State of Alabama
Ambient Air Monitoring
2019 Network Plan

May 29, 2019

Alabama Department of Environmental Management

Table of Contents

List of Tables

List of Figures

Definitions and Acronyms

AAQM	Ambient Air Quality Monitoring
AAQMP	Ambient Air Quality Monitoring Plan
ADEM	Alabama Department of Environmental Management
ARM	Approved Regional Method
AQS	Air Quality System
avg	average
CBSA	Core Based Statistical Area
CFR	*Code of Federal Regulations*
CO	Carbon Monoxide
CSA	Combined Statistical Area
CSN	Chemical Speciation Network
EPA	Environmental Protection Agency
FEM	Federal Equivalent Method
FRM	Federal Reference Method
HDNREM	Huntsville Division of Natural Resources and Environmental Management
hr	hour
hi-vol	high-volume sampler
JCDH	Jefferson County Department of Health
low-vol	low-volume particulate sampler
m3	cubic meter
min	minute
ml	milliliter
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multipollutant monitoring station
O3	ozone
PAMS	Photochemical Assessment Monitoring Station
Pb	lead
PM	particulate matter
$PM_{2.5}$	particulate matter ≤2.5 micrometers diameter
PM_{10}	particulate matter ≤10 micrometers diameter
PQAO	primary quality assurance organization
PSD	Prevention of Significant Deterioration
PWEI	Population Weighted Emissions Index
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
SLAMS	State or Local Air Monitoring Station
SO2	Sulfur Dioxide
SPM	Special Purpose Monitor
STN ($PM_{2.5}$)	Speciation Trends Network
tpy	tons per year
TSP	Total Suspended Particulate
URG	URG-3000N PM2.5 Speciation monitoring carbon-specific sampler
° C	degree Celsius
$\mu g/m^3$	micrograms (of pollutant) per cubic meter (of air sampled)
µSA	Micropolitan Statistical Area
≥	greater than or equal to
>	greater than
≤	less than or equal to
<	less than

Introduction

In October 2006, the United States Environmental Protection Agency (EPA) issued final Federal Regulations (40 CFR Part 58) concerning state and local agency ambient air monitoring networks. These regulations require states to submit an annual monitoring network review to EPA. This document provides the framework for establishment and maintenance of Alabama's air quality surveillance system, lists changes that occurred during 2018/2019, and changes proposed to take place to the current ambient air monitoring network during 2019/2020.

Public Review and Comment

The annual monitoring network review must be made available for public inspection for thirty (30) days prior to submission to EPA. This document can be accessed at the following link:

http://www.adem.state.al.us/newsEvents/publicNotices.cnt

Or by contacting:

Michael E. Malaier, Chief
Air Assessment Unit
Field Operations Division
Alabama Department of Environmental Management
P.O. Box 301463, Montgomery, AL 36130-1463
(Street address: 1350 Coliseum Boulevard, Montgomery, AL 36110-2059)
Or by e-mail at mml@adem.alabama.gov

Overview of Alabama's Air Monitoring Network

Ambient air monitors in the state of Alabama are operated for a variety of monitoring objectives. These objectives include determining whether areas of the state meet the National Ambient Air Quality Standards (NAAQS), to provide public information such as participation in EPA's AirNow program, Air Quality Index (AQI) reporting for larger Metropolitan Statistical Areas (MSAs), for use in Air Quality models, and to provide data to Air Quality Researchers. Alabama monitors the six (6) criteria pollutants which have NAAQS identified for them: Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide (NO_2), Ozone (O_3), particulate matter (PM_{10}, $PM_{2.5}$), and Sulfur Dioxide (SO_2). $PM_{2.5}$ speciated compounds, a non-criteria pollutant, is also monitored for special purposes. In addition, meteorological data may also be collected to support air monitoring and aid in analysis of the ambient air monitoring data.

In Alabama, the air quality surveillance system is operated by three separate entities: the Alabama Department of Environmental Management (ADEM), and two local agencies, the Jefferson County Department of Health (JCDH), and the Huntsville Department of Natural Resources and Environmental Management (HDNREM). Each agency is responsible for its own annual network plan. This document reflects only the ADEM air quality surveillance system. An overview of the 2019 ADEM Monitoring Network can be found in Table 1.

The JCDH plan will be available for review on their website by following this link. https://jcdh.org/SitePages/Misc/AirProgReports.aspx

The HDNREM plan will be available for review on their website by following this link. https://www.huntsvilleal.gov/environment/air-quality/

Currently, the Air Quality Index (AQI) is reported for Huntsville, Birmingham, Mobile, Montgomery and Phenix City on the Internet at the sites listed below.

ADEM	http://www.adem.state.al.us/programs/air/airquality/ozone/historical.cnt
JCDH	https://jcdh.org/SitePages/Programs-Services/EnvironmentalHealth/Air-RadiationProtectionDivision/AirQualForecast.aspx
HDNREM	https://www.huntsvilleal.gov/environment/air-quality/air-pollution-control-program/air-quality-daily-index-reports/

.

Summary of findings of the network review

Summary of changes in 2018/2019

- **MOMS, ADEM, AQS ID 01-101-1002**, replaced hi-vol samplers with low-vol samplers for PM10 monitoring.
- **Gadsden C College, AQS ID 01-055-0010**, and **VA, Tuscaloosa, AQS ID 01-125-0004**, discontinued continuous $PM_{2.5}$ monitoring in 2018. One FRM $PM_{2.5}$ monitor remains in service at each site.

Summary of proposed changes for 2019/2020

- **Muscle Shoals, AQS ID 01-033-1002**, ADEM has loss access to the site, is finding it difficult to find a suitable replacement location, and is proposing to completely shut down the site at the end of the year (Appendix A). Both O_3 and $PM_{2.5}$ monitoring will be discontinued at this location due to loss of access to site, low design value and no required monitors in the MSA. This site is not required by 40 CFR 58, Appendix D. Resources will be allocated to other sites in the state.
- **Dothan (Civic Center), AQS ID 01-069-0003**, ADEM is proposing to shut down the site at the end of the year (Appendix A). $PM_{2.5}$ monitoring will be discontinued due to low design value and no required monitors in this MSA. This site is not required by 40 CFR 58, Appendix D. Resources will be allocated to other sites in the state.
- **Dothan, AQS ID 01-069-0004**, ADEM is proposing to shut down the site at the end of the season (Appendix A). O_3 monitoring will be discontinued at this site due to low design value and no required monitors in this MSA. This site is not required by 40 CFR 58, Appendix D. Resources will be allocated to other sites in the state.
- **Decatur, AQS ID 01-103-0011**, will replace the BAM-1020 with an API T-640 for evaluation of new method for continuous $PM_{2.5}$ monitoring. The shelter will also be replaced at this site.
- **Ward, Sumter Co., AQS ID 01-119-0003**, will replace the BAM-1020 with a BAM-1022 for continuous $PM_{2.5}$ monitoring.
- All continuous gas analyzer inlets will be replaced with CAS inlets in 2019.

Table 1 2019 ADEM Ambient Air Monitoring Network

ADEM Site Common Name	AQS ID	Ozone	PM2.5	PM 2.5 Collocated	PM2.5 Speciation	BAM Continuous PM2.5	PM10 Lo-Vol	PM10 Lo-Vol Collocated	Lead	Lead Collocated	SO2
Fairhope	01-003-0010	X	X								
Ashland	01-027-0001		X								
Muscle Shoals	01-033-1002	P	P								
Crossville	01-049-1003		X								
Wetumpka Westside Technology	01-051-0004	X									
Gadsden C College	01-055-0010		X								
Southside	01-055-0011	X									
Dothan (Civic Center)	01-069-0003		P								
Dothan	01-069-0004	P									
Chickasaw	01-097-0003	X	X			X					X
Bay Road	01-097-2005	X									
MOMS, ADEM	01-101-1002	X	X	X		X	X	X			
Decatur	01-103-0011	X	X			X					
Troy Lead	01-109-0003								X	X	
Phenix City - South Girard School	01-113-0003	X	X	X	X	X					
Helena	01-117-0004	X									
Lhoist, Montevallo Plant	01-117-9001										X
Ward, Sumter Co.	01-119-0003	X				X					X
VA, Tuscaloosa	01-125-0004		X								
Duncanville, Tuscaloosa	01-125-0010	X									

P = Proposed closure in 2019/2020

Network Plan Description

As per 40 CFR Part 58.10, an annual monitoring network plan which provides for the establishment and maintenance of an air quality surveillance system consisting of the air quality monitors in the state is required to be submitted by all states to EPA.

Specifically §58.10 (a) requires for each existing and proposed monitoring site:

1. A statement of purpose for each monitor.
2. Evidence that siting and operation of each monitor meets the requirements of Appendices A, C, D, and E of 40 CFR Part 58, where applicable.
3. §58.10 (b) requires the plan contain the following information for each existing and proposed site:
    a. The Air Quality System (AQS) site identification number.
    b. The location, including street address and geographical coordinates.
    c. The sampling and analysis method(s) for each measured parameter.
    d. The operating schedules for each monitor.
    e. Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.
    f. The monitoring objective and spatial scale of representativeness for each monitor.
    g. The identification of any sites that are suitable and sites that are not suitable for comparison against the annual $PM_{2.5}$ NAAQS as described in §58.30.
    h. The Metropolitan Statistical Area (MSA), Core Based Statistical Area (CBSA), Combined Statistical Area (CSA) or other area represented by the monitor.
    i. The designation of any Pb monitors as either source-oriented or non-source-oriented according to Appendix D to 40 CFR part 58.
    j. Any source-oriented monitors for which a waiver has been requested or granted by the U.S. EPA Regional Administrator as allowed for under paragraph 4.5(a)(ii) of Appendix D to 40 CFR part 58.
    k. Any source-oriented or non-source-oriented site for which a waiver has been requested or granted by the U.S. EPA Regional Administrator for the use of Pb-PM10 monitoring in lieu of Pb-TSP monitoring as allowed for under paragraph 2.10 of Appendix C to 40 CFR part 58.
    l. The identification of required NO2 monitors as near-road, area-wide, or vulnerable and susceptible population monitors in accordance with Appendix D, section 4.3 of this part.
    m. The identification of any PM 2.5 FEMs and/or ARMs used in the monitoring agency's network where the data are not of sufficient quality such that data are not to be compared to the NAAQS. For required SLAMS where the agency identifies that the PM 2.5 Class III FEM or ARM does not produce data of sufficient quality for comparison to the NAAQS, the monitoring agency must ensure that an operating FRM or filter-based FEM meeting the sample frequency requirements described in § 58.12 or other Class III $PM_{2.5}$ FEM or ARM with data of sufficient quality is operating and reporting data to meet the network design criteria described in Appendix D to this part.

Monitoring Requirements

Appendix A of 40 CFR Part 58 outlines the Quality Assurance Requirements for SLAMS, SPMs, and PSD Air Monitoring. It details calibration and auditing procedures used to collect valid air quality data, the minimum number of collocated monitoring sites, calculations used for data quality assessments, and reporting requirements. All sites operated by ADEM follow the requirements set forth in Appendix A.

Appendix C of 40 CFR Part 58 specifies the criteria pollutant monitoring methods which must be used in SLAMS and NCore stations. All criteria pollutant monitoring operated by ADEM follow the methods specified in Appendix C.

Appendix D of 40 CFR Part 58 specifies network design criteria for ambient air quality monitoring. The overall design criteria, the minimum number of sites for each parameter, the type of sites, the spatial scale of the sites, and the monitoring objectives of the sites are detailed. In designing the air monitoring network for ADEM, the requirements of Appendix D were followed. The specifics for each pollutant network are in their individual chapters.

Appendix E of 40 CFR Part 58 specifies probe material, placement of the monitoring probe and spacing from obstructions. All monitors operated by ADEM were evaluated against Appendix E criteria.

Population and CBSA

Alabama has a 2018 population estimate of 4,887,871. Alabama's Metropolitan and Micropolitan Core Based Statistical Areas with corresponding classifications as Metropolitan or Micropolitan, county names included in that area, and the 2018 estimated population totals are listed in Table 2.

Minimum monitoring requirements vary for each pollutant and can be based on a combination of factors such as population, the level of monitored pollutants, and Core Based Statistical Area boundaries as defined in the latest U.S. Census information. The term "Core Based Statistical Area" (CBSA) is a collective term for both Metropolitan Statistical Areas (MSA) and Micropolitan Statistical Areas (μSA).

Table 2 Alabama CBSAs

Alabama Core Based Statistical Area	Counties in CBSA	2018 Population Estimate	Metropolitan or Micropolitan Statistical Areas
Anniston-Oxford-Jacksonville	Calhoun	114,277	Metropolitan
Auburn-Opelika	Lee	163,941	Metropolitan
Birmingham-Hoover	Bibb, Blount, Chilton, Jefferson, Shelby, St. Clair, Walker	1,151,801	Metropolitan
Columbus, GA-AL	Russell County in Alabama and Chattahoochee, Harris, Marion, Muscogee Counties in Georgia	305,451	Metropolitan
Daphne-Fairhope-Foley	Baldwin	218,022	Metropolitan
Decatur	Lawrence, Morgan	152,046	Metropolitan
Dothan	Geneva, Henry, Houston	148,245	Metropolitan
Florence-Muscle Shoals	Colbert, Lauderdale	147,149	Metropolitan
Gadsden	Etowah	102,501	Metropolitan
Huntsville	Limestone, Madison	462,693	Metropolitan
Mobile	Mobile	413,757	Metropolitan
Montgomery	Autauga, Elmore, Lowndes, Montgomery	373,225	Metropolitan
Tuscaloosa	Hale, Pickens, Tuscaloosa	243,575	Metropolitan
Albertville	Marshall	96,109	Micropolitan
Alexander City	Tallapoosa	40,497	Micropolitan
Atmore	Escambia	36,748	Micropolitan
Cullman	Cullman	83,442	Micropolitan
Enterprise	Coffee	51,909	Micropolitan
Fort Payne	DeKalb	71,385	Micropolitan
Ozark	Dale	48,956	Micropolitan
Scottsboro	Jackson	51,736	Micropolitan
Selma	Dallas	38,310	Micropolitan
Talladega-Sylacauga	Coosa, Talladega	90,543	Micropolitan
Troy	Pike	33,338	Micropolitan
Valley	Chambers	33,615	Micropolitan

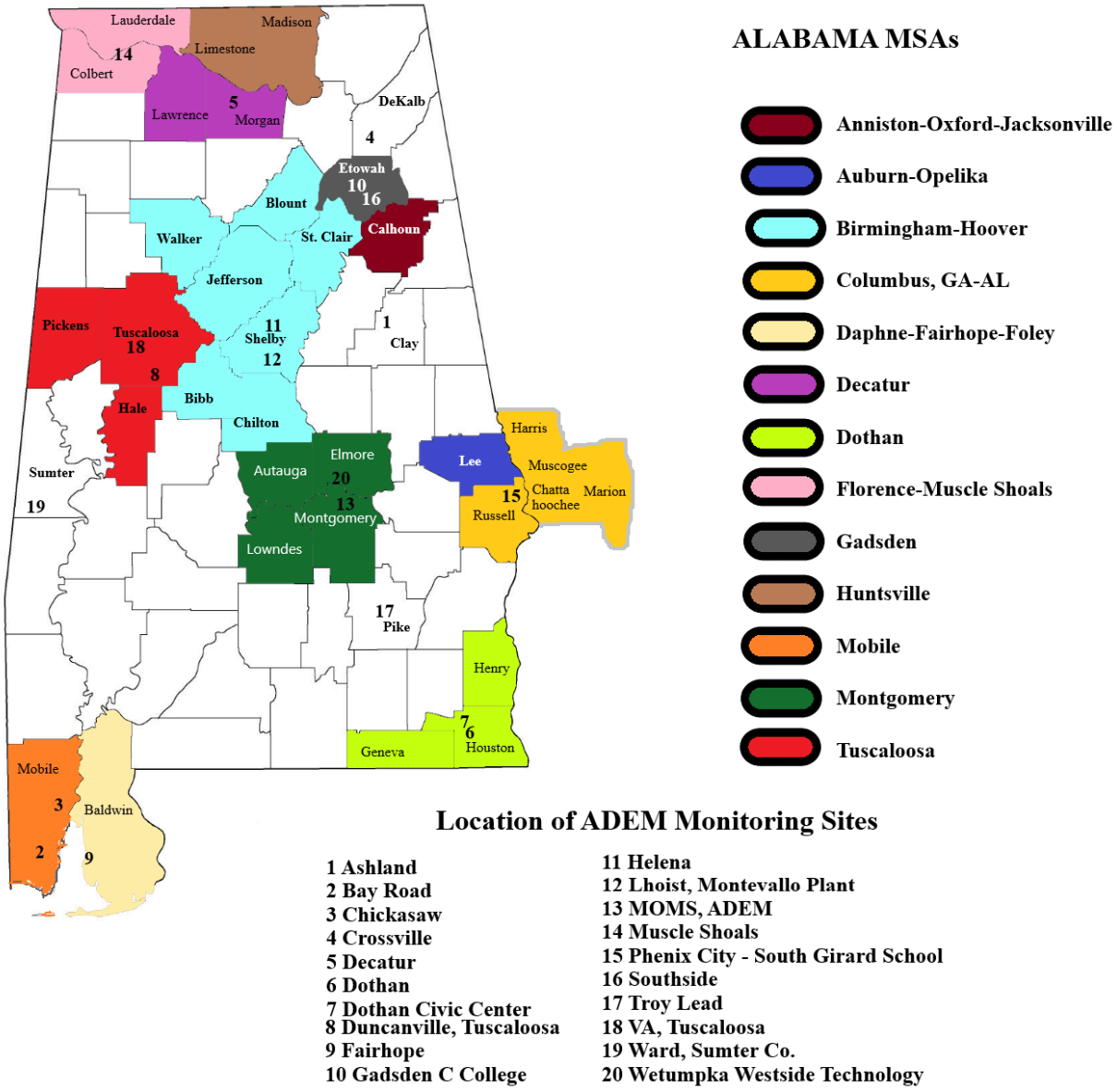


Figure 1 Alabama MSAs and ADEM Monitoring Sites

Types of Monitoring Stations

CASTNET – *Clean Air Status and Trends Network*: is a national air quality monitoring network designed to provide data to assess trends in air quality, atmospheric deposition, and ecological effects due to changes in air pollutant emissions. CASTNET provides long-term monitoring of air quality in rural areas to determine trends in regional atmospheric nitrogen, sulfur, and ozone concentrations and deposition fluxes of sulfur and nitrogen pollutants in order to evaluate the effectiveness of national and regional air pollution control programs. EPA-sponsored CASTNET ozone monitors are Part 58 compliant, therefore the data can be used for regulatory purposes. CASTNET Ozone data is now reported to AQS. There is one CASNET site in Alabama, **Sand Mountain, AQS ID 01-049-9991**, in DeKalb County, operated by an EPA contractor.

NCore – *National Core multi-pollutant monitoring station*: Sites that measure multiple pollutants at trace levels in order to provide support to integrated air quality management data needs. Each state is required to operate at least one NCore site. There is one NCore site in Alabama, **North Birmingham, AQS ID 01-073-0023**, located in Jefferson County and operated by JCDH. Refer to the JCDH Ambient Air Network Plan for details.

PAMS – *Photochemical Assessment Monitoring Station*: PAMS are established to obtain more comprehensive data in areas with high levels of ozone pollution by also monitoring oxides of Nitrogen (NOx) and volatile organic compounds (VOCs). PAMS monitoring requirements were revised in the 2016 ozone NAAQS rule and a PAMS site will be required in Jefferson County. Refer to the JCDH Ambient Air Network Plan for details.

SLAMS - *State or Local Ambient Monitoring Station*: SLAMS make up ambient air quality monitoring sites that are primarily needed for NAAQS comparisons. With exception to two monitors, a BAM-1022 undergoing a 24-month evaluation period and a SASS URG used for supplemental speciation, located at Phenix City, AQS ID 01-113-0003, all of the ADEM ambient air monitors are designated SLAMS. Monitors are described in detail in the section labeled ADEM's Pollutant Network Tables.

SPM – *Special Purpose Monitor:* **Phenix City, AQS ID 01-113-0003,** began monitoring $PM_{2.5}$ continuously with a BAM-1022 on 09/18/2019. This BAM is labeled as SPM while undergoing a 24-month evaluation period.

SO2 DRR - *SO2 Data Requirements Rule*: DRR became effective September 21, 2015. Per 40 CFR Part 51, states are required to report all sources that generate >2,000 tpy SO2, not dependent upon population density. Each source in this category must characterize air quality through air quality modeling or ambient air monitoring. Each source that chooses monitoring must operate their site equivalent with the SLAMS requirements of 40 CFR Part 58. Source-oriented monitoring for SO2 is required from January 1, 2017 through December 31, 2019 for adequate data to calculate a valid design value. Alabama has one DRR SO2 monitoring site, **Lhoist, Montevallo Plant, AQS ID 01-117-9001**, operated by a Lhoist contractor within the ADEM PQAO.

STN – *$PM_{2.5}$ Speciation Trends Network*: A $PM_{2.5}$ speciation station designated to be part of the speciation trends network. This network provides chemical species data of fine particulates. There is one STN site in Alabama, **North Birmingham, AQS ID 01-073-0023**, located in Jefferson County and operated by JCDH. Refer to the JCDH Ambient Air Network Plan for details.

Supplemental Speciation – A monitoring site that is not dedicated as an STN site in the Chemical Speciation Network, but has monitors used to gain supplemental data for that network. ADEM provides supplemental speciation data from **Phenix City-South Girard School, AQS ID 01-113-0003.**

ADEM's Monitoring Networks by Pollutant

Carbon Monoxide (CO) Network

On August 12, 2011 EPA issued a final rule that retained the existing NAAQS for Carbon Monoxide (CO) and made changes to the ambient air monitoring requirements. EPA revised the minimum requirements for CO monitoring by requiring CO monitors to be collocated with one required near-road NO_2 monitor in CBSAs having a population of 1,000,000 or more persons. ADEM does not operate a near-road monitoring site or CO monitor. For more information regarding CO monitoring in Alabama refer to the JCDH Ambient Air Network Plan for details.

Lead (Pb) Network

In 2008, EPA revised the NAAQS for lead (Pb). The Pb standard was lowered from 1.5 ug/m^3 for a quarterly average to 0.15 ug/m^3 based on the highest rolling 3-month average over a 3-year period. EPA set minimum monitoring requirements for source and population oriented monitoring. Source oriented monitoring is required near sources that have Pb emissions ≥1 ton per year. Population oriented monitoring is required for CBSAs >500,000. In December 2010, EPA revised the Pb rule to require source-oriented monitors for sources greater than ½ ton per year and stated that population oriented monitors would be located at NCore sites. In March, 2016, EPA removed the requirement for Pb monitoring at NCore sites that were not located near a Pb emissions source.

Based on current emissions data or modeling, ADEM has identified one source, Sanders Lead Company, Inc., located in Troy, Pike County, a micropolitan statistical area, which emits greater than 1/2 ton of Pb per year. **Troy Lead, AQS ID 01-109-0003,** operated by ADEM, has been monitoring for Pb near that source since 1979. To meet QA requirements, collocated lead monitoring is also occurring at this site. No additional changes are proposed for this network.

Nitrogen Dioxide (NO_2) Network

On January 22, 2010 the US EPA finalized the monitoring rules for Nitrogen Dioxide (NO_2). The rules require the placement of NO_2 monitors near a major road in each CBSA with a population ≥500,000 people and a second monitor is required near another major road in areas with either a CBSA population ≥2.5 million people, or one or more road segments with an annual average daily traffic (AADT) count ≥250,000 vehicles. For near road NO_2 monitoring, Birmingham-Hoover is the only MSA in Alabama with a population greater than 500,000. However, the population is less than 2.5 million and there are no road segments with AADT greater than 250,000 vehicles. The rules also require an NO_2 monitor to be placed in any urban area with a population greater than or equal to 1 million people to assess community-wide concentrations. Birmingham-Hoover is the only MSA in Alabama with a population greater than 1 million. Refer to the JCDH Ambient Air Network Plan for details. ADEM does not operate an NO_2 monitor.

Ozone (O_3) Network

Effective December 28, 2015, the level of the NAAQS for ozone was changed from 0.075 to 0.070 ppm. To attain this standard, the 3-year average of the fourth-highest daily maximum 8-hour average ozone concentrations measured at each monitor within an area over each year must not exceed 0.070 ppm..

Minimum monitoring requirements for ozone are based on population and whether the design value is <85% of the NAAQS, or ≥85% of the NAAQS (See Table 3). Since the NAAQS for ozone is 0.070 parts per million of ozone then 85% of the NAAQS truncated is **0.059** ppm

Table 3 SLAMS Minimum Ozone Monitoring Site Requirements

TABLE D–2 OF APPENDIX D TO PART 58
SLAMS MINIMUM O3 MONITORING REQUIREMENTS

MSA population[1, 2]	Most recent 3-year design value concentrations ≥85% of any O3 NAAQS[3]	Most recent 3-year design value concentrations <85% of any O3 NAAQS[3,4]
>10 million	4	2
4–10 million	3	1
350,000–<4 million	2	1
50,000–<350,000[5]	1	0

1 Minimum monitoring requirements apply to the Metropolitan statistical area (MSA).
2 Population based on latest available census figures.
3 The ozone (O3) National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
4 These minimum monitoring requirements apply in the absence of a design value.
5 Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

ADEM's Ozone Monitoring Sites and Design Values are described in Table 4.

Table 4 ADEM Ozone Monitoring Sites and Design Values

Site Name	AQS ID	2016-2018 Design Values	MSA	MSA MAX DV[2]	2018 est pop
Helena[1]	01-117-0004	0.067	Birmingham-Hoover	0.067	1,151,801
Phenix City - South Girard School[1]	01-113-0003	***	Columbus, GA-AL	0.060	305,451
Fairhope	01-003-0010	0.063	Daphne-Fairhope-Foley	0.063	218,022
Decatur	01-103-0011	0.064	Decatur	0.064	152,046
Dothan	01-069-0004	0.058	Dothan	0.058	148,245
Muscle Shoals	01-033-1002	0.059	Florence-Muscle Shoals	0.059	147,149
Southside	01-055-0011	0.063	Gadsden	0.063	102,501
Chickasaw	01-097-0003	0.064			
Bay Road	01-097-2005	0.063	Mobile	0.064	413,757
Wetumpka Westside Technology	01-051-0004	***			
MOMS, ADEM	01-101-1002	0.060	Montgomery	0.060	373,225
Duncanville, Tuscaloosa	01-125-0010	0.060	Tuscaloosa	0.060	243,575
Ward, Sumter Co.	01-119-0003	0.057	not in MSA	N/A	NA
Sand Mountain[3]	01-049-9991	0.062	not in MSA	N/A	NA

DV ≥ 85% of the NAAQS

[1] Only site within MSA operated by ADEM

[2] MSA MAX DV may be obtained from monitors not operated by ADEM

[3] CASTNET site operated by EPA contractor

*** Not enough data for a design value

Ozone Monitoring Requirements for Alabama MSAs

Birmingham-Hoover MSA

Using the Birmingham-Hoover MSA 2018 population estimate and the design value from Table 4, two Ozone monitors are required in this MSA. ADEM operates **Helena, AQS ID 01-117-0004**, because it is located in Shelby County. Other ozone sites in this MSA are located within the jurisdiction of the JCDH. For more information regarding ozone monitoring in Jefferson County refer to the JCDH ambient air network plan. No changes are planned for the ADEM site.

Columbus, GA-AL MSA

Using the Columbus GA-AL MSA 2018 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. ADEM operates **Phenix City-South Girard School, AQS ID 01-113-0003**, in Russell County, Alabama. For more information regarding ozone monitoring in this MSA, refer to the State of Georgia's ambient air network plan. No changes are planned for the ADEM site.

Daphne-Fairhope-Foley MSA

Using the Daphne-Fairhope-Foley MSA 2018 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. There is currently one Ozone site, **Fairhope, AQS ID 01-003-0010**. No changes are planned.

Decatur MSA

Using the Decatur MSA 2018 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. There is currently one Ozone site, **Decatur, AQS ID 01-103-0011**. No changes are planned.

Dothan MSA

Using the Dothan MSA 2018 population estimate and the design value from Table 4, zero Ozone monitors are required for this MSA. There is currently one Ozone site, **Dothan, AQS ID 01-069-0004**. ADEM is proposing to discontinue monitoring at this site at the end of the 2019 ozone season. See Appendix A for justification.

Florence-Muscle Shoals MSA

Using the Florence-Muscle Shoals MSA 2018 population estimate and the design value from Table 4, zero Ozone monitors are required for this MSA. There is currently one Ozone site, **Muscle Shoals, AQS ID 01-033-1002.** ADEM is proposing to discontinue monitoring at this site at the end of the 2019 ozone season. See Appendix A for justification.

Gadsden MSA

Using the Gadsden MSA 2018 population estimate and the design value from Table 4, one Ozone monitor is required for this MSA. There is currently one Ozone site, **Southside, AQS ID 01-055-0011**. No changes are planned.

Huntsville MSA

ADEM does not operate any ozone monitors in this MSA. For information regarding ozone monitoring in Huntsville refer to the HDNREM ambient air network plan.

Mobile MSA

Using the Mobile MSA 2018 population estimate and the design value from Table 4, two Ozone monitors are required for this MSA. There are currently two Ozone sites, **Chickasaw, AQS ID 01-097-0003, and Bay Road, 01-097-2005**. No changes are planned.

Montgomery MSA

Using the Montgomery MSA 2018 population estimate and the design value from Table 4, two Ozone monitors are required for this MSA. There are currently two Ozone sites, **MOMS, ADEM, AQS ID 01-101-1002 and Wetumpka Westside Technology Park, AQS ID 01-051-0004**. No changes are planned.

Tuscaloosa MSA

Using the Tuscaloosa MSA 2018 population estimate and design value from Table 4, one Ozone monitor is required for this MSA. There is currently one Ozone site, **Duncanville, Tuscaloosa, AQS ID 01-125-0010**. No changes are planned.

Anniston-Oxford and Auburn-Opelika MSAs

The MSAs of Auburn-Opelika and Anniston-Oxford were evaluated by ADEM. It was determined that due to the close proximity of ozone monitors in the neighboring MSAs, additional ozone monitors would not be needed. Since these areas do not have design values, no ozone monitors are required by Appendix D of 40 CFR Part 58.

Sites not located in an MSA

Ward, Sumter Co., AQS ID 01-119-0003, represents rural, background ozone values for the state. The historical design values for this monitor have been less than 85% of the NAAQS. No changes are planned.

Sand Mountain, AQS ID 01-049-9991, is a CASTNET site operated by an EPA contractor.

$PM_{2.5}$ Network

Minimum monitoring requirements for $PM_{2.5}$ are based on population and the design value <85% of the NAAQS, ≥85% of the NAAQS (See Table 5). Additionally, a regional background site and a regional transport site are required.

Section 4.7.2 of Appendix D of 40 CFR Part 58 also requires a collocated continuous $PM_{2.5}$ monitor in each MSA that is required to have a FRM monitor. The number of collocated continuous monitors required for an MSA will be equal to at least half of the required FRM monitors for that MSA. This is not required if the continuous monitor is a FEM that is labeled as the primary and comparable to the NAAQS. The state is also required to operate $PM_{2.5}$ speciation monitors to characterize the constituents of $PM_{2.5}$. The number of speciation monitors is determined in consultation with EPA Region IV.

$PM_{2.5}$ design values in Table 6 are based on 2016-2018 data. A design value of **29.75** ug/m^3 is the lowest value which is ≥85% of the 24-hour standard of 35 ug/m^3. A design value of **10.2** ug/m^3 is the lowest value that is ≥85% of the annual standard of 12 ug/m^3 (effective March 18, 2013).

Table 5 $PM_{2.5}$ Minimum Monitoring Site Requirements

TABLE D–5 OF APPENDIX D TO PART 58 PM2.5 MINIMUM MONITORING REQUIREMENTS		
MSA population [1,2]	Most recent 3-year design value ≥85% of any PM2.5 NAAQS[3]	Most recent 3-year design value<85% of any PM2.5 NAAQS[3,4]
>1,000,000	3	2
500,000–1,000,000	2	1
50,000–<500,000 [5]	1	0

1 Minimum monitoring requirements apply to the Metropolitan statistical area (MSA).
2 Population based on latest available census figures.
3 The PM2.5 National Ambient Air Quality Standards (NAAQS) levels and forms are defined in 40 CFR part 50.
4 These minimum monitoring requirements apply in the absence of a design value.
5 Metropolitan statistical areas (MSA) must contain an urbanized area of 50,000 or more population.

The current $PM_{2.5}$ Rule requires CBSAs with populations greater than one million but less than four million operate a $PM_{2.5}$ monitor at its NO_2 near road site by January 1, 2017. ADEM does not operate an NO_2 monitor or a near road site. More information regarding this requirement in Alabama can be found in the JCDH ambient air network plan.

ADEM's $PM_{2.5}$ Network is described in Table 6.

Table 6 ADEM $PM_{2.5}$ Monitoring Sites and Design Values

Site Name	AQS Site ID	PM2.5 24 hr DV 2016-2018	PM2.5 Annual DV 2016-2018	MSA	24hr MSA MAX DV[2]	Annual MSA MAX DV[2]	2018 est pop
Phenix City - South Girard School[1]	01-113-0001	***	***	Columbus GA-AL	32	9.2	305,451
Fairhope	01-003-0010	17	7.3	Daphne-Fairhope-Foley	17	7.3	218,022
Decatur	01-103-0011	15	7.5	Decatur	15	7.5	152,046
Dothan (Civic Center)	01-069-0003	16	7.8	Dothan	16	7.8	148,245
Muscle Shoals	01-033-1002	16	7.5	Florence-Muscle Shoals	16	7.5	147,149
Gadsden C College	01-055-0010	16	8.3	Gadsden	16	8.3	102,501
Chickasaw	01-097-0003	17	8.1	Mobile	17	8.1	413,757
MOMS, ADEM	01-101-1002	19	8.6	Montgomery	19	8.6	373,225
VA, Tuscaloosa	01-125-0004	16	7.8	Tuscaloosa	16	7.8	243,575
Ashland (Background/Regional Transport)	01-027-0001	15	7.4	Not in MSA	15	7.4	NA
Crossville (Background)	01-049-1003	15	7.6	Not in MSA	15	7.6	NA

DV ≥ 85% of the NAAQS

[1] Only site within MSA operated by ADEM

[2] MSA MAX DV may be obtained from monitors not operated by ADEM

*** Not enough data for a design value

$PM_{2.5}$ Monitoring Requirements for Alabama MSAs

Birmingham-Hoover MSA

ADEM does not operate $PM_{2.5}$ monitors in the Birmingham-Hoover MSA. For more information regarding $PM_{2.5}$ monitoring in this MSA refer to the JCDH ambient air network plan.

Columbus, GA-AL MSA

Using the Columbus, GA-AL MSA 2018 population estimate and the design value from Table 6, one FRM monitor is required. ADEM operates one FRM monitor, one collocated FRM monitor, one speciation monitor, and one FEM continuous monitor at **Phenix City – South Girard School, AQS ID 01-113-0003**. The FEM continuous monitor, placed in operation 09/18/2017, is flagged as a special purpose monitor while it is in the 24-month evaluation period. For more information regarding $PM_{2.5}$ monitoring in this MSA refer to the State of Georgia's ambient air network plan. No changes are planned for the ADEM site.

Daphne-Fairhope-Foley MSA

Using the Daphne-Fairhope-Foley MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor located at **Fairhope, AQS ID 01-003-0010**. No changes are planned.

Decatur MSA

Using the Decatur MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor and one non-FEM continuous monitor located at **Decatur, AQS ID 01-103-0011**. ADEM intends to replace the non-FEM BAM-1020 with an API T-640 in 2019. The API T-640 will be operated as a FEM continuous monitor which will be capable of producing NAAQS comparable data after its evaluation period.

Dothan MSA

Using the Dothan MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor located at **Dothan (Civic Center), AQS ID 01-069-0003**. ADEM is proposing to discontinue monitoring at this site at the end of the 2019. See Appendix A for justification.

Florence-Muscle Shoals MSA

Using the Florence-Muscle Shoals MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor located at **Muscle Shoals, AQS ID 01-033-1002**. ADEM is proposing to discontinue monitoring at this site at the end of 2019 unless we are asked to vacate sooner by the property owners. See Appendix A for justification.

Gadsden MSA

Using the Gadsden MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor at **Gadsden Community College, AQS ID 01-055-0010**. The non-FEM continuous monitor that was at this site discontinued sampling in 2018. No changes are planned.

Huntsville MSA

ADEM does not operate $PM_{2.5}$ monitors in the Huntsville MSA. For information regarding $PM_{2.5}$ monitoring in this MSA refer to the HDNREM ambient air network plan.

Mobile MSA

Using the Mobile MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor and one non-FEM continuous monitor located at **Chickasaw, AQS ID 01-097-0003**. No changes are planned.

Montgomery MSA

Using the Montgomery MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor, one collocated FRM monitor, and one non-FEM continuous monitor located at **MOMS, ADEM, AQS ID 01-101-1002**. No changes are planned.

Tuscaloosa MSA

Using the Tuscaloosa MSA 2018 population estimate and the design value from Table 6, zero FRM monitors are required. There is currently one FRM monitor located at **VA, Tuscaloosa, AQS ID 01-125-0004**. The non-FEM continuous monitor that was at this site discontinued sampling in 2018. No changes are planned.

Anniston-Oxford and Auburn-Opelika MSAs

The MSAs of Anniston-Oxford and Auburn-Opelika were evaluated to determine the need for monitors. It was determined that due to the close proximity of $PM_{2.5}$ monitors in neighboring MSAs, additional monitors would not be needed. $PM_{2.5}$ monitoring in the adjacent MSAs continue to provide adequate coverage. Since these areas do not have design values, no FRM monitors are required by Appendix D of 40 CFR Part 58.

$PM_{2.5}$ Monitors not located in MSAs

Ashland, AQS ID 01-027-0001, serves as a regional transport site in between the large MSAs of Birmingham-Hoover, Alabama and Atlanta-Sandy Springs-Roswell, Georgia using an FRM monitor. No changes are planned.

Crossville, **AQS ID 01-049-1003**, represents rural, background $PM_{2.5}$ values for the northeast part of the state using an FRM monitor. No changes are planned.

Ward, Sumter Co., AQS ID 01-119-0003, represents rural, background $PM_{2.5}$ values for the west part of the state. ADEM intends to replace the non-FEM BAM-1020 with a FEM BAM-1022 in 2019. The BAM-1022 will be operated as a FEM continuous monitor which will be capable of producing NAAQS comparable data after its evaluation period.

PM_{10} Network

PM_{10} has been a criteria pollutant since 1987. Since that time there has been widespread monitoring of the PM_{10} levels in Alabama. In 2006, the U.S. EPA modified the NAAQS for PM_{10} to revoke the annual standard. Currently, there is a daily standard of 150 ug/m^3 based on 3 years of data.

The Montgomery MSA has a population between 250,000 and 500,000 and PM_{10} concentrations are less than 80% of the NAAQS daily standard. According to Table D-4 of Appendix D to Part 58, 0 to 1 PM_{10} monitors are required. In the Montgomery MSA, ADEM operates two low-volume PM_{10} monitors on a 1 in 6 day schedule at **MOMS, ADEM, AQS ID 01-101-1002**, one being the collocated quality assurance monitor. No changes are planned.

Sulfur Dioxide (SO_2) Network

Effective August 23, 2010, EPA strengthened the primary NAAQS for SO_2. EPA established a new 1-hour standard at 75 parts per billion (ppb), based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. According to EPA, for a short-term 1-hour SO_2 standard, it is more technically appropriate, efficient, and effective to use modeling as the principal means of assessing compliance for medium to larger sources, and to rely more on monitoring for groups of smaller sources and sources not as conducive to modeling. Such an approach is consistent with EPA's historical approach and longstanding guidance for SO_2. EPA is setting specific minimum requirements that inform states on where they are required to place SO_2 monitors. The final monitoring regulations require monitors to be placed in Core Based Statistical Areas (CBSAs) based on a Population Weighted Emissions Index (PWEI) for the area. The final rule requires:

- 3 monitors in CBSAs with PWEI values ≥1,000,000 or more;
- 2 monitors in CBSAs with PWEI values <1,000,000 but >100,000; and
- 1 monitor in CBSAs with PWEI values >5,000.

According to the latest PWEI calculations listed in Table 7 only the Birmingham-Hoover and Mobile MSAs require SO_2 monitoring**.** ADEM operates two SO_2 monitors: **Chickasaw, AQS ID 01-097-0003**, for the Mobile MSA and **Ward, Sumter Co., AQS ID 01-119-0003**, not located in an MSA, for background purposes. For more information regarding SO_2 monitoring in the Birmingham-Hoover MSA refer to the JCDH ambient air monitoring network plan.

Effective September 21, 2015, the SO2 Data Requirements Rule (DRR) per 40 CFR Part 51, requires states to report all sources that generate >2,000 tpy SO_2, not dependent upon population density. Each source in this category must characterize air quality through air quality modeling or ambient air monitoring. Each source that chooses monitoring must operate their site equivalent with the SLAMS requirements of 40 CFR Part 58. Source-oriented monitoring for SO_2 is required from January 1, 2017 through December 31, 2019 for adequate data to calculate a valid design value. Lhoist North America of Alabama, LLC – Montevallo Plant, located within the Birmingham-Hoover MSA, has monitored SO_2 in accordance with the DRR since January 1, 2017. The site is **Lhoist, Montevallo Plant, AQS ID 01-117-9001**, and operates within ADEM's PQAO.

Table 7 SO_2 Monitors Required

SO2 Population Weighted Emissions Index (PWEI) Calcuations using 2018 Census Estimates and 2014 National Emissions Inventory (NEI) v2

CBSA Name	2014 NEI v2 SO2 (tpy)	Population (2018)	PWEI in Million persons-tpy	Required Monitors
Birmingham-Hoover	57,436	1,151,801	66,155	2
Mobile	16,849	413,757	6,971	1
Florence-Muscle Shoals	22,490	147,149	3,309	0
Albertville	809	96,109	78	0
Anniston-Oxford-Jacksonville	629	114,277	72	0
Auburn-Opelika	646	163,941	106	0
Columbus, GA-AL	4,242	305,451	1,296	0
Cullman	436	83,442	36	0
Daphne-Fairhope-Foley	518	218,022	113	0
Decatur	4,138	152,046	629	0
Dothan	645	148,245	96	0
Enterprise	345	51,909	18	0
Gadsden	4,436	102,501	455	0
Huntsville	1,690	462,693	782	0
Montgomery	6,266	373,225	2,339	0
Ozark	179	48,956	9	0
Scottsboro	7,442	51,736	385	0
Selma	1,029	38,310	39	0
Talladega-Sylacauga	1,394	90,543	126	0
Troy	7,748	33,338	258	0
Tuscaloosa	1,820	243,575	443	0
Valley	273	33,615	9	0

Quality Assurance

ADEM has a U.S. EPA approved Quality Assurance Program Plan that details the activities used to control and document the quality of the data collected. ADEM is an independent Primary Quality Assurance Organization (PQAO) as defined by 40 CFR Part 58. Part of the EPA required quality control program for particulate monitoring is the use of collocated particulate monitors. 40 CFR Part 58, Appendix A requires a percentage of manual particulate monitors to be collocated with FRM monitors so that quality statistics can be calculated. ADEM includes monitors for this purpose.

ADEM POLLUTANT NETWORK TABLES

A description of ADEM's ambient air monitoring network, followed by detailed site evaluations, will be presented in this section.

Included will be:

- Site Common Name
- County/CBSA
- AQS ID
- Address
- Latitude and Longitude
- Monitoring Objective/Scale
- Beginning and Ending Sampling Date
- Method, Method Code and Operating Schedule
- Comparability to the NAAQS

Lead

Site Common Name	County/CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
Troy Lead	Pike/Troy µSA	01-109-0003	Henderson Road, Troy	31.790479	-85.978974	Highest Concentration / Neighborhood	1/1/1979	active	S, G 44, 6	Y
							1/1/1979	active	S, G 44, 6	Y
S = Hi-Volume Total Suspended Particulate G = Lead Analysis by Graphite Furnace 6 = 24 hours every 6th day										

PM_{10}

Site Common Name	County / CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
MOMS, ADEM	Montgomery / Montgomery MSA	01-101-1002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	Population Exposure/ Neighborhood	6/1/1993	active	L, 127, 6	Y
						Quality Assurance/ Neighborhood	1/1/2013	active	L, 127, 6	Y
L = Low Volume Sequential Sampler 6 = 24 hours every 6th day										

SO_2

Site Common Name	County / CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
Chickasaw	Mobile / Mobile MSA	01-097-0003	Iroquois And Azalea, Chickasaw	30.76972	-88.0875	Population Exposure / Neighborhood	1/1/2013	active	P, 100, C	Y
Lhoist	Shelby / Birmingham-Hoover MSA	01-117-9001	7444 St. Hwy 25, Calera	33.0928	-86.8072	High Concentration – SO2 DRR / Middle	1/1/2017	active	P, 100, C	Y
Ward	Sumter / no MSA	01-119-0003	NNE of Ward Post Office, Ward	32.362606	-88.277992	General/Background / Regional	1/1/2018	active	P, 100, C	Y
P = Pulsed Fluorescent C = Continuous										

Ozone

Site Common Name	County/CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective / Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
Fairhope	Baldwin/Daphne-Fairhope-Foley MSA	01-003-0010	Fairhope High School, Fairhope	30.497478	-87.880258	Population Exposure/ Neighborhood	3/1/2000	active	U, 087, C	Y
Muscle Shoals	Colbert/Decatur MSA	01-033-1002	Wilson Dam Rd and 2nd Street, Muscle Shoals	34.762619	-87.638097	Population Exposure/ Neighborhood	3/1/2003	active	U, 047, C	Y
Wetumpka Westside	Elmore/Montgomery MSA	01-051-0004	3148 Elmore Road, Wetumpka	32.53568	-86.255193	Highest Concentration/ Urban	3/1/2018	active	U, 087, C	Y
Southside	Etowah/Gadsden MSA	01-055-0011	1450 Parker Anderson Lane, Southside	33.904039	-86.053867	Highest Concentration/ Neighborhood	4/26/2002	active	U, 047, C	Y
Dothan	Houston/Dothan MSA	01-069-0004	161 Buford Lane, Dothan	31.188933	-85.423094	Population Exposure/ Neighborhood	3/14/2005	active	U, 087, C	Y
Chickasaw	Mobile/Mobile MSA	01-097-0003	Iroquois and Azalea Chickasaw	30.770181	-88.087761	Population Exposure/ Neighborhood	3/2/1982	active	U, 087, C	Y
Bay Road	Mobile/Mobile MSA	01-097-2005	Bay Road, Mobile	30.474305	-88.141022	Population Exposure and Highest Concentration/	3/1/1999	active	U, 087, C	Y
MOMS, ADEM	Montgomery/Montgomery MSA	01-101-1002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	Population Exposure/ Neighborhood	6/2/1993	active	U, 087, C	Y
Decatur	Morgan/Decatur MSA	01-103-0011	Wallace Development Center, Decatur	34.530717	-86.967536	Population Exposure/ Urban	4/1/2000	active	U, 047, C	Y
Phenix City - South Girard	Russell/Columbus GA-AL MSA	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	Highest Concentration/ Urban	3/1/2018	active	U, 087, C	Y
Helena	Shelby/Birmingham-Hoover MSA	01-117-0004	Bearden Farm. Helena	33.317142	-86.825754	Population Exposure/ Urban	1/1/1983	active	U, 087, C	Y
Ward, Sumter Co.	Sumter/no MSA	01-119-0003	NNE of Ward Post Office	32.362606	-88.277992	General/Background/ Regional	3/1/2013	active	U, 087, C	Y
Duncanville, Tuscaloosa	Tuscaloosa/Tuscaloosa MSA	01-125-0010	11690 Southfork Drive, Duncanville	33.089772	-87.459733	Population Exposure/ Urban	2/1/2001	active	U, 087, C	Y
U = UV Photometric Ozone Analyzer C = Continuous										

$PM_{2.5}$

Site Common Name	County/CBSA	AQS ID	Address	Latitude	Longitude	Monitoring Objective/Scale	Date Began	Date Ended	Method, Method Code and Schedule	NAAQS
Fairhope	Baldwin/ Daphne-Fairhope-Foley MSA	01-003-0010	Fairhope High School, Fairhope	30.497478	-87.880258	Population Exposure/ Neighborhood	1/1/2000	active	L, 145, 3	Y
Ashland	Clay/no MSA	01-027-0001	Ashland Airport, Ashland	33.284928	-85.803608	Regional Transport/ Regional	1/1/1999	active	L, 145, 3	Y
Muscle Shoals	Colbert/ Florence-Muscle Shoals MSA	01-033-1002	Wilson Dam Road and 2nd Street, Muscle Shoals	34.762619	-87.638097	Highest Concentration/ Neighborhood	1/1/1999	active	L, 145, 3	Y
Crossville	DeKalb/no MSA	01-049-1003	13112 Hwy 68, Crossville	34.288567	-85.969858	General/Background/ Neighborhood	1/1/1999	active	L, 145, 3	Y
Gadsden C College	Etowah/Gadsden MSA	01-055-0010	1001 Wallace Drive, Gadsden	33.991494	-85.992647	Population Exposure/ Urban	1/1/2000	active	L, 145, 3	Y
							1/1/2014	9/11/2018	B, 731, C	N
Dothan (Civic Center)	Houston/Dothan MSA	01-069-0003	126 North St Andrews St., Dothan (civic center roof)	31.224783	-85.390789	Population Exposure/ Neighborhood	1/7/2005	active	L, 145, 3	Y
Chickasaw	Mobile/Mobile MSA	01-097-0003	Iroquois and Azalea, Chickasaw	30.770181	-88.087761	Population Exposure/ Regional	7/19/2002	active	L, 145, 3	Y
							1/1/2011	active	B, 731, C	N
MOMS, ADEM	Montgomery/ Montgomery MSA	01-101-0002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	Population Exposure/ Neighborhood	1/16/2009	active	L, 145, 3	Y
							1/16/2009	active	L, 145, 6	Y
							4/1/2009	active	B, 731, C	N
Decatur	Morgan/Decatur MSA	01-103-0011	Wallace Ctr.Hwy 31, Decatur	34.530717	-86.967536	Population Exposure/ Middle	8/7/2001	active	L, 145, 3	Y
							1/1/2011	active	B, 731, C	N
Phenix City - S. Girard School	Russell/Columbus GA-AL MSA	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	Highest Concentration/ Urban	1/18/2017	active	L, 145, 3	Y
							1/18/2017	active	L, 145, 3	Y
							9/18/2017	active	B, 209, C	N
Ward, Sumter County	Sumter/no MSA	01-119-0003	NNE of Ward Post Office, Ward	32.362606	-88.277992	General/Background/ Regional	7/1/2013	active	B, 731, C	N
VA, Tuscaloosa	Tuscaloosa/Tuscaloosa MSA	01-125-0004	3701 Loop Road East, Tuscaloosa	33.189931	-87.484189	Population Exposure/ Neighborhood	10/1/2002	active	L, 145, 3	Y
							1/1/2011	5/1/2018	B, 731, C	N

B = Beta Attenuation Monitor L = Low Volume Sequential Sampler 3 = 24 hours every 3rd day 6 = 24 hours every 6th day C = Continuous

APPENDIX A

Proposed Site Closure Justifications

Under 40 CFR §58.14(c), requests for SLAMS monitor discontinuation:

…will be approved if any of the following criteria are met and if the requirements of 40 CFR Part 58 Appendix D, if any, continue to be met:

(1) Any $PM_{2.5}$, O_3, CO, PM_{10}, SO2, Pb, or NO_2 SLAMS monitor which has shown attainment during the previous five years, that has a probability of less than 10 percent of exceeding 80 percent of the applicable NAAQS during the next three years based on the levels, trends, and variability observed in the past, and which is not specifically required by an attainment plan or maintenance plan.
(2) Any SLAMS monitor for , CO, PM_{10}, SO2, Pb, or NO_2 which has consistently measured lower concentrations than another monitor for the same pollutant in the same county (or portion of a county within a distinct attainment area, nonattainment area, or maintenance area, as applicable) during the previous five years, and which is not specifically required by an attainment plan or maintenance plan, if control measures scheduled to be implemented or discontinued during the next five years would apply to the areas around both monitors and have similar effects on measured concentrations, such that the retained monitor would remain the higher reading of the two monitors being compared.
(3) For any pollutant, any SLAMS monitor in a county (or portion of a county within a distinct attainment, nonattainment, or maintenance area, as applicable) provided the monitor has not measured violations of the applicable NAAQS in the previous five years, and the approved SIP provides for a specific, reproducible approach to representing the air quality of the affected county in the absence of actual monitoring data.
(4) A PM2.5 SLAMS monitor which EPA has determined cannot be compared to the relevant NAAQS because of the siting of the monitor, in accordance with §58.30.
(5) A SLAMS monitor that is designed to measure concentrations upwind of an urban area for purposes of characterizing transport into the area and that has not recorded violations of the relevant NAAQS in the previous five years, if discontinuation of the monitor is tied to start-up of another station also characterizing transport.
(6) A SLAMS monitor not eligible for removal under any of the criteria in paragraphs (c)(1) through (c)(5) of this section may be moved to a nearby location with the same scale of representation if logistical problems beyond the State's control make it impossible to continue operation at its current site.

Other requests for discontinuation that do not meet any of the above criteria may also be approved on a case-by-case basis if discontinuance does not compromise data collection needed for implementation of a NAAQS and if the requirements of 40 CFR Part 58 Appendix D, if any, continue to be met.

Muscle Shoals, AQS ID 01-033-1002

The Metropolitan Statistical Area of Florence-Muscle Shoals currently has one ozone monitor and one one FRM monitor located at Muscle Shoals (AQS ID: 01-033-1002). The $PM_{2.5}$ design value are 16 ug/m3 (24-hour standard) and 7.5ug/m3 (annual standard) which are less than 85% of the NAAQS for this monitor and is not required by 40 CFR 58, Appendix D. ADEM proposes to

close this $PM_{2.5}$ monitor due to its low design value and stable readings. The ozone design value for this site is 0.059 ppm which is less than 85% of the NAAQS. This monitor is not required by 40 CFR 58, Appendix D.

Meets the following 40 CFR 58.14 (c) approval conditions:

1. Parameter in attainment for the last 5 years
2. The monitor not required by attainment plan or maintenance plan
3. The monitor is not the last monitor in a non-attainment area
4. There is less than 10% probability that the monitor will exceed 80% of the NAAQS during the next 3 years.

The ozone and $PM_{2.5}$ monitors at Muscle Shoals meet the first three requirements. A statistical test was applied to the design values for these monitors to determine if the data met condition 4. The design values and the analysis are shown below. If the formula below is less than 80 percent of the applicable NAAQS the site is eligible for closure.

	PM 2.5		Ozone
	24-hr	Annual	
DV 2014	9.4	21.2	0.059
DV 2015	8.7	16.2	0.057
DV 2016	7.5	15.8	0.061
DV 2017	7.4	15.5	0.056
DV 2018	7.5	16.2	0.060
Xbar	8.1	17.0	0.059
n	5	5	5
t (n=5)	2.13	2.13	2.13
s	0.9	2.4	0.002
P	8.9	19.2	0.061
NAAQS	12.0	35.0	0.070
80% of NAAQS	9.6	28	0.056
is P < .8 NAAQS?	Yes	Yes	No

$$\overline{X} + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

Xbar = avg design value for past 5 years
t = student's t value for n-1 deg of freedom
s = standard deviation of the design values
n = number of records
DVyy = annual design value
NAAQS = pollutant Standard
P = probability

The ozone monitor and $PM_{2.5}$ monitor have been located at the same site. The property where this site is located has been sold to a new owner and ADEM has been asked to remove the monitors from this site. ADEM is proposing to close this site at the end of year, unless the property owners request us to vacate sooner, for the following reasons:

- These monitors have very low and stable design values and predicted to remain less than 85% of the NAAQS over the next 3 years.
- The building is greater than 14 years old and is due for replacement which is major cost.
- ADEM is in the process of upgrading ozone monitoring equipment across the network and this site will need a new ozone monitor, calibrator, and site data controller.
- The $PM_{2.5}$ data meets all 4 requirements for closure and is not required.
- The ozone data meet 3 of the 4 requirements for closure, have not exceeded the NAAQS in the previous 5 years, and is not required.
- ADEM can use the resources from this site to support other monitoring activities.
- Cost for setting up a new site could be used to improve infrastructure and communication in other areas of the network.

Dothan Civic Center, AQS ID: 01-069-0003

The Metropolitan Statistical Area of Dothan, Al. currently has one FRM monitor located at Dothan Civic Center (AQS ID: 01-069-0003). The $PM_{2.5}$ design values are 16 ug/m^3 (24-hour standard) and 7.8 ug/m^3 (annual standard) which are less than 85% of the NAAQS for this monitor and this monitor is not required by 40 CFR 58, Appendix D. ADEM proposes to close this $PM_{2.5}$ monitor due to its low design value and stable readings.

Meets all of the following 40 CFR 58.14 (c) approval conditions:

1. Parameter in attainment for the last 5 years
2. The monitor not required by attainment plan or maintenance plan
3. The monitor is not the last monitor in a non-attainment area
4. There is less than 10% probability that the monitor will exceed 80% the NAAQS during the next 3 years.

	PM 2.5	
	Annual	24-hour
DV 14	8.7	19.5
DV 15	7.3	14.9
DV 16	7.1	13.0
DV 17	8.6	18.3
DV 18	7.7	16.5
Xbar	7.9	16.4
n	5	5
t (n=5)	2.13	2.13
s	0.7	2.6
P	8.6	18.9
NAAQS	12.0	35.0
80% of NAAQS	9.6	28
is P < .8 NAAQS?	Yes	Yes

$$\overline{X} + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

Xbar = avg design value for past 5 years
t = student's t value for n-1 deg of freedom
s = standard deviation of the design values
n = number of records
DVyy = annual design value
NAAQS = pollutant Standard
P = probability

ADEM is proposing to close this site at the end of the 2019 calendar year for the following reasons:

- This monitors has very low and stable design values.
- The $PM_{2.5}$ data meets all 4 requirements for closure and is not required.
- ADEM can use the resources from this site to support other monitoring activities.

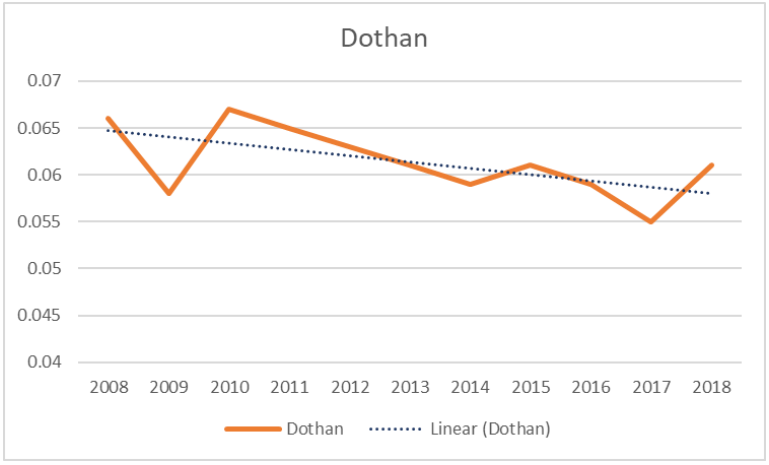
Dothan, AQS ID 01-069-0004

The Metropolitan Statistical Area of Dothan, Al. currently has one monitor located at Buford Lane (AQS ID: 01-069-0004). The ozone design value for this site is 0.058 ppm which is less than 85% of the NAAQS. This monitor is not required by 40 CFR 58, Appendix D. ADEM proposes to close this ozone monitor due to its low design value and stable readings.

Meets the following 40 CFR 58.14 (c) approval conditions:

1. Parameter in attainment for the last 5 years
2. The monitor not required by attainment plan or maintenance plan
3. The monitor is not the last monitor in a non-attainment area
4. There is less than 10% probability that the monitor will exceed 80% of the NAAQS during the next 3 years.
    a. Although the calculation does not conclusively confirm the discontinuation of the monitoring, further analysis indicate a strong negative trend over the last 11 years.
    b. There is no reason to indicate that this trend will change.
    c. No exceededance of the NAAQS have been reported on this site in the past 5 years.
    d. EPA Region 4 has the discretion to weigh all evidence in support of discontinutation of monitoring.

	Ozone
DV 14	0.059
DV 15	0.061
DV 16	0.059
DV 17	0.055
DV 18	0.061
Xbar	0.059
n	5
t (n=5)	2.13
s	0.002
P	0.061
NAAQS	0.070
80% of NAAQS	0.056
is P < .8 NAAQS?	No



ADEM is proposing to close this site at the end of the 2019 monitoring season for the following reasons:

- The monitor design value is predicted to remain less than 85% of the NAAQS over the next 3 years.
- The ozone data meets 3 of the requirements for closure.
- Trend analysis of the last 11 years of data indicate a strong negative trend.
- Based on the analysis, the monitor is expected to maintain attainment and therefore is no longer required
- The building is greater than 15 years old and is due for replacement which is major cost.
- ADEM can use the resources from this site to support other monitoring activities.

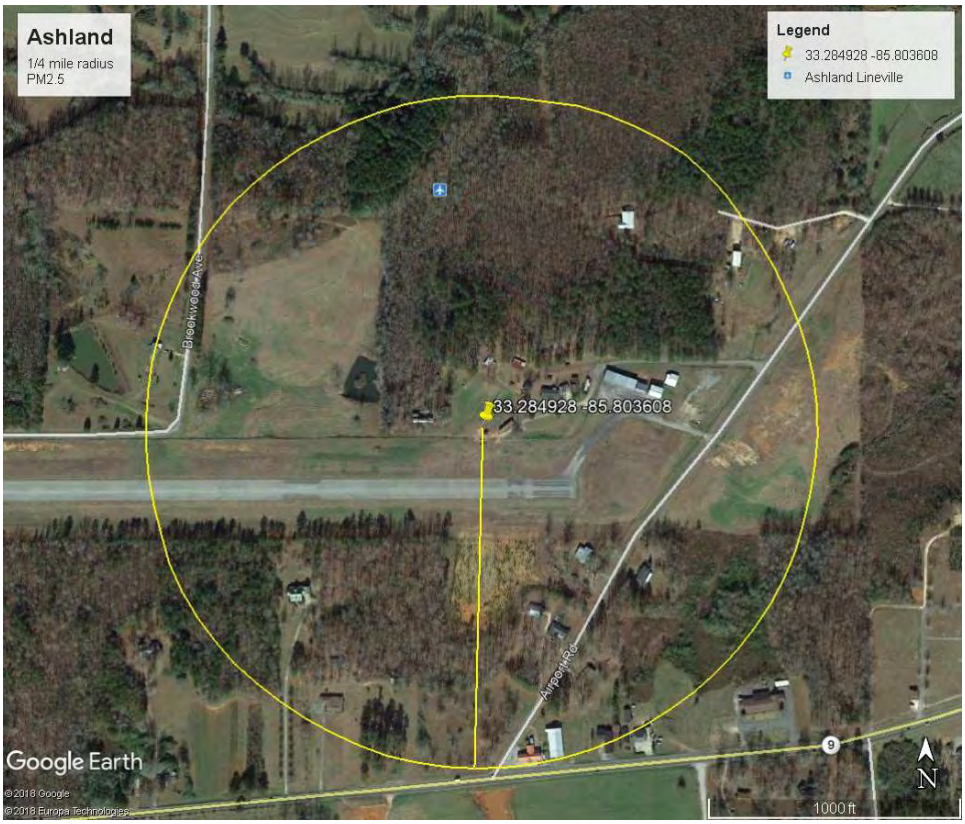
APPENDIX B

Site Assessments

All of ADEM's sites meet the requirements of 40 CFR 58, Appendices A, C, D and E, as appropriate. A monitor's suitability for comparison with the NAAQS is documented in the ADEM Pollutant Network Tables and Site Assessments.

ASHLAND **AQS ID 01-027-0001**

Ashland Airport, Ashland, Clay County **33.284928 -85.803608**



MSA: N/A 420m from Hwy 9 AADT 6180 (2017) Property Type: Residential (private)

NORTH

SOUTH

EAST

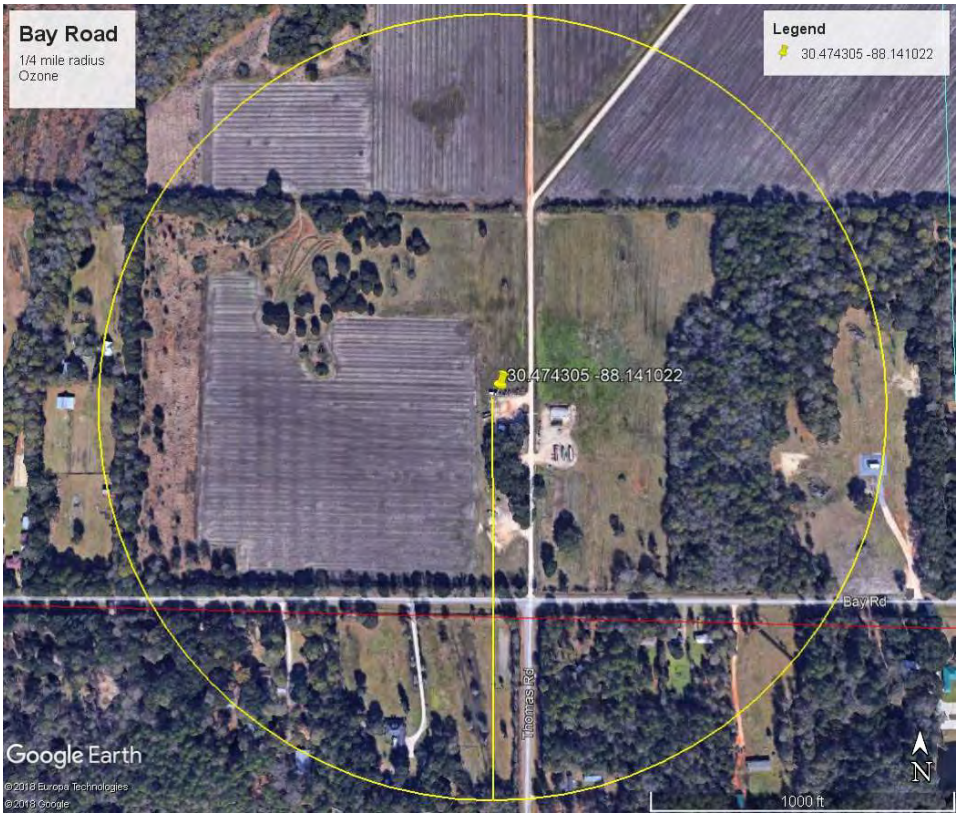
WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
PM 2.5	Regional Transport/ Regional	Every 3 days	01/01/1999	145	Inlet Head	2.1m	N/A	33m	9.6m/ East

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/27/2019

BAY ROAD **AQS ID 01-097-2005**

Bay Road, Theodore, Mobile County **30.474305 -88.141022**



MSA: Mobile 1.63 miles from Dauphin Island Parkway AADT 7790 (2017) Property Type: Agricultural (county)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure and Highest Concentration/ Urban	Continuous	03/01/1999	087	Teflon/ Stainless Steel	4.4m	1.6m	36.5m	14.6m/ South

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/12/2019

CHICKASAW

Iroquois and Azalea, Chickasaw, Mobile County

AQS ID 01-097-0003

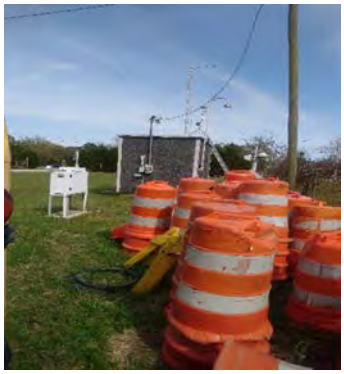
30.770181 -88.087761

MSA: Mobile 56+m from Iroquois St Property Type: Commercial (city)

NORTH

SOUTH

EAST



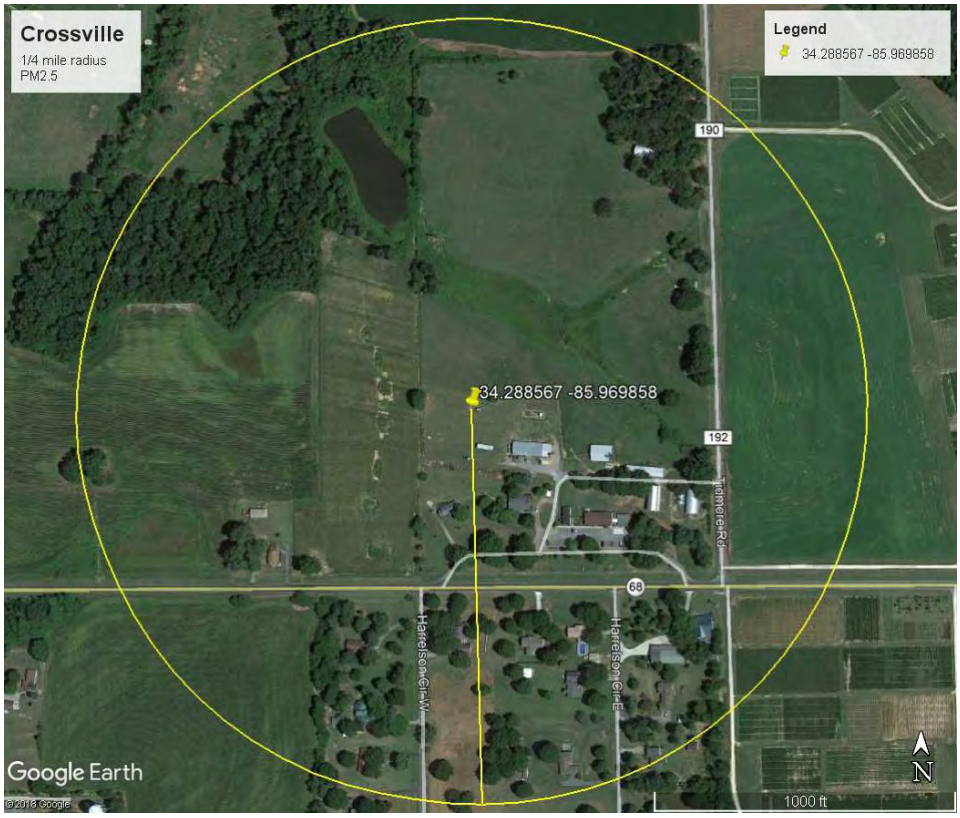
WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Neighborhood	Continuous	03/02/1982	087	Teflon/ Stainless Steel	4.0m	1.4m	13m	3.6m/ West
SO2			01/01/2013	100	Teflon/ Teflon	3.6m	1.0m	16m	
BAM 2.5	Population Exposure/ Regional	Continuous	01/01/2015	731	Inlet Head	4.8m	2.2m	15.5m	
PM 2.5		Once every 3 days	07/19/2002	145	Inlet Head	2.1m	N/A	8m	

All tree foliage west of the shelter was removed within 14 days of this evaluation. Evaluation Date: 03/12/2019

CROSSVILLE **AQS ID 01-049-1003**

13112 Highway 68, Crossville, DeKalb County **34.288567 -85.969858**



µSA: Fort Payne 175m from Hwy 68 AADT 5980 (2017) Property Type: Agricultural (Auburn University)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
PM 2.5	General Background/ Neighborhood	Every 3 days	10/01/2002	145	Inlet Head	2.1m	N/A	23m	10.8m/ North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/04/2019

DECATUR **AQS ID 01-103-0011**

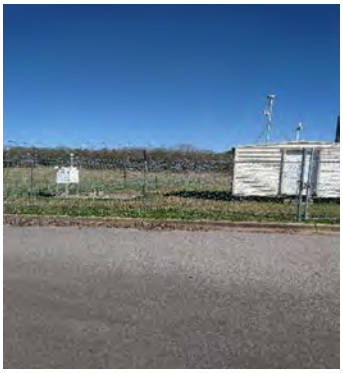
JH Crow Drive, Decatur, Morgan County **34.530717 -86.967536**

MSA: Decatur 490+m from Hwy 31 AADT 16,650 (2017) Property Type: Commercial (Armory Comm. of Alabama)

NORTH

SOUTH

EAST



WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/Urban	Continuous	04/01/2000	047	Teflon/ Stainless Steel	3.6m	1.2m	20m	13.6m/ South
BAM 2.5	Population Exposure/Middle	Continuous	01/01/2015	731	Inlet Head	4.8m	2.4m	19.5m	
PM 2.5		Every 3 days	08/07/2001	145	Inlet Head	2.1m	N/A	25m	

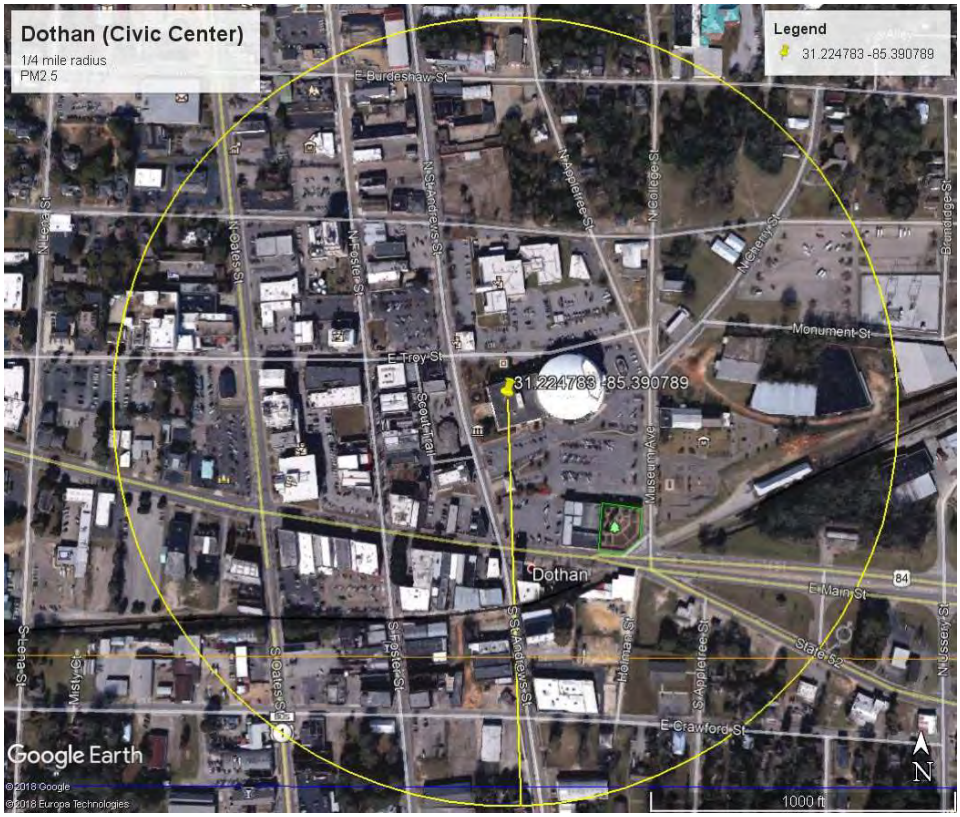
This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/05/2019

DOTHAN (CIVIC CENTER)

126 North St. Andrews Street, Dothan, Houston County

AQS ID 01-069-0003

31.224783 -85.390789



MSA: Dothan 38m from N St. Andrews Street Property Type: Commercial (city)

NORTH

SOUTH

EAST

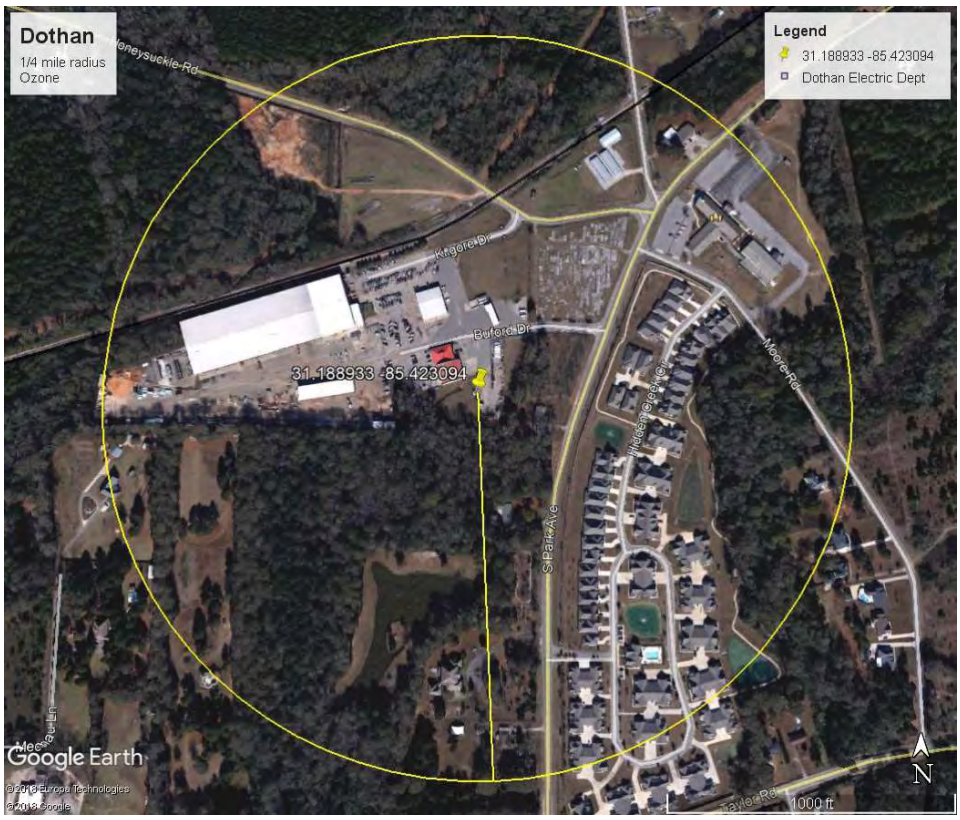
WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
PM 2.5	Highest Concentration/ Neighborhood	Every 3 days	01/07/2005	145	Inlet Head	13.5m	N/A	N/A	N/A

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/13/2019

DOTHAN **AQS ID 01-069-0004**

161 Buford Lane, Dothan, Houston County **31.188933 -85.423094**



MSA: Dothan 107m to S Park Avenue Property Type: Residential (city)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Neighborhood	Continuous	03/14/2005	087	Teflon/ Stainless Steel	4.2m	1.6m	32.5m	25m/ South

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/13/2019

DUNCANVILLE, TUSCALOOSA **AQS ID 01-125-0010**

11690 Southfork Drive, Duncanville, Tuscaloosa County **33.089772 -87.459733**

MSA: Tuscaloosa 74m from S Loop Road Property Type: Commercial (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Urban	Continuous	02/01/2001	087	Teflon/ Stainless Steel	4.0m	1.4m	20m	3.8m/ North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/26/2019

FAIRHOPE **AQS ID 01-003-0010**

1 Pirate Drive, Fairhope, Baldwin County **30.497478 -87.880258**

MSA: Daphne-Fairhope-Foley 65m from cul-de-sac on Gale Rowe Lane Property Type: Commercial (county)

NORTH

SOUTH

EAST

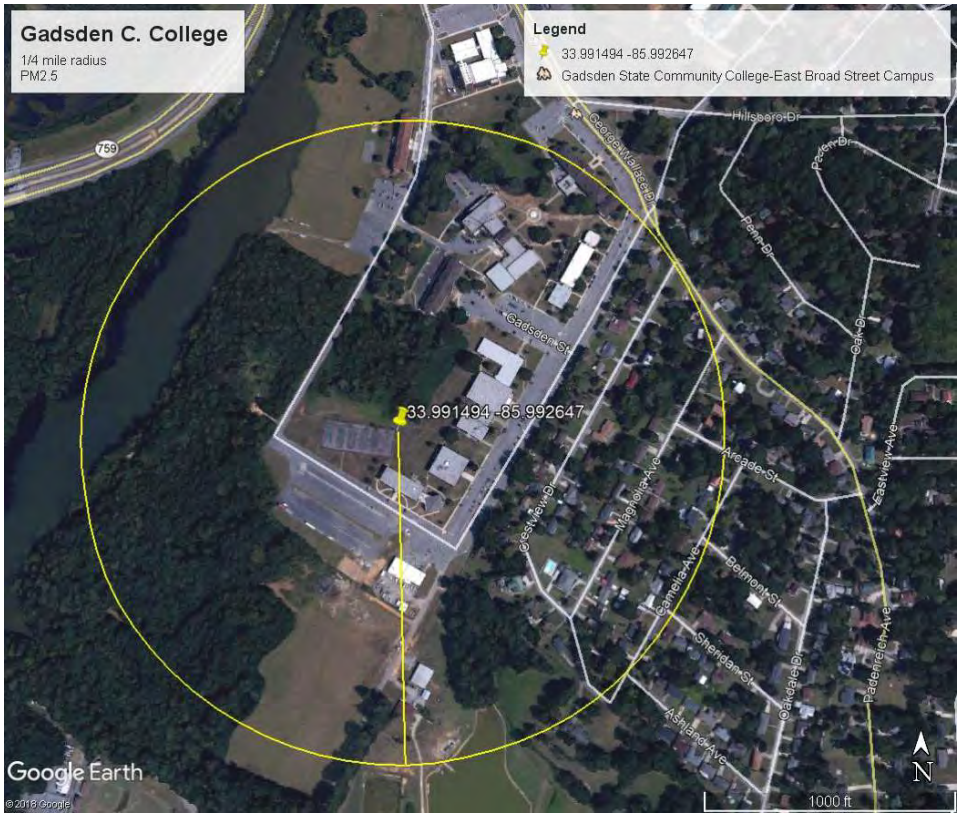
WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Neighborhood	Continuous	03/01/2000	087	Teflon/ Stainless Steel	4.4m	1.8m	10m	3m/ East
PM 2.5		Every 3 days	01/01/2000	145	Inlet Head	2.1m	N/A	11.5m	

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/12/2019

GADSDEN C COLLEGE
1001 Wallace Drive, Gadsden, Etowah County

AQS ID 01-055-0010
33.991494 -85.992647



MSA: Gadsden 445m from George Wallace Dr. 21,120 AADT (2017) Property Type: Commercial (college)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
PM 2.5	Population Exposure/ Urban	Every 3 days	10/01/2002	145	Inlet Head	2.1m	N/A	17m	9.6m/ North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/04/2019

HELENA **AQS ID 01-117-0004**

Bearden Farm, Helena, Shelby County **33.317142 -86.825754**

MSA: Birmingham-Hoover 342m from Hwy 261 AADT 10,370 (2017) Property Type: Agricultural (private)

NORTH

SOUTH

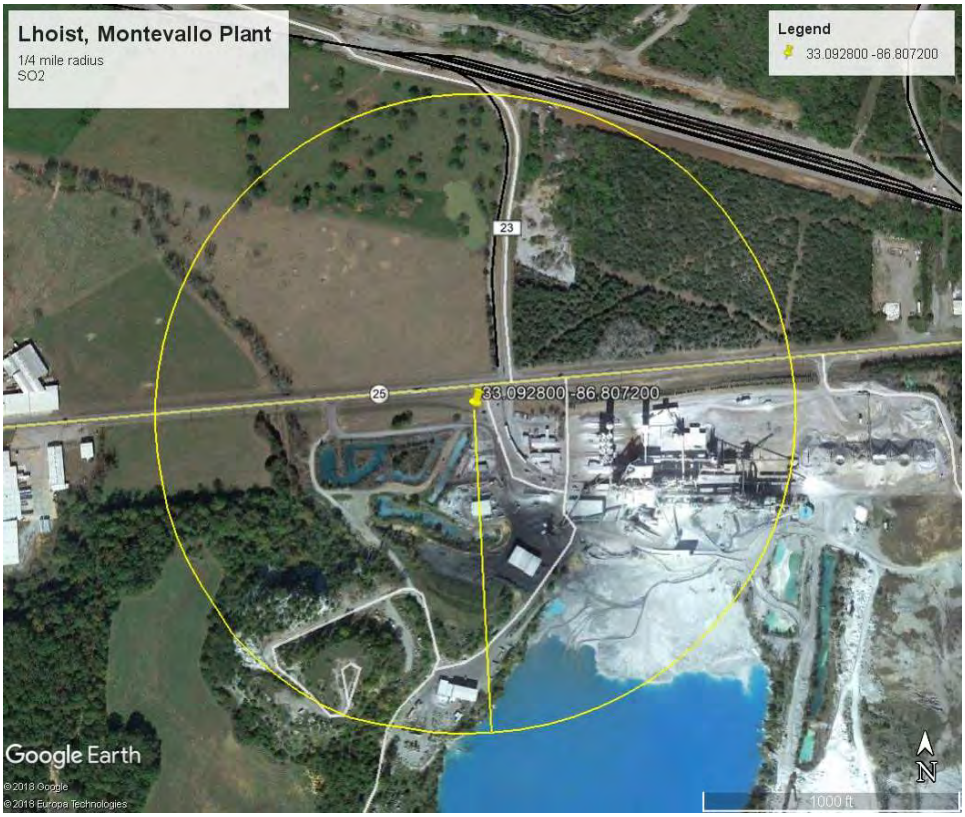
EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Population Exposure/ Urban	Continuous	01/01/1983	087	Teflon/ Stainless Steel	4.4m	1.8m	13.4m	6.2m/ East

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/25/2019

LHOIST, MONTEVALLO PLANT **AQS ID 01-017-9001**
7444 Highway 25, Calera, Shelby County **33.0928 -86.8072**



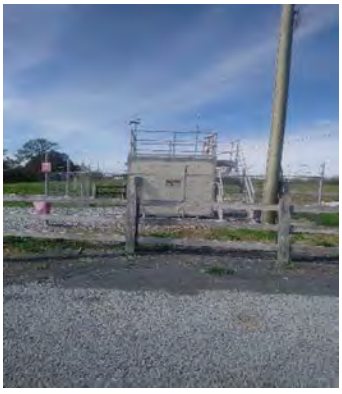
MSA: Birmingham-Hoover 22m from Hwy 25 AADT 8270 (2017) Property Type: Industrial (private)

NORTH

SOUTH

EAST

WEST



Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
SO2	Highest Concentration/ Middle	Continuous	01/01/2017	100	Teflon	4.5m	1.9m	15m	4.8m/ Southwest

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/25/2019

MOMS, ADEM **AQS ID 01-101-1002**

1350 Coliseum Boulevard, Montgomery, Montgomery County **32.412811 -86.263394**

MSA: Montgomery 133m from Newell Parkway Property Type: Commercial (state)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance between collocated samplers	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone - continuous	Population Exposure/ Neighborhood	06/02/1993	087	Teflon/ Teflon	4.67m	1.83m	N/A	50+m	10.6m/ West
BAM 2.5 - continuous		01/01/2015	731	Inlet Head	5.24m	2.4m			
PM 2.5 – 1 in 3 days		01/16/2009	145		4.9m	N/A	1.9m		
PM 2.5 Co – 1 in 6 days									
PM 10 – 1 in 6 days		09/16/1993	127		3.23m		1.36m		
PM 10 Co – 1 in 6 days	QA/ Neighborhood	01/01/2013							

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/22/2019

PHENIX CITY-SOUTH GIRARD SCHOOL

AQS ID 01-113-0003

510 6th Place South, Phenix City, Russell County

32.437028 -84.999653

MSA: Columbus GA-AL 123m from 6th Place South Property Type: Commercial (city)

NORTH

SOUTH

EAST

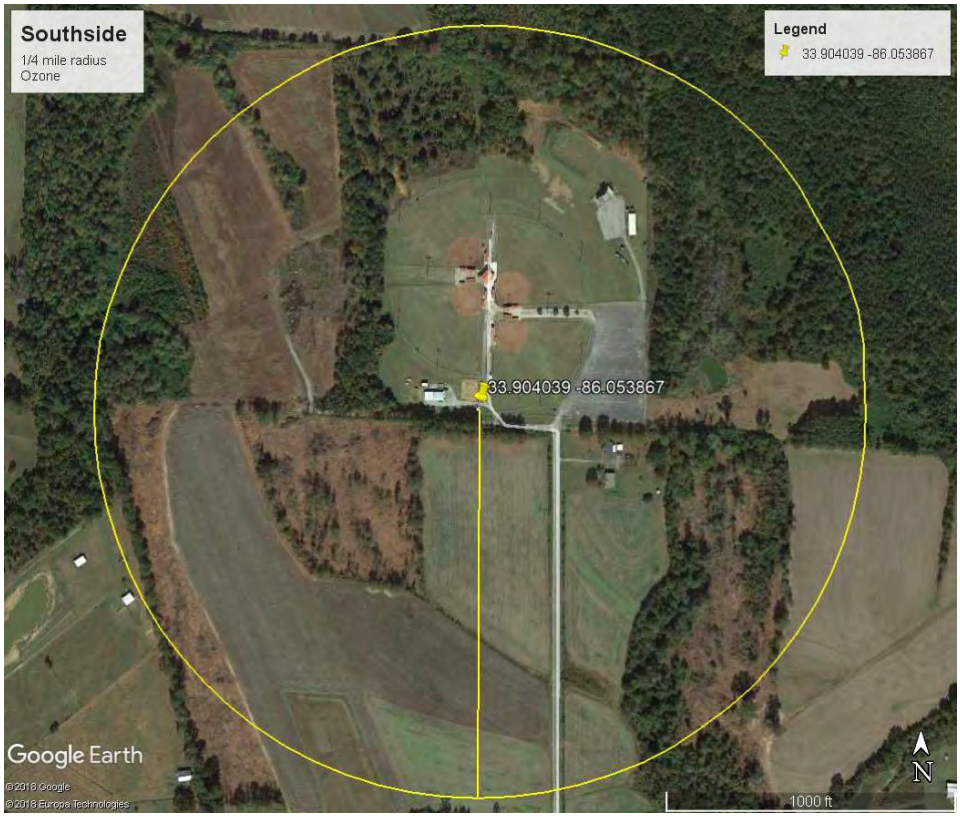
WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance between collocated samplers	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Highest Concentration/ Urban	Continuous	03/01/2018	087	Teflon/Teflon	4.43m	1.83m	N/A	35+m	2m/ Southeast
BAM 2.5			09/18/2017	209	Inlet	4.77m	2.17m			
PM 2.5		Once every 3 days	01/18/2017	145	Inlet	4.7m	N/A	1m		
PM 2.5 Co					Inlet	4.7m				
Carbon Speciation Supplemental	Population Exposure/ No scale	Once every 6 days	06/12/2017	811	N/A	4.6m		N/A		
PM 2.5 Speciation				812	N/A	4.6m				

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/21/2019

SOUTHSIDE **AQS ID 01-055-0011**

1450 Parker Anderson Lane, Southside, Etowah County **33.904039 -86.053867**



MSA: Gadsden 82m from Parker Anderson Lane Property Type: Agricultural (city)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Highest Concentration/ Neighborhood	Continuous	04/26/2002	047	Teflon/ Stainless Steel	4.0m	1.8m	13.5m	16.8m North

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/04/2019

TROY LEAD **AQS ID 01-109-0003**

Henderson Road, Troy, Pike County **31.790479 -85.978974**

µSA: Troy 14.5m from Henderson Road Property Type: Industrial (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe Inlet Height from ground	Distance between collocated samplers	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Lead TSP	Highest Concentration/ Neighborhood	Every 6 days	01/01/2009	044	2.11m	2.08m	13.5m	16.6m/ Northeast
Lead TSP Co							11.5m	

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/13/2019

VA, TUSCALOOSA
3701 Loop Road East, Tuscaloosa, Tuscaloosa County

AQS ID 01-125-0004
33.189931 -87.484189

MSA: Tuscaloosa 28m from nearest parking lot and 500+m from Loop Rd Property Type: Residential (USA)

NORTH

SOUTH

EAST

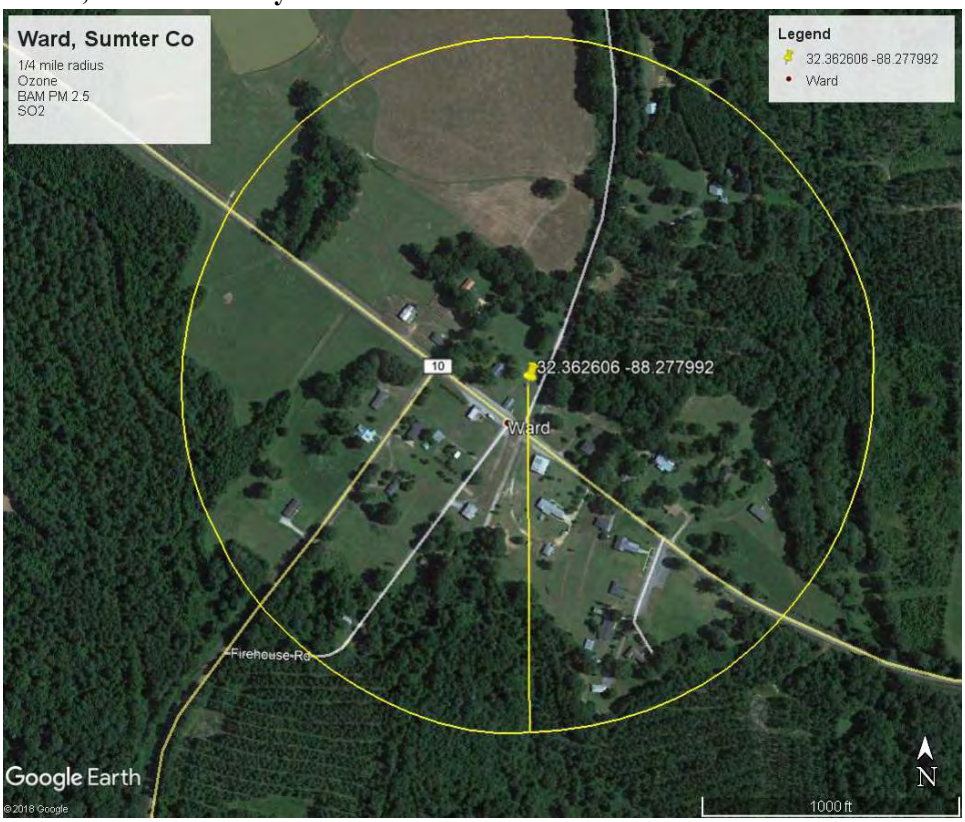
WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
PM 2.5	Population Exposure/ Neighborhood	Every 3 days	10/01/2002	145	Inlet Head	2.1m	N/A	16m	8.4m South

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/26/2019

WARD, SUMTER CO. **AQS ID 01-119-0003**

NNE of Ward Post Office, Sumter County **32.362606 -88.277992**



MSA: N/A 41m from Ward Road 16 Property Type: Agricultural (private)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
BAM 2.5	General Background/ Regional	Continuous	01/01/2015	731	Inlet Head	4.5m	1.9m	15m	18.8m Northwest
Ozone			03/01/2013	087	Teflon/ Stainless Steel	3.8m	1.2m	12.5m	
SO2			01/04/2018	100	Teflon/ Teflon	4.2m	1.4m	12.5m	

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 02/26/2019

WETUMPKA WESTSIDE TECHNOLOGY PARK

AQS ID 01-051-0004

3148 Elmore Road, Wetumpka, Elmore County

32.535680 -86.255193

MSA: Montgomery 50+m from Hwy 14 AADT 11,710 (2017) Property Type: Industrial (city)

NORTH

SOUTH

EAST

WEST

Parameter	Monitoring Objective/ Scale	Schedule	Start Date	AQS Method Code	Probe/Rain Shield Material	Probe Inlet Height from ground	Distance from probe to supporting structure	Distance from probe to nearest tree dripline	Height of nearest tree/ Direction from probe to tree
Ozone	Highest Concentration/ Urban	Continuous	03/20/2018	087	Teflon/ Stainless Steel	3.6m	1.2m	23.5m	13.8m/ East

This site meets all requirements of 40 CFR Part 58. Evaluation Date: 03/22/2019