*DIVISION FOR AIR QUALITY*

# Kentucky Annual Ambient Air Monitoring Network Plan 2007

KENTUCKY DIVISION FOR AIR QUALITY

Commonwealth of Kentucky Environmental & Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane, Frankfort, Kentucky 40601

Kentucky UNBRIDLED SPIRIT

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## CERTIFICATION

By the signatures below, the Kentucky Division for Air Quality certifies that the information contained in this Surveillance Network document for sampling year 2007 is complete and accurate at the time of submittal to EPA Region 4. However, due to circumstances that may arise during the sampling year, some network information may change. A notification of change and a request for approval will be submitted to EPA Region 4 at that time.

Print Name: Andrea P. Keatley Signature: Date: 4/30/07
Environmental Scientist II

Print Name: Sean Alteri Signature: Date: 5/3/07
Technical Services Branch Manager

Print Name: John S. Lyons Signature: Date: 5/4/07
Division Director

## PUBLIC NOTIFICATION AND COMMENT PERIOD

In accordance with 40 C.F.R. 58.10(a)(1), the Kentucky Environmental and Public Protection Cabinet shall make the annual monitoring network plan available for public inspection for at least 30 days prior to submission to the U.S. EPA. The annual monitoring network plan details the operation and location of ambient air monitors operated by the Kentucky Division for Air Quality (KYDAQ), Louisville Metro Air Pollution Control District (LMAPCD), the National Park Service (NPS), and required industrial monitors.

A total of 684 hardcopy and 126 electronic notifications were mailed announcing the availability of the network plan for public inspection and comment. The public comment period relating to the 2007 annual monitoring network plan began March 19, 2007, and concluded at the close of business on April 18, 2007.

During the comment period, the LMAPCD and Tennessee Valley Authority (TVA) provided the KYDAQ with administrative corrections to the LMAPCD and TVA air monitoring network information through personal communication. Prior to the comment period, the NPS provided the KYDAQ with development plans for the Kentucky Trimodal Transpark (KTT) in Warren County. The KTT has the potential of becoming a large industrial and mobile transportation complex with a railroad hub and regional airport. The KTT will also have dedicated access to the I-65 and US 31-W corridors. Concern was expressed by the NPS over the loss of the NOx monitor at the Oakland air monitoring station in Warren County because of the potential impact the KTT may have in the area. The KYDAQ considered the concerns expressed by the NPS prior to making a decision to discontinue the NOx monitor in Warren County.

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### ACRONYMS

**AEM –** Automated Equivalent Method

**AQI** – Air Quality Index

**AQS** – Air Quality System

**ARM** – Automated Reference Method

**CBSA** – Core-Based Statistical Area

**CSA** – Combined Statistical Area

**FAM** – Federal Alternate Method

**FEM** – Federal Equivalent Method

**FRM** – Federal Reference Method

**KYDAQ** – Kentucky Division for Air Quality

**LMAPCD** – Louisville Metro Air Pollution Control District

**MSA** – Metropolitan Statistical Area

**NAAQS** – National Ambient Air Quality Standards

**NAMS** – National Air Monitoring Stations

**SAMWG** – Standing Air Monitoring Working Group

**SLAMS** – State and Local Air Monitoring Stations

**SPM** – Special Purpose Monitors

**U.S.EPA** – United States Environmental Protection Agency

**UV** – Ultra Violet

**VOC** – Volatile Organic Compounds

## INTRODUCTION

In October 1975, the United State Environmental Protection Agency (U.S.EPA) established a work group to critically review and evaluate current air monitoring activities at that time. This group was named the Standing Air Monitoring Working Group (SAMWG). The review by the SAMWG indicated several areas where deficiencies existed which needed correction. The principal areas needing correction were: an excess of monitoring sites in some areas to assess air quality; existing regulations did not allow for flexibility to conduct special purpose monitoring studies; data reporting was untimely and incomplete caused by a lack of uniformity in station location and probe siting, sampling methodology, quality assurance practices, and data handling procedures.

In August 1978, recommendations developed by SAMWG, to remedy the deficiencies in the existing monitoring activities, were combined with the new requirements of Section 319 of the Clean Air Act. Section 319 provided for the development of uniform air quality monitoring criteria and methodology; reporting of a uniform air quality index in major urban areas; and the establishment of an air quality monitoring system nation-wide which utilizes uniform monitoring criteria and provides for monitoring stations in major urban areas that supplement State monitoring. The combination of the recommendations and requirements were included in a proposed revision to the air monitoring regulations.

In May 1979, air monitoring regulations were finalized by the U.S.EPA requiring certain modifications and additions to be included in the State Implementation Plan for air quality surveillance. These regulations require each state to operate a network of monitoring stations designated as State and Local Air Monitoring Stations (SLAMS) that measure ambient concentrations of air pollutants for which standards have been established. The SLAMS designation contains provisions concerning the conformity to specific siting and monitoring criteria not previously required. The regulations also provide for an annual review of the monitoring network to insure objectives are being met and to identify needed modification.

The Kentucky Division for Air Quality (KYDAQ) has operated an air quality monitoring network in the Commonwealth since July 1967. The Louisville Metro Air Pollution Control District (LMAPCD), a local agency, has maintained a sub-network in its area of jurisdiction since January 1956. Since that time, the networks have been expanded in accordance with the U.S.EPA's regulations to consist of a current overall network of 44 stations, operated by KYDAQ, LMAPCD and the National Park Service. The Commonwealth's SLAMS air monitoring network monitors criteria pollutants for which the National Ambient Air Quality Standards (NAAQS) have been issued. In addition to a SLAMS network, KYDAQ's air monitoring network includes special purpose monitors (SPM) for air toxics, mercury, wet deposition and meteorological stations.

The annual monitoring network description, as provided for in 40 CFR Part 58.10, *Annual monitoring network plan and periodic network assessment*, must contain the following information for each monitoring station in the network:

1. The Air Quality System (AQS) site identification number for existing stations.

2. The location, including the street address and geographical coordinates, for each monitoring station.

3. The sampling and analysis method used for each measured parameter.

4. The operating schedule for each monitor.

5. Any proposal to remove or move a monitoring station with in a period of eighteen months following the plan submittal.

6. The monitoring objective and spatial scale of representativeness for each monitor.

7. The identification of any site that is suitable for comparison against the PM2.5 NAAQS.

8. The Metropolitan Statistical Area (MSA), Core-Based Statistical Area (CBSA), Combined Statistical Area (CSA) or other area represented by the monitor.

The following document constitutes the Kentucky ambient air monitoring network description and is organized into three main parts:

(1) Station Description Format: An outline of the designations, parameters, monitoring methods, and the basis for site selection.

(2) Network Summaries: Presenting the total number of sites and monitors in each region and for the state. Also included is a listing of all proposed changes to the current network.

(3) Air Monitoring Station Description: Each air monitor station is described in detail as per the outline in (1) above.

Modification to the network as determined by an annual review process will be made each year to maintain a current up-to-date network description document.

## STATION DESCRIPTION FORMAT

### AQS Site Identification Information

Pertinent, specific siting information for each site and monitor is stored in the U.S. EPA's AQS data system. This information includes the exact location of the site, local and regional population, description of the site location, monitor types, and monitoring objectives. This site and monitor information is routinely updated whenever there is a change in site characteristics or pollutants monitored.

### Network Station Description

The network station descriptions contained in this document include the following information:

**1. Site Description**

Specific information is provided to show the location of the monitoring equipment at the site, if the site is located in a CSA/MSA, the AQS identification number, the GPS coordinates, and that monitors and monitor probes conform to the siting criteria.

**2. Date Established**

The date when each existing monitoring station was established is shown in the description. For those stations, which are proposed, a date is provided when it is expected for the station to be in operation.

**3. Site Approval Status**

Each monitoring station in the existing network has been reviewed with the purpose of determining whether it meets all design criteria for inclusion in the SLAMS network. Stations that do not meet the criteria will either be relocated in the immediate area or when possible, re-sited at the present location.

**4. Monitoring Objectives**

The monitoring network was designed to provide information to be used as a basis for the following actions:

(a) To determine compliance with ambient air quality standards and to plan measures to attain these standards.

(b) To activate emergency control procedures in the event of an impending air pollution episode.

(c) To observe pollution trends throughout a region including rural areas and report progress made toward meeting ambient air quality standards.

(d) To provide a database for the evaluation of the effects of air quality on population, land use, and transportation planning; to provide a database for the development and evaluation of air dispersion models.

**5. Monitoring Stations' Designations**

Most stations described in the air quality surveillance network are designated as "SLAMS". In addition, some of these stations fulfill other requirements, which must be identified. In this description of the network, designations are also made for National Air Monitoring Stations (NAMS), Special Purpose Monitors (SPM), Emergency Episode Monitoring sites and Air Quality Index sites (AQI). The following is the criteria used for each of these designations.

**SLAMS:** Requirements for air quality surveillance systems provide for the establishment of a network of monitoring stations designated as State and Local Air Monitoring Stations (SLAMS) that measure ambient concentrations of those pollutants for which standards have been established. These stations must meet

requirements that relate to four major areas: quality assurance, monitoring methodology, sampling interval and siting of instruments and instrument probes.

**NAMS:** Within the SLAMS network certain monitors are selected to provide the U.S. EPA with timely data for use in national trends analysis. These NAMS monitors are identified in the summary of network stations.

**EMERGENCY EPISODE MONITORING SITES (EPISODE):** Regulations provide for the operation of at least one continuous SLAMS monitor for each major pollutant in designated locations for emergency episode monitoring. These monitors are placed in areas of worst air quality and provide continual surveillance during episode conditions.

**AIR QUALITY INDEX (AQI):** Certain stations in the SLAMS network provide data for daily index reporting. Index reporting is required for all urban areas with a population exceeding 200,000. However, KYDAQ is providing this service to the general public from all areas where monitoring and attending staff are available. The AQI is a method of reporting that converts concentration levels of pollution to a simple number scale of 0-500. Intervals on the AQI scale are related to potential health effects of the daily measured concentrations of the major pollutants. KYDAQ prepares the Index twice daily for release to the public from the pollutant data reported from the Field Offices.

**SPM:** Not all monitors and monitoring stations in the air quality surveillance network are included in the SLAMS network. In order to allow the capability of providing monitoring for complaint studies, modeling verification and compliance status, certain monitors are reserved for short-term studies and designated as Special Purpose Monitors (SPM). These monitors are not committed to any one location or for any specified time period. They may be located as separate monitoring stations or be included at SLAMS locations. Monitoring data may be reported, provided that the monitors and stations conform to all requirements of the SLAMS network.

## 6. Monitoring Methods

All sampling and analytical procedures used in the air-monitoring network conform to Federal reference (FRM), alternate (FAM) or equivalent (FEM) methods. In case there is no federal method, procedures are described in the Kentucky Air Quality Monitoring and Quality Assurance Manuals.

### (a) Particulate Matter 10 microns in size ($PM_{10}$)

All $PM_{10}$ samplers operated by the Division for Air Quality are certified as either FRM or FEM samplers and are operated according to the requirements set forth in 40 CFR 50 and 40 CFR 53. Intermittent samplers collect a 24-hour sample every sixth day on 46.2 mm PTFE filters. The filter is weighed before and after the sample run. The gain in weight in relation to the volume of air sampled is calculated in micrograms per cubic meter ($\mu g/m^3$). The PTFE filters are to be equilibrated before each weighing for a minimum of 24 hours at a 20-23 degrees C mean temperature and a 30-40 % mean relative humidity.

Continuous $PM_{10}$ samplers provide 24-hour samples daily for SLAMS reporting. During sampling, ambient air passes through an inlet designed to pass only particles smaller than 10 microns in diameter. After exiting the inlet, the sample stream is sent to a mass

transducer. Inside the transducer the sample stream passes through a Teflon-coated glass fiber filter. This filter is weighed every two seconds. The difference between the current filter weight and the initial or installed weight gives the total mass of the collected particulate. The mass concentration is computed by dividing the total mass by the flow rate. Data is transmitted by telemetry for entry into the automated central data acquisition system.

(b) **Particulate Matter 2.5 microns in size ($PM_{2.5}$)**

With the exception of continuous samplers all $PM_{2.5}$ samplers operated by the Division for Air Quality are certified as either FRM or FEM samplers. All manual samplers are operated per the requirements set forth in 40 CFR 50, Appendix L. Samples are collected on 46.2mm PTFE filters over a 24-hour sampling period. Air flow through the filter is to be maintained at 16.7 liters per minute. The flow rate must not vary more than +/-5% for five minutes over a 24-hour sample period at actual ambient temperature and pressure. Samples must be retrieved within 177 hours of the end of the sample run and must be kept cool (4 degrees C or cooler) during transit to meet the thirty-day limit for re-weighing.

The PTFE filters are to be equilibrated before each weighing for a minimum of 24 hours at a controlled atmosphere of 20-23 degrees C mean temperature and 30-40% mean relative humidity. Filters must be used within thirty days of initial weighing. Filters must be re-weighed within thirty days of the end of the sample run and must be kept at 4 degrees C or cooler. The gain in weight in relation to the volume of air sampled is calculated in micrograms per cubic meter ($\mu g/m^3$).

Continuous $PM_{2.5}$ samplers provide 24-hour samples daily for AQI reporting. During sampling, ambient air passes through an inlet and sharp cut cyclone designed to pass only particles smaller than 2.5 microns in diameter. After exiting the inlet, the sample stream is sent to a mass transducer. Inside the transducer the sample stream passes through a Teflon-coated glass fiber filter. This filter is weighed every two seconds. The difference between the current filter weight and the initial or installed weight gives the total mass of the collected particulate. The mass concentration is computed by dividing the total mass by the flow rate. Data is transmitted by telemetry for entry into the automated central data acquisition system.

(c) **$PM_{2.5}$ Speciation sampling and analysis**

In addition to operating $PM_{2.5}$ samplers that determine only $PM_{2.5}$ mass values, KYDAQ also operates $PM_{2.5}$ speciation samplers that collect samples that are analyzed to determine the chemical makeup of $PM_{2.5}$. Samples are collected on a set of three filters over a 24-hour sampling period. The individual filters are composed of different media in order to collect specific types of toxic pollutants.

After collection, the samples are shipped in ice chests to an EPA contract laboratory for analysis. At the laboratory the samples are analyzed using optical and electron microscopy, thermal optical analysis, ion chromatography and x-ray fluorescence to determine the presence and level of specific toxic compounds. Sample results are entered in the AQS data system.

(d) **Sulfur Dioxide**

Instruments used to continuously monitor sulfur dioxide levels in the atmosphere employ the UV fluorescence and UV open path methods. The continuous data output

from the instrument is transmitted by telemetry for entry into an automated central data system.

Calibration of these instruments is done dynamically using certified gas mixtures containing a known concentration of sulfur dioxide gas. This gas is then diluted in a specially designed apparatus to give varying known concentrations of sulfur dioxide. These known concentrations are supplied to the instruments, which are adjusted so that instrument output corresponds with the specific concentrations. Calibration curves are prepared for each instrument and each data point is automatically compared to this curve before entry into the data acquisition system.

(e) **Carbon Monoxide**

Continuous monitoring for carbon monoxide is performed by use of the non-dispersive infrared correlation method. Data is transmitted by telemetry for entry in an automated central data acquisition system.

Calibration of the instrument is performed periodically by using nitrogen or zero air to establish the zero baseline and NIST or NIST traceable gas mixtures of carbon monoxide in air. The span is checked daily using a certified mixture of compressed gas containing approximately 45 parts per million carbon monoxide.

(f) **Ozone**

Ozone is monitored using the UV photometry and UV open path methods. The continuous data output from the instrument is transmitted by telemetry for entry into an automated central data acquisition system.

Monitors are calibrated routinely using an ozone generator, which is calibrated using the ultra violet photometry reference method. Calibration curves are prepared for each instrument and each data point is automatically compared to this curve before entry into the data acquisition system.

(g) **Nitrogen Dioxide**

The chemiluminescence and UV open path methods are used in monitoring the nitrogen dioxide level in the ambient air. The continuous data output from the instrument is transmitted by telemetry for entry into an automated central data acquisition system.

Calibration of these instruments is done dynamically using NIST certified gas mixtures of nitric oxide. Through the use of dilution apparatus, varying concentrations are produced and supplied to the monitors, thus producing a specific calibration curve for each instrument. Each data point is automatically compared to this curve before entry into the data acquisition system.

(h) **Lead**

Lead concentrations are determined from the analysis of suspended particulates collected by high volume particulate samplers. Particulate samples are ashed to remove organic matter and acid extracted to dissolve the metals. The lead content is determined by the atomic absorption spectroscopy method.

(i) **Mercury**

Cold vapor atomic fluorescence spectrometry is used to determine elemental gaseous mercury in ambient air at sub-ng/$m^3$ levels. The analyzer uses a dual, ultra pure gold absorbent, cartridge design that allows alternating desorption and sampling. The dual cartridge designs results in continuous mercury sampling of the air stream. The continuous data

output from the instrument is transmitted by telemetry for entry into an automated central data acquisition system.

(j) **Air Toxics**

Air toxics pollutants are determined in three categories: metals, volatile organic compounds (VOC) and carbonyls.

Metal samples are collected on 46.2 mm PTFE filter over a 24-hour period similar to the PM10 monitoring method. The filter is weighed before and after the sample run. The gain in weight in relation to the volume of air sampled is used to calculate the concentration in micrograms per cubic meter ($\mu g/m^3$). The PTFE filter is to be equilibrated before each weighing for a minimum of 24 hours at a 20-23 degrees C mean temperature and a 30-40 % mean relative humidity. The filter is then delivered to the Division for Environmental Services for inductively coupled plasma/mass spectrometer analysis to determine the concentration of metals in $\mu g/m^3$.

VOC samples are collected in a vacuum canister. Ambient air is pulled into the canister over a 24-hour sampling period. The sample is shipped to the Division for Environmental Services for gas chromatography/mass spectrometer analysis. VOC concentrations determined in the sample are reported in $\mu g/m^3$.

Carbonyl samples are collected on a DPNH cartridge. An ambient air stream flows through the cartridge at a1 liter per minute flow rate for a 24-hour sampling period. The cartridge is packed on ice and shipped to the Division for Environmental Services for high-pressure liquid chromatography analysis. Carbonyl concentrations determined in the sample are reported in $\mu g/m^3$.

(k) **Wet Deposition**

Acid precipitation monitoring stations operate on a weekly sampling schedule. Cumulative precipitation events occurring during a seven-day period are collected in one container to represent a one-week sample. An Aerochem precipitation sampler and NCON samplers are used to collect the sample. The principle of operation of the samplers is based on the use of a moisture sensor that activates an electrically driven movable container lid covering the "wet" container during dry periods and then is moved to un-cover the "wet" container when precipitation occurs. The opening and closing of the lid for each precipitation event is indicated on a data logger providing the time and date of each event. At the end of each weekly sampling period, the sample bag/bottle in the "wet" container is removed and a new sample bag/bottle is installed. The sample is then analyzed at the Division for Environmental Services' laboratory.

## 7. Quality Assurance Status

The Division for Air Quality has an extensive quality assurance program to ensure that all air monitoring data collected is accurate and precise. Staff members audit air monitors on a scheduled basis, including those operated by the Louisville Metro Air Pollution Control District, to ensure that each instrument is calibrated and operating properly. Data validation is performed monthly by verifying the data reported by each instrument is recorded accurately in the computerized database.

## 8. Area Representativeness

Each station in the monitoring network must be described in terms of the physical dimensions of the air parcel nearest the monitoring station throughout which actual pollutant concentrations are

reasonably similar. Area dimensions or scales of representativeness used in the network description are:

(a) Microscale - defines the concentration in air volumes associated with area dimensions ranging from several meters up to about 100 meters.

(b) Middle scale - defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometers.

(c) Neighborhood scale - defines concentrations within an extended area of a city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers.

(d) Urban scale - defines an overall citywide condition with dimensions on the order of 4 to 50 kilometers.

(e) Regional Scale - defines air quality levels over areas having dimensions of 50 to hundreds of kilometers.

Closely associated with the area around the monitoring station where pollutant concentrations are reasonably similar are the basic monitoring exposures of the station. There are four basic exposures included in this description:

(a) To determine the highest concentrations expected to occur in the area covered by the network.

(b) To determine representative concentrations in areas of high population density.

(c) To determine the impact on ambient pollution levels of significant sources or source categories.

(d) To determine general background concentration levels.

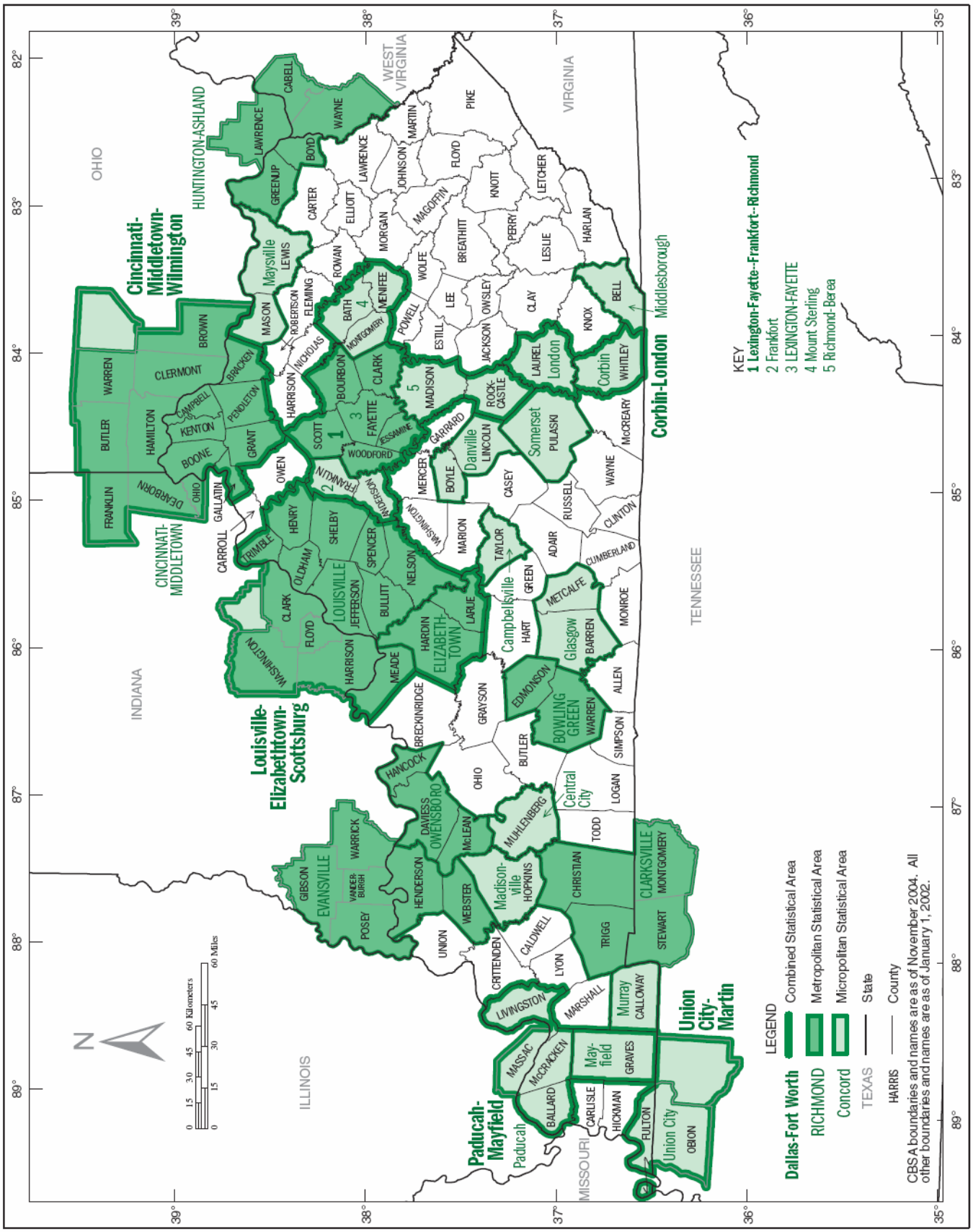
The design intent in siting stations is to correctly match the area dimensions represented by the sample of monitored air with the area dimensions most appropriate for the monitoring objective of the station. The following relationship of the four basic objectives and the area of representativeness are appropriate when siting monitoring stations:

| **Monitoring Exposures** | **Siting Area Scale** |
|---|---|
| Highest concentration | Micro, Middle, Neighborhood |
| Population | Neighborhood, Urban |
| Source impact | Micro, Middle, Neighborhood |
| General/background | Neighborhood, Regional |

**Data Processing and Reporting**

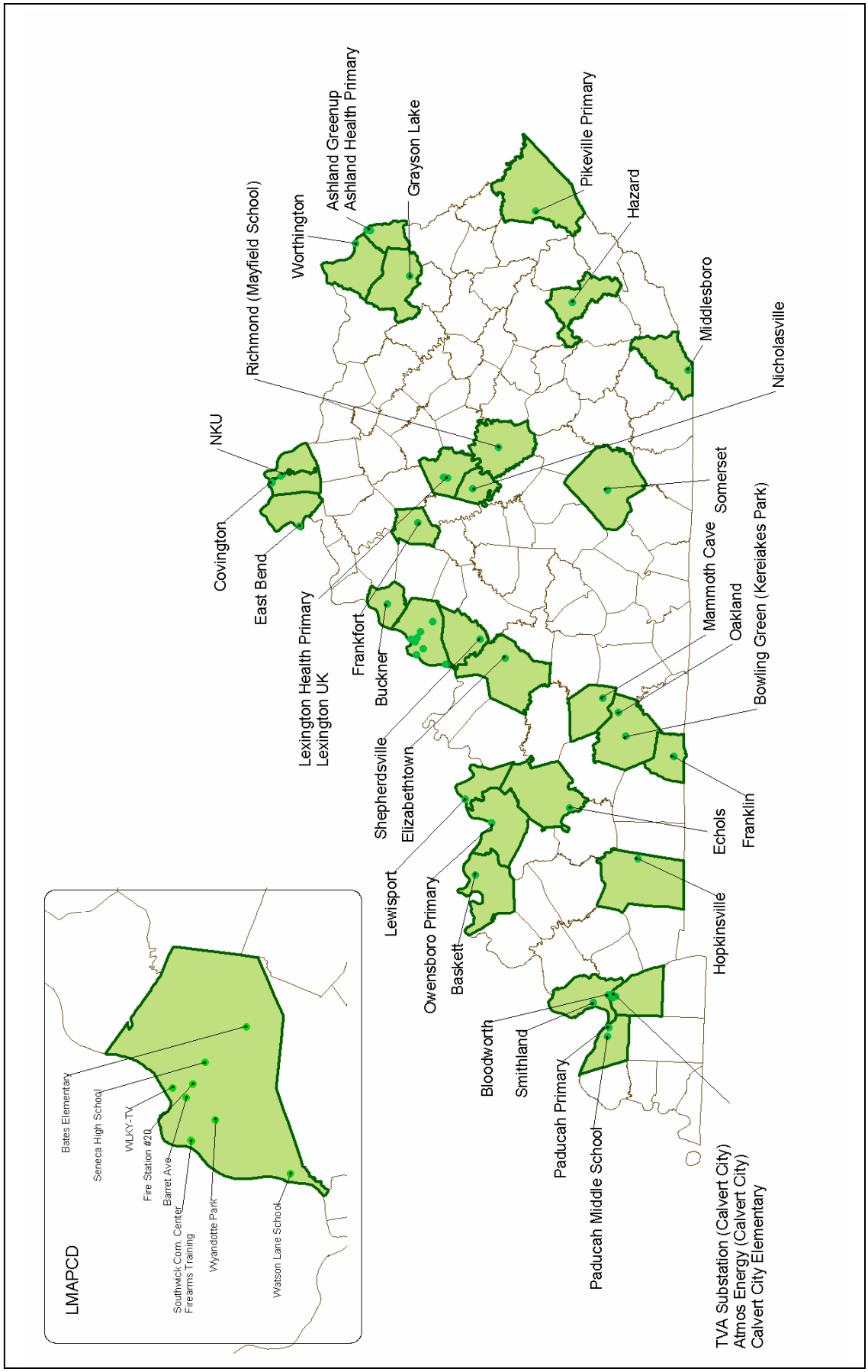
All ambient air quality data are stored in a centralized server located at the 14th floor of the Capital Plaza Tower, the Environmental and Public Protection (EPPC) headquarters in Frankfort, Kentucky. The server is backed up on tape nightly, weekly and monthly. The backup tape of the server is stored off site of the EPPC headquarters and is cycled through use on a monthly schedule. After each month of data has passed all quality assurance checks, the data is transmitted via telemetry to the U.S. EPA's national data storage system known as AQS. Statistical data summaries are generated from this database and compiled to produce the Ambient Air Quality Annual Report. This report may be accessed at the KYDAQ website: http://www.air.ky.gov. The report is located under **Public Information**.

## KENTUCKY - Core Based Statistical Areas and Counties




U.S. DEPARTMENT OF COMMERCE Economics and Statistics Administration U.S. Census Bureau

# KYDAQ Monitoring Network



## AIR MONITORING STATIONS SUMMARY

| Region | Number of Sites | $PM_{2.5}$ | $PM_{10}$ | $SO_2$ | $NO_2$ | CO | $O_3$ | Metals | Hg | Wet Dep | VOC | Carbonyl | Speciation | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appalachian | 3 | $5^{CT}$ | $2^{C**}$ | 0 | 0 | 0 | 3 | $2^{C}$ | 0 | 0 | $2^{D}$ | $2^{D}$ | 1 | 2 |
| Ashland-Huntington | 4 | $3^{T}$ | $2^{C**}$ | 2 | 1 | 0 | 3 | $2^{C}$ | 1 | 2 | 1 | 1 | 1 | 2 |
| Bluegrass | 5 | $5^{T}$ | $1^{**}$ | 2 | 1 | 0 | $2^{N}$ | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| Cincinnati-Northern Kentucky | 3 | $4^{T}$ | 0 | 1 | 1 | 0 | 3 | 0 | 1 | 1 | 1 | 1 | 1 | 2 |
| Louisville | 9 | $9^{CT}$ | $3^{C}$ | $2^{N}$ | 1 | $2^{N}$ | $3^{N}$ | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| North Central | 3 | $3^{T}$ | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Owensboro-Henderson | 4 | $7^{CT}$ | $1^{T}$ | 3 | 2 | 0 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 2 |
| Paducah-Cairo | 8 | $3^{T}$ | $2^{**}$ | 1 | 1 | 0 | 2 | 1 | 1 | 1 | $5^{C}$ | 0 | 0 | 2 |
| South Central | 4 | $3^{CT}$ | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| National Park Service | 1 | $1^{T}$ | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTALS | 44 | 43 | 11 | 12 | 8 | 3 | 27 | 7 | 6 | 6 | 11 | 5 | 5 | 15 |

$^{C}$=Collocated monitors; $^{D}$=Duplicate monitors; $^{T}$=$TEOM_{2.5}$ continuous $PM_{2.5}$ monitors or $TEOM_{10}$ continuous $PM_{10}$ monitors; **=Multiple analysis: $PM_{10}$ Teflon filters used for $PM_{10}$ monitoring and Metals monitoring; $^{N}$=NAMS ($PM_{10}$ NAMS in Ashland and Louisville=2sites; $SO_2$ NAMS in Louisville=1 site; CO NAMS in Louisville=1 site; O3 NAMS in Bluegrass=2 sites; O3 NAMS in Louisville =1 site)

## SUMMARY OF NETWORK CHANGES 2007

**Ashland-Huntington Region** – **Grayson Lake** (21-043-0500) add Hg wet deposition sampler.

**Bluegrass Region** – **Ironworks** (21-067-0001) discontinue site. **Nicholasville** (21-113-0001) add Hg wet deposition and sulfur dioxide samplers.

**Cincinnati-Northern Kentucky Region** – **Covington** (21-117-0007) when the NKU site is operational, discontinue sulfur dioxide and nitrogen dioxide samplers. **East Bend** (21-015-0003) when the NKU site is operational, discontinue mercury sampler. **NKU** (to be announced) add sulfur dioxide, nitrogen dioxide, mercury, Hg wet deposition, $PM_{2.5}$, $PM_{2.5}$ TEOM and ozone samplers.

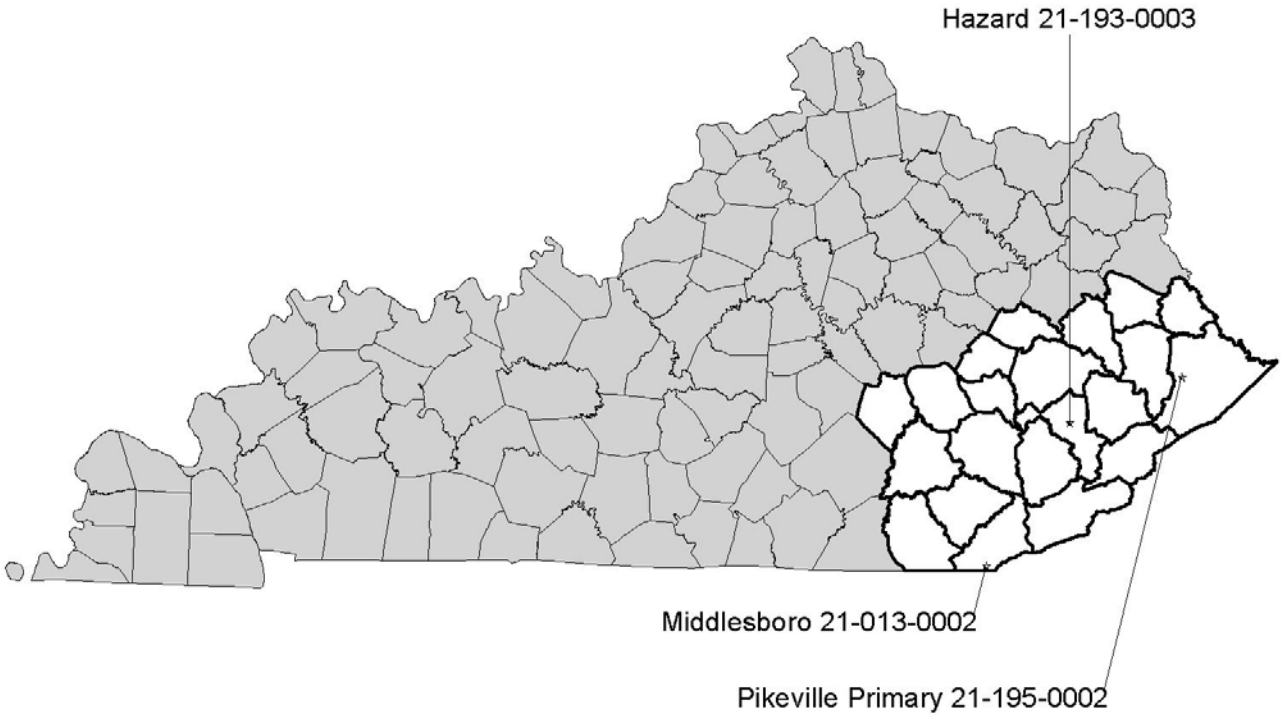
**Owensboro Region** – **Baskett** (21-101-0014) discontinue $PM_{10}$ TEOM sampler; add $PM_{2.5}$ TEOM sampler. **Echols** (21-183-0032) discontinue air toxics sampling; discontinue ozone and sulfur dioxide point source samplers; add Hg wet deposition sampler; sample nitrogen dioxide, ozone and sulfur dioxide pollutants with the UV open path method.

**North Central Region** – **Shepherdsville** (21-029-0006) discontinue $PM_{10}$ TEOM, nitrogen dioxide, and $PM_{2.5}$ TEOM samplers. **Elizabethtown** (21-093-0006) add $PM_{2.5}$ TEOM sampler.

**Paducah Region** – **Bloodworth** (21-139-0004) discontinue mercury and sulfur dioxide samplers. **Smithland** (21-139-0003) add mercury and Hg wet deposition samplers.

**South Central Region** – **Oakland** (21-227-0008) discontinue nitrogen dioxide sampler add $PM_{2.5}$ samplers. **Bowling Green** (21-227-0007) discontinue $PM_{2.5}$ samplers.

# Appalachian Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-013-0002 | Airport, 34th & Dorchester Middlesboro (Bell) | X(s) | | | | | X(s) | | | | | | | X |
| 21-193-0003 | Perry County Horse Park Hazard (Perry) | X(s) | X(c) | | | | X(s) | X(cs) | | | X(cs) | X(cs) | X(s) | X |
| 21-195-0002 | 101 N. Mayo Trail, DOT Office Pikeville (Pike) | X(ct) | | | | | X(s) | | | | | | | |
| | TOTAL | 5 | 2 | 0 | 0 | 0 | 3 | 2 | 0 | 0 | 2 | 2 | 1 | 2 |

(c) Collocated Monitor

(s) Special Purpose Monitor

(t) Continuous PM Monitor

(Rev.3/27/06)

**401 KAR 50:020 Air Quality Control Region:** Appalachian Intrastate (101)
**CSA/MSA:** Middlesborough, KY Micropolitan Statistical Area
**Site Name:** Middlesboro
**AQS Site ID:** 21-013-0002
**Location:** Middlesboro Airport, Middlesboro, KY 40965
**County:** Bell
**GPS Coordinates:** 36.608056, -83.736944
**Date Established:** February 14, 1992
**Inspection Date:** November 28, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

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The monitoring site is a stationary equipment shelter located on the grounds of the Middlesboro Airport in Middlesboro, Kentucky. The sample inlets are 13 feet above ground level and 55 feet from the nearest road. The most recent site inspection was conducted on November 28, 2006. Upon inspection the sample lines and monitors were found to be in good condition. Even though this site is for special purpose monitoring, the site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide information on the transport of ozone into the region.

**Monitors:**

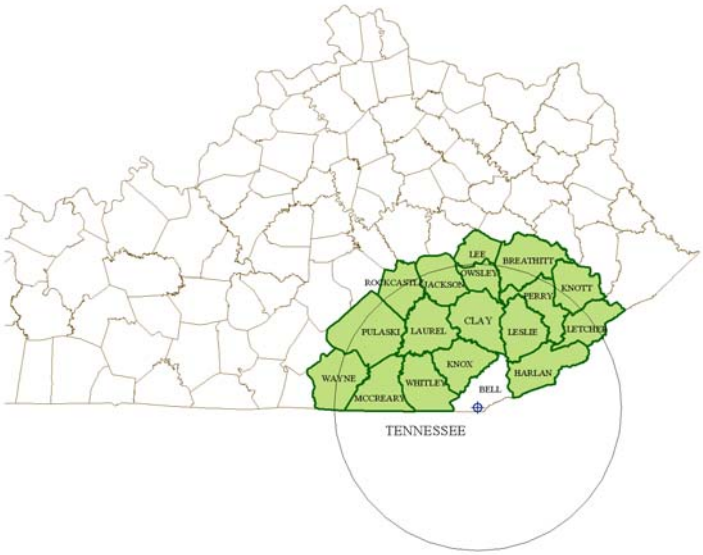
| **Monitor Type** | **Designation** | **Analysis Method** | **Frequency of Sampling** |
|---|---|---|---|
| FRM $PM_{2.5}$ | SPM | Gravimetric | 24-hours every sixth day |
| AEM Ozone | SPM | UV photometry | Continuously<br>March 1-October 31 |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
The site represents population exposure on a neighborhood scale for particulates. This site also represents transport on a regional scale for ozone.

Particulate Neighborhood Scale


Ozone Regional Scale



**401 KAR 50:020 Air Quality Control Region:** Appalachian Intrastate (101)
**CSA/MSA:** Not in a MSA – Rural
**Site Name:** Hazard
**AQS Site ID:** 21-193-0003
**Location:** Perry County Horse Park, Hazard, KY 41701
**County:** Perry
**GPS Coordinates:** 37.283056, -83.220278
**Date Established:** April 1, 2000
**Inspection Date:** October 24, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Perry County Horse Park in Hazard, Kentucky. The sample inlets are 15 feet above ground level and 65 feet from the nearest road. The most recent site inspection was conducted on October 24, 2006. Upon inspection the sample lines and monitors were found to be in good condition. This site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to detect elevated pollutant levels for activation of emergency control procedures for ozone; and to measure rural concentrations of a sub-group of air toxics for use in national assessment.

**Monitors:**

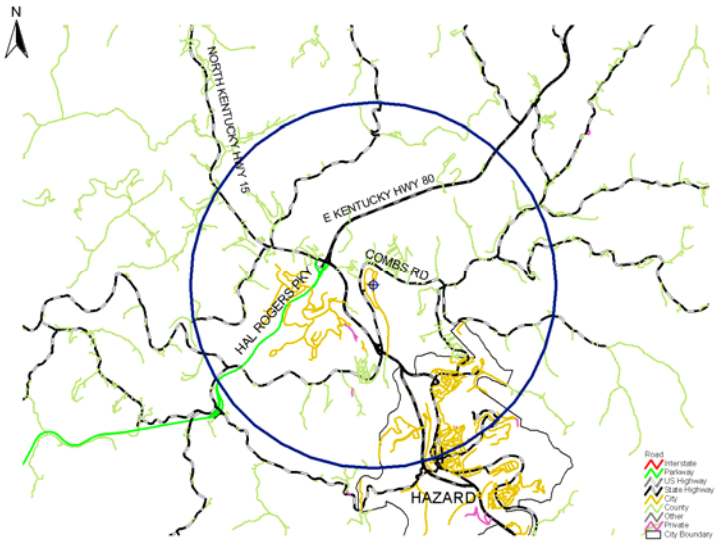
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM<br>EPISODE | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{10}$ | SLAMS | Gravimetric | 24-hours every sixth day |
| - Collocated $PM_{10}$ | SLAMS | Gravimetric | 24-hours every sixth day |
| - Metals $PM_{10}$ | SPM | Determined from the $PM_{10}$ sample using EPA method IO 3.4 | Same as $PM_{10}$ |
| FRM $PM_{2.5}$ | SPM | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ Speciation | SLAMS | Thermal optical, ion chromatography, and X-ray fluorescence | 24-hours every sixth day |
| Volatile Organics Compound | SPM | EPA method TO-15 | 24-hours every sixth day |
| Carbonyls | SPM | EPA method TO-11A | 24-hours every sixth day |
| $Chrome_{VI}$ | SPM | CARB method | 24-hours every sixth day |
| Collocated $Chrome_{VI}$ | SPM | CARB method | 24-hours every twelfth day |

| | | | |
|---|---|---|---|
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

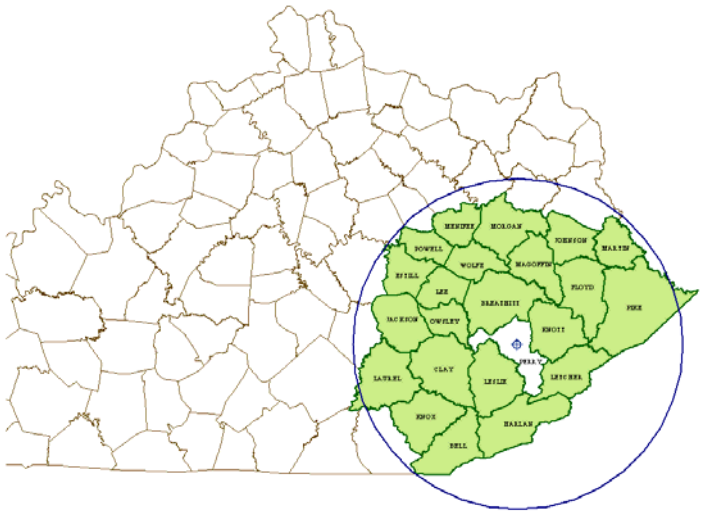
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
The site represents population exposure on a neighborhood scale. This site also represents general/background on a regional scale for air toxics.

Criteria Pollutants Neighborhood Scale




Air Toxics Regional Scale



**401 KAR 50:020 Air Quality Control Region:** Appalachian Intrastate (101)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** Pikeville Primary
**AQS Site ID:** 21-195-0002
**Location:** DOT District Office, 101 North Mayo Trail, Pikeville, KY 41501
**County:** Pike
**GPS Coordinates:** 37.482778, -82.535278
**Date Established:** May1, 1994
**Inspection Date:** September 12, 2006 and March 8, 2007
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

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The monitoring site is a stationary equipment shelter located behind the DOT District Office building at 101 North Mayo Trail in Pikeville, KY. The sample inlets are 12 feet above ground level and 116 feet from the nearest road. A new stationary shelter was delivered to the Pikeville site in December 2006. Upon inspection the sample lines and monitors were found to be in good condition. This site meets the requirements of 40 CFR 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to detect elevated pollutant levels for activation of emergency control procedures for particulates; and to provide pollutant levels for daily air quality index reporting.

**Monitors:**

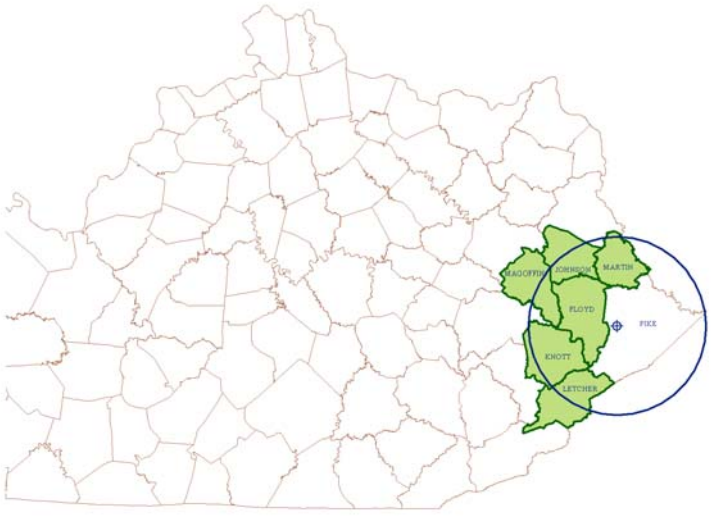
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| - Collocated FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | SPM<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

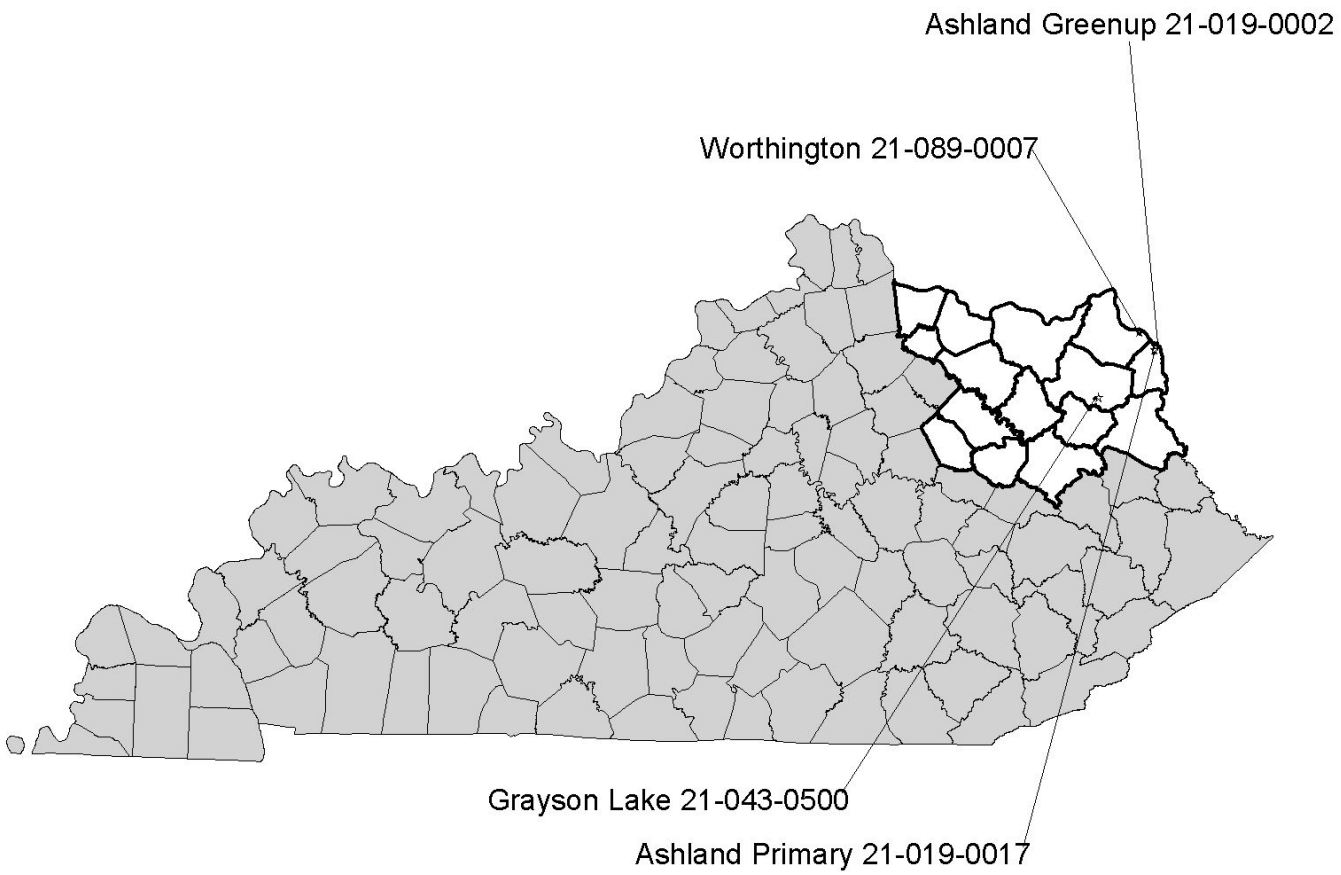
**Area Representativeness:**
The site represents population exposure on a neighborhood scale for particulates. This site also represents population exposure on an urban scale for ozone.

Particulate Neighborhood Scale


Ozone Urban Scale



# Ashland-Huntington Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-019-0002 | 21st & Greenup<br>Ashland (Boyd) | | X(cN) | | | | | X(c) | | | | | | |
| 21-019-0017 | 2924 Holt St, FIVCO Health Dept<br>Ashland (Boyd) | X(It) | | X(eI) | X(e) | | X(eI) | | | | X(s) | X(s) | X(s) | X |
| 21-043-0500 | Camp Webb, Grayson Lake<br>Grayson (Carter) | X | | | | | X(s) | | X | X<br>HG | | | | X |
| 21-089-0007 | Water Tower, Scott & Center Sts.<br>Worthington (Greenup) | | | X(s) | | | X | | | | | | | |
| | TOTAL | 3 | 2 | 2 | 1 | 0 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 2 |

(c) Collocated Monitor
(e) Emergency Episode Monitor
(I) Air Quality Index Monitor
(N) National Air Monitoring Station (NAMS) Monitor
(s) Special Purpose Monitor
(t) Continuous PM Monitor

(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** Huntington (WV)-Ashland (KY)-Portsmouth-Ironton (OH) Interstate (103)
**CSA/MSA:** Huntington-Ashland, WV-KY-OH MSA
**Site Name:** Ashland -Greenup
**AQS Site ID:** 21-019-0002
**Location:** 122 22nd Street, Ashland, KY
**County:** Boyd
**GPS Coordinates:** 38.478611, -82.631944
**Date Established:** April 2, 1978
**Inspection Date:** October 23, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located on the west end, on a one-story building, of a roof in the Ashland Valvoline Oil complex in Ashland, Kentucky. The sample inlets are 19 feet above ground level and 100 feet from the nearest road. The most recent site inspection was conducted on October 23, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to observe pollution trends that provide information for national data analysis; and to measure concentrations of a sub-group of air toxics.

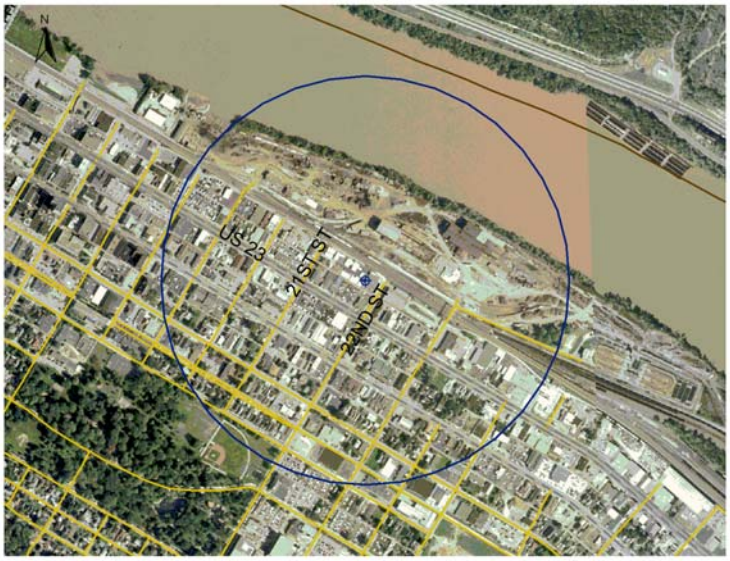
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{10}$ | NAMS<br>SLAMS | Gravimetric | 24-hours every sixth day |
| - Collocated FRM $PM_{10}$ | SPM | Gravimetric | 24-hours every sixth day |
| - Metals $PM_{10}$ | SPM | Determined from the $PM_{10}$ sample using EPA method IO 3.4 | Same as $PM_{10}$ |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
The site represents maximum concentrations on a middle scale for particulates. This site also represents population exposure on a neighborhood scale for air toxics.

Particulate Middle Scale




Air Toxics Neighborhood Scale

**401 KAR 50:020 Air Quality Control Region:** Huntington (WV)-Ashland (KY)-Portsmouth-Ironton (OH) Interstate (103)
**CSA/MSA:** Huntington-Ashland, WV-KY-OH MSA
**Site Name:** Ashland Primary (FIVCO)
**AQS Site ID:** 21-019-0017
**Location:** FIVCO Health Department, 2924 Holt Street, Ashland, KY 41101
**County:** Boyd
**GPS Coordinates:** 38.459167, -82.640556
**Date Established:** January 1, 1999
**Inspection Date:** October 23, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the health department building in Ashland, Kentucky. The sample inlets are 13 feet above ground level and 240 feet from the nearest road. The most recent site inspection was conducted on October 23, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to detect elevated pollutant levels for activation of emergency control procedures for nitrogen dioxide, ozone and sulfur dioxide; and to provide pollutant levels for daily air quality index reporting.

**Monitors:**

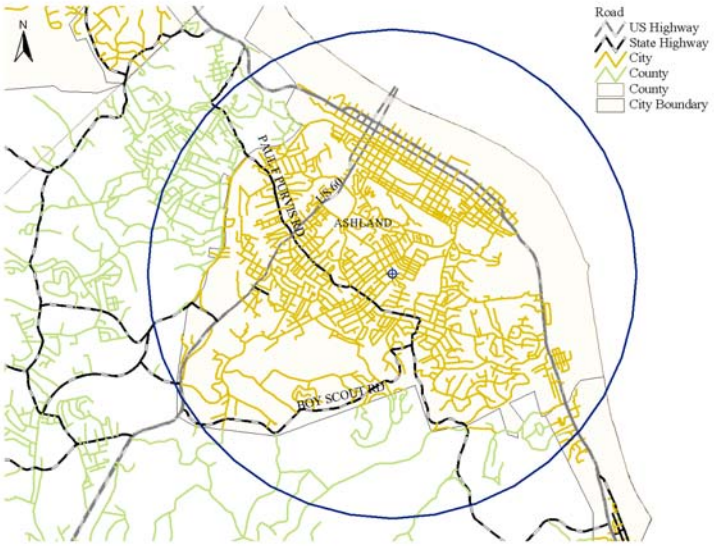
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Nitrogen Dioxide | SLAMS<br>EPISODE | Chemiluminescence | Continuously |
| AEM Ozone | SLAMS<br>AQI<br>EPISODE | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ Speciation | SLAMS | Thermal optical, ion chromatography, and X-ray fluorescence | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | SPM<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS<br>AQI<br>EPISODE | UV fluorescence | Continuously |
| Volatile Organics Compound | SPM | EPA method TO-15 | 24-hours every sixth day |

| | | | |
|---|---|---|---|
| Carbonyls | SPM | EPA method TO-11A | 24-hours every sixth day |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

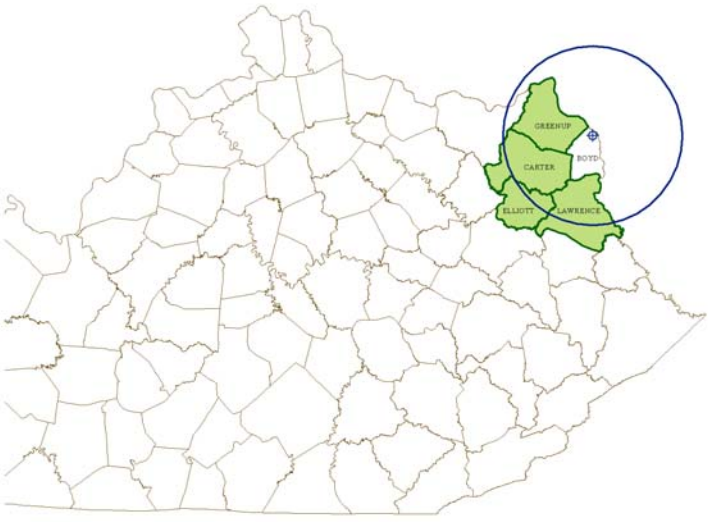
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates, sulfur dioxide, ozone and air toxics. This site also represents population exposure on an urban scale for nitrogen dioxide.

Criteria and Air Toxics Neighborhood Scale




Nitrogen Dioxide Urban Scale



**401 KAR 50:020 Air Quality Control Region:** Huntington (WV)-Ashland (KY)-Portsmouth-Ironton (OH) Interstate (103)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** Grayson Lake
**AQS Site ID:** 21-043-0500
**Location:** Camp Grayson at Grayson Lake, Grayson, KY 41143
**County:** Carter
**GPS Coordinates:** 38.238333, -82.988333
**Date Established:** May 13, 1981
**Inspection Date:** October 23, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter in a fenced area located in a remote section of Camp Grayson in Grayson, Kentucky. The sample inlets are 13 feet above ground level and the nearest road is a service road. The most recent site inspection was conducted on October 23, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to determine background levels of PM2.5; to provide ozone data upwind of the Ashland area; and to measure background levels of Mercury in ambient air and in precipitation.

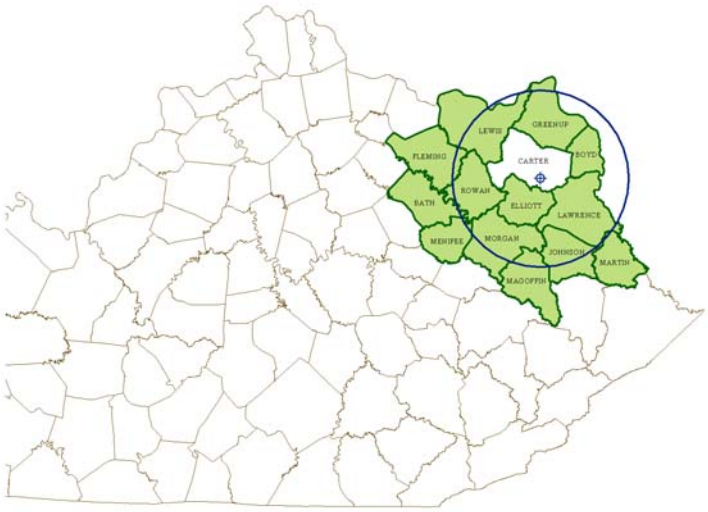
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| Mercury - ambient | SPM | Cold vapour atomic fluorescence spectrometry | Continuously |
| Mercury - Wet Deposition | SPM | Wet deposition collected, analysis of sample by the Environmental Services Laboratory using EPA method 1631, Revision E | Weekly |
| Wet Deposition | SPM | Wet deposition collected, analysis of sample by the Environmental Services laboratory | Weekly |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
The site represents background levels on an urban scale for particulates and mercury. This site also represents upwind/background levels on an urban scale for ozone and population exposure on an urban scale for wet deposition.

Criteria and Wet Deposition Urban Scale



**401 KAR 50:020 Air Quality Control Region:** Huntington (WV)-Ashland (KY)-Portsmouth-Ironton (OH) Interstate (103)
**CSA/MSA:** Huntington-Ashland, WV-KY-OH MSA
**Site Name:** Worthington
**AQS Site ID:** 21-089-0007
**Location:** Scott Street and Center Avenue, Worthington, KY 41183
**County:** Greenup
**GPS Coordinates:** 38.548333, -82.731667
**Date Established:** October 12, 1980
**Inspection Date:** October 23, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---


The monitoring site is a stationary equipment shelter located on the grounds of a water tower near the intersection of Scott Street and Center Avenue in Worthington, Kentucky. The sample inlets are 13 feet above ground level and 57 feet from the nearest road. The most recent site inspection was conducted on October 23, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to detect elevated pollutant levels for activation of emergency control procedures for nitrogen dioxide, ozone and sulfur dioxide; and to provide pollutant levels for daily air quality index reporting.

**Monitors:**

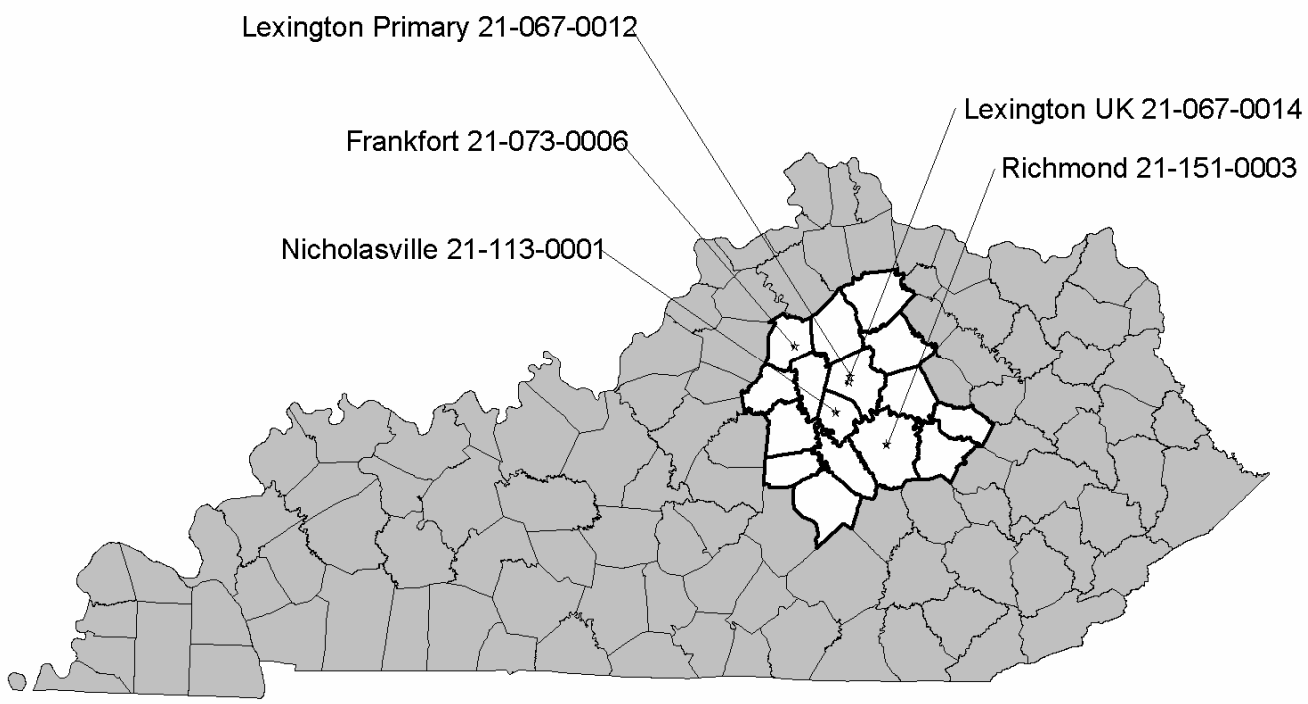
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |
| AEM Sulfur Dioxide | SPM | UV fluorescence | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for ozone and sulfur dioxide.

Criteria Neighborhood Scale

# Bluegrass Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-067-0012 | 650 Newtown Pike<br>Lexington (Fayette) | X(t) | | X(eI) | X(e) | | X<br>(N I e) | | | | X(s) | X(s) | X(s) | |
| 21-067-0014 | 533 South Limestone<br>Lexington (Fayette) | X | X | | | | | X(s) | | | X(s) | | | |
| 21-073-0006 | 803 Schenkel Lane<br>Frankfort (Franklin) | X | | | | | | | | | | | | |
| 21-113-0001 | KY DOT Garage, US 27 Bypass<br>Nicholasville (Jessamine) | | | X(s) | | | X | | X | HG | | | | X |
| 21-151-0003 | Mayfield Elementary Sch, Bond St<br>Richmond (Madison) | X | | | | | | | | | | | | |
| | TOTAL | 5 | 1 | 2 | 1 | 0 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |

(e) Emergency Episode Monitor

(I) Air Quality Index Monitor

(N) National Air Monitoring Station (NAMS) Monitor

(s) Special Purpose Monitor

(t) Continuous PM Monitor

(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** Bluegrass Intrastate (102)
**CSA/MSA:** Lexington-Fayette-Frankfort-Richmond, KY CSA / Lexington-Fayette, KY MSA
**Site Name:** Lexington Primary
**AQS Site ID:** 21-067-0012
**Location:** Fayette County Health Department, 650 Newtown Pike, Lexington, KY 40508
**County:** Fayette
**GPS Coordinates:** 38.065000, -84.500000
**Date Established:** November 8, 1979
**Inspection Date:** August 18, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---


The monitoring site is a stationary equipment shelter located on the grounds of the Fayette County health department building in Lexington, Kentucky. The sample inlets are 13 feet above ground level and 385 feet from the nearest road. The most recent site inspection was conducted on August 18, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to detect elevated pollutant levels for activation of emergency control procedures for nitrogen dioxide, ozone and sulfur dioxide; to provide pollutant levels for daily air quality index reporting; and to observe pollution trends for national data analysis for ozone.

**Monitors:**

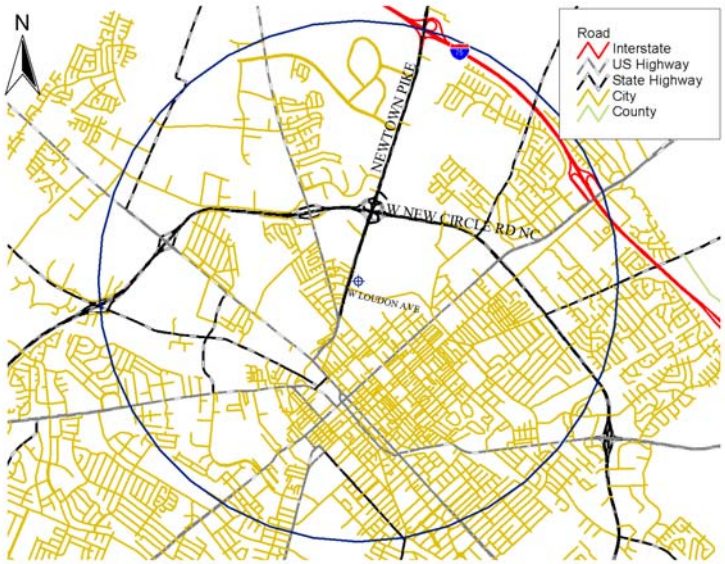
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| ARM Nitrogen Dioxide | SLAMS<br>EPISODE | Chemiluminescence | Continuously |
| AEM Ozone | SLAMS<br>AQI<br>EPISODE | UV photometry | Continuously<br><br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ Speciation | SLAMS | Thermal optical, ion chromatography, and X-ray fluorescence | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | SPM<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS<br>AQI<br>EPISODE | UV fluorescence | Continuously |
| Volatile Organics Compound | SPM | EPA method TO-15 | 24-hours every sixth day |

| | | | |
|---|---|---|---|
| Carbonyls | SPM | EPA method TO-11A | 24-hours every sixth day |

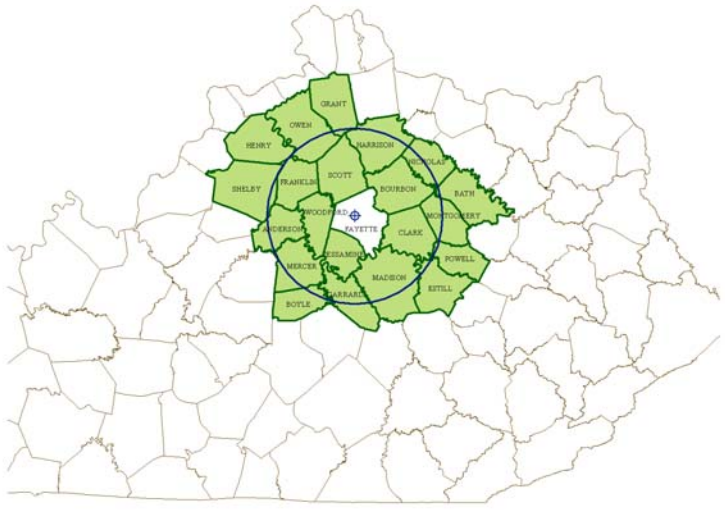
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates, sulfur dioxide and ozone. This site also represents population exposure on an urban scale for nitrogen dioxide and air toxics.

Criteria Neighborhood Scale




Nitrogen Dioxide and Air Toxics Urban Scale



**401 KAR 50:020 Air Quality Control Region:** Bluegrass Intrastate (102)
**CSA/MSA:** Lexington-Fayette-Frankfort-Richmond, KY CSA / Lexington-Fayette, KY MSA
**Site Name:** U.K. Lexington
**AQS Site ID:** 21-067-0014
**Location:** 533 South Limestone, Lexington, KY 40508
**County:** Fayette
**GPS Coordinates:** 38.038889, -84.507500
**Date Established:** October 2, 1982
**Inspection Date:** August 18, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located on the roof of the Whalen Transportation Research Building on the University of Kentucky campus in Lexington, Kentucky. The sample inlets are 32 feet above ground level and 60 feet from the nearest road. The most recent site inspection was conducted on August 18, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{10}$ | SLAMS | Gravimetric | 24-hours every sixth day |
| - Metals $PM_{10}$ | SPM | Determined from the $PM_{10}$ sample using EPA method IO 3.4 | Same as $PM_{10}$ |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| Volatile Organic Compound | SPM | EPA Method TO-15 | 24-hour every sixth day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
The site represents population exposure on a neighborhood scale.

Criteria Neighborhood Scale

**401 KAR 50:020 Air Quality Control Region:** Bluegrass Intrastate (102)
**CSA/MSA:** Frankfort, KY Micropolitan Statistical Area
**Site Name:** Frankfort
**AQS Site ID:** 21-073-0006
**Location:** 803 Schenkel Lane, Frankfort, KY 40601
**County:** Franklin
**GPS Coordinates:** 38.219361, -84.838500
**Date Established:** January 1, 1999
**Inspection Date:** December 15, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---


The monitoring site is located on the roof of the Ragland Building in Frankfort, Kentucky. The sample inlets are 18 feet above ground level and 250 feet from the nearest road. The most recent site inspection was conducted on December 15, 2006. Upon inspection, the sample inlet and monitor was found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

Criteria Neighborhood Scale

**401 KAR 50:020 Air Quality Control Region:** Bluegrass Intrastate (102)
**CSA/MSA:** Lexington-Fayette-Frankfort-Richmond, KY CSA / Lexington-Fayette, KY MSA
**Site Name:** Nicholasville
**AQS Site ID:** 21-113-0001
**Location:** DOT Garage, US 27 Bypass, Nicholasville, KY 40356
**County:** Jessamine
**GPS Coordinates:** 37.893333, -84.589167
**Date Established:** August 1, 1991
**Inspection Date:** August 18, 2006 and December 14, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---


The monitoring site is a stationary equipment shelter located on the grounds of the Kentucky DOT Garage in Nicholasville, Kentucky. The sample inlets are 13 feet above ground level and 385 feet from the nearest road. The most recent site inspection was conducted on August 18, 2006. The site meets the requirements of 40 CFR 58, Appendices C, D and E. A new equipment shelter was delivered on September 15, 2006. After completion of the final installation, the site was revisited on December 14, 2006. The new shelter is located 216 meters south of the old shelter on the same grounds of the Kentucky DOT Garage in Nicholasville, Kentucky. The sample inlets are 17 feet above ground level and 372 feet from the nearest road. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide ozone data upwind of the Lexington area.

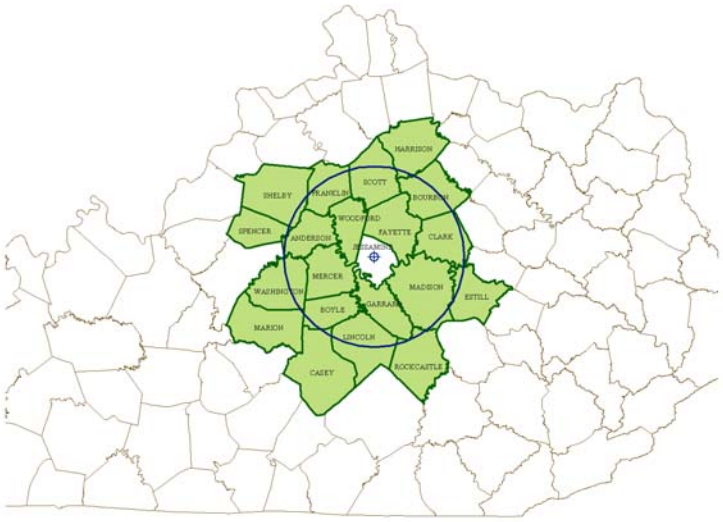
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |
| AEM Sulfur Dioxide | SPM | UV fluorescence | Continuously |
| Mercury - ambient | SPM | Cold vapour atomic fluorescence spectrometry | Continuously |
| Mercury – Wet Deposition | SPM | Wet deposition collected, analysis of sample by the Environmental Services Laboratory | Weekly |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.
**Area Representativeness:**

This site represents population exposure on an urban scale.

Criteria and Air Toxics Urban Scale



**401 KAR 50:020 Air Quality Control Region:** Bluegrass Intrastate (102)
**CSA/MSA:** Lexington-Fayette-Frankfort-Richmond, KY CSA / Richmond-Berea, KY Micropolitan Statistical Area
**Site Name:** Richmond
**AQS Site ID:** 21-151-0003
**Location:** Mayfield School on Bond Street, Richmond, KY 40475
**County:** Madison
**GPS Coordinates:** 37.738056, -84.285556
**Date Established:** January 1, 1999
**Inspection Date:** October 24, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

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The monitoring site is located on the roof of the Mayfield Elementary School in Richmond, Kentucky. The sample inlet is 15 feet above ground level and 200 feet from the nearest road. The most recent site inspection was conducted on October 24, 2006. Upon inspection, the sample inlet and monitor was found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

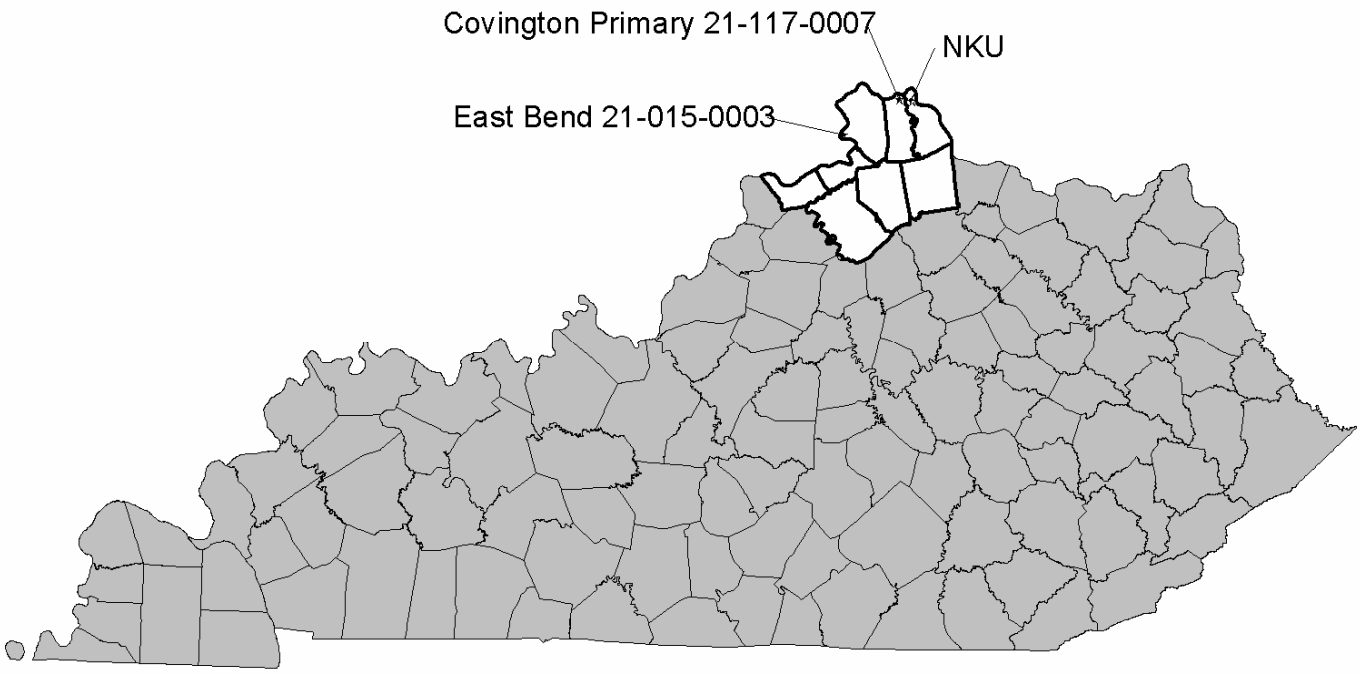
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates.

Criteria Neighborhood Scale

# Cincinnati-Northern Kentucky Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-015-0003 | KY 338 & Lower River Road East Bend (Boone) | | | X(s) | | | X | | ~~X~~ | | | | | X |
| Not Available | 524A John's Hill Road Highland Heights(Campbell) | X(It) | | X(I) | X | | X(Ie) | | X | HG | | | | |
| 21-117-0007 | 1401 Dixie Highway Covington (Kenton) | X(tIe) | | ~~X(I)~~ | ~~X~~ | | X(I) | | | | X | X | X | X |
| | TOTAL | 4 | 0 | 1 | 1 | 0 | 3 | 0 | 1 | 1 | 1 | 1 | 1 | 2 |

(e) Emergency Episode Monitor

(I) Air Quality Index Monitor

(t) Continuous PM Monitor

(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** Metropolitan Cincinnati (Ohio) Interstate (079)
**CSA/MSA:** Cincinnati-Middletown-Wilmington, OH-KY-IN CSA / Cincinnati-Middletown, OH-KY-IN MSA
**Site Name:** East Bend
**AQS Site ID:** 21-015-0003
**Location:** KY 338 and Lower River Road, East Bend, KY 41005
**County:** Boone
**GPS Coordinates:** 38.918056, -84.852778
**Date Established:** July 1, 1977
**Inspection Date:** October 27, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.


The monitoring site is a stationary equipment shelter located at the intersection of KY 338 and Lower River Road in East Bend, Kentucky. The sample inlets are 12 feet above ground level and 50 feet from the nearest road. The most recent site inspection was conducted on October 27, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

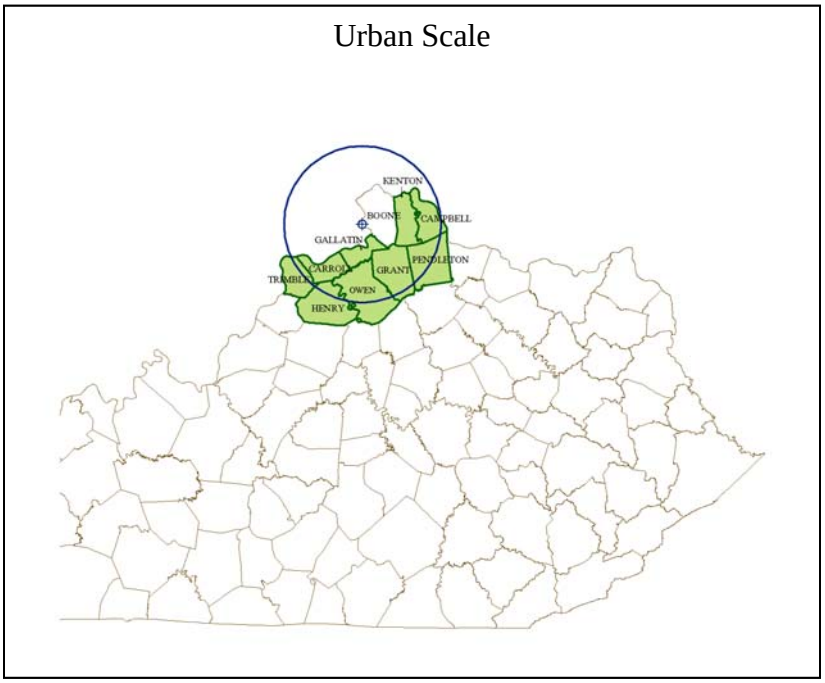
**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents background levels on an urban scale for ozone.



**401 KAR 50:020 Air Quality Control Region:** Metropolitan Cincinnati (Ohio) Interstate (079)
**CSA/MSA:** Cincinnati-Middletown-Wilmington, OH-KY-IN CSA / Cincinnati-Middletown, OH-KY-IN MSA
**Site Name:** Covington
**AQS Site ID:** 21-117-0007
**Location:** University College, 1401 Dixie Hwy, Covington, KY 41011
**County:** Kenton
**GPS Coordinates:** 39.072500, -84.525000
**Date Established:** August 22, 1975
**Inspection Date:** October 27, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network


The monitoring site is a stationary equipment shelter located on the grounds of the University College in Covington, Kentucky. The sample inlets are 13 feet above ground level and 40 feet from the nearest road. The most recent site inspection was conducted on October 27, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to provide ozone, particulate and sulfur dioxide levels for daily index reporting; and to detect elevated pollutant levels for activation of emergency control procedures for particulates.

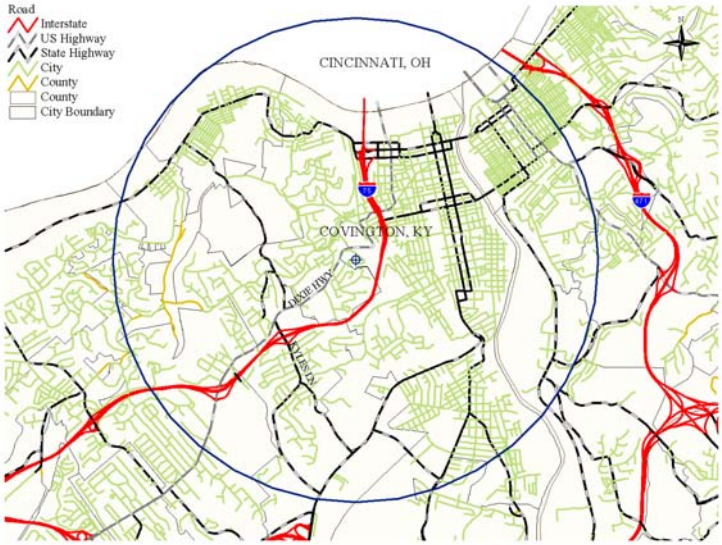
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ Speciation | SLAMS | Thermal optical, ion chromatography, and X-ray fluorescence | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | SPM<br>AQI<br>EPISODE | Tapered element oscillating microbalance, gravimetric | Continuously |
| Volatile Organics Compound | SPM | EPA method TO-15 | 24-hours every sixth day |
| Carbonyls | SPM | EPA method TO-11A | 24-hours every sixth day |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for ozone and particulates.

Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** Metropolitan Cincinnati (Ohio) Interstate (079)
**CSA/MSA:** Cincinnati-Middletown-Wilmington, OH-KY-IN CSA / Cincinnati-Middletown, OH-KY-IN MSA
**Site Name:** Northern Kentucky University "NKU"
**AQS Site ID:** To be determined
**Location:** 524A John's Hill Road, Highland Heights, KY 41076
**County:** Campbell
**GPS Coordinates:** 39.021727, - 84.474386
**Date Established:** 2007
**Inspection Date:**
**Inspection By:**
**Site Approval Status**:

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Picture Not Available

This site will be a stationary equipment shelter located on farmland owned by the Northern Kentucky University.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to provide ozone, particulate and sulfur dioxide levels for daily index reporting; and to detect elevated pollutant levels for activation of emergency control procedures for ozone.

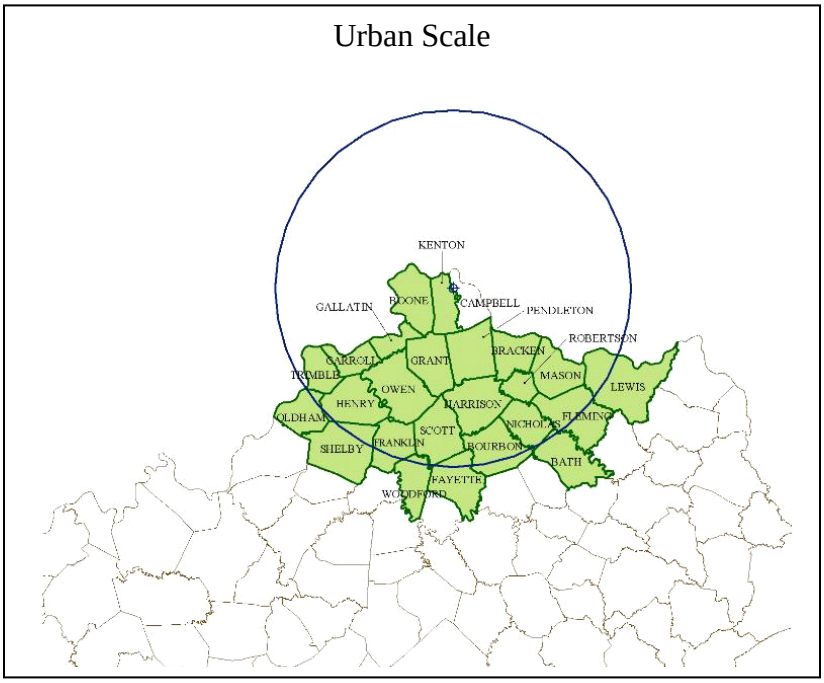
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Nitrogen Dioxide | SLAMS | Chemiluminescence | Continuously |
| AEM Ozone | SLAMS<br>AQI<br>EPISODE | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ TEOM | SPM<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS<br>AQI | UV fluorescence | Continuously |
| Mercury - ambient | SPM | Cold vapour atomic fluorescence spectrometry | Continuously |
| Mercury – Wet Deposition | SPM | Wet deposition collected, analysis of sample by the Environmental Services laboratory | Weekly |

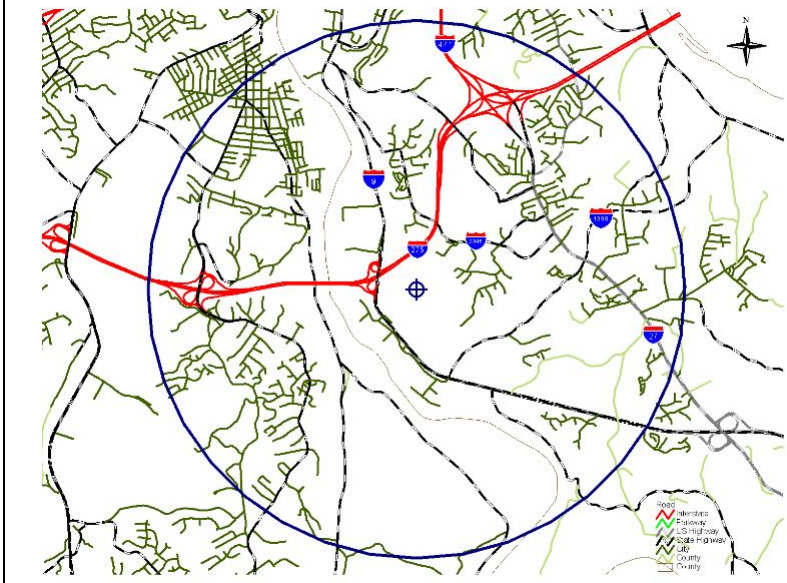
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure for nitrogen dioxide, ozone, sulfur dioxide and mercury on an urban scale. This site also represents population exposure on a neighborhood scale for particulate matter.

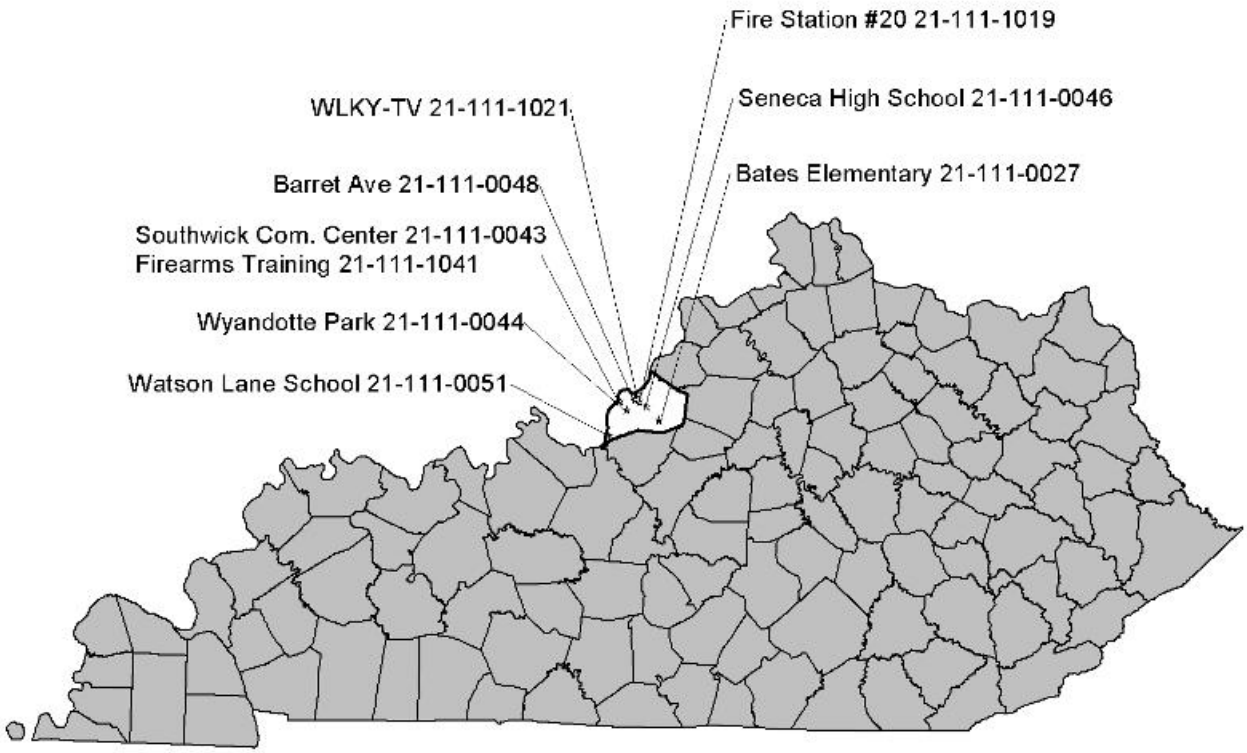
Urban Scale




Neighborhood Scale



# Louisville Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-111-0027 | 7601 Bardstown Road Louisville (Jefferson) | Xt(s) | | | | | X(I) | | | | | | | |
| 21-111-0043 | 3621 Southern Avenue Louisville (Jefferson) | X(ctI) | X(c) | | | | | | | | | | X | X |
| 21-111-0044 | 1032 Beecher Avenue Louisville (Jefferson) | X | X(tNI) | | | | | | | | | | | |
| 21-111-0046 | 3510 Goldsmith Lane Louisville (Jefferson) | | | | | X(NI) | | | | | | | | |
| 21-111-0048 | 850 Barret Avenue Louisville (Jefferson) | X(t I) | | | | | | | | | | | | |
| 21-111-0051 | 7201 Watson Lane Louisville (Jefferson) | X(tsI) | | X(I) | | | X(I) | | | | | | | |
| 21-111-1019 | 1735 Bardstown Road Louisville (Jefferson) | | | | | X(I) | | | | | | | | |
| 21-111-1021 | 1918 Mellwood Ave, WLKY-TV Louisville (Jefferson) | | | | X(e) | | X(N) | | | | | | | |
| 21-111-1041 | 4201 Algonquin Parkway Louisville (Jefferson) | | | X(NIe) | | | | | | | | | | |
| | TOTAL | 9 | 3 | 2 | 1 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 1 |

(c) Collocated Monitor
(e) Emergency Episode Monitor
(I) Air Quality Index Monitor
(N) National Air Monitoring Station (NAMS) Monitor
(s) Special Purpose Monitor
(t) Continuous PM Monitor

**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Bates Elementary
**AQS Site ID:** 21-111-0027
**Location:** Bates Elementary School, 7601 Bardstown Road, Louisville, KY 40291
**County:** Jefferson
**GPS Coordinates:** 38.137222, -85.578333
**Date Established:** January 4, 1973
**Inspection Date:** September 22, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

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The monitoring site is a stationary equipment shelter located on the grounds of the Bates Elementary School in Louisville, Kentucky. The sample inlets are 13 feet above ground level and 1000 feet from the nearest road. The most recent site inspection was conducted on September 22, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide pollution levels for daily index reporting.

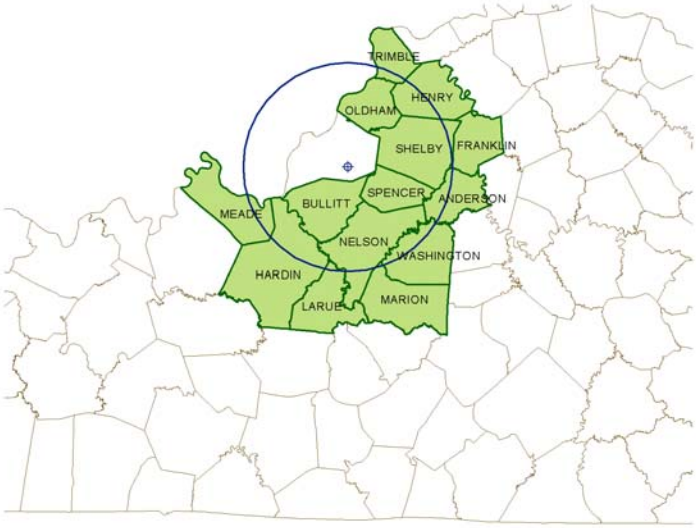
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| $PM_{2.5}$ TEOM | Other<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |

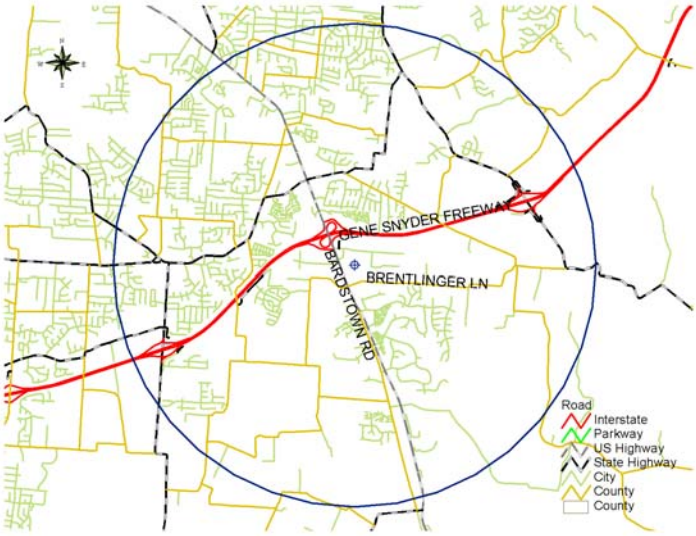
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR Part 58, Appendix A.

**Area Representativeness:**
The site represents population exposure on an urban scale for ozone. This site also represents population exposure on a neighborhood scale for fine particulates.

Ozone Urban Scale




Particulates Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Southwick Community Center
**AQS Site ID:** 21-111-0043
**Location:** Southwick Community Center, 3621 Southern Avenue, Louisville, KY 40211
**County:** Jefferson
**GPS Coordinates:** 38.232222, -85.825278
**Date Established:** July 1, 1983
**Inspection Date:** October 26, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located on the roof of the Southwick Park Community Center in Louisville, Kentucky. The sample inlets are 16 feet above ground level and 200 feet from the nearest road. The most recent site inspection was conducted on October 26, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide pollution levels for daily index reporting.

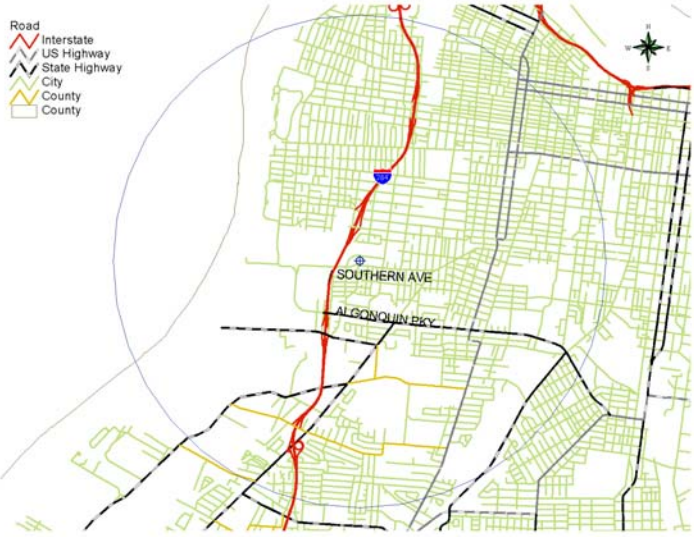
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| $PM_{10}$ TEOM | AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| - Collocated $PM_{10}$ TEOM | AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours everyday |
| - Collocated FRM $PM_{2.5}$ | Other | Gravimetric | 24-hours every sixth day |
| $PM_{2.5}$ Speciation with separate Carbon Analyzer | SLAMS | Thermal optical, ion chromatography, and X-ray fluorescence | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | Other AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates. This site also represents population exposure, highest concentration for the SLAMS speciation particulates.

Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Wyandotte Park
**AQS Site ID:** 21-111-0044
**Location:** Wyandotte Park, 1032 Beecher Avenue, Louisville, KY 40215
**County:** Jefferson
**GPS Coordinates:** 38.190833, -85.780556
**Date Established:** September 1, 1983
**Inspection Date:** September 22, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located on the roof of the pool house at Wyandotte Park in Louisville, Kentucky. The sample inlets are 16 feet above ground level and 150 feet from the nearest road. The most recent site inspection was conducted on September 22, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to observe pollution trends for national data analysis; and to provide pollution levels for daily index reporting.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM $PM_{10}$ TEOM | NAMS<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours everyday |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
The site represents population exposure on a neighborhood scale.

Neighborhood Scale

**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Seneca
**AQS Site ID:** 21-111-0046
**Location:** Seneca High School, Goldsmith Lane, Louisville, KY 40218
**County:** Jefferson
**GPS Coordinates:** 38.208056, -85.655556
**Date Established:** April 1, 1987
**Inspection Date:** October 26, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located at the Seneca High School in Louisville, Kentucky. The sample inlet is 37 feet above ground level and 600 feet from the nearest road. The most recent site inspection was conducted on October 26, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to observe pollution trends for national data analysis; and to provide pollution levels for daily index reporting.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| ARM Carbon Monoxide | NAMS<br>SLAMS<br>AQI | Non-dispersive infrared | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

Neighborhood Scale

**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Barret Avenue
**AQS Site ID:** 21-111-0048
**Location:** 850 Barret Avenue, Louisville, KY 40204
**County:** Jefferson
**GPS Coordinates:** 38.240556, -85.731667
**Date Established:** November 1, 1989
**Inspection Date:** September 22, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

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The monitoring site is located on the roof of a three story building on Barret Avenue in Louisville, Kentucky. The sample inlets are 33 feet above ground level and 175 feet from the nearest road. The most recent site inspection was conducted on September 22, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide pollution levels for daily index reporting.

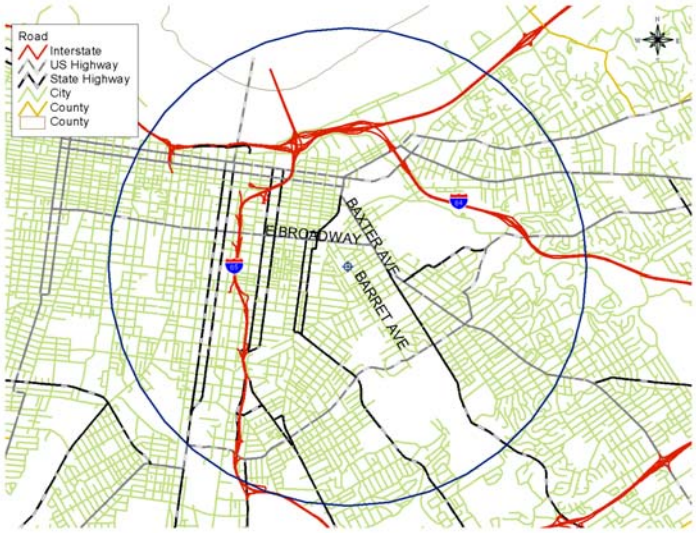
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{2.5}$ | SLAMS<br>AQI | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ TEOM | Other<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| Solar Radiation | Other | Pyranometer | Continuously |
| Rain/melt Precipitation | Other | Heated tipping bucket | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Watson Lane
**AQS Site ID:** 21-111-0051
**Location:** Watson Lane School, 7201 Watson Lane, Louisville, KY 40272
**County:** Jefferson
**GPS Coordinates:** 38.060833, -85.896111
**Date Established:** July 16, 1992
**Inspection Date:** September 22, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Watson Lane Elementary School in Louisville, Kentucky. The sample inlets are 13 feet above ground level and 125 feet from the nearest road. The most recent site inspection was conducted on September 22, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

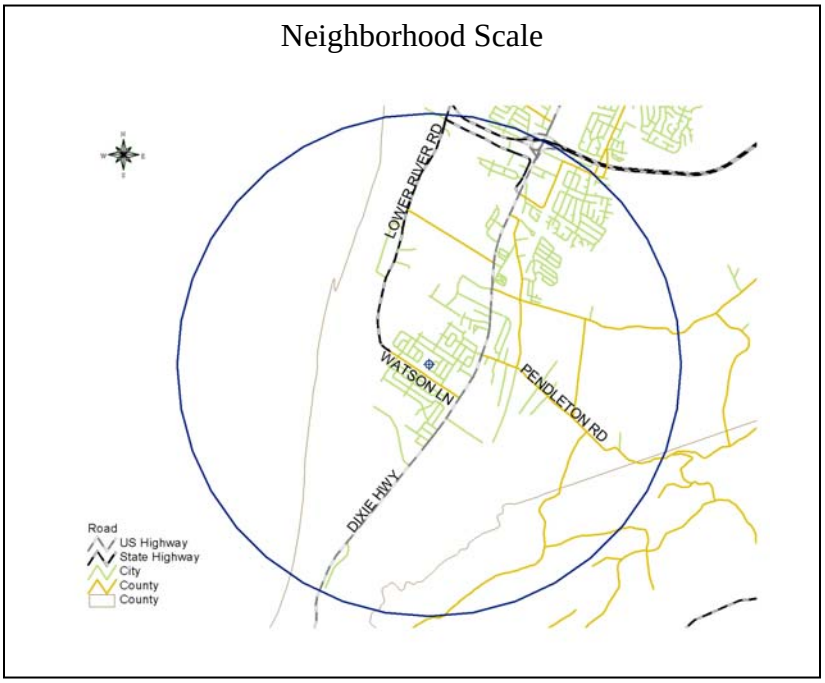
**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide pollution levels for daily index reporting.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | Other | Gravimetric | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | Other<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS<br>AQI | UV fluorescence | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.



**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Fire Station 20
**AQS Site ID:** 21-111-0019
**Location:** Fire Station 20, 1735 Bardstown Road, Louisville, KY 40205
**County:** Jefferson
**GPS Coordinates:** 38.228889, -85.702222
**Date Established:** January 1, 1973
**Inspection Date:** October 26, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located at Fire Station Number 20 on Bardstown Road in Louisville, Kentucky. The sample inlet is 10 feet above ground level and 13 feet from the nearest road. The most recent site inspection was conducted on October 26, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide pollution levels for daily index reporting.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| ARM Carbon Monoxide | SLAMS AQI | Non-dispersive infrared | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents maximum concentration on a micro scale.

Micro Scale

**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** WLKY-TV
**AQS Site ID:** 21-111-1021
**Location:** WLKY-TV, 1918 Mellwood Avenue, Louisville, KY 40206
**County:** Jefferson
**GPS Coordinates:** 38.263611, -85.711667
**Date Established:** August 31, 1973
**Inspection Date:** October 26, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located at the WLKY-TV building in Louisville, Kentucky. The sample inlets are 15 feet above ground level and 500 feet from the nearest road. The most recent site inspection was conducted on October 26, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to observe pollution trends for national data analysis; to detect episode levels for the activation of emergency control procedures; and to provide pollution levels for daily index reporting.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Nitrogen Dioxide | SLAMS<br>EPISODE | Chemiluminescence | Continuously |
| AEM Ozone | NAMS<br>SLAMS<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for ozone. This site also represents population exposure on an urban scale for nitrogen dioxide.

Ozone Neighborhood Scale


Nitrogen Dioxide Urban Scale

**401 KAR 50:020 Air Quality Control Region:** Louisville Interstate (078)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Firearms Training
**AQS Site ID:** 21-111-1041
**Location:** Firearms Training, 4201 Algonquin Parkway, Louisville, KY 40211
**County:** Jefferson
**GPS Coordinates:** 38.231630, -85.826720
**Date Established:** April 13, 1978
**Inspection Date:** September 22, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Firearms Training Center in Louisville, Kentucky. The sample inlet is 15 feet above ground level and 100 feet from the nearest road. The most recent site inspection was conducted on September 22, 2006. The air monitoring site was found to be in accordance with 40 CFR Part 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to observe pollution trends for national data analysis; to detect episode levels for the activation of emergency control procedures; and to provide pollution levels for daily index reporting.

**Monitors:**

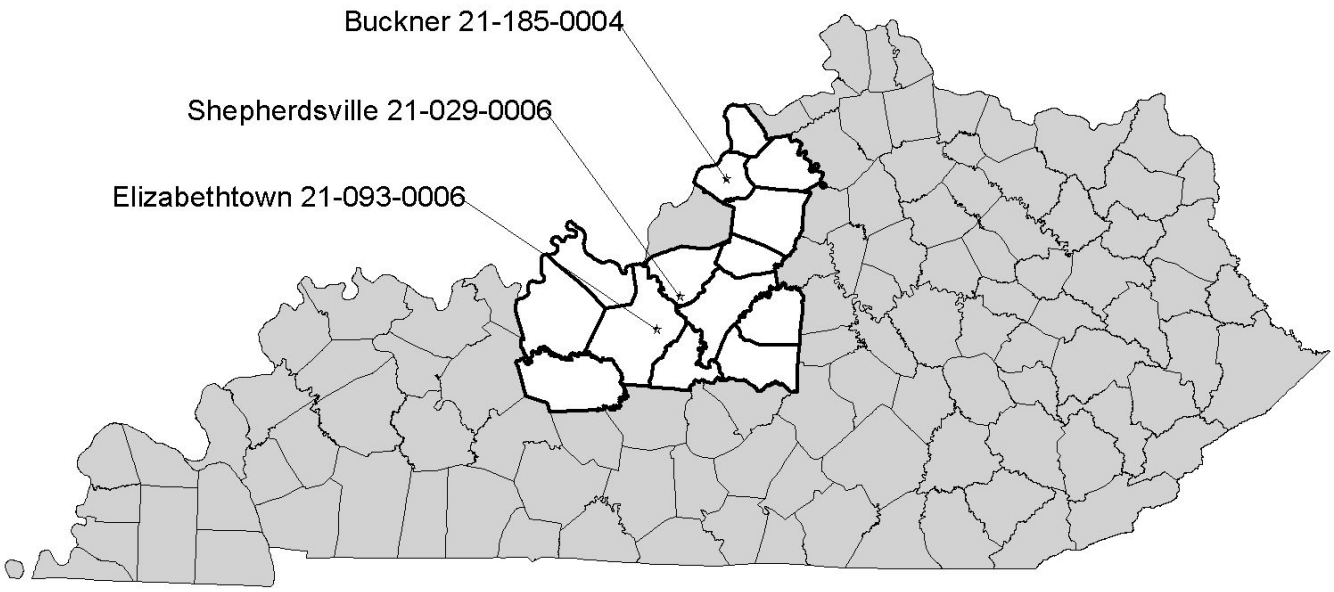
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Sulfur Dioxide | NAMS<br>SLAMS<br>EPISODE<br>AQI | UV fluorescence | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

Neighborhood Scale

# North Central Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-029-0006 | 2nd & Carpenter Streets Shepherdsville (Bullitt) | X | | | | | X | | | | | | | X |
| 21-093-0006 | 801 N Miles St, Am Legion Park Elizabethtown (Hardin) | X(t) | | | | | X(s) | | | | | | | |
| 21-185-0004 | DOT Garage, 3995 Morgan Rd Buckner (Oldham) | | | | | | X | | | | | | | |
| | TOTAL | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

(s) Special Purpose Monitor

(t) Continuous PM Monitor

(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** North Central Kentucky Intrastate (104)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Shepherdsville
**AQS Site ID:** 21-029-0006
**Location:** Second and Carpenter Streets, Shepherdsville, KY 40165
**County:** Bullitt
**GPS Coordinates:** 37.98556, -85.713056
**Date Established:** January 30, 1992
**Inspection Date:** August 21, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located in a fenced in area near the intersection of Second and Carpenter Streets in Shepherdsville, Kentucky. The sample inlets are 13 feet above ground level and 70 feet from the nearest road. The most recent site inspection was conducted on August 21, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

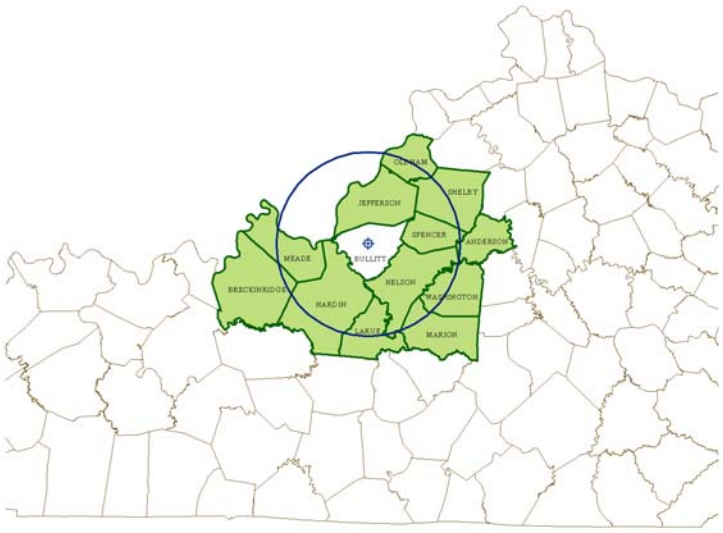
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates and population exposure on an urban scale for ozone.

Particulates Neighborhood Scale


Ozone Urban Scale



**401 KAR 50:020 Air Quality Control Region:** North Central Kentucky Intrastate (104)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Elizabethtown, KY MSA
**Site Name:** Elizabethtown
**AQS Site ID:** 21-093-0006
**Location:** American Legion Park, 801 North Miles Street, Elizabethtown, KY 42701
**County:** Hardin
**GPS Coordinates:** 37.706389, -85.851667
**Date Established:** February 24, 2000
**Inspection Date:** August 21, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

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No Picture Available

The monitoring site is a stationary equipment shelter located near the tennis courts on the grounds of the American Legion Park in Elizabethtown, Kentucky. The sample inlets are 13 feet above ground level and 800 feet from the nearest road. The most recent site inspection was conducted on August 21, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

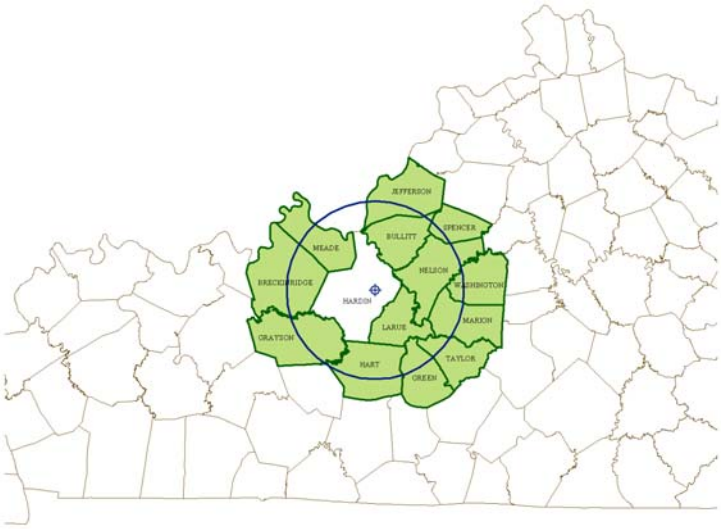
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ TEOM | SPM | Tapered element oscillating microbalance, gravimetric | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates and population exposure on an urban scale for ozone.

Particulates Neighborhood Scale


Ozone Urban Scale



**401 KAR 50:020 Air Quality Control Region:** North Central Kentucky Intrastate (104)
**CSA/MSA:** Louisville-Jefferson County-Elizabethtown-Scottsburg, KY-IN CSA / Louisville-Jefferson County, KY-IN MSA
**Site Name:** Buckner
**AQS Site ID:** 21-185-0004
**Location:** DOT Garage, 3995 Morgan Road, Buckner, KY 40010
**County:** Oldham
**GPS Coordinates:** 38.398611, -85.443333
**Date Established:** May 1, 1981
**Inspection Date:** August 21, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

No Picture Available

The monitoring site is a stationary equipment shelter located on the grounds of the Kentucky DOT Highway Garage in Buckner, Kentucky. The sample inlets are 13 feet above ground level and 250 feet from the nearest road. The most recent site inspection was conducted on August 21, 2006. Upon inspection, the sample line and monitor were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards.

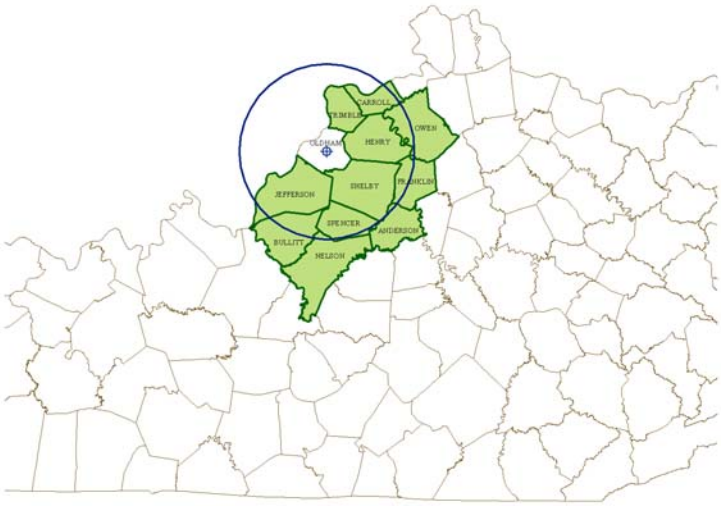
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |

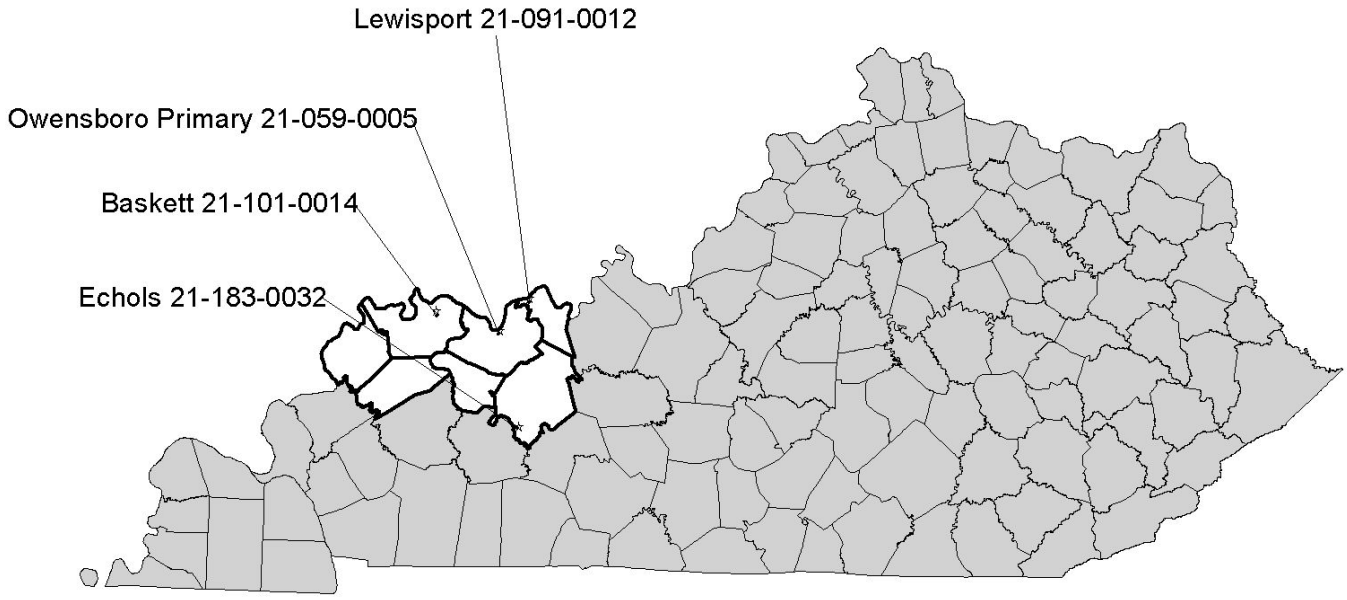
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents maximum concentrations on an urban scale.

Ozone Urban Scale



# Owensboro-Henderson Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb -onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-059-0005 | 716 Pleasant Valley Road Owensboro (Daviess) | X(tIe) | | X(eI) | X(e) | | X(eI) | | | | | | | X |
| 21-091-0012 | Lewisport Elementary School Lewisport (Hancock) | | | | | | X | | | | | | | |
| 21-101-0014 | Baskett Fire Department Baskett (Henderson) | X(ct) | | X | | | X(s) | | | | | | | |
| 21-183-0032 | Keytown Road Echols (Ohio) | X(st) | X(s) | X(s) | X(s) | | X(s) | X(s) | X | HG | | | | X |
| | TOTAL | 7 | 1 | 3 | 2 | 0 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 2 |

(c) Collocated Monitor
(e) Emergency Episode Monitor
(I) Air Quality Index Monitor
(s) Special Purpose Monitor
(t) Continuous PM Monitor

(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** Evansville-Owensboro-Henderson Interstate (077)
**CSA/MSA:** Owensboro, KY MSA
**Site Name:** Owensboro Primary
**AQS Site ID:** 21-059-0005
**Location:** 716 Pleasant Valley Road, Owensboro, KY 42303
**County:** Daviess
**GPS Coordinates:** 37.780833, -87.075556
**Date Established:** December 1, 1970
**Inspection Date:** September 25, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds behind the Wyndall's Shopping Center in Owensboro, Kentucky. The sample inlets are 13 feet above ground level and 200 feet from the nearest road. The most recent site inspection was conducted on September 25, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D, E and G.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to detect emergency pollution levels of criteria pollutants for activation of emergency control procedures; and to provide levels of ozone, particulate matter and sulfur dioxide for daily index reporting.

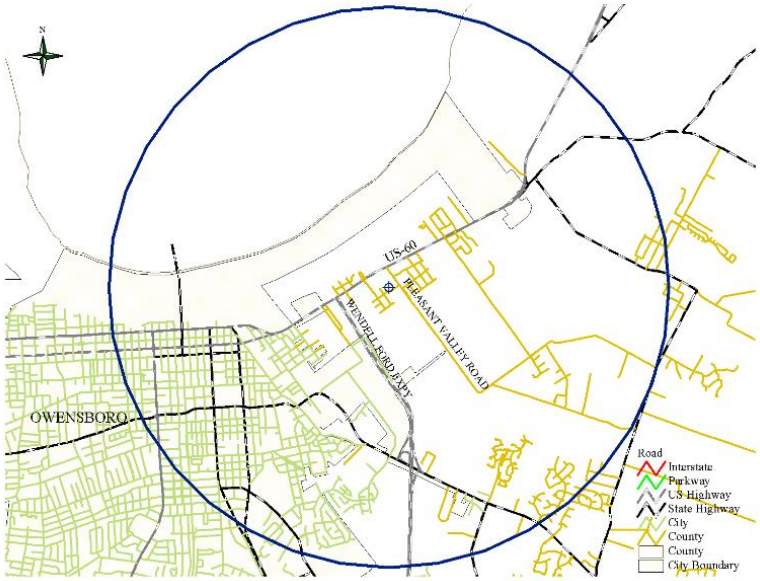
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Nitrogen Dioxide | SLAMS<br>EPISODE | Chemiluminescence | Continuously |
| AEM Ozone | SLAMS<br>EPISODE<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS<br>EPISODE<br>AQI | Gravimetric | 24-hours every third day |
| $PM_{2.5}$ TEOM | SPM | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS<br>EPISODE<br>AQI | UV fluorescence | Continuously |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

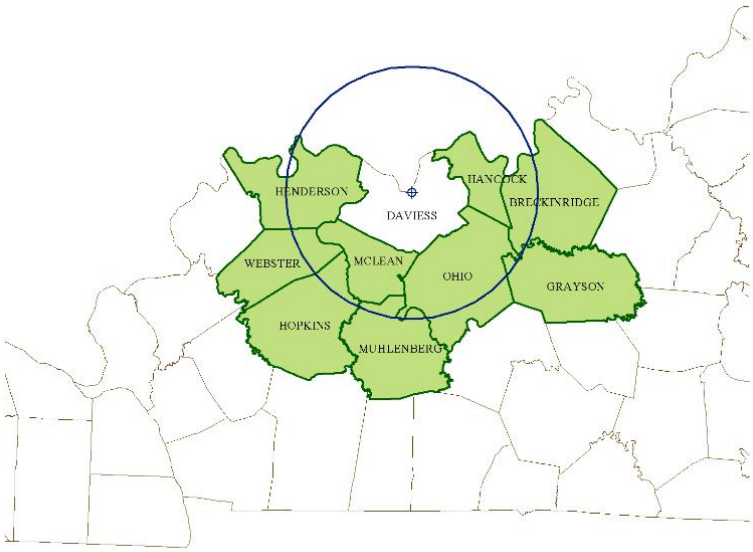
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for particulates, ozone and sulfur dioxide. This site also represents population exposure on an urban scale for nitrogen dioxide.

Criteria Neighborhood Scale




Nitrogen Dioxide Urban Scale



**401 KAR 50:020 Air Quality Control Region:** Evansville-Owensboro-Henderson Interstate (077)
**CSA/MSA:** Owensboro, KY MSA
**Site Name:** Lewisport
**AQS Site ID:** 21-091-0012
**Location:** Second and Caroline Streets, Lewisport Elementary School, Lewisport, KY 42351
**County:** Hancock
**GPS Coordinates:** 37.938889, -86.896944
**Date Established:** September 5, 1980
**Inspection Date:** September 25, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Lewisport Elementary School in Lewisport, Kentucky. The sample inlets are 11 feet above ground level and 175 feet from the nearest road. The most recent site inspection was conducted on September 25, 2006. Upon inspection, the sample line and monitor were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

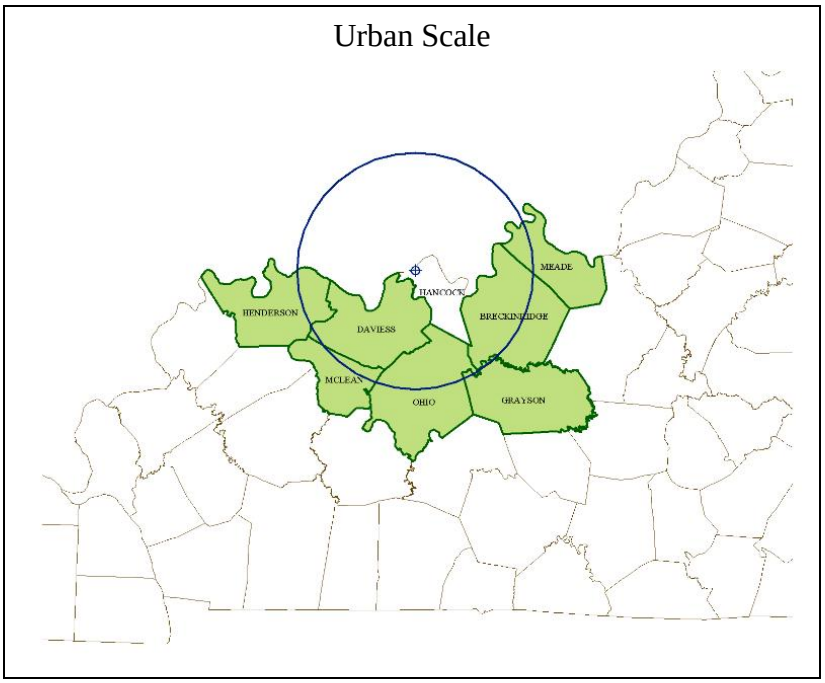
**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents maximum concentration on an urban scale.



**401 KAR 50:020 Air Quality Control Region:** Evansville-Owensboro-Henderson Interstate (077)
**CSA/MSA:** Evansville, IN- KY MSA
**Site Name:** Baskett
**AQS Site ID:** 21-101-0014
**Location:** Baskett Fire Department, Baskett, KY 42402
**County:** Henderson
**GPS Coordinates:** 37.871389, -87.463333
**Date Established:** February 27, 1992
**Inspection Date:** September 25, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Baskett Fire Department in Baskett, Kentucky. The sample inlets are 13 feet above ground level and 25 feet from the nearest road. The most recent site inspection was conducted on September 25, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

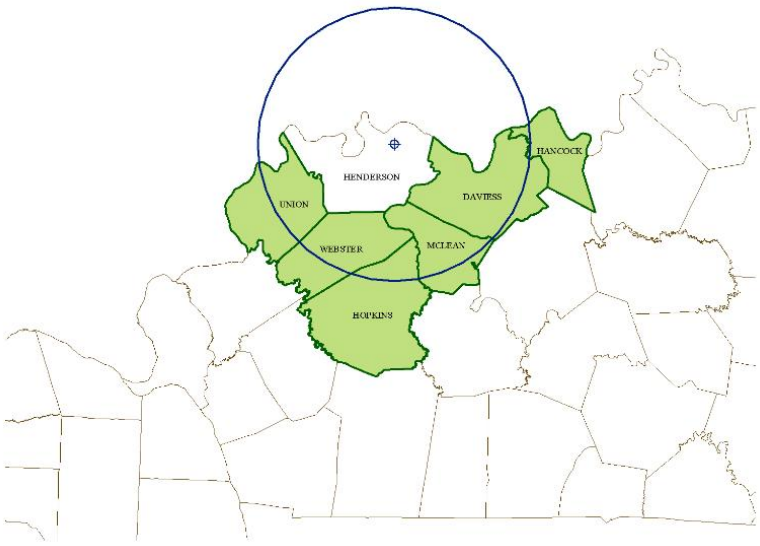
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM | UV photometry | Continuously<br>March 1 – October 31 |
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| - Collocated FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | SPM | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS | UV fluorescence | Continuously |

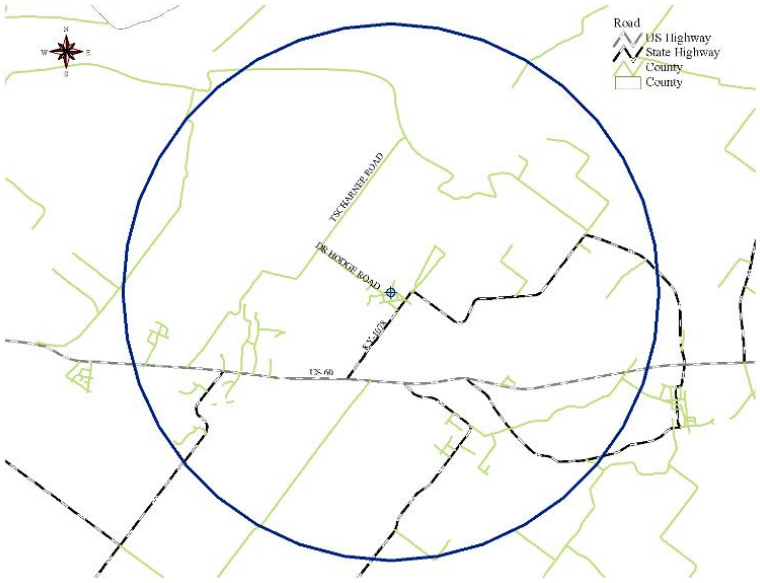
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents maximum concentration on an urban scale for ozone. This site also represents population exposure on a neighborhood scale for particulates and sulfur dioxide.

Ozone Urban Scale




Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** Evansville-Owensboro-Henderson Interstate (077)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** Echols
**AQS Site ID:** 21-183-0032
**Location:** Keytown Road, Echols, KY 42320
**County:** Ohio
**GPS Coordinates:** 37.319725, -86.956097
**Date Established:** February 1, 2005
**Inspection Date:** September 19, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on farmland off Keytown Road near the intersection with Pond Church Road in Echols, Kentucky. The sample inlets are 12 feet above ground level and 100 feet from the nearest road. The most recent site inspection was conducted on September 19, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

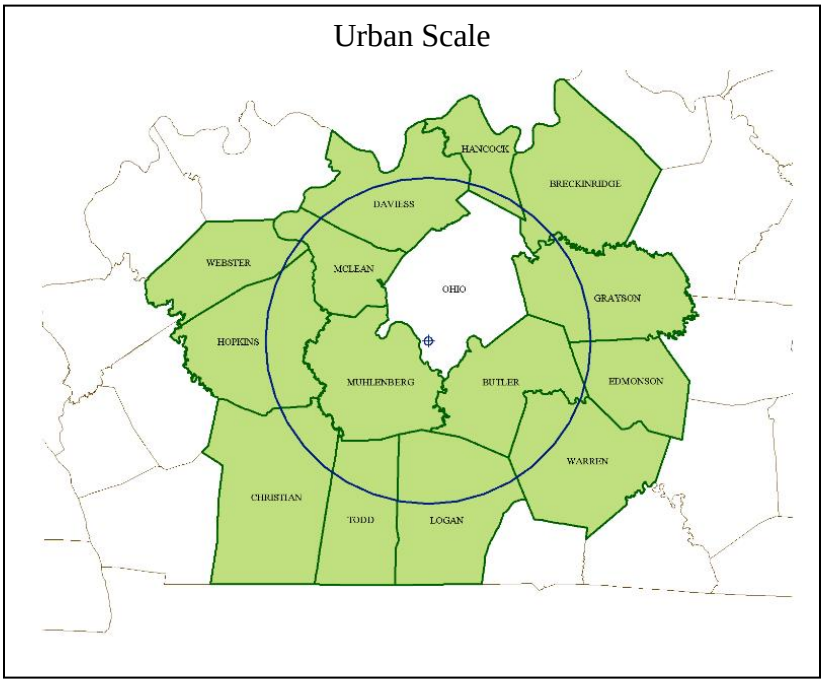
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| Nitrogen Dioxide | SPM | UV open path | Continuously |
| Ozone | SPM | UV open path | Continuously<br>March 1 – October 31 |
| FRM $PM_{10}$ | SPM | Gravimetric | 24-hours every sixth day |
| - Metals $PM_{10}$ | SPM | Determined from the $PM_{10}$ samples using EPA method IO 3.4 | Same as $PM_{10}$ |
| FRM $PM_{2.5}$ | SPM | Gravimetric | 24-hours every sixth day |
| $PM_{2.5}$ TEOM | SPM | Tapered element oscillating microbalance, gravimetric | Continuously |
| Sulfur Dioxide | SPM | UV open path | Continuously |
| Mercury – ambient | SPM | Cold vapour atomic fluorescence spectrometry | Continuously |
| Mercury – Wet Deposition | SPM | Wet deposition collected, analysis of sample by the Environmental Services Laboratory | Weekly |
| Ammonia | SPM | UV open path | Continuously |
| Nitric Oxide | SPM | UV open path | Continuously |

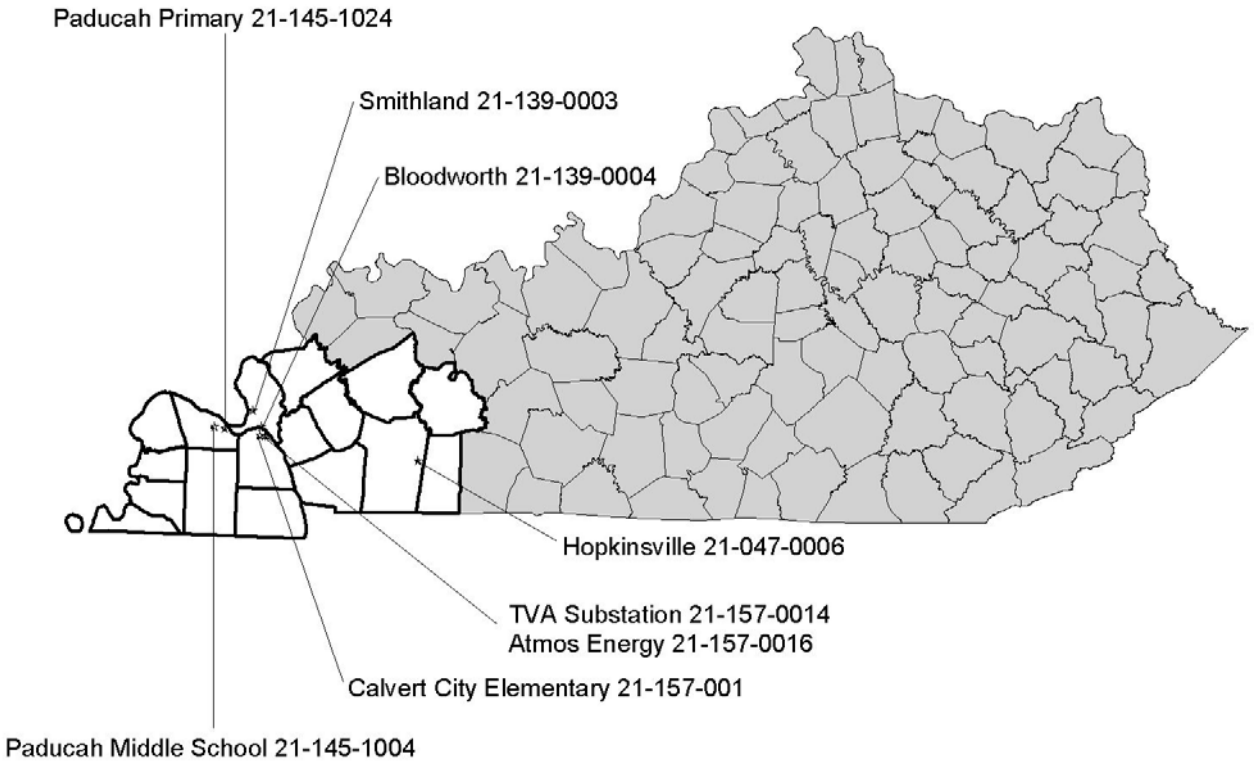
| | | | |
|---|---|---|---|
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A for the FRM $PM_{2.5}$ and $PM_{10}$ monitors. Quality Assurance procedures are currently being developed for the open path methods.

**Area Representativeness:**
This site represents source oriented exposure on an urban scale.



# Paducah-Cairo Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-047-0006 | 10800 Pilot Rock Road<br>Hopkinsville (Christian) | X | | | | | | | | | | | | |
| 21-139-0003 | DOT Garage, 811 Hwy 60 East<br>Smithland (Livingston) | | | | | | X | | X | HG | | | | |
| 21-139-0004 | 763 Bloodworth Road<br>Livingston County | | | | | | | | | | X(cs) | | | X |
| 21-145-1004 | Middle School, 342 Lone Oak Rd<br>Paducah (McCracken) | X | X | | | | | | | | | | | |
| 21-145-1024 | J-P RECC, 2901 Powell Street<br>Paducah (McCracken) | Xt(Ie) | | X(eI) | X(e) | | X(eI) | | | | | | | |
| 21-157-0014 | TVA Substation<br>Calvert City (Marshall) | | | | | | | | | | X(s) | | | X |
| 21-157-0016 | Atmos Energy<br>Calvert City (Marshall) | | | | | | | | | | X(s) | | | |
| 21-157-0018 | Calvert City Elementary School<br>Calvert City (Marshall) | | X | | | | | X | | | X(s) | | | |
| | TOTAL | 3 | 2 | 1 | 1 | 0 | 2 | 1 | 1 | 1 | 5 | 0 | 0 | 2 |

(c) Collocated Monitor

(e) Emergency Episode Monitor

(I) Air Quality Index Monitor

(t) Continuous PM Monitor



(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Clarksville, TN-KY MSA
**Site Name:** Hopkinsville
**AQS Site ID:** 21-047-0006
**Location:** 10800 Pilot Rock Road, Hopkinsville, KY 42240
**County:** Christian
**GPS Coordinates:** 36.911667, -87.323611
**Date Established:** January 1, 1999
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is on a platform in a field adjacent to a residence located at 10800 Pilot Rock Road in Hopkinsville, Kentucky. The sample inlet is 10 feet above ground level and 300 feet from the nearest road. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample inlet and monitor was found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

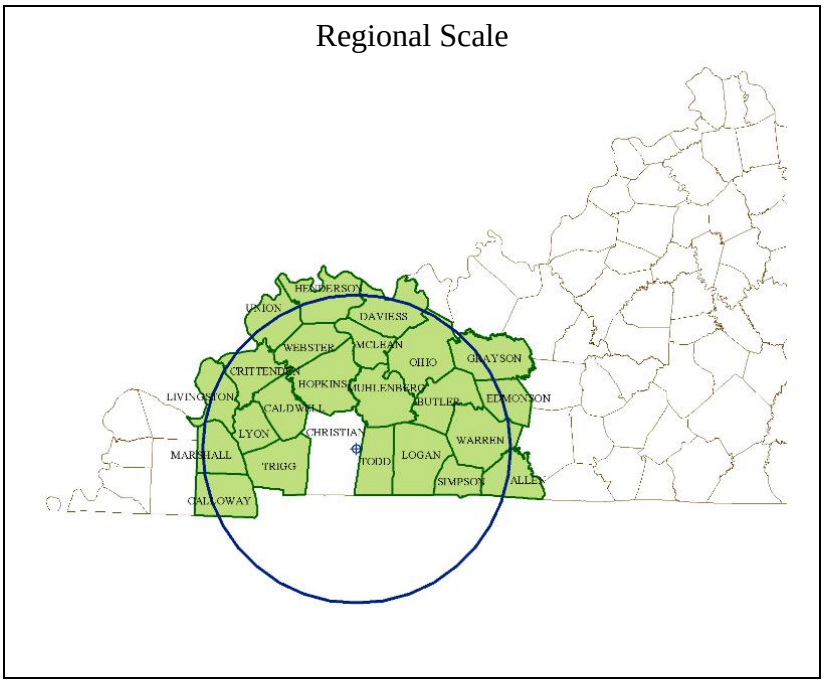
**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality standards and to determine levels of interstate transport of fine particulate matter.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| Tennessee Valley Authority operates: AEM Ozone | Compliance | UV photometry | Continuously<br>March 1 – October 31 |
| Tennessee Valley Authority operates: Meteorological | Compliance | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a regional scale.



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Paducah-Mayfield, KY-IL CSA/ Paducah, KY-IL Micropolitan Statistical Area
**Site Name:** Smithland
**AQS Site ID:** 21-139-0003
**Location:** KY DOT Garage, 811 HWY 60 East, Smithland, KY 42081
**County:** Livingston
**GPS Coordinates:** 37.155556, -88.393056
**Date Established:** April 1, 1988
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the KY DOT Highway Garage in Smithland, Kentucky. The sample inlet is 13 feet above ground level and 1200 feet from the nearest road. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample line and monitor was found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

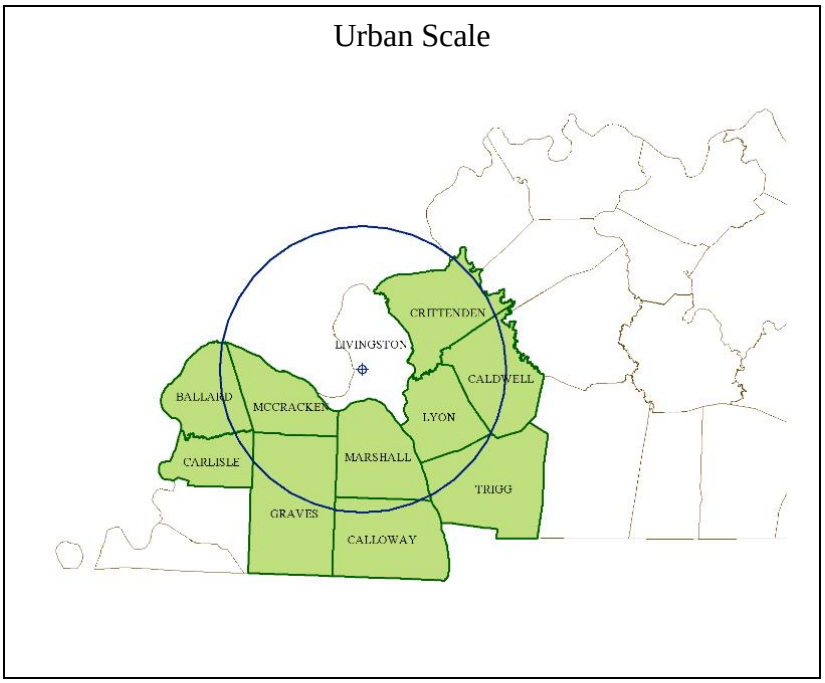
**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality standards.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SLAMS | UV photometry | Continuously<br>March 1 – October 31 |
| Mercury – ambient | SPM | Cold vapour fluorescence spectrometry | Continuously |
| Mercury – Wet Deposition | SPM | Wet deposition collected, analysis of sample by the Environmental Services Laboratory | Weekly |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents maximum concentration on an urban scale.



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Paducah-Mayfield, KY-IL CSA/ Paducah, KY-IL Micropolitan Statistical Area
**Site Name:** Bloodworth
**AQS Site ID:** 21-139-0004
**Location:** 763 Bloodworth Road, Smithland, KY 42081
**County:** Livingston
**GPS Coordinates:** 37.070833, -88.334167
**Date Established:** September 15, 1986
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of a residence at the end of Bloodworth Road in Smithland, Kentucky. The sample inlets are 13 feet above ground level and 1200 feet from the nearest road. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample lines and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

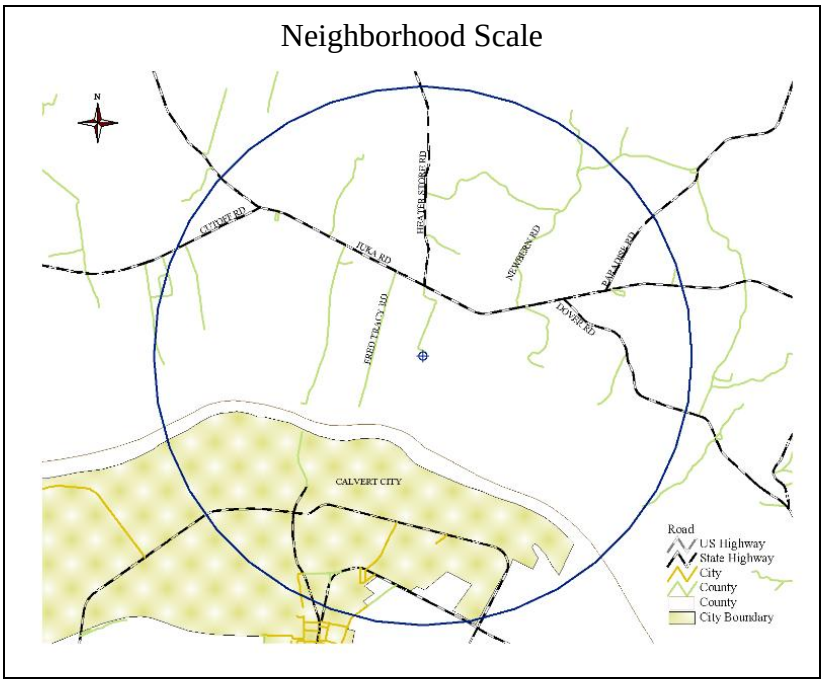
**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality standards and to measure highest concentrations and source impact levels of a sub group of air toxics.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| Volatile Organic Compounds | SPM | EPA method TO-15 | 24-hours every sixth day |
| - Collocated VOC | SPM | EPA method TO-15 | 24-hours every sixth day |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents source impact on a neighborhood scale.



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Paducah-Mayfield, KY-IL CSA/ Paducah, KY-IL Micropolitan Statistical Area
**Site Name:** Paducah Middle School
**AQS Site ID:** 21-145-1004
**Location:** Paducah Middle School, 342 Lone Oak, Paducah, KY 42001
**County:** McCracken
**GPS Coordinates:** 37.065556, -88.637778
**Date Established:** July 1, 1969
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is located on the roof of the Paducah Middle School in Paducah, Kentucky. The sample inlets are 20 feet above ground level and 110 feet from the nearest road. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality standards.

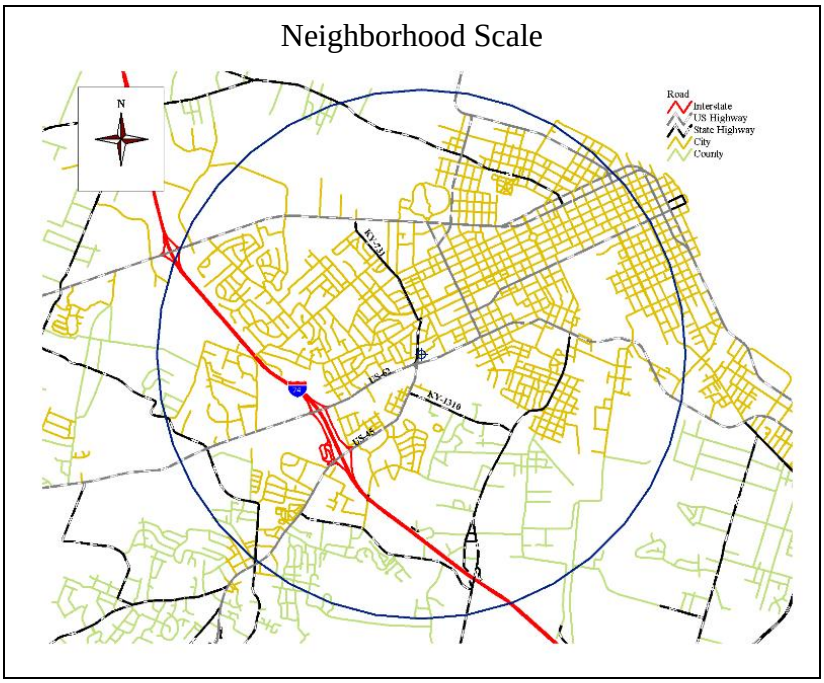
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| FRM $PM_{10}$ | SLAMS | Gravimetric | 24-hours every sixth day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Paducah-Mayfield, KY-IL CSA/ Paducah, KY-IL Micropolitan Statistical Area
**Site Name:** Jackson Purchase Paducah Primary
**AQS Site ID:** 21-145-1024
**Location:** Jackson Purchase RECC, 2901 Powell Street, Paducah, KY 42003
**County:** McCracken
**GPS Coordinates:** 37.058056, -88.572500
**Date Established:** August 15, 1980
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Jackson Purchase RECC in Paducah, Kentucky. The sample inlets are 13 feet above ground level and 31 feet from the nearest road. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality standards; to detect episode pollution levels of criteria pollutants for activation of emergency control procedures; and to provide levels of ozone, particulate matter and sulfur dioxide for daily index reporting.

**Monitors:**

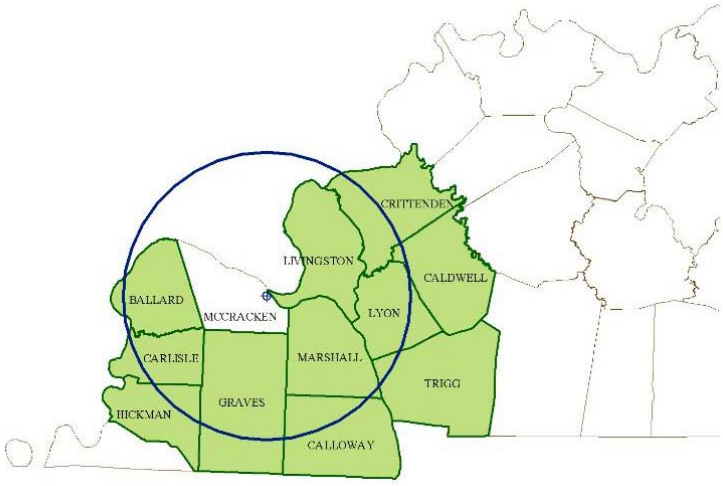
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| ARM Nitrogen Dioxide | SLAMS<br>EPISODE | Chemiluminescence | Continuously |
| AEM Ozone | SLAMS<br>EPISODE<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| $PM_{2.5}$ TEOM | SPM<br>EPISODE<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |
| AEM Sulfur Dioxide | SLAMS<br>EPISODE<br>AQI | UV fluorescence | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale for ozone, particulates and sulfur dioxide. This site also represents population exposure on an urban scale for nitrogen dioxide.

Neighborhood Scale


Nitrogen Dioxide Urban Scale



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** TVA Calvert City
**AQS Site ID:** 21-157-0014
**Location:** Ballpark Road, Calvert City, KY 42029
**County:** Marshall
**GPS Coordinates:** 37.024200, -88.195100
**Date Established:** January 1, 2005
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is an air toxics monitor located off Ballpark Road in Calvert City, Kentucky. The sample inlet is 2 meters above ground level. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample inlet and monitor was found to be in good condition.

**Monitoring Objective:**
The monitoring objective is to determine if toxic air pollutants are present and to quantify them.

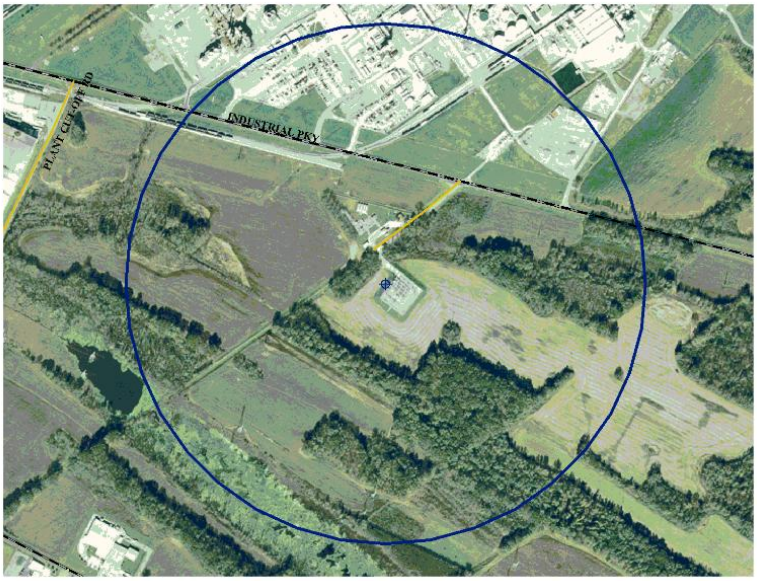
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| Volatile Organic Compounds | SPM | EPA method TO-15 | 24-hours every sixth day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents source oriented exposure on a middle scale.

Middle Scale



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** Atmos Calvert City
**AQS Site ID:** 21-157-0016
**Location:** KY95, Calvert City, KY 42029
**County:** Marshall
**GPS Coordinates:** 37.023100, -88.211500
**Date Established:** January 1, 2005
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is an air toxics monitor located off KY95 in Calvert City, Kentucky. The sample inlet is 2 meters above ground level. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample inlet and monitor was found to be in good condition.

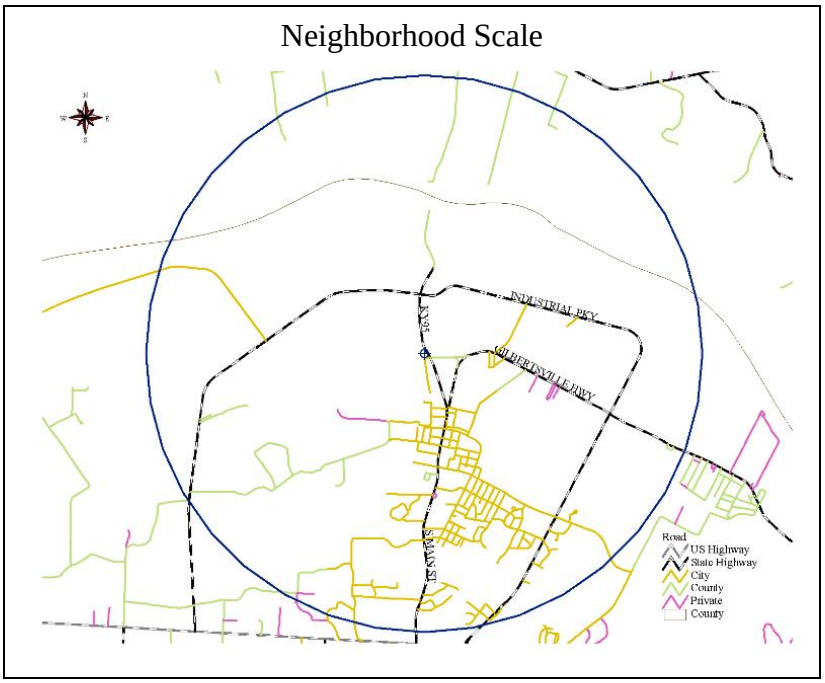
**Monitoring Objective:**
The monitoring objective is to determine if toxic air pollutants are present and quantify them.

**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| Volatile Organic Compounds | SPM | EPA method TO-15 | 24-hours every sixth day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents source oriented exposure on a neighborhood scale.



**401 KAR 50:020 Air Quality Control Region:** Paducah – Cairo Interstate (072)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** Calvert City Elementary
**AQS Site ID:** 21-157-0018
**Location:** Calvert City Elementary, 623 5th Avenue, Calvert City, KY 42029
**County:** Marshall
**GPS Coordinates:** 37.026916, -88.343944
**Date Established:** May 1, 2005
**Inspection Date:** October 12, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Calvert City Elementary in Calvert City, Kentucky. The sample inlets are 13 feet above ground level and 80 feet from the nearest road. The most recent site inspection was conducted on October 12, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine if toxic air pollutants are present and quantify them and to provide meteorological data for toxics analysis.

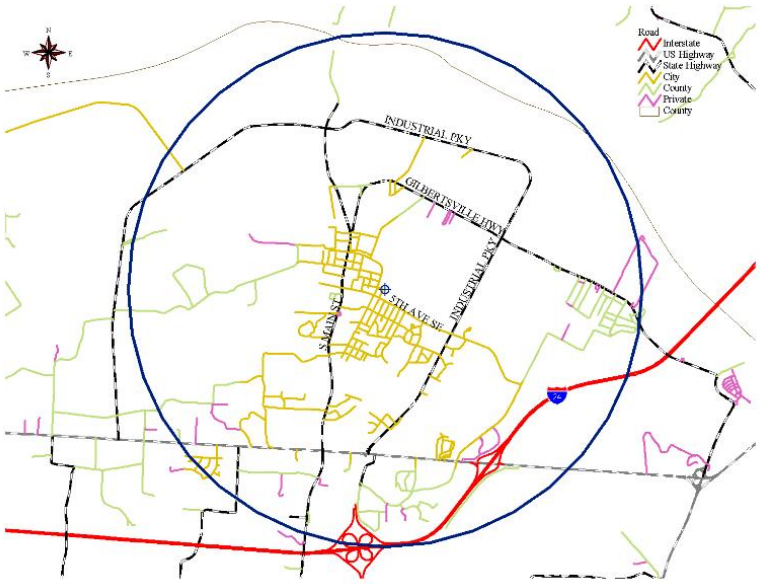
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM PM10 | SPM | Gravimetric | 24-hours every sixth day |
| - Metals PM10 | SPM | Determined from the PM10 sample using EPA method IO 3.4 | Same as PM10 |
| Volatile Organic Compounds | SPM | EPA method TO-15 | 24-hours every sixth day |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

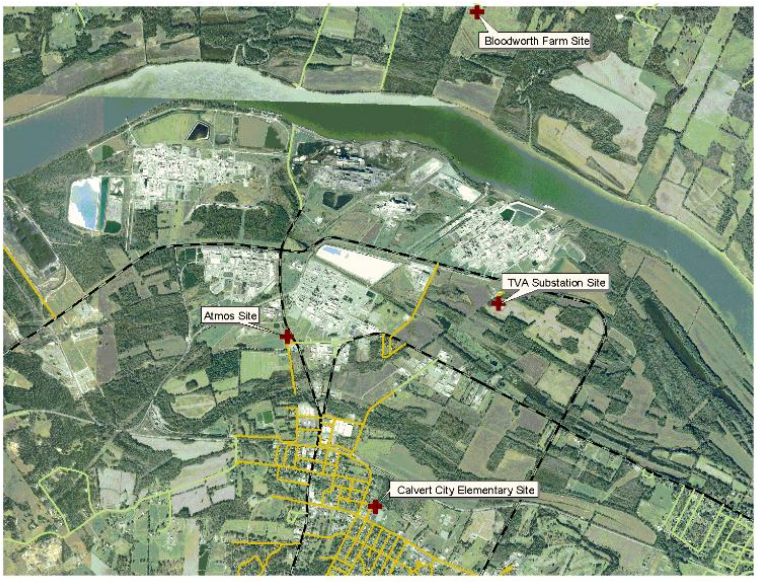
**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

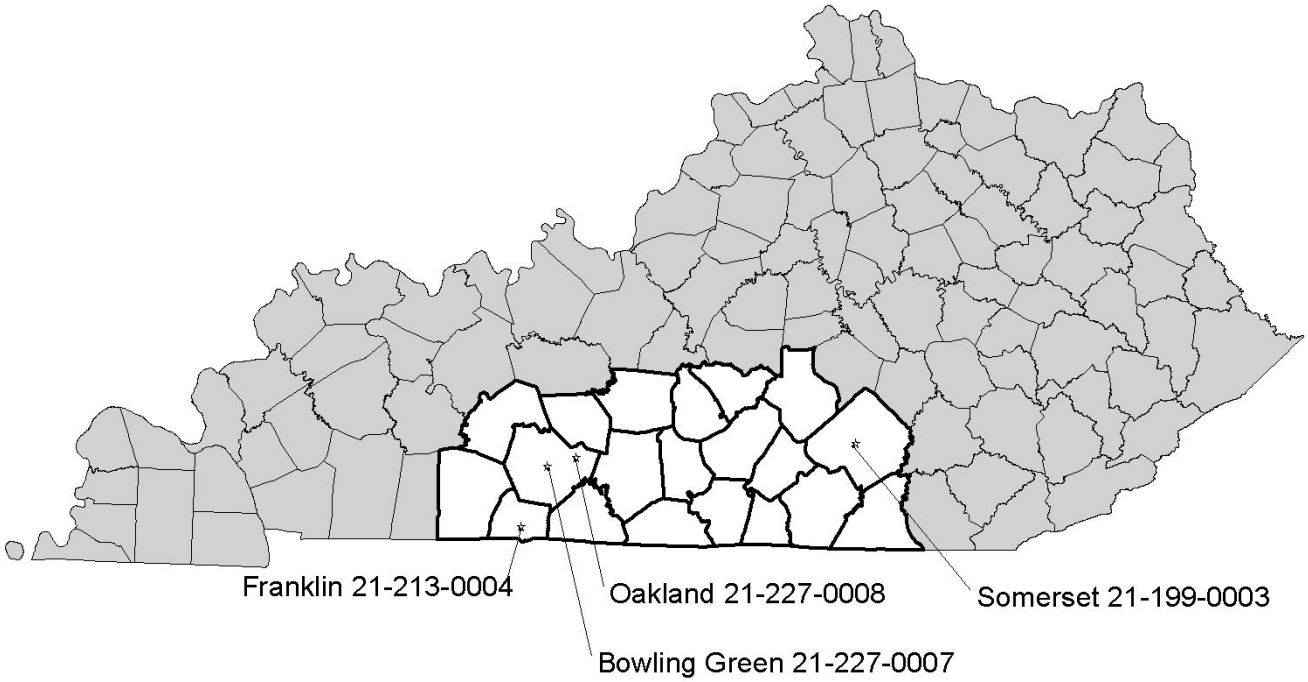
Neighborhood Scale




Calvert City Air Toxics Network



# South Central Region




| AIRS ID | ADDRESS | PM2.5 | PM10 | SO2 | NO2 | CO | O3 | Metals | Hg | Wet Dep. | VOC | Carb-onyl | Specia-tion | MET |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21-199-0003 | Somerset Gas Co., Clifty Street Somerset (Pulaski) | | | | | | X(s) | | | | | | | |
| 21-213-0004 | KY DOT Garage, KY 1008 Franklin (Simpson) | | | | | | X(s) | | | | | | | X |
| 21-227-0007 | Kereiakes Park Bowling Green (Warren) | X(c) | | | | | | | | | | | | |
| 21-227-0008 | Oakland School Oakland (Warren) | Xt(I) | | | | | X(sI) | | | | | | | |
| | TOTAL | 3 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

(c) Collocated Monitor
(I) Air Quality Index Monitor
(s) Special Purpose Monitor
(t) Continuous PM Monitor

(Rev.3/2/07)

**401 KAR 50:020 Air Quality Control Region:** South Central Kentucky Intrastate (105)
**CSA/MSA:** Somerset, KY Micropolitan Statistical Area
**Site Name:** Somerset
**AQS Site ID:** 21-199-0003
**Location:** Somerset Gas Company, Clifty Street, Somerset, KY 42501
**County:** Pulaski
**GPS Coordinates:** 37.097500, -84.611667
**Date Established:** February 14, 1992
**Inspection Date:** December 14, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---


The monitoring site is a stationary equipment shelter located on the grounds of the Somerset Gas Company Warehouse on Clifty Street in Somerset, KY. The sample inlets are 15 feet above ground level and 35 feet from the nearest road. The most recent site inspection was conducted on December 14, 2006. Upon inspection the sample line and monitors were found to be in good condition. Even though the site is for special purpose monitoring, the site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

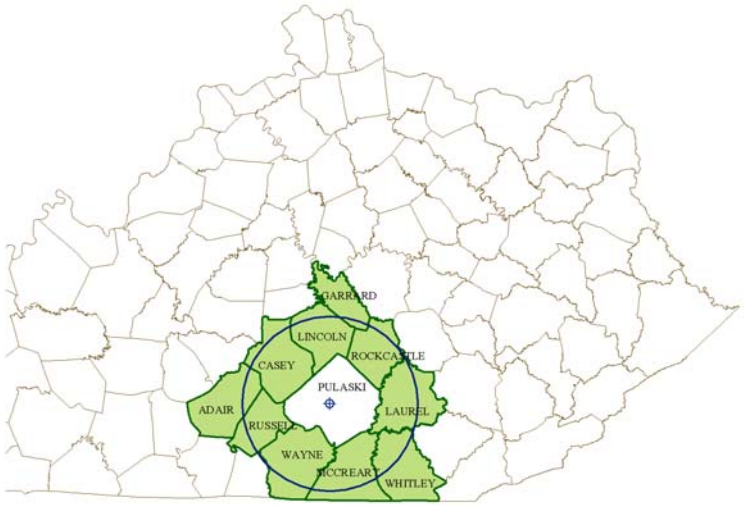
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM | UV photometry | Continuously<br>March 1 – October 31 |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site also represents population exposure on an urban scale for ozone.

Ozone Urban Scale



**401 KAR 50:020 Air Quality Control Region:** South Central Kentucky Intrastate (105)
**CSA/MSA:** Not in a MSA - Rural
**Site Name:** Franklin
**AQS Site ID:** 21-213-0004
**Location:** DOT Garage, KY 1008, Franklin, KY 42134
**County:** Simpson
**GPS Coordinates:** 38.219361, -84.838500
**Date Established:** June 19, 1991
**Inspection Date:** September 25, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the DOT Garage on KY1008 in Franklin, Kentucky. The sample inlets are 13 feet above ground level and 200 feet from the nearest road. The most recent site inspection was conducted on September 25, 2006. Upon inspection, the sample line and monitor was found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards; to measure ozone levels upwind of Bowling Green; and to provide data on interstate ozone transport.

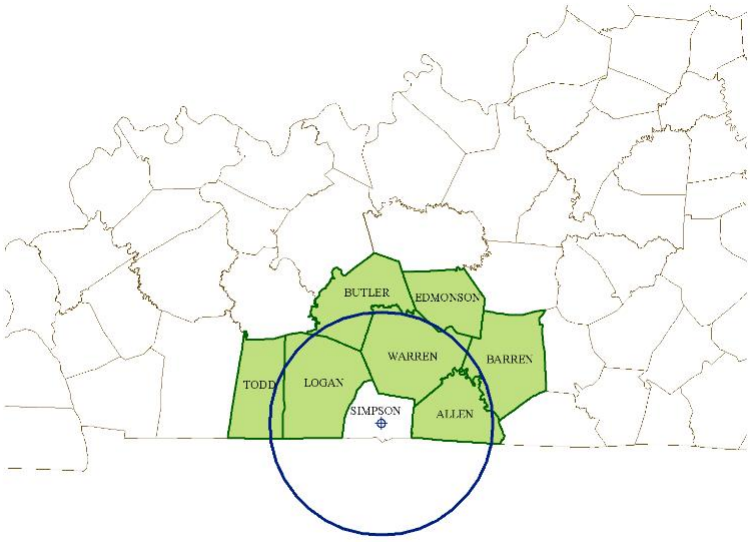
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM | UV photometry | Continuously<br>March 1 – October 31 |
| Meteorological | Other | AQM grade instruments for wind speed, wind direction, humidity, barometric pressure and temperature | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on an urban scale.

Ozone Urban Scale



**401 KAR 50:020 Air Quality Control Region:** South Central Kentucky Intrastate (105)
**CSA/MSA:** Bowling Green, KY MSA
**Site Name:** Bowling Green – Kereiakes Park
**AQS Site ID:** 21-227-0007
**Location:** Kereiakes Park, Fairview Avenue, Bowling Green, KY 42101
**County:** Warren
**GPS Coordinates:** 36.993333, -86.418333
**Date Established:** January1, 1999
**Inspection Date:** September 25, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a platform located behind the tennis courts on the grounds of the Kereiakes Park on Fairview Avenue in Bowling Green, Kentucky. The sample inlets are 10 feet above ground level and 400 feet from the nearest road. The most recent site inspection was conducted on September 25, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D and E.

**Monitoring Objective:**
The monitoring objective is to determine compliance with National Ambient Air Quality Standards.

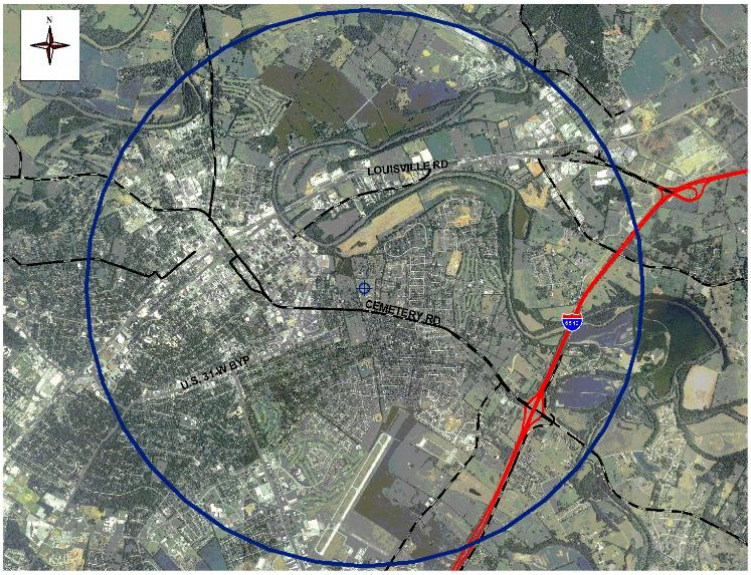
**Monitors:**

| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every third day |
| - Collocated FRM $PM_{2.5}$ | SLAMS | Gravimetric | 24-hours every sixth day |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on a neighborhood scale.

Neighborhood Scale



**401 KAR 50:020 Air Quality Control Region:** South Central Kentucky Intrastate (105)
**CSA/MSA:** Bowling Green, KY MSA
**Site Name:** Oakland Primary
**AQS Site ID:** 21-227-0008
**Location:** Oakland Elementary School, Oakland, KY 42159
**County:** Warren
**GPS Coordinates:** 37.036667, -86.250556
**Date Established:** January 1, 2000
**Inspection Date:** September 25, 2006
**Inspection By:** Andrea P. Keatley
**Site Approval Status**: Site and monitors meet all design criteria for the monitoring network.

---

The monitoring site is a stationary equipment shelter located on the grounds of the Oakland Elementary School in Oakland, Kentucky. The sample inlets are 13 feet above ground level and 200 feet from the nearest road. The most recent site inspection was conducted on September 25, 2006. Upon inspection, the sample inlets and monitors were found to be in good condition. The site meets the requirements of 40 CFR 58, Appendices C, D, E and G.

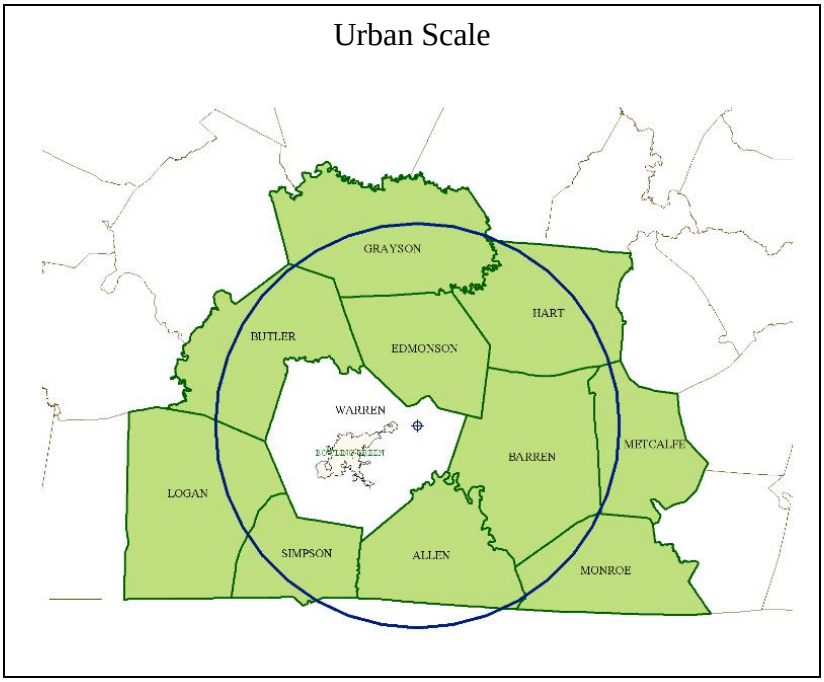
**Monitoring Objective:**
The monitoring objectives are to determine compliance with National Ambient Air Quality Standards and to provide levels of ozone and particulate matter for daily index reporting..

**Monitors:**

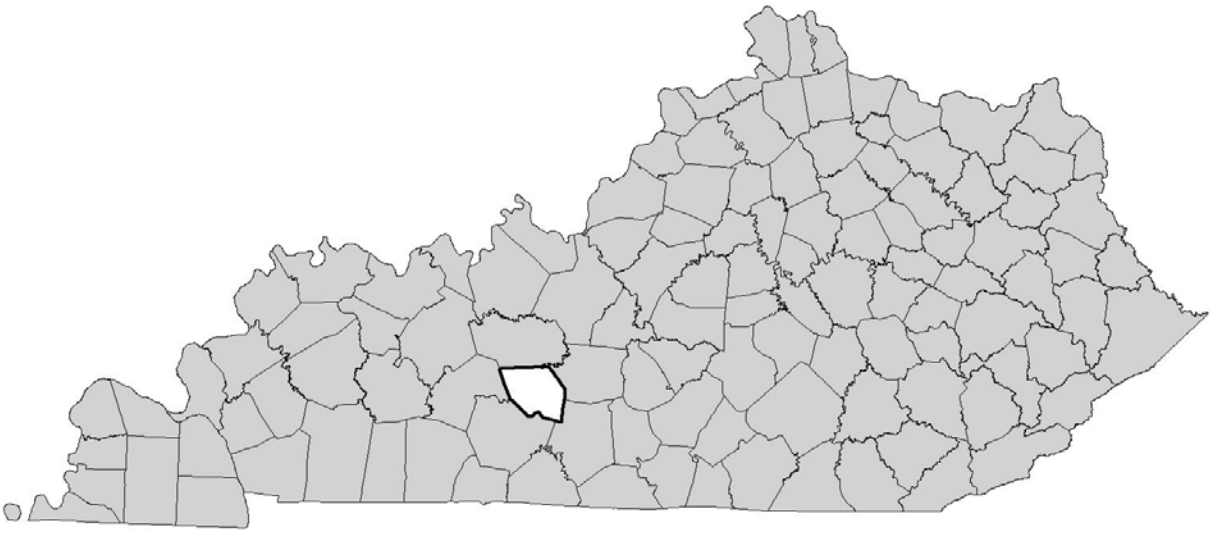
| Monitor Type | Designation | Analysis Method | Frequency of Sampling |
|---|---|---|---|
| AEM Ozone | SPM<br>AQI | UV photometry | Continuously<br>March 1 – October 31 |
| $PM_{2.5}$ TEOM | SPM<br>AQI | Tapered element oscillating microbalance, gravimetric | Continuously |

**Quality Assurance Status:**
All Quality Assurance procedures have been implemented in accordance with 40 CFR 58, Appendix A.

**Area Representativeness:**
This site represents population exposure on an urban scale for particulates. This site also represents maximum concentration on and urban scale for ozone.



# APPENDIX A
# National Park Service



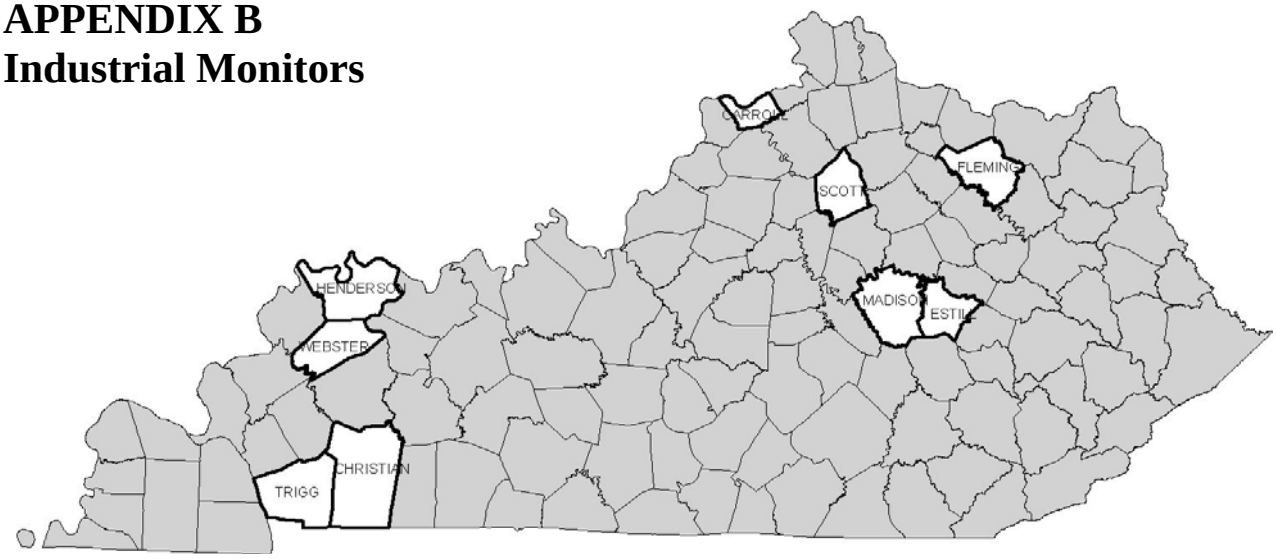
AIR QUALITY SURVEILLANCE NETWORK

NATIONAL PARK SERVICE

| AIRS ID | ADDRESS | $PM_{2.5}$ | $PM_{10}$ | $SO_2$ | $NO_2$ | CO | $O_3$ | HG | MET |
|---|---|---|---|---|---|---|---|---|---|
| 21-061-0501 | Alfred Cook Road<br>Mammoth Cave (Edmonson) | X[1] | | X | X | X | X | X | X |
| | TOTAL | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |

[1] A continuous sampler operates here.

# APPENDIX B
# Industrial Monitors




| AIRS ID | ADDRESS | $PM_{2.5}$ | $PM_{10}$ | $SO_2$ | $NO_2$ | CO | $O_3$ |
|---|---|---|---|---|---|---|---|
| 21-041-0004[5] | US 42<br>Ghent (Carroll) | | X<br>(collocated) | | X | | |
| 21-041-0005[5] | US 42<br>Ghent (Carroll) | | X | | | | |
| 21-047-0006[1] | 10800 Pilot Rock Road<br>Hopkinsville (Christian) | | | | | | X |
| 21-065-9001[6] | 100 EK Power Lane<br>Irvine (Estill) | | | X | | | |
| 21-069-9001[6] | 455 Industrial Drive<br>Flemingsburg (Fleming) | | | | | | X |
| 21-101-1010[2] | US 41 & KY 2096<br>Sebree (Henderson) | | | X | | | |
| 21-101-1011[2] | KY 2097<br>Sebree (Henderson) | | | X | | | |
| 21-151-9001[6] | 246 Ford Road<br>Richmond (Madison) | | | X | | | |
| 21-209-0002[3] | 4673 Muddy Ford Road<br>Scott County | | | | | | X |
| 21-221-8001[1] | Cadiz<br>LBL (Trigg) | X | | X | X | | X |
| 21-233-0002[2] | Bell Gibson Road<br>Webster County | | | X | | | |
| 54-099-0003[4] | Spring Brook Drive<br>Kenova (Wayne, WV) | | | X | X | | X |
| 54-099-0004[4] | Route 52<br>Neal (Wayne, WV) | | | X | | | |
| 54-099-0005[4] | Big Sandy Road<br>Neal (Wayne, WV) | | | X | | | |
| | TOTAL | 1 | 2 | 9 | 3 | 0 | 5 |

[1] – TVA
[2] – Western Kentucky Electric
[3] – Toyota
[4] – Marathon-Ashland Petroleum
[5] – North American Stainless
[6] – East Kentucky Power

(Rev. 4/23/07)

# APPENDIX C
# West Jefferson County Air Toxics Monitoring Stations
# Volatile Organics

| AIRS ID | Established | Method | Location | Purpose |
|---|---|---|---|---|
| 21-111-1041 | 1999 | TO-15 | 4201 Algonquin Parkway | Maximum Impact |
| 21-111-0054 | 1999 | TO-15 | 4211 Campground Road | Maximum Impact |
| 21-111-0057 | 1999 | TO-15 | U of L Shelby Campus | Urban Control Site |
| 21-111-0058 | 1999 | TO-15 | Farnsley Middle School 3400 Lees Lane | Neighborhood Exposure |
| 21-111-0060 | 1999 | TO-15 | Chickasaw Park | Neighborhood Exposure |
| 21-111-0062 | 1999 | TO-15 | Cane Run Elementary | Neighborhood Exposure |