-methylheptane |
| 2,3,4-trimethylpentane | | |

4. Two compounds, M-Diethylbenzene and Isopropyl Benzene, were reported at the upper level and not reported at the ground level.

Table 11. Median Target Compound Concentrations

| | TG AM | TG PM | TT AM | TT PM | | TG AM | TG PM | TT AM | TT PM |
|---|---|---|---|---|---|---|---|---|---|
| METHANE | 28.8 | 27.9 | 28.2 | 28.4 | 2-METHYLHEXANE | 0.5 | 1.1 | 0.4 | 0.5 |
| ETHANE | 3.0 | 3.7 | 2.7 | 2.8 | 2,3-DIMETHYLPENTANE | 0.3 | 0.4 | ND | 0.3 |
| ETHYLENE | 1.5 | 1.6 | 0.6 | 0.7 | 3-METHYLHEXANE | 0.3 | 0.4 | ND | 0.5 |
| PROPANE | 5.3 | 2.4 | 1.0 | 1.7 | 2,2,4-TRIMETHYLPENTANE | 2.8 | 18.0 | 0.5 | 0.4 |
| PROPYLENE | 1.3 | 1.1 | 0.6 | 0.6 | N-HEPTANE | 0.4 | 0.5 | ND | 0.4 |
| ISOBUTANE | 0.7 | 1.2 | 0.4 | 0.5 | METHYLCYCLOHEXANE | ND | 0.5 | ND | 0.3 |
| N-BUTANE | 1.3 | 1.1 | 0.5 | 0.6 | 2,3,4-TRIMETHYLPENTANE | 0.6 | 1.9 | ND | ND |
| ACETYLENE | 1.5 | 1.1 | 0.7 | 1.0 | TOLUENE | 3.0 | 2.4 | 17.2 | 10.2 |
| TRANS-2-BUTENE | ND | 1.5 | 0.3 | ND | 2-METHYLHEPTANE | 0.4 | 0.6 | ND | ND |
| 1-BUTENE | 0.4 | 0.3 | 0.4 | 0.3 | 3-METHYLHEPTANE | 0.4 | 0.4 | ND | ND |
| CIS-2-BUTENE | ND | 1.3 | ND | ND | N-OCTANE | 0.8 | 0.5 | ND | 0.5 |
| CYCLOPENTANE | 0.8 | 0.8 | ND | ND | ETHYLBENZENE | 0.5 | 1.7 | 0.8 | 0.4 |
| ISOPENTANE | 3.1 | 1.6 | 0.7 | 0.9 | META/PARA-XYLENE | 1.2 | 0.8 | 0.7 | 0.6 |
| N-PENTANE | 2.0 | 1.6 | 0.4 | 0.5 | O-XYLENE | 0.7 | 0.4 | 0.4 | 0.5 |
| TRANS-2-PENTENE | 0.4 | 1.8 | ND | ND | N-NONANE | 0.5 | 0.5 | 0.6 | 0.5 |
| 1-PENTENE | 0.4 | 0.3 | 0.4 | 0.4 | ISOPROPYLBENZENE | ND | ND | 0.4 | ND |
| CIS-2-PENTENE | ND | 1.8 | 1.0 | 2.6 | N-PROPYLBENZENE | 0.6 | ND | 0.4 | ND |
| 2,2-DIMETHYLBUTANE | 0.4 | 1.1 | ND | ND | M-ETHYLTOLUENE | 2.4 | 1.0 | 0.9 | 0.9 |
| 2,3-DIMETHYLBUTANE | 0.4 | 1.4 | 0.6 | ND | 1,3,5-TRIMETHYLBENZENE | 0.5 | 0.7 | 1.0 | ND |
| 2-METHYLPENTANE | 0.9 | 0.6 | 0.3 | 0.4 | O-ETHYLTOLUENE | 0.8 | 1.1 | 1.8 | 1.7 |
| 3-METHYLPENTANE | 0.5 | 0.5 | 0.3 | 0.3 | 1,2,4-TRIMETHYLBENZENE | 6.7 | 5.5 | 13.6 | 10.7 |
| ISOPRENE | 4.6 | 12.4 | 1.2 | 2.1 | DECANE | 0.5 | 0.5 | 0.8 | ND |
| HEXANE | 0.6 | 0.5 | ND | 0.7 | 1,2,3-TRIMETHYLBENZENE | 2.5 | 1.3 | 1.2 | 0.8 |
| METHYLCYCLOPENTANE | 0.5 | 0.5 | ND | ND | M-DIETHYLBENZENE | ND | ND | 1.3 | ND |
| 2,4-DIMETHYLPENTANE | 0.4 | 1.1 | 0.4 | ND | P-DIETHYLBENZENE | ND | 0.5 | 0.5 | ND |
| BENZENE | 1.0 | 0.9 | 1.0 | 0.8 | UNDECANE | 0.5 | 0.4 | 0.8 | 0.7 |
| CYCLOHEXANE | ND | 0.3 | 0.5 | 0.4 | | | | | |

note: ND = Not Detected above MRL

The complete set of the PAMS Hydrocarbon Speciation Reports for each level for each of the 13 sampling days in 2000 is included in Appendix B.

## 6. Requests For Electronic Copies Of The Data

The data used in this summary report are available on request the data from:

Charles Davis
Ambient Monitoring Section
Division of Air Quality
NC Dept of Environment and Natural Resources
1641 Mail Service Center
Raleigh, NC 27699-1641
Phone: (919) 715-0664

# Appendix A

# Monthly Ozone Hourly Reports

Note: Hourly data values not reported have been invalidated.

Current Date : 02/15/02
Current Time : 11:44

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
04/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 1 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 04 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 05 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 08 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 09 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 20 | | | | | | | | | | .036 | .037 | .043 | .048 | .055 | .057 | .060 | .061 | .059 | .053 | .047 | .049 | .047 | .046 | .044 | .061 | .049 | 15 |
| 21 | .043 | .043 | .043 | | .039 | .037 | .036 | .037 | .039 | .042 | .049 | .055 | .060 | .063 | .067 | .068 | .063 | .061 | .053 | .049 | .044 | .039 | .040 | .036 | .068 | .048 | 23 |
| 22 | .031 | .026 | .022 | | .016 | .013 | .012 | .019 | .023 | .025 | .026 | .027 | .033 | .035 | .032 | .030 | .028 | .029 | .028 | .021 | .014 | .013 | .022 | .023 | .035 | .023 | 23 |
| 23 | .023 | .024 | .025 | | .022 | .019 | .019 | .025 | .033 | .040 | .043 | .048 | .052 | .055 | .057 | .058 | .060 | .056 | .039 | .027 | .026 | .005 | .009 | .001 | .060 | .033 | 23 |
| 24 | .000 | .012 | .023 | | .015 | .007 | .007 | .018 | .023 | .030 | .035 | .040 | .048 | .049 | .056 | .054 | .048 | .039 | .040 | .045 | .040 | .042 | .045 | .045 | .056 | .033 | 23 |
| 25 | .045 | .043 | .042 | | .041 | .040 | .035 | .036 | .038 | | .040 | .042 | .039 | .037 | .044 | .046 | .042 | .039 | .039 | .040 | .043 | .043 | .038 | .032 | .046 | .040 | 22 |
| 26 | .027 | .025 | .027 | | .017 | .013 | .010 | | | .037 | .039 | .041 | .050 | .054 | .053 | .051 | .052 | .050 | .041 | .030 | .031 | .035 | .039 | .037 | .054 | .036 | 21 |
| 27 | .035 | .029 | .025 | | .028 | .025 | .019 | .019 | | .025 | .027 | .032 | .035 | .045 | .052 | .056 | .064 | .063 | .040 | .035 | .033 | .024 | .023 | .025 | .064 | .034 | 22 |
| 28 | .029 | .034 | .037 | | .029 | .022 | .017 | .022 | .011 | .017 | .021 | .025 | .037 | .047 | .049 | .054 | .056 | .052 | .048 | .051 | .054 | .046 | .046 | .047 | .056 | .037 | 23 |
| 29 | .046 | .040 | .033 | | .027 | .022 | .017 | .026 | .034 | .046 | .054 | .060 | .062 | .069 | .066 | .053 | .057 | .059 | .060 | .048 | .037 | .025 | .019 | .012 | .069 | .042 | 23 |
| 30 | .006 | .001 | .003 | | .008 | .010 | .006 | .020 | .036 | .044 | .054 | .062 | .074 | .076 | .069 | .068 | .070 | .071 | .053 | .035 | .029 | .027 | .028 | .027 | .076 | .038 | 23 |
| Max | .046 | .043 | .043 | | .041 | .040 | .036 | .037 | .039 | .046 | .054 | .062 | .074 | .076 | .069 | .068 | .070 | .071 | .060 | .051 | .054 | .047 | .046 | .047 | .076 | | |
| Avg | .028 | .027 | .028 | | .024 | .020 | .017 | .024 | .029 | .034 | .038 | .043 | .048 | .053 | .054 | .054 | .054 | .052 | .044 | .038 | .036 | .031 | .032 | .029 | | .037 | |
| Rds | 10 | 10 | 10 | 00 | 10 | 10 | 10 | 09 | 08 | 10 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | | | 241 |

Current Date : 02/15/02
Current Time : 11:44

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
04/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M2
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 4 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 04 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 05 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 08 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 09 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 26 | | | | | | | | | | | | .046 | .052 | .056 | .056 | .055 | .055 | .055 | .053 | .048 | .046 | .045 | .044 | .042 | .056 | .050 | 13 |
| 27 | .039 | .037 | .035 | .036 | .034 | | .025 | .024 | .026 | .028 | .030 | .034 | .037 | .047 | .056 | .060 | .068 | .069 | .061 | .044 | .042 | .036 | .033 | .030 | .069 | .040 | 23 |
| 28 | .034 | .039 | .042 | .039 | .036 | | .025 | .029 | .020 | .023 | .028 | .032 | .043 | .053 | .057 | .058 | .062 | .057 | .053 | .055 | .058 | .050 | .052 | .055 | .062 | .043 | 23 |
| 29 | .055 | .049 | .040 | .040 | .043 | | .037 | .033 | .038 | .048 | .055 | .062 | .066 | .072 | .071 | .068 | .062 | .068 | .066 | .066 | .056 | .060 | .039 | .041 | .072 | .053 | 23 |
| 30 | .053 | .055 | .047 | .051 | .056 | | .060 | .050 | .042 | .048 | .056 | .064 | .077 | .079 | .072 | .071 | .074 | .075 | .076 | .075 | .073 | .073 | .074 | .072 | .079 | .064 | 23 |
| Max | .055 | .055 | .047 | .051 | .056 | | .060 | .050 | .042 | .048 | .056 | .064 | .077 | .079 | .072 | .071 | .074 | .075 | .076 | .075 | .073 | .073 | .074 | .072 | .079 | | |
| Avg | .045 | .045 | .041 | .041 | .042 | | .036 | .034 | .031 | .036 | .042 | .047 | .055 | .061 | .062 | .062 | .064 | .064 | .061 | .057 | .055 | .052 | .048 | .048 | | .050 | |
| Rds | 04 | 04 | 04 | 04 | 04 | 00 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | | | 105 |

Current Date : 02/15/02
Current Time : 11:44

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
04/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M4
Units : PPM
Avg Interval : 01

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Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 5 Interval : 1 Units : 007
Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 04 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 05 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 08 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 09 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 26 | | | | | | | | | | | .042 | .045 | .053 | .058 | .058 | .057 | .057 | .057 | .057 | .056 | .057 | .052 | .047 | .044 | .058 | .052 | 14 |
| 27 | .042 | .043 | .043 | .043 | | .035 | .031 | .029 | .028 | .030 | .032 | .036 | .039 | .048 | .058 | .060 | .069 | .071 | .065 | .049 | .045 | .043 | .040 | .034 | .071 | .044 | 23 |
| 28 | .038 | .043 | .046 | .044 | | .044 | .034 | .037 | .051 | .040 | .040 | .040 | .050 | .058 | .062 | .064 | .067 | .062 | .058 | .060 | .062 | .054 | .057 | .059 | .067 | .050 | 23 |
| 29 | .059 | .054 | .046 | .047 | | .055 | .052 | .044 | .039 | .048 | .056 | .063 | .067 | .073 | .073 | .073 | .069 | .072 | .068 | .069 | .066 | .069 | .068 | .067 | .073 | .060 | 23 |
| 30 | .070 | .071 | .057 | .071 | | .066 | .064 | .061 | .047 | .049 | .057 | .065 | .078 | .080 | .074 | .072 | .075 | .077 | .078 | .078 | .076 | .077 | .077 | .077 | .080 | .069 | 23 |
| Max | .070 | .071 | .057 | .071 | | .066 | .064 | .061 | .051 | .049 | .057 | .065 | .078 | .080 | .074 | .073 | .075 | .077 | .078 | .078 | .076 | .077 | .077 | .077 | .080 | | |
| Avg | .052 | .052 | .048 | .051 | | .050 | .045 | .042 | .041 | .041 | .045 | .049 | .057 | .063 | .065 | .065 | .067 | .067 | .065 | .062 | .061 | .059 | .057 | .056 | | .055 | |
| Rds | 04 | 04 | 04 | 04 | 00 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | | | 106 |

Current Date : 02/15/02
Current Time : 11:44

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
04/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : HI
Units : PPM
Avg Interval : 01

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Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 6 Interval : 1 Units : 007
Method : 047

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Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 02 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 03 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 04 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 05 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 06 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 07 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 08 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 09 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 17 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 19 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 26 | | | | | | | | | | | | | .047 | .052 | .055 | .053 | .053 | .053 | .053 | .053 | .055 | .056 | .052 | .049 | .056 | .052 | 12 |
| 27 | .042 | .041 | .044 | .047 | .052 | .049 | | .047 | .049 | .045 | .038 | .040 | .043 | .045 | .053 | .055 | .065 | .067 | .065 | .062 | .055 | .062 | .067 | .069 | .069 | .052 | 23 |
| 28 | .067 | .067 | .069 | .069 | .070 | .070 | | .066 | .073 | .071 | .072 | .073 | .070 | .064 | .061 | .063 | .066 | .061 | .059 | .060 | .061 | .055 | .056 | .068 | .073 | .065 | 23 |
| 29 | .070 | .071 | .068 | .068 | .069 | .071 | | .070 | .069 | .054 | .051 | .058 | .061 | .068 | .069 | .067 | .066 | .071 | .070 | .066 | .062 | .062 | .062 | .064 | .071 | .065 | 23 |
| 30 | .064 | .067 | .063 | .055 | .057 | .066 | | .062 | .069 | .070 | .061 | .062 | .072 | .076 | .069 | .066 | .069 | .073 | .074 | .075 | .073 | .073 | .074 | .073 | .076 | .067 | 23 |
| Max | .070 | .071 | .069 | .069 | .070 | .071 | | .070 | .073 | .071 | .072 | .073 | .072 | .076 | .069 | .067 | .069 | .073 | .074 | .075 | .073 | .073 | .074 | .073 | .076 | | |
| Avg | .060 | .061 | .061 | .059 | .062 | .064 | | .061 | .065 | .060 | .055 | .058 | .058 | .061 | .061 | .060 | .063 | .065 | .064 | .063 | .061 | .061 | .062 | .064 | | .061 | |
| Rds | 04 | 04 | 04 | 04 | 04 | 04 | 00 | 04 | 04 | 04 | 04 | 04 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | 05 | | | 104 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
05/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

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Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 1 Interval : 1 Units : 007
Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .021 | .026 | .023 | | .008 | .008 | .008 | .019 | .042 | .059 | .074 | .077 | .077 | .079 | .082 | .084 | .082 | .083 | .082 | .078 | .074 | .063 | .059 | .060 | .084 | .055 | 23 |
| 02 | .060 | .057 | .054 | | .051 | .047 | .043 | .044 | .046 | .047 | .051 | .058 | .060 | .055 | .063 | .064 | .070 | .059 | .048 | .041 | .028 | .016 | .026 | .044 | .070 | .049 | 23 |
| 03 | .044 | .040 | .025 | | .014 | .023 | .032 | .046 | .052 | .058 | .064 | .068 | .070 | .071 | .073 | .073 | .073 | .072 | .062 | .049 | .054 | .055 | .055 | .051 | .073 | .053 | 23 |
| 04 | .049 | .044 | .031 | | .012 | .000 | .001 | .019 | .044 | .055 | .055 | .065 | .067 | .070 | .072 | .072 | .071 | .066 | .050 | .040 | .038 | .041 | .039 | .035 | .072 | .045 | 23 |
| 05 | .032 | .024 | .022 | | .015 | .008 | .012 | .028 | .041 | .051 | .057 | .062 | .068 | .069 | .068 | .068 | .069 | .066 | .047 | .039 | .033 | .031 | .027 | .025 | .069 | .041 | 23 |
| 06 | .025 | .028 | .026 | | .022 | .018 | .022 | .022 | .032 | .048 | .061 | .072 | .071 | .071 | .070 | .070 | .069 | .066 | .048 | .040 | .036 | .033 | .031 | .030 | .072 | .043 | 23 |
| 07 | .027 | .026 | .025 | | .018 | .014 | .021 | .029 | .041 | .051 | .058 | .058 | .060 | .062 | .066 | .067 | .068 | .064 | .055 | .046 | .044 | .038 | .038 | .041 | .068 | .044 | 23 |
| 08 | .041 | .034 | .037 | | .035 | .031 | .022 | .025 | .035 | .049 | .055 | .060 | .066 | | .074 | .076 | .077 | .074 | .066 | .058 | .053 | .048 | .045 | .041 | .077 | .050 | 22 |
| 09 | .036 | .032 | .029 | | .027 | .026 | .025 | .030 | | | .040 | .047 | .057 | .062 | .065 | .067 | .066 | .072 | .071 | .067 | .059 | .052 | .044 | .042 | .072 | .048 | 21 |
| 10 | .038 | .035 | .035 | | | .035 | .033 | .036 | .042 | .049 | .053 | .055 | .056 | .057 | .054 | .051 | .053 | .041 | .036 | .037 | .040 | .038 | .051 | .049 | .057 | .044 | 22 |
| 11 | .037 | | .013 | | .023 | .013 | .001 | .007 | .037 | .054 | .066 | .074 | .078 | .087 | .091 | .089 | .084 | .064 | .057 | .051 | .052 | .047 | .045 | .043 | .091 | .050 | 22 |
| 12 | .036 | .037 | .042 | | .034 | .028 | .019 | .034 | .046 | .057 | .064 | .067 | .067 | .070 | .069 | .068 | .069 | .062 | .057 | .054 | .050 | .043 | .030 | .027 | .070 | .049 | 23 |
| 13 | .025 | .039 | .038 | | .033 | .033 | .033 | .041 | .051 | .061 | .067 | .071 | .072 | .072 | .075 | .071 | .064 | .061 | .044 | .040 | .038 | .038 | .049 | .048 | .075 | .050 | 23 |
| 14 | .050 | .047 | .046 | | .040 | .035 | .032 | .036 | .047 | .051 | .057 | .061 | | .073 | .075 | .072 | .072 | .065 | .059 | .043 | .031 | .022 | .006 | .008 | .075 | .046 | 22 |
| 15 | .031 | .045 | .048 | | .042 | .037 | .037 | .044 | .049 | .052 | .056 | .060 | .063 | .066 | .069 | .073 | .072 | .069 | .056 | .038 | .030 | .017 | .010 | .000 | .073 | .046 | 23 |
| 16 | .000 | .000 | .003 | | .002 | .000 | .001 | .027 | .039 | .051 | .057 | .067 | .071 | .072 | .074 | .075 | .075 | .067 | .050 | .043 | .039 | .050 | .059 | .057 | .075 | .042 | 23 |
| 17 | .056 | .055 | .052 | | .041 | .032 | .036 | .042 | .052 | .059 | .063 | .063 | .067 | .068 | .069 | .074 | .078 | .076 | .066 | .054 | .048 | .048 | .047 | .045 | .078 | .056 | 23 |
| 18 | .044 | .043 | .041 | | .039 | .037 | .034 | .038 | .042 | .053 | .058 | .061 | .063 | .065 | .069 | .071 | .071 | .070 | .066 | .065 | .059 | .059 | .056 | .052 | .071 | .054 | 23 |
| 19 | .048 | .044 | .045 | | .049 | .045 | .042 | .045 | .051 | .060 | .067 | .070 | .070 | .068 | .070 | .073 | .072 | .070 | .053 | .045 | .041 | .046 | .044 | .046 | .073 | .054 | 23 |
| 20 | .051 | .048 | .048 | | .044 | .041 | .037 | .041 | .049 | .061 | .076 | .087 | .080 | .075 | .072 | .068 | .068 | .073 | .054 | .048 | .049 | .052 | .050 | .046 | .087 | .057 | 23 |
| 21 | .040 | .036 | .029 | | .030 | .027 | .031 | .029 | .030 | .032 | .034 | .040 | .041 | .049 | .055 | .055 | .048 | .037 | .029 | .025 | .030 | .027 | .025 | .034 | .055 | .035 | 23 |
| 22 | .034 | .026 | .026 | | .018 | .018 | .016 | .017 | .025 | .032 | .042 | .052 | .056 | .056 | .058 | .062 | .063 | .063 | .059 | .045 | .030 | .019 | .026 | .023 | .063 | .037 | 23 |
| 23 | .014 | .008 | .008 | | .000 | .000 | .000 | .002 | .031 | | | .064 | .065 | .069 | .070 | .064 | .049 | .044 | .041 | .045 | .039 | .034 | .030 | .035 | .070 | .033 | 21 |
| 24 | .043 | .040 | .033 | | .018 | .020 | .025 | .037 | .044 | .046 | .053 | .062 | .062 | .068 | .068 | .071 | .074 | .071 | .071 | .061 | .052 | .053 | .052 | .054 | .074 | .051 | 23 |
| 25 | .051 | .045 | .039 | | .034 | .030 | .023 | .029 | .037 | .049 | .045 | .030 | .038 | .046 | .052 | | .057 | .055 | .054 | .047 | .026 | .017 | .021 | .017 | .057 | .038 | 22 |
| 26 | .023 | .027 | .025 | | .020 | .017 | .026 | .031 | .050 | .061 | .069 | .076 | .083 | .089 | .092 | .088 | .084 | .078 | .065 | .053 | .035 | .029 | .026 | .018 | .092 | .050 | 23 |
| 27 | .014 | .009 | .022 | | .016 | .022 | .022 | .023 | .036 | .047 | .052 | .061 | .063 | .064 | .062 | .058 | .053 | .039 | .029 | .025 | .026 | .031 | .033 | .036 | .064 | .036 | 23 |
| 28 | .028 | .023 | .019 | | .011 | .016 | .025 | .031 | .033 | .038 | .040 | .043 | .044 | .043 | .044 | .045 | .048 | .047 | .043 | .036 | .041 | .050 | .040 | .032 | .050 | .035 | 23 |
| 29 | .028 | .026 | .028 | | .023 | .023 | .026 | .036 | .039 | .044 | .043 | .046 | .047 | .042 | .037 | .034 | .032 | .031 | .029 | .027 | .025 | .024 | .024 | .022 | .047 | .032 | 23 |
| 30 | .021 | .022 | .021 | | .022 | .022 | .022 | .022 | .023 | .025 | .028 | .031 | .033 | .036 | .039 | .039 | .041 | .039 | .036 | .035 | .033 | .031 | .030 | .029 | .041 | .029 | 23 |
| 31 | .027 | .026 | .024 | | .018 | .016 | .020 | .024 | .027 | .031 | .035 | .040 | .041 | .044 | .047 | .050 | .054 | .057 | .045 | .033 | .028 | .013 | .004 | .005 | .057 | .030 | 23 |
| Max | .060 | .057 | .054 | | .051 | .047 | .043 | .046 | .052 | .061 | .076 | .087 | .083 | .089 | .092 | .089 | .084 | .083 | .082 | .078 | .074 | .063 | .059 | .060 | .092 | | |
| Avg | .034 | .033 | .030 | | .025 | .023 | .023 | .030 | .040 | .049 | .054 | .059 | .061 | .063 | .065 | .066 | .065 | .061 | .052 | .045 | .040 | .037 | .036 | .035 | | .045 | |
| Rds | 31 | 30 | 31 | 00 | 30 | 31 | 31 | 31 | 30 | 29 | 30 | 31 | 30 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 704 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
05/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M2
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 4 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .066 | .055 | .054 | .060 | .056 | | .054 | .051 | .052 | .068 | .079 | .083 | .082 | .084 | .087 | .089 | .088 | .089 | .088 | .084 | .081 | .068 | .064 | .065 | .089 | .071 | 23 |
| 02 | .066 | .062 | .059 | .057 | .056 | | .049 | .050 | .053 | .053 | .056 | .064 | .066 | .063 | .070 | .072 | .075 | .075 | .076 | .074 | .073 | .071 | .057 | .059 | .076 | .063 | 23 |
| 03 | .055 | .053 | .055 | .056 | .054 | | .049 | .053 | .057 | .064 | .068 | .070 | .073 | .074 | .076 | .076 | .077 | .078 | .075 | .074 | .070 | .065 | .063 | .061 | .078 | .065 | 23 |
| 04 | .060 | .061 | .059 | .058 | .060 | | .055 | .034 | .048 | .058 | .057 | .066 | .069 | .072 | .074 | .075 | .074 | .070 | .066 | .066 | .065 | .050 | .048 | .047 | .075 | .060 | 23 |
| 05 | .046 | .045 | .045 | .046 | .043 | | .043 | .039 | .045 | .055 | .061 | .065 | .071 | .073 | .073 | .073 | .073 | .072 | .071 | .071 | .076 | .072 | .064 | .054 | .076 | .059 | 23 |
| 06 | .057 | .051 | .045 | .043 | .041 | | .031 | .027 | .036 | .051 | .064 | .075 | .075 | .074 | .073 | 074 | .075 | .074 | .073 | .072 | .069 | .065 | .060 | .057 | .075 | .059 | 23 |
| 07 | .051 | .048 | .044 | .039 | .040 | | .037 | .037 | .046 | .056 | .062 | .061 | .063 | .065 | .070 | .070 | .073 | .069 | .065 | .063 | .062 | .061 | .052 | .049 | .073 | .055 | 23 |
| 08 | .049 | .049 | .049 | .048 | .045 | | .037 | .042 | .047 | .054 | .060 | .063 | .070 | | .078 | .080 | .083 | .080 | .074 | .070 | .066 | .056 | .049 | .044 | .083 | .058 | 22 |
| 09 | .039 | .035 | .033 | .034 | .033 | | .031 | .034 | .035 | .038 | .043 | .048 | .059 | .064 | .067 | .069 | .069 | .075 | .077 | .075 | .065 | .055 | .046 | .044 | .077 | .050 | 23 |
| 10 | .040 | .038 | .039 | .041 | | | .038 | .040 | .046 | | | .058 | .059 | .059 | .057 | .055 | .057 | .058 | .054 | .055 | .057 | .053 | .057 | .057 | .059 | .050 | 20 |
| 11 | .058 | | .064 | .064 | .063 | | .061 | .037 | .040 | .054 | .068 | .075 | .079 | .088 | .093 | .092 | .090 | .087 | .087 | .087 | .074 | .059 | .057 | .053 | .093 | .069 | 22 |
| 12 | .049 | .050 | .051 | .047 | .043 | | .031 | .041 | .050 | .060 | .067 | .069 | .068 | .072 | .071 | .071 | .072 | .067 | .065 | .063 | .059 | .055 | .056 | .057 | .072 | .058 | 23 |
| 13 | .057 | .053 | .050 | .044 | .042 | | .041 | .047 | .055 | .064 | .070 | .072 | .072 | .073 | .077 | .072 | .067 | .066 | .064 | .059 | .060 | .053 | .053 | .051 | .077 | .059 | 23 |
| 14 | .053 | .050 | .049 | .047 | .045 | | .043 | .041 | .050 | .054 | .059 | .062 | | .075 | .077 | .076 | .077 | .071 | .072 | .066 | .061 | .063 | .066 | .053 | .077 | .059 | 22 |
| 15 | .045 | .049 | .052 | .051 | .047 | | .043 | .048 | .053 | .056 | .058 | .062 | .065 | .068 | .071 | .076 | .075 | .073 | .070 | .074 | .074 | .073 | .070 | .070 | .076 | .061 | 23 |
| 16 | .063 | .050 | .057 | .055 | .053 | | .042 | .032 | .042 | .054 | .060 | .070 | .074 | .075 | .078 | .079 | .078 | .075 | .072 | .073 | .073 | .061 | .068 | .066 | .079 | .063 | 23 |
| 17 | .065 | .065 | .062 | .059 | .054 | | .054 | .056 | .059 | .064 | .068 | .068 | .072 | .073 | .073 | .078 | .083 | .082 | .069 | .056 | .052 | .051 | .050 | .048 | .083 | .063 | 23 |
| 18 | .047 | .046 | .043 | .043 | .043 | | .038 | .043 | .046 | .058 | .062 | .065 | .067 | .070 | .073 | .074 | .075 | .074 | .071 | .070 | .066 | .064 | .060 | .056 | .075 | .058 | 23 |
| 19 | .053 | .050 | .052 | .056 | .055 | | .049 | .050 | .055 | .063 | .070 | .071 | .070 | .070 | .072 | .076 | .076 | .076 | .073 | .070 | .071 | .062 | .055 | .055 | .076 | .063 | 23 |
| 20 | .057 | .054 | .054 | .053 | .051 | | .044 | .046 | .054 | .064 | .079 | .088 | .081 | .076 | .074 | .070 | .071 | .077 | .075 | .078 | .064 | .055 | .053 | .047 | .088 | .063 | 23 |
| 21 | .042 | .041 | .040 | .037 | .031 | | .030 | .029 | .031 | .033 | .034 | .041 | .042 | .049 | .056 | .057 | .050 | .042 | .034 | .030 | .032 | .032 | .034 | .045 | .057 | .038 | 23 |
| 22 | .040 | .032 | .031 | .030 | .028 | | .026 | .030 | .034 | .038 | .047 | .056 | .060 | .061 | .063 | .066 | .068 | .069 | .066 | .064 | .055 | .048 | .044 | .048 | .069 | .048 | 23 |
| 23 | .047 | .048 | .056 | .056 | .057 | | .057 | .061 | .046 | .054 | .064 | .069 | .069 | .077 | .079 | .078 | .076 | .076 | .068 | .070 | .066 | .054 | .042 | .048 | .079 | .061 | 23 |
| 24 | .050 | .049 | .050 | .050 | .050 | | .043 | .044 | | | .056 | .063 | .064 | .069 | .070 | .073 | .077 | .074 | .075 | .071 | .069 | .069 | .068 | .064 | .077 | .061 | 21 |
| 25 | .057 | .051 | .046 | .043 | .042 | | .031 | .033 | .040 | .052 | .049 | .040 | .043 | .050 | .057 | | .061 | .060 | .062 | .058 | .052 | .055 | .053 | .045 | .062 | .049 | 22 |
| 26 | .046 | .048 | .051 | .051 | .048 | | .040 | .034 | .052 | .063 | .072 | .077 | .085 | .091 | .095 | .092 | .087 | .083 | .085 | .089 | .081 | .079 | .078 | .077 | .095 | .069 | 23 |
| 27 | .079 | .079 | .077 | .078 | .078 | | .035 | .030 | .040 | .051 | .056 | .064 | .065 | .067 | .065 | .062 | .061 | .047 | .041 | .045 | .037 | .039 | .037 | .045 | .079 | .055 | 23 |
| 28 | .046 | .045 | .045 | .042 | .038 | | .026 | .030 | .033 | .038 | .041 | .042 | .045 | .044 | .045 | .045 | .049 | .048 | .045 | .039 | .045 | .053 | .050 | .044 | .053 | .042 | 23 |
| 29 | .039 | .033 | .036 | .036 | .027 | | .028 | .040 | .042 | .048 | .047 | .050 | .051 | .045 | .040 | .038 | .036 | .035 | .033 | .031 | .029 | .028 | .028 | .025 | .051 | .036 | 23 |
| 30 | .025 | .026 | .025 | .025 | .026 | | .025 | .026 | .027 | .028 | .032 | .034 | .036 | .039 | .042 | .043 | .045 | .044 | .041 | .040 | .037 | .036 | .034 | .033 | .045 | .033 | 23 |
| 31 | .032 | .031 | .029 | .027 | .024 | | .024 | .028 | .030 | .033 | .037 | .041 | .042 | .045 | .047 | .051 | .054 | .059 | .053 | .055 | .057 | .055 | .055 | .053 | .059 | .041 | 23 |
| Max | .079 | .079 | .077 | .078 | .078 | | .061 | .061 | .059 | .068 | .079 | .088 | .085 | .091 | .095 | .092 | .090 | .089 | .088 | .089 | .081 | .079 | .078 | .077 | .095 | | |
| Avg | .050 | .048 | .048 | .047 | .045 | | .039 | .039 | .044 | .052 | .058 | .062 | .064 | .066 | .069 | .070 | .070 | .068 | .065 | .064 | .061 | .056 | .053 | .052 | | .056 | |
| Rds | 31 | 30 | 31 | 31 | 30 | 00 | 31 | 31 | 30 | 29 | 30 | 31 | 30 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 704 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
05/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M4
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 5 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .071 | .065 | .065 | .074 | | .075 | .080 | .082 | .058 | .070 | .081 | .084 | .084 | .085 | .089 | .091 | .090 | .091 | .090 | .087 | .084 | .069 | .066 | .067 | .091 | .078 | 23 |
| 02 | .067 | .062 | .059 | .058 | | .055 | .052 | .051 | .054 | .054 | .058 | .065 | .067 | .066 | .072 | .074 | .076 | .077 | .078 | .076 | .074 | .073 | .069 | .065 | .078 | .065 | 23 |
| 03 | .058 | .058 | .061 | .065 | | .067 | .058 | .056 | .058 | .065 | .069 | .071 | .073 | .075 | .077 | .077 | .078 | .080 | .079 | .078 | .077 | .073 | .067 | .067 | .080 | .069 | 23 |
| 04 | .070 | .071 | .069 | .067 | | .065 | .077 | .052 | .051 | .059 | .058 | .067 | .070 | .073 | .076 | .076 | .075 | .072 | .068 | .069 | .069 | .053 | .052 | .049 | .077 | .065 | 23 |
| 05 | .050 | .050 | .050 | .052 | | .053 | .054 | .047 | .046 | .056 | .061 | .066 | .072 | .074 | .073 | .074 | .074 | .073 | .073 | .073 | .079 | .073 | .063 | .054 | .079 | .062 | 23 |
| 06 | .068 | .061 | .049 | .048 | | .042 | .035 | .033 | .038 | .052 | .065 | .075 | .076 | .075 | .074 | .075 | .076 | .076 | .075 | .075 | .075 | .071 | .062 | .068 | .076 | .062 | 23 |
| 07 | .059 | .048 | .053 | .058 | | .051 | .051 | .045 | .048 | .056 | .062 | .062 | .064 | .066 | .071 | .071 | .074 | .071 | .067 | .068 | .066 | .066 | .057 | .053 | .074 | .060 | 23 |
| 08 | .052 | .053 | .053 | .052 | | .048 | .047 | .045 | .048 | .055 | .060 | .065 | .071 | | .080 | .081 | .085 | .082 | .078 | .075 | .071 | .058 | .049 | .043 | .085 | .061 | 22 |
| 09 | .038 | .036 | .035 | .037 | | .035 | .034 | .036 | .037 | .040 | | | .062 | .068 | .071 | .074 | .073 | .080 | .082 | .082 | .074 | .057 | .048 | .045 | .082 | .054 | 21 |
| 10 | .043 | .040 | .042 | .046 | | .046 | .043 | .044 | .049 | .055 | .059 | .061 | .062 | .062 | .060 | .058 | .061 | .062 | .059 | .060 | .063 | .059 | .060 | .060 | .063 | .054 | 23 |
| 11 | .062 | | .069 | .067 | | .066 | .065 | .054 | .042 | .056 | .069 | .077 | .081 | .091 | .096 | .094 | .093 | .090 | .091 | .092 | .081 | .064 | .060 | .058 | .096 | .073 | 22 |
| 12 | .053 | .057 | .057 | .051 | | .053 | .054 | .049 | .053 | .062 | .069 | .072 | .072 | .075 | .074 | .074 | .076 | .071 | .070 | .067 | .065 | .064 | .066 | .060 | .076 | .063 | 23 |
| 13 | .058 | .057 | .062 | .053 | | .049 | .047 | .050 | .057 | .066 | .072 | .075 | .076 | .077 | .081 | .077 | .071 | .071 | .070 | .065 | .070 | .060 | .055 | .052 | .081 | .063 | 23 |
| 14 | .054 | .052 | .051 | .050 | | .050 | .049 | .045 | .052 | .055 | .059 | .063 | | .076 | .078 | .078 | .079 | .073 | .075 | .072 | .065 | .069 | .069 | .065 | .079 | .062 | 22 |
| 15 | .056 | .053 | .054 | .053 | | .048 | .047 | .050 | .055 | .057 | .060 | .063 | .067 | .069 | .072 | .077 | .076 | .075 | .073 | .077 | .076 | .074 | .072 | .073 | .077 | .064 | 23 |
| 16 | .066 | .055 | .060 | .059 | | .054 | .049 | .037 | .044 | .055 | .061 | .071 | .075 | .075 | .079 | .080 | .080 | .077 | .075 | .076 | .075 | .068 | .071 | .070 | .080 | .065 | 23 |
| 17 | .070 | .069 | .067 | .066 | | .059 | .064 | .065 | .064 | .066 | .070 | .070 | .073 | .075 | .075 | .080 | .085 | .084 | .071 | .059 | .054 | .053 | .051 | .048 | .085 | .066 | 23 |
| 18 | .047 | .046 | .042 | .040 | | .041 | .040 | .045 | .048 | .059 | .064 | .066 | .069 | .073 | .074 | .076 | .077 | .076 | .073 | .072 | .068 | .065 | .061 | .058 | .077 | .059 | 23 |
| 19 | .056 | .055 | .056 | .058 | | .055 | .052 | .052 | .057 | .064 | .071 | .073 | .073 | .073 | .075 | .079 | .079 | .079 | .076 | .073 | .076 | .067 | .057 | .058 | .079 | .065 | 23 |
| 20 | .061 | .058 | .057 | .056 | | .052 | .049 | .049 | .055 | .065 | .080 | .090 | .083 | .079 | .076 | .072 | .074 | .079 | .079 | .081 | .067 | .057 | .057 | .046 | .090 | .066 | 23 |
| 21 | .041 | .050 | .047 | .041 | | .031 | .033 | .030 | .027 | .031 | .033 | .040 | .041 | .048 | .054 | .057 | .052 | .047 | .042 | .037 | .038 | .039 | .038 | .052 | .057 | .041 | 23 |
| 22 | .049 | .042 | .035 | .031 | | .032 | .034 | .034 | .036 | .041 | .049 | .056 | .061 | .062 | .064 | .068 | .070 | .070 | .068 | .067 | .062 | .058 | .054 | .056 | .070 | .052 | 23 |
| 23 | .056 | .055 | .060 | .061 | | .061 | .062 | .067 | .065 | .055 | .066 | | | .078 | .082 | .080 | .079 | .081 | .074 | .075 | .075 | .063 | .058 | .059 | .082 | .067 | 21 |
| 24 | .052 | .052 | .053 | .053 | | .056 | .053 | .048 | .051 | .051 | .058 | .065 | .067 | .073 | .074 | .077 | .080 | .077 | .078 | .074 | .074 | .075 | .074 | .067 | .080 | .064 | 23 |
| 25 | .059 | .053 | .050 | .046 | | .041 | .039 | .038 | .043 | .053 | .051 | .045 | .045 | .051 | .058 | | .063 | .064 | .064 | .063 | .057 | .059 | .056 | .052 | .064 | .052 | 22 |
| 26 | .054 | .053 | .055 | .054 | | .056 | .057 | .043 | .054 | .064 | .072 | .078 | .086 | .093 | .097 | .093 | .089 | .085 | .088 | .090 | .083 | .082 | .084 | .086 | .097 | .073 | 23 |
| 27 | .080 | .079 | .084 | .083 | | .077 | .053 | .048 | .046 | .053 | .058 | .066 | .068 | .070 | .068 | .065 | .064 | .050 | .045 | .048 | .044 | .045 | .039 | .047 | .084 | .060 | 23 |
| 28 | .049 | .050 | .050 | .047 | | .038 | .030 | .033 | .033 | .039 | .043 | .045 | .047 | .045 | .046 | .047 | .051 | .051 | .048 | .041 | .047 | .053 | .053 | .047 | .053 | .044 | 23 |
| 29 | .044 | .038 | .038 | .035 | | .028 | .030 | .041 | .044 | .050 | .050 | .051 | .052 | .047 | .041 | .039 | .038 | .036 | .034 | .032 | .031 | .029 | .029 | .027 | .052 | .038 | 23 |
| 30 | .027 | .027 | .027 | .027 | | .028 | .028 | .028 | .029 | .030 | .033 | .035 | .037 | .041 | .043 | .045 | .046 | .046 | .042 | .041 | .039 | .038 | .036 | .035 | .046 | .035 | 23 |
| 31 | .034 | .033 | .032 | .030 | | .025 | .027 | .030 | .031 | .033 | .038 | .042 | .042 | .045 | .048 | .052 | .054 | .060 | .054 | .057 | .059 | .057 | .055 | .054 | .060 | .043 | 23 |
| Max | .080 | .079 | .084 | .083 | | .077 | .080 | .082 | .065 | .070 | .081 | .090 | .086 | .093 | .097 | .094 | .093 | .091 | .091 | .092 | .084 | .082 | .084 | .086 | .097 | | |
| Avg | .054 | .052 | .052 | .052 | | .049 | .048 | .046 | .047 | .053 | .059 | .064 | .066 | .068 | .070 | .072 | .072 | .071 | .068 | .067 | .065 | .061 | .057 | .056 | | .059 | |
| Rds | 31 | 30 | 31 | 31 | 00 | 31 | 31 | 31 | 31 | 31 | 30 | 29 | 29 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 705 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
05/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : HI
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 6 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .072 | .071 | .074 | .073 | .073 | .074 | | .078 | .080 | .077 | .075 | .079 | .079 | .080 | .083 | .086 | .085 | .087 | .089 | .087 | .089 | .075 | .067 | .066 | .089 | .078 | 23 |
| 02 | .064 | .059 | .058 | .057 | .057 | .056 | | .052 | .053 | .054 | .058 | .063 | .066 | .074 | .078 | .079 | .075 | .073 | .073 | .074 | .071 | .073 | .068 | .071 | .079 | .065 | 23 |
| 03 | .072 | .070 | .073 | .068 | .067 | .065 | | .062 | .058 | .059 | .062 | .064 | .066 | .067 | .069 | .069 | .070 | .074 | .075 | .076 | .076 | .074 | .072 | .070 | .076 | .068 | 23 |
| 04 | .071 | .074 | .073 | .073 | .072 | .072 | | .069 | .068 | .058 | .053 | .061 | .065 | .067 | .069 | .069 | .069 | .067 | .067 | .066 | .069 | .055 | .058 | .060 | .074 | .066 | 23 |
| 05 | .060 | .061 | .062 | .061 | .063 | .064 | | .062 | .061 | .055 | .056 | .060 | .066 | .068 | .067 | .068 | .068 | .067 | .069 | .068 | .068 | .064 | .068 | .066 | .069 | .064 | 23 |
| 06 | .063 | .065 | .065 | .068 | .064 | .059 | | .061 | .065 | .070 | .061 | .069 | .069 | .068 | .067 | .068 | .070 | .070 | .071 | .071 | .071 | .065 | .065 | .063 | .071 | .066 | 23 |
| 07 | .061 | .061 | .062 | .060 | .055 | .056 | | .053 | .053 | .054 | .058 | .056 | .058 | .059 | .064 | .065 | .068 | .066 | .065 | .067 | .066 | .066 | .071 | .063 | .071 | .061 | 23 |
| 08 | .065 | .058 | .056 | .056 | .057 | .056 | | .054 | .061 | .062 | .055 | .058 | .065 | | .072 | .075 | .078 | .079 | .075 | .077 | .074 | .064 | .060 | .066 | .079 | .064 | 22 |
| 09 | .063 | .059 | .060 | .060 | .063 | .066 | | .056 | .052 | .043 | .043 | .048 | .056 | .061 | .064 | .068 | .068 | .075 | .078 | .078 | .073 | .072 | .066 | .060 | .078 | .062 | 23 |
| 10 | .056 | .052 | .050 | .051 | | .058 | | | | | .051 | .053 | .054 | .054 | .053 | .050 | .053 | .052 | .053 | .059 | .067 | .057 | .056 | .059 | .067 | .054 | 19 |
| 11 | .060 | | .066 | .065 | .062 | .055 | | .057 | .059 | .051 | .057 | .066 | .071 | .079 | .085 | .085 | .085 | .084 | .085 | .097 | .093 | .075 | .068 | .073 | .097 | .071 | 22 |
| 12 | .079 | .089 | .078 | .075 | .077 | .082 | | .075 | .083 | .077 | .061 | .062 | .062 | .064 | .064 | .063 | .067 | .064 | .065 | .061 | .063 | .060 | .053 | .052 | .089 | .068 | 23 |
| 13 | .066 | .085 | .087 | .063 | .060 | .057 | | .054 | .057 | .061 | .063 | .065 | .066 | .067 | .068 | .067 | .060 | .063 | .062 | .065 | .062 | .066 | .051 | .048 | .087 | .063 | 23 |
| 14 | .049 | .045 | .047 | .047 | .044 | .044 | | .039 | .043 | .044 | .049 | .053 | | .066 | .069 | .069 | .071 | .068 | .070 | .069 | .063 | .065 | .063 | .061 | .071 | .056 | 22 |
| 15 | .057 | .055 | .053 | .050 | .050 | .049 | | .046 | .047 | .049 | .051 | .055 | .058 | .060 | .063 | .067 | .069 | .068 | .066 | .068 | .069 | .068 | .069 | .067 | .069 | .058 | 23 |
| 16 | .066 | .058 | .060 | .057 | .055 | .056 | | .056 | .060 | .051 | .053 | .062 | .066 | .067 | .069 | .072 | .071 | .070 | .069 | .070 | .071 | .068 | .073 | .073 | .073 | .064 | 23 |
| 17 | .073 | .072 | .071 | .073 | .073 | .070 | | .068 | .072 | .071 | .067 | .067 | .065 | .066 | .067 | .072 | .077 | .079 | .072 | .058 | .055 | .056 | .055 | .054 | .079 | .067 | 23 |
| 18 | .057 | .056 | .054 | .053 | .055 | .052 | | .044 | .044 | .051 | .056 | .058 | .061 | .064 | .067 | .068 | .070 | .070 | .068 | .068 | .065 | .063 | .061 | .063 | .070 | .059 | 23 |
| 19 | .060 | .059 | .058 | .056 | .055 | .055 | | .054 | .054 | .056 | .061 | .063 | .063 | .062 | .065 | .068 | .069 | .071 | .069 | .069 | .068 | .073 | .068 | .063 | .073 | .062 | 23 |
| 20 | .061 | .061 | .058 | .062 | .061 | .050 | | .049 | .048 | .053 | .066 | .078 | .073 | .068 | .065 | .061 | .062 | .068 | .071 | .072 | .060 | .060 | .054 | .048 | .078 | .061 | 23 |
| 21 | .047 | .049 | .049 | .052 | .052 | .044 | | .033 | .035 | .023 | .026 | .031 | .034 | .041 | .045 | .050 | .046 | .048 | .044 | .030 | .038 | .053 | .056 | .053 | .056 | .042 | 23 |
| 22 | .049 | .044 | .046 | .038 | .042 | .044 | | .036 | .033 | .034 | .042 | .048 | .051 | .053 | .055 | .058 | .061 | .062 | .062 | .064 | .064 | .062 | .057 | .054 | .064 | .050 | 23 |
| 23 | .058 | .059 | .060 | .065 | .065 | .063 | | .060 | .062 | .057 | .057 | .063 | .063 | .070 | .077 | .074 | .078 | .076 | .075 | .083 | .081 | .080 | .072 | .064 | .083 | .067 | 23 |
| 24 | .048 | .050 | .053 | .052 | .059 | .059 | | .052 | .050 | | | .057 | .059 | .065 | .064 | .068 | .072 | .070 | .072 | .072 | .082 | .075 | .068 | .067 | .082 | .062 | 21 |
| 25 | .060 | .058 | .057 | .058 | .059 | .060 | | .056 | .059 | .056 | .050 | .048 | .049 | .048 | .053 | | .058 | .059 | .062 | .062 | .060 | .059 | .058 | .054 | .062 | .056 | 22 |
| 26 | .065 | .060 | .065 | .064 | .063 | .061 | | .058 | .061 | .055 | .062 | .068 | .076 | .083 | .087 | .084 | .081 | .078 | .081 | .084 | .084 | .090 | .092 | .088 | .092 | .073 | 23 |
| 27 | .085 | .085 | .085 | .084 | .079 | .077 | | .068 | .063 | .055 | .053 | .060 | .061 | .062 | .061 | .057 | .058 | .047 | .047 | .053 | .047 | .047 | .038 | .048 | .085 | .061 | 23 |
| 28 | .048 | .053 | .053 | .050 | .052 | .054 | | .046 | .048 | .040 | .034 | .040 | .046 | .044 | .042 | .044 | .046 | .048 | .052 | .046 | .048 | .055 | .059 | .057 | .059 | .048 | 23 |
| 29 | .065 | .048 | .052 | .048 | .028 | .031 | | .033 | .034 | .040 | .041 | .043 | .044 | .041 | .035 | .033 | .032 | .031 | .028 | .027 | .026 | .024 | .025 | .025 | .065 | .036 | 23 |
| 30 | .024 | .024 | .023 | .023 | .025 | .025 | | .023 | .024 | .024 | .026 | .029 | .031 | .034 | .037 | .039 | .040 | .040 | .038 | .036 | .034 | .034 | .034 | .033 | .040 | .030 | 23 |
| 31 | .033 | .036 | .034 | .033 | .031 | .031 | | .028 | .024 | .026 | .028 | .032 | .034 | .036 | .040 | .044 | .047 | .055 | .051 | .052 | .056 | .056 | .058 | .059 | .059 | .040 | 23 |
| Max | .085 | .089 | .087 | .084 | .079 | .082 | | .078 | .083 | .077 | .075 | .079 | .079 | .083 | .087 | .086 | .085 | .087 | .089 | .097 | .093 | .090 | .092 | .088 | .097 | | |
| Avg | .059 | .059 | .059 | .057 | .057 | .056 | | .052 | .053 | .051 | .052 | .056 | .059 | .061 | .063 | .064 | .065 | .065 | .065 | .065 | .064 | .063 | .060 | .059 | | .059 | |
| Rds | 31 | 30 | 31 | 31 | 30 | 31 | 00 | 30 | 30 | 29 | 30 | 31 | 30 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 703 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
06/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 1 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .010 | .073 | .007 | | .008 | .008 | .012 | .024 | .040 | .065 | .078 | .090 | .088 | .099 | .112 | .124 | .134 | .124 | .083 | .059 | .037 | .031 | .014 | .012 | .134 | .057 | 23 |
| 02 | .016 | .021 | .021 | | .004 | .005 | .014 | .029 | .051 | .082 | .097 | .095 | .100 | .112 | .116 | .108 | .105 | .083 | .062 | .049 | .045 | .039 | .036 | .031 | .116 | .057 | 23 |
| 03 | .026 | .022 | .019 | | .018 | .010 | .005 | .036 | .057 | .073 | .076 | .080 | .082 | .074 | .077 | .077 | .054 | .048 | .057 | .053 | .051 | .055 | .052 | .041 | .082 | .049 | 23 |
| 04 | .036 | .040 | .042 | | .036 | .034 | .029 | .026 | .027 | .028 | .033 | .043 | .046 | .045 | .044 | .044 | .042 | .039 | .036 | .034 | .030 | .025 | .022 | .022 | .046 | .034 | 23 |
| 05 | .020 | .018 | .018 | | | .014 | .015 | .019 | .027 | .027 | .029 | .034 | .032 | .028 | .025 | .033 | .032 | .024 | .022 | .022 | .021 | .021 | .020 | .019 | .034 | .023 | 22 |
| 06 | .018 | .020 | .018 | | .019 | .020 | .025 | | | .042 | .047 | .053 | .060 | .062 | .060 | .058 | | | | | | | | | .062 | .038 | 13 |
| 07 | .018 | .023 | .027 | | .022 | .014 | .018 | .030 | .037 | .041 | .045 | .048 | .049 | .050 | .051 | .050 | .049 | .047 | .041 | .027 | .014 | .009 | .000 | .002 | .051 | .030 | 23 |
| 08 | .008 | .012 | .010 | | .011 | .007 | .009 | .026 | .039 | .048 | .053 | .057 | .059 | .061 | .068 | .069 | .070 | .070 | .067 | .058 | .046 | .037 | .036 | .036 | .070 | .041 | 23 |
| 09 | .034 | .034 | .034 | | .025 | .020 | .021 | .029 | .038 | .044 | .053 | .067 | .078 | .085 | .083 | .079 | .078 | .076 | .082 | .075 | .065 | .057 | .051 | .048 | .085 | .054 | 23 |
| 10 | .045 | .043 | .042 | | .026 | .022 | .031 | .035 | .051 | .060 | .064 | .069 | .072 | .082 | .088 | .084 | .078 | .075 | .071 | .064 | .057 | .051 | .044 | .041 | .088 | .056 | 23 |
| 11 | .039 | .038 | .035 | | .028 | .026 | .026 | .030 | .038 | .044 | .050 | .058 | .066 | .071 | .072 | .074 | .076 | .076 | .074 | .060 | .054 | .047 | .039 | .036 | .076 | .050 | 23 |
| 12 | .031 | .029 | .026 | | .020 | .018 | .014 | .017 | .026 | .037 | .047 | .057 | .063 | .066 | .070 | .075 | .084 | .091 | .084 | .069 | .063 | .056 | .047 | .040 | .091 | .049 | 23 |
| 13 | .030 | .025 | .023 | | .018 | .015 | .014 | .024 | .035 | .052 | .071 | .084 | .081 | .085 | .089 | .090 | .099 | .095 | .086 | .077 | .066 | .059 | .053 | .041 | .099 | .057 | 23 |
| 14 | .030 | .025 | .021 | | .015 | .012 | .008 | .013 | .028 | .043 | .056 | .066 | .069 | .074 | .063 | .050 | .040 | .021 | .030 | .031 | .026 | .022 | .020 | .018 | .074 | .033 | 23 |
| 15 | .016 | .019 | .017 | | .012 | .013 | .013 | .014 | .019 | .027 | .037 | .047 | .053 | .057 | .059 | .064 | .060 | .051 | .041 | .035 | .025 | .018 | .012 | .006 | .064 | .031 | 23 |
| 16 | .004 | .004 | .008 | | .006 | .008 | .011 | .017 | .023 | .029 | .040 | .044 | .042 | .044 | .044 | .047 | .048 | .052 | .051 | .041 | .030 | .021 | .016 | .014 | .052 | .028 | 23 |
| 17 | .012 | .011 | .011 | | .010 | .009 | .010 | .012 | .022 | .032 | .039 | .043 | .043 | .044 | .045 | .047 | .050 | .047 | .037 | .023 | .028 | .022 | .018 | .017 | .050 | .027 | 23 |
| 18 | .016 | .013 | .010 | | .006 | .005 | .007 | .013 | .023 | .032 | .039 | .047 | .048 | .050 | .050 | .042 | .033 | .028 | .031 | .030 | .020 | .022 | .019 | .017 | .050 | .026 | 23 |
| 19 | .015 | .014 | .011 | | .009 | .009 | .008 | .016 | .026 | .041 | .046 | .050 | .053 | .041 | .033 | .036 | .031 | .027 | .025 | .017 | .016 | .016 | .010 | .022 | .053 | .024 | 23 |
| 20 | .026 | .013 | .009 | | .012 | .014 | .013 | | | .016 | .020 | .023 | .027 | .036 | .044 | .047 | .040 | .042 | .038 | .031 | .024 | .015 | .010 | .016 | .047 | .024 | 21 |
| 21 | .018 | .026 | .032 | | .035 | .031 | .034 | .038 | .038 | .039 | .042 | .048 | .053 | .058 | .061 | .064 | .067 | .064 | .059 | .052 | .046 | .038 | .038 | .040 | .067 | .044 | 23 |
| 22 | .038 | .035 | .032 | | .026 | .024 | .024 | | | .043 | .052 | .059 | .062 | .049 | .047 | .053 | .044 | .034 | .027 | .026 | .026 | .024 | .020 | .018 | .062 | .036 | 21 |
| 23 | .018 | .019 | .012 | | .003 | .001 | .003 | | .032 | .055 | .072 | .072 | .078 | .080 | .082 | .083 | .080 | .063 | .043 | .039 | .028 | .030 | .024 | .024 | .083 | .042 | 22 |
| 24 | .022 | .017 | .014 | | .010 | .010 | .016 | .019 | .030 | .060 | .071 | .075 | .077 | .081 | .075 | .074 | .073 | .066 | .057 | .046 | .041 | .036 | .032 | .028 | .081 | .044 | 23 |
| 25 | .022 | .015 | .013 | | .018 | .023 | .027 | .031 | .037 | .043 | .049 | .053 | .058 | .065 | .073 | .072 | .067 | .060 | | .049 | .046 | .041 | .039 | .038 | .073 | .042 | 22 |
| 26 | .033 | .029 | .028 | | .024 | .022 | .024 | .018 | .022 | .043 | .047 | .051 | .054 | .055 | .059 | .063 | .065 | .048 | .038 | .029 | .028 | .029 | .026 | .023 | .065 | .037 | 23 |
| 27 | .022 | .023 | .027 | | .022 | .018 | .019 | .024 | .034 | .042 | .049 | .052 | .055 | .054 | .057 | .057 | .054 | .053 | .045 | .037 | .037 | .035 | .031 | .028 | .057 | .038 | 23 |
| 28 | .024 | .019 | .016 | | | .010 | .011 | .016 | .024 | .033 | .046 | .050 | .048 | .047 | .039 | .041 | .031 | .032 | .025 | .014 | .024 | .026 | .025 | .026 | .050 | .028 | 22 |
| 29 | .031 | .027 | .027 | | .024 | .021 | .018 | .017 | | .018 | .026 | .038 | .045 | .042 | .035 | .032 | .034 | .032 | .029 | .021 | .009 | .004 | .005 | .010 | .045 | .024 | 22 |
| 30 | .011 | .011 | .014 | | .009 | .004 | .006 | .028 | .038 | .050 | .058 | .060 | .059 | .059 | .062 | .064 | .059 | .053 | .044 | .028 | .014 | .002 | .011 | .006 | .064 | .032 | 23 |
| Max | .045 | .073 | .042 | | .036 | .034 | .034 | .038 | .057 | .082 | .097 | .095 | .100 | .112 | .116 | .124 | .134 | .124 | .086 | .077 | .066 | .059 | .053 | .048 | .134 | | |
| Avg | .022 | .023 | .020 | | .017 | .014 | .016 | .023 | .033 | .042 | .051 | .057 | .059 | .061 | .062 | .063 | .061 | .055 | .049 | .041 | .035 | .030 | .026 | .024 | | .039 | |
| Rds | 30 | 30 | 30 | 00 | 28 | 30 | 30 | 26 | 26 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 28 | 29 | 29 | 29 | 29 | 29 | | | 671 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
06/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M2
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 4 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .045 | .036 | .030 | .025 | .022 | | .021 | .031 | .044 | .069 | .082 | .093 | .096 | .100 | .111 | .122 | .132 | .127 | .109 | .097 | .095 | .092 | .095 | .087 | .132 | .076 | 23 |
| 02 | .086 | .076 | .090 | .091 | .082 | | .061 | .045 | .054 | .085 | .097 | .092 | .096 | .110 | .113 | .107 | .106 | .086 | .088 | .087 | .084 | .080 | .080 | .073 | .113 | .085 | 23 |
| 03 | .067 | .071 | .074 | .070 | .070 | | .069 | .052 | .060 | .075 | .077 | .078 | .078 | .073 | .079 | .081 | .070 | .065 | .065 | .060 | .058 | .059 | .056 | .050 | .081 | .067 | 23 |
| 04 | .048 | .045 | .046 | .042 | .041 | | .037 | .033 | .033 | .031 | .036 | .044 | .048 | .048 | .046 | .048 | .048 | .048 | .046 | .041 | .036 | .031 | .028 | .026 | .048 | .040 | 23 |
| 05 | .023 | .020 | .021 | .018 | | | .017 | .021 | .028 | .029 | .032 | .034 | .036 | .033 | .031 | .037 | .037 | .032 | .030 | .028 | .026 | .025 | .024 | .024 | .037 | .027 | 22 |
| 06 | .025 | .027 | .024 | .027 | .028 | | .031 | .032 | .041 | .047 | .051 | .057 | .064 | .066 | .063 | .062 | | | | | | | | | .066 | .043 | 15 |
| 07 | .024 | .029 | .032 | .033 | .031 | | .025 | | | .044 | .047 | .049 | .050 | .051 | .052 | .052 | .051 | .052 | .052 | .055 | .059 | .064 | .060 | .060 | .064 | .046 | 21 |
| 08 | .053 | .052 | .047 | .043 | .043 | | .038 | .033 | .044 | .052 | .056 | .059 | .061 | .063 | .071 | .073 | .072 | .074 | .074 | .070 | .060 | .051 | .044 | .044 | .074 | .055 | 23 |
| 09 | .044 | .044 | .042 | .039 | .038 | | .033 | .035 | .042 | .048 | .056 | .069 | .079 | .084 | .082 | .078 | .076 | .077 | .086 | .080 | .071 | .063 | .056 | .053 | .086 | .059 | 23 |
| 10 | .051 | .049 | .048 | .047 | .048 | | .042 | .041 | .055 | .063 | .067 | .070 | .072 | .079 | .085 | .081 | .077 | .076 | .074 | .070 | .063 | .054 | .048 | .046 | .085 | .061 | 23 |
| 11 | .044 | .043 | .041 | .039 | .038 | | .032 | .034 | .041 | .046 | .052 | .058 | .064 | .069 | .069 | .069 | .074 | .075 | .076 | .070 | .059 | .050 | .044 | .039 | .076 | .053 | 23 |
| 12 | .035 | .033 | .031 | .030 | .029 | | .025 | .028 | .031 | .040 | .049 | .059 | .064 | .067 | .069 | .074 | .084 | .091 | .086 | .072 | .068 | .059 | .052 | .043 | .091 | .053 | 23 |
| 13 | .033 | .029 | .028 | .026 | .024 | | .020 | .027 | .037 | .052 | .069 | .079 | .076 | .078 | .083 | .085 | .098 | .092 | .088 | .079 | .070 | .065 | .058 | .043 | .098 | .058 | 23 |
| 14 | .033 | .029 | .026 | .022 | .018 | | .011 | .016 | .030 | .044 | .053 | .059 | .060 | .067 | .058 | .052 | .044 | .045 | .039 | .034 | .037 | .033 | .036 | .027 | .067 | .037 | 23 |
| 15 | .024 | .026 | .022 | .019 | .018 | | .017 | .019 | .022 | .030 | .040 | .048 | .051 | .053 | .054 | .061 | .057 | .051 | .044 | .037 | .027 | .022 | .017 | .015 | .061 | .033 | 23 |
| 16 | .010 | .009 | .012 | .010 | .010 | | .015 | .021 | .027 | .035 | .044 | .046 | .047 | .047 | .048 | .049 | .048 | .053 | .053 | .044 | .032 | .023 | .018 | .016 | .053 | .031 | 23 |
| 17 | .015 | .014 | .014 | .014 | .013 | | .013 | .016 | .025 | .035 | .041 | .044 | .043 | .041 | .043 | .046 | .051 | .050 | .051 | .049 | .037 | .025 | .021 | .020 | .051 | .031 | 23 |
| 18 | .019 | .016 | .013 | .011 | .008 | | .010 | .017 | .026 | .035 | .042 | .048 | .047 | .048 | .049 | .053 | .042 | .042 | .042 | .041 | .036 | .034 | .027 | .023 | .053 | .031 | 23 |
| 19 | .021 | .019 | .018 | .015 | .016 | | .020 | .025 | .033 | .043 | .047 | .048 | .052 | .061 | .047 | .041 | .036 | .031 | .032 | .027 | .020 | .019 | .019 | .033 | .061 | .031 | 23 |
| 20 | .033 | .019 | .017 | .018 | .020 | | .016 | .011 | .013 | .019 | .022 | .025 | .029 | .038 | .046 | .048 | .042 | .044 | .043 | .040 | .036 | .035 | .033 | .033 | .048 | .029 | 23 |
| 21 | .033 | .032 | .037 | .041 | .040 | | .039 | | | .040 | .045 | .051 | .054 | .055 | .058 | .062 | .065 | .065 | .064 | .060 | .051 | .042 | .042 | .044 | .065 | .048 | 21 |
| 22 | .042 | .039 | .037 | .035 | .033 | | .029 | .034 | .039 | | .056 | .062 | .065 | .061 | .050 | .055 | .051 | .052 | .041 | .036 | .031 | .029 | .027 | .027 | .065 | .042 | 22 |
| 23 | .027 | .027 | .027 | .030 | .034 | | .022 | .014 | .029 | | .071 | .069 | .072 | .075 | .078 | .079 | .077 | .083 | .075 | .073 | .070 | .080 | .074 | .065 | .083 | .056 | 22 |
| 24 | .050 | .043 | .041 | .040 | .037 | | .033 | .032 | .035 | .059 | .069 | .071 | .071 | .075 | .071 | .069 | .070 | .067 | .064 | .048 | .044 | .040 | .035 | .033 | .075 | .052 | 23 |
| 25 | .032 | .032 | .028 | .024 | .024 | | .030 | .034 | .038 | .043 | .048 | .050 | .053 | .059 | .067 | .067 | .063 | .057 | | .051 | .049 | .044 | .042 | .040 | .067 | .044 | 22 |
| 26 | .035 | .032 | .031 | .029 | .028 | | .027 | .034 | .039 | .045 | .049 | .051 | .052 | .053 | .056 | .059 | .061 | .053 | .051 | .044 | .045 | .045 | .039 | .035 | .061 | .043 | 23 |
| 27 | .031 | .033 | .034 | .032 | .030 | | .024 | .027 | .037 | .046 | .052 | .054 | .054 | .052 | .054 | .055 | .054 | .052 | .046 | .040 | .041 | .038 | .035 | .032 | .055 | .041 | 23 |
| 28 | .028 | .023 | .019 | .015 | | | .015 | .020 | .027 | .036 | .048 | .052 | .051 | .051 | .051 | .053 | .052 | .041 | .042 | .035 | .032 | .034 | .031 | .032 | .053 | .035 | 22 |
| 29 | .035 | .030 | .032 | .030 | .029 | | .023 | .022 | .022 | .022 | .030 | .042 | .049 | .049 | .043 | .037 | .039 | .037 | .038 | .038 | .035 | .037 | .027 | .031 | .049 | .033 | 23 |
| 30 | .040 | .040 | .037 | .031 | .029 | | .027 | .034 | .041 | .051 | .060 | .061 | .060 | .059 | .059 | .061 | .062 | .063 | .063 | .067 | .070 | .069 | .069 | .064 | .070 | .052 | 23 |
| Max | .086 | .076 | .090 | .091 | .082 | | .069 | .052 | .060 | .085 | .097 | .093 | .096 | .110 | .113 | .122 | .132 | .127 | .109 | .097 | .095 | .092 | .095 | .087 | .132 | | |
| Avg | .036 | .033 | .033 | .031 | .031 | | .027 | .028 | .035 | .045 | .052 | .057 | .059 | .062 | .062 | .063 | .063 | .061 | .059 | .054 | .049 | .046 | .042 | .039 | | .046 | |
| Rds | 30 | 30 | 30 | 30 | 28 | 00 | 30 | 28 | 28 | 28 | 30 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 28 | 29 | 29 | 29 | 29 | 29 | | | 673 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
06/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M4
Units : PPM
Avg Interval : 01

++++++++++
Transaction 1
Parameter 44201
Frequency 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 5 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .053 | .045 | .046 | .042 | | .035 | .034 | .037 | .047 | .070 | .083 | .095 | .098 | .102 | .114 | .125 | .136 | .131 | .112 | .100 | .094 | .093 | .092 | .089 | .136 | .081 | 23 |
| 02 | .100 | .095 | .093 | .103 | | .094 | .092 | .080 | .056 | .085 | .098 | .095 | .101 | .116 | .120 | .114 | .112 | .091 | .096 | .093 | .089 | .086 | .086 | .084 | .120 | .094 | 23 |
| 03 | .075 | .070 | .090 | .082 | | .073 | .079 | .067 | .063 | .077 | .079 | .081 | .083 | .078 | .083 | .085 | .078 | .075 | .068 | .063 | .063 | .063 | .060 | .055 | .090 | .073 | 23 |
| 04 | .052 | .050 | .049 | .045 | | .046 | .042 | .039 | .037 | .031 | .036 | .044 | .048 | .048 | .046 | .049 | .048 | .049 | .052 | .044 | .038 | .035 | .032 | .031 | .052 | .043 | 23 |
| 05 | .025 | .022 | .023 | .020 | | .020 | .020 | .024 | .027 | .029 | .032 | .031 | .034 | .035 | .032 | .038 | .038 | .035 | .033 | .033 | .031 | .030 | .028 | .027 | .038 | .029 | 23 |
| 06 | .029 | .029 | .028 | .033 | | .035 | .036 | .034 | .040 | | | .056 | .064 | .066 | .064 | .063 | | | | | | | | | .066 | .044 | 13 |
| 07 | .028 | .031 | .034 | .034 | | .033 | .030 | .035 | .041 | .045 | .048 | .050 | .052 | .052 | .054 | .053 | .052 | .053 | .054 | .056 | .061 | .066 | .063 | .062 | .066 | .047 | 23 |
| 08 | .058 | .058 | .053 | .053 | | .052 | .053 | .039 | .044 | .052 | .056 | .060 | .062 | .064 | .072 | .074 | .074 | .075 | .075 | .072 | .063 | .066 | .048 | .047 | .075 | .059 | 23 |
| 09 | .047 | .048 | .046 | .045 | | .047 | .042 | .038 | .043 | .048 | .056 | .070 | .081 | .087 | .085 | .082 | .080 | .080 | .090 | .080 | .072 | .065 | .057 | .055 | .090 | .062 | 23 |
| 10 | .054 | .052 | .052 | .051 | | .050 | .044 | .048 | .056 | .064 | .068 | .072 | .075 | .084 | .090 | .086 | .081 | .079 | .076 | .072 | .065 | .053 | .049 | .048 | .090 | .063 | 23 |
| 11 | .047 | .046 | .044 | .046 | | .042 | .038 | .036 | .042 | .047 | .052 | .059 | .068 | .073 | .073 | .074 | .078 | .079 | .080 | .072 | .059 | .052 | .050 | .042 | .080 | .056 | 23 |
| 12 | .039 | .037 | .037 | .036 | | .033 | .033 | .033 | .035 | .042 | .051 | .061 | .067 | .070 | .073 | .079 | .089 | .095 | .089 | .075 | .070 | .062 | .056 | .046 | .095 | .056 | 23 |
| 13 | .036 | .033 | .032 | .031 | | .028 | .025 | .029 | .039 | .054 | .071 | .084 | .082 | .086 | .090 | .092 | .101 | .097 | .093 | .084 | .073 | .069 | .060 | .043 | .101 | .062 | 23 |
| 14 | .037 | .034 | .033 | .029 | | .020 | .019 | .019 | .030 | | .055 | .063 | .067 | .074 | .064 | .054 | .043 | .043 | .044 | .038 | .045 | .040 | .053 | .041 | .074 | .042 | 22 |
| 15 | .036 | .031 | .023 | .020 | | .019 | .019 | .019 | .022 | .031 | .041 | .049 | .056 | .058 | .061 | .066 | .062 | .054 | .047 | .039 | .027 | .021 | .021 | .016 | .066 | .036 | 23 |
| 16 | .013 | .012 | .014 | .012 | | .012 | .018 | .023 | .029 | .036 | .045 | .049 | .050 | .051 | .051 | .051 | .050 | .055 | .056 | .044 | .032 | .023 | .019 | .017 | .056 | .033 | 23 |
| 17 | .015 | .015 | .016 | .017 | | .015 | .016 | .017 | .027 | .036 | .043 | .046 | .047 | .045 | .048 | .051 | .056 | .054 | .055 | .051 | .036 | .025 | .022 | .022 | .056 | .033 | 23 |
| 18 | .021 | .017 | .015 | .012 | | .009 | .012 | .019 | .028 | .036 | .043 | .050 | .052 | .053 | .054 | .056 | .049 | .054 | .047 | .045 | .039 | .037 | .027 | .026 | .056 | .034 | 23 |
| 19 | .025 | .024 | .027 | .025 | | .032 | .029 | .028 | .036 | .045 | .049 | .051 | .057 | .064 | .052 | .041 | .040 | .034 | .036 | .032 | .026 | .022 | .023 | .042 | .064 | .036 | 23 |
| 20 | .036 | .024 | .024 | .024 | | .026 | .020 | .013 | .016 | | | .026 | .029 | .039 | .045 | .048 | .043 | .045 | .045 | .044 | .039 | .039 | .039 | .043 | .048 | .033 | 21 |
| 21 | .040 | .038 | .042 | .045 | | .042 | .043 | .045 | .040 | .040 | .045 | .052 | .055 | .059 | .063 | .067 | .071 | .071 | .070 | .064 | .053 | .042 | .042 | .044 | .071 | .051 | 23 |
| 22 | .044 | .042 | .040 | .039 | | .036 | .034 | .036 | | .050 | .057 | .065 | .069 | .065 | .056 | .059 | .057 | .065 | .054 | .042 | .035 | .031 | .034 | .033 | .069 | .047 | 22 |
| 23 | .035 | .035 | .040 | .046 | | .043 | .043 | .024 | .033 | .057 | .073 | .073 | .078 | .081 | .084 | .084 | .083 | .087 | .083 | .079 | .076 | .082 | .082 | .073 | .087 | .064 | 23 |
| 24 | .061 | .056 | .059 | .055 | | .053 | .053 | .058 | .051 | .062 | .072 | .076 | .078 | .082 | .077 | .077 | .077 | .073 | .069 | .050 | .046 | .042 | .036 | .034 | .082 | .060 | 23 |
| 25 | .034 | .033 | .031 | .028 | | .032 | .033 | .035 | .040 | .045 | .050 | .053 | .059 | .066 | .074 | .074 | .069 | .064 | | .055 | .051 | .044 | .042 | .040 | .074 | .047 | 22 |
| 26 | .034 | .031 | .030 | .029 | | .034 | .033 | .036 | .042 | .047 | .050 | .054 | .057 | .058 | .062 | .065 | .067 | .059 | .053 | .051 | .051 | .049 | .043 | .038 | .067 | .046 | 23 |
| 27 | .036 | .038 | .037 | .035 | | .030 | .027 | .029 | .039 | .048 | .054 | .057 | .059 | .058 | .060 | .062 | .060 | .059 | .050 | .042 | .043 | .040 | .037 | .033 | .062 | .044 | 23 |
| 28 | .030 | .025 | .020 | .018 | | .016 | .017 | .021 | .029 | .038 | .050 | .055 | .056 | .055 | .060 | .059 | .059 | .046 | .049 | .047 | .041 | .041 | .041 | .034 | .060 | .039 | 23 |
| 29 | .036 | .034 | .038 | .035 | | .030 | .027 | .025 | .025 | .026 | | | .051 | .052 | .048 | .041 | .041 | .040 | .040 | .043 | .041 | .045 | .044 | .054 | .054 | .038 | 21 |
| 30 | .059 | .054 | .045 | .041 | | .040 | .040 | .042 | .044 | .053 | .061 | .063 | .063 | .062 | .064 | .065 | .066 | .065 | .065 | .067 | .070 | .073 | .071 | .065 | .073 | .058 | 23 |
| Max | .100 | .095 | .093 | .103 | | .094 | .092 | .080 | .063 | .085 | .098 | .095 | .101 | .116 | .120 | .125 | .136 | .131 | .112 | .100 | .094 | .093 | .092 | .089 | .136 | | |
| Avg | .041 | .038 | .038 | .037 | | .035 | .035 | .034 | .037 | .047 | .056 | .059 | .063 | .066 | .067 | .067 | .067 | .065 | .063 | .057 | .052 | .049 | .046 | .044 | | .051 | |
| Rds | 30 | 30 | 30 | 30 | 00 | 30 | 30 | 30 | 29 | 27 | 27 | 29 | 30 | 30 | 30 | 30 | 29 | 29 | 28 | 29 | 29 | 29 | 29 | 29 | | | 673 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
06/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : HI
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 6 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .061 | .058 | .060 | .063 | .062 | .065 | | .067 | .070 | .071 | .074 | .085 | .091 | .093 | .104 | .116 | .127 | .123 | .109 | .107 | .106 | .097 | .084 | .082 | .127 | .085 | 23 |
| 02 | .082 | .096 | .096 | .090 | .081 | .090 | | .086 | .083 | .083 | .089 | .088 | .090 | .103 | .109 | .104 | .102 | .085 | .090 | .088 | .085 | .087 | .091 | .090 | .109 | .090 | 23 |
| 03 | .081 | .077 | .075 | .069 | .077 | .074 | | .071 | .071 | .069 | .069 | .071 | .072 | .068 | .072 | .077 | .071 | .074 | .065 | .059 | .059 | .058 | .057 | .057 | .081 | .069 | 23 |
| 04 | .060 | .057 | .054 | .057 | .053 | .062 | | .060 | .061 | .058 | .061 | .043 | .057 | .062 | .063 | .057 | .059 | .055 | .061 | .048 | .050 | .055 | .047 | .054 | .063 | .056 | 23 |
| 05 | .038 | .030 | .036 | .030 | | .043 | | .047 | .038 | .040 | .047 | .030 | .037 | .035 | .034 | .040 | .037 | .034 | .034 | .035 | .034 | .043 | .052 | .052 | .052 | .038 | 22 |
| 06 | .048 | .043 | .039 | .043 | .044 | .045 | | .033 | .037 | .044 | .045 | .049 | .056 | .059 | .056 | .054 | | | | | | | | | .059 | .046 | 15 |
| 07 | .028 | .036 | .038 | .037 | .039 | .038 | | .033 | .034 | | | .044 | .046 | .046 | .047 | .047 | .046 | .047 | .049 | .051 | .054 | .059 | .062 | .059 | .062 | .044 | 21 |
| 08 | .059 | .059 | .054 | .054 | .053 | .052 | | .051 | .049 | .047 | .051 | .054 | .056 | .058 | .065 | .068 | .069 | .070 | .073 | .071 | .069 | .069 | .063 | .056 | .073 | .059 | 23 |
| 09 | .054 | .055 | .056 | .051 | .044 | .056 | | .045 | .042 | .042 | .048 | .062 | .073 | .079 | .079 | .074 | .075 | .076 | .084 | .081 | .074 | .070 | .066 | .066 | .084 | .063 | 23 |
| 10 | .066 | .069 | .072 | .072 | .072 | .070 | | .065 | .067 | .060 | .061 | .064 | .068 | .076 | .084 | .081 | .076 | .076 | .074 | .072 | .065 | .053 | .057 | .060 | .084 | .068 | 23 |
| 11 | .060 | .068 | .057 | .043 | .038 | .043 | | .042 | .050 | .048 | .046 | .052 | .061 | .065 | .066 | .067 | .072 | .074 | .077 | .073 | .070 | .069 | .061 | .054 | .077 | .058 | 23 |
| 12 | .053 | .058 | .061 | .057 | .052 | .047 | | .055 | .062 | .063 | .063 | .065 | .071 | .069 | .069 | .071 | .081 | .090 | .090 | .082 | .073 | .074 | .075 | .070 | .090 | .067 | 23 |
| 13 | .067 | .066 | .066 | .047 | .044 | .034 | | .045 | .061 | .071 | .073 | .075 | .073 | .076 | .080 | .082 | .093 | .094 | .092 | .082 | .068 | .061 | .057 | .061 | .094 | .068 | 23 |
| 14 | .057 | .063 | .059 | .055 | .052 | .051 | | .039 | .039 | .036 | .047 | .056 | .061 | .068 | .060 | .049 | .041 | .041 | .040 | .040 | .050 | .058 | .058 | .059 | .068 | .051 | 23 |
| 15 | .051 | .039 | .037 | .039 | .038 | .039 | | .033 | .028 | .026 | .034 | .043 | .050 | .054 | .056 | .062 | .058 | .052 | .048 | .037 | .028 | .024 | .023 | .020 | .062 | .039 | 23 |
| 16 | .017 | .016 | .015 | .019 | .025 | .033 | | .023 | .026 | .029 | .039 | .041 | .044 | .044 | .046 | .048 | .046 | .051 | .053 | .045 | .031 | .021 | .018 | .015 | .053 | .032 | 23 |
| 17 | .015 | .015 | .016 | .016 | .015 | .015 | | .015 | .021 | .029 | .035 | .039 | .039 | .039 | .041 | .045 | .049 | .052 | .052 | .048 | .032 | .025 | .023 | .017 | .052 | .030 | 23 |
| 18 | .017 | .013 | .012 | .011 | .010 | .012 | | .014 | .022 | .027 | .032 | .039 | .042 | .044 | .048 | .052 | .045 | .048 | .049 | .050 | .048 | .037 | .031 | .046 | .052 | .032 | 23 |
| 19 | .040 | .039 | .041 | .039 | .040 | .041 | | .037 | .037 | .038 | .042 | .043 | .050 | .062 | .056 | .038 | .048 | .055 | .058 | .047 | .038 | .048 | .048 | .043 | .062 | .044 | 23 |
| 20 | .039 | .031 | .034 | .032 | .023 | .026 | | .016 | .020 | .019 | .019 | .019 | .023 | .033 | .040 | .044 | .042 | .044 | .049 | .044 | .042 | .044 | .044 | .041 | .049 | .033 | 23 |
| 21 | .042 | .045 | .045 | .043 | .046 | .048 | | .045 | | | .043 | .048 | .051 | .055 | .059 | .062 | .068 | .070 | .072 | .070 | .061 | .054 | .061 | .061 | .072 | .054 | 21 |
| 22 | .056 | .049 | .042 | .043 | .044 | .046 | | .037 | .038 | .044 | | .057 | .064 | .063 | .063 | .062 | .055 | .063 | .058 | .056 | .048 | .050 | .056 | .057 | .064 | .052 | 22 |
| 23 | .047 | .052 | .054 | .056 | .056 | .057 | | .054 | .059 | .054 | .065 | .066 | .070 | .074 | .078 | .079 | .079 | .083 | .080 | .079 | .072 | .077 | .090 | .083 | .090 | .068 | 23 |
| 24 | .082 | .081 | .080 | .082 | .082 | .081 | | .074 | .076 | .074 | .067 | .071 | .073 | .077 | .072 | .072 | .073 | .071 | .070 | .050 | .048 | .044 | .043 | .039 | .082 | .068 | 23 |
| 25 | .043 | .047 | .047 | .043 | .041 | .042 | | .047 | .052 | .042 | .045 | .050 | .054 | .061 | .069 | .071 | .067 | .063 | | .057 | .056 | .046 | .044 | .045 | .071 | .051 | 22 |
| 26 | .046 | .055 | .050 | .053 | .058 | .062 | | .043 | .037 | .041 | .045 | .049 | .052 | .053 | .057 | .060 | .065 | .055 | .053 | .054 | .054 | .050 | .045 | .035 | .065 | .050 | 23 |
| 27 | .038 | .045 | .042 | .040 | .038 | .034 | | .039 | .040 | .043 | .048 | .051 | .053 | .053 | .054 | .056 | .055 | .054 | .050 | .042 | .042 | .037 | .033 | .029 | .056 | .044 | 23 |
| 28 | .025 | .021 | .015 | .019 | | .023 | | .024 | .027 | .031 | .043 | .049 | .050 | .054 | .059 | .056 | .058 | .049 | .051 | .050 | .044 | .046 | .047 | .047 | .059 | .040 | 22 |
| 29 | .029 | .038 | .036 | .035 | .037 | .032 | | .025 | .018 | | | .037 | .044 | .047 | .047 | .047 | .050 | .041 | .038 | .051 | .054 | .057 | .058 | .063 | .063 | .042 | 21 |
| 30 | .063 | .056 | .053 | .061 | .068 | .062 | | .054 | .056 | .053 | .056 | .058 | .057 | .057 | .057 | .059 | .061 | .062 | .063 | .064 | .064 | .068 | .067 | .066 | .068 | .060 | 23 |
| Max | .082 | .096 | .096 | .090 | .082 | .090 | | .086 | .083 | .083 | .089 | .088 | .091 | .103 | .109 | .116 | .127 | .123 | .109 | .107 | .106 | .097 | .091 | .090 | .127 | | |
| Avg | .048 | .049 | .048 | .046 | .047 | .047 | | .043 | .045 | .047 | .051 | .053 | .057 | .060 | .063 | .063 | .064 | .063 | .063 | .059 | .055 | .054 | .053 | .052 | | .054 | |
| Rds | 30 | 30 | 30 | 30 | 28 | 30 | 00 | 30 | 29 | 27 | 27 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 28 | 29 | 29 | 29 | 29 | 29 | | | 672 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
07/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 1 Interval : 1 Units : 007
Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .000 | .000 | .000 | | .000 | .000 | .000 | .015 | .044 | .060 | .065 | .065 | .067 | .067 | .072 | .065 | .058 | .052 | .041 | .025 | .017 | .015 | .006 | .006 | .072 | .032 | 23 |
| 02 | .010 | .007 | .001 | | .000 | .000 | .000 | .015 | .050 | .059 | .068 | .072 | .068 | .068 | .066 | .068 | .068 | .066 | .052 | .043 | .037 | .039 | .050 | .055 | .072 | .041 | 23 |
| 03 | .055 | .053 | .048 | | .040 | .036 | .028 | .024 | .040 | .056 | .060 | .063 | | .066 | .066 | .067 | .072 | .072 | .068 | .065 | .065 | .054 | .049 | .046 | .072 | .054 | 22 |
| 04 | .042 | .041 | .041 | | .035 | .034 | .032 | .034 | .041 | .047 | .053 | .056 | .065 | .067 | .066 | .068 | .061 | .047 | .054 | .060 | .056 | .044 | .048 | .052 | .068 | .049 | 23 |
| 05 | .044 | .039 | .031 | | .020 | .022 | .019 | .031 | .044 | .057 | .066 | .069 | .061 | .058 | .050 | .046 | .045 | .037 | .033 | .025 | .010 | .011 | .012 | .008 | .069 | .036 | 23 |
| 06 | .019 | .017 | .017 | | .017 | .011 | .005 | .013 | .029 | .041 | .050 | .060 | .062 | .065 | .064 | .057 | .057 | .066 | .065 | .047 | .029 | .018 | .014 | .011 | .066 | .036 | 23 |
| 07 | .007 | .007 | .001 | | .002 | .013 | .020 | .033 | .041 | .046 | .053 | .060 | .065 | .075 | .078 | .076 | .077 | .074 | .062 | .038 | .028 | .023 | .029 | .042 | .078 | .041 | 23 |
| 08 | .042 | .030 | .027 | | .029 | .014 | .011 | .038 | .055 | .056 | .055 | .060 | .063 | .065 | .066 | .066 | .068 | .065 | .057 | .047 | .043 | .045 | .050 | .057 | .068 | .048 | 23 |
| 09 | .058 | .052 | .046 | | .037 | .040 | .038 | .037 | .041 | .042 | .043 | .045 | .049 | .051 | .053 | .053 | .055 | .053 | .052 | .050 | .045 | .042 | .040 | .041 | .058 | .046 | 23 |
| 10 | .041 | .039 | .039 | | .035 | .035 | .027 | .033 | .044 | .055 | .060 | .061 | .067 | .070 | .073 | .069 | .076 | .078 | .067 | .049 | .045 | .044 | .049 | .065 | .078 | .053 | 23 |
| 11 | .057 | .054 | .054 | | .042 | .034 | .028 | .029 | .028 | .035 | .051 | .070 | .077 | .080 | .065 | .068 | .064 | .059 | .048 | .039 | .034 | .038 | .035 | .039 | .080 | .049 | 23 |
| 12 | .037 | .052 | .046 | | .033 | .034 | .030 | .035 | .044 | | | .055 | .056 | .056 | .051 | .050 | .046 | .044 | .040 | .029 | .013 | .011 | .014 | .010 | .056 | .037 | 21 |
| 13 | .023 | .032 | .038 | | .034 | .036 | .038 | .043 | .035 | .036 | .035 | .039 | .048 | .051 | .055 | .056 | .059 | .056 | .043 | .029 | .018 | .003 | .007 | .006 | .059 | .035 | 23 |
| 14 | .002 | .001 | .002 | | .000 | .000 | .002 | .016 | .038 | .048 | .050 | .052 | .055 | .054 | .053 | .055 | .060 | .055 | .047 | .040 | .038 | .036 | .033 | .030 | .060 | .033 | 23 |
| 15 | .028 | .053 | .040 | | .024 | .038 | .029 | .027 | .031 | .037 | .054 | .065 | .071 | .078 | .072 | .068 | .068 | .061 | .037 | .034 | .025 | .019 | .018 | .017 | .078 | .043 | 23 |
| 16 | .011 | .006 | .004 | | .000 | .000 | .001 | .010 | .025 | .025 | .034 | .031 | .052 | .061 | .063 | .061 | .060 | .057 | .039 | .028 | .014 | .010 | .011 | .011 | .063 | .026 | 23 |
| 17 | .007 | .040 | .034 | | .019 | .017 | .015 | .019 | .031 | .046 | .054 | .058 | .064 | .068 | .073 | .073 | .066 | .062 | .050 | .033 | .020 | .019 | .004 | .002 | .073 | .038 | 23 |
| 18 | .002 | .000 | .000 | | .000 | .000 | .000 | .005 | .046 | .066 | .071 | .074 | .084 | .077 | .082 | .083 | .083 | .084 | .072 | .047 | .036 | .030 | .026 | .024 | .084 | .043 | 23 |
| 19 | .021 | .020 | .022 | | .026 | .024 | .023 | | | | .069 | .078 | .081 | .077 | .077 | .068 | .062 | .061 | .059 | .053 | .049 | .049 | .047 | .052 | .081 | .050 | 20 |
| 20 | .055 | .054 | .050 | | .033 | .018 | .015 | .023 | .036 | .047 | .053 | .055 | .057 | .058 | .052 | .050 | .052 | .052 | .047 | .035 | .020 | .011 | .002 | .000 | .058 | .038 | 23 |
| 21 | .000 | .000 | .000 | | .002 | .005 | .011 | .018 | .019 | .018 | .022 | .028 | .046 | .054 | .060 | .062 | .060 | .058 | .051 | .046 | .037 | .027 | .017 | .010 | .062 | .028 | 23 |
| 22 | .005 | .002 | .001 | | .000 | .000 | .003 | .008 | .023 | .047 | .061 | .061 | .062 | .060 | .059 | .062 | .057 | .051 | .043 | .039 | .036 | .027 | .019 | .017 | .062 | .032 | 23 |
| 23 | .014 | .012 | .013 | | .019 | .024 | .022 | .030 | .035 | .031 | .036 | .041 | .047 | .048 | .048 | .047 | .046 | .042 | .039 | .041 | .032 | .031 | .031 | .033 | .048 | .033 | 23 |
| 24 | .036 | .032 | .038 | | .046 | .043 | .036 | .036 | .040 | .044 | .049 | .047 | .052 | .052 | .050 | .049 | .048 | .044 | .043 | .044 | .041 | .037 | .040 | .043 | .052 | .043 | 23 |
| 25 | .041 | .038 | .032 | | .026 | .023 | .018 | .018 | .018 | .020 | .022 | .026 | .028 | .029 | .030 | .029 | .029 | .028 | .027 | .027 | .027 | .030 | .030 | .028 | .041 | .027 | 23 |
| 26 | .026 | .024 | .022 | | .016 | .011 | .011 | .014 | .017 | .016 | .020 | .021 | .025 | .034 | .036 | .038 | .029 | .030 | .025 | .013 | .002 | .000 | .000 | .000 | .038 | .018 | 23 |
| 27 | .002 | .000 | .000 | | .000 | .000 | .004 | .014 | .028 | .038 | .045 | .050 | .053 | .058 | .058 | .061 | .073 | .059 | .038 | .025 | | | | | .073 | .031 | 19 |
| 28 | .007 | .004 | .002 | | .000 | .000 | .000 | .010 | .032 | .049 | .055 | .059 | .061 | .058 | .059 | .060 | .064 | .053 | .041 | .032 | .030 | .025 | .025 | .022 | .064 | .032 | 23 |
| 29 | .052 | .057 | .048 | | .037 | .031 | .025 | .031 | .034 | .042 | .051 | .056 | .065 | .065 | .055 | .038 | .042 | .032 | .034 | .038 | .032 | .024 | .012 | .008 | .065 | .039 | 23 |
| 30 | .005 | .006 | .005 | | .000 | .000 | .008 | .013 | .021 | .032 | .041 | .045 | .042 | .037 | .030 | .022 | .022 | .021 | .017 | .009 | .002 | .003 | .006 | .006 | .045 | .017 | 23 |
| 31 | .007 | .008 | .009 | | .010 | .008 | .008 | .009 | .013 | .014 | .020 | .021 | .029 | .036 | .045 | .049 | .052 | .046 | .043 | .033 | .028 | .048 | .045 | .041 | .052 | .027 | 23 |
| Max | .058 | .057 | .054 | | .046 | .043 | .038 | .043 | .055 | .066 | .071 | .078 | .084 | .080 | .082 | .083 | .083 | .084 | .072 | .065 | .065 | .054 | .050 | .065 | .084 | | |
| Avg | .024 | .025 | .022 | | .018 | .017 | .016 | .022 | .034 | .041 | .048 | .053 | .057 | .059 | .058 | .057 | .057 | .053 | .046 | .037 | .030 | .027 | .025 | .026 | | .037 | |
| Rds | 31 | 31 | 31 | 00 | 31 | 31 | 31 | 30 | 30 | 29 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | | | 703 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
07/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M2
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 4 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .060 | .061 | .055 | .057 | .055 | | .057 | .036 | .046 | .062 | .066 | .066 | .066 | .070 | .070 | .071 | .066 | .063 | .067 | .055 | .064 | .070 | .068 | .064 | .071 | .061 | 23 |
| 02 | .062 | .057 | .060 | .058 | .051 | | .058 | .040 | .052 | .061 | .070 | .072 | .065 | .065 | .064 | .064 | .066 | .067 | .067 | .068 | .063 | .058 | .059 | .063 | .072 | .061 | 23 |
| 03 | .063 | .060 | .057 | .058 | .055 | | .046 | .049 | .053 | .061 | .065 | .066 | | .067 | .067 | .069 | .073 | .075 | .073 | .073 | .071 | .059 | .054 | .050 | .075 | .061 | 22 |
| 04 | .047 | .046 | .046 | .044 | .042 | | .038 | .040 | .046 | .052 | .056 | .059 | .066 | .069 | .069 | .069 | .064 | .060 | .060 | .065 | .063 | .060 | .059 | .063 | .069 | .055 | 23 |
| 05 | .062 | .060 | .053 | .043 | .039 | | .031 | .035 | .047 | .058 | .067 | .068 | .061 | .060 | .054 | .053 | .051 | .045 | .045 | .044 | .041 | .040 | .034 | .031 | .068 | .048 | 23 |
| 06 | .031 | .037 | .031 | .028 | .030 | | .020 | .016 | | | .052 | .060 | .061 | .063 | .065 | .059 | .059 | .069 | .076 | .080 | .080 | .077 | .075 | .073 | .080 | .054 | 21 |
| 07 | .064 | .060 | .058 | .051 | .050 | | .055 | .046 | .049 | .053 | .071 | .063 | .068 | .075 | .078 | .076 | .079 | .080 | .078 | .077 | .073 | .068 | .066 | .065 | .080 | .065 | 23 |
| 08 | .057 | .058 | .055 | .053 | .050 | | .050 | .045 | .058 | .057 | .056 | .060 | .061 | .068 | .069 | .069 | .072 | .073 | .073 | .069 | .067 | .063 | .057 | .063 | .073 | .061 | 23 |
| 09 | .064 | .060 | .058 | .053 | .049 | | .044 | .043 | .046 | .048 | .047 | .047 | .051 | .053 | .055 | .056 | .058 | .055 | .056 | .056 | .052 | .048 | .045 | .047 | .064 | .051 | 23 |
| 10 | .046 | .044 | .044 | .043 | .042 | | .040 | .043 | .049 | .057 | .063 | .062 | .067 | .072 | .075 | .072 | .077 | .082 | .078 | .068 | .066 | .060 | .059 | .072 | .082 | .060 | 23 |
| 11 | .064 | .062 | .061 | .058 | .056 | | .041 | .033 | .031 | .037 | .052 | .070 | .078 | .084 | .070 | .071 | .071 | .071 | .076 | .059 | .056 | .051 | .051 | .047 | .084 | .058 | 23 |
| 12 | .042 | .057 | .057 | .045 | .043 | | .033 | .038 | .047 | .051 | .055 | .057 | .058 | .059 | .057 | .056 | .054 | .052 | .048 | .043 | .046 | .047 | .048 | .048 | .059 | .049 | 23 |
| 13 | .046 | .044 | .047 | .049 | .053 | | .053 | .051 | .045 | .039 | .039 | .041 | .050 | .054 | .057 | .059 | .061 | .062 | .057 | .055 | .051 | .057 | .055 | .054 | .062 | .051 | 23 |
| 14 | .053 | .049 | .046 | .043 | .046 | | .020 | .019 | .041 | .051 | .053 | .055 | .057 | .057 | .055 | .057 | .060 | .057 | .050 | .045 | .043 | .040 | .037 | .034 | .060 | .046 | 23 |
| 15 | .032 | .057 | .048 | .040 | .032 | | .044 | .037 | .035 | .041 | .058 | .066 | .071 | .077 | .072 | .069 | .070 | .068 | .069 | .067 | .063 | .062 | .059 | .062 | .077 | .056 | 23 |
| 16 | .061 | .053 | .048 | .042 | .044 | | .042 | .034 | .031 | .031 | .041 | .035 | .052 | .060 | .062 | .062 | .062 | .061 | .063 | .063 | .055 | .051 | .060 | .057 | .063 | .050 | 23 |
| 17 | .029 | .049 | .052 | .056 | .056 | | .028 | .023 | .033 | .048 | .056 | .058 | .063 | .067 | .072 | .073 | .067 | .065 | .060 | .061 | .066 | .064 | .063 | .060 | .073 | .055 | 23 |
| 18 | .059 | .059 | .059 | .073 | .084 | | .084 | .051 | .050 | .071 | .075 | .077 | .085 | .078 | .083 | .084 | .085 | .089 | .079 | .070 | .069 | .070 | .059 | .056 | .089 | .071 | 23 |
| 19 | .055 | .044 | .047 | .045 | .045 | | .035 | .039 | .051 | .065 | .072 | .078 | .081 | .078 | .079 | .074 | .069 | .067 | .065 | .064 | .057 | .053 | .051 | .057 | .081 | .059 | 23 |
| 20 | .061 | .060 | .057 | .053 | .036 | | .017 | | | .047 | .054 | .056 | .059 | .062 | .057 | .052 | .053 | .054 | .052 | .050 | .051 | .048 | .047 | .044 | .062 | .050 | 21 |
| 21 | .045 | .044 | .045 | .048 | .042 | | .036 | .023 | .021 | .020 | .025 | .029 | .047 | .055 | .061 | .065 | .064 | .062 | .057 | .052 | .046 | .043 | .034 | .037 | .065 | .043 | 23 |
| 22 | .031 | .044 | .049 | .058 | .060 | | .028 | .012 | .023 | .047 | .061 | .062 | .063 | .063 | .061 | .064 | .060 | .056 | .049 | .044 | .044 | .046 | .043 | .029 | .064 | .047 | 23 |
| 23 | .032 | .035 | .030 | .036 | .038 | | .027 | .033 | .038 | .034 | .038 | .042 | .048 | .050 | .051 | .049 | .050 | .049 | .049 | .048 | .041 | .042 | .038 | .037 | .051 | .040 | 23 |
| 24 | .039 | .037 | .041 | .052 | .051 | | .046 | .038 | .041 | .046 | .051 | .049 | .054 | .055 | .053 | .051 | .051 | .048 | .046 | .047 | .044 | .040 | .043 | .045 | .055 | .046 | 23 |
| 25 | .044 | .041 | .035 | .030 | .030 | | .023 | .022 | .023 | .025 | .026 | .029 | .031 | .033 | .033 | .033 | .032 | .031 | .030 | .030 | .031 | .033 | .033 | .031 | .044 | .030 | 23 |
| 26 | .030 | .028 | .027 | .024 | .020 | .087 | .016 | .017 | .019 | .019 | .023 | .022 | .027 | .035 | .039 | .041 | .038 | .034 | .032 | .030 | .030 | .029 | .029 | .026 | .087 | .030 | 24 |
| 27 | .026 | .022 | .025 | .024 | .023 | | .020 | .018 | .030 | .040 | .046 | .051 | .054 | .059 | .062 | .069 | .075 | .064 | .060 | .055 | | | | | .075 | .043 | 19 |
| 28 | .051 | .040 | .031 | .042 | .042 | | .037 | .035 | .034 | .051 | .057 | .061 | .062 | .061 | .060 | .063 | .069 | .071 | .063 | .062 | .048 | .045 | .045 | .040 | .071 | .050 | 23 |
| 29 | .056 | .060 | .056 | .054 | .047 | | .035 | .031 | .034 | .041 | .050 | .057 | .066 | .067 | .063 | .060 | .056 | .049 | .044 | .054 | .054 | .041 | .033 | .025 | .067 | .049 | 23 |
| 30 | .020 | .019 | .016 | .016 | .015 | | .015 | .016 | .026 | .035 | .043 | .046 | .043 | .040 | .035 | .027 | .025 | .023 | .023 | .022 | .014 | .013 | .012 | .011 | .046 | .024 | 23 |
| 31 | .013 | .015 | .015 | .016 | .018 | | .017 | .021 | .020 | .018 | .022 | .025 | .033 | .039 | .049 | .053 | .058 | .059 | .053 | .043 | .038 | .054 | .051 | .048 | .059 | .033 | 23 |
| Max | .064 | .062 | .061 | .073 | .084 | .087 | .084 | .051 | .058 | .071 | .075 | .078 | .085 | .084 | .083 | .084 | .085 | .089 | .079 | .080 | .080 | .077 | .075 | .073 | .089 | | |
| Avg | .046 | .047 | .045 | .044 | .043 | .087 | .036 | .032 | .038 | .045 | .051 | .054 | .058 | .061 | .061 | .060 | .061 | .060 | .057 | .055 | .052 | .051 | .048 | .047 | | .050 | |
| Rds | 31 | 31 | 31 | 31 | 31 | 01 | 31 | 30 | 29 | 30 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | | | 705 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
07/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M4
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 5 Interval : 1 Units : 007
Method : 047

++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .064 | .067 | .068 | .062 | | .065 | .066 | .065 | .052 | .063 | .068 | .068 | .071 | .073 | .075 | .075 | .072 | .073 | .071 | .071 | .076 | .075 | .074 | .073 | .076 | .069 | 23 |
| 02 | .068 | .067 | .062 | .064 | | .062 | .065 | .056 | .054 | .061 | .071 | .074 | .070 | .071 | .071 | .072 | .073 | .074 | .073 | .074 | .071 | .064 | .062 | .065 | .074 | .067 | 23 |
| 03 | .066 | .064 | .063 | .062 | | .061 | .060 | .056 | .056 | .062 | .066 | .068 | | .072 | .071 | .073 | .077 | .080 | .077 | .078 | .073 | .060 | .055 | .051 | .080 | .065 | 22 |
| 04 | .048 | .048 | .047 | .046 | | .043 | .042 | .042 | .048 | .053 | .057 | .061 | .069 | .072 | .073 | .073 | .067 | .064 | .064 | .068 | .068 | .065 | .062 | .067 | .073 | .058 | 23 |
| 05 | .066 | .062 | .051 | .044 | | .041 | .041 | .037 | .047 | .059 | .069 | .071 | .065 | .064 | .057 | .058 | .057 | .051 | .050 | .047 | .046 | .047 | .047 | .037 | .071 | .052 | 23 |
| 06 | .037 | .046 | .042 | .037 | | .047 | .036 | .019 | .035 | .045 | .055 | .064 | .066 | .069 | .071 | .065 | .064 | .074 | .082 | .086 | .086 | .082 | .081 | .078 | .086 | .059 | 23 |
| 07 | .066 | .053 | .056 | .062 | | .066 | .086 | .074 | .056 | .065 | .082 | .070 | .070 | .075 | .081 | .079 | .082 | .084 | .082 | .081 | .077 | .078 | .075 | .078 | .086 | .072 | 23 |
| 08 | .062 | .066 | .066 | .070 | | .068 | .065 | .052 | .057 | .057 | .056 | .060 | .064 | .069 | .071 | .071 | .074 | .076 | .076 | .074 | .074 | .070 | .059 | .064 | .076 | .066 | 23 |
| 09 | .065 | .061 | .061 | .059 | | .054 | .047 | .046 | .048 | .049 | .049 | .049 | .054 | .057 | .059 | .061 | .062 | .058 | .058 | .057 | .054 | .049 | .046 | .049 | .065 | .054 | 23 |
| 10 | .047 | .046 | .045 | .045 | | .044 | .043 | .045 | .051 | .059 | .065 | .066 | .072 | .078 | .080 | .078 | .082 | .086 | .083 | .077 | .075 | .075 | .066 | .074 | .086 | .064 | 23 |
| 11 | .066 | .066 | .064 | .061 | | .052 | .051 | .036 | .032 | .038 | .053 | .072 | .081 | .087 | .073 | .074 | .072 | .074 | .074 | .062 | .062 | .059 | .062 | .051 | .087 | .061 | 23 |
| 12 | .046 | .059 | .059 | .045 | | .040 | .036 | .040 | .048 | .052 | | | .059 | .061 | .060 | .058 | .059 | .057 | .051 | .051 | .051 | .053 | .061 | .058 | .061 | .052 | 21 |
| 13 | .056 | .056 | .058 | .059 | | .065 | .062 | .056 | .054 | .045 | .045 | .045 | .051 | .056 | .059 | .061 | .063 | .063 | .059 | .057 | .055 | .054 | .054 | .054 | .065 | .055 | 23 |
| 14 | .053 | .049 | .050 | .053 | | .051 | .040 | .036 | .043 | .052 | .054 | .056 | .058 | .059 | .057 | .059 | .063 | .059 | .052 | .048 | .045 | .041 | .035 | .033 | .063 | .049 | 23 |
| 15 | .032 | .058 | .045 | .034 | | .048 | .043 | .042 | .039 | .043 | .058 | .066 | .073 | .079 | .074 | .070 | .071 | .070 | .072 | .067 | .068 | .065 | .066 | .064 | .079 | .058 | 23 |
| 16 | .062 | .063 | .056 | .044 | | .044 | .044 | .038 | .034 | .036 | .048 | .041 | .054 | .062 | .065 | .065 | .064 | .064 | .066 | .066 | .060 | .061 | .069 | .060 | .069 | .055 | 23 |
| 17 | .037 | .046 | .058 | .058 | | .044 | .047 | .036 | .034 | .048 | .056 | .059 | .065 | .070 | .075 | .076 | .069 | .068 | .064 | .064 | .070 | .066 | .065 | .063 | .076 | .058 | 23 |
| 18 | .062 | .059 | .061 | .076 | | .072 | .075 | .087 | .059 | .071 | .076 | .079 | .089 | .081 | .087 | .088 | .090 | .094 | .083 | .076 | .077 | .079 | .070 | .073 | .094 | .076 | 23 |
| 19 | .078 | .056 | .060 | .057 | | .057 | .054 | .049 | .056 | | | .082 | .087 | .083 | .084 | .080 | .076 | .075 | .071 | .069 | .059 | .054 | .053 | .059 | .087 | .066 | 21 |
| 20 | .063 | .063 | .062 | .057 | | .022 | .018 | .026 | .038 | .050 | .056 | .057 | .059 | .063 | .058 | .054 | .054 | .055 | .054 | .053 | .053 | .051 | .048 | .047 | .063 | .050 | 23 |
| 21 | .047 | .046 | .049 | .049 | | .052 | .049 | .027 | .025 | .019 | .026 | .029 | .047 | .055 | .063 | .065 | .065 | .062 | .057 | .053 | .050 | .050 | .045 | .056 | .065 | .047 | 23 |
| 22 | .060 | .065 | .059 | .067 | | .067 | .057 | .025 | .027 | .047 | .062 | .063 | .064 | .064 | .064 | .065 | .062 | .058 | .052 | .047 | .048 | .045 | .046 | .039 | .067 | .054 | 23 |
| 23 | .049 | .044 | .037 | .040 | | .044 | .035 | .036 | .042 | .040 | .041 | .045 | .050 | .052 | .053 | .052 | .052 | .053 | .052 | .050 | .043 | .045 | .042 | .041 | .053 | .045 | 23 |
| 24 | .044 | .042 | .044 | .056 | | .058 | .055 | .044 | .043 | .047 | .051 | .050 | .055 | .056 | .055 | .054 | .053 | .050 | .049 | .050 | .047 | .043 | .046 | .048 | .058 | .049 | 23 |
| 25 | .047 | .043 | .038 | .034 | | .031 | .027 | .025 | .027 | .029 | .031 | .033 | .036 | .037 | .037 | .037 | .036 | .035 | .034 | .034 | .035 | .037 | .036 | .034 | .047 | .034 | 23 |
| 26 | .033 | .031 | .028 | .025 | | .019 | .020 | .019 | .020 | .018 | .022 | .021 | .026 | .033 | .036 | .039 | .037 | .035 | .034 | .031 | .032 | .031 | .031 | .029 | .039 | .028 | 23 |
| 27 | .032 | .033 | .036 | .038 | | .044 | .044 | .025 | .030 | .039 | .046 | .051 | .053 | .058 | .062 | .069 | .075 | .065 | .060 | .054 | | | | | .075 | .048 | 19 |
| 28 | .054 | .053 | .052 | .056 | | .052 | .054 | .051 | .042 | .051 | .058 | .062 | .064 | .061 | .061 | .064 | .070 | .072 | .067 | .065 | .053 | .047 | .046 | .045 | .072 | .056 | 23 |
| 29 | .058 | .064 | .063 | .066 | | .055 | .045 | .035 | .034 | .040 | .051 | .059 | .067 | .069 | .065 | .062 | .060 | .049 | .046 | .057 | .056 | .047 | .031 | .024 | .069 | .052 | 23 |
| 30 | .022 | .022 | .020 | .022 | | .021 | .022 | .021 | .028 | .037 | .044 | .047 | .045 | .041 | .034 | .029 | .029 | .025 | .023 | .025 | .020 | .021 | .019 | .018 | .047 | .027 | 23 |
| 31 | .019 | .021 | .019 | .019 | | .020 | .022 | .028 | .024 | .020 | .024 | .027 | .034 | .041 | .050 | .055 | .059 | .060 | .056 | .044 | .040 | .058 | .057 | .052 | .060 | .036 | 23 |
| Max | .078 | .067 | .068 | .076 | | .072 | .086 | .087 | .059 | .071 | .082 | .082 | .089 | .087 | .087 | .088 | .090 | .094 | .083 | .086 | .086 | .082 | .081 | .078 | .094 | | |
| Avg | .051 | .052 | .050 | .050 | | .048 | .046 | .041 | .041 | .046 | .053 | .056 | .060 | .063 | .063 | .063 | .064 | .063 | .061 | .059 | .057 | .055 | .053 | .052 | | .054 | |
| Rds | 31 | 31 | 31 | 31 | 00 | 31 | 31 | 31 | 31 | 30 | 29 | 30 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | | | 704 |

Current Date : 02/15/02
Current Time : 11:45

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
07/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : HI
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 6 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .070 | .066 | .063 | .068 | .059 | .065 | | .063 | .064 | .059 | .062 | .064 | .065 | .069 | .072 | .076 | .071 | .071 | .068 | .069 | .072 | .072 | .070 | .070 | .076 | .067 | 23 |
| 02 | .073 | .070 | .070 | .071 | .071 | .071 | | .067 | .069 | .064 | .065 | .069 | .065 | .065 | .066 | .068 | .069 | .072 | .071 | .073 | .072 | .070 | .071 | .076 | .076 | .069 | 23 |
| 03 | .077 | .079 | .077 | .077 | .074 | .075 | | .069 | .067 | .059 | .060 | .062 | | .066 | .067 | .068 | .073 | .078 | .077 | .080 | .078 | .061 | .058 | .052 | .080 | .069 | 22 |
| 04 | .058 | .057 | .055 | .062 | .074 | .067 | | .067 | .057 | .050 | .051 | .054 | .061 | .065 | .067 | .067 | .061 | .060 | .062 | .071 | .075 | .068 | .064 | .072 | .075 | .062 | 23 |
| 05 | .067 | .063 | .054 | .058 | .049 | .051 | | .049 | .047 | .049 | .060 | .065 | .060 | .057 | .052 | .054 | .052 | .057 | .055 | .054 | .056 | .050 | .043 | .040 | .067 | .053 | 23 |
| 06 | .037 | .042 | .041 | .038 | .037 | .038 | | .038 | .035 | | | .054 | .057 | .061 | .064 | .062 | .060 | .069 | .080 | .085 | .084 | .080 | .084 | .087 | .087 | .058 | 21 |
| 07 | .088 | .080 | .064 | .063 | .066 | .072 | | .079 | .082 | .076 | .083 | .085 | .071 | .070 | .073 | .073 | .075 | .079 | .080 | .081 | .077 | .074 | .079 | .082 | .088 | .076 | 23 |
| 08 | .079 | .079 | .073 | .070 | .073 | .073 | | .061 | .057 | .052 | .050 | .054 | .059 | .065 | .067 | .068 | .071 | .073 | .077 | .075 | .072 | .072 | .067 | .066 | .079 | .067 | 23 |
| 09 | .069 | .065 | .068 | .065 | .061 | .065 | | .056 | .049 | .045 | .043 | .045 | .048 | .051 | .054 | .055 | .057 | .058 | .060 | .063 | .063 | .064 | .059 | .058 | .069 | .057 | 23 |
| 10 | .053 | .049 | .050 | .051 | .049 | .046 | | .046 | .050 | .054 | .060 | .061 | .064 | .068 | .071 | .070 | .074 | .080 | .082 | .077 | .073 | .072 | .077 | .076 | .082 | .063 | 23 |
| 11 | .073 | .071 | .066 | .064 | .071 | .061 | | .055 | .059 | .053 | .047 | .061 | .072 | .077 | .074 | .069 | .073 | .074 | .068 | .059 | .055 | .059 | .062 | .060 | .077 | .064 | 23 |
| 12 | .060 | .057 | .049 | .046 | .044 | .047 | | .055 | .052 | .042 | .047 | .050 | .052 | .054 | .058 | .058 | .058 | .056 | .052 | .057 | .059 | .057 | .061 | .054 | .061 | .053 | 23 |
| 13 | .056 | .066 | .066 | .063 | .061 | .062 | | .058 | .056 | .054 | .056 | .055 | .052 | .054 | .057 | .058 | .059 | .061 | .060 | .058 | .058 | .054 | .055 | .057 | .066 | .058 | 23 |
| 14 | .053 | .051 | .055 | .057 | .057 | .059 | | .057 | .056 | .050 | .050 | .051 | .052 | .054 | .052 | .056 | .060 | .057 | .052 | .048 | .050 | .045 | .040 | .050 | .060 | .052 | 23 |
| 15 | .052 | .050 | .041 | .042 | .043 | .040 | | .033 | .043 | .042 | .048 | .059 | .066 | .071 | .070 | .064 | .066 | .066 | .069 | .068 | .075 | .070 | .062 | .059 | .075 | .056 | 23 |
| 16 | .062 | .059 | .052 | .053 | .055 | .053 | | .041 | .045 | .046 | .049 | .051 | .050 | .054 | .057 | .058 | .057 | .057 | .061 | .064 | .062 | .062 | .063 | .063 | .064 | .055 | 23 |
| 17 | .046 | .046 | .058 | .058 | .057 | .053 | | .046 | .048 | .046 | .050 | .053 | .058 | .064 | .068 | .071 | .065 | .064 | .061 | .061 | .068 | .067 | .067 | .067 | .071 | .058 | 23 |
| 18 | .063 | .063 | .063 | .063 | .063 | .063 | | .057 | .064 | .067 | .069 | .071 | .081 | .076 | .079 | .082 | .083 | .088 | .082 | .074 | .081 | .088 | .083 | .075 | .088 | .072 | 23 |
| 19 | .078 | .080 | .078 | .081 | .078 | .078 | | .070 | .078 | .068 | .070 | .077 | .082 | .078 | .079 | .081 | .084 | .084 | .094 | .091 | .076 | .064 | .070 | .063 | .094 | .077 | 23 |
| 20 | .068 | .070 | .068 | .054 | .042 | .036 | | .035 | .042 | | | .050 | .053 | .060 | .056 | .050 | .049 | .051 | .051 | .050 | .054 | .052 | .048 | .052 | .070 | .051 | 21 |
| 21 | .056 | .058 | .060 | .059 | .060 | .059 | | .048 | .050 | .052 | .049 | .051 | .044 | .048 | .057 | .059 | .061 | .059 | .054 | .050 | .053 | .057 | .061 | .062 | .062 | .055 | 23 |
| 22 | .064 | .065 | .068 | .067 | .067 | .066 | | .060 | .063 | .066 | .058 | .058 | .056 | .060 | .058 | .062 | .061 | .066 | .076 | .064 | .050 | .052 | .055 | .057 | .076 | .061 | 23 |
| 23 | .057 | .055 | .055 | .057 | .058 | .056 | | .044 | .044 | .047 | .047 | .044 | .041 | .045 | .047 | .050 | .050 | .051 | .050 | .050 | .053 | .052 | .048 | .053 | .058 | .050 | 23 |
| 24 | .053 | .055 | .051 | .051 | .051 | .050 | | .052 | .053 | .052 | .049 | .048 | .051 | .053 | .051 | .050 | .049 | .046 | .045 | .046 | .046 | .044 | .045 | .044 | .055 | .049 | 23 |
| 25 | .044 | .040 | .037 | .035 | .040 | .034 | | .030 | .027 | .028 | .030 | .031 | .033 | .034 | .035 | .032 | .032 | .031 | .030 | .031 | .034 | .037 | .034 | .032 | .044 | .033 | 23 |
| 26 | .032 | .030 | .029 | .028 | .027 | .022 | | .022 | .024 | .018 | .022 | .022 | .028 | .031 | .033 | .034 | .035 | .036 | .035 | .034 | .032 | .035 | .036 | .037 | .037 | .029 | 23 |
| 27 | .038 | .040 | .044 | .043 | .041 | .041 | | .039 | .039 | .038 | .042 | .047 | .050 | .052 | .058 | .065 | .069 | .063 | .059 | .054 | | | | | .069 | .048 | 19 |
| 28 | .051 | .047 | .050 | .050 | .050 | .054 | | .047 | .048 | .048 | .053 | .058 | .058 | .058 | .057 | .059 | .066 | .071 | .065 | .063 | .057 | .057 | .065 | .062 | .071 | .056 | 23 |
| 29 | .056 | .061 | .060 | .063 | .064 | .062 | | .055 | .056 | .054 | .051 | .054 | .061 | .064 | .062 | .060 | .058 | .048 | .045 | .045 | .038 | .030 | .029 | .028 | .064 | .052 | 23 |
| 30 | .026 | .026 | .030 | .037 | .037 | .041 | | .037 | .036 | .035 | .040 | .043 | .040 | .040 | .029 | .030 | .025 | .027 | .030 | .030 | .030 | .028 | .025 | .030 | .043 | .032 | 23 |
| 31 | .031 | .029 | .028 | .024 | .024 | .023 | | .023 | .020 | .031 | .034 | .029 | .033 | .037 | .046 | .052 | .057 | .060 | .059 | .053 | .046 | .051 | .056 | .059 | .060 | .039 | 23 |
| Max | .088 | .080 | .078 | .081 | .078 | .078 | | .079 | .082 | .076 | .083 | .085 | .082 | .078 | .079 | .082 | .084 | .088 | .094 | .091 | .084 | .088 | .084 | .087 | .094 | | |
| Avg | .057 | .057 | .055 | .055 | .054 | .054 | | .050 | .050 | .049 | .051 | .054 | .055 | .058 | .059 | .060 | .060 | .061 | .061 | .060 | .059 | .058 | .057 | .058 | | .056 | |
| Rds | 31 | 31 | 31 | 31 | 31 | 31 | 00 | 31 | 31 | 29 | 29 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 30 | 30 | 30 | 30 | | | 704 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
08/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 1 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .039 | .041 | .034 | | .016 | .011 | .008 | .012 | .019 | .032 | .028 | .027 | .030 | .031 | .034 | .035 | .038 | .038 | .030 | .021 | .027 | .018 | .011 | .005 | .041 | .025 | 23 |
| 02 | .004 | .003 | .003 | | .004 | .004 | .003 | | | | .016 | .021 | .025 | .025 | .027 | .035 | .026 | .028 | .015 | .006 | .013 | .026 | .024 | .023 | .035 | .016 | 20 |
| 03 | .018 | .014 | .009 | | .001 | .000 | .001 | .005 | .016 | .027 | | .027 | .026 | .026 | .027 | .030 | .027 | .027 | .023 | .016 | .015 | .014 | .008 | .007 | .030 | .016 | 22 |
| 04 | .010 | .010 | .010 | | .012 | .011 | .011 | .014 | .018 | .024 | .028 | .034 | .037 | .038 | .042 | .040 | .041 | .037 | .038 | .038 | .043 | .046 | .042 | .032 | .046 | .028 | 23 |
| 05 | .024 | .025 | .019 | | .014 | .018 | .024 | .023 | .028 | .032 | .035 | .040 | .049 | .050 | .055 | .058 | .055 | .045 | .029 | .017 | .008 | .011 | .006 | .008 | .058 | .029 | 23 |
| 06 | .009 | .008 | .010 | | .012 | .011 | .012 | .014 | .025 | .039 | .048 | .052 | .054 | .053 | .052 | .056 | .052 | .047 | .044 | .043 | .044 | .038 | .035 | .030 | .056 | .034 | 23 |
| 07 | .030 | .030 | .029 | | .023 | .021 | .013 | .010 | .021 | .032 | .049 | .054 | .058 | .064 | .061 | .058 | .053 | .049 | .046 | .045 | .043 | .038 | .031 | .026 | .064 | .038 | 23 |
| 08 | .022 | .024 | .026 | | .022 | .017 | .011 | .015 | .023 | .040 | .060 | .079 | .081 | .082 | .075 | .074 | .076 | .070 | .044 | .035 | .021 | .025 | .035 | .029 | .082 | .042 | 23 |
| 09 | .029 | .027 | .028 | | .016 | .011 | .008 | .014 | .025 | .041 | .057 | .080 | .091 | .093 | .083 | .083 | .073 | .051 | .039 | .040 | .037 | .043 | .041 | .038 | .093 | .045 | 23 |
| 10 | .037 | .040 | .042 | | .034 | .029 | .023 | .019 | .017 | .034 | .044 | .054 | .064 | .075 | .084 | .077 | .069 | .064 | .039 | .026 | .018 | .012 | .002 | .004 | .084 | .039 | 23 |
| 11 | .004 | .001 | .000 | | .000 | .000 | .000 | .003 | .027 | .025 | .042 | .054 | .065 | .075 | | .070 | .067 | .058 | .058 | .043 | .034 | .029 | .026 | .019 | .075 | .031 | 22 |
| 12 | .031 | .042 | .042 | | .032 | .026 | .022 | | .034 | .041 | .048 | .053 | .053 | .050 | .048 | .051 | .050 | .041 | .030 | .035 | .035 | .025 | .019 | .024 | .053 | .037 | 22 |
| 13 | .020 | .016 | .016 | | .011 | .008 | .010 | .021 | .030 | .034 | .034 | .033 | .040 | .045 | .036 | .031 | .036 | .036 | .025 | .015 | .007 | .000 | .000 | .000 | .045 | .021 | 23 |
| 14 | .000 | .000 | .000 | | .000 | .000 | .006 | .009 | .019 | .033 | .043 | .050 | .052 | .055 | .060 | .062 | .065 | .047 | .030 | .023 | .006 | .004 | .004 | .003 | .065 | .024 | 23 |
| 15 | .001 | .000 | .000 | | .000 | .000 | .000 | .002 | .010 | .029 | .057 | .067 | .082 | .089 | .087 | .089 | .079 | .071 | .052 | .045 | .031 | .024 | .024 | .020 | .089 | .037 | 23 |
| 16 | .017 | .018 | .021 | | .019 | .021 | .028 | | | | .045 | .061 | .072 | .080 | .083 | .081 | .091 | .079 | .048 | .040 | .025 | .030 | .060 | .060 | .091 | .048 | 20 |
| 17 | .056 | .050 | .044 | | .035 | .030 | .025 | .029 | .036 | .044 | .052 | .058 | .062 | .068 | .071 | .070 | .070 | .059 | .050 | .042 | .036 | .036 | .034 | .032 | .071 | .047 | 23 |
| 18 | .036 | .035 | .035 | | .031 | .030 | .028 | .029 | .035 | .041 | .050 | .062 | | .075 | .075 | .072 | .051 | .038 | .023 | .014 | .028 | .017 | .012 | .015 | .075 | .037 | 22 |
| 19 | .019 | .008 | .017 | | .023 | .019 | .017 | .018 | .022 | .029 | .038 | .042 | .043 | .045 | .048 | .046 | .049 | .044 | .026 | .011 | .009 | .009 | .006 | .003 | .049 | .025 | 23 |
| 20 | .007 | .007 | .000 | | .000 | .000 | .000 | .010 | .038 | .045 | .048 | .051 | .050 | .050 | .046 | .045 | .046 | .046 | .038 | .025 | .008 | .000 | .000 | .000 | .051 | .024 | 23 |
| 21 | .000 | .000 | .000 | | .000 | .000 | .003 | .016 | .026 | .040 | .046 | .047 | .050 | .052 | .052 | .050 | .049 | .045 | .033 | .019 | .011 | .006 | .009 | .022 | .052 | .025 | 23 |
| 22 | .034 | .027 | .010 | | .000 | .000 | .000 | | | .046 | .055 | .059 | .059 | .060 | .061 | .061 | .059 | .054 | .038 | .020 | .013 | .002 | .000 | .000 | .061 | .031 | 21 |
| 23 | .000 | .000 | .000 | | | .000 | .000 | .000 | .020 | .041 | .056 | .058 | .061 | .061 | .064 | .063 | .062 | .045 | .037 | .035 | .041 | .046 | .045 | .038 | .064 | .035 | 22 |
| 24 | .030 | .025 | .016 | | .011 | .008 | .009 | .014 | | .044 | .057 | .068 | .076 | .083 | .082 | .086 | .084 | .075 | .066 | .048 | .036 | .028 | .018 | .021 | .086 | .044 | 22 |
| 25 | .020 | .018 | .013 | | .008 | .006 | .004 | .006 | .018 | .021 | .031 | .051 | .061 | .061 | .058 | .059 | .063 | .053 | .030 | .013 | .000 | .000 | .000 | .000 | .063 | .025 | 23 |
| 26 | .000 | .000 | .001 | | .001 | .000 | .001 | .001 | .022 | .056 | .063 | .063 | .073 | .070 | .070 | .074 | .070 | .063 | .052 | .042 | .034 | .039 | .038 | .041 | .074 | .038 | 23 |
| 27 | .041 | .042 | .036 | | .032 | .025 | .025 | .030 | .029 | .028 | .032 | .043 | .048 | .054 | .050 | .046 | .044 | .035 | .035 | .034 | .032 | .022 | .020 | .018 | .054 | .034 | 23 |
| 28 | .020 | .017 | .011 | | .012 | .011 | .006 | .016 | .024 | .029 | .034 | .040 | .040 | .046 | .054 | .056 | .050 | .048 | .040 | .041 | .037 | .036 | .029 | .025 | .056 | .031 | 23 |
| 29 | .023 | .021 | .019 | | .018 | | .019 | .019 | .028 | .041 | .041 | .042 | .046 | .046 | .049 | .052 | .053 | .044 | .034 | .013 | .008 | .010 | .013 | .018 | .053 | .029 | 22 |
| 30 | .018 | .017 | .016 | | .018 | .017 | .017 | .015 | .016 | .016 | .014 | .014 | .016 | .017 | .020 | .020 | .018 | .018 | .016 | .016 | .017 | .015 | .014 | .014 | .020 | .016 | 23 |
| 31 | .014 | .012 | .011 | | .006 | .004 | .005 | .009 | .012 | .020 | .025 | .037 | .041 | .042 | .039 | .036 | .029 | .027 | .031 | .025 | .018 | .017 | .026 | .027 | .042 | .022 | 23 |
| Max | .056 | .050 | .044 | | .035 | .030 | .028 | .030 | .038 | .056 | .063 | .080 | .091 | .093 | .087 | .089 | .091 | .079 | .066 | .048 | .044 | .046 | .060 | .060 | .093 | | |
| Avg | .019 | .018 | .016 | | .013 | .011 | .010 | .013 | .023 | .034 | .042 | .049 | .053 | .056 | .056 | .056 | .054 | .047 | .036 | .028 | .023 | .021 | .020 | .019 | | .031 | |
| Rds | 31 | 31 | 31 | 00 | 30 | 30 | 31 | 27 | 27 | 29 | 30 | 31 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 698 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
08/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M2
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 4 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .043 | .044 | .045 | .028 | .020 | | .012 | .016 | .023 | .036 | .033 | .030 | .033 | .035 | .038 | .038 | .041 | .044 | .038 | .034 | .033 | .027 | .023 | .027 | .045 | .032 | 23 |
| 02 | .029 | .027 | .026 | .022 | .023 | | .005 | .005 | .010 | .015 | .021 | .027 | .029 | .029 | .032 | .039 | .037 | .035 | .027 | .025 | .025 | .033 | .033 | .031 | .039 | .025 | 23 |
| 03 | .027 | .026 | .021 | .019 | .016 | | .008 | | | .031 | | .033 | .032 | .033 | .035 | .038 | .036 | .032 | .032 | .029 | .029 | .024 | .013 | .013 | .038 | .026 | 20 |
| 04 | .017 | .018 | .018 | .021 | .020 | | .018 | .020 | .023 | .029 | .035 | .039 | .041 | .043 | .046 | .045 | .047 | .049 | .046 | .048 | .050 | .052 | .051 | .047 | .052 | .035 | 23 |
| 05 | .042 | .043 | .041 | .038 | .027 | | .032 | .028 | .032 | .035 | .039 | .043 | .051 | .053 | .056 | .060 | .060 | .057 | .058 | .062 | .054 | .053 | .052 | .050 | .062 | .046 | 23 |
| 06 | .049 | .044 | .049 | .048 | .034 | | .028 | .024 | .029 | .043 | .053 | .057 | .058 | .059 | .059 | .060 | .059 | .057 | .057 | .055 | .054 | .049 | .043 | .038 | .060 | .048 | 23 |
| 07 | .037 | .037 | .036 | .034 | .032 | | .028 | .025 | .029 | .038 | .055 | .061 | .066 | .071 | .067 | .064 | .061 | .060 | .058 | .055 | .054 | .051 | .044 | .034 | .071 | .047 | 23 |
| 08 | .031 | .033 | .034 | .032 | .029 | | .019 | .021 | .028 | .044 | .063 | .082 | .084 | .085 | .079 | .079 | .084 | .095 | .102 | .106 | .077 | .055 | .043 | .039 | .106 | .058 | 23 |
| 09 | .039 | .036 | .036 | .032 | .030 | | .017 | .020 | .030 | .043 | .060 | .084 | .093 | .095 | .092 | .089 | .081 | .081 | .086 | .074 | .065 | .054 | .049 | .047 | .095 | .057 | 23 |
| 10 | .044 | .046 | .051 | .044 | .044 | | .035 | .028 | .022 | .037 | .048 | .055 | .064 | .079 | .089 | .084 | .076 | .074 | .067 | .066 | .065 | .069 | .069 | .063 | .089 | .057 | 23 |
| 11 | .071 | .074 | .069 | .072 | .073 | | .041 | .026 | .038 | .029 | .046 | .055 | .066 | .077 | | .076 | .075 | .066 | .066 | .063 | .069 | .064 | .054 | .047 | .077 | .059 | 22 |
| 12 | .044 | .049 | .050 | .049 | .046 | | .035 | | .038 | .044 | .051 | .054 | .056 | .054 | .052 | .054 | .053 | .049 | .049 | .045 | .047 | .044 | .037 | .033 | .056 | .046 | 22 |
| 13 | .033 | .031 | .027 | .025 | .028 | | .029 | .028 | .035 | .038 | .041 | .039 | .042 | .052 | .051 | .045 | .041 | .046 | .044 | .044 | .044 | .039 | .033 | .025 | .052 | .037 | 23 |
| 14 | .023 | .031 | .020 | .024 | .025 | | .023 | .013 | .022 | .036 | .047 | .052 | .055 | .058 | .065 | .068 | .071 | .063 | .055 | .057 | .043 | .050 | .061 | .067 | .071 | .044 | 23 |
| 15 | .070 | .071 | .065 | .055 | .048 | | .018 | .012 | .012 | .031 | .061 | .071 | .085 | .092 | .092 | .095 | .090 | .099 | .100 | .091 | .080 | .082 | .084 | .083 | .100 | .069 | 23 |
| 16 | .076 | .061 | .057 | .055 | .066 | | .050 | .051 | .055 | .065 | .071 | .078 | .085 | .089 | .094 | .089 | .101 | .097 | .094 | .092 | .085 | .070 | .068 | .069 | .101 | .074 | 23 |
| 17 | .063 | .057 | .053 | .051 | .048 | | .040 | | | .048 | .054 | .060 | .064 | .069 | .072 | .074 | .076 | .078 | .076 | .082 | .087 | .073 | .057 | .050 | .087 | .063 | 21 |
| 18 | .046 | .043 | .045 | .043 | .044 | | .034 | .035 | .043 | .046 | .054 | .063 | | .078 | .079 | .078 | .072 | .068 | .044 | .055 | .054 | .058 | .057 | .047 | .079 | .053 | 22 |
| 19 | .037 | .029 | .029 | .028 | .035 | | .028 | .025 | .028 | .036 | .044 | .048 | .051 | .054 | .055 | .057 | .058 | .057 | .055 | .055 | .050 | .053 | .060 | .055 | .060 | .044 | 23 |
| 20 | .045 | .040 | .039 | .042 | .044 | | .051 | .036 | .042 | .050 | .053 | .055 | .055 | .055 | .050 | .049 | .051 | .053 | .051 | .051 | .053 | .052 | .050 | .046 | .055 | .048 | 23 |
| 21 | .041 | .045 | .039 | .031 | .036 | | .026 | .026 | .031 | .045 | .049 | .051 | .053 | .056 | .056 | .054 | .054 | .054 | .056 | .057 | .060 | .064 | .061 | .049 | .064 | .047 | 23 |
| 22 | .047 | .048 | .047 | .048 | .051 | | .054 | .050 | .040 | .050 | .058 | .063 | .062 | .063 | .063 | .063 | .063 | .063 | .068 | .076 | .077 | .075 | .072 | .060 | .077 | .059 | 23 |
| 23 | .052 | .042 | .046 | .045 | | | .037 | .051 | | .048 | .062 | .064 | .065 | .067 | .070 | .070 | .071 | .072 | .068 | .062 | .062 | .060 | .056 | .046 | .072 | .057 | 21 |
| 24 | .037 | .033 | .029 | .029 | .027 | | .022 | .024 | .032 | .049 | .062 | .072 | .080 | .088 | .087 | .091 | .094 | .082 | .076 | .066 | .057 | .044 | .050 | .050 | .094 | .055 | 23 |
| 25 | .039 | .036 | .038 | .037 | .036 | | .017 | | | .026 | .034 | .054 | .064 | .065 | .061 | .060 | .066 | .069 | .062 | .062 | .060 | .049 | .053 | .046 | .069 | .049 | 21 |
| 26 | .032 | .029 | .043 | .036 | .025 | | .021 | .021 | .031 | .055 | .062 | .064 | .074 | .071 | .073 | .078 | .076 | .075 | .070 | .066 | .060 | .054 | .051 | .052 | .078 | .053 | 23 |
| 27 | .051 | .052 | .052 | .052 | .048 | | .044 | .041 | .039 | .036 | .038 | .049 | .053 | .057 | .060 | .058 | .059 | .045 | .043 | .048 | .043 | .035 | .035 | .033 | .060 | .046 | 23 |
| 28 | .029 | .031 | .030 | .028 | .023 | | .014 | .022 | .031 | .033 | .038 | .044 | .043 | .048 | .057 | .061 | .055 | .053 | .048 | .049 | .049 | .046 | .042 | .044 | .061 | .039 | 23 |
| 29 | .037 | .031 | .027 | .025 | .026 | | .026 | .025 | .033 | .046 | .046 | .047 | .050 | .051 | .052 | .055 | .058 | .049 | .041 | .037 | .042 | .031 | .028 | .030 | .058 | .038 | 23 |
| 30 | .029 | .026 | .025 | .024 | .025 | | .023 | .021 | .021 | .021 | .020 | .020 | .021 | .022 | .025 | .025 | .023 | .023 | .022 | .022 | .022 | .021 | .019 | .020 | .029 | .022 | 23 |
| 31 | .019 | .018 | .016 | .016 | .015 | | .014 | .015 | .016 | .023 | .029 | .039 | .044 | .045 | .047 | .047 | .037 | .037 | .041 | .032 | .027 | .026 | .035 | .036 | .047 | .029 | 23 |
| Max | .076 | .074 | .069 | .072 | .073 | | .054 | .051 | .055 | .065 | .071 | .084 | .093 | .095 | .094 | .095 | .101 | .099 | .102 | .106 | .087 | .082 | .084 | .083 | .106 | | |
| Avg | .041 | .039 | .038 | .036 | .034 | | .027 | .026 | .030 | .038 | .047 | .053 | .057 | .061 | .061 | .062 | .062 | .060 | .058 | .056 | .054 | .050 | .047 | .044 | | .047 | |
| Rds | 31 | 31 | 31 | 31 | 30 | 00 | 31 | 27 | 27 | 31 | 30 | 31 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 701 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
08/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M4
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 5 Interval : 1 Units : 007
Method : 047

++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .041 | .047 | .052 | .028 | | .019 | .016 | .020 | .026 | .039 | .035 | .033 | .036 | .038 | .041 | .041 | .044 | .047 | .042 | .036 | .036 | .033 | .032 | .035 | .052 | .035 | 23 |
| 02 | .034 | .032 | .030 | .031 | | .012 | .008 | .008 | .013 | | | | .032 | .031 | .034 | .041 | .038 | .037 | .029 | .028 | .030 | .040 | .042 | .040 | .042 | .029 | 20 |
| 03 | .032 | .025 | .022 | .018 | | .012 | .013 | .014 | .025 | .034 | | .035 | .034 | .035 | .037 | .040 | .038 | .038 | .038 | .035 | .039 | .029 | .016 | .016 | .040 | .028 | 22 |
| 04 | .020 | .022 | .024 | .026 | | .026 | .025 | .025 | .028 | .032 | .037 | .041 | .044 | .046 | .049 | .047 | .049 | .050 | .051 | .052 | .052 | .057 | .059 | .058 | .059 | .040 | 23 |
| 05 | .048 | .042 | .041 | .038 | | .030 | .035 | .030 | .031 | .036 | .039 | .043 | .051 | .053 | .057 | .062 | .061 | .058 | .058 | .061 | .057 | .054 | .060 | .058 | .062 | .047 | 23 |
| 06 | .059 | .060 | .062 | .058 | | .044 | .050 | .047 | .033 | .045 | .055 | .059 | .061 | .061 | .062 | .063 | .061 | .061 | .060 | .060 | .061 | .055 | .043 | .040 | .063 | .054 | 23 |
| 07 | .040 | .040 | .039 | .038 | | .034 | .034 | .031 | .032 | .041 | .057 | .064 | .069 | .074 | .071 | .068 | .065 | .065 | .062 | .059 | .058 | .055 | .051 | .039 | .074 | .051 | 23 |
| 08 | .036 | .037 | .037 | .034 | | .027 | .023 | .023 | .029 | .045 | .064 | .084 | .087 | .089 | .083 | .083 | .087 | .099 | .108 | .108 | .079 | .062 | .045 | .044 | .108 | .061 | 23 |
| 09 | .047 | .039 | .039 | .036 | | .033 | .029 | .029 | .033 | .045 | .061 | .087 | .096 | .100 | .096 | .092 | .084 | .084 | .088 | .082 | .081 | .056 | .051 | .050 | .100 | .062 | 23 |
| 10 | .046 | .048 | .053 | .049 | | .048 | .052 | .042 | .025 | .037 | .048 | .056 | .065 | .081 | .092 | .087 | .079 | .077 | .071 | .066 | .070 | .072 | .073 | .072 | .092 | .061 | 23 |
| 11 | .071 | .077 | .081 | .074 | | .069 | .070 | .058 | .056 | .030 | .046 | .056 | .067 | .079 | | .077 | .079 | .074 | .070 | .066 | .065 | .062 | .057 | .055 | .081 | .065 | 22 |
| 12 | .053 | .054 | .057 | .058 | | .044 | .040 | | .039 | .044 | .052 | .056 | .057 | .055 | .054 | .056 | .055 | .051 | .052 | .047 | .048 | .045 | .041 | .040 | .058 | .049 | 22 |
| 13 | .038 | .037 | .034 | .033 | | .037 | .037 | .031 | .035 | .038 | .042 | .040 | .042 | .052 | .050 | .048 | .043 | .047 | .046 | .048 | .045 | .045 | .046 | .040 | .052 | .041 | 23 |
| 14 | .041 | .043 | .042 | .045 | | .042 | .041 | .020 | .022 | .036 | .047 | .053 | .057 | .059 | .066 | .069 | .072 | .064 | .058 | .056 | .053 | .054 | .065 | .070 | .072 | .051 | 23 |
| 15 | .071 | .072 | .070 | .061 | | .041 | .040 | .026 | .013 | .031 | .060 | .070 | .085 | .093 | .093 | .097 | .090 | .100 | .102 | .093 | .085 | .082 | .086 | .084 | .102 | .071 | 23 |
| 16 | .083 | .076 | .075 | .080 | | .066 | .049 | .059 | .059 | | | | .086 | .092 | .095 | .092 | .103 | .100 | .098 | .095 | .094 | .077 | .070 | .070 | .103 | .080 | 20 |
| 17 | .065 | .060 | .058 | .059 | | .049 | .045 | .040 | .043 | .050 | .056 | .062 | .065 | .071 | .074 | .075 | .078 | .079 | .082 | .090 | .081 | .078 | .069 | .056 | .090 | .064 | 23 |
| 18 | .049 | .044 | .046 | .043 | | .045 | .037 | .039 | .045 | .047 | .053 | .062 | | .080 | .082 | .080 | .073 | .072 | .061 | .064 | .066 | .071 | .068 | .059 | .082 | .058 | 22 |
| 19 | .045 | .034 | .036 | .033 | | .036 | .033 | .029 | .030 | .038 | .046 | .050 | .053 | .055 | .056 | .058 | .059 | .058 | .058 | .056 | .055 | .059 | .069 | .062 | .069 | .048 | 23 |
| 20 | .051 | .044 | .043 | .053 | | .061 | .062 | .058 | .045 | .051 | .053 | .056 | .056 | .056 | .051 | .050 | .052 | .054 | .053 | .055 | .057 | .057 | .058 | .050 | .062 | .053 | 23 |
| 21 | .050 | .054 | .056 | .053 | | .049 | .044 | .040 | .034 | .045 | .050 | .052 | .055 | .057 | .057 | .055 | .054 | .055 | .058 | .059 | .062 | .065 | .063 | .055 | .065 | .053 | 23 |
| 22 | .058 | .057 | .057 | .056 | | .057 | .060 | .057 | | .050 | | .063 | .063 | .063 | .063 | .063 | .063 | .064 | .070 | .076 | .077 | .077 | .075 | .065 | .077 | .063 | 21 |
| 23 | .060 | .056 | .059 | .058 | | .054 | .054 | .050 | .045 | .046 | .062 | .065 | .066 | .067 | .070 | .070 | .072 | .076 | .074 | .073 | .069 | .067 | .060 | .049 | .076 | .061 | 23 |
| 24 | .036 | .037 | .036 | .035 | | .034 | .032 | .032 | .035 | | .062 | .073 | .082 | .089 | .087 | .092 | .096 | .084 | .077 | .071 | .060 | .051 | .057 | .056 | .096 | .059 | 22 |
| 25 | .047 | .045 | .045 | .042 | | .054 | .039 | .012 | .023 | .030 | .038 | .052 | .065 | .068 | .063 | .061 | .067 | .072 | .068 | .067 | .063 | .059 | .062 | .049 | .072 | .051 | 23 |
| 26 | .044 | .054 | .062 | .065 | | .051 | .057 | .057 | .054 | .057 | .066 | .067 | .076 | .073 | .074 | .079 | .077 | .077 | .073 | .071 | .066 | .059 | .058 | .055 | .079 | .063 | 23 |
| 27 | .053 | .055 | .054 | .055 | | .062 | .056 | .048 | .045 | .039 | .040 | .050 | .054 | .058 | .060 | .059 | .062 | .051 | .047 | .058 | .053 | .043 | .048 | .046 | .062 | .052 | 23 |
| 28 | .038 | .038 | .034 | .030 | | .041 | .027 | .028 | .034 | .034 | .039 | .045 | .043 | .048 | .057 | .061 | .057 | .055 | .050 | .050 | .053 | .051 | .052 | .053 | .061 | .044 | 23 |
| 29 | .045 | .040 | .032 | .030 | | | .030 | .029 | .035 | .047 | .046 | .048 | .051 | .052 | .053 | .056 | .060 | .052 | .043 | .045 | .042 | .040 | .047 | .039 | .060 | .043 | 22 |
| 30 | .033 | .032 | .033 | .027 | | .028 | .026 | .023 | .022 | .022 | .021 | .021 | .022 | .024 | .026 | .027 | .024 | .024 | .023 | .023 | .023 | .022 | .021 | .021 | .033 | .024 | 23 |
| 31 | .021 | .019 | .018 | .018 | | .018 | .019 | .018 | .019 | .024 | .030 | .040 | .045 | .046 | .050 | .049 | .045 | .043 | .044 | .036 | .032 | .034 | .042 | .042 | .050 | .032 | 23 |
| Max | .083 | .077 | .081 | .080 | | .069 | .070 | .059 | .059 | .057 | .066 | .087 | .096 | .100 | .096 | .097 | .103 | .100 | .108 | .108 | .094 | .082 | .086 | .084 | .108 | | |
| Avg | .046 | .045 | .046 | .044 | | .040 | .038 | .034 | .033 | .039 | .048 | .054 | .058 | .062 | .063 | .064 | .064 | .063 | .061 | .060 | .058 | .055 | .054 | .050 | | .051 | |
| Rds | 31 | 31 | 31 | 31 | 00 | 30 | 31 | 30 | 30 | 28 | 27 | 29 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 699 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
08/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : HI
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 6 Interval : 1 Units : 007
Method : 047

++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .040 | .046 | .054 | .019 | .017 | .020 | | .026 | .028 | .039 | .031 | .028 | .031 | .033 | .037 | .036 | .039 | .043 | .040 | .031 | .033 | .029 | .034 | .030 | .054 | .033 | 23 |
| 02 | .018 | .015 | .013 | .014 | .022 | .025 | | .018 | .015 | .013 | .018 | .025 | .028 | .028 | .029 | .036 | .039 | .036 | .032 | .026 | .028 | .037 | .042 | .036 | .042 | .025 | 23 |
| 03 | .024 | .023 | .035 | .032 | .026 | .028 | | .030 | | | | .030 | .029 | .030 | .033 | .036 | .037 | .039 | .043 | .041 | .046 | .042 | .042 | .037 | .046 | .034 | 20 |
| 04 | .040 | .045 | .039 | .032 | .044 | .044 | | .051 | .051 | .043 | .041 | .040 | .040 | .042 | .045 | .045 | .048 | .048 | .050 | .050 | .054 | .053 | .042 | .038 | .054 | .044 | 23 |
| 05 | .043 | .045 | .040 | .051 | .054 | .052 | | .041 | .034 | .033 | .036 | .041 | .047 | .049 | .051 | .056 | .059 | .058 | .061 | .062 | .059 | .057 | .055 | .057 | .062 | .049 | 23 |
| 06 | .055 | .060 | .065 | .060 | .056 | .055 | | .055 | .055 | .055 | .052 | .055 | .057 | .056 | .057 | .058 | .058 | .058 | .062 | .065 | .067 | .067 | .060 | .059 | .067 | .058 | 23 |
| 07 | .055 | .055 | .058 | .059 | .054 | .045 | | .050 | .047 | .050 | .053 | .060 | .064 | .068 | .066 | .063 | .062 | .064 | .066 | .063 | .063 | .059 | .054 | .060 | .068 | .058 | 23 |
| 08 | .058 | .054 | .046 | .045 | .045 | .045 | | .050 | .053 | .047 | .056 | .074 | .079 | .081 | .074 | .075 | .079 | .092 | .101 | .103 | .091 | .070 | .069 | .067 | .103 | .067 | 23 |
| 09 | .066 | .068 | .066 | .068 | .064 | .063 | | .056 | .052 | .055 | .062 | .076 | .086 | .091 | .088 | .085 | .076 | .078 | .084 | .088 | .080 | .080 | .069 | .065 | .091 | .072 | 23 |
| 10 | .066 | .060 | .054 | .054 | .053 | .054 | | .050 | .051 | .041 | .044 | .049 | .057 | .071 | .084 | .080 | .073 | .072 | .071 | .070 | .069 | .069 | .069 | .071 | .084 | .062 | 23 |
| 11 | .073 | .073 | .077 | .075 | .073 | .073 | | .064 | .067 | .068 | .069 | .067 | .064 | .071 | | .072 | .075 | .078 | .071 | .066 | .062 | .064 | .058 | .064 | .078 | .069 | 22 |
| 12 | .072 | .070 | .069 | .066 | .058 | .051 | | | .045 | .039 | .045 | .050 | .052 | .050 | .049 | .050 | .050 | .048 | .048 | .046 | .047 | .043 | .043 | .043 | .072 | .051 | 22 |
| 13 | .044 | .045 | .046 | .046 | .045 | .044 | | .040 | .041 | .043 | .046 | .046 | .043 | .047 | .047 | .045 | .045 | .045 | .049 | .049 | .049 | .047 | .044 | .040 | .049 | .045 | 23 |
| 14 | .041 | .042 | .041 | .041 | .033 | .040 | | .041 | .037 | .035 | .041 | .047 | .050 | .053 | .059 | .063 | .067 | .061 | .060 | .056 | .062 | .065 | .067 | .065 | .067 | .050 | 23 |
| 15 | .066 | .065 | .068 | .058 | .056 | .057 | | .052 | .053 | .058 | .057 | .063 | .076 | .085 | .086 | .087 | .087 | .092 | .097 | .091 | .080 | .073 | .078 | .074 | .097 | .072 | 23 |
| 16 | .075 | .071 | .079 | .083 | .084 | .084 | | .072 | .067 | .066 | .065 | .072 | .077 | .083 | .086 | .084 | .096 | .096 | .093 | .091 | .091 | .079 | .070 | .065 | .096 | .079 | 23 |
| 17 | .066 | .067 | .056 | .057 | .061 | .055 | | .046 | | | | .053 | .057 | .064 | .067 | .068 | .072 | .076 | .078 | .081 | .080 | .080 | .075 | .069 | .081 | .066 | 20 |
| 18 | .064 | .067 | .068 | .077 | .080 | .085 | | .071 | .070 | .060 | .050 | .057 | | .074 | .077 | .075 | .072 | .071 | .069 | .070 | .064 | .066 | .055 | .052 | .085 | .067 | 22 |
| 19 | .055 | .057 | .042 | .038 | .054 | .052 | | .035 | .040 | .035 | .039 | .043 | .047 | .049 | .051 | .053 | .054 | .054 | .056 | .055 | .052 | .052 | .058 | .061 | .061 | .049 | 23 |
| 20 | .066 | .063 | .053 | .053 | .054 | .053 | | .051 | .053 | .052 | .048 | .051 | .051 | .052 | .047 | .045 | .047 | .050 | .051 | .058 | .060 | .059 | .055 | .053 | .066 | .053 | 23 |
| 21 | .050 | .055 | .054 | .051 | .053 | .057 | | .049 | .046 | .042 | .045 | .047 | .049 | .052 | .051 | .050 | .050 | .051 | .054 | .057 | .058 | .060 | .062 | .061 | .062 | .052 | 23 |
| 22 | .060 | .059 | .053 | .055 | .056 | .058 | | .051 | .054 | .054 | .053 | .058 | .057 | .057 | .058 | .058 | .058 | .061 | .064 | .071 | .070 | .065 | .067 | .070 | .071 | .059 | 23 |
| 23 | .069 | .067 | .055 | .059 | | .062 | | .056 | .054 | .059 | | .056 | .060 | .061 | .064 | .064 | .068 | .073 | .075 | .073 | .074 | .078 | .080 | .073 | .080 | .065 | 21 |
| 24 | .076 | .075 | .072 | .064 | .068 | .070 | | .062 | .063 | .067 | .061 | .067 | .076 | .082 | .080 | .085 | .090 | .080 | .072 | .074 | .068 | .064 | .068 | .063 | .090 | .071 | 23 |
| 25 | .058 | .054 | .055 | .056 | .054 | .059 | | .043 | | | .062 | .052 | .060 | .062 | .063 | .067 | .066 | .067 | .072 | .068 | .065 | .063 | .071 | .073 | .073 | .061 | 21 |
| 26 | .072 | .069 | .072 | .067 | .066 | .067 | | .062 | .061 | .064 | .060 | .061 | .070 | .069 | .068 | .075 | .073 | .074 | .072 | .068 | .065 | .062 | .073 | .065 | .075 | .067 | 23 |
| 27 | .069 | .069 | .071 | .070 | .066 | .064 | | .058 | .060 | .059 | .054 | .049 | .049 | .054 | .058 | .059 | .063 | .064 | .057 | .064 | .066 | .058 | .061 | .067 | .071 | .061 | 23 |
| 28 | .062 | .064 | .062 | .051 | .041 | .045 | | .052 | .060 | .049 | .040 | .043 | .042 | .048 | .053 | .056 | .055 | .055 | .049 | .053 | .060 | .060 | .057 | .056 | .064 | .052 | 23 |
| 29 | .057 | .055 | .048 | .052 | .048 | | | .037 | .035 | .042 | .043 | .044 | .045 | .047 | .047 | .050 | .054 | .055 | .052 | .046 | .048 | .046 | .044 | .038 | .057 | .046 | 22 |
| 30 | .038 | .041 | .040 | .033 | .027 | .026 | | .022 | .021 | .021 | .020 | .019 | .021 | .022 | .023 | .024 | .022 | .023 | .021 | .022 | .022 | .021 | .021 | .022 | .041 | .024 | 23 |
| 31 | .023 | .023 | .022 | .024 | .024 | .025 | | .027 | .028 | .032 | .034 | .037 | .041 | .043 | .046 | .046 | .048 | .049 | .043 | .036 | .048 | .051 | .054 | .056 | .056 | .037 | 23 |
| Max | .076 | .075 | .079 | .083 | .084 | .085 | | .072 | .070 | .068 | .069 | .076 | .086 | .091 | .088 | .087 | .096 | .096 | .101 | .103 | .091 | .080 | .080 | .074 | .103 | | |
| Avg | .055 | .055 | .053 | .051 | .051 | .051 | | .047 | .047 | .047 | .047 | .050 | .053 | .057 | .058 | .059 | .060 | .061 | .061 | .061 | .060 | .058 | .057 | .056 | | .055 | |
| Rds | 31 | 31 | 31 | 31 | 30 | 30 | 00 | 30 | 28 | 28 | 28 | 31 | 30 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 699 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
09/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 1 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .023 | .022 | .022 | | .022 | .021 | .020 | .026 | .030 | .030 | .037 | .038 | .038 | .041 | .042 | .042 | .042 | .035 | .025 | .035 | .028 | .025 | .022 | .022 | .042 | .029 | 23 |
| 02 | .016 | .007 | .004 | | .010 | .015 | .018 | .024 | .029 | .032 | .030 | .028 | .027 | .037 | .046 | .042 | .026 | .017 | .011 | .013 | .017 | .016 | .035 | .029 | .046 | .023 | 23 |
| 03 | .025 | .015 | .014 | | .007 | .013 | .014 | .019 | .023 | .028 | .033 | .033 | .038 | .044 | .046 | .045 | .046 | .042 | .041 | .040 | .035 | .035 | .028 | .026 | .046 | .030 | 23 |
| 04 | .025 | .023 | .026 | | .022 | .022 | .022 | .019 | .021 | .029 | .033 | .037 | .033 | .037 | .040 | .036 | .030 | .027 | .025 | .018 | .009 | .004 | .012 | .007 | .040 | .024 | 23 |
| 05 | .007 | .014 | .014 | | .012 | .019 | .027 | .015 | .011 | .010 | .011 | .014 | .016 | | .018 | .019 | .018 | .018 | .017 | .016 | .016 | .017 | .019 | .020 | .027 | .015 | 22 |
| 06 | .021 | .022 | .023 | | .023 | .022 | .020 | | | .020 | .024 | .024 | .025 | .026 | .026 | .027 | .028 | .028 | .025 | .024 | .023 | .022 | .021 | .021 | .028 | .023 | 21 |
| 07 | .020 | .019 | .020 | | .014 | .011 | .009 | .013 | .018 | .022 | .027 | .032 | .034 | .036 | .036 | .037 | .037 | .034 | .021 | .011 | .002 | .000 | .001 | .006 | .037 | .020 | 23 |
| 08 | .005 | .000 | .000 | | .000 | .000 | .000 | .008 | .014 | .025 | .031 | .035 | .039 | .043 | .044 | .042 | .041 | .029 | .013 | .003 | .000 | .000 | .000 | .000 | .044 | .016 | 23 |
| 09 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .000 | .020 | .036 | .042 | .044 | .046 | .047 | .052 | .055 | .040 | .024 | .009 | .002 | .001 | .000 | .000 | .055 | .018 | 23 |
| 10 | .000 | .001 | .000 | | .000 | .000 | .000 | .000 | .016 | .034 | .048 | .049 | .048 | .045 | .047 | .049 | .050 | .042 | .022 | .013 | .003 | .000 | .001 | .014 | .050 | .020 | 23 |
| 11 | .019 | .013 | .007 | | .000 | .000 | .000 | .004 | .017 | .028 | .038 | .045 | .045 | .048 | .050 | .049 | .041 | .035 | | .001 | .000 | .000 | .013 | .015 | .050 | .021 | 22 |
| 12 | .005 | .000 | .000 | | .000 | .000 | .000 | .000 | .011 | .025 | .036 | .039 | .049 | .054 | .058 | | .050 | .038 | .023 | .015 | .007 | .003 | .000 | .000 | .058 | .018 | 22 |
| 13 | .000 | .000 | .000 | | .000 | .000 | .000 | .002 | .011 | .036 | .053 | .068 | .084 | .098 | .094 | .096 | .097 | .065 | .044 | .067 | .045 | .016 | .013 | .005 | .098 | .038 | 23 |
| 14 | .001 | .003 | .005 | | .000 | .003 | .000 | .003 | .014 | .033 | .050 | .056 | .061 | .066 | .054 | .049 | .028 | .014 | .003 | .003 | .015 | .019 | .021 | .024 | .066 | .022 | 23 |
| 15 | .025 | .028 | .027 | | .015 | .014 | .009 | .005 | .021 | .046 | .057 | .061 | .061 | .060 | .061 | .059 | .054 | .048 | .045 | .032 | .016 | .014 | .033 | .031 | .061 | .035 | 23 |
| 16 | .027 | .025 | .023 | | .012 | .011 | .008 | .012 | .019 | .021 | .024 | .029 | .032 | .036 | .038 | .037 | .036 | .026 | .015 | .004 | .000 | .000 | .000 | .000 | .038 | .018 | 23 |
| 17 | .000 | .001 | .007 | | .006 | .009 | .009 | .012 | .013 | .015 | .021 | .031 | .038 | .041 | .044 | .042 | .032 | .018 | .012 | .006 | .000 | .000 | .000 | .000 | .044 | .015 | 23 |
| 18 | .000 | .000 | .010 | | .009 | .010 | .009 | .010 | .010 | .014 | .014 | .016 | .017 | .018 | .021 | .025 | .025 | .024 | .023 | .022 | .024 | .025 | .027 | .025 | .027 | .016 | 23 |
| 19 | .023 | .021 | .019 | | .017 | .015 | .009 | .008 | .011 | .018 | .027 | .034 | .041 | .049 | .051 | .046 | .044 | .038 | .023 | .026 | .027 | .025 | .025 | .028 | .051 | .027 | 23 |
| 20 | .025 | .023 | .021 | | .010 | .008 | .007 | .010 | .022 | .031 | | | .049 | .054 | .058 | .056 | .050 | .046 | .040 | .035 | .032 | .029 | .023 | .018 | .058 | .030 | 21 |
| 21 | .015 | .012 | .009 | | .005 | .004 | .005 | .006 | .008 | .012 | .019 | .027 | .033 | .039 | .041 | .042 | .034 | .022 | .009 | .020 | .028 | .026 | .017 | .008 | .042 | .019 | 23 |
| 22 | .009 | .016 | .019 | | .014 | .012 | .013 | .016 | .019 | .019 | .025 | .026 | .025 | .019 | .017 | .019 | .017 | .012 | .010 | .012 | .012 | .010 | .019 | .024 | .026 | .016 | 23 |
| 23 | .023 | .022 | .018 | | .012 | .009 | .011 | .006 | .004 | .007 | .011 | .016 | .010 | .010 | .011 | .012 | .013 | .011 | .009 | .012 | .013 | .011 | .009 | .008 | .023 | .011 | 23 |
| 24 | .003 | .000 | .002 | | .000 | .002 | .004 | .005 | .007 | .014 | .025 | .035 | .046 | .053 | .053 | .055 | .051 | .026 | .012 | .007 | .001 | .000 | .000 | .000 | .055 | .017 | 23 |
| 25 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .003 | .012 | .021 | .020 | .034 | .032 | .017 | .015 | .008 | .004 | .004 | .003 | .001 | .000 | .000 | .003 | .034 | .007 | 23 |
| 26 | .002 | .001 | .000 | | .003 | .004 | .005 | .004 | .005 | .008 | .011 | .014 | .016 | .015 | .012 | .011 | .005 | .002 | .000 | .000 | .009 | .010 | .011 | .011 | .016 | .006 | 23 |
| 27 | .013 | .011 | .009 | | .007 | .006 | .004 | .005 | .009 | | | .027 | .033 | .038 | .040 | .039 | .039 | .023 | .004 | .000 | .000 | .000 | .000 | .000 | .040 | .014 | 21 |
| 28 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .004 | .010 | .023 | .037 | .048 | .051 | .050 | .048 | .044 | .028 | .007 | .000 | .000 | .000 | .000 | .008 | .051 | .015 | 23 |
| 29 | .011 | .006 | .003 | | .019 | .019 | .018 | .015 | .014 | .016 | .022 | .032 | .043 | .046 | .046 | .046 | .046 | .041 | .033 | .031 | .030 | .029 | .026 | .025 | .046 | .026 | 23 |
| 30 | .024 | .021 | .022 | | .020 | .017 | .017 | .022 | .028 | .031 | .033 | .035 | .038 | .038 | .040 | .039 | .037 | .025 | .019 | .018 | .015 | .011 | .015 | .015 | .040 | .025 | 23 |
| Max | .027 | .028 | .027 | | .023 | .022 | .027 | .026 | .030 | .046 | .057 | .068 | .084 | .098 | .094 | .096 | .097 | .065 | .045 | .067 | .045 | .035 | .035 | .031 | .098 | | |
| Avg | .012 | .010 | .010 | | .008 | .008 | .008 | .009 | .014 | .022 | .029 | .033 | .038 | .042 | .041 | .040 | .037 | .028 | .019 | .016 | .013 | .011 | .013 | .013 | | .020 | |
| Rds | 30 | 30 | 30 | 00 | 30 | 30 | 30 | 29 | 29 | 29 | 28 | 29 | 30 | 29 | 30 | 29 | 30 | 30 | 29 | 30 | 30 | 30 | 30 | 30 | | | 681 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
09/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M2
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 4 Interval : 1 Units : 007
Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .031 | .032 | .032 | .032 | .034 | | .028 | .031 | .033 | .035 | .038 | .039 | .039 | .040 | .040 | .041 | .043 | .044 | .045 | .043 | .045 | .041 | .033 | .030 | .045 | .036 | 23 |
| 02 | .027 | .023 | .021 | .021 | .024 | | .026 | .029 | .030 | .035 | .034 | .031 | .031 | .041 | .048 | .044 | .037 | .031 | .029 | .024 | .025 | .028 | .045 | .041 | .048 | .031 | 23 |
| 03 | .039 | .039 | .034 | .025 | .021 | | .025 | .025 | .028 | .033 | .038 | .038 | .042 | .047 | .050 | .049 | .052 | .052 | .050 | .049 | .045 | .045 | .037 | .034 | .052 | .039 | 23 |
| 04 | .035 | .033 | .037 | .034 | .033 | | .034 | .029 | .029 | .035 | .039 | .042 | .038 | .039 | .044 | .043 | .035 | .034 | .037 | .027 | .017 | .012 | .026 | .034 | .044 | .033 | 23 |
| 05 | .036 | .036 | .033 | .020 | .019 | | .032 | .020 | .017 | .015 | .015 | .019 | .020 | | .023 | .024 | .023 | .023 | .022 | .021 | .020 | .021 | .023 | .025 | .036 | .023 | 22 |
| 06 | .026 | .028 | .028 | .030 | .029 | | .026 | .026 | .025 | .025 | .029 | .029 | .030 | .031 | .032 | .033 | .034 | .034 | .032 | .029 | .028 | .027 | .027 | .026 | .034 | .028 | 23 |
| 07 | .026 | .025 | .025 | .023 | .021 | | .015 | | | | .030 | .034 | .038 | .041 | .041 | .042 | .043 | .044 | .044 | .041 | .037 | .034 | .032 | .029 | .044 | .033 | 20 |
| 08 | .028 | .027 | .027 | .024 | .022 | | .019 | | .017 | .027 | .032 | .037 | .040 | .044 | .044 | .045 | .044 | .045 | .049 | .049 | .046 | .046 | .042 | .038 | .049 | .036 | 22 |
| 09 | .033 | .025 | .027 | .038 | .035 | | .037 | .041 | .026 | .021 | .037 | .042 | .044 | .046 | .046 | .051 | .057 | .054 | .052 | .053 | .055 | .054 | .049 | .050 | .057 | .042 | 23 |
| 10 | .045 | .038 | .036 | .035 | .036 | | .034 | .032 | .019 | .034 | .048 | .050 | .047 | .047 | .047 | .050 | .052 | .054 | .058 | .060 | .054 | .047 | .045 | .035 | .060 | .043 | 23 |
| 11 | .028 | .027 | .030 | .031 | .032 | | .025 | .021 | .019 | .029 | .040 | .047 | .048 | .046 | .048 | .048 | .047 | .046 | | .045 | .044 | .042 | .029 | .021 | .048 | .036 | 22 |
| 12 | .021 | .025 | .024 | .017 | .024 | | .025 | .021 | .015 | .025 | .036 | .042 | .049 | .052 | .056 | | .052 | .051 | .050 | .053 | .057 | .052 | .047 | .037 | .057 | .037 | 22 |
| 13 | .030 | .027 | .026 | .018 | .017 | | .032 | .041 | .034 | .040 | .055 | .069 | .082 | .097 | .099 | .102 | .102 | .097 | .086 | .091 | .087 | .073 | .043 | .042 | .102 | .060 | 23 |
| 14 | .044 | .034 | .038 | .049 | .030 | | .031 | .015 | .016 | .033 | .046 | .052 | .056 | .061 | .059 | .059 | .058 | .059 | .065 | .049 | .035 | .032 | .033 | .035 | .065 | .043 | 23 |
| 15 | .035 | .038 | .037 | .035 | .035 | | .021 | .011 | .027 | .051 | .059 | .064 | .065 | .064 | .065 | .063 | .060 | .056 | .054 | .050 | .048 | .035 | .040 | .037 | .065 | .045 | 23 |
| 16 | .034 | .032 | .030 | .029 | .028 | | .022 | .020 | .024 | .026 | .028 | .032 | .036 | .039 | .041 | .043 | .044 | .043 | .044 | .043 | .043 | .037 | .020 | .023 | .044 | .033 | 23 |
| 17 | .025 | .028 | .028 | .028 | .025 | | .024 | .023 | .020 | .020 | .025 | .033 | .041 | .044 | .047 | .048 | .046 | .049 | .050 | .050 | .048 | .047 | .050 | .049 | .050 | .036 | 23 |
| 18 | .047 | .045 | .044 | .042 | .038 | | .026 | .025 | .023 | .026 | .022 | .023 | .023 | .023 | .026 | .029 | .029 | .029 | .028 | .028 | .030 | .030 | .031 | .030 | .047 | .030 | 23 |
| 19 | .029 | .028 | .025 | .024 | .023 | | .015 | .013 | .017 | .023 | .031 | .037 | .043 | .050 | .052 | .048 | .048 | .046 | .044 | .046 | .045 | .047 | .046 | .044 | .052 | .035 | 23 |
| 20 | .040 | .036 | .034 | .032 | .032 | | .022 | .020 | .029 | .034 | .046 | .051 | | | | | | | | | | | | | .051 | .034 | 11 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| Max | .047 | .045 | .044 | .049 | .038 | | .037 | .041 | .034 | .051 | .059 | .069 | .082 | .097 | .099 | .102 | .102 | .097 | .086 | .091 | .087 | .073 | .050 | .050 | .102 | | |
| Avg | .032 | .031 | .030 | .029 | .027 | | .025 | .024 | .023 | .029 | .036 | .040 | .042 | .047 | .047 | .047 | .047 | .046 | .046 | .044 | .042 | .039 | .036 | .034 | | .037 | |
| Rds | 20 | 20 | 20 | 20 | 20 | 00 | 20 | 18 | 19 | 19 | 20 | 20 | 19 | 18 | 19 | 18 | 19 | 19 | 18 | 19 | 19 | 19 | 19 | 19 | | | 441 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
09/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : M4
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 5 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .040 | .039 | .043 | .041 | | .038 | .035 | .034 | .034 | .036 | .040 | .040 | .041 | .042 | .042 | .043 | .044 | .046 | .047 | .045 | .047 | .040 | .035 | .034 | .047 | .040 | 23 |
| 02 | .033 | .027 | .029 | .028 | | .028 | .029 | .028 | .032 | .036 | .036 | .034 | .033 | .044 | .049 | .047 | .042 | .036 | .032 | .028 | .028 | .030 | .047 | .038 | .049 | .034 | 23 |
| 03 | .044 | .035 | .029 | .023 | | .029 | .032 | .027 | .030 | .034 | .037 | .038 | .042 | .048 | .051 | .051 | .053 | .053 | .053 | .051 | .045 | .045 | .038 | .038 | .053 | .040 | 23 |
| 04 | .041 | .038 | .041 | .040 | | .039 | .041 | .034 | .031 | .036 | .040 | .043 | .039 | .039 | .044 | .042 | .044 | .040 | .047 | .035 | .026 | .026 | .042 | .045 | .047 | .038 | 23 |
| 05 | .045 | .042 | .036 | .022 | | .030 | .035 | .021 | .018 | .016 | .017 | .020 | .021 | | .024 | .025 | .024 | .024 | .023 | .022 | .021 | .022 | .024 | .025 | .045 | .025 | 22 |
| 06 | .026 | .028 | .029 | .031 | | .028 | .027 | .026 | .026 | | | .029 | .031 | .031 | .032 | .034 | .035 | .033 | .032 | .030 | .028 | .027 | .027 | .026 | .035 | .029 | 21 |
| 07 | .026 | .026 | .025 | .024 | | .020 | .018 | .020 | .025 | .027 | .031 | .035 | .039 | .042 | .042 | .043 | .044 | .046 | .045 | .042 | .039 | .038 | .038 | .033 | .046 | .033 | 23 |
| 08 | .033 | .033 | .034 | .031 | | .033 | .031 | .029 | .021 | .026 | .033 | .037 | .041 | .044 | .045 | .046 | .045 | .046 | .048 | .049 | .047 | .045 | .045 | .042 | .049 | .038 | 23 |
| 09 | .040 | .038 | .039 | .044 | | .042 | .041 | .038 | .037 | .021 | .036 | .043 | .044 | .046 | .047 | .052 | .057 | .053 | .053 | .054 | .054 | .054 | .053 | .046 | .057 | .044 | 23 |
| 10 | .044 | .041 | .036 | .038 | | .041 | .041 | .037 | .025 | .032 | .048 | .051 | .048 | .048 | .047 | .051 | .053 | .056 | .060 | .060 | .056 | .049 | .049 | .041 | .060 | .045 | 23 |
| 11 | .032 | .034 | .035 | .038 | | .037 | .038 | .041 | .025 | .029 | .041 | .049 | .050 | .049 | .050 | .050 | .049 | .049 | | .046 | .045 | .044 | .034 | .024 | .050 | .040 | 22 |
| 12 | .030 | .026 | .025 | .027 | | .042 | .041 | .042 | .022 | .025 | .035 | .041 | .051 | .053 | .057 | | .053 | .052 | .049 | .054 | .057 | .056 | .052 | .043 | .057 | .042 | 22 |
| 13 | .036 | .031 | .033 | .031 | | .041 | .050 | .054 | .048 | .041 | .055 | .070 | .082 | .097 | .098 | .102 | .103 | .100 | .088 | .085 | .077 | .069 | .059 | .057 | .103 | .065 | 23 |
| 14 | .044 | .037 | .057 | .056 | | .038 | .041 | .034 | .018 | .033 | .051 | .059 | .062 | .067 | .065 | .062 | .064 | .067 | .064 | .053 | .039 | .035 | .035 | .037 | .067 | .048 | 23 |
| 15 | .038 | .041 | .039 | .038 | | .036 | .031 | .016 | .027 | .051 | .059 | .065 | .066 | .064 | .066 | .064 | .061 | .057 | .054 | .053 | .052 | .039 | .041 | .037 | .066 | .047 | 23 |
| 16 | .035 | .033 | .032 | .030 | | .025 | .024 | .023 | .024 | .025 | .028 | .032 | .036 | .039 | .041 | .043 | .044 | .043 | .044 | .043 | .041 | .040 | .035 | .034 | .044 | .034 | 23 |
| 17 | .035 | .036 | .030 | .033 | | .030 | .030 | .031 | .026 | .022 | .025 | .034 | .041 | .043 | .046 | .047 | .046 | .048 | .049 | .050 | .050 | .049 | .049 | .045 | .050 | .038 | 23 |
| 18 | .044 | .044 | .044 | .045 | | .042 | .041 | .039 | .032 | .031 | .029 | .028 | .026 | .027 | .030 | .033 | .032 | .031 | .030 | .030 | .033 | .032 | .033 | .032 | .045 | .034 | 23 |
| 19 | .031 | .030 | .027 | .025 | | .022 | .016 | .014 | .017 | .024 | .032 | .039 | .046 | .053 | .056 | .051 | .051 | .049 | .048 | .054 | .052 | .055 | .053 | .050 | .056 | .038 | 23 |
| 20 | .045 | .039 | .039 | .040 | | .035 | .033 | .029 | .032 | .038 | .048 | | | | | | | | | | | | | | .048 | .037 | 10 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| Max | .045 | .044 | .057 | .056 | | .042 | .050 | .054 | .048 | .051 | .059 | .070 | .082 | .097 | .098 | .102 | .103 | .100 | .088 | .085 | .077 | .069 | .059 | .057 | .103 | | |
| Avg | .037 | .034 | .035 | .034 | | .033 | .033 | .030 | .027 | .030 | .037 | .041 | .044 | .048 | .049 | .049 | .049 | .048 | .048 | .046 | .044 | .041 | .041 | .038 | | .040 | |
| Rds | 20 | 20 | 20 | 20 | 00 | 20 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 18 | 19 | 18 | 19 | 19 | 18 | 19 | 19 | 19 | 19 | 19 | | | 442 |

Current Date : 02/15/02
Current Time : 11:46

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
09/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : HI
Units : PPM
Avg Interval : 01

++++++++++
Transaction : 1
Parameter : 44201
Frequency : 1

AIRS Codes
State : 37 County : 183 Site : 0017
POC : 6 Interval : 1 Units : 007
Method : 047
++++++++++

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .056 | .055 | .054 | .055 | .054 | .042 | | .037 | .034 | .032 | .036 | .036 | .038 | .039 | .039 | .039 | .041 | .044 | .043 | .040 | .052 | .050 | .041 | .044 | .056 | .043 | 23 |
| 02 | .044 | .046 | .044 | .045 | .047 | .047 | | .038 | .035 | .035 | .042 | .047 | .059 | .061 | .050 | .046 | .047 | .040 | .040 | .038 | .036 | .039 | .045 | .040 | .061 | .043 | 23 |
| 03 | .037 | .039 | .036 | .036 | .036 | .041 | | .041 | .038 | .038 | .039 | .039 | .040 | .046 | .049 | .048 | .051 | .054 | .052 | .052 | .051 | .050 | .044 | .052 | .054 | .043 | 23 |
| 04 | .053 | .053 | .055 | .057 | .053 | .052 | | .051 | .051 | .046 | .041 | .042 | .040 | .039 | .043 | .043 | .046 | .049 | .047 | .051 | .051 | .051 | .048 | .047 | .057 | .048 | 23 |
| 05 | .046 | .046 | .045 | .041 | .043 | .040 | | .023 | .016 | .014 | .014 | .017 | .019 | | .021 | .022 | .022 | .021 | .021 | .020 | .020 | .021 | .023 | .024 | .046 | .026 | 22 |
| 06 | .025 | .027 | .028 | .029 | .029 | .028 | | .026 | .026 | .026 | .026 | .027 | .028 | .029 | .030 | .032 | .033 | .032 | .031 | .029 | .027 | .026 | .027 | .027 | .033 | .028 | 23 |
| 07 | .026 | .027 | .029 | .030 | .031 | .032 | | .031 | .028 | | | | .033 | .036 | .037 | .038 | .040 | .042 | .042 | .039 | .037 | .034 | .034 | .034 | .042 | .034 | 20 |
| 08 | .037 | .038 | .037 | .037 | .038 | .039 | | .036 | .037 | .035 | .029 | .033 | .037 | .041 | .042 | .043 | .042 | .043 | .045 | .047 | .046 | .046 | .044 | .042 | .047 | .039 | 23 |
| 09 | .039 | .039 | .040 | .040 | .040 | .040 | | .039 | .039 | .038 | .033 | .040 | .041 | .043 | .044 | .048 | .054 | .053 | .054 | .055 | .055 | .056 | .056 | .057 | .057 | .045 | 23 |
| 10 | .052 | .048 | .040 | .038 | .037 | .035 | | .032 | .037 | .038 | .043 | .046 | .044 | .044 | .043 | .046 | .048 | .051 | .056 | .057 | .058 | .056 | .051 | .046 | .058 | .045 | 23 |
| 11 | .049 | .040 | .039 | .039 | .039 | .041 | | .038 | .039 | .031 | .036 | .044 | .046 | .044 | .045 | .046 | .046 | .046 | | .046 | .045 | .043 | .041 | .036 | .049 | .041 | 22 |
| 12 | .032 | .034 | .034 | .034 | .034 | .034 | | .031 | .033 | .028 | .034 | .038 | .045 | .047 | .053 | | .048 | .049 | .049 | .049 | .051 | .052 | .054 | .055 | .055 | .041 | 22 |
| 13 | .048 | .045 | .045 | .045 | .046 | .049 | | .046 | .043 | .051 | .046 | .063 | .075 | .090 | .097 | .100 | .103 | .105 | .101 | .085 | .076 | .069 | .068 | .068 | .105 | .068 | 23 |
| 14 | .064 | .062 | .054 | .058 | .062 | .063 | | .062 | .061 | .059 | .053 | .053 | .057 | .062 | .063 | .057 | .060 | .059 | .057 | .055 | .057 | .054 | .060 | .058 | .064 | .058 | 23 |
| 15 | .062 | .068 | .062 | .060 | .054 | .046 | | .041 | .049 | .045 | .052 | .057 | .058 | .056 | .057 | .056 | .054 | .051 | .052 | .052 | .049 | .040 | .040 | .036 | .068 | .052 | 23 |
| 16 | .032 | .031 | .033 | .032 | .030 | .030 | | .023 | .022 | .021 | .022 | .026 | .030 | .033 | .035 | .039 | .039 | .040 | .040 | .039 | .040 | .039 | .037 | .038 | .040 | .032 | 23 |
| 17 | .038 | .037 | .036 | .036 | .034 | .033 | | .029 | .029 | .029 | .031 | .028 | .033 | .037 | .041 | .043 | .044 | .043 | .046 | .047 | .043 | .044 | .043 | .040 | .047 | .037 | 23 |
| 18 | .040 | .040 | .039 | .038 | .041 | .041 | | .039 | .039 | .038 | .038 | .037 | .035 | .034 | .034 | .034 | .030 | .028 | .027 | .027 | .031 | .033 | .032 | .031 | .041 | .035 | 23 |
| 19 | .031 | .031 | .029 | .027 | .024 | .021 | | .013 | .014 | .020 | .023 | .030 | .037 | .046 | .049 | .046 | .046 | .045 | .046 | .057 | .062 | .051 | .053 | .045 | .062 | .036 | 23 |
| 20 | .050 | .057 | .051 | .047 | .045 | .050 | | .047 | .050 | .048 | .044 | .048 | .050 | | | | | | | | | | | | .057 | .048 | 12 |
| 21 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 23 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 25 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 27 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 29 | | | | | | | | | | | | | | | | | | | | | | | | | | | 00 |
| 30 | | | | | | | | | | | | | | | | | | | | | | | .037 | | .037 | .037 | 01 |
| Max | .064 | .068 | .062 | .060 | .062 | .063 | | .062 | .061 | .059 | .053 | .063 | .075 | .090 | .097 | .100 | .103 | .105 | .101 | .085 | .076 | .069 | .068 | .068 | .105 | | |
| Avg | .043 | .043 | .041 | .041 | .040 | .040 | | .036 | .036 | .035 | .035 | .039 | .042 | .045 | .045 | .045 | .047 | .047 | .047 | .046 | .046 | .044 | .043 | .043 | | .042 | |
| Rds | 20 | 20 | 20 | 20 | 20 | 20 | 00 | 20 | 20 | 19 | 19 | 19 | 20 | 18 | 19 | 18 | 19 | 19 | 18 | 19 | 19 | 19 | 20 | 19 | | | 444 |

Current Date : 02/19/02
Current Time : 13:31

Monthly Parameter Report - Hourly Averages
NC DENR\Division of Air Quality
10/00

Logger Id : UT
Site Name : WRALTOWR
Parameter : O3
Units : PPM
Avg Interval : 01

++++++++++ AIRS Codes ++++++++++
Transaction : 1 State : 37 County : 183 Site : 0017
Parameter : 44201 POC : 1 Interval : 1 Units : 007
Frequency : 1 Method : 047

Hours

| Day | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | Max | Avg | Rds |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | .016 | .016 | .016 | | .012 | .012 | .015 | .018 | .019 | .020 | .022 | .024 | .026 | .027 | .030 | .030 | .030 | .027 | .026 | .024 | .022 | .023 | .022 | .022 | .030 | .021 | 23 |
| 02 | .020 | .018 | .020 | | .015 | .011 | .008 | .009 | .018 | .025 | .029 | .034 | .036 | .041 | .047 | .049 | .043 | .026 | .011 | .008 | .009 | .008 | .005 | .004 | .049 | .021 | 23 |
| 03 | .010 | .009 | .013 | | .013 | .012 | .007 | .013 | .025 | .034 | .046 | .057 | .066 | .074 | .080 | .079 | .064 | .046 | .030 | .024 | .018 | .014 | .013 | .014 | .080 | .033 | 23 |
| 04 | .012 | .018 | .019 | | .013 | .013 | .011 | .013 | .024 | .040 | .056 | .065 | .065 | .068 | .069 | .068 | .072 | .056 | .044 | .035 | .025 | .017 | .015 | .009 | .072 | .035 | 23 |
| 05 | .006 | .003 | .004 | | .000 | .001 | .003 | .003 | .006 | .021 | .039 | .055 | .065 | .064 | .062 | .058 | .047 | .033 | .031 | .022 | .019 | .011 | .015 | .009 | .065 | .025 | 23 |
| 06 | .008 | .007 | .007 | | .006 | .006 | .006 | .013 | .026 | .042 | .057 | .066 | .071 | .071 | .067 | .050 | .040 | .019 | .009 | .002 | .025 | .035 | .032 | .030 | .071 | .030 | 23 |
| 07 | .030 | .029 | .028 | | .023 | .024 | .020 | .017 | .021 | .027 | .032 | .037 | .042 | .045 | .048 | .049 | .042 | .036 | .031 | .032 | .033 | .030 | .028 | .027 | .049 | .031 | 23 |
| 08 | .025 | .024 | .024 | | .022 | .022 | .022 | .021 | .020 | .020 | .024 | .023 | .021 | .019 | .018 | .017 | .014 | .009 | .004 | .000 | .000 | .000 | .000 | .003 | .025 | .015 | 23 |
| 09 | .009 | .013 | .012 | | .007 | .001 | .000 | .003 | .013 | .020 | .023 | .025 | .026 | .026 | .027 | .026 | .026 | .014 | .004 | .008 | .013 | .004 | .000 | .000 | .027 | .013 | 23 |
| 10 | .000 | .000 | .000 | | .000 | .000 | .000 | .007 | | | | .029 | .031 | .034 | .035 | .037 | .036 | .026 | .020 | .015 | .013 | .012 | .010 | .010 | .037 | .015 | 20 |
| 11 | .010 | .006 | .005 | | .010 | .010 | .002 | .001 | .002 | .014 | .023 | .029 | .032 | .034 | .037 | .040 | .039 | .025 | .003 | .000 | .000 | .000 | .001 | .001 | .040 | .014 | 23 |
| 12 | .002 | .000 | .000 | | .000 | .000 | .000 | .000 | .009 | .015 | .032 | .042 | .043 | .045 | | .049 | .043 | .025 | .006 | .000 | .000 | .000 | .000 | .000 | .049 | .014 | 22 |
| 13 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .001 | .010 | .016 | .049 | .058 | .057 | .056 | .053 | .043 | .034 | .027 | .003 | .000 | .002 | .000 | .000 | .058 | .017 | 23 |
| 14 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .003 | .018 | .025 | .035 | .054 | .066 | .072 | .070 | .055 | .041 | .036 | .018 | .000 | .000 | .000 | .001 | .072 | .021 | 23 |
| 15 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .012 | .028 | .037 | .054 | .068 | .074 | .074 | .066 | .058 | .034 | .020 | .020 | .000 | .000 | .000 | .000 | .074 | .023 | 23 |
| 16 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .004 | .053 | .072 | .078 | .088 | .089 | .088 | .083 | .070 | .043 | .020 | .008 | .000 | .000 | .000 | .000 | .089 | .030 | 23 |
| 17 | .000 | .000 | .000 | | .003 | .000 | .000 | .004 | .028 | .038 | .040 | .052 | .057 | .059 | .058 | .055 | .050 | .041 | .032 | .025 | .022 | .026 | .021 | .015 | .059 | .027 | 23 |
| 18 | .007 | .013 | .019 | | .018 | .015 | .010 | .007 | .006 | .007 | .013 | .025 | .034 | .043 | .057 | .063 | .056 | .032 | .003 | .000 | .008 | .020 | .019 | .024 | .063 | .021 | 23 |
| 19 | .026 | .031 | .030 | | .026 | .020 | .009 | | | | .033 | .041 | .044 | .048 | .050 | .051 | .040 | .024 | .002 | .000 | .000 | .000 | .000 | .000 | .051 | .023 | 20 |
| 20 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .001 | .013 | .020 | .044 | .057 | .057 | .055 | .054 | .035 | .018 | .004 | .008 | .000 | .000 | .004 | .005 | .057 | .016 | 23 |
| 21 | .003 | .004 | .000 | | .000 | .000 | .002 | .000 | .009 | .039 | .048 | .054 | .057 | .062 | .062 | .065 | .053 | .040 | .027 | .022 | .017 | .009 | .008 | .005 | .065 | .025 | 23 |
| 22 | .003 | .000 | .000 | | .001 | .018 | .015 | .027 | .034 | .041 | .059 | .063 | .069 | .072 | .072 | .073 | .068 | .066 | .058 | .056 | .053 | .047 | .041 | .036 | .073 | .042 | 23 |
| 23 | .028 | .027 | .025 | | .019 | .014 | .012 | .014 | .021 | .025 | .029 | .034 | .037 | .040 | .041 | .041 | .035 | .016 | .000 | .000 | .000 | .006 | .013 | .019 | .041 | .021 | 23 |
| 24 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | | .022 | .028 | .038 | .046 | .055 | .056 | .055 | .039 | .013 | .000 | .000 | .000 | .000 | .000 | .000 | .056 | .016 | 22 |
| 25 | .000 | .000 | .000 | | .000 | .000 | .000 | .000 | .012 | .029 | .038 | .049 | .054 | .060 | .062 | .061 | .051 | .029 | .004 | .000 | .000 | .002 | .016 | .006 | .062 | .020 | 23 |
| 26 | .005 | .000 | .000 | | .000 | .000 | .002 | .010 | .019 | .022 | .029 | .038 | .039 | .038 | .039 | .038 | .032 | .018 | .002 | .005 | .019 | .022 | .024 | .024 | .039 | .018 | 23 |
| 27 | .027 | .024 | .020 | | .015 | .015 | .012 | .008 | .017 | .028 | .037 | .041 | .043 | .045 | .043 | .045 | .042 | .026 | .007 | .000 | .000 | .000 | .000 | .000 | .045 | .021 | 23 |
| 28 | .000 | .004 | .014 | | .008 | .012 | .012 | .011 | .020 | .039 | .053 | .058 | .064 | .065 | .058 | .054 | .046 | .029 | .029 | .033 | .028 | .031 | .035 | .033 | .065 | .032 | 23 |
| 29 | .032 | .029 | .027 | | .024 | .017 | .005 | .004 | .021 | .029 | .030 | .033 | .034 | .037 | .039 | .040 | .036 | .026 | .022 | .019 | .014 | .012 | .012 | .006 | .040 | .023 | 23 |
| 30 | .011 | .017 | .015 | | .010 | .005 | .000 | .000 | .019 | .029 | .027 | .028 | .031 | .036 | .040 | .041 | .038 | .029 | .022 | .016 | .012 | .012 | .013 | .015 | .041 | .020 | 23 |
| 31 | .018 | .009 | .000 | | .000 | .000 | .000 | .000 | .015 | .020 | .024 | .027 | .031 | .034 | .035 | .035 | .029 | .012 | .000 | .000 | .000 | .000 | .000 | .000 | .035 | .012 | 23 |
| Max | .032 | .031 | .030 | | .026 | .024 | .022 | .027 | .034 | .053 | .072 | .078 | .088 | .089 | .088 | .083 | .072 | .066 | .058 | .056 | .053 | .047 | .041 | .036 | .089 | | |
| Avg | .009 | .009 | .009 | | .007 | .007 | .005 | .006 | .015 | .026 | .034 | .042 | .048 | .051 | .052 | .051 | .044 | .029 | .017 | .013 | .011 | .011 | .011 | .010 | | .022 | |
| Rds | 31 | 31 | 31 | 00 | 31 | 31 | 31 | 30 | 28 | 29 | 30 | 31 | 31 | 31 | 30 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | 31 | | | 705 |

# Appendix B

# Speciated PAMS Hydrocarbon Reports

## Auburn Tower PAMs Hydrocarbon Analysis  Date: June 2, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 31.7 | 29.7 | 29.1 | 29.6 |
| ETHANE | 9.2 | 5.7 | 7.4 | 7.2 |
| ETHYLENE | 4.3 | 1.4 | 1.6 | 1.6 |
| PROPANE | 38.1 | 2.6 | 3.9 | 3.4 |
| Unknown | 0.3 | | 0.3 | |
| PROPYLENE | 1.9 | 1.1 | 0.9 | 0.9 |
| ISOBUTANE | 1.9 | 0.5 | 1.7 | 0.7 |
| N-BUTANE | 3.2 | 1.2 | 2.1 | 1.5 |
| Unknown | | | | |
| ACETYLENE | 3.2 | 1.3 | 2.0 | 1.4 |
| Unknown | | | | |
| TRANS-2-BUTENE | | | | |
| 1-BUTENE | 0.4 | 0.7 | 0.3 | 0.6 |
| Unknown | 6.3 | 1.6 | 19.8 | 1.3 |
| Unknown | 1.1 | | 0.7 | |
| CIS-2-BUTENE | | | | |
| Unknown | | 0.4 | | |
| CYCLOPENTANE | | | | |
| ISOPENTANE | 6.2 | 1.5 | 3.2 | 1.7 |
| Unknown | 5.2 | | 2.5 | |
| N-PENTANE | 2.7 | 0.7 | 1.8 | 0.8 |
| Unknown | | | | |
| TRANS-2-PENTENE | | | | |
| Unknown | | | 0.5 | |
| 1-PENTENE | 0.3 | 0.5 | 0.3 | 0.4 |
| Unknown | | | | |
| CIS-2-PENTENE | | 2.5 | | 5.3 |
| Unknown | | | | |
| 2,2-DIMETHYLBUTANE | 0.4 | | | |
| Unknown | 0.4 | 0.3 | | 0.4 |
| 2,3-DIMETHYLBUTANE | 0.5 | | 0.3 | |
| 2-METHYLPENTANE | 1.5 | 0.3 | 1.0 | 0.4 |
| 3-METHYLPENTANE | 1.1 | | 0.5 | |
| Unknown | | | | |
| ISOPRENE | 9.3 | | 18.5 | 3.1 |
| HEXANE | 1.1 | | 0.5 | |
| Unknown | | | | |
| METHYLCYCLOPENTANE | 0.7 | | | |
| 2,4-DIMETHYLPENTANE | | | | |
| Unknown | | | | |
| BENZENE | 2.8 | 2.3 | 1.0 | 1.1 |
| CYCLOHEXANE | | | | |
| 2-METHYLHEXANE | 0.5 | | | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | 0.4 | |
| 3-METHYLHEXANE | 0.3 | | 0.3 | |
| Unknown | | 0.6 | | 0.6 |
| 2,2,4-TRIMETHYLPENTANE | 4.7 | 1.2 | 40.3 | 0.7 |
| N-HEPTANE | 0.5 | | | |
| Unknown | 0.5 | 3.1 | 1.0 | 3.4 |
| METHYLCYCLOHEXANE | | | | |
| Unknown | 1.3 | 0.6 | 8.2 | 0.8 |
| 2,3,4-TRIMETHYLPENTANE | 0.8 | | 3.9 | |
| TOLUENE | 5.0 | 62.8 | 4.2 | 22.7 |
| Unknown | | | | |
| 2-METHYLHEPTANE | | | 0.6 | |
| Unknown | | | 0.3 | |
| 3-METHYLHEPTANE | | | | |
| Unknown | 0.8 | 0.8 | 0.5 | 0.8 |
| Unknown | 0.5 | 0.4 | 0.5 | 0.4 |
| N-OCTANE | 0.8 | | | |
| Unknown | 1.9 | 3.9 | 1.3 | 3.3 |
| Unknown | 0.6 | | 2.8 | |
| Unknown | | 1.1 | 0.7 | 1.1 |
| ETHYLBENZENE | 1.0 | 1.1 | | 0.4 |
| META/PARA-XYLENE | 2.1 | 4.9 | 0.6 | 1.0 |
| Unknown | 0.6 | | 3.3 | |
| O-XYLENE | 2.6 | 3.6 | | 1.0 |
| N-NONANE | 0.5 | | | |
| ISOPROPYLBENZENE | | | | |
| Unknown | 1.1 | | 0.4 | |
| Unknown | 2.2 | 1.7 | 1.2 | 1.8 |
| N-PROPYLBENZENE | | | | |
| M-ETHYLTOLUENE | 6.8 | 1.8 | 0.9 | 1.2 |
| 1,3,5-TRIMETHYLBENZENE | 0.7 | 1.0 | | |
| Unknown | | | 0.8 | |
| O-ETHYLTOLUENE | 0.9 | 3.0 | | 1.7 |
| Unknown | | | 1.6 | |
| 1,2,4-TRIMETHYLBENZENE | 12.8 | 41.6 | 5.6 | 25.2 |
| DECANE | | 0.8 | | |
| Unknown | 0.8 | | 0.8 | |
| 1,2,3-TRIMETHYLBENZENE | 8.7 | 9.5 | 2.1 | 2.3 |
| Unknown | | | 1.8 | |
| M-DIETHYLBENZENE | | 1.9 | | |
| P-DIETHYLBENZENE | | | | |
| Unknown | 2.5 | 5.3 | 6.9 | |
| UNDECANE | 1.2 | 1.8 | | 0.7 |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 196.5 | 206.8 | 191.1 | 130.4 |
| NMOC | 164.8 | 177.1 | 162.0 | 100.8 |
| PAMS | 138.8 | 157.1 | 106.0 | 87.1 |
| Unknowns | 26.0 | 20.0 | 56.0 | 13.7 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 107.7 | 45.9 | 97.1 | 46.7 |
| Olefins | 16.2 | 6.1 | 21.6 | 11.9 |
| Aromatics | 43.4 | 133.4 | 14.5 | 56.7 |
| Acetylene | 3.2 | 1.3 | 2.0 | 1.4 |

## Auburn Tower PAMs Hydrocarbon Analysis  Date: June 9, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 28.8 | 26.2 | 30.5 | 25.7 |
| ETHANE | 3.0 | 2.7 | 4.3 | 2.9 |
| ETHYLENE | 2.4 | 0.6 | 1.2 | 0.7 |
| PROPANE | 5.3 | 1.0 | 2.2 | 1.6 |
| Unknown | | | | |
| PROPYLENE | 1.3 | 0.6 | 0.9 | 0.6 |
| ISOBUTANE | 0.6 | | 1.0 | |
| N-BUTANE | 0.9 | 0.3 | 1.2 | 0.6 |
| Unknown | | | | |
| ACETYLENE | 1.5 | 0.7 | 1.4 | 1.0 |
| Unknown | | | | |
| TRANS-2-BUTENE | | 0.3 | | |
| 1-BUTENE | 0.5 | 0.3 | 0.4 | 0.3 |
| Unknown | 3.9 | 0.8 | 12.4 | 0.7 |
| Unknown | 1.0 | | 0.5 | |
| CIS-2-BUTENE | | | | |
| Unknown | | | 3.3 | 0.6 |
| CYCLOPENTANE | | | | |
| ISOPENTANE | 1.9 | 0.6 | 1.6 | 0.9 |
| Unknown | 3.1 | | 2.0 | |
| N-PENTANE | 1.0 | 0.4 | 1.0 | 0.4 |
| Unknown | 0.4 | | | |
| TRANS-2-PENTENE | | | | |
| Unknown | | | | |
| 1-PENTENE | 0.4 | 0.3 | 0.3 | |
| Unknown | | 0.4 | | |
| CIS-2-PENTENE | | 1.1 | | 2.6 |
| Unknown | | | | 0.4 |
| 2,2-DIMETHYLBUTANE | | | | |
| Unknown | 0.4 | | | |
| 2,3-DIMETHYLBUTANE | | 0.6 | | |
| 2-METHYLPENTANE | 0.6 | 0.3 | 0.5 | 0.3 |
| 3-METHYLPENTANE | 0.5 | 0.3 | | |
| Unknown | | | | |
| ISOPRENE | 2.8 | 0.7 | 9.8 | 2.1 |
| HEXANE | 1.2 | | 0.5 | |
| Unknown | | 2.0 | 0.5 | 0.4 |
| METHYLCYCLOPENTANE | 0.5 | | 0.4 | |
| 2,4-DIMETHYLPENTANE | | | | |
| Unknown | | | | |
| BENZENE | 1.0 | 0.7 | 0.8 | 0.5 |
| CYCLOHEXANE | | 0.3 | | |
| 2-METHYLHEXANE | 0.4 | | | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | | |
| 3-METHYLHEXANE | | | 0.4 | |
| Unknown | | | | |
| 2,2,4-TRIMETHYLPENTANE | 2.4 | 0.4 | 19.1 | |
| N-HEPTANE | | | | |
| Unknown | 0.7 | 1.7 | 1.8 | 2.1 |
| METHYLCYCLOHEXANE | | | | |
| Unknown | | | 4.0 | 0.5 |
| 2,3,4-TRIMETHYLPENTANE | 0.4 | | 1.9 | |
| TOLUENE | 1.6 | 17.2 | 2.7 | 9.2 |
| Unknown | | | | |
| 2-METHYLHEPTANE | | | 0.4 | |
| Unknown | | | | |
| 3-METHYLHEPTANE | | | | |
| Unknown | 0.5 | 0.5 | 0.6 | 0.6 |
| Unknown | | | 0.3 | 0.7 |
| N-OCTANE | | | | |
| Unknown | 0.9 | 1.3 | 0.7 | 1.5 |
| Unknown | | | 1.1 | |
| Unknown | | 0.5 | 0.4 | 0.7 |
| ETHYLBENZENE | | 0.4 | | |
| META/PARA-XYLENE | 1.2 | 0.9 | 0.9 | |
| Unknown | | | | |
| O-XYLENE | 0.7 | 0.4 | 0.4 | 0.4 |
| N-NONANE | | 0.6 | 0.5 | |
| ISOPROPYLBENZENE | | 0.4 | | |
| Unknown | | | | |
| Unknown | 0.8 | 1.3 | 0.5 | 0.5 |
| N-PROPYLBENZENE | | 0.4 | | |
| M-ETHYLTOLUENE | 1.0 | 0.6 | | |
| 1,3,5-TRIMETHYLBENZENE | | | 0.6 | |
| Unknown | | | | |
| O-ETHYLTOLUENE | | 0.6 | | |
| Unknown | | | 0.6 | |
| 1,2,4-TRIMETHYLBENZENE | 6.4 | 14.6 | 3.4 | 11.7 |
| DECANE | 0.6 | | 0.5 | |
| Unknown | | | | |
| 1,2,3-TRIMETHYLBENZENE | 1.6 | 0.6 | 0.6 | 0.7 |
| Unknown | | | 0.7 | |
| M-DIETHYLBENZENE | | 0.7 | | |
| P-DIETHYLBENZENE | | 0.5 | | |
| Unknown | | | 1.3 | |
| UNDECANE | | 1.0 | 0.4 | 0.7 |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 81.9 | 85.7 | 120.8 | 71.4 |
| NMOC | 53.1 | 59.5 | 90.3 | 45.7 |
| PAMS | 41.4 | 51.1 | 59.4 | 37.2 |
| Unknowns | 11.7 | 8.4 | 30.9 | 8.6 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 48.0 | 34.7 | 66.5 | 33.0 |
| Olefins | 7.3 | 3.9 | 12.6 | 6.3 |
| Aromatics | 13.3 | 38.1 | 9.4 | 22.5 |
| Acetylene | 1.5 | 0.7 | 1.4 | 1.0 |

## Auburn Tower PAMs Hydrocarbon Analysis  Date: June 16, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 28.4 | 27.3 | 25.9 | 26.2 |
| ETHANE | 1.4 | 1.1 | 1.7 | 1.3 |
| ETHYLENE | 1.0 | 0.9 | 1.6 | 0.7 |
| PROPANE | 1.5 | 1.0 | 1.0 | 0.7 |
| Unknown | | 0.4 | | |
| PROPYLENE | 0.7 | 0.7 | 1.0 | 0.9 |
| ISOBUTANE | 0.5 | 0.3 | 0.7 | |
| N-BUTANE | 0.9 | 0.4 | 0.7 | 0.4 |
| Unknown | | | | |
| ACETYLENE | 0.8 | | 1.1 | |
| Unknown | | | | |
| TRANS-2-BUTENE | | | | |
| 1-BUTENE | 0.3 | 0.4 | 0.3 | 0.4 |
| Unknown | 5.3 | 1.1 | **10.3** | 1.2 |
| Unknown | 0.6 | | 0.4 | 0.4 |
| CIS-2-BUTENE | | | | |
| Unknown | | | | |
| CYCLOPENTANE | | | | |
| ISOPENTANE | 1.6 | 0.6 | 1.4 | 0.6 |
| Unknown | 3.1 | | 2.3 | |
| N-PENTANE | 0.8 | | 0.8 | |
| Unknown | | | | |
| TRANS-2-PENTENE | | | | |
| Unknown | | | | |
| 1-PENTENE | | | | 0.3 |
| Unknown | | | | |
| CIS-2-PENTENE | | 0.4 | | 0.7 |
| Unknown | | | | |
| 2,2-DIMETHYLBUTANE | | | | |
| Unknown | | | | |
| 2,3-DIMETHYLBUTANE | 0.4 | | | |
| 2-METHYLPENTANE | 0.5 | | 0.6 | |
| 3-METHYLPENTANE | 0.3 | | 0.3 | |
| Unknown | | | | |
| ISOPRENE | 2.7 | 0.5 | **25.2** | 3.1 |
| HEXANE | 0.3 | | 0.5 | |
| Unknown | | | | |
| METHYLCYCLOPENTANE | | | | |
| 2,4-DIMETHYLPENTANE | | | | |
| Unknown | | | | |
| BENZENE | 0.9 | 0.8 | 1.0 | 0.8 |
| CYCLOHEXANE | | | | |
| 2-METHYLHEXANE | 0.6 | 0.4 | 0.5 | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | | |
| 3-METHYLHEXANE | | | 0.4 | |
| Unknown | 0.3 | | | |
| 2,2,4-TRIMETHYLPENTANE | 4.3 | 0.6 | 13.0 | 0.6 |
| N-HEPTANE | | | 0.4 | |
| Unknown | 1.2 | 2.7 | 1.8 | 5.7 |
| METHYLCYCLOHEXANE | | | | |
| Unknown | 1.0 | 0.5 | 2.5 | 1.0 |
| 2,3,4-TRIMETHYLPENTANE | 0.6 | | 1.4 | |
| TOLUENE | 1.6 | **25.4** | 1.9 | **10.5** |
| Unknown | | | | |
| 2-METHYLHEPTANE | | | 0.7 | |
| Unknown | | | | |
| 3-METHYLHEPTANE | | | 0.4 | |
| Unknown | 0.4 | 0.5 | 0.7 | 0.4 |
| Unknown | | | | 0.5 |
| N-OCTANE | | | 0.4 | |
| Unknown | 0.9 | 1.7 | 1.0 | 1.4 |
| Unknown | | | 0.8 | |
| Unknown | | 0.5 | 0.4 | 0.6 |
| ETHYLBENZENE | 0.4 | | | |
| META/PARA-XYLENE | 1.5 | 0.5 | 1.6 | 0.4 |
| Unknown | | | | |
| O-XYLENE | 0.6 | 0.4 | 0.4 | |
| N-NONANE | | | | |
| ISOPROPYLBENZENE | | | | |
| Unknown | | | | |
| Unknown | 0.7 | 0.8 | 0.4 | 0.8 |
| N-PROPYLBENZENE | | | | |
| M-ETHYLTOLUENE | 2.0 | 0.8 | 1.3 | 0.9 |
| 1,3,5-TRIMETHYLBENZENE | 0.4 | | | |
| Unknown | | | | |
| O-ETHYLTOLUENE | | | | |
| Unknown | | | 0.5 | |
| 1,2,4-TRIMETHYLBENZENE | 6.5 | **14.6** | 4.7 | 10.5 |
| DECANE | | | | |
| Unknown | | | | |
| 1,2,3-TRIMETHYLBENZENE | 1.8 | 0.5 | 1.2 | 0.9 |
| Unknown | | | 0.7 | |
| M-DIETHYLBENZENE | | | | |
| P-DIETHYLBENZENE | | | | |
| Unknown | | | 1.1 | |
| UNDECANE | | 0.4 | | |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 76.8 | 86.0 | 114.9 | 72.0 |
| NMOC | 48.4 | 58.7 | 89.0 | 45.8 |
| PAMS | 34.9 | 50.5 | 66.1 | 33.9 |
| Unknowns | 13.5 | 8.2 | 22.9 | 12.0 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 42.1 | 32.1 | 50.7 | 29.8 |
| Olefins | 4.7 | 2.8 | 28.1 | 6.2 |
| Aromatics | 15.8 | 42.9 | 12.1 | 24.0 |
| Acetylene | 0.8 | 0.0 | 1.1 | 0.0 |

## Auburn Tower PAMs Hydrocarbon Analysis

**Date: June 23, 2000**

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 29.1 | NA | 28.3 | NA |
| ETHANE | 3.5 | NA | 3.3 | NA |
| ETHYLENE | 2.2 | NA | 1.0 | NA |
| PROPANE | 14.6 | NA | 2.4 | NA |
| Unknown | | NA | | NA |
| PROPYLENE | 1.4 | NA | 1.1 | NA |
| ISOBUTANE | 1.2 | NA | 1.3 | NA |
| N-BUTANE | 1.8 | NA | 1.1 | NA |
| Unknown | | NA | | NA |
| ACETYLENE | 1.8 | NA | 1.1 | NA |
| Unknown | | NA | | NA |
| TRANS-2-BUTENE | | NA | | NA |
| 1-BUTENE | 0.3 | NA | 0.3 | NA |
| Unknown | 5.8 | NA | 16.4 | NA |
| Unknown | 0.5 | NA | 0.5 | NA |
| CIS-2-BUTENE | | NA | | NA |
| Unknown | | NA | | NA |
| CYCLOPENTANE | | NA | | NA |
| ISOPENTANE | 4.2 | NA | 1.6 | NA |
| Unknown | 2.8 | NA | 2.1 | NA |
| N-PENTANE | 2.3 | NA | 0.9 | NA |
| Unknown | | NA | | NA |
| TRANS-2-PENTENE | | NA | | NA |
| Unknown | 0.5 | NA | | NA |
| 1-PENTENE | | NA | | NA |
| Unknown | | NA | | NA |
| CIS-2-PENTENE | | NA | | NA |
| Unknown | | NA | | NA |
| 2,2-DIMETHYLBUTANE | | NA | | NA |
| Unknown | | NA | 0.4 | NA |
| 2,3-DIMETHYLBUTANE | 0.3 | NA | | NA |
| 2-METHYLPENTANE | 1.1 | NA | 0.7 | NA |
| 3-METHYLPENTANE | 0.6 | NA | | NA |
| Unknown | | NA | | NA |
| ISOPRENE | 8.1 | NA | 14.6 | NA |
| HEXANE | 0.6 | NA | | NA |
| Unknown | | NA | | NA |
| METHYLCYCLOPENTANE | 0.4 | NA | | NA |
| 2,4-DIMETHYLPENTANE | | NA | | NA |
| Unknown | | NA | | NA |
| BENZENE | 1.8 | NA | 0.9 | NA |
| CYCLOHEXANE | | NA | | NA |
| 2-METHYLHEXANE | | NA | | NA |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | NA | | NA |
| 3-METHYLHEXANE | 0.3 | NA | | NA |
| Unknown | | NA | | NA |
| 2,2,4-TRIMETHYLPENTANE | 3.2 | NA | 18.0 | NA |
| N-HEPTANE | 0.3 | NA | | NA |
| Unknown | 1.3 | NA | 2.7 | NA |
| METHYLCYCLOHEXANE | | NA | | NA |
| Unknown | 1.2 | NA | 4.2 | NA |
| 2,3,4-TRIMETHYLPENTANE | 0.6 | NA | 1.8 | NA |
| TOLUENE | 3.2 | NA | 2.5 | NA |
| Unknown | | NA | | NA |
| 2-METHYLHEPTANE | | NA | 0.4 | NA |
| Unknown | | NA | | NA |
| 3-METHYLHEPTANE | | NA | | NA |
| Unknown | 0.6 | NA | 0.4 | NA |
| Unknown | | NA | | NA |
| N-OCTANE | | NA | | NA |
| Unknown | 1.7 | NA | 1.3 | NA |
| Unknown | | NA | 0.9 | NA |
| Unknown | | NA | 0.4 | NA |
| ETHYLBENZENE | 0.5 | NA | | NA |
| META/PARA-XYLENE | 1.1 | NA | 0.6 | NA |
| Unknown | | NA | | NA |
| O-XYLENE | 0.7 | NA | | NA |
| N-NONANE | | NA | | NA |
| ISOPROPYLBENZENE | | NA | | NA |
| Unknown | 1.0 | NA | | NA |
| Unknown | 1.0 | NA | 0.9 | NA |
| N-PROPYLBENZENE | | NA | | NA |
| M-ETHYLTOLUENE | 4.8 | NA | 0.7 | NA |
| 1,3,5-TRIMETHYLBENZENE | | NA | | NA |
| Unknown | | NA | | NA |
| O-ETHYLTOLUENE | | NA | | NA |
| Unknown | | NA | 0.7 | NA |
| 1,2,4-TRIMETHYLBENZENE | 9.9 | NA | 5.8 | NA |
| DECANE | | NA | | NA |
| Unknown | 0.3 | NA | | NA |
| 1,2,3-TRIMETHYLBENZENE | 6.0 | NA | 1.3 | NA |
| Unknown | | NA | 0.8 | NA |
| M-DIETHYLBENZENE | | NA | | NA |
| P-DIETHYLBENZENE | | NA | | NA |
| Unknown | 0.5 | NA | 1.5 | NA |
| UNDECANE | 0.6 | NA | | NA |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 123.9 | NA | 122.9 | NA |
| NMOC | 94.8 | NA | 94.6 | NA |
| PAMS | 77.6 | NA | 61.4 | NA |
| Unknowns | 17.2 | NA | 33.2 | NA |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 64.8 | NA | 59.9 | NA |
| Olefins | 12.0 | NA | 17.0 | NA |
| Aromatics | 28.1 | NA | 11.8 | NA |
| Acetylene | 1.8 | NA | 1.1 | NA |

## Auburn Tower PAMs Hydrocarbon Analysis  Date: July 10, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 29.1 | 28.9 | 28.3 | 28.4 |
| ETHANE | 2.8 | 2.7 | 5.3 | 2.6 |
| ETHYLENE | 1.3 | 0.5 | 18.6 | 0.5 |
| PROPANE | 2.3 | 1.0 | 2.4 | 1.9 |
| Unknown | | | | |
| PROPYLENE | 1.2 | 0.6 | 11.6 | 0.6 |
| ISOBUTANE | 0.7 | | 4.2 | 0.3 |
| N-BUTANE | 1.3 | 0.5 | 12.7 | 0.6 |
| Unknown | | | 0.7 | |
| ACETYLENE | 0.9 | 0.6 | **23.4** | 0.8 |
| Unknown | | | 1.5 | |
| TRANS-2-BUTENE | | | 1.5 | |
| 1-BUTENE | 0.4 | | 1.7 | 0.3 |
| Unknown | 4.9 | 0.7 | **18.5** | 1.0 |
| Unknown | 0.7 | | | |
| CIS-2-BUTENE | | | 1.3 | |
| Unknown | 4.2 | | 0.4 | |
| CYCLOPENTANE | | | 1.0 | |
| ISOPENTANE | 2.9 | 0.7 | **34.4** | 0.9 |
| Unknown | 2.8 | | 2.1 | |
| N-PENTANE | 1.3 | 0.4 | **11.3** | 0.4 |
| Unknown | | | 5.2 | |
| TRANS-2-PENTENE | | | 3.2 | |
| Unknown | 0.5 | | 6.1 | |
| 1-PENTENE | 0.3 | | 1.7 | |
| Unknown | | | 1.4 | |
| CIS-2-PENTENE | | 0.9 | 1.8 | 4.5 |
| Unknown | | | | |
| 2,2-DIMETHYLBUTANE | | | 1.9 | |
| Unknown | 0.4 | | 0.7 | |
| 2,3-DIMETHYLBUTANE | | | 2.5 | |
| 2-METHYLPENTANE | 0.7 | | **7.6** | |
| 3-METHYLPENTANE | 0.4 | | 4.4 | |
| Unknown | | | 0.9 | |
| ISOPRENE | 4.7 | 1.9 | **34.5** | 6.3 |
| HEXANE | 0.6 | | 4.0 | |
| Unknown | | | 1.4 | |
| METHYLCYCLOPENTANE | 0.4 | | 2.1 | |
| 2,4-DIMETHYLPENTANE | 0.4 | | 1.1 | |
| Unknown | | | | |
| BENZENE | 1.0 | 0.8 | **11.5** | 0.9 |
| CYCLOHEXANE | | 0.5 | 0.3 | |
| 2-METHYLHEXANE | | | 1.6 | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | 1.1 | |
| 3-METHYLHEXANE | | | 1.7 | |
| Unknown | | | 0.7 | |
| 2,2,4-TRIMETHYLPENTANE | 3.2 | | 26.6 | 0.4 |
| N-HEPTANE | | | 0.7 | |
| Unknown | 0.9 | 2.2 | 1.5 | 3.4 |
| METHYLCYCLOHEXANE | | | 0.7 | |
| Unknown | 0.4 | 0.4 | 6.1 | 0.6 |
| 2,3,4-TRIMETHYLPENTANE | 0.4 | | 3.7 | |
| TOLUENE | 2.2 | **13.3** | 20.6 | **9.8** |
| Unknown | | | 0.3 | |
| 2-METHYLHEPTANE | | | 0.9 | |
| Unknown | | | 0.6 | |
| 3-METHYLHEPTANE | 0.4 | | | |
| Unknown | 0.5 | | 0.4 | 0.5 |
| Unknown | | | 0.5 | 0.4 |
| N-OCTANE | | | 0.5 | |
| Unknown | 1.5 | 1.9 | 1.1 | 1.6 |
| Unknown | | | 1.2 | |
| Unknown | | | 0.4 | 0.5 |
| ETHYLBENZENE | 0.4 | | 2.8 | |
| META/PARA-XYLENE | 1.0 | | 11.0 | |
| Unknown | | | | |
| O-XYLENE | | | 3.5 | |
| N-NONANE | | | | |
| ISOPROPYLBENZENE | | | | |
| Unknown | | | | |
| Unknown | 0.7 | 0.7 | 0.9 | 0.5 |
| N-PROPYLBENZENE | | | | |
| M-ETHYLTOLUENE | 1.0 | 1.0 | 4.7 | 0.9 |
| 1,3,5-TRIMETHYLBENZENE | 0.4 | | 0.8 | |
| Unknown | | | 0.4 | |
| O-ETHYLTOLUENE | | | 1.1 | |
| Unknown | | | 0.9 | |
| 1,2,4-TRIMETHYLBENZENE | 10.8 | **13.6** | 11.1 | 10.9 |
| DECANE | | | | |
| Unknown | | | 0.4 | |
| 1,2,3-TRIMETHYLBENZENE | 1.1 | | 2.4 | 0.5 |
| Unknown | | | 1.7 | |
| M-DIETHYLBENZENE | | | | |
| P-DIETHYLBENZENE | | | 0.5 | |
| Unknown | | | 2.6 | |
| UNDECANE | 0.4 | | 0.5 | |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 91.5 | 73.7 | 389.6 | 79.9 |
| NMOC | 62.4 | 44.8 | 361.2 | 51.5 |
| PAMS | 44.9 | 39.0 | 302.6 | 43.1 |
| Unknowns | 17.5 | 5.8 | 58.7 | 8.4 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 47.1 | 34.6 | 161.5 | 35.5 |
| Olefins | 7.9 | 3.9 | 75.9 | 12.2 |
| Aromatics | 18.0 | 28.7 | 70.1 | 23.0 |
| Acetylene | 0.9 | 0.6 | 23.4 | 0.8 |

## Auburn Tower PAMs Hydrocarbon Analysis  Date: July 17, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 30.2 | 29.4 | 28.6 | 28.4 |
| ETHANE | 4.0 | 3.6 | 5.3 | 4.3 |
| ETHYLENE | 2.6 | | 2.8 | 0.8 |
| PROPANE | 3.7 | 1.4 | 2.8 | 2.0 |
| Unknown | | | | 0.4 |
| PROPYLENE | 1.8 | 0.5 | 4.2 | 0.5 |
| ISOBUTANE | 1.1 | 0.4 | 1.3 | 0.5 |
| N-BUTANE | 1.9 | 0.6 | 1.1 | 1.0 |
| Unknown | | | | |
| ACETYLENE | 1.8 | | 1.2 | 1.0 |
| Unknown | | | | |
| TRANS-2-BUTENE | | | | |
| 1-BUTENE | | | | 0.3 |
| Unknown | 3.6 | 1.0 | 10.4 | 1.3 |
| Unknown | 0.4 | | 0.4 | |
| CIS-2-BUTENE | | | | |
| Unknown | | | | |
| CYCLOPENTANE | | | | |
| ISOPENTANE | 4.8 | 0.8 | 1.8 | 1.4 |
| Unknown | 2.4 | | 1.9 | |
| N-PENTANE | 1.9 | 0.5 | 1.3 | 0.8 |
| Unknown | | | | |
| TRANS-2-PENTENE | | | | |
| Unknown | 0.3 | | | |
| 1-PENTENE | | | 0.3 | |
| Unknown | | | | |
| CIS-2-PENTENE | | 3.0 | | 5.2 |
| Unknown | | | | |
| 2,2-DIMETHYLBUTANE | 0.5 | | | |
| Unknown | | | | 0.3 |
| 2,3-DIMETHYLBUTANE | 0.6 | | | |
| 2-METHYLPENTANE | 1.8 | 0.3 | 0.6 | 0.5 |
| 3-METHYLPENTANE | 1.0 | 0.3 | 0.6 | 0.3 |
| Unknown | | 0.6 | | 0.4 |
| ISOPRENE | 4.5 | | 10.3 | 2.1 |
| HEXANE | 0.4 | | | |
| Unknown | | | | |
| METHYLCYCLOPENTANE | 0.5 | | | |
| 2,4-DIMETHYLPENTANE | | | | |
| Unknown | | | | |
| BENZENE | 1.1 | 1.0 | 1.1 | 0.7 |
| CYCLOHEXANE | | | | |
| 2-METHYLHEXANE | | | | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | | |
| 3-METHYLHEXANE | 0.4 | | | |
| Unknown | | | | |
| 2,2,4-TRIMETHYLPENTANE | 2.4 | 0.3 | 14.3 | 0.4 |
| N-HEPTANE | | | | |
| Unknown | 2.3 | 1.2 | 1.2 | 3.3 |
| METHYLCYCLOHEXANE | | | | |
| Unknown | 0.5 | | 3.2 | 0.5 |
| 2,3,4-TRIMETHYLPENTANE | 0.6 | | 1.4 | |
| TOLUENE | 3.3 | 21.9 | 1.9 | 10.7 |
| Unknown | | | | |
| 2-METHYLHEPTANE | | | 0.6 | |
| Unknown | | | | |
| 3-METHYLHEPTANE | | | | |
| Unknown | 0.3 | 0.5 | 0.5 | 1.6 |
| Unknown | | 0.5 | | 0.5 |
| N-OCTANE | | | | |
| Unknown | 1.5 | 1.8 | 1.4 | 1.5 |
| Unknown | | | 0.7 | |
| Unknown | | 0.4 | 0.4 | 0.7 |
| ETHYLBENZENE | 0.6 | | | |
| META/PARA-XYLENE | 1.8 | | | 0.8 |
| Unknown | | | 0.4 | |
| O-XYLENE | 0.7 | | | 0.5 |
| N-NONANE | | | | |
| ISOPROPYLBENZENE | | | | |
| Unknown | | | | |
| Unknown | 0.7 | | 0.4 | 0.8 |
| N-PROPYLBENZENE | | | | |
| M-ETHYLTOLUENE | 2.4 | | 1.0 | 0.6 |
| 1,3,5-TRIMETHYLBENZENE | | | | |
| Unknown | | | | |
| O-ETHYLTOLUENE | | | | |
| Unknown | | | 0.6 | |
| 1,2,4-TRIMETHYLBENZENE | 10.9 | 13.5 | 5.4 | 9.9 |
| DECANE | | | | |
| Unknown | | | | |
| 1,2,3-TRIMETHYLBENZENE | 2.5 | 1.0 | 0.9 | 1.7 |
| Unknown | | | 0.5 | |
| M-DIETHYLBENZENE | | | | |
| P-DIETHYLBENZENE | | | | |
| Unknown | | | 1.2 | |
| UNDECANE | 0.7 | | | 0.9 |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 102.6 | 84.7 | 112.0 | 86.3 |
| NMOC | 72.4 | 55.4 | 83.3 | 57.9 |
| PAMS | 60.3 | 49.3 | 60.2 | 46.6 |
| Unknowns | 12.1 | 6.0 | 23.1 | 11.2 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 56.5 | 37.7 | 59.7 | 40.4 |
| Olefins | 9.0 | 3.6 | 17.6 | 8.8 |
| Aromatics | 23.2 | 37.4 | 10.4 | 24.8 |
| Acetylene | 1.8 | 0.0 | 1.2 | 1.0 |

## Auburn Tower PAMs Hydrocarbon Analysis  Date: July 24, 2000

| | TG | TT | TG | TT |
|---|---|---|---|---|
| Sample Time | AM | AM | PM | PM |
| METHANE | 28.5 | NA | 27.5 | NA |
| ETHANE | 3.0 | NA | 2.8 | NA |
| ETHYLENE | 1.5 | NA | 0.9 | NA |
| PROPANE | 2.9 | NA | 2.1 | NA |
| Unknown | | NA | 0.4 | NA |
| PROPYLENE | 1.6 | NA | 1.3 | NA |
| ISOBUTANE | 0.4 | NA | 0.4 | NA |
| N-BUTANE | 0.6 | NA | 0.5 | NA |
| Unknown | | NA | | NA |
| ACETYLENE | 1.0 | NA | 1.0 | NA |
| Unknown | | NA | | NA |
| TRANS-2-BUTENE | | NA | | NA |
| 1-BUTENE | | NA | | NA |
| Unknown | 3.0 | NA | 2.1 | NA |
| Unknown | 0.6 | NA | 0.4 | NA |
| CIS-2-BUTENE | | NA | | NA |
| Unknown | | NA | | NA |
| CYCLOPENTANE | | NA | | NA |
| ISOPENTANE | 1.2 | NA | 1.0 | NA |
| Unknown | 2.5 | NA | 1.8 | NA |
| N-PENTANE | 0.6 | NA | 1.4 | NA |
| Unknown | | NA | | NA |
| TRANS-2-PENTENE | | NA | | NA |
| Unknown | | NA | | NA |
| 1-PENTENE | | NA | | NA |
| Unknown | | NA | | NA |
| CIS-2-PENTENE | | NA | | NA |
| Unknown | | NA | | NA |
| 2,2-DIMETHYLBUTANE | | NA | | NA |
| Unknown | | NA | | NA |
| 2,3-DIMETHYLBUTANE | | NA | | NA |
| 2-METHYLPENTANE | 0.4 | NA | | NA |
| 3-METHYLPENTANE | | NA | | NA |
| Unknown | | NA | | NA |
| ISOPRENE | 1.2 | NA | 5.7 | NA |
| HEXANE | | NA | | NA |
| Unknown | | NA | | NA |
| METHYLCYCLOPENTANE | | NA | | NA |
| 2,4-DIMETHYLPENTANE | | NA | | NA |
| Unknown | | NA | | NA |
| BENZENE | 0.7 | NA | 0.4 | NA |
| CYCLOHEXANE | | NA | | NA |
| 2-METHYLHEXANE | | NA | | NA |

| | TG | TT | TG | TT |
|---|---|---|---|---|
| Sample Time | AM | AM | PM | PM |
| 2,3-DIMETHYLPENTANE | | NA | | NA |
| 3-METHYLHEXANE | | NA | | NA |
| Unknown | | NA | | NA |
| 2,2,4-TRIMETHYLPENTANE | 1.6 | NA | 1.6 | NA |
| N-HEPTANE | | NA | | NA |
| Unknown | 0.7 | NA | 0.8 | NA |
| METHYLCYCLOHEXANE | | NA | | NA |
| Unknown | | NA | | NA |
| 2,3,4-TRIMETHYLPENTANE | | NA | | NA |
| TOLUENE | 1.0 | NA | 0.9 | NA |
| Unknown | | NA | | NA |
| 2-METHYLHEPTANE | | NA | | NA |
| Unknown | | NA | | NA |
| 3-METHYLHEPTANE | | NA | | NA |
| Unknown | 0.6 | NA | 0.5 | NA |
| Unknown | | NA | | NA |
| N-OCTANE | | NA | | NA |
| Unknown | 1.7 | NA | 1.5 | NA |
| Unknown | | NA | | NA |
| Unknown | | NA | | NA |
| ETHYLBENZENE | | NA | | NA |
| META/PARA-XYLENE | 0.4 | NA | 0.4 | NA |
| Unknown | | NA | | NA |
| O-XYLENE | | NA | 0.4 | NA |
| N-NONANE | | NA | | NA |
| ISOPROPYLBENZENE | | NA | | NA |
| Unknown | | NA | | NA |
| Unknown | 0.4 | NA | | NA |
| N-PROPYLBENZENE | | NA | | NA |
| M-ETHYLTOLUENE | 1.1 | NA | 0.7 | NA |
| 1,3,5-TRIMETHYLBENZENE | | NA | | NA |
| Unknown | | NA | | NA |
| O-ETHYLTOLUENE | | NA | | NA |
| Unknown | | NA | | NA |
| 1,2,4-TRIMETHYLBENZENE | 9.8 | NA | 6.1 | NA |
| DECANE | | NA | | NA |
| Unknown | | NA | | NA |
| 1,2,3-TRIMETHYLBENZENE | 1.0 | NA | 1.1 | NA |
| Unknown | | NA | | NA |
| M-DIETHYLBENZENE | | NA | | NA |
| P-DIETHYLBENZENE | | NA | | NA |
| Unknown | | NA | | NA |
| UNDECANE | | NA | 0.6 | NA |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG | TT | TG | TT |
|---|---|---|---|---|
| | AM | AM | PM | PM |
| Total HC | 68.0 | NA | 64.5 | NA |
| NMOC | 39.5 | NA | 37.0 | NA |
| PAMS | 30.0 | NA | 29.5 | NA |
| Unknowns | 9.5 | NA | 7.4 | NA |

| | TG | TT | TG | TT |
|---|---|---|---|---|
| Identified Compounds | AM | AM | PM | PM |
| Paraffins | 39.2 | NA | 38.0 | NA |
| Olefins | 4.3 | NA | 7.9 | NA |
| Aromatics | 14.0 | NA | 10.2 | NA |
| Acetylene | 1.0 | NA | 1.0 | NA |

## Auburn Tower PAMs Hydrocarbon Analysis

## Date: August 7, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 30.8 | 26.8 | 27.5 | NA |
| ETHANE | 4.1 | 2.7 | 4.0 | NA |
| ETHYLENE | 3.1 | 0.6 | 3.7 | NA |
| PROPANE | 8.5 | 1.7 | 3.4 | NA |
| Unknown | 0.4 | | | NA |
| PROPYLENE | 3.5 | 0.6 | 7.6 | NA |
| ISOBUTANE | 14.9 | | 1.9 | NA |
| N-BUTANE | 2.2 | 0.5 | 2.3 | NA |
| Unknown | | | | NA |
| ACETYLENE | 2.1 | 0.6 | 1.0 | NA |
| Unknown | | | 0.5 | NA |
| TRANS-2-BUTENE | | | | NA |
| 1-BUTENE | 0.4 | | 0.4 | NA |
| Unknown | 5.2 | 0.9 | 12.4 | NA |
| Unknown | 0.4 | | 0.5 | NA |
| CIS-2-BUTENE | | | | NA |
| Unknown | | | | NA |
| CYCLOPENTANE | | | | NA |
| ISOPENTANE | 4.7 | 0.6 | 4.2 | NA |
| Unknown | 2.0 | | 1.6 | NA |
| N-PENTANE | 2.0 | 0.4 | 2.8 | NA |
| Unknown | | | | NA |
| TRANS-2-PENTENE | 0.4 | | 0.5 | NA |
| Unknown | 0.9 | | 0.6 | NA |
| 1-PENTENE | 0.5 | | 0.5 | NA |
| Unknown | | | | NA |
| CIS-2-PENTENE | | 0.8 | | NA |
| Unknown | | | | NA |
| 2,2-DIMETHYLBUTANE | | | 0.3 | NA |
| Unknown | 0.6 | 0.4 | | NA |
| 2,3-DIMETHYLBUTANE | 0.4 | | | NA |
| 2-METHYLPENTANE | 1.4 | | 1.0 | NA |
| 3-METHYLPENTANE | 0.8 | | 0.5 | NA |
| Unknown | | | | NA |
| ISOPRENE | 4.1 | 1.7 | 34.0 | NA |
| HEXANE | 0.9 | | 0.8 | NA |
| Unknown | | | 0.3 | NA |
| METHYLCYCLOPENTANE | 0.6 | | 0.5 | NA |
| 2,4-DIMETHYLPENTANE | | | | NA |
| Unknown | | | | NA |
| BENZENE | 1.4 | 1.0 | 0.8 | NA |
| CYCLOHEXANE | | 2.3 | | NA |
| 2-METHYLHEXANE | 0.4 | | | NA |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | 0.3 | | 0.4 | NA |
| 3-METHYLHEXANE | 0.3 | | | NA |
| Unknown | | | | NA |
| 2,2,4-TRIMETHYLPENTANE | 3.7 | 0.6 | 21.3 | NA |
| N-HEPTANE | 0.4 | | | NA |
| Unknown | 2.8 | 3.7 | 2.6 | NA |
| METHYLCYCLOHEXANE | | | | NA |
| Unknown | 1.4 | 0.7 | 4.8 | NA |
| 2,3,4-TRIMETHYLPENTANE | 0.7 | | 1.9 | NA |
| TOLUENE | 3.8 | 23.4 | 2.9 | NA |
| Unknown | | | | NA |
| 2-METHYLHEPTANE | | | 0.4 | NA |
| Unknown | | | | NA |
| 3-METHYLHEPTANE | | | | NA |
| Unknown | 0.6 | 0.4 | 0.6 | NA |
| Unknown | | 0.5 | | NA |
| N-OCTANE | | | | NA |
| Unknown | 1.3 | 2.5 | 1.3 | NA |
| Unknown | | | 1.5 | NA |
| Unknown | | 0.5 | 0.4 | NA |
| ETHYLBENZENE | 0.5 | | | NA |
| META/PARA-XYLENE | 2.2 | 0.4 | 1.2 | NA |
| Unknown | | | 0.3 | NA |
| O-XYLENE | 0.8 | | 0.4 | NA |
| N-NONANE | | | | NA |
| ISOPROPYLBENZENE | | | | NA |
| Unknown | 0.4 | | 0.3 | NA |
| Unknown | 0.7 | 0.5 | 0.7 | NA |
| N-PROPYLBENZENE | 0.6 | | | NA |
| M-ETHYLTOLUENE | 6.1 | 0.9 | 1.4 | NA |
| 1,3,5-TRIMETHYLBENZENE | 1.4 | | | NA |
| Unknown | | | 0.4 | NA |
| O-ETHYLTOLUENE | 0.8 | | | NA |
| Unknown | 7.2 | | 0.9 | NA |
| 1,2,4-TRIMETHYLBENZENE | 2.2 | 16.9 | 5.8 | NA |
| DECANE | | | | NA |
| Unknown | | | 0.9 | NA |
| 1,2,3-TRIMETHYLBENZENE | 3.7 | 1.3 | 1.8 | NA |
| Unknown | | | 0.9 | NA |
| M-DIETHYLBENZENE | | | | NA |
| P-DIETHYLBENZENE | | | | NA |
| Unknown | | | 2.4 | NA |
| UNDECANE | 0.5 | 0.5 | 0.4 | NA |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 139.1 | 94.5 | 169.5 | NA |
| NMOC | 108.3 | 67.7 | 142.0 | NA |
| PAMS | 84.3 | 57.6 | 107.8 | NA |
| Unknowns | 23.9 | 10.1 | 34.2 | NA |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 77.6 | 36.2 | 73.6 | NA |
| Olefins | 12.0 | 3.6 | 46.6 | NA |
| Aromatics | 9.9 | 3.0 | 45.6 | NA |
| Acetylene | 2.1 | 0.6 | 1.0 | NA |

## Auburn Tower PAMs Hydrocarbon Analysis

## Date: August 18, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 27.4 | 29.1 | 25.5 | NA |
| ETHANE | 4.2 | 3.1 | 6.7 | NA |
| ETHYLENE | 1.2 | 0.4 | 0.4 | NA |
| PROPANE | 6.4 | 1.8 | 2.8 | NA |
| Unknown | | | | NA |
| PROPYLENE | 0.9 | 0.4 | 0.5 | NA |
| ISOBUTANE | 0.7 | | 0.6 | NA |
| N-BUTANE | 1.6 | 0.6 | 1.0 | NA |
| Unknown | | | | NA |
| ACETYLENE | 1.5 | 1.0 | 0.7 | NA |
| Unknown | | | | NA |
| TRANS-2-BUTENE | | | | NA |
| 1-BUTENE | | | | NA |
| Unknown | 1.1 | 0.6 | 0.4 | NA |
| Unknown | | | | NA |
| CIS-2-BUTENE | | | | NA |
| Unknown | | | 0.3 | NA |
| CYCLOPENTANE | 0.8 | | | NA |
| ISOPENTANE | 3.1 | 1.0 | 1.4 | NA |
| Unknown | | | | NA |
| N-PENTANE | 10.3 | 0.4 | 0.5 | NA |
| Unknown | | | | NA |
| TRANS-2-PENTENE | | | | NA |
| Unknown | | | | NA |
| 1-PENTENE | | | | NA |
| Unknown | | | | NA |
| CIS-2-PENTENE | | 0.6 | | NA |
| Unknown | | | | NA |
| 2,2-DIMETHYLBUTANE | | | | NA |
| Unknown | 0.4 | 0.5 | | NA |
| 2,3-DIMETHYLBUTANE | 0.3 | | | NA |
| 2-METHYLPENTANE | 0.8 | | 0.6 | NA |
| 3-METHYLPENTANE | 0.4 | | 0.4 | NA |
| Unknown | | | | NA |
| ISOPRENE | 4.9 | | 1.1 | NA |
| HEXANE | 0.4 | | 0.7 | NA |
| Unknown | | | 0.5 | NA |
| METHYLCYCLOPENTANE | 0.5 | | | NA |
| 2,4-DIMETHYLPENTANE | 0.3 | | | NA |
| Unknown | 1.7 | | | NA |
| BENZENE | 0.9 | 1.1 | 0.4 | NA |
| CYCLOHEXANE | | | 0.4 | NA |
| 2-METHYLHEXANE | | | 0.5 | NA |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | 0.3 | NA |
| 3-METHYLHEXANE | | | 0.5 | NA |
| Unknown | | | | NA |
| 2,2,4-TRIMETHYLPENTANE | 0.6 | | | NA |
| N-HEPTANE | | | 0.4 | NA |
| Unknown | 1.5 | 0.8 | | NA |
| METHYLCYCLOHEXANE | | | 0.3 | NA |
| Unknown | 0.3 | | | NA |
| 2,3,4-TRIMETHYLPENTANE | | | | NA |
| TOLUENE | 3.6 | 15.8 | 3.5 | NA |
| Unknown | | | | NA |
| 2-METHYLHEPTANE | | | | NA |
| Unknown | | | | NA |
| 3-METHYLHEPTANE | | | | NA |
| Unknown | 0.5 | 0.4 | | NA |
| Unknown | | | | NA |
| N-OCTANE | | | 0.5 | NA |
| Unknown | 1.1 | 1.7 | 0.4 | NA |
| Unknown | | | | NA |
| Unknown | | 0.4 | | NA |
| ETHYLBENZENE | 0.5 | | 0.4 | NA |
| META/PARA-XYLENE | 1.5 | | 0.5 | NA |
| Unknown | | | | NA |
| O-XYLENE | 0.5 | | 0.5 | NA |
| N-NONANE | | | 0.5 | NA |
| ISOPROPYLBENZENE | | | | NA |
| Unknown | | | | NA |
| Unknown | 0.7 | | | NA |
| N-PROPYLBENZENE | | | | NA |
| M-ETHYLTOLUENE | 3.4 | 0.8 | | NA |
| 1,3,5-TRIMETHYLBENZENE | | | | NA |
| Unknown | | | | NA |
| O-ETHYLTOLUENE | | | | NA |
| Unknown | | | | NA |
| 1,2,4-TRIMETHYLBENZENE | 4.7 | 13.4 | 1.7 | NA |
| DECANE | 0.5 | | | NA |
| Unknown | | | | NA |
| 1,2,3-TRIMETHYLBENZENE | 3.7 | | 0.5 | NA |
| Unknown | | | | NA |
| M-DIETHYLBENZENE | | | | NA |
| P-DIETHYLBENZENE | | | | NA |
| Unknown | | | | NA |
| UNDECANE | 0.4 | | | NA |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 93.4 | 73.9 | 55.2 | NA |
| NMOC | 66.0 | 44.8 | 29.7 | NA |
| PAMS | 58.7 | 40.4 | 28.1 | NA |
| Unknowns | 7.3 | 4.4 | 1.6 | NA |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 58.8 | 36.0 | 43.4 | NA |
| Olefins | 7.0 | 1.4 | 2.0 | NA |
| Aromatics | 18.8 | 31.2 | 7.5 | NA |
| Acetylene | 1.5 | 1.0 | 0.7 | NA |

## Auburn Tower PAMs Hydrocarbon Analysis

## Date: August 31, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 28.0 | 28.2 | 27.1 | 28.4 |
| ETHANE | 3.0 | 1.2 | 1.7 | 1.1 |
| ETHYLENE | 1.3 | 0.4 | 0.6 | 0.5 |
| PROPANE | 5.8 | 0.7 | 2.5 | 0.9 |
| Unknown | 0.3 | | | |
| PROPYLENE | 0.8 | 0.4 | 0.6 | |
| ISOBUTANE | 0.7 | | 0.4 | |
| N-BUTANE | 1.3 | | 0.6 | |
| Unknown | | | | |
| ACETYLENE | 1.3 | | | |
| Unknown | 0.3 | | | |
| TRANS-2-BUTENE | | | | |
| 1-BUTENE | | | | |
| Unknown | 0.8 | 0.7 | 0.9 | 0.9 |
| Unknown | | | | |
| CIS-2-BUTENE | | | | |
| Unknown | | | | |
| CYCLOPENTANE | 0.8 | | 0.6 | |
| ISOPENTANE | 3.3 | | 1.3 | |
| Unknown | | | 0.4 | |
| N-PENTANE | 14.3 | | 11.7 | |
| Unknown | | | | |
| TRANS-2-PENTENE | | | | |
| Unknown | | | | |
| 1-PENTENE | | | | |
| Unknown | | | | |
| CIS-2-PENTENE | | 2.2 | | 1.8 |
| Unknown | | | | |
| 2,2-DIMETHYLBUTANE | 0.3 | | | |
| Unknown | | | 0.3 | |
| 2,3-DIMETHYLBUTANE | 0.3 | | | |
| 2-METHYLPENTANE | 1.1 | | 0.4 | |
| 3-METHYLPENTANE | 0.5 | | | |
| Unknown | | | | |
| ISOPRENE | 4.9 | | 0.7 | |
| HEXANE | | | 0.4 | |
| Unknown | | | | |
| METHYLCYCLOPENTANE | | | | |
| 2,4-DIMETHYLPENTANE | | 0.4 | | |
| Unknown | 1.8 | | 2.0 | |
| BENZENE | 0.8 | | 0.4 | 0.8 |
| CYCLOHEXANE | | | | |
| 2-METHYLHEXANE | | | | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | | |
| 3-METHYLHEXANE | | | | |
| Unknown | | | 0.3 | |
| 2,2,4-TRIMETHYLPENTANE | 0.6 | 0.3 | 0.6 | |
| N-HEPTANE | 0.4 | | | |
| Unknown | 3.9 | 1.8 | 1.7 | 2.3 |
| METHYLCYCLOHEXANE | | | | |
| Unknown | 0.6 | | 0.3 | 0.4 |
| 2,3,4-TRIMETHYLPENTANE | 0.4 | | | |
| TOLUENE | 3.0 | 7.6 | 2.4 | 23.4 |
| Unknown | | | | |
| 2-METHYLHEPTANE | 0.4 | | | |
| Unknown | | | | |
| 3-METHYLHEPTANE | | | | |
| Unknown | 0.5 | 0.3 | | 0.4 |
| Unknown | | | | |
| N-OCTANE | | | | |
| Unknown | 1.5 | 1.6 | 1.2 | 1.9 |
| Unknown | | | | |
| Unknown | | 0.5 | | 0.7 |
| ETHYLBENZENE | 0.9 | | 0.6 | |
| META/PARA-XYLENE | 1.1 | | 0.8 | |
| Unknown | | | | |
| O-XYLENE | 0.6 | | 0.4 | |
| N-NONANE | | | | |
| ISOPROPYLBENZENE | | | | |
| Unknown | 0.4 | | | |
| Unknown | | | | |
| N-PROPYLBENZENE | | | | |
| M-ETHYLTOLUENE | 2.6 | | 2.4 | 0.9 |
| 1,3,5-TRIMETHYLBENZENE | | | | |
| Unknown | 0.4 | | | |
| O-ETHYLTOLUENE | | | | |
| Unknown | | | | |
| 1,2,4-TRIMETHYLBENZENE | 6.7 | 10.2 | 4.3 | 15.9 |
| DECANE | 0.4 | | 0.4 | |
| Unknown | | | | |
| 1,2,3-TRIMETHYLBENZENE | 2.6 | | 2.5 | 1.1 |
| Unknown | | | | |
| M-DIETHYLBENZENE | | | | |
| P-DIETHYLBENZENE | | | | |
| Unknown | | | 0.3 | |
| UNDECANE | 0.5 | | | |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 98.8 | 56.5 | 70.8 | 81.4 |
| NMOC | 70.8 | 28.4 | 43.7 | 52.9 |
| PAMS | 60.3 | 23.4 | 36.2 | 46.4 |
| Unknowns | 10.5 | 4.9 | 7.5 | 6.5 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 61.8 | 30.9 | 47.6 | 30.4 |
| Olefins | 6.9 | 2.9 | 1.9 | 2.3 |
| Aromatics | 18.4 | 17.8 | 13.8 | 42.1 |
| Acetylene | 1.3 | 0.0 | 0.0 | 0.0 |

## Auburn Tower PAMs Hydrocarbon Analysis

## Date: September 7, 2000

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| METHANE | 27.8 | 20.7 | 27.2 | 29.3 |
| ETHANE | 1.6 | 0.9 | 1.6 | 1.5 |
| ETHYLENE | 0.4 | | | |
| PROPANE | 2.0 | 0.5 | 1.3 | 1.1 |
| Unknown | | | | 0.3 |
| PROPYLENE | 0.7 | 0.5 | 0.7 | 0.5 |
| ISOBUTANE | | | 0.4 | |
| N-BUTANE | 0.4 | | 0.3 | 0.3 |
| Unknown | | | | |
| ACETYLENE | | | 0.6 | |
| Unknown | | | | |
| TRANS-2-BUTENE | | | | |
| 1-BUTENE | | | | |
| Unknown | 0.7 | 0.5 | 0.9 | 0.7 |
| Unknown | | | | |
| CIS-2-BUTENE | | | | |
| Unknown | | | | |
| CYCLOPENTANE | | | | |
| ISOPENTANE | 0.6 | | 0.6 | 0.4 |
| Unknown | | | | |
| N-PENTANE | 6.0 | | 7.3 | |
| Unknown | | | | |
| TRANS-2-PENTENE | | | | |
| Unknown | | | | |
| 1-PENTENE | | | | |
| Unknown | | | | |
| CIS-2-PENTENE | | | | 2.6 |
| Unknown | | | | |
| 2,2-DIMETHYLBUTANE | | | | |
| Unknown | 0.4 | | | |
| 2,3-DIMETHYLBUTANE | | | | |
| 2-METHYLPENTANE | | | | |
| 3-METHYLPENTANE | | | | |
| Unknown | | | | |
| ISOPRENE | | | 3.5 | 1.0 |
| HEXANE | 0.3 | | | |
| Unknown | | | | |
| METHYLCYCLOPENTANE | | | | |
| 2,4-DIMETHYLPENTANE | | | | |
| Unknown | 1.0 | | 1.0 | |
| BENZENE | | | 0.4 | |
| CYCLOHEXANE | | | | |
| 2-METHYLHEXANE | | | | |

| Sample Time | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| 2,3-DIMETHYLPENTANE | | | | |
| 3-METHYLHEXANE | | | | |
| Unknown | | | | |
| 2,2,4-TRIMETHYLPENTANE | | | | 0.3 |
| N-HEPTANE | | | | |
| Unknown | 0.6 | 0.3 | 1.1 | 1.0 |
| METHYLCYCLOHEXANE | | | 0.3 | |
| Unknown | | | 0.3 | |
| 2,3,4-TRIMETHYLPENTANE | | | | |
| TOLUENE | 0.8 | 0.9 | 1.1 | 3.6 |
| Unknown | | | | |
| 2-METHYLHEPTANE | | | | |
| Unknown | | | | |
| 3-METHYLHEPTANE | | | | |
| Unknown | 0.4 | | 0.3 | 0.3 |
| Unknown | 0.4 | | | |
| N-OCTANE | | | | |
| Unknown | 1.1 | 0.9 | 1.6 | 1.5 |
| Unknown | | | | |
| Unknown | | | | 0.5 |
| ETHYLBENZENE | 0.5 | | | |
| META/PARA-XYLENE | 0.5 | 0.7 | | |
| Unknown | | | | |
| O-XYLENE | | | | |
| N-NONANE | | | | |
| ISOPROPYLBENZENE | | | | |
| Unknown | | | | |
| Unknown | | | | |
| N-PROPYLBENZENE | | | | |
| M-ETHYLTOLUENE | 1.3 | | 0.9 | 0.7 |
| 1,3,5-TRIMETHYLBENZENE | | | | |
| Unknown | | | | |
| O-ETHYLTOLUENE | | | | |
| Unknown | | | | |
| 1,2,4-TRIMETHYLBENZENE | 2.6 | 2.6 | 3.5 | 6.6 |
| DECANE | | | | |
| Unknown | | 0.4 | | |
| 1,2,3-TRIMETHYLBENZENE | 0.9 | 3.3 | 1.2 | 0.5 |
| Unknown | | | | |
| M-DIETHYLBENZENE | | | | |
| P-DIETHYLBENZENE | | | | |
| Unknown | | 0.4 | | |
| UNDECANE | | | | |

TG - Ground Level
TT - 1420 Feet
AM - Sampled 6:00 to 9:00 AM
PM - Sampled 2:00 to 5:00 PM

| | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Total HC | 50.9 | 32.5 | 56.2 | 52.6 |
| NMOC | 23.1 | 11.8 | 28.9 | 23.4 |
| PAMS | 18.6 | 9.3 | 23.7 | 19.0 |
| Unknowns | 4.6 | 2.5 | 5.2 | 4.3 |

| Identified Compounds | TG AM | TT AM | TG PM | TT PM |
|---|---|---|---|---|
| Paraffins | 38.7 | 22.0 | 39.1 | 32.8 |
| Olefins | 1.1 | 0.5 | 4.2 | 4.1 |
| Aromatics | 6.5 | 7.5 | 7.1 | 11.4 |
| Acetylene | 0.0 | 0.0 | 0.6 | 0.0 |

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