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July 2, 2017

Beverly Banister, Director
Air Pesticides & Toxics Management Division
US EPA - Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

Dear Ms. Banister:

In accordance with 40 CFR 58.10, the Alabama Department of Environmental Management (ADEM) has prepared the Annual Network Plan for the State of Alabama. The plan was placed on the ADEM website on May 21, 2018, to start a 30-day public review period. The review period concluded at the close of business on June 22, 2018.

During the 30-day public review period, ADEM received comments from several organizations. ADEM reviewed the comments and responded to the commenters. No changes were made to the plan based on these comments.

The following items will be submitted electronically to Todd Rinck and Darren Palmer:

2018 Annual Network Plan
2018 Plan Addendum with Site Assessments
Public Comments
ADEM Responses
Air Monitoring Equipment Evaluations

If I can provide additional information please contact me at (334) 260-2747.

Sincerely,

Mike Malaier, Chief
Air Assessment Unit
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State of Alabama
Ambient Air Monitoring
2018 Network Plan

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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
Bham	Birmingham
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 Department of Natural Resources and Environmental Management
hr	hour
hi-vol	high-volume PM10 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 stations
O3	ozone
PAMS	Photochemical Assessment Monitoring Stations
Pb	lead
PM	particulate matter
PM2.5	particulate matter ≤2.5 micrometers diameter
PM10	particulate matter ≤10 micrometer diameter
PM10-2.5	particulate matter ≤10 microns but > 2.5 microns
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 (PM2.5)	Speciation Trends Network
TEOM	Tapered Element Oscillating Microbalance (Rupprecht and Patashnick Co.)
tpy	tons per year
TSP	Total Suspended Particulate
URG	URG-3000N PM2.5 Speciation monitoring carbon-specific sampler
USEPA	United States Environmental Protection Agency
° C	degree Celsius
$\mu g/m^3$	micrograms (of pollutant) per cubic meter (of air sampled)
≥	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 2017, and changes proposed to take place to the current ambient air monitoring network during 2018/2019.

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. For 2018, this document was placed on ADEM's website on 05/21/2018 to begin a 30-day public review period. This document can be accessed at the following link:

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

Or by contacting:

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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). There are other non-criteria pollutants, such as $PM_{2.5}$ speciated compounds, that are also monitored for special purposes. In addition, meteorological data is also collected to support the monitoring and aid in analysis of the ambient air monitoring data.

In Alabama, the air quality surveillance system is operated by the state environmental agency, 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 performing the required annual review of their portion of the current ambient air quality network and developing a proposed network plan to be implemented during 2019. This document reflects the air quality surveillance system operated only by ADEM. An overview of the 2018 ADEM Monitoring Network can be seen in Table 1.

The Jefferson County Department of Health plan will be available for review on their website by following this link. www.jcdh.org/jcdh-ambient-air-network-plan

The Huntsville Department of Natural Resources and Enviromental Management's plan will be available for review on their website by following this link.
https://www.huntsvilleal.gov/government/departments/natural-resources/.

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	http://www.jcdh.org/programs/air-radiation-protection-division/air-quality-forecast/
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 2017/2018

- Wetumpka (AQS ID 01-051-0003) ozone monitoring site had to be moved due to loss of access to the site. The site was moved to 3148 Elmore Road, Wetumpka, Alabama and assigned AQS ID 01-051-0004. Ozone monitoring began March 21, 2018. See the new site assessment in Appendix C.
- South Girard School (AQS ID 01-113-0003) replaced Phenix City-Downtown particulate matter monitoring site (AQS ID 01-113-0001) and Phenix City-Ladonia ozone monitoring site (AQS ID 01-113-0002). All ambient air monitoring activities in the Phenix City area were consolidated to one location at the South Girard School at 510 6th Place, Phenix City. Particulate matter monitoring began January 18, 2017 and ozone monitoring began March 1, 2018.
- ADEM began monitoring SO_2 at the Ward site (AQS ID 01-119-0003) to determine background levels of SO2. The SO_2 monitor is designated as a Special Purpose Monitor (SPM).
- Childersburg (AQS ID 01-121-0002) particulate matter monitoring site was closed December 31, 2017 due to its low design value. This site was not in an MSA and was not required by 40 CFR 58, Appendix D.

Summary of proposed changes for 2018/2019

- ADEM proposes to shut down the <u>continuous</u> PM2.5 monitors at the Tuscaloosa and Gadsden sites. These monitors were installed due to a requirement of 40 CFR 58, appendix D, 4.7.2. Due to the low concentrations that have been recorded at these locations, these monitors are no longer required. For more details see APPENDIX C.

Table 1 All Sites in the 2018 ADEM Monitoring Network

Site Common Name	AQS ID	Ozone	PM2.5	PM 2.5 collocated	PM2.5 Spec.	BAM (Cont. PM2.5)	PM10 Hi-Vol	PM10 Hi-Vol collocated	Lead	Lead Collocated	SO2
ADEM Sites											
Fairhope	01-003-0010	x	x								
Ashland	01-027-0001		x								
Muscle Shoals	01-033-1002	x	x								
Crossville	01-049-1003		x								
Wetumpka WT	01-051-0004	x									
Gadsden - CC	01-055-0010		x			c					
Southside	01-055-0011	x									
Dothan -CC	01-069-0003		x								
Dothan	01-069-0004	x									
Mobile - Chickasaw	01-097-0003	x	x			x					x
Mobile - Bay Road	01-097-2005	x									
Montgomery - MOMS	01-101-1002	x	x	x		x	x	x			
Decatur	01-103-0011	x	x			x					
Troy	01-109-0003								x	x	
Phenix City - South Girard School	01-113-0003	x	x	x	x	x					
Helena	01-117-0004	x									
Lhoist	01-117-9001										x
Ward, Sumter Co.	01-119-0003	x				x					x
Tuscaloosa - VA Hospital	01-125-0004		x			c					
Duncanville, Tuscaloosa	01-125-0010	x									

C = to be closed in 2018.

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 PM2.5 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 PM2.5 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 the placement of the monitoring probe, its'spacing from obstructions and probe material. All monitors operated by ADEM were evaluated against Appendix E criteria.

Population and CBSA

Alabama has a 2017 population estimate of 4,874,747 of which 3,731,531 is located in the 13 MSAs listed in Table 2.

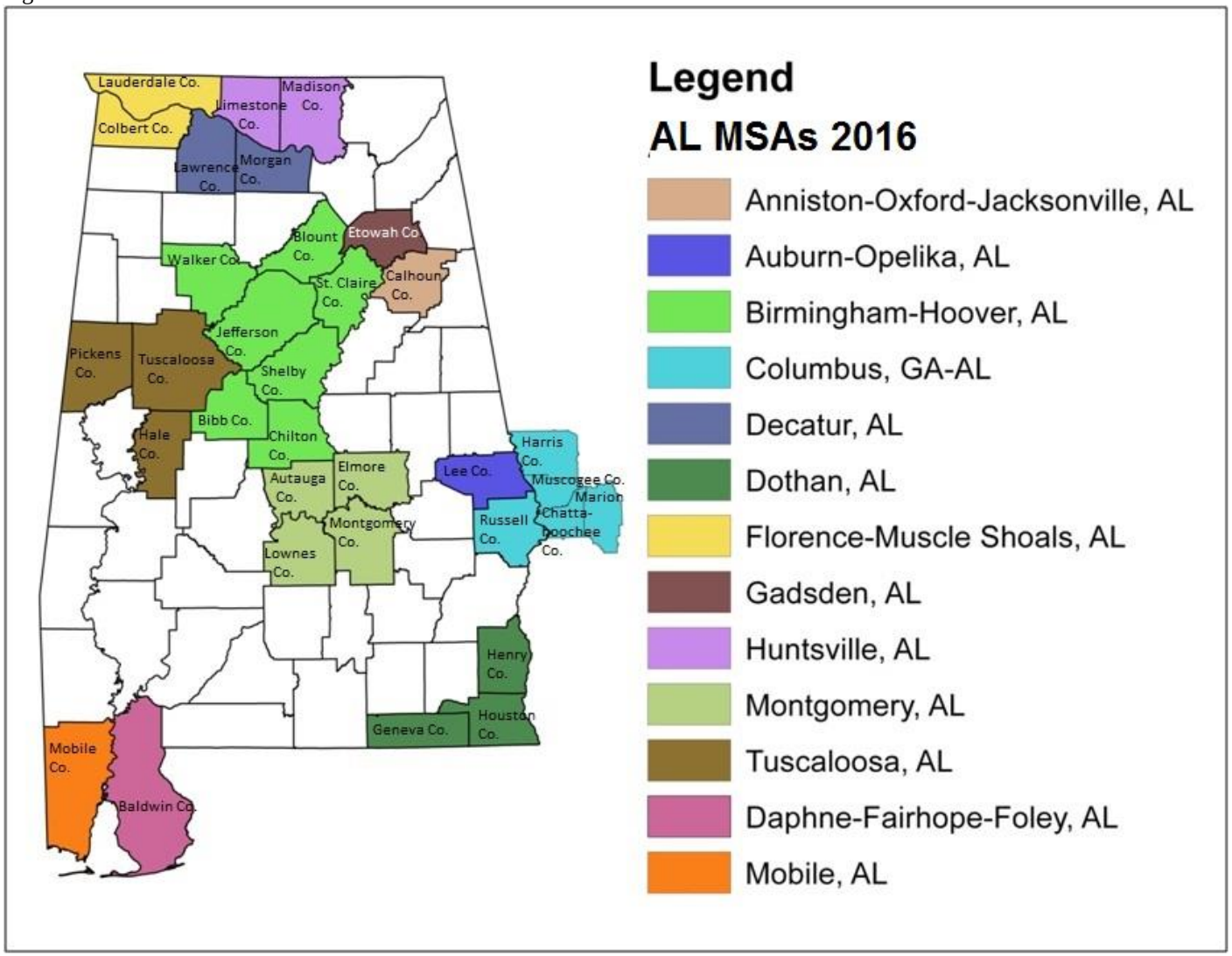
Minimum monitoring requirements vary for each pollutant and can be based on a combination of factors such as population, the level of monitored pollutants, and Core Based Statistical Area boundaries as defined in the latest US Census information. The term "Core Based Statistical Area" (CBSA) is a collective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

Table 2 lists the CBSAs in Alabama along with county names included in that area, and the 2017 estimated population. The Metropolitan Statistical Areas followed by the Micropolitan Statistical Areas are listed from highest to lowest population.

Table 2 Alabama CBSAs

Core Based Statistical Areas	Counties	2017 Population Est.	Metropolitan or Micropolitan Statistical Areas
Birmingham-Hoover, AL	Bibb, Blount, Chilton, Jefferson, Shelby, St. Clair, and Walker	1,149,807	Metropolitan Statistical Area
Huntsville, AL	Limestone and Madison	455,448	Metropolitan Statistical Area
Mobile, AL	Mobile County	413,995	Metropolitan Statistical Area
Montgomery, AL	Autauga, Elmore, Lowndes, and Montgomery	373,903	Metropolitan Statistical Area
Columbus, GA-AL	Russell County, AL and Chattahoochee County,GA, Harris County,GA, Marion County,GA, Muscogee County,GA	303,811	Metropolitan Statistical Area
Tuscaloosa, AL	Hale, Pickens and Tuscaloosa	242,799	Metropolitan Statistical Area
Daphne-Fairhope-Foley, AL	Baldwin	212,628	Metropolitan Statistical Area
Auburn-Opelika, AL	Lee	161,604	Metropolitan Statistical Area
Decatur, AL	Lawrence and Morgan	151,867	Metropolitan Statistical Area
Dothan, AL	Geneva, Henry and Houston	147,914	Metropolitan Statistical Area
Florence-Muscle Shoals, AL	Colbert and Lauderdale	147,038	Metropolitan Statistical Area
Anniston-Oxford-Jacksonville, AL	Calhoun	114,728	Metropolitan Statistical Area
Gadsden, AL	Etowah	102,755	Metropolitan Statistical Area
Albertville, AL	Marshall	95,548	Micropolitan Statistical Area
Talladega-Sylacauga, AL	Coosa and Talladega	90,819	Micropolitan Statistical Area
Cullman, AL	Cullman	82,755	Micropolitan Statistical Area
Scottsboro, AL	Jackson	51,909	Micropolitan Statistical Area
Enterprise, AL	Coffee	51,874	Micropolitan Statistical Area
Ozark, AL	Dale	49,226	Micropolitan Statistical Area
Selma, AL	Dallas	39,215	Micropolitan Statistical Area
Valley, AL	Chambers	33,713	Micropolitan Statistical Area
Troy, AL	Pike	33,267	Micropolitan Statistical Area

Figure 1 Alabama with MSAs as of 2016



Types of Monitoring Stations

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 Plan for details.

SLAMS - *State or Local Ambient Monitoring Station*: The SLAMS make up ambient air quality monitoring sites that are primarily needed for NAAQS comparisons. **ADEM SLAMS are described in detail by pollutant in the section labeled Alabama's SLAMS by Pollutant.**

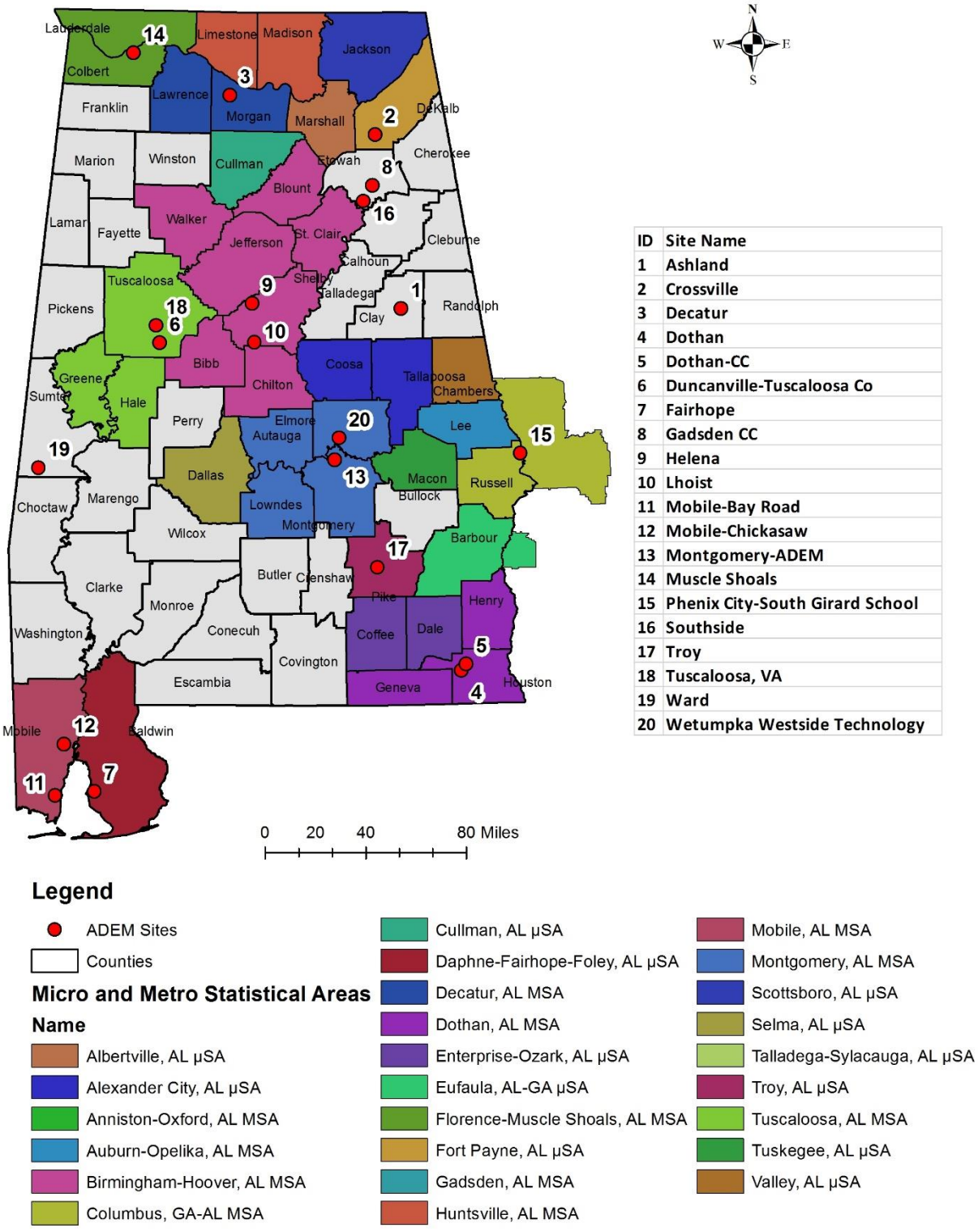
STN – *PM2.5 Speciation Trends Network*: A $PM_{2.5}$ speciation station designated to be part of the speciation trends network. This network provides chemical species data of fine particulates. There is one STN site in Alabama, North Birmingham, in Jefferson County (AQS ID 01-073-0023), operated by JCDH. Refer to the JCDH Plan for details.

Supplemental Speciation - Any $PM_{2.5}$ speciation station that is used to gain supplemental data and is not dedicated as part of the speciation trends network. Alabama's network has 2 supplemental sites: **ADEM operates one at Phenix City-Girard School (AQS ID 01-113-0003)** and a second is operated by JCDH at the Wylam site (AQS ID 01-073-2003). Refer to the JCDH Plan for details on their site.

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 one NCore site. There is one NCore site in Alabama, North Birmingham, in Jefferson County (AQS ID 01-073-0023), operated by JCDH. Refer to the JCDH Plan for details.

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 CASTNET site in Alabama, Sand Mountain in DeKalb County (AQS ID 01-049-9991), operated by an EPA contractor.

SO2 Data Requirements Rule (DRR)– Effective September 21, 2015, per 40 CFR Part 51, states are required 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. **Alabama has one DRR SO2 monitoring site, Lhoist (AQS ID 01-117-9001) operated by a Lhoist contractor.**



ID	Site Name
1	Ashland
2	Crossville
3	Decatur
4	Dothan
5	Dothan-CC
6	Duncanville-Tuscaloosa Co
7	Fairhope
8	Gadsden CC
9	Helena
10	Lhoist
11	Mobile-Bay Road
12	Mobile-Chickasaw
13	Montgomery-ADEM
14	Muscle Shoals
15	Phenix City-South Girard School
16	Southside
17	Troy
18	Tuscaloosa, VA
19	Ward
20	Wetumpka Westside Technology

Legend

- ADEM Sites
- Counties

Micro and Metro Statistical Areas

Name

- Albertville, AL μSA
- Alexander City, AL μSA
- Anniston-Oxford, AL MSA
- Auburn-Opelika, AL MSA
- Birmingham-Hoover, AL MSA
- Columbus, GA-AL MSA
- Cullman, AL μSA
- Daphne-Fairhope-Foley, AL μSA
- Decatur, AL MSA
- Dothan, AL MSA
- Enterprise-Ozark, AL μSA
- Eufaula, AL-GA μSA
- Florence-Muscle Shoals, AL MSA
- Fort Payne, AL μSA
- Gadsden, AL MSA
- Huntsville, AL MSA
- Mobile, AL MSA
- Montgomery, AL MSA
- Scottsboro, AL μSA
- Selma, AL μSA
- Talladega-Sylacauga, AL μSA
- Troy, AL μSA
- Tuscaloosa, AL MSA
- Tuskegee, AL μSA
- Valley, AL μSA

Figure 2 Location of ADEM Monitoring Sites

Alabama's SLAMS by Pollutant

Lead 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 (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.

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. For more information regarding CO monitoring refer to the JCDH Plan for details. ADEM does not operate a CO monitor.

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 Plan for details. ADEM does not operate an NO_2 monitor.

Sulfur Dioxide (SO_2) Network

Effective August 23, 2010, EPA strengthened the primary National Ambient Air Quality Standard (NAAQS) for sulfur dioxide (SO_2). EPA established a new 1-hour standard at a level of 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 of 1,000,000 or more;
- 2 monitors in CBSAs with PWEI values less than 1,000,000 but greater than 100,000; and
- 1 monitor in CBSAs with PWEI values greater than 5,000.

According to the latest PWEI calculations listed in Table 3 CBSA's PWEI and Number of Monitors Required
, only the Birmingham-Hoover and Mobile MSAs require SO2 monitoring. ADEM operates one SO_2 monitor at Chickasaw, (AQS ID 01-097-0003), for the Mobile-Daphne-Fairhope CBSA.
For more information regarding SO_2 monitoring for the Birmingham-Hoover MSA refer to the JCDH Plan for details.

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, (AQS ID 01-117-9001) located in Calera, Birmingham-Hoover MSA will be characterized by monitoring. Monitoring began on January 1, 2017.
ADEM began monitoring SO_2 at Ward, Sumter Co. (AQS ID 01-119-0003) as a background site in January 2018. The monitor will be designated as a Special Purpose Monitor (SPM).
No other changes are planned.

Table 3 CBSA's PWEI and Number of Monitors Required

Population Weighted Emissions Index (PWEI) Calcuations May 2018 - Using 2017 Census Estimates & 2014 NEI				
CBSA Name	2014 NEIv2 so2 (tpy)	Population (2017)	PWEI in Million persons-tpy	Required Monitors
Birmingham-Hoover, AL	57,436	1,149,807	66,040	2
Mobile, AL	16,849	413,995	6,975	1
Albertville, AL	809	95,548	77	0
Anniston-Oxford, AL	629	114,728	72	0
Auburn-Opelika, AL	646	161,604	104	0
Columbus, GA-AL	4,242	303,811	1,289	0
Cullman, AL	436	82,755	36	0
Daphne-Fairhope-Foley, AL	518	212,628	110	0
Decatur, AL	4,138	151,867	628	0
Dothan, AL	645	147,914	95	0
Enterprise, AL	345	51,874	18	0
Florence-Muscle Shoals, AL	22,490	147,038	3,307	0
Gadsden, AL	4,436	102,755	456	0
Huntsville, AL	1690	455,448	770	0
Montgomery, AL	6,266	373,903	2,343	0
Ozark	179	49,226	9	0
Scottsboro, AL	7,442	51,909	386	0
Selma, AL	1029	39,215	40	0
Talladega-Sylacauga, AL	1,394	90,819	127	0
Troy, AL	7,748	33,267	258	0
Tuscaloosa, AL	1,820	242,799	442	0
Valley, AL	273	33,713	9	0

PM10 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 US EPA modified the NAAQS for PM_{10} to revoke the annual standard. Currently, there is still 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 less than 80% of the NAAQS. 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 high volume PM_{10} monitors on a 1 in 6 day schedule at MOMS, ADEM (AQS ID 01-101-1002), one of them being the collocated quality assurance monitor. No changes are proposed.

Ozone 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. Since the NAAQS for ozone is 0.070 parts per million of ozone then 85% of the NAAQS truncated is **0.059** ppm

Table 4 SLAMS Minimum Ozone Monitoring 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.

Table 5 Alabama MSAs with Ozone Monitoring Sites and Current Design Valuelists Alabama's Ozone sites, AQS ID, 2015-2017 Ozone Design Values, MSA name, maximum design value of the MSA, number of Ozone monitors required by the CFR, and the current number of Ozone monitors.

Table 5 Alabama MSAs with Ozone Monitoring Sites and Current Design Value

Site Name	AQS ID	2015-2017 Design Values	MSA	MSA Max DV	# of sites required per CFR	Current # of sites
Helena	01-117-0004	0.066	Birmingham-Hoover	0.068	2	****
Phenix City – Ladonia (closed 10/31/2017)	01-113-0002	0.062	Columbus, GA- Phenix City, AL	0.062	1	2*
Phenix City - Girard Sch.	01-113-0003	***				
Columbus, GA, Airport	13-215-0008	0.061				
Decatur	01-103-0011	0.063	Decatur	0.063	1	1
Dothan	01-069-0004	0.058	Dothan	0.058	0	1
Fairhope	01-003-0010	0.063	Daphne-Fairhope	0.063	1	1
Muscle Shoals	01-033-1002	0.058	Florence-Muscle Shoals	0.058	1	1
Southside	01-055-0011	0.061	Gadsden	0.061	1	1
Mobile - Chickasaw	01-097-0003	0.062	Mobile	0.063	2	2
Mobile - Bay Road	01-097-2005	0.063				
Wetumpka - Head Start Sch. (closed 10/31/17)	01-051-0003†	0.055	Montgomery	0.061	2	2
Wetumpka - Tech. Park (start 03/20/18)	01-051-0003	***				
Montgomery - MOMS	01-101-1002	0.061				
Duncanville, Tuscaloosa	01-125-0010	0.060	Tuscaloosa	0.060	1	1
Ward (Sumter Co.) ozone background site	01-119-0003	0.056	not in MSA	NA	0	1
Sand Mtn. **	01-049-9991	0.062	not in MSA	NA	0	1

DV ≥ 85% of the NAAQS

* 1 in AL and 1 in GA

** CASTNET site operated by EPA contractor.

*** Not enough data for a design value

****ADEM operates 1 site, additional sites operated by JCDH

† Data only available for 2017

Ozone Monitoring Requirements for Alabama MSAs

Birmingham-Hoover MSA

Using the Birmingham-Hoover MSA population estimate in 2017 (Table 2) and the design value, two Ozone monitors are required in this MSA. One site, Helena (AQS ID 01-117-0004), operated by ADEM, is located in Shelby County. Other ozone sites in this MSA are located in Jefferson County and operated by Jefferson County Department of Health. For more information regarding ozone monitoring in Jefferson County refer to the JCDH network plan. No changes are planned for this MSA by ADEM.

Columbus, GA/AL MSA

Using the Columbus GA/AL MSA population estimate in 2017 (Table 2) and the design value from Table 5 Alabama MSAs with Ozone Monitoring Sites and Current Design Value, one Ozone monitor is required for this MSA. There are currently two Ozone sites in this MSA: Phenix City-South Girard School (AQS ID 01-113-0003), which replaced Ladonia (AQS ID 01-113-0002), and Columbus, GA, Airport (AQS ID 13-215-0008), operated by Georgia Environmental Protection Division. No changes are planned for this MSA by ADEM.

Decatur MSA

Using the Decatur MSA population estimate in 2017 (Table 2) and the design value from Table 5, one Ozone monitor is required for this MSA. There is currently one Ozone site, Decatur (AQS ID 01- 103-0011). No changes are planned for this MSA.

Dothan MSA

Using the Dothan MSA population estimate in 2017 (Table 2) and the design value from Table 5, an Ozone monitor is not required for this MSA. There is currently one Ozone site, Dothan (AQS ID 01-069-0004). No changes are planned for this MSA.

Daphne-Fairhope-Foley MSA

Using the Daphne-Fairhope-Foley MSA population estimate in 2017 (Table 2) and the design value from Table 5, one Ozone monitor is required for this MSA. There is currently one Ozone site, Fairhope (AQS ID 01-003-0010). No changes are planned for this MSA.

Florence-Muscle Shoals MSA

Using the Florence-Muscle Shoals MSA population estimate in 2017 (Table 2) and the design value from Table 5, an Ozone monitor is not required for this MSA. There is currently one Ozone site, Muscle Shoals (AQS ID 01-033-1002). No changes are planned for this MSA.

Gadsden MSA

Using the Gadsden MSA population estimate in 2017 (Table 2) and the design value from Table 5, one Ozone monitor is required for this MSA. There is currently one Ozone site, Southside (AQS ID 01-055-0011). No changes are planned for this MSA.

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

Mobile MSA
Using the Mobile MSA population estimate in 2017 (Table 2) and the design value from Table 5, 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 for this MSA.

Montgomery MSA
Using the Montgomery MSA population estimate in 2017 (Table 2) and the design value from Table 5, two Ozone monitors are required for this MSA. There are currently two Ozone sites, MOMS (AQS ID 01-101-1002) and Wetumpka Westside Technology Park (AQS ID 01-051-0004). The Wetumpka Head Start School site (AQS ID 01-051-0003) closed after operating for just the 2017 ozone season. Refer to APPENDIX B.

Tuscaloosa MSA
Using the Tuscaloosa MSA population estimate in 2017 (Table 2) and the design value from Table 5, one Ozone monitor is required for this MSA. There is currently one Ozone site, Duncanville (AQS ID 01-125-0010). No changes are planned for this MSA.

Auburn-Opelika and Anniston-Oxford 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
ADEM operates one site, Ward (AQS ID 01-119-0003)**,** in Sumter Co. that 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 for this monitor.

$PM_{2.5}$ Network

Minimum monitoring requirements for $PM_{2.5}$ are based on population and whether the design value is less than 85% of the NAAQS, or greater than or equal to 85% of the NAAQS (See Table 6). In addition to the FRM monitors required by Table 6 PM2.5 Minimum Monitoring Requirements, the state is required to operate a regional background and a regional transport site. 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 requirement goes away 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 by EPA Region IV. $PM_{2.5}$ design values in Table 7 are based on 2015-2017 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 6 PM2.5 Minimum Monitoring 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 a million but less than 4 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 near road site. More information regarding this requirement in Alabama can be found in the JCDH network plan.

In order to meet the continuous monitoring requirements of Appendix D, ADEM currently operates seven MetOne BAM monitors (AQS method code 731) which do not have FEM designation. These monitors are also used for AQI reporting and for submittal to the AirNow system. Comparison with the NAAQS will be based on the FRMs at each site which are designated as the primary monitor and operate on the required frequency.

Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value lists Alabama's $PM_{2.5}$ sites, AQS ID, the 2015-2017 $PM_{2.5}$ 24-hour and Annual and Design Values for each site, MSA name, the 2017 estimated population of the MSAs, the Annual and 24-hour Design Value for each MSA, number of monitors required by the CFR and the current number of $PM_{2.5}$ monitors.

Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value

Site Name	AQS Site ID	PM2.5 24 hr DV 2015-2017	PM2.5 Annual DV 2015-2017	MSA	Annual MSA DV	24hr MSA DV	# of sites required per CFR	Current # of sites
Phenix City - Girard Sch. (started 01/19/18)	01-113-0003	22.2	9.4	Columbus, GA/AL	9.5	29.8	0	***
Decatur	01-103-0011	15	7.9	Decatur	7.9	15.0	0	1
Dothan CC	01-069-0003	15	7.7	Dothan	7.7	15.0	0	1
Fairhope	01-003-0010	17	7.7	Daphne-Fairhope-Foley	7.7	17.0	0	1
Muscle Shoals	01-033-1002	16	7.9	Florence-Muscle Shoals	7.9	16.0	0	1
Gadsden - CC	01-055-0010	17	8.7	Gadsden	8.7	17.0	0	1
Mobile - Chickasaw	01-097-0003	17	8.1	Mobile	8.1	17.0	0	1
Montgomery – MOMS	01-101-1002	20	8.8	Montgomery	8.8	20.0	0	1
Tuscaloosa - VA Hospital	01-125-0004	16	8.1	Tuscaloosa	8.1	16.0	0	1
Ashland (Bkg/Transport)*	01-027-0001	18	7.8	Not in MSA	7.8	18.0	1	1
Crossville (Bkg/Transport)*	01-049-1003	16	8.3	Not in MSA	8.3	16.0	1	1
Childersburg (closed 12/27/17)	01-121-0002	18	9.1	Not in MSA	9.1	18.0	0	1
Ward, Sumter Co. (Bkg/Transport) (continuous)*	01-119-0003			Not in MSA			1	1

DV ≥ 85% of the NAAQS

* 1 background and 1 transport site are required for Alabama

***ADEM operates 1 site, additional sites operated by the State of Georgia

$PM_{2.5}$ Monitoring requirements for Alabama MSAs

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

Columbus, GA/AL MSA
Using the Columbus, GA/AL MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is required. There are currently four FRM monitors, one collocated FRM monitor, two non-FRM/FEM/ARM continuous monitors, and two speciation monitors in this MSA. 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 is not currently comparable to the NAAQS while it is in the 2-year evaluation period. ADEM has no changes planned for this MSA.

Daphne-Fairhope-Foley MSA
Using the Daphne-Fairhope-Foley MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is required. There is currently one FRM monitor located at Fairhope (AQS ID 01-003-0010). No changes are planned for this MSA.

Decatur MSA
Using the Decatur MSA population estimate in 2017 (Table 2) and the design value from Table 7, no FRM monitor is required. There is currently one FRM monitor and one non-FEM continuous monitor located at Decatur (AQS ID 01-103-0011). No changes are planned for this MSA.

Dothan MSA
Using the Dothan MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is required. There is currently one FRM monitor located at Dothan Civic Center (AQS ID 01-069-0003). No changes are planned for this MSA.

Florence-Muscle Shoals MSA
Using the Florence-Muscle Shoals MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is required. There is currently one FRM monitor located at Muscle Shoals (AQS ID 01-003-1002). No changes are planned for this MSA.

Gadsden MSA
Using the Gadsden MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is required. There is currently one FRM monitor and one non-FEM continuous monitor at Gadsden Community College (AQS ID 01-055-0010). ADEM plans to shut down the continuous monitor at this site in 2018. ADEM will continue to operate the FRM monitor.

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

Mobile MSA
Using the Mobile MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is 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 for this MSA.

Montgomery MSA
Using the Montgomery MSA population estimate in 2017 (Table 2) and the design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value, no FRM monitor is required. There is currently one FRM monitor, one collocated FRM monitor, and one non-FEM continuous monitor located at the MOM (AQS ID 01-101-1002) site. No changes are planned for this MSA.

Tuscaloosa MSA
Using the Tuscaloosa MSA population estimate in 2017 (Table 2) and the design value from Table 7, no FRM monitor is required. There is currently one FRM monitor and one non-FEM continuous monitor located at VA, Tuscaloosa (AQS ID 01-125-0004). ADEM plans to shut down the continuous monitor at this site in 2018. ADEM will continue to operate the FRM monitor.

Auburn-Opelika and Anniston-Oxford MSAs
The MSAs of Auburn-Opelika and Anniston-Oxford 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.

PM2.5 Monitors not located in MSAs
Sumter County represents rural, background $PM_{2.5}$ values for the west part of the state. A non-FEM continuous monitor is currently being operated in Ward (AQS ID 01-119-0003). ADEM intends to maintain this site.

Ashland (AQS ID 01-027-0001) serves as a regional transport site in between the large MSAs of Birmingham-Hoover and Atlanta using an FRM monitor. The $PM_{2.5}$ design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value is less than 85% of the NAAQS. ADEM intends to maintain this site.

Crossville (AQS ID 01-049-1003) represents rural, background PM2.5 values for the northeast part of the state using an FRM monitor. The PM2.5 design value from Table 7 MSA's with PM2.5 Monitoring Sites and Current Design Value is less than 85% of the NAAQS. ADEM intends to maintain this site.

Quality Assurance

ADEM has an US 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.

Monitoring Equipment Evaluation

An evaluation of the condition of ambient monitors and auxiliary equipment is performed by ADEM. The equipment is categorized as "good" or "poor". As resources allow, equipment in "poor" condition will be replaced. A report of ADEM's equipment evaluation will be submitted to the US EPA by July 1 each year.

NETWORK DESCRIPTIONS

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

Included will be:

- AQS ID
- Address
- Latitude and Longitude
- Scale
- Type
- Monitoring Objective
- Beginning Sampling Date and Ending Sampling Date
- Method
- Operating Schedule
- Is it comparible to the NAAQS?

ADEM AIR MONITORING NETWORK DESCRIPTION

Abbreviations	
Scale	
N	Neighborhood (0.5 – 4 Kilometers)
U	Urban (overall citywide conditions, 4 -50 kilometers
R	Regional (usually rural, with homogenous geography, tens to hundreds of kilometers)
M	Middle Scale
Type	
CAS	CASNET operated by EPA
S	SLAMS
QA	QA Collocated Monitor
SPM	Special Purpose Monitor
Operating Schedule	
C	Continuous monitor
D	Daily 24-hour samples
3	1 24-hour sample every 3 days (on national schedule)
6	1 24-hour sample every 6 days (on national schedule)
Methods	
H	Hi-volume SSI sampler
L	Low Volume SSI
B	BAM continuous monitor
U	UV photometric ozone analyzer
P	Pulsed Fluorescent
S	Hi-Volume Total Suspended Particulate monitor
G	Lead Analysis by Graphite furnace
NAAQS[1]	
Y,N	Data suitable for comparison to NAAQS

[1] Collocated monitors must be operated in the same manner as the federal reference method but one monitor at the site is designated as the main monitor for comparison to the NAAQS.

PM 2.5

Site common name	County	AQS Site ID	Address	Latitude	Longitude	SCALE	TYPE	Monitoring objective / CBSA	Date Began	Date Ended	METHOD	SCHEDULE	NAAQS	Mth #	Comments
Fairhope	Baldwin	01-003-0010	Fairhope High School	30.497478	-87.880258	N	S	Population Exposure/ Mobile-Daphne-Fairhope	1/1/2000	active	L	3	Y	145	
Ashland	Clay	01-027-0001	Ashland Airport	33.284928	-85.803608	R	S	Regional Transport/ not in CBSA	1/1/1999	active	L	3	Y	145	
Muscle Shoals	Colbert	01-033-1002	Wilson Dam Road and 2nd Street	34.762619	-87.638097	N	S	Highest Concentration/ Florence-Muscle Shoals MSA	1/1/1999	active	L	3	Y	145	
Crossville	DeKalb	01-049-1003	13112 Hwy 68	34.288567	-85.969858	N	S	General/background/ not in CBSA	1/1/1999	active	L	3	Y	145	
Gadsden C College	Etowah	01-055-0010	1001 Wallace Drive	33.991494	-85.992647	U	S	Population Exposure/ Gadsden MSA	1/1/2000	active	L	3	Y	145	
Gadsden C College	Etowah	01-055-0010	1001 Wallace Drive	33.991494	-85.992647	U	S	Population Exposure/ Gadsden MSA	1/1/2014	active	B	C	N	731	Non FEM cont. to close in 2018
Dothan Civic Center	Houston	01-069-0003	126 North St Andrews St. Civic Center	31.224783	-85.390789	N	S	Population Exposure/ Dothan-Enterprise-Ozark	1/7/2005	active	L	3	Y	145	
Chickasaw	Mobile	01-097-0003	Iroquois and Azalea	30.770181	-88.087761	R	S	Population Exposure/ Mobile-Daphne-Fairhope	7/19/2002	active	L	3	Y	145	
Chickasaw	Mobile	01-097-0003	Iroquois and Azalea	30.770181	-88.087761	R	S	Population Exposure/ Mobile-Daphne-Fairhope	1/1/2011	active	B	C	N	731	Non FEM cont.

PM 2.5 continued

Site common name	County	AQS Site ID	Address	Latitude	Longitude	SCALE	TYPE	Monitoring objective / CBSA	Date Began	Date Ended	METHOD	SCHEDULE	NAAQS	Method Code	Comments
MOMS, ADEM	Montgomery	01-101-0002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	N	S	Population Exposure/ Montgomery MSA	1/16/2009	active	L	3	Y	145	
MOMS, ADEM	Montgomery	01-101-0002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	N	S	Population Exposure/ Montgomery MSA	1/16/2009	active	L	6	Y	145	Collocated FRM
MOMS, ADEM	Montgomery	01-101-0002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	N	S	Other/ Montgomery MSA	4/1/2009	active	B	C	N	731	Non FEM cont.
Decatur	Morgan	01-103-0011	Wallace Ctr.Hwy 31, Decatur	34.530717	-86.967536	M	S	Population Exposure/ Decatur MSA	8/7/2001	active	L	3	Y	145	
Decatur	Morgan	01-103-0011	Wallace Ctr.Hwy 31, Decatur	34.530717	-86.967536	M	S	Population Exposure/ Decatur MSA	1/1/2011	active	B	C	N	731	Non FEM cont.
Phenix City - S. Girard School	Russell	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	U	S	Highest Concentration/ Columbus, GA-AL MSA	1/18/2017	active	L	3	Y	145	
Phenix City - S. Girard School	Russell	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	U	S	Highest Concentration/ Columbus, GA-AL MSA	1/18/2017	active	L	3	Y	145	Collocated FRM
Phenix City - S. Girard School	Russell	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	U	S	Highest Concentration/ Columbus, GA-AL MSA	9/18/2017	active	B	C	N		2-year test period
Ward, Sumter County	Sumter	01-119-0003	NNE of Ward Post Office	32.362606	-88.277992	R	S	Other/not in MSA	7/1/2013	active	B	C	N	731	Non FEM cont.
VA, Tuscaloosa	Tuscaloosa	01-125-0004	3701 Loop Road East	33.189931	-87.484189	N	S	Population Exposure/ Tuscaloosa MSA	10/1/2002	active	L	3	Y	145	
VA, Tuscaloosa	Tuscaloosa	01-125-0004	3701 Loop Road East	33.189931	-87.484189	N	O	Population Exposure/ Tuscaloosa MSA	1/1/2011	active	B	C	N	731	Non FEM cont. to close in 2018

PM_{10}

Site common name	County	AQS Site ID	Address	Latitude	Longitude	SCALE	TYPE	Monitoring objective / CBSA	Date Began	Date Ended	METHOD	SCHEDULE	NAAQS	Mth #	Commnets
Montgomery - MOMS	Montgomery	01-101-1002	1350 Coliseum Blvd, Montgomery, AL	32.412811	-86.263394	N	S	Population Exposure/ Montgomery	6/1/1993	active	S	6	Y	63	
Montgomery - MOMS	Montgomery	01-101-1002	1350 Coliseum Blvd, Montgomery, AL	32.412811	-86.263394	N	S	Quality Assurance/ Montgomery	1/1/2013	active	S	6	Y	63	

Lead

Site common name	County	AQS Site ID	Address	Latitude	Longitude	SCALE	TYPE	Monitoring objective / CBSA	Date Began	Date Ended	METHOD	SCHEDULE	NAAQS	Mth #	Comments
Troy	Pike	01-109-0003	Henderson Road, Troy, AL	31.790479	-85.978974	N	S	Highest Concentration /Troy uSA	1/1/2009	active	S, G	6	Y	44	
Troy	Pike	01-109-0003	Henderson Road, Troy, AL	31.790479	-85.978974	N	S	Highest Concentration /Troy uSA	1/1/2009	active	S, G	6	Y	44	

OZONE

Site common name	County	AQS Site ID	Address	Latitude	Longitude	SCALE	TYPE	Monitoring objective / CBSA	Date Began	Date Ended	METHOD	SCHEDULE	NAAQS	Mth #	Comments
Fairhope	Baldwin	01-003-0010	Fairhope High School, Fairhope	30.497478	-87.880258	N	SPM	Population Exposure/ Mobile MSA	3/1/2000	active	U	C	Y	087	
Muscle Shoals	Colbert	01-033-1002	Wilson Dam Rd And 2nd St.	34.762619	-87.638097	N	S	Population Exposure/ Decatur MSA	3/1/2003	active	U	C	Y	047	
Wetumpka	Elmore	01-051-0004	3148 Elmore Road, Wetumpka	32.535681	-86.255193	U	S	Highest Concentration/ Montgomery MSA	3/1/2018	active	U	C	Y	087	
Southside	Etowah	01-055-0011	1450 Parker Anderson Lane, Southside	33.9039	-86.0539	N	SPM	Max Concentration/ Gadsden MSA	4/26/2002	active	U	C	Y	047	
Dothan	Houston	01-069-0004	161 Buford Lane	31.188933	-85.423094	N	S	Population Exposure/ Dothan MSA	3/14/2005	active	U	C	Y	087	
Mobile - Chickasaw	Mobile	01-097-0003	Iroquois And Azalea Chickasaw	30.770181	-88.087761	N	S	Population Exposure/ Mobile MSA	3/2/1982	active	U	C	Y	087	
Mobile - Bay Road	Mobile	01-097-2005	Bay Road, Mobile	30.4747	-88.14111	U	S	Population Exposure and Highest Concentration/ Mobile MSA	3/1/1999	active	U	C	Y	087	
Montgomery - MOMS	Montgomery	01-101-1002	1350 Coliseum Blvd, Montgomery	32.412811	-86.263394	N	S	Population Exposure/ Montgomery MSA	6/2/1993	active	U	C	Y	087	
Decatur	Morgan	01-103-0011	Wallace Development Center	34.530717	-86.967536	U	S	Population Exposure/ Decatur MSA	4/1/2000	active	U	C	Y	047	
Phenix City - South Girard School	Russell	01-113-0003	510 6th Place South, Phenix City	32.437028	-84.999653	U	SPM	Highest Concentration/ Columbus, GA-AL	3/1/2018	active	U	C	Y	087	
Helena	Shelby	01-117-0004	Helena, Bearden Farm	33.3169	-86.825	U	S	Population Exposure/ Birmingham MSA	1/1/1983	active	U	C	Y	087	
Ward, Sumter Co.	Sumter	01-119-0003	NNE of Ward Post Office	32.362606	-88.277992	R	S	General/Background/not in MSA	3/1/2013	active	U	C	Y	087	
Duncanville, Tuscaloosa	Tuscaloosa	01-125-0010	11690 Southfork Drive, Duncanville	33.089772	-87.459733	U	S	Population Exposure/ Tuscaloosa MSA	2/1/2001	active	U	C	Y	087	

SO_2

Site common name	County	AQS Site ID	Address	Latitude	Longitude	SCALE	TYPE	Monitoring objective / CBSA	Date Began	Date Ended	METHOD	SCHEDULE	NAAQS	Mth #	Commnets
Chickasaw	Mobile	01-097-0003	Iroquois and Azalea Chickasaw	30.76972	-88.0875	N	S	Population Exposure/ Mobile MSA	1/1/2013	active	P	C	Y	600	
Lhoist	Shelby	01-117-9001	7444 St. Hwy 25, Calera, AL.	30.0928	-86.8072	M	S	High Concentration – SO2 DRR	01/01/2017	active	P	C	Y	600	
Ward	Sumter	01-119-0003	NNE of Ward Post Office	32.362606	-88.277992	R	S	General/Background	01/01/2018	active		C	Y	600	

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APPENDIX A

Site Assessments

An assessment of ADEM's sites is performed each year to ensure that they meet the requirements of 40 CFR 58, Appendices A, C, D and E for their intended purpose. A monitor's suitablility for comparison with the NAAQS is documented in the Network Description and Site Assessment tables. Known exceptions to these siting criteria are documented below. The complete assessment will be sent to the US EPA, Region 4 with this network plan. The site assessment will then be placed on ADEM's website as an addendum to the 2018 Plan.

Issues that have been identified in the 2018 Site Assessments:

- Chickasaw (AQS ID 01-097-0003) in 2017 a small tree was identified that was encroaching on the 10 meter requirement. ADEM performed some pruning to alleviate the problem but the tree continues to grow into the restricted zone. ADEM has contacted the City of Chickasaw to schedule removal of the tree.

APPENDIX B

New Site Descriptions

Wetumpka Technology Park

At the beginning of the 2018 ozone season, ADEM had to relocate the Wetumpka ozone monitoring site due to loss of access to the site that was operated in 2017. This site is located in the Montgomery MSA (which consists of Montgomery, Elmore, Autauga and Lowndes Counties) and is intended to be the downwind high concentration ozone site for the MSA.

Recent History of ozone monitoring in Elmore County.

DBT, Wetumpka (AQS ID 01-051-0001)
ADEM monitored for ground level ozone with the Monitoring Objective of Highest Concentration in the Montgomery Metropolitan Statistical Area on an Urban Scale at the DBT, Wetumpka site (AQS ID 01-051-0001) from March 1, 1990 to June 27, 2016. Due to construction of a swimming pool and changes in landscaping by the property owner, this site no longer met the siting criteria in 40 CFR Part 58, Appendix E. Air monitoring activities previously conducted at DBT, Wetumpka (AQS ID 01-051-0001) were conducted at a new site, Wetumpka (AQS ID 01-051-0003) from March 17, 2017 through October 31, 2017.

Wetumpka (AQS ID 01-051-0003)
The Wetumpka site property was owned by Elmore Autauga Community Action Committee, a non-profit agency. The agency lost federal funding thereby losing control of the site property. The new grant recipient is an interim non-profit agency that plans to sell the property where the air monitoring shelter is located.

Wetumpka (AQS ID 01-051-0004)
The new Wetumpka site property, located 1.4 miles west of the previous site property, is owned by the Industrial Development Board, City of Wetumpka. It is currently used as a hay field and will remain so in the foreseeable future. E911 assigned the address as 3148 Elmore Road, Wetumpka, Alabama. The most current average annual daily traffic value for the nearest portion of Elmore Road is 11,980 and the shelter will be more than 30 meters from the nearest traffic lane. The air inlet is located more than 10 meters from the drip line from any tree and more than 2 times the height of a line of trees east (approximately 20 meters tall) of the shelter. The monitoring objective will continue to be Highest Concentration of Ozone in the Montgomery Metropolitan Statistical Area on an Urban scale. Refer to Figure 3, Figure 4, and Figure 5 for distance measurements.

Because this location meets all siting criteria and is only 1.4 miles from the closed WET site it will continue to represent the high concentration site for the MSA. ADEM requests EPA link the data from this site to the WET site (AQS ID 01-051-0003) so that the 3-year design value will be derived using data from both sites. A summary of ozone data from all sites in the MSA for the last 10 years can be found in Table 8 and Figure 6.

Figure 3 Aerial Map Showing Position of New (WTT) site relative to the WET site.

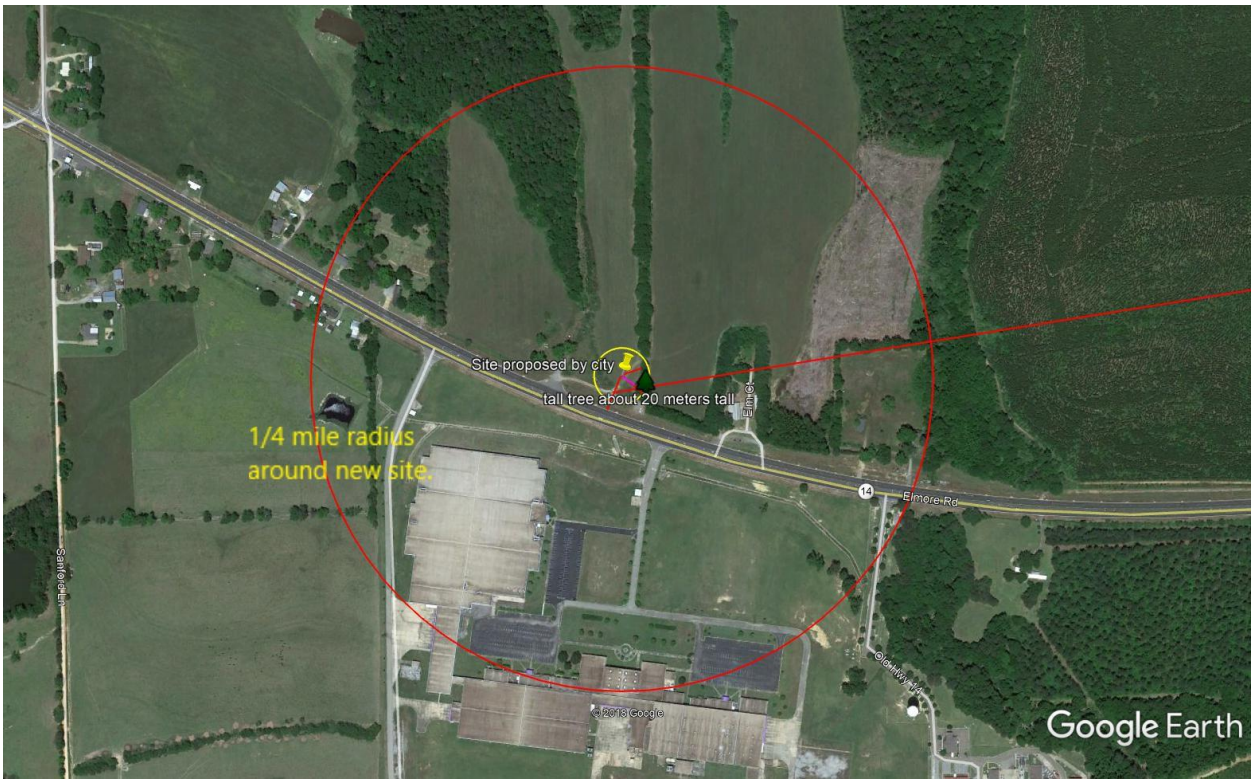


Figure 4 Aerial Map Showing Detail in 1/4 mile Radius of New Site (WTT)

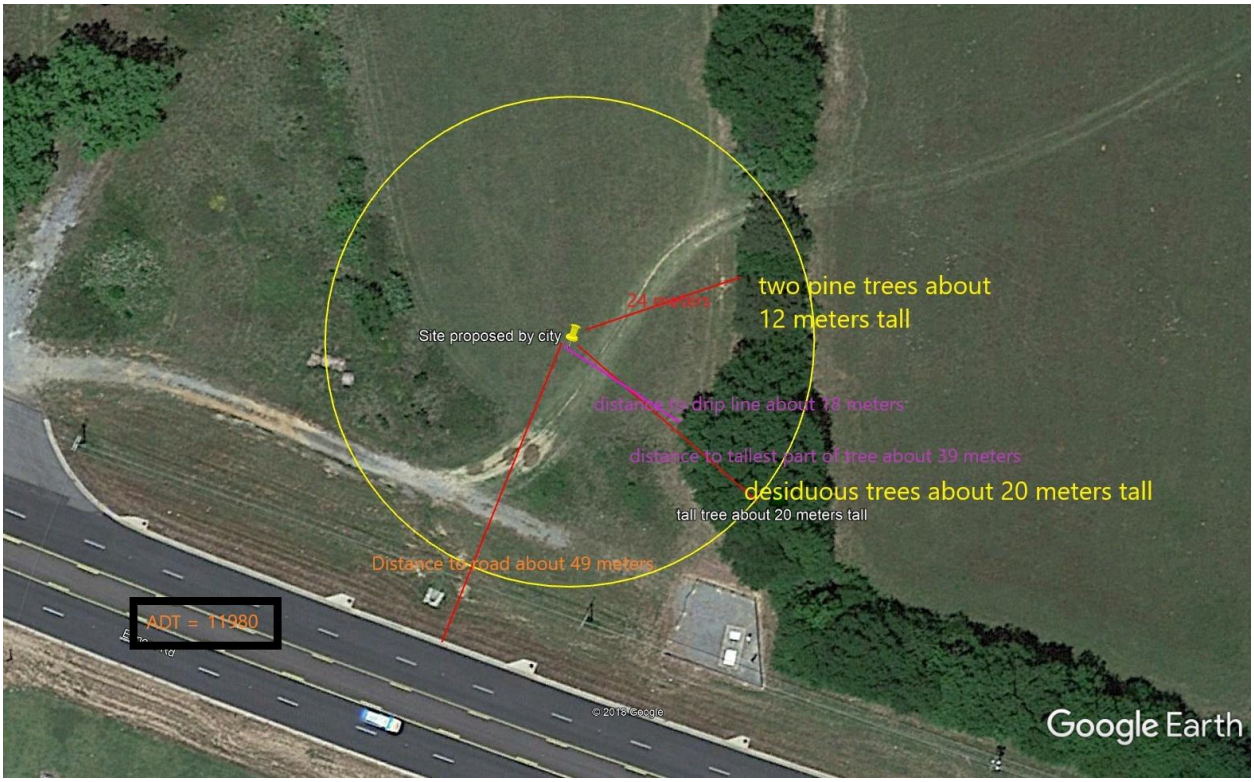


Figure 5 Distances to Potential Obstructions and Roadway

Montgomery MSA, Ozone Summary Data										
Annual 4th Maximum										
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
MOM	0.069	0.064	0.072	0.070	0.066	0.061	0.062	0.063	0.063	0.057
DBT	0.068	0.061	0.073	0.068	0.065	0.061	0.060	0.061	0.057	
WET Headstart School										0.055

Table 8 Summary of Ozone Data for Montgomery MSA

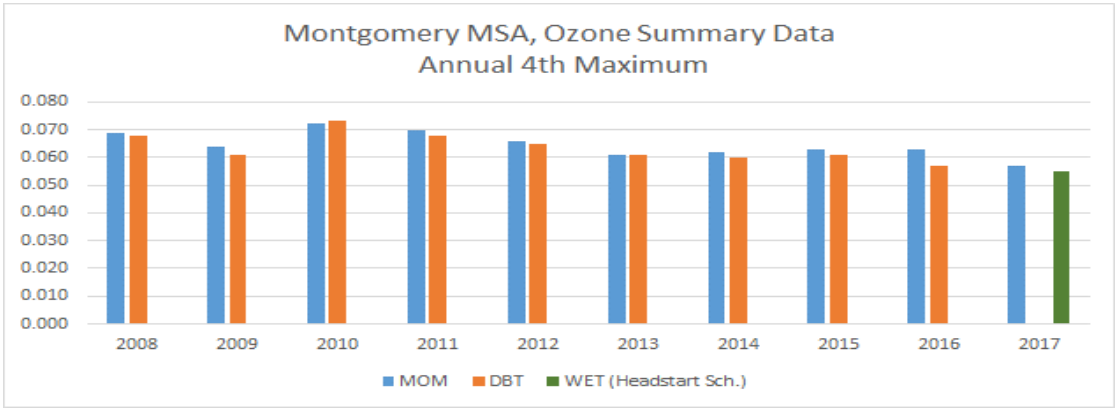
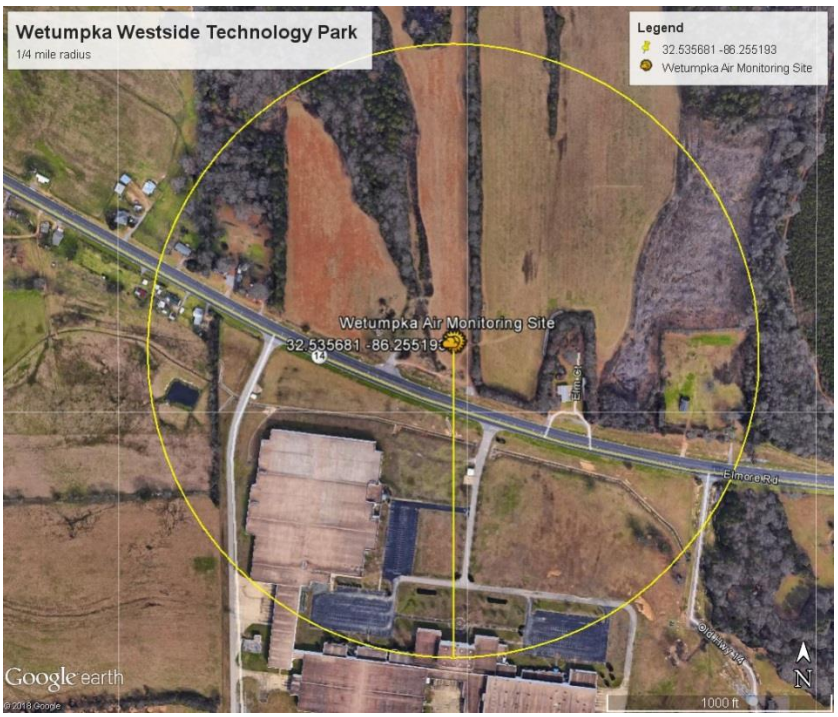


Figure 6 Graph of Montgomery MSA Ozone Data

WETUMPKA WESTSIDE TECHNOLOGY PARK



AQS ID: 01-051-0004

Area Represented:
CBSA: Montgomery, AL
Air Quality Control Region: Columbus-Phenix City
Urban Area: Montgomery, AL

Address: 3148 Elmore Road, Wetumpka, AL

Latitude/Longitude: 32.535681/-86.255193

Project Type: Population-Oriented Surveillance

Site Established: 03/20/2018

Site Evaluation: 04/03/2018

Site History: Montgomery MSA Highest Concentration for Ozone has been monitored in the Wetumpka area since 01/01/1983. This new site will continue to monitor for ozone. It is located on property that has indefinite plans to become an industrial park. The industrial property located across the street is no longer in operation.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Highest Concentration	Continuous	4.14m	Urban	03/20/2018

A wind break located between hay fields is located more than 20 meters east of the shelter. The tallest tree in that wind break is 17.2 meters tall and located 25.5 meters southeast of the probe inlet. The nearest tree is approximately 12 meters tall and the dripline is 23 meters east of the probe inlet. The most recent average annual daily traffic value is 11,980 on Elmore Road. The air inlet is 55 meters from Elmore Road. This site meets all requirements of 40 CFR Part 58.

APPENDIX C

Site/Monitor Removal Justifications

- Wetumpka **(AQS ID 01-051-0003) See appendix B.**
- **Tuscaloosa VA (TSV) AQS ID 01-125-0004 POC 3 , continuous PM2.5 monitor.**

This non-FEM monitor has been operating since 2011 for the purpose of meeting 40 CFR 58, Appendix D, section 4.7.2 "Requirement for Continuous PM 2.5 Monitoring." This section states that for the number of FRM monitors that are required to be operated in an MSA, at least ½ half of that number of continuous monitors will be operated. Due to the consistently low design value in the Tuscaloosa MSA (see Table 6) this continuous monitor has not been required for 3 years. The monitor is in disrepair and ADEM believes that the resources needed to update this equipment can be better used in other parts of ADEM's continuous PM2.5 network.
The collocated FRM monitor will continue to be operated at that location.

- **Gadsden Community College (GAD) AQS ID 01-055-0010 POC 3 , continuous PM2.5 monitor.**

This non-FEM monitor has been operating since 2000 for the purpose of meeting 40 CFR 58, Appendix D, section 4.7.2 "Requirement for Continuous PM 2.5 Monitoring." This section states that for the number of FRM monitors that are required to be operated in an MSA, at least ½ half of that number of continuous monitors will be operated. Due to the consistently low design value in the Tuscaloosa MSA (see Table 6) this continuous monitor has not been required for 3 years. The monitor is in disrepair and ADEM believes that the resources needed to update this equipment can be better used in other parts of ADEM's continuous PM2.5 network.
The collocated FRM monitor will continue to be operated at that location.

Addendum to the State of Alabama Ambient Air Monitoring 2018 Network Plan

FAIRHOPE

AQS ID: 01-003-0010

Area Represented:
CBSA: Daphne-Fairhope-Foley
CSA: Mobile-Daphne-Fairhope
Air Quality Control Region: Mobile-Pensacola-Panama City-Southern Mississippi
Urban Area: Mobile, AL

Address: Fairhope High School, 1 Pirate Drive, Fairhope, AL

Latitude/Longitude: 30.497478/-87.880258

Project Type: Source-Oriented Ambient Surveillance

Site Established: 01/01/2000

Site Evaluation: 03/05/2018

Site History: Established as an air monitoring site 01/01/2000.

North

South

East

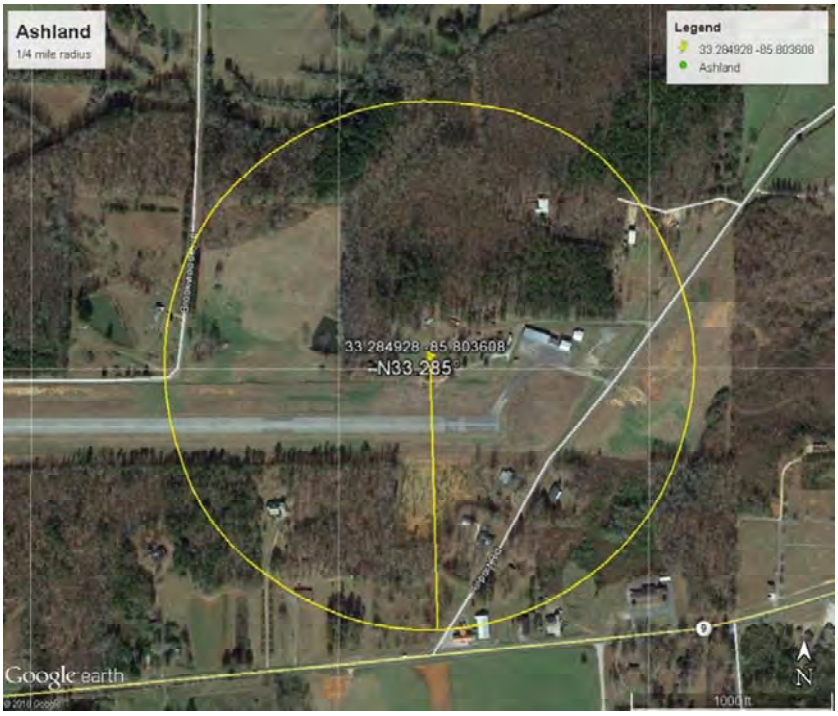
West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	4.87 m	Neighborhood	03/01/2000
PM 2.5	Population Exposure	Every 3 days	2.34 m	Neighborhood	01/01/2000

The nearest tree is approximately 13 meters tall and the dripline is 17 meters east of the shelter. The annual average daily traffic value is just under 15,760 on Highway 98. The air monitoring shelter is 500 meters from Highway 98 and 64 meters from the cul-de-sac of Gail Rowe Lane.

This site meets all requirements of 40 CFR Part 58.

ASHLAND



AQS ID: 01-027-0001

Area Represented:
Not in an MSA
Air Quality Control Region:
East Alabama
Urban Area: Anniston, AL

Address: Ashland Airport

Latitude/Longitude:
33.284928/-85.803608

Project Type: Population-Oriented Surveillance

Site Established: 03/25/1991

Site Evaluation: 12/05/2017

Site History: Established as an Ozone site. Ozone monitoring ended 11/01/2007. PM2.5 monitoring began 01/01/1999. This is a Regional Transport site for PM2.5.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
PM 2.5	Regional Transport	Every 3 days	2.1m	Regional	01/01/1999

The nearest tree is approximately 29 meters tall and the dripline is 37 meters west of the probe inlet.

This site meets all requirements of 40 CFR Part 58.

MUSCLE SHOALS

AQS ID: 01-033-1002

Area Represented:
CBSA: Florence-Muscle Shoals
Air Quality Control Region: Tennessee River Valley-Cumberland Mountains
Urban Area: Florence, AL

Address: Wilson Dam Road and 2nd Street

Latitude/Longitude: 34.762619/-87.638097

Project Type: Special Studies for Ozone and Source-Oriented Ambient Surveillance for PM2.5

Site Established: 03/01/2003

Site Evaluation: 05/30/2018

Site History: Established as a PM 2.5 monitoring site 01/01/1999 and added ozone monitoring 03/01/2003.

North

South

East

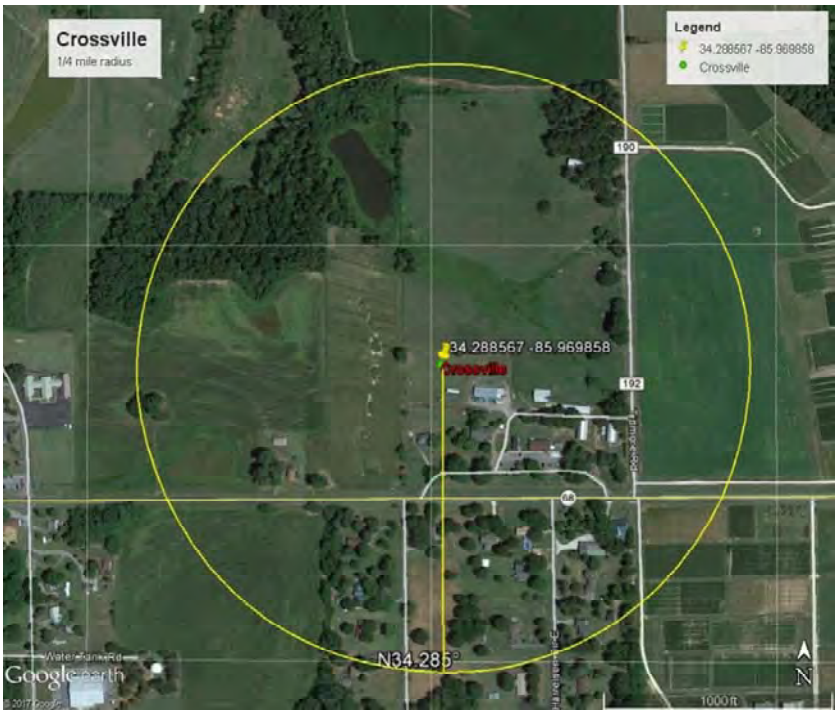
West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	3.9 m	Neighborhood	03/01/2003
PM 2.5	Highest Concentration	Every 3 days	2.1 m	Neighborhood	01/01/1999

The nearest tree is approximately 15 meters tall and the dripline is 36 meters northwest of the shelter. The annual average daily traffic value is 15,650 on 2nd Street and 26,740 on Wilson Dam Road. The air monitoring shelter is 400 meters from 2nd Street and 290 meters from Wilson Dam Road.

This site meets all requirements of 40 CFR Part 58.

CROSSVILLE



AQS ID: 01-049-1003

Area Represented:
CBSA: Fort Payne, AL
Air Quality Control Region: Tennessee River Valley-Cumberland Mountains
Urban Area: None

Address: 13112 Highway 68, Crossville, Alabama 35962

Latitude/Longitude: 34.288567 /-85.969858

Project Type: Background Surveillance

Site Established: 12/01/1998

Site Evaluation: 06/14/2018

Site History: This site is shared with the Sand Mountain Alabama Agricultural Experiment Station, owned by USEPA – Clean Air Markets Division, established 11/17/1988.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
PM 2.5	General/Background	Every 3 days	2.1m	Neighborhood	01/01/1999

The nearest tree is approximately 11.2 meters tall and the dripline is 23 meters northeast of the probe inlet.

This site meets all requirements of 40 CFR Part 58.

WETUMPKA WESTSIDE TECHNOLOGY PARK

AQS ID: 01-051-0004

Area Represented:
CBSA: Montgomery, AL
Air Quality Control Region: Columbus-Phenix City
Urban Area: Montgomery, AL

Address: 3148 Elmore Road, Wetumpka, AL

Latitude/Longitude: 32.535681/-86.255193

Project Type: Population-Oriented Surveillance

Site Established: 03/20/2018

Site Evaluation: 04/03/2018

Site History: Montgomery MSA Highest Concentration for Ozone has been monitored in the Wetumpka area since 01/01/1983. This new site will continue to monitor for ozone. It is located on property that has indefinite plans to become an industrial park. The industrial property located across the highway is no longer in operation.

North

South

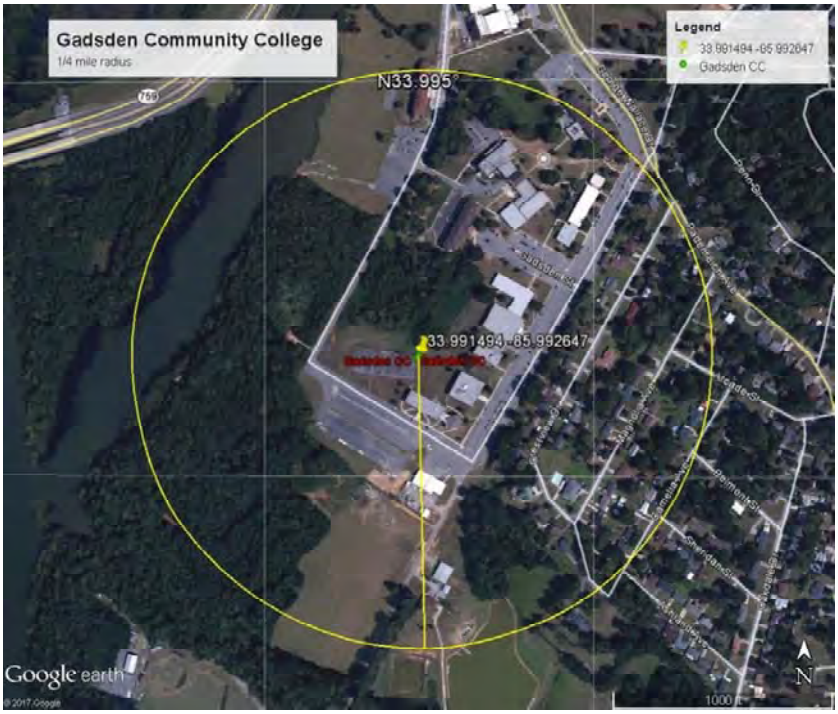
East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Highest Concentration	Continuous	4.14m	Urban	03/20/2018

A wind break located between hay fields is located more than 20 meters east of the shelter. The tallest tree in that wind break is 17.2 meters tall and located 25.5 meters southeast of the probe inlet. The nearest tree is approximately 12 meters tall and the dripline is 23 meters east of the probe inlet. The most recent average annual daily traffic value is 11,980 on Elmore Road. The air inlet is 55 meters from Elmore Road. This site meets all requirements of 40 CFR Part 58.

GADSDEN C. COLLEGE



AQS ID: 01-055-0010

Area Represented:
CBSA: Gadsden, AL
Air Quality Control Region: East Alabama
Urban Area: Gadsden, AL

Address: 1001 Wallace Drive, Gadsden, AL

Latitude/Longitude: 33.991494/-85.992647

Project Type: Exposure Studies

Site Established: 01/01/2000

Site Evaluation: 05/22/2018

Site History: Established as a PM2.5 air monitoring site 01/01/2000. Collocation began 01/01/2009. The tennis courts next to the air monitors, still visible in the aerial photograph, were removed between 2012 and 2015 according to historical photographs on Google Earth Pro.

North

South

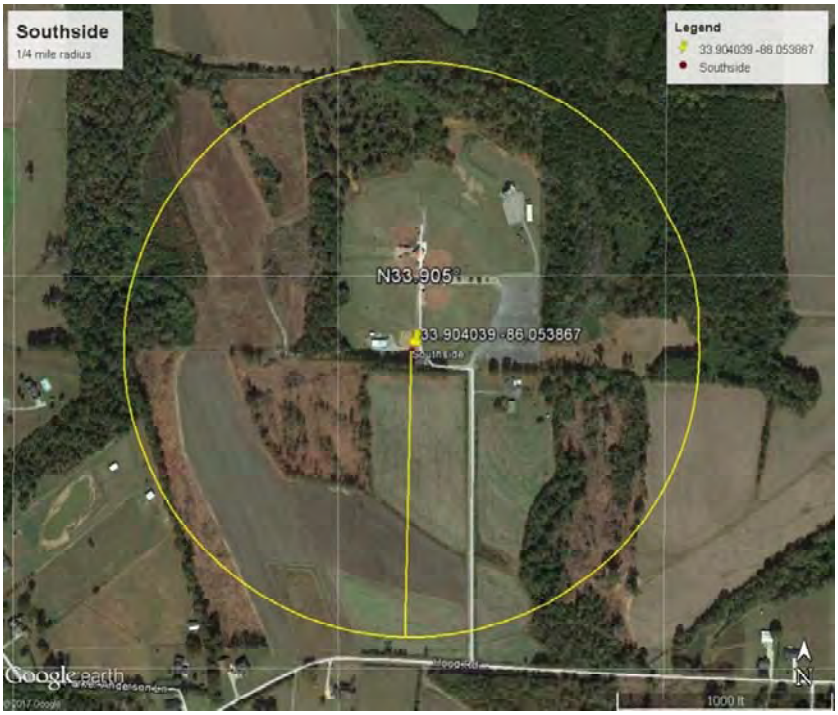
East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
PM2.5	Population Exposure	Every 3 days	2.1m	Urban	01/01/2000
PM 2.5 BAM	Population Exposure	Continuous	2.1m	Urban	01/01/2015

The nearest trees are a hedge of mimosas, approximately 8 meters tall and the dripline is 9 meters north of the BAM and 11 meters north of the PM2.5 sequential sampler. The annual average daily traffic value is 27,710 on Interstate 759. The air monitoring shelter is 485 meters from Interstate 759 and 75 meters from College Drive. The PM2.5 sequential sampler meets all requirements of 40 CFR Part 58.

SOUTHSIDE



AQS ID: 01-055-0011

Area Represented:
CBSA: Gadsden
Air Quality Control Region: East Alabama
Urban Area: Gadsden, AL

Address: 1450 Parker Anderson Lane, Southside, AL 35907

Latitude/Longitude: 33.904039/-86.053867

Project Type: Population-Oriented Surveillance

Site Established: 04/26/2002

Site Evaluation: 05/22/2018

Site History: Established as an ozone site 04/26/2002.

North

South

East

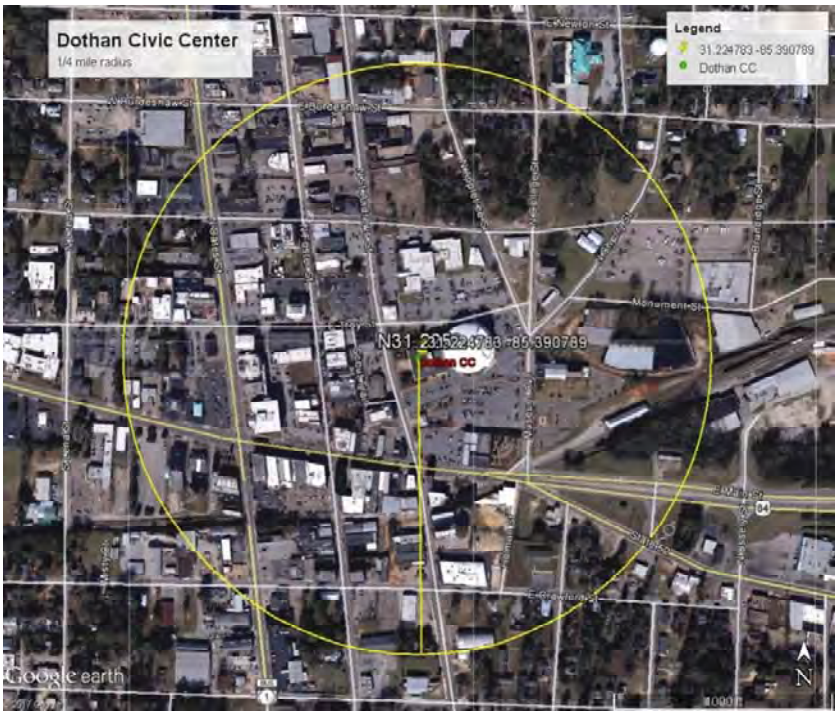
West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Highest Concentration	Continuous	4.24m	Neighborhood	04/26/2002

The nearest tree is approximately 14.8 meters tall and the dripline is 12.5 meters south of the probe inlet. The most recent average annual daily traffic value is 14,380 on Lister Ferry Road. The air inlet is 30 meters from the unnamed road agricultural road and more than 1300 meters from Lister Ferry Road.

This site meets all requirements of 40 CFR Part 58.

DOTHAN (CIVIC CENTER)



AQS ID: 01-069-0003

Area Represented:
CBSA: Dothan, AL
CSA: Dothan-Enterprise-Ozark
Air Quality Control Region: Southeast Alabama
Urban Area: Dothan, AL

Address: 126 North St. Andrews Street (Civic Center)

Latitude/Longitude: 31.224783/-85.390789

Project Type: Population-Oriented Surveillance

Site Established: 01/07/2005

Site Evaluation: 10/23/2017

Site History: Established as a PM2.5 site 01/07/2005.

North

South

East

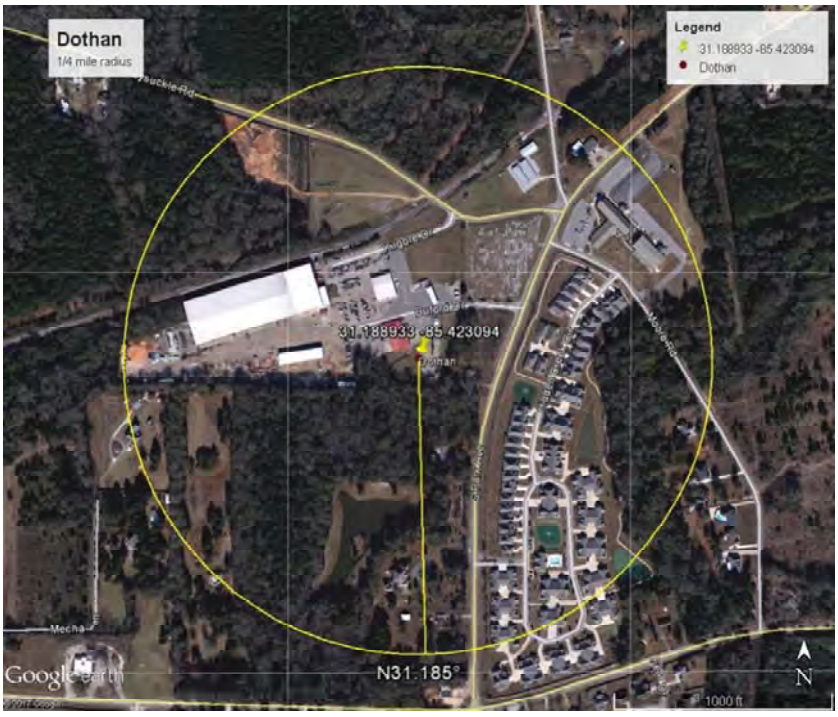
West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
PM 2.5	Highest Concentration	Every 3 days	13m	Neighborhood	01/07/2005

The monitor is located on the roof of the Dothan Civic Center.

This site meets all requirements of 40 CFR Part 58.

DOTHAN



AQS ID: 01-069-0004

Area Represented:
CBSA: Dothan, AL
CSA: Dothan-Enterprise-Ozark
Air Quality Control Region: Southeast Alabama
Urban Area: Dothan, AL

Address: 161 Buford Lane

Latitude/Longitude:
31.188933/-85.423094

Project Type: Population-Oriented Surveillance

Site Established: 03/14/2005

Site Evaluation: 10/23/2017

Site History: Established as an Ozone site.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	4.28m	Neighborhood	03/14/2005

The nearest tree is approximately 29 meters tall and the dripline is 31 meters south of the probe inlet. A privet shrub, approximately 2 meters tall, located south of the shelter next to the power meter, should be cut back before it could be considered an obstacle. The air monitoring shelter is 110 meters from the nearest lane of S Park Avenue and over 1,000 meters from Highway 231 where the annual average daily traffic value is 31,480.

This site meets all requirements of 40 CFR Part 58.

CHICKASAW

AQS ID: 01-097-0003

Area Represented:
CBSA: Mobile
CSA: Mobile-Daphne-Fairhope
Air Quality Control Region: Mobile-Pensacola-Panama City-Southern Mississippi
Urban Area: Mobile, AL

Address: Iroquois and Azalea, Chickasaw, AL

Latitude/Longitude: 30.770181/-88.087761

Project Type: Population-Oriented Surveillance

Site Established: 05/22/1974

Site Evaluation: 06/18/2018

Site History: Established as an air monitoring site 05/22/1974. Ozone and SO2 monitoring began 03/02/1982. PM 2.5 monitoring began 07/19/2002.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
SO2	Population Exposure	Continuous	4.13 m	Neighborhood	03/02/1982
Ozone	Population Exposure	Continuous	4.78 m	Neighborhood	03/02/1982
PM 2.5	Population Exposure	Every 3 days	2.1 m	Regional	07/19/2002
BAM PM 2.5	Other	Continuous	5.33 m	Regional	01/01/2011

The nearest tree is approximately 8.8 meters tall and the dripline is 14 meters west of the probe inlet. The annual average daily traffic value is just under 12,000 on Highway 43 and almost 71,000 on Interstate 65. The air monitoring shelter is 57 meters from the nearest lane of Iroquois Street, ¾ mile from Highway 43 and ½ mile from Interstate 65. This site meets all requirements of 40 CFR Part 58.

BAY ROAD

AQS ID: 01-097-2005

Area Represented:
CBSA: Mobile
CSA: Mobile-Daphne-Fairhope
Air Quality Control Region: Mobile-Pensacola-Panama City-Southern Mississippi
Urban Area: Mobile, AL

Address: Bay Road, Mobile, AL

Latitude/Longitude: 30.474305/-88.141022

Project Type: Population-Oriented Surveillance

Site Established: 01/01/1999

Site Evaluation: 03/05/2018

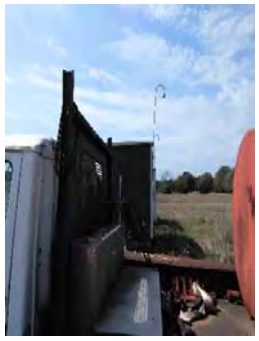
Site History: Established as a PM 2.5 site on 01/01/1999. Ozone monitoring began 03/01/1999. PM 2.5 monitoring ended 12/31/2011.

North

South

East

West



Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Highest Concentration and Population Exposure	Continuous	3.0 m	Urban	01/01/1999

The nearest tree is approximately 13 meters tall and the dripline is 35 meters south of the probe inlet. The most recent average annual daily traffic value is 7,140. The air inlet is 30 meters from the unnamed road agricultural road and more than 200 meters from Bay Road.

This site meets all requirements of 40 CFR Part 58.

MOMS, ADEM

AQS ID: 01-101-1002

Area Represented:
CBSA: Montgomery
Air Quality Control Region: Columbus-Phenix City
Urban Area: Montgomery, AL

Address: 1350 Coliseum Blvd, Montgomery, AL

Latitude/Longitude: 32.412811/-86.263394

Project Type: Population-Oriented Surveillance

Site Established: 06/01/1993

Site Evaluation: 06/19/2018

Site History: PM2.5 monitors were relocated from RCC1 on 1/15/2009.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	4.04m	Neighborhood	06/02/1993
PM 2.5	Population Exposure	Every 3 days	4.74m	Neighborhood	01/16/2009
PM 2.5	Collocation	Every 6 days	4.74m	Neighborhood	01/16/2009
BAM PM 2.5	Other	Continuous	5.04m	Regional	02/01/2002
PM 10	Population Exposure	Every 6 days	2.3m	Neighborhood	01/01/2013
PM 10	Collocation	Every 6 days	2.3m	Neighborhood	01/01/2013

The nearest tree is approximately 11.6 meters tall and the dripline is 63 meters west of the probe inlet. The annual average daily traffic value is 28,560 on Northern Boulevard. The air monitoring shelter is 135 meters from Newell Parkway, 280 meters from Coliseum Boulevard and 2/3 mile from Northern Boulevard. This site meets all requirements of 40 CFR Part 58.

DECATUR

AQS ID: 01-103-0011

Area Represented:
CBSA: Decatur
CSA: Huntsville-Decatur-Albertville, AL
Air Quality Control Region: Tennessee River Valley-Cumberland Mountains
Urban Area: Decatur, AL

Address: Wallace Development Center, Decatur, AL

Latitude/Longitude: 34.530717/-86.967536

Project Type: Population-Oriented Surveillance

Site Established: 04/01/2000

Site Evaluation: 05/31/2018

Site History: Established as an air monitoring site 04/01/2000. PM 2.5 collocation with a sequential sampler operated from 08/12/2002 to 06/01/2006.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	3.9 m	Urban	04/01/2000
PM 2.5	Population Exposure	Every 3 days	2.1 m	Middle	08/07/2001
BAM PM 2.5	Other	Continuous	5.2 m	Middle	01/01/2011

The nearest tree is approximately 11.6 meters tall and the dripline is 17.3 meters southwest of the probe inlet. The air monitoring shelter is 500 meters from Highway 31 where the annual average daily traffic value is 18,390. This site meets all requirements of 40 CFR Part 58.

TROY LEAD

AQS ID: 01-109-0003

Area Represented:
CBSA: Troy, AL
Air Quality Control Region:
Columbus-Phenix City

Address: Henderson Road

Latitude/Longitude:
31.790479/-85.978974

Project Type: Source-Oriented Ambient Surveillance

Site Established: 01/01/2009

Site Evaluation: 10/23/2017

Site History: Established to monitor lead in ambient air that may be generated from Sanders Lead Company across the street.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Lead	Highest Concentration	Every 6 days	2.0 m	Neighborhood	01/01/2009
Lead	Collocation	Every 6 days	2.0m	Neighborhood	01/01/2009

The nearest tree is approximately 17 meters tall and the dripline is 11 meters west of the nearest probe inlet. The nearest tree in the direction of Sanders Lead emission stacks is approximately 15 meters tall and the dripline is 81 meters south of the nearest probe inlet. The average annual daily traffic value is 31,110 on Highway 231. The air inlets are 16 and 18 meters from S Three Notch St and 250 meters from Highway 231. This site meets all requirements of 40 CFR Part 58.

PHENIX CITY – SOUTH GIRARD SCHOOL

AQS ID: 01-113-0003

Area Represented:
CBSA: Columbus, GA-AL
CSA: Columbus-Auburn-Opelika, GA-AL
Air Quality Control Region: Columbus-Phenix City
Urban Area: Columbus, GA-AL

Address: 510 6th Place South, Phenix City, Alabama 36869

Latitude/Longitude: 32.437028/-84.999653

Project Type: Population-Oriented Surveillance

Site Established: 01/18/2017

Site Evaluation: 03/29/2018

Site History: This site is a consolidation of the particulate monitors that were located in downtown Phenix City and the ozone monitor that was located in Ladonia.

North

South

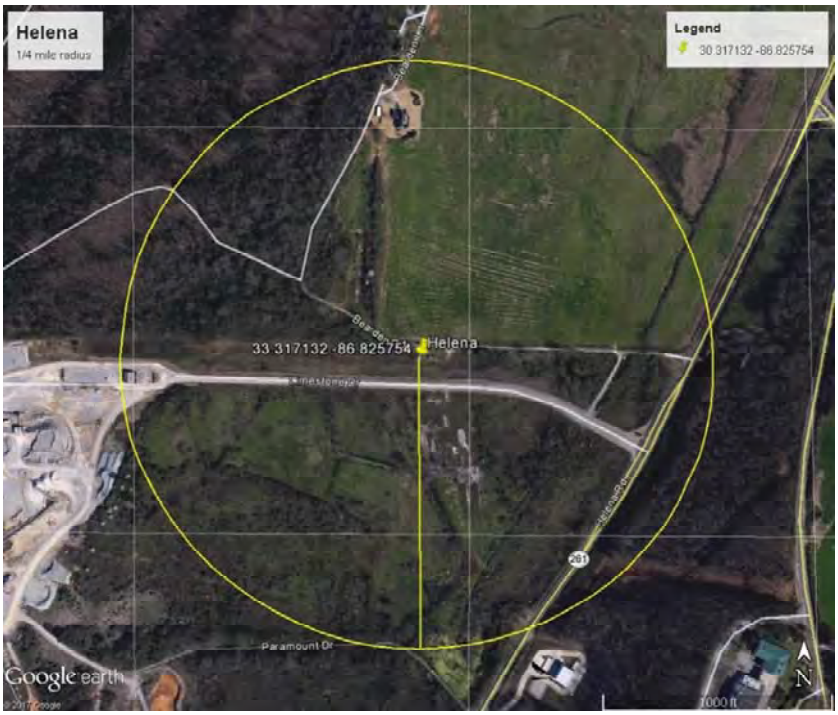
East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Highest Concentration	Continuous	4.39m	Urban	03/01/2018
PM 2.5	Highest Concentration	Every 3 days	4.7m	Urban	01/18/2017
PM 2.5	Collocation	Every 3 days	4.7m	Urban	01/18/2017
PM2.5 BAM	Highest Concentration	Continuous	4.7m	Urban	09/18/2017
PM 2.5 Speciation	Population Exposure	Every 6 days	4.3m	Urban	06/12/2017
Speciation Carbon	Population Exposure	Every 6 days	4.67m	Urban	06/12/2017

The nearest tree is approximately 8 meters tall and the dripline is over 40 meters south of the probe inlets. The annual average daily traffic value is 33,540 on Highway 431. The air monitoring shelter is 120 meters from 6th Place S, 120 meters from 5th Avenue S and 1.3 miles from Highway 431. This site meets all requirements of 40 CFR Part 58.

HELENA



AQS ID: 01-117-0004

Area Represented:
CBSA: Birmingham-Hoover
CSA: Birmingham-Hoover-Talladega
Air Quality Control Region: Metropolitan Birmingham
Urban Area: Birmingham, AL

Address: Helena, Bearden Farm

Latitude/Longitude: 33.316900/-86.825000

Project Type: Population-Oriented Surveillance

Site Established: 01/01/1983

Site Evaluation: 06/11/2018

Site History: Established as an Ozone site on 01/01/1983. NO2 was monitored from 09/11/1992 to 11/01/2001.

North

South

East

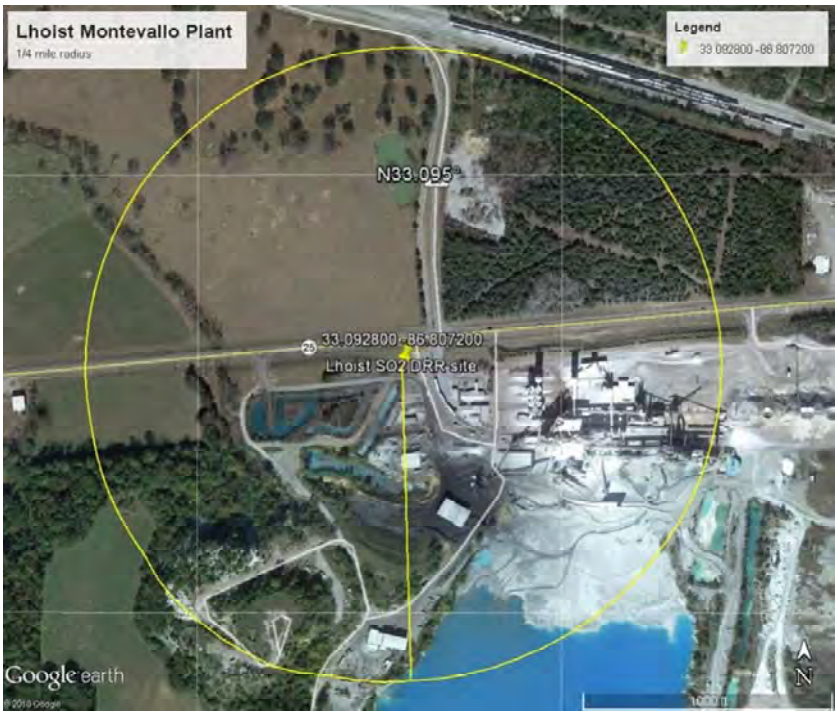
West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	4.7m	Urban	01/01/1983

The nearest tree is approximately 9 meters tall and the dripline is 18 meters east of the probe inlet. The most recent average annual daily traffic value is 10,370 on Helena Road. The air inlet is 30 meters from Limestone Drive and more than 300 meters from Helena Road.

This site meets all requirements of 40 CFR Part 58.

LHOIST, MONTEVALLO PLANT



AQS ID: 01-117-9001

Area Represented:
CBSA: Birmingham-Hoover
CSA: Birmingham-Hoover-Talladega
Air Quality Control Region: Metropolitan Birmingham
Urban Area: Birmingham, AL

Address: 7444 Highway 25, Calera, AL

Latitude/Longitude: 33.092800/-86.807200

Project Type: Source-Oriented Ambient Surveillance

Site Established: 01/01/2017

Site Evaluation: 10/24/2017

Site History: Established as an SO2 site by Lhoist as a result of the Direct Reporting Rule and choosing monitoring over modeling.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
SO2	Highest Concentration	Continuous	4.47 m	Middle	01/01/2017

The nearest tree is approximately 6 meters tall and the dripline is 18 meters southwest of the probe inlet. The most recent average annual daily traffic value is 6,320 and 8.290 on Highway 25. The air inlet is over 20 meters from Highway 25.

This site meets all requirements of 40 CFR Part 58.

WARD, SUMTER CO.

AQS ID: 01-119-0003

Area Represented:
CBSA: Meridian, MS
Air Quality Control Region: Metropolitan Birmingham

Address: NNE of Ward Post Office, Sumter Co., Alabama

Latitude/Longitude:
32.362606/-88.277992

Project Type: Background Surveillance

Site Established: 03/01/2013

Site Evaluation: 06/15/2018

Site History: This site replaced the Gaston (Sumter) site when it became inaccessible due to logging.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	General/Background	Continuous	4.06m	Regional	03/01/2013
PM2.5 BAM	General/Background	Continuous	4.65m	Regional	01/01/2015
SO2	General/Background	Continuous	4.18m	Regional	01/04/2018

The nearest tree is approximately 18 meters tall and the dripline is 11.5 meters west of the probe inlet. The most recent average annual daily traffic value is 2,880 on Highway 17. The air inlet is 40 meters from Ward Road and 4 miles from Highway 17.

This site meets all requirements of 40 CFR Part 58.

VA, TUSCALOOSA

AQS ID: 01-125-0004

Area Represented:
CBSA: Tuscaloosa, AL
Air Quality Control Region: Metropolitan Birmingham
Urban Area: Tuscaloosa, AL

Address: 3701 Loop Road East

Latitude/Longitude:
33.189931/-87.484189

Project Type: Population-Oriented Surveillance

Site Established: 10/01/2002

Site Evaluation: 12/12/2017

Site History: Established as a PM2.5 air monitoring site 10/01/2002. Collocation began 08/01/2009.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
PM2.5	Population Exposure	Every 3 days	2.1m	Neighborhood	10/01/2002
PM 2.5 BAM	Population Exposure	Continuous	2.2m	Neighborhood	08/01/2009

The nearest tree is approximately 12 meters tall and the dripline is 14 meters south of the nearest monitor. The annual average daily traffic value is 17,010 on Veterans Memorial Parkway. The air monitors are 46 meters from Loop Road East and 600 meters from Veterans Memorial Parkway.

This site meets all requirements of 40 CFR Part 58.

DUNCANVILLE

AQS ID: 01-125-0010

Area Represented:
CBSA: Tuscaloosa
Air Quality Control Region: Metropolitan Birmingham
Urban Area: Tuscaloosa, AL

Address: 11690 Southfork Drive, Duncanville

Latitude/Longitude: 33.089772/-87.459733

Project Type: Population-Oriented Surveillance

Site Established: 02/01/2001

Site Evaluation: 12/17/2017

Site History: Established as an Ozone site on 02/01/2001.

North

South

East

West

Parameter	Monitoring Objective	Sampling Schedule	Probe Inlet Height	Spatial Scale	Begin Date
Ozone	Population Exposure	Continuous	4.29 m	Urban	02/01/2001

The nearest tree is approximately 9 meters tall and the dripline is 32 meters southwest of the probe inlet. The most recent average annual daily traffic value is 9,000. The air inlet is 72 meters from S Loop Road and more than 200 meters from Highway 82.

This site meets all requirements of 40 CFR Part 58.

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

July 2, 2018

Ms. Haley Colson Lewis
Gasp
2320 Highland Avenue S.
Suite 270
Birmingham, AL 35205

Mr. Michael Hansen, Executive Director

RE: Comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan

Dear Ms. Lewis and Mr. Hansen:

Thank you for your comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan. Attached is a response to the comments received. The Jefferson County Health Department and the City of Huntsville will address any comments which they receive regarding monitoring in their respective borders.

Sincerely,

Ronald W. Gore, Chief
Air Division
ADEM

RWG:lwb

Attachments

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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(334) 271-7700 ▪ FAX (334) 271-7950

July 2, 2018

Ms. Barbara Caddell, President
League of Women Voters of Alabama
1321 Dauphin St.
Mobile, AL 36604

RE: Comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan

Dear Ms. Caddell:

Thank you for your comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan. Attached is a response to the comments received. The Jefferson County Health Department and the City of Huntsville will address any comments which they receive regarding monitoring in their respective borders.

Sincerely,

Ronald W. Gore, Chief
Air Division
ADEM

RWG:lwb

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LANCE R. LEFLEUR
DIRECTOR

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Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

July 2, 2018

Ms. Christina Andreen
Southern Environmental Law Center
2829 2nd Avenue South, Suite 282
Birmingham, AL 35233-2838

RE: Comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan

Dear Ms. Andreen:

Thank you for your comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan. Attached is a response to the comments received. The Jefferson County Health Department and the City of Huntsville will address any comments which they receive regarding monitoring in their respective borders.

Sincerely,

Ronald W. Gore, Chief
Air Division
ADEM

RWG:lwb

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Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

July 2, 2018

Ms. Mary Anne Wilson, President
League of Women Voters of Mobile
P.O. Box 40602
Mobile, AL 36640

RE: Comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan

Dear Ms. Wilson:

Thank you for your comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan. Attached is a response to the comments received. The Jefferson County Health Department and the City of Huntsville will address any comments which they receive regarding monitoring in their respective borders.

Sincerely,

Ronald W. Gore, Chief
Air Division
ADEM

RWG:lwb

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Response to Comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan

ADEM received four sets of comments on its draft Monitoring Network Plan for 2018. For convenience, relevant comments have been consolidated as necessary.

Several commenters objected to the removal of the continuous PM2.5 monitors at the Tuscaloosa and Gadsden sites. These monitors were not federally equivalent monitors (FEM) and their data was not used for Air Quality demonstration purposes. These monitoring sites will continue to operate with PM2.5 federal reference monitors (FRM) which do provide quality data for Air Quality demonstration purposes. Due to the low historical PM2.5 levels measured at these sites and the cost of maintaining and operating these monitors, these non-reference monitors are being removed.

Some commenters requested additional information regarding the Monitoring Equipment Evaluation Report required to be submitted to EPA. Attached is a copy of the report submitted to EPA.

One commenter requested additional information regarding the process for relocating monitors. Typically monitors are relocated due to issues regarding site access; such as changes in landowners, changes in land use, or other leasing problems. Additionally, changes in other characteristics of the site such as newly placed buildings, increased vegetation, etc. may make the monitoring site improper for future monitoring. Whenever this occurs, the Air Division's Meteorologist Section is consulted regarding the appropriateness of any available sites. Factors such as typical wind speed, wind direction, elevation, and any physical characteristics around the proposed site locations are considered. EPA is consulted early and often in this process and its concurrence with the appropriateness of the proposed site is received before the monitors are relocated, if possible.

Several comments requesting additional PM10 monitoring in the Mobile area were received. PM10 monitoring which measured compliance with the air quality standards was conducted in the Mobile area in the past at several locations. ADEM does not have sufficient resources to place additional monitors at this time. ADEM submitted a proposal for a grant from EPA last year, but was not awarded any funding. EPA has proposed some funding for this, but it would supply less than 25% of the necessary funding and would not provide the data needed by the Department to characterize the source emissions. Additionally, EPA has agreed that, based on past monitoring data, the Mobile area would show attainment with the air quality standards. The issue of additional PM10 monitoring in Mobile has been raised several times in the past. Please find attached three additional documents which reflect the Department's position on this matter. Be advised that the third document is a response from the USEPA's Atlanta office to a media inquiry on coal dust.

Site ID	DESCRIPTION	age (years)	Condition (good/fair/poor)
WTT	BUILDING PORTABLE 8X12	12	f
	Data Logger ESC 8832	11	g
	One Pen Chart Recorder 1241	5	g
	Ozone Analyzer T400	1	g
	Ozone Calibrator T703U	1	g
WARD	8 x 12 Portable Building	6	g
	Beta Attenuation Monitor Met One BAM	8	g
	Datalogger 8872B	0	g
	Gas Calibrator Teledyne T700	6	g
	Ozone Analyzer T400	1	g
	Ozone Calibrator T703U	0	g
	Recorder Strip Chart One Pen	15	f
	Recorder Strip Chart One Pen	4	g
	Sulfur Dioxide Analyzer Teledyne T100	6	g
	Zero Air Generator American Ecotech AE-1101	6	g
TUSC	Beta Attenuation Monitor Met One BAM	9	g
	Data Logger ESC 8832	8	g
	PM 2.5 Monitor 2025i	3	g
TROY	SAMPLER AIR TSP	10	g
	SAMPLER AIR TSP	10	g
SOUTHSIDE	Analyzer Ozone 49c	13	g
	BUILDING PORTABLE 8'X12'	16	f
	Calibrator Ozone 49c	12	g
	Data Logger ESC 8832	5	g
	Recorder Strip Chart One Pen	8	g
PCG	Continuous PM 2.5 Monitor BAM-1022	3	g
	Data Logger ESC 8832	5	g
	Monitoring Building 8x10	0	g
	One-Pen Chart Recorder Soltech 1241	8	g
	Ozone Analyzer T400	0	g
	Ozone Calibrator T703	6	g
	PM2.5 Monitor 2025I	6	g
	PM2.5 Monitor 2025I	5	g
	Sampler Aerosol Speciation	5	g
	Sampler Speciator Sequential Particulate	3	g
MUSC	BUILDING PORTABLE 8X12	12	f
	Calibrator Ozone 49i	11	g
	Ozone Analyzer 49i	8	g
	PM2.5 Monitor 2025I	6	g
	RECORDER STRIP CHART ONE PEN	11	f
	Beta Attenuation Monitor Met One BAM	8	g
	BUILDING PORTABLE 8'X12'	11	g
	Data Logger 8772	3	g
	Monitoring Building 8x10	0	g

Site ID	DESCRIPTION	age (years)	Condition (good/fair/poor)
MOM	Ozone Analyzer T400	5	g
	Ozone Calibrator T703	6	g
	PM 2.5 Air Sampler 2025I	0	g
	PM 2.5 Monitor 2025i	3	g
	Recorder Strip Chart One Pen	16	f
	SAMPLER AIR PM-10	29	f
	SAMPLER AIR PM-10	29	f
HELE	BUILDING PORTABLE 8X12	12	g
	Data Logger ESC 8832	8	g
	Ozone Analyzer Teledyne T400	6	g
	Ozone Calibrator T703U	1	g
	Recorder Strip Chart One Pen	16	f
GDSCC	Beta Attenuation Monitor Met One BAM	9	g
	Data Logger ESC 8832	11	g
	Sampler Air PM 2.5 R&P 2025	8	f
FAIR	Building Custom Concrete	9	g
	Data Logger ESC 8832	8	g
	Ozone Analyzer Teledyne T400	6	g
	Ozone Calibrator T703	5	g
	Recorder Strip Chart One Pen	12	f
	Sampler Air PM 2.5 R&P 2025	8	f
DUNCANVILLE	BUILDING PORTABLE 8'X12'	17	f
	Data Logger ESC 8832	8	g
	One-Pen Chart Recorder Soltech 1241	8	g
	Ozone Analyzer T400	5	g
	Ozone Calibrator T703	5	g
DOTH C C	PM2.5 Monitor 2025I	2	g
DOTH	BUILDING PORTABLE 8'X12'	13	g
	Data Logger ESC 8832	8	g
	One Pen Chart Recorder 1241	5	g
	Ozone Analyzer T400	5	g
	Ozone Calibrator T703	6	g
DECA	Beta Attenuation Monitor Met One BAM	9	g
	BUILDING PORTABLE	21	p
	Calibrator Ozone 49i	11	g
	Data Logger ESC 8832	8	g
	Multical System Chinook	2	g
	Ozone Analyzer 49i	8	g
	PM2.5 Monitor 2025I	2	g
	Recorder Strip Chart One Pen	8	g
CROSS	Sampler Air PM 2.5 R&P 2025	8	f
	Beta Attenuation Monitor Met One W/Shelter	10	g
	Building Custom Concrete	9	g
	Datalogger 8872	3	g

Site ID	DESCRIPTION	age (years)	Condition (good/fair/poor)
CHIC	Dilution Gas Calibrator T700	5	g
	Ozone Analyzer T400	1	g
	Ozone Calibrator T703U	0	g
	Recorder Strip Chart One Pen	16	f
	Recorder Strip Chart One Pen	6	g
	Sampler Air PM 2.5 R&P 2025	8	f
	Sulfur Dioxide Analyzer Teledyne T100	6	g
	Zero Air System API M701H	5	g
BAYRD	Building Custom Concrete	9	g
	BUILDING PORTABLE 8X12	12	f
	Data Logger ESC 8832	5	g
	Ozone Analyzer Teledyne T400	6	g
	Ozone Calibrator T703U	1	g
	Recorder Strip Chart One Pen	12	g
ASHL	BUILDING PORTABLE	27	p
	PM2.5 Monitor 2025I	5	g
Lab/spare	Calibrator Flow HiVol Orfice	35	f
	INDICATOR BAROMETRIC	11	g
	Analyzer Ozone 49c	13	g
	Analyzer Ozone 49c	13	g
	Analyzer Ozone 49c	12	f
	Analyzer Ozone 49c	12	f
	Analyzer Ozone 49c	12	f
	Beta Attenuation Monitor Met One W/Shelter	10	g
	Beta Attneuation Monitor Met One W/Shelter	10	g
	Calibrator Flow DeltaCal	8	g
	Calibrator Flow DeltaCal	8	g
	Calibrator Flow DeltaCal	7	g
	Calibrator Flow DeltaCal	7	g
	Calibrator Flow DeltaCal	7	g
	Calibrator Flow Streamline Chinook	19	p
	Calibrator Ozone 49c	13	g
	Calibrator Ozone 49c	13	f
	Calibrator Ozone 49i	11	g
Lab/spare	Calibrator Ozone 49i	11	g
	Chart Recorder Linseis LE250E-1	3	g
	Chart Recorder Linseis LE250E-1	3	g
	Chart Recorder Linseis LE250E-1	3	g
	Continuous PM 2.5 Monitor BAM-1022	3	g
	Datalogger 8872	3	g
	Datalogger 8872	3	g
	Datalogger 8872B	0	g
	Digital Mass Flow Meter	4	g
	Digital Mass Flow Meter	4	g

Site ID	DESCRIPTION	age (years)	Condition (good/fair/poor)
	Flow Calibrator Mesa Labs 530H	0	g
	Flow Calibrator Mesa Labs 530L	0	g
	Gas Calibrator Teledyne T700	6	g
	MANOMETER DIGITAL	16	f
	METER MANOMETER	19	p
	METER MANOMETER	19	p
	MultiCal System Chinook	4	g
	Multical System Chinook	2	g
Lab/spare	Multical System Chinook	2	g
	Ozone Analyzer 49i	8	g
	Ozone Analyzer T400	1	g
	Ozone Analyzer T400	0	g
	Ozone Calibrator T703	5	g
	Ozone Calibrator T703U	1	g
	PM 2.5 Air Sampler 2025I	0	g
	PM 2.5 Air Sampler 2025I	0	g
	PM 2.5 Air Sampler 2025I	0	g
	PM 2.5 Air Sampler 2025I	0	g
	PM 2.5 Air Sampler 2025I	0	g
	PM 2.5 Air Sampler 2025I	0	g
	PM2.5 Monitor 2025I	6	g
	PM2.5 Monitor 2025I	6	g
	PM2.5 Monitor 2025I	5	g
	PM2.5 Monitor 2025I	5	g
	Portable Calibrator T750U	1	g
	Portable Calibrator T750U	1	g
Lab/spare	Portable Zero Air Module T751H	1	g
	Portable Zero Air Module T751H	1	g
	Recorder Strip Chart Three Pen	18	p
	Recorder Strip Chart One Pen	16	f
	Recorder Strip Chart One Pen	16	f
	Recorder Strip Chart One Pen	4	g
	Recorder Strip Chart One Pen	4	g
	Recorder Strip Chart Three Pen	25	g
	Sampler Aerosol Speciation	5	g
	Sampler Air HiVol TSP Tisch TE-8550 Pb	6	g
	Sampler Air PM Speciation	14	p
	Sampler Air PM Speciation	13	p
	SAMPLER AIR PM-10	30	f
	SAMPLER AIR PM-10	29	p
	Sulfur Dioxide Analyzer T100	5	g
	Zero Air Generator American Ecotech AE-1101	6	g
	Zero Air Generator American Ecotech AE-1101	6	g
	Beta Attenuation Monitor Met One EBAM	8	g

Site ID	DESCRIPTION	age (years)	Condition (good/fair/poor)
Lab/spare	Manometer Digital	7	g
	MANOMETER DIGITAL	16	f
	SAMPLER AIR HI VOL TSP	30	f
	Portable Building 8x12	5	g

OFFICE OF THE CITY COUNCIL

May 24, 2016

Mr. Lance R. LeFleur
Alabama Department of Environmental Management
1400 Coliseum Boulevard
Montgomery, AL 36110-2400

Dear Mr. LeFleur:

The Mobile City Council has recently received several complaints from citizens, especially those who reside in downtown, regarding what they suspect to be fugitive coal dust. We are aware that the Alabama Department of Environmental Management sets and enforces air quality regulations for the State. Given that, we urge you to look into these concerns and, also, consider whether it is necessary to revisit air quality monitors in the downtown area.

Thank you for your consideration of this request.

Sincerely,

Gina Gregory
Council President
District 7

Levon C. Manzie
Councilmember
District 2

Cc: Mr. Ron Gore, Chief Air Division, ADEM

P.O. Box 1827 • Mobile, AL 36633-1827 • Phone (251) 208-7441 • Fax (251) 208-7482

LANCE R. LEFLEUR
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May 27, 2016

Ms. Gina Gregory, President
Mr. Levon Manzie, Member
Mobile City Council
P. O. Box 1827
Mobile, Alabama 36633-1827

Dear Ms. Gregory and Mr. Manzie:

Thank you for your letter of May 24, 2016 concerning coal dust in downtown Mobile.

As you know, the Alabama Department of Environmental Management (ADEM) has been addressing this issue for some time. Your letter references air monitoring ADEM performed in the past. The results of that monitoring are detailed in the enclosed attachments.

ADEM's regulations mandate that coal-handling facilities minimize the emissions of dust through permit requirements dealing with operational practices, such as keeping coal piles wetted during dry weather, designing the height and shape of piles to counter wind-blown dust, requiring proper loading and unloading techniques, and other similar measures. Because the coal-handling facilities near downtown Mobile collectively handle millions of tons of coal per year, the amount of dust that is emitted can be substantial enough during extremely dry and windy conditions to cause noticeable traces of coal dust some distance from the facilities.

Given this, the question "Do these traces of coal dust in residential and business areas represent a threat to human health?" must be addressed. In addressing that question, ADEM has considered the following:

1. The results of the extensive monitoring in 2006 showed that the ambient air in downtown Mobile met the National Ambient Air Quality Standards for particulate matter. This standard is the number set by the U. S. Environmental Protection Agency nationwide which represents the level which is protective of human health and the environment. The levels measured in 2006 met both the NAAQS from 2006 and the standards in effect now.

2. According to reliable records, the tonnage of coal being loaded and unloaded through the Port of Mobile in recent years is substantially lower than in 2006. ADEM has also been made aware of a number of coal dust control measures that have been put in place at the port coal handling facilities. Based on these factors, there is no reasonable expectation that the amount of coal dust present in downtown Mobile is equal to or higher than levels present in 2006.

3. Existing monitors in the Mobile/Baldwin counties area (see attachment) that were also operational in 2006 recorded results comparable to the downtown Mobile monitor when it was in place. Those existing monitors have not indicated an increase in particulates as would be present in coal dust above the levels recorded in 2006.

4. ADEM relies on the USEPA's expertise to determine the technologies specific types of industries must install to minimize emissions and to protect public health. EPA has not identified the need to develop such standards for coal-handling facilities in its 45 years of existence.

5. Many people mistake "coal dust" for "coal ash." Coal dust arises from handling coal after it is mined. Coal ash is emitted from boilers and other furnaces which burn coal, and also from dry handling of this ash after it is filtered from stack gas. Coal ash has the potential to have more health effects than coal dust.

6. Generally, very fine particles in the air are caused by combustion sources (cars, boilers, fires) and from atmospheric chemical reactions. Larger particles are emitted from mechanical processes such as coal-handling. The fine particles, rather than the larger particles, are the cause of health concern, as they can get deep into the lungs and cannot be easily removed.

For the reasons above, ADEM has no basis to conclude that the concentrations of coal dust in downtown Mobile pose a danger to human health. Likewise, it does not appear any demonstrable benefit would be derived from ADEM expending limited resources to repeat the monitoring performed in 2006.

Thank you for your concern for Mobile's environment and its citizens. If questions arise, please call Ron Gore, Chief of ADEM's Air Division, at 334-271-7868.

Sincerely,

Lance R. LeFleur
Director

LRL/RG/ghe

Attachments (2)

Mobile Red Cross 2006 Particulate Monitoring

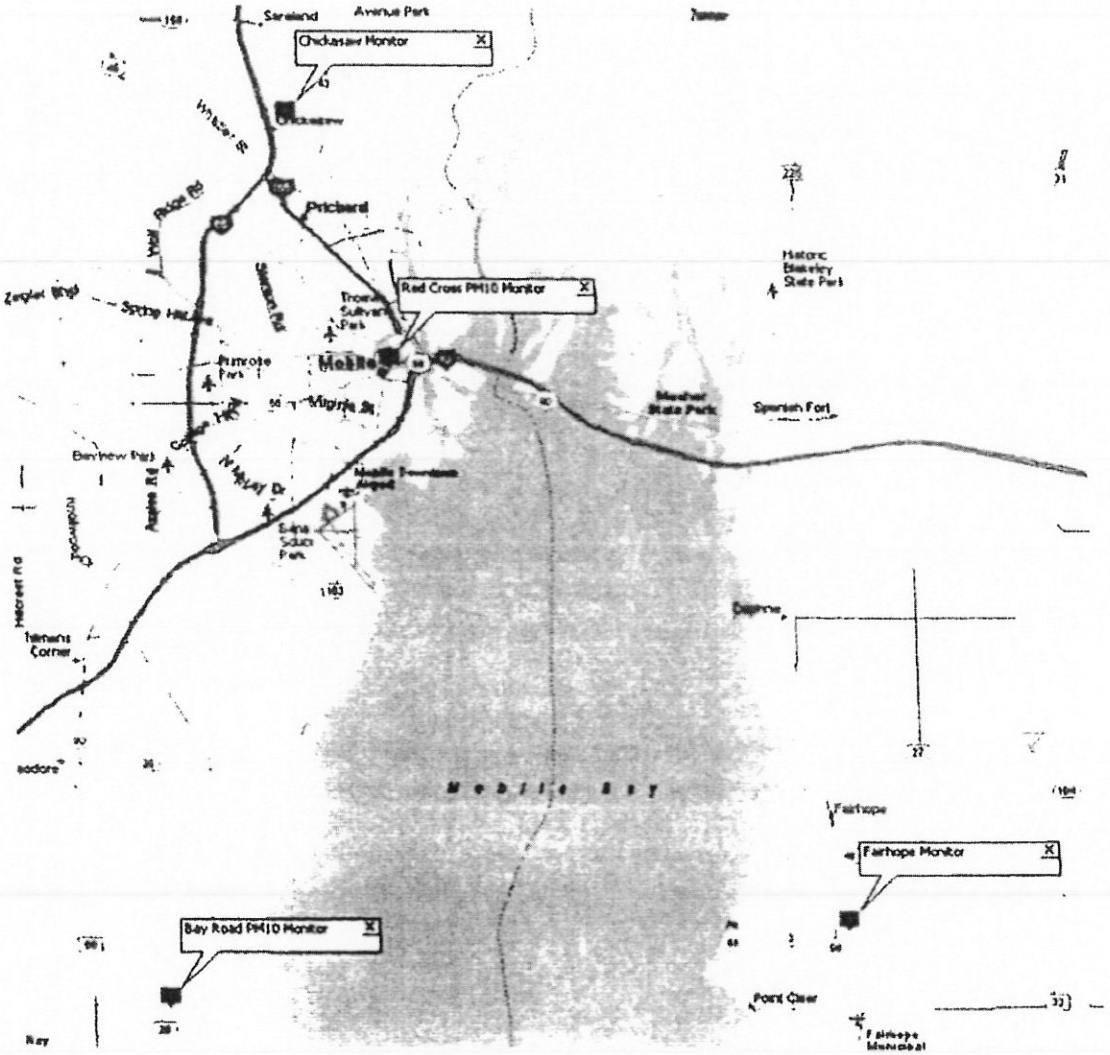
In 2006, the Red Cross Particulate Monitor measured 49 micrograms per cubic meter (ug/m^3) on a daily maximum basis.

The National Ambient Air Quality Standard (NAAQS) at that time was 150 ug/m^3, and this standard remains in effect in 2016.

In 2006, the monitor read 25 ug/m^3 versus the NAAQS of 50 ug/m^3 on an annual average basis.

The USEPA revoked the annual average NAAQS in 2006.

As with the Red Cross site's data from 2006, all three of ADEM's monitor in the Mobile area show attainment of the NAAQS.



ADEM's Three currently operating monitors in the Mobile area plus the Red Cross Site in 2006


35 N Sage Ave
Red Cross PM10
Mobile
5.2 Miles
2.4 Miles
Pinto Island
McDuffie Island
Google Earth

This is in response to your email of May 24, 2016, to James Pinkney of the EPA Region 4 staff in Atlanta requesting information about several questions related to various industrial activities in the vicinity of Mobile, AL, along the Mobile River and in the Port of Mobile in. Our responses to your questions are below. Please let me know if you need additional follow-up.

Coal Dust

1. **Question:** I understand some areas across the U.S. require coal terminals to store the coal dust under enclosed buildings or domes. Is this something the EPA is considering requiring on a federal level to stop fugitive coal dust emissions? Why or why not?

   Response: EPA regulations do not require enclosures for coal piles. However, the Agency works with the Alabama Department of Environmental Management (ADEM) to address health concerns posed by particulate matter (PM).

   EPA does not have regulations requiring enclosures for coal piles. The Clean Air Act requires EPA to set limits on the amount of six common pollutants, including particulate matter, allowed in the outdoor air to protect public health and the environment (these limits are called the National Ambient Air Quality Standards or NAAQS). PM that is 10 microns in size or smaller is of particular concern, because particles this small can get into the lungs, potentially causing serious health problems. EPA has established a NAAQS for PM that is 10 microns and smaller and a NAAQS for PM that is 2.5 microns and smaller. There is not a NAAQS for particles larger than 10 micrometers (including large dust particles). The Mobile area is currently meeting EPA's PM NAAQS requirements, based on the most recent three years of air quality monitoring data collected by ADEM.

2. **Question:** How does the EPA regulate the Alabama Department of Environmental Management (ADEM), and make sure that these coal terminals in Downtown Mobile are operating appropriately?

   Response: ADEM has primary responsibility for implementing federally delegated clean air requirements in Alabama. The U.S. EPA has an oversight responsibility for these programs. The agency performs this oversight responsibility in several ways. For example, under the State Review Framework, EPA conducts regional and state reviews of the enforcement and compliance programs for various environmental laws administered by the state on behalf of EPA, including numerous provisions of the Clean Air Act. The reviews are done on a five-year cycle, using national and state data, enforcement file reviews, commitments made in annual agreements and discussions with senior management. Once the review is completed, EPA creates a report. If the report identifies issues for resolution, EPA and the state address them collaboratively. EPA Region 4, which includes Alabama within its territory, also works on an ongoing basis with ADEM to ensure the continued integrity of environmental programs which EPA has delegated to the state.

3. **Question:** I understand the EPA allows for a certain amount of coal dust emissions, would someone be able to explain a little bit more as to why that's allowed, and how there is no threat with minimal pollution?

Response: The Clean Air Act addresses many different pollution sources using a variety of approaches to reduce a variety of air pollutants. For some pollutants (such as PM), the Act requires EPA to set limits on the amount of the pollutant allowed in the outdoor air to protect public health and the environment (these limits are called National Ambient Air Quality Standards or NAAQS). For other pollutants, the Act does not establish a NAAQS; instead, it requires pollution sources to limit *emissions* of those pollutants, through approaches such as pollutant-specific emission limits. One such set of emission control requirements related to Coal Preparation and Processing Plants is described here. For coal piles, a potential air pollution concern is the emission of particulate matter (PM). PM that is 10 microns in size or smaller is of particular concern because particles this small can get into the lungs, potentially causing serious health problems. EPA has established a NAAQS for PM that is 10 microns and smaller and a NAAQS for PM that is 2.5 microns and smaller. There is not a NAAQS for particles larger than 10 micrometers (including large dust particles). The Mobile area is currently meeting EPA's PM NAAQS requirements, based on the most recent three years of air quality monitoring data collected by ADEM.

Chemical Storage

1. **Question:** I noticed some companies had air emissions data listed in the TRI database (Alabama Bulk, Martin Energy Services), but others (Plains Marketing) only had air emissions data listed in the NEI database. The companies are emitting the many of the same toxic chemicals, yet they appear to be listed and/or classified differently. Why is that? Why are different companies required to list the data differently? Plains emits more Hazardous Air Pollutants than Alabama Bulk and Martin Energy Services, yet its emissions are only listed in the NEI database.

   Response: The National Emissions Inventory (NEI) is a detailed estimate of air emissions of NAAQS pollutants and their precursors, and hazardous air pollutants from air emissions sources. The NEI is released every three years based primarily upon data provided by State, Local, and Tribal air agencies for sources in their jurisdictions and supplemented by data developed by the US EPA.

   In comparison, the Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. U.S. facilities in different industry sectors must report annually how much of each chemical is released to the environment and/or managed through recycling, energy recovery and treatment. The TRI is limited to specific industry types and specific chemicals. In addition, a facility must meet specific criteria in order for it to be required to report to the TRI.

   In short, the NEI and TRI are two different emissions inventories developed with different approaches and criteria. This can result in explainable differences (e.g., a facility being in the NEI but not in the TRI because it meets the NEI criteria for inclusion, but not the TRI criteria). In some instances, however, reported emissions for a facility in the NEI and TRI should match but do not. When such instances are identified, EPA takes steps to investigate and correct the data.

2. **Question:** Is the EPA considering changing its toxic air emissions standards, or making them more stringent?

The Clean Air Act sets out a multi-step process for regulating emissions of air toxics, also known as hazardous air pollutants, from industrial sources.

- First, the law requires EPA to issue technology-based standards (known as maximum achievable control technology, or "MACT" standards) to reduce emissions of air toxics from stationary sources.

- Then, within 8 years from issuance of the standards, the law requires the agency to assess the standards to determine whether they are sufficiently protective of public health and provide an ample margin of safety. If the review shows that the standards are not protective of public health with an ample margin of safety, EPA must strengthen standards as necessary to provide that ample margin of safety.

- In addition to this 8-year residual risk review, every 8 years following issuance of the MACT standards, EPA must assess whether there have been advancements in practices, processes or technologies that can further reduce toxic emissions, and the EPA must tighten the MACT standards if these technologies are cost effective.

- These periodic reviews of the MACT standards are collectively referred to as Risk and Technology (RTR) reviews.

- For example, EPA issued MACT standards to reduce toxic air emissions at large bulk gasoline terminals in 1994. The agency conducted the RTR review for the large bulk gasoline terminal source category in 2005.

- As another example, in 2004, EPA issued MACT standards for large organic liquids distribution (non-gasoline) tank farms. And in 2008, EPA issued air toxic emissions standards for smaller bulk gasoline terminals. EPA has made various amendments to these rules since they were first issued. EPA anticipates beginning work on the risk and technology review for the 2004 organic liquids distribution rule soon.

3. **Question:** Why are petrochemical storage companies allowed to emit these chemicals into the air every year? Is there no risk for the public nearby with the current standards that have been set?

   Response: EPA has set numerous standards for different types of pollution sources, including tank and bulk terminal facilities. Typically, such standards do not require pollution sources to have zero emissions; instead, they set limits on emissions. The overall goal is that risks posed by air pollution in all communities are acceptably low. States can also impose more stringent requirements than those required by EPA.

<u>Emergency Planning and Community Right-to-Know</u>

1. **Question:** I understand this industry is required to submit Tier II reports regarding the hazardous materials stored in the tanks. I'm told the companies submit these reports to

county EMA offices and ADEM with an "on-your-honor" system. How does the EPA ensure what these companies say is in the tanks, is really what's being stored in there?

Response: The Emergency Planning and Community Right to Know Act (EPCRA) is a federally implemented program. U.S. EPA Region 4 conducts an average of 100 EPCRA compliance monitoring visits per year throughout the eight southeastern states (not including inspections for the Toxics Release Inventory program which are counted separately). Compliance monitoring visits include an extensive review of facility records to verify the accuracy and completeness of information submitted by the facility to the State Emergency Response Commission (SERC), Local Emergency Planning Committee (LEPC), and local Fire Departments. While local Fire Departments do not have enforcement authority for EPCRA, they typically visit facilities in their area on a yearly basis to confirm the location and contents of hazardous materials stored on-site.

CLEAN AIR. HEALTHY COMMUNITIES.

June 22, 2018

VIA ELECTRONIC MAIL AND US MAIL
Michael E. Malaier, Chief
Air Assessment Unit
Field Operations Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463

Re: State of Alabama Ambient Air Monitoring Plan for 2018

Dear Mr. Malaier:

Gasp[1] respectfully submits the following comment to the Alabama Department of Environmental Management (ADEM) on the State of Alabama Annual Ambient Air Monitoring Plan for 2018 ("the Plan"). We appreciate the opportunity to make these public comments. Gasp not only looks forward to continued compliance with the Clean Air Act (CAA) and the National Ambient Air Quality Standards (NAAQS), but we also will continue to advocate for stronger, more comprehensive air monitoring throughout Alabama.

I. Purpose

Gasp is a health advocacy organization focused on air quality issues in the Greater Birmingham Area. Accordingly, Gasp has a vested interest in the Plan. The "State of the Air 2018" found ozone pollution significantly worsened in 2014-2016, while improvements continued in year-round particle pollution and fewer episodes of high particle days.[2] Birmingham and Jefferson County's rankings are worse for 2018, where Birmingham ranked 15th in annual particle pollution.[3] For 2014-2016, Jefferson County received an "F" ranking for high ozone days where the county had 1 red and 15 orange ozone days (higher than any other county in Alabama). We continue to maintain that a comparison to the past is the incorrect standard and it

[1]Gasp is a non-profit health advocacy organization fighting for healthy air in Alabama. We strive to reduce air pollution through education and advocacy — because Alabamians deserve clean, healthy air. http://www.gaspgroup.org

[2] American Lung Association, State of the Air 2018 (2018) *available at* http://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2018-full.pdf (last visited June 13, 2018).

[3] American Lung Association, State of the Air 2018 (2018) *available at* http://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2018-full.pdf (last visited June 13, 2018).

is our mission to activate Alabama for clean air. We encourage the Jefferson County Department of Health (JCDH) to not simply comply with the NAAQS, but to fully embrace their duty of protecting Alabama's air quality. Our detailed comments will highlight specific aspects of the JCDH Annual Air Monitoring Network Plan that could be improved to reach aspirational, not mere threshold standards of compliance. We also will offer recommendations and pose inquiries to JCDH and ADEM that hopefully will not only strengthen the Plan itself but also enhance Gasp's understanding of the proposed changes for 2018.

II. SO_2 Monitoring at Shuttlesworth

The SO_2 monitor was installed at the Shuttlesworth site to "determine whether SO_2 concentrations near coke plants are higher than those measured at the North Birmingham NCore site." The monitor became operational on January 1, 2017, and thus has been collecting SO_2 measurements for approximately seventeen (17) months. **FIGURE 1** below shows the Monitor Values Report for the SO_2 monitors in the Birmingham-Hoover MSA:

FIGURE 1[4]: 2017 SO_2 MONITOR VALUES FOR BIRMINGHAM-HOOVER MSA

Monitor Values Report

Geographic Area: Birmingham-Hoover, AL
Pollutant: SO2
Year: 2017
Exceptional Events: Included (if any)
Note: The * indicates the mean does not satisfy minimum data completeness criteria.

Obs 1hr	First Max 1hr	Second Max 1hr	99th Percentile	Obs 24hr	First Max 24hr	Second Max 24hr	Days >STD	Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
6526	59.4	39.3	36	275	8.2	7.3	0	1.09*	None	2	010730023	No. B'Ham,Sou R.R., 3009 28th St. No.	Birmingham	Jefferson	AL	04
8559	14.7	14.4	12	360	3.1	2.9	0	0.99	None	1	010731003	Fairfield, Pfd, 5229 Court B	Fairfield	Jefferson	AL	04
8571	110.1	91.5	84	358	37.4	31.8	0	3.97	None	1	010736004	4113 Shuttlesworth Drive	Birmingham	Jefferson	AL	04
7713	80.6	52.9	43	347	10.8	9.6	0	0.18	None	1	011179001	7444 State Hwy 25	Calera	Shelby	AL	04

As evidenced by **FIGURE 1**, the first max (1 hour) values for the Shuttlesworth site are almost double those of the NCore monitor and the second max (1 hour) values are almost triple those of the NCore site. From studying this limited amount of information, there seems to at least be an inference that the SO_2 concentrations near the coke plans are higher than those measured at the NCore site. Gasp would be interested in learning what the next steps in "additional characterizations of the SO_2 concentrations in the area" might entail. Would JCDH please provide to Gasp, in as much detail as possible, what additional characterizations of SO_2 in the area will involve?

III. Shuttlesworth $PM_{2.5}$ monitor values must be publicly available via AirData.

In 2016, Gasp brought to the attention of JCDH the fact that monitor values for the Shuttlesworth $PM_{2.5}$ monitor are not publicly available via AirData[5]. JCDH responded, in part,

[4] U.S. EPA, AirData, http://www.epa.gov/airdata (last visited June 13, 2018)
[5] Specifically, Gasp commented: "In APPENDIX A of the Plan, JCDH asserts that they will 'continue to monitor for PM2.5 at this site using a continuous monitoring method where the results will be publically accessible through the AirNow website located in the JCDH webpage.' As of the date of this comment, we are five and a half months into 2016. Accordingly, it is troubling that no monitor values are currently being recorded for the Shuttlesworth monitor on EPA's AirData website. The absence of the

that "the data that is collected at this site is not eligible for NAAQS compliance purposes because it is considered a special purpose monitor[6]." As of the date of this comment, monitor values are still not publicly available via the AirData site, as seen in **FIGURES 2[7] and 3[8]** below:

FIGURE 2: 2018 $PM_{2.5}$ MONITOR VALUES FOR BIRMINGHAM-HOOVER MSA

Monitor Values Report

Geographic Area: Birmingham-Hoover, AL
Pollutant: PM2.5
Year: 2018 (Annual statistics for 2018 are not final until May 1, 2019)
Exceptional Events: Included (if any)
Note: The * indicates the mean does not satisfy minimum data completeness criteria.

Obs	First Max	Second Max	Third Max	Fourth Max	98th Percentile	Weighted Annual Mean	Exc Events	Monitor Number	Site ID	Address	City	County	State	EPA Region
20	17.6	11.6	11.6	10.1	18	7.9*	None	1	010730023	No. B'Ham,Sou R.R., 3009 28th St. No.	Birmingham	Jefferson	AL	04
10	17.9	11.7	9.6	8.8	18	8.9*	None	2	010730023	No. B'Ham,Sou R.R., 3009 28th St. No.	Birmingham	Jefferson	AL	04
40	22.3	16.8	14.6	14.2	22	8.9*	Included	3	010730023	No. B'Ham,Sou R.R., 3009 28th St. No.	Birmingham	Jefferson	AL	04
15	14.1	12	11.1	9	14	8.0*	None	1	010731005	Route 8 Mcadory	Not in a City	Jefferson	AL	04
10	14.1	11	8.5	7.9	14	7.7*	None	2	010731005	Route 8 Mcadory	Not in a City	Jefferson	AL	04
10	13.3	11.6	10.7	10	13	8.6*	None	1	010731010	201 Ashville Road	Leeds	Jefferson	AL	04
10	13.6	11.6	10.1	9.3	14	8.5*	None	2	010731010	201 Ashville Road	Leeds	Jefferson	AL	04
19	15.4	10.9	10.2	10.1	15	7.7*	None	1	010732003	1242 Jersey St Wylam Al	Birmingham	Jefferson	AL	04
10	15.1	10.8	9.9	8.9	15	8.6*	None	2	010732003	1242 Jersey St Wylam Al	Birmingham	Jefferson	AL	04
10	15.8	12.1	9.3	8.5	16	8.9*	None	1	010732059	1110 5th Street West Birmingham, Al 35204	Birmingham	Jefferson	AL	04

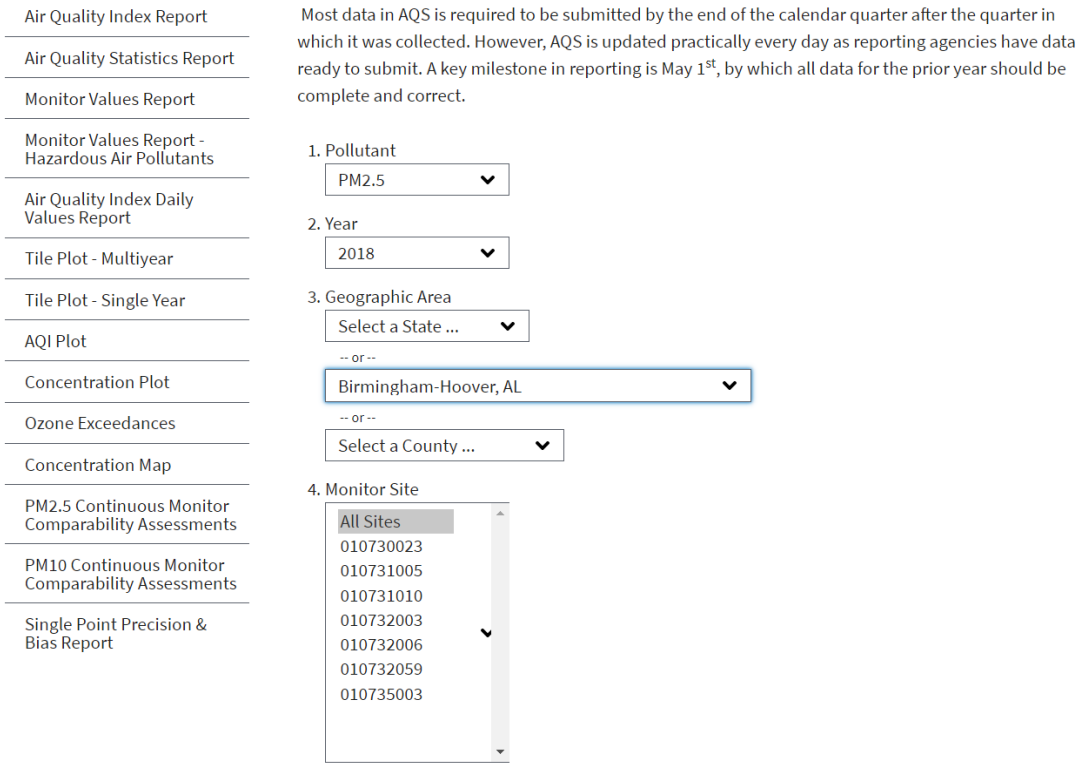
FIGURE 3: 2018 LIST OF MONITORING SITES FOR $PM_{2.5}$ DAILY VALUES
(Shuttlesworth's monitor ID is 01-073-6004, which is not listed)

Shuttlesworth monitor from the AirData results can be seen in FIGURE 1 and FIGURE 2 below. Gasp is interested in clarification from JCDH when the Shuttlesworth monitor began collecting data. Additionally, if the monitor did begin sampling on 2/1/2016, Gasp would like to inquire as to why the monitor values are not being reported through AirData and added to the monthly concentration plot as they are for the other PM2.5 monitors throughout the Birmingham-Hoover MSA." Lewis, H., Gasp Comment on State of Alabama Ambient Air Monitoring Plan for 2016 (2016).

[6] Letter from Ronald W. Gore to author (July 5, 2016) (on file with author) at 3.

[7] U.S. EPA, AirData, http://www.epa.gov/airdata (last visited June 13, 2018)

[8] Id.



There appears to be a several years-long confusion regarding the monitor type classification for the Shuttlesworth monitor. JCDH responded to Gasp's comments on a Modification to the Network Plan on March 30, 2017 by stating again that the data collected is not for compliance purposes. JCDH also added that "with respect to the categorization of the $PM_{2.5}$ monitor as a SLAMS instead of SPM, again, it appears this was the result of an editing error when the Department's part of the State Network Plan was merged with full State Network Plan. The Department submitted the Modification to address this error as the monitor does not meet regulatory requirements and the Department operates it as an SPM for public data access purposes by way of EPA's AirNow system." However, in the EPA's response to the 2017 Plan, the EPA instructed JCDH to classify the Shuttlesworth monitor as a SLAMS: "[a]s stated in our June 5, 2017 response to the network plan addendum dated April 7, 2017, *this monitor must remain classified as a SLAMS* as previously classified in subsequent Network Plans submitted since 2007. *While correctly classified in AQS as SLAMS, it is incorrectly classified in the 2017 Network Plan as a SPM*[9]." The 2018 Plan correctly identifies the Shuttlesworth monitor as a SPM[10].

However, although the Shuttlesworth monitor is now correctly identified in the 2018 Plan as a SLAMS, the monitor values still not publicly available via AirData. Commenter inquired with officials at JCDH about this issue and was referred to an Air Pollution Information Analyst,

[9] Letter from Beverly Bannister, Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Ron Gore, Chief, Air Division, Alabama Department of Environmental Management (Nov. 7, 2017). Emphasis added.

[10] *See* Jefferson County Department of Health Ambient Air Monitoring 2018 Network Review at 29 (proposed May 25, 2018).

who ultimately responded that "The PM2.5 monitor at our Shuttlesworth site is what is called a "special purpose monitor". Per agreement with the EPA, JCDH is not required to report the data from this monitor to the EPA's AQS data reporting system. Data from this monitor is used, in house, by JCDH only. The data you can find on the AirData website is taken from AQS. Therefore, since we do not report the Shuttlesworth PM2.5 data to AQS, that is why you have not been able to find the data on AirData[11]."

As Gasp has emphasized in past comments, data and the ability of the public to access it is crucial to participating in public comment processes such as these. Where there appears to be a significant amount of confusion within JCDH regarding the classification of this monitor, we strongly urge JCDH to make every effort possible to quickly begin reporting monitor values for the Shuttlesworth $PM_{2.5}$ continuous monitor. Where the EPA has instructed listing the monitor as a SLAMS, which the JCDH has done in the 2018 Plan, the monitor values should be publicly available. Gasp would appreciate an update of when the monitor values will once again be publicly available via AirData.

IV. Additional Recommendations and Inquiries

A. JCDH: Please elaborate on plans to conduct an air toxics study in the near future.

In EPA's response to ADEM's 2017 Plan[12], the EPA mentions that the manual samplers for PM_{10} at the Wylam site will be utilized for an air toxics study "in the near future." Gasp is interested in further information on the following:

1) Will the air toxics study be conducted jointly by EPA and JCDH?
2) What is the focus of the air toxics study, i.e. a certain geographical area, certain facilities, certain contaminants?
3) Can you quantify "near future" by giving an estimate or exact date of when such air toxics study will occur?

B. ADEM: What were the results of discussions with ADEM and EPA about the coal dust concerns raised by communities near the Port of Mobile coal terminal?

For the second year in a row, EPA's correspondence back to ADEM regarding the 2016 and 2017 Plans mentions PM_{10} monitor near the Port of Mobile coal terminal[13]. Gasp members are concerned about the coal dust and the lack of a PM_{10} monitor. Would ADEM be willing to

[11] E-mail from Allison H. Perry, Air Pollution Information Analyst, JCDH, to Haley Colson Lewis, Staff Attorney, Gasp (June 13, 2018, 1:22 CST) (on file with author).
[12] Letter from Beverly Bannister, Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Ron Gore, Chief, Air Division, Alabama Department of Environmental Management (Nov. 7, 2017).
[13] *See* Letter from Beverly Bannister, Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Ron Gore, Chief, Air Division, Alabama Department of Environmental Management (Nov.

share with Gasp the documents submitted to EPA (specifically, any additional historical PM_{10} monitoring data in the Mobile area not reflected in the Network Plan or previously reported to the AQS system)? Further, may Gasp and its members look forward to a PM_{10} monitor once again being implemented into ADEM's network in Mobile, in a location to sufficiently address the coal dust concerns near the Port of Mobile, as part of the Ambient Air Monitoring Plan for 2017?

Finally, should a PM10 monitor be impractical or impossible, Gasp encourages ADEM to deploy a special purpose monitor of some sort. For example, the CDC suggests that coal dust can be monitored through a specific device and technique[14]. The CDC recommendations for sampling coal dust are attached to this comment as EXHIBIT A. Gasp, our members and other community members and leaders in Mobile would be interested in engaging with ADEM and the EPA about deploying a special purpose monitor to address community concerns with coal dust at the Port of Mobile.

C. JCDH: Why is the monitoring objective for the Shuttlesworth PM_{10} monitor listed as "population exposure" in the Plan?

In the EPA's response to the 2017 Plan, the EPA instructed JCDH to "change the monitoring objective to 'highest concentration' or provide rationale as to why the monitor should not be characterized as 'highest concentration' in AQS[15]." JCDH was also instructed to act on this by December 31, 2017[16]. The 2018 Plan currently lists the monitoring objective as "population exposure[17]."

Gasp would like to inquire why the monitoring objective has not been changed to "highest concentration." If rationale was provided to EPA for not listing the monitor as "highest concentration" Gasp would like to request to review the rationale submitted to EPA as a response to this inquiry.

V. Conclusion

Gasp maintains that a comparison to the past is the incorrect standard. Although air quality has improved in the Greater Birmingham Area, we still have air quality issues that adversely affect the health of Birmingham citizens. Gasp looks forward to JCDH and ADEM addressing our concerns, recommendations and inquires in this comment. A comprehensive Ambient Air Monitoring Plan will improve air quality and thus the health of all Birmingham and Alabama citizens.

7, 2017); and Letter from Jeananne Gettle, Acting Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Michael Malaier, Chief, Air Division, Alabama Department of Environmental Management (Nov. 4, 2016).

[14] A cyclone and filter can be used with a gravimetric technique. *See*

[15] Letter from Beverly Bannister, Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Ron Gore, Chief, Air Division, Alabama Department of Environmental Management (Nov. 7, 2017).

[16] Id.

[17] *See* Jefferson County Department of Health Ambient Air Monitoring 2018 Network Review at 27 (proposed May 25, 2018).

CLEAN AIR. HEALTHY COMMUNITIES.

We appreciate the opportunity to comment.

Respectfully submitted,

Haley Colson Lewis
Staff Attorney

Michael Hansen
Executive Director

CC: Corey Masuca, PE, PhD JD
Jason Howanitz, MSCE, PE
Jonathon Stanton, PE

SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 205-745-3060 | 2829 2ND AVENUE SOUTH, SUITE 282 BIRMINGHAM, AL 35233-2838 | Facsimile 205-745-3064

June 22, 2018

Via Electronic Mail

Mr. Michael E. Malaier
Chief, Air Assessment Unit
Field Operations Division
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130-1463
mml@adem.state.al.us

RE: Comments on the State of Alabama Ambient Air Monitoring 2018 Network Plans

Dear Mr. Malaier:

The Southern Environmental Law Center (SELC) respectfully submits the following comments on the State of Alabama Ambient Air Monitoring Plans for 2018 (Plans) as presented by the Alabama Department of Environmental Management (ADEM), the Jefferson County Department of Health (JCDH), and the Huntsville Department of Natural Resources and Environmental Management (HDNREM).

1. Reduction in the air monitoring network in Alabama

ADEM, JCDH and HDNREM continue to remove monitors each year, leading to an increasingly sparse air monitoring network and keeping the public and the agencies in the dark about pollution increases. In particular, the agencies have reduced the number of PM_{10} monitors and $PM_{2.5}$ monitors throughout the state.

A. $PM_{2.5}$ Monitoring

In 2015, ADEM discontinued its $PM_{2.5}$ monitor in Pelham.[1] ADEM closed the $PM_{2.5}$ monitor in Childersburg in 2017.[2] Now ADEM and JCDH plan to discontinue the continuous $PM_{2.5}$ monitors in Tuscaloosa, Gadsden, and Hoover.[3] Reducing $PM_{2.5}$ monitoring in these locations weakens Alabama's network of $PM_{2.5}$ monitors and could result in the exposure of Alabamians to a number of hazards, including heart and lung disease, river acidification, and damage to stone and other materials, including culturally or historically significant statues or monuments.[4]

[1] ADEM, State of Alabama Ambient Air Monitoring 2015 Consolidated Network Review (2015), at 6.
[2] ADEM, State of Alabama Ambient Air Monitoring 2018 Network Plan (2018), at 6.
[3] *Id;* JCDH, Jefferson County Department of Health's Ambient Air Monitoring 2018 Network Review (2018), at 6.
[4] EPA, Health and Environmental Effects of Particulate Matter (PM) (last visited June 14, 2018), https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm.

a. Discontinuance of $PM_{2.5}$ Monitor in Hoover

JCDH proposes to discontinue non-FEM continuous $PM_{2.5}$ sampling at the Hoover site. As stated in the comments last year, removing the $PM_{2.5}$ monitor from the Hoover site would remove the southernmost monitor in a highly-populated area of Jefferson County, and in an area likely to exceed the ambient air quality standards for $PM_{2.5}$. In addition, JCDH provides no rationale or explanation for discontinuing the Hoover $PM_{2.5}$ monitor.[5] In fact, contrary to JCDH's proposal to discontinue the $PM_{2.5}$ monitor at Hoover, its section on $PM_{2.5}$ says it operates a monitor at Hoover, and does not mention the proposed closure.[6] Please clarify JCDH's plan for the Hoover $PM_{2.5}$ site, and if it proposes to discontinue the monitor, please provide a justification for the discontinuance of the Hoover $PM_{2.5}$ monitor.

b. Discontinuance of $PM_{2.5}$ Monitors in Tuscaloosa and Gadsden

ADEM proposes discontinuing continuous $PM_{2.5}$ monitoring at the Tuscaloosa VA site and the Gadsden Community College site.[7] ADEM reasons that no FRM monitor is required because of Tuscaloosa's population estimate listed in Table 2 and the design value listed in Table 7.[8] ADEM then states that it will shut down the continuous $PM_{2.5}$ monitor, not the FRM monitor.[9]

In its justification for the removal of each monitor, ADEM states that the "monitor is in disrepair," but does not state how long the monitors have been in disrepair.[10] Removal of monitors should not be based on the condition of the monitor. Monitors should be removed only when the monitoring objective is no longer necessary or when there are other monitors that can accomplish the same task.[11]

Please provide additional information concerning why ADEM proposes to discontinue this site.

B. PM_{10} Monitoring

There were 19 PM_{10} monitors in 2014. Since then, six PM_{10} monitors have been discontinued. ADEM discontinued the PM_{10} monitor in Mobile in 2014, and JCDH discontinued 4 SLAMs Low Volume PM_{10} monitors 2016. After the 2017 discontinuation of the Wylam Low Volume PM_{10} monitor, there are now only 13 PM_{10} monitors in the state, down 30% since 2014.[12] Reducing the PM_{10} monitoring network in Birmingham and operating no PM_{10} monitor in Mobile significantly weakens Alabama's monitoring network. Further, SELC is concerned that this type of systematic reduction in monitors will lead to a sparse network that may overlook significant air pollution in the state.

[5] JCDH, *supra* note 3, at 6, 20.
[6] *Id.* at 20.
[7] ADEM, *supra* note 2, at 6, 41.
[8] *Id.* at 10, 23, 26.
[9] *Id.* at 41.
[10] *Id.* at 41.
[11] *See* 40 C.F.R. § 58.14.
[12] *See* JCDH, *supra* note 3, at 6; ADEM, *supra* note 2, at 7.

a. PM_{10} Monitoring in the Mobile MSA

ADEM has never justified the discontinuance of the PM_{10} monitor in Mobile, although concerns by both the public and the EPA have been documented for several years. In 2016, EPA expressed a desire "to work with ADEM on additional PM_{10} monitoring efforts in the communities near these [coal loading and unloading] activities," because PM_{10} monitoring has never taken place "in the communities closest to the largest sources of coal dust emissions."[13] EPA stated that the previous PM_{10} monitors were not appropriately sited to determine the PM_{10} concentration near the coal terminals:

> The [2006 Mobile Red Cross] monitor, as well as other PM_{10} monitors previously operated by ADEM, are useful to characterize the urban background concentrations in Mobile. However, it does not appear that these monitors were appropriately sited to characterize the maximum concentration of PM_{10} in communities near the coal terminals, which would likely occur much closer to the source.[14]

EPA reiterated its desire to work with ADEM in 2017, stating that it "would like to continue discussions with the ADEM about additional PM_{10} monitoring in the communities near the Port of Mobile coal terminal that was requested by several commenters."[15]

In contrast to Mobile, Huntsville is only required to operate one PM_{10} monitor; however, it chooses to operate three. In its 2018 Plan, HDNREM states:

> These [PM_{10}] monitors can be operated at very low cost and provide good spatial coverage within the city. Experience has shown that members of the public want ambient air monitoring to be performed in their part of the city, and the PM_{10} monitoring sites provide a monitoring presence at relatively low cost. Furthermore, the PM_{10} data provide an indirect indication of $PM_{2.5}$ spatial variability at a tiny fraction of the cost of operating multiple $PM_{2.5}$ sites.[16]

Citizens in Mobile are concerned about the health and environmental impacts of coal dust emissions. Because of this community concern, ADEM should monitor PM_{10} in the Mobile area. In addition, while ADEM stated in its response to SELC's comments in 2016 that it did not have the resources to operate additional monitors in Mobile, HDNREM points out that PM_{10} monitors are inexpensive. Because of the community concerns and the reasonable price of PM_{10} monitors, ADEM should install and operate PM_{10} monitors in the Mobile area.

To ensure that monitoring provides sufficient information on coal dust emissions, SELC also recommends a total suspended particulates monitor at the boundary of the facilities, as well as a $PM_{2.5}$ monitor in the surrounding neighborhood. The total suspended particulates monitor

[13] EPA Response to 2016 State of Alabama Ambient Air Monitoring Network Plan, U.S. E.P.A. Region 4 Comments and Recommendations (Nov. 4, 2016), at 6.
[14] *Id.*
[15] *See* EPA Response to 2017 State of Alabama Ambient Air Monitoring Network Plan, U.S. E.P.A. Region 4 Comments and Recommendations (Nov. 7, 2017)
[16] HDNREM, 2018 Annual Network Plan (2018), at 3.

can be used to determine the source of the PM emissions, and the $PM_{2.5}$ monitor will provide data on the finer particles which are more hazardous to health.

In its response to SELC's 2017 comment letter, ADEM also stated that it applied to EPA for a grant and may be able to conduct additional monitoring.[17] Please provide an update on the status of the grant application.

b. Shuttlesworth PM_{10} Monitor

In its 2017 comments and recommendations, EPA requested that JCDH change the monitoring objective for the Shuttlesworth PM_{10} monitor to "highest concentration."[18] This change was to be made by December 31, 2017. EPA also required the monitor be classified as a SLAMs monitor, as it was recorded in the AQS system, not as a SPM monitor, as it was listed in the 2017 Network Plan. In the 2018 Plan, JCDH has changed the monitor to SLAMS, but has not listed the monitoring objective as "highest concentration."[19] JCDH must make the changes as required by EPA.

c. Wylam PM_{10} Monitor

EPA states that the PM_{10} manual samplers at the Wylam monitor "will be utilized for an air toxics study in the near future."[20] Please provide details on this air toxics study, including: the data from the monitor used in the study, the purpose of the study, the parties participating in the study, and the anticipated completion date of the study.

C. Ozone Monitoring in Hoover

Last year, JCDH proposed to discontinue ozone monitoring at the Hoover site in southern Jefferson County.[21] In our comments last year, we asked JCDH to provide an explanation for its proposal to discontinue the monitoring. In its response to the Plan, EPA did not approve JCDH's request to shut down the ozone monitor, stating that "[n]o rationale for the shutdown was included in the Network Plan."[22] EPA requested that JCDH supply a justification by December 31, 2017, and after receiving an addendum to the Plan, EPA approved the discontinuance.[23]

The Addendum submitted by JCDH included five pages of data justifying the discontinuance of the ozone monitor in Hoover. This is the type of information that SELC requested in its comments last year. The agencies must include this type of information in their annual Plans in order for the public to meaningfully comment on any proposed changes to the Plans.

[17] ADEM Response to SELC's Comments on Ambient Air Monitoring 2017 Consolidated Network Review (July 6, 2017), at 3.
[18] EPA 2017 Response, *supra* note 14.
[19] JCDH, *supra* note 3, at 27.
[20] EPA 2017 Response, *supra* note 15, at 3.
[21] ADEM, State of Alabama Ambient Air Monitoring 2017 Consolidated Network Review (2017), at 8.
[22] EPA 2017 Response, *supra* note 15.
[23] *Id*. at 4-5; EPA Response to Hoover Ozone Ambient Air Monitoring Site Addendum (Feb. 27, 2018).

2. SO_2 Monitoring in Birmingham

On January 1, 2017, JCDH began operating an SO_2 monitor near the Shuttlesworth site to determine whether the SO_2 concentrations measured near the coke plants are higher than those at the North Birmingham NCore site.[24] According to EPA, "[i]f the SO_2 concentrations at Shuttlesworth are higher than at North Birmingham, then additional characterization of the SO_2 concentrations in the area may be required."[25]

The 2017 daily 1-hour SO_2 monitoring data reveals that the SO_2 concentrations monitored at Shuttlesworth are much higher than the concentrations measured at North Birmingham. The North Birmingham site's highest 1-hour daily maximum concentration was 59.4 ppb, recorded on May 8, 2017. Its average 1-hour daily maximum concentration was 4.7 ppb. The Shuttlesworth site's highest 1-hour daily maximum concentration was 110.1 ppb, recorded on February 16, 2017. Its average 1-hour daily maximum concentration was 18.2 ppb — almost quadrupling the daily average at North Birmingham.[26]

Because much higher SO_2 concentrations have been measured at the Shuttlesworth site compared to the North Birmingham site, additional characterization of the SO_2 concentrations should be required. This is critical, as even short term exposure to SO_2 can harm the human respiratory system and make breathing difficult; longer exposure to SO_2 emissions can permanently damage the respiratory system, inhibit plant growth, and cause smog and haze that reduce visibility and permanently stain and damage stonework.[27]

3. Community Health Concerns

One of the monitoring objectives of the ambient air monitoring network regulations is to "[p]rovide air pollution data to the general public in a timely manner."[28] In Alabama, the agencies' air monitoring plans do not specifically discuss community health concerns as a monitoring objective. For example, the Plans do not include information on community complaints that each agency receives, or has received in the previous year, and how monitoring might help resolve such concerns by generating monitoring data.

To ensure that the air monitoring network supplies air pollution data and information to concerned citizens, SELC recommends that each plan: (a) contain a section that summarizes community complaints relating to issues such as air quality, odors, and nuisance due to fugitive PM emissions, received by each agency over the past year; (b) address how monitoring might allow specific air pollutant data to be collected to address the specific community concerns raised by the complaints; (c) prioritize such monitoring efforts, if needed, based on factors such as the nature and severity of the complaints that need to be addressed; (d) propose the appropriate monitoring in the plan; and (e) attach the complaints received by the agencies.

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[24] EPA 2016 Response¸ *supra* note 13, at 5.
[25] *Id.*
[26] *See* EPA, Monitor Values Report (last visited June 21, 2018), https://www.epa.gov/outdoor-air-quality-data/monitor-values-report.
[27] EPA, Sulfur Dioxide Basics (last visited June 14, 2018), https://www.epa.gov/so2-pollution/sulfur-dioxide-basics.
[28] 40 C.F.R. Pt. 58, App. D, § 1.1.

4. Monitoring Equipment Evaluation Report

The Plans note that each agency will submit a monitoring equipment evaluation report to the EPA by July 1 each year.[29] This evaluation report gives the condition of each monitor throughout the network. However, given the timing of the comment period for the air monitoring plans, the monitoring equipment evaluation report for this year is not available for review. SELC requests that either the monitoring evaluating report be made available sooner for review (prior to the deadline to comment on the Plans) or the comment period for the Plans be extended so that the evaluation reports are available for review and comment. SELC also requests that the agencies provide their monitoring budget (including budget for monitor maintenance) for each of the past five years, their projected budget for each of the next five years, and how much of their budget is supplied by EPA.

5. Monitor Relocation

When monitors are proposed to be moved or relocated, the agencies do not discuss the appropriateness of the new locations. We recommend that the agencies conduct dispersion modeling to justify the location of any new or relocated monitor so that there is some assurance that the location is likely to capture representative concentrations of the pollutant in question, given the sources of that pollutant and meteorological considerations.

6. Emissions Inventory Data

In some instances, emissions inventory data is utilized to determine the required number of monitors. For example, in Table 3 of the ADEM Plan, ADEM references the 2014 National Emissions Inventory (NEI) data.[30] If more recent data is available, it should be used in the 2018 Plans.

7. Meteorological Data

The Plans do not include any discussion of where the agencies collect meteorological data in their jurisdictions. They should include a discussion of the locations of all meteorological monitoring data in each agency's jurisdiction, including monitoring stations located at airports or other national weather monitoring stations, and whether such monitors are public or private. Additionally, it would be helpful if the agencies included the meteorological monitoring stations on the map showing the locations of pollutant monitoring sites.

8. Population and CBSA

The plans currently use population data to estimate the number of monitors required in specific areas of the state. However, there is no discussion of how population estimates are made in non-census years. Since the required number of monitors depends on such population estimates in many cases, the plans should discuss how population estimates are determined.

[29] *See, e.g.*, ADEM, *supra* note 2, at 27.
[30] *Id.* at 16.

Respectfully submitted,

Christina Andreen
Staff Attorney

League of Women Voters of Mobile
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June 21, 2018

Via E-Mail and US Mail

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mml@adem.state.al. us

RE: State of Alabama Ambient Air Monitoring 2018 Network Plan

Dear Mr. Malaier:

The League of Women Voters of Mobile (LWV Mobile) respectfully submits the following comments on the State of Alabama Ambient Air Monitoring 2018 Network Plan (2018 Plan). The League of Women Voters[1] has been a strong voice for clean air since 1971 and continues to the present to educate and advocate on issues of air quality. Further, the League has long been a supporter of citizen participation in government and in access to information.

The 2018 Plan keeps the various monitors currently in place in the Mobile MSA. However, there is one area of monitoring absent in the 2018 Plan that LWV Mobile would like to see reestablished and that is PM10 monitoring in the Mobile MSA, specifically in the communities closest to the source of fugitive dust emission from coal loading and unloading activities in Mobile.

Mobile has two coal terminals in operation along the Mobile River close to downtown and other close-in neighborhoods.[2] Coal dust has been an issue for the Mobile communities in and near the downtown area for some time. As noted in comments filed for the 2016 Ambient Air Monitoring Network Plan, an investigative television report in 2016 found evidence of coal dust throughout the Mobile downtown area, including a sample containing approximately 30% coal dust one block from the Council Traditional School, an elementary school that draws students from across the city.[3] Just a block away from the school is a nursing

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[1] The League of Women Voters, founded in 1920, is a nonpartisan political organization that encourages informed and active participation in government, works to increase understanding of major public policy issues and influences public policy through education and advocacy. The League is organized at the national level, the state level (League of Women Voters of Alabama) and the local level. The League of Women Voters of Mobile has been an active, community organization in Mobile since its founding in 1955.

[2] Mobile was the second-largest port of entry in the US for coal imports and the fourth-largest port for coal exports in 2017, according to the US Energy Information Administration, Alabama State Energy Profile, Alabama Quick Facts, (Last updated May 17, 2018), https://www.eia.gov/state/?sid=AL . (Last accessed June 19, 2018).

[3] Letter from Keith Johnson, Southern Environmental Law Center to Michael F. Malaier, ADEM, Comments on the State of Alabama Ambient Air Monitoring 2016 Consolidated Network Review (June 20, 2016), citing, *inter alia*, Katie Weis, Fox 10 News Investigates: Coal Uncovered Part 2, Fox 10 (May 19, 2016, 1:01 PM). See, http://www.fox10tv.com/clip/12447064/fox10-news-investigates-coal-uncovered-part-2 (Last accessed June 19, 2018).

home/rehabilitation facility, Allen Health and Rehabilitation (formerly, the Allen Memorial nursing home). Both the school and the nursing home are located within approximately 2 miles of the McDuffie Coal Terminal.

Since 2016, coal exports have increased. According to *Made in Alabama*, the Alabama Department of Commerce's website, Alabama exports set a new record in 2017, including a 158% increase in mineral exports, primarily coal.[4]

In addition to the reported record growth at the Port, there has been an upsurge in residential and commercial development in the downtown area. Since late 2016/2017, ten new multifamily housing sites in the downtown area have either been in the planning phase, broken ground or available for lease.[5] Business activity in the area also shows an upward trend. Downtown has experienced "a restaurant boom, an increase in high quality office space and a diversification of the downtown workforce." [6] Thus, there is an increasing number of people living, working, and patronizing establishments in the downtown area.

ADEM closed the only PM10 monitoring site in the Mobile MSA in 2014.[7] That monitor, however, was not in the communities closest to the source of the coal loading and unloading activities. For the past two years, in correspondence back to ADEM regarding the 2016 and 2017 Plans, the Environmental Protection Agency (EPA) indicated that it wanted to continue discussions with ADEM concerning additional "PM10 monitoring in the communities near the Port of Mobile coal terminal that was requested by several commenters."[8] LWV Mobile requests that ADEM make public any documents submitted to EPA, specifically, any additional historical PM10 monitoring data in the Mobile area not reflected in the Network Plan or previously reported to the AQS system.

ADEM currently operates a PM2.5 monitor in Chickasaw, in Mobile County, even farther away than the site of the closed PM10 monitor.[9] However, the monitor in Chickasaw tracks a different type of dust, that from combustion of coal and other materials. On the other hand, PM10 monitors track non combusted coal dust, road dust and other similar particles.[10] Additionally, as the PM10 particles are heavier and tend to settle more quickly (although they have been known to travel up to 25-30 miles),[11] monitoring closer to the source of the emissions would provide more accurate information for addressing air quality.

Particles less than or equal to 10 micrometers in diameter are small enough to get into the lungs, with the potential to cause serious health problems.[12] According to the EPA, "[s]tudies suggest that short-term

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[4] Jerry Underwood, "Alabama exports set new annual record in 2017, topping $21.7 billion," *Made in Alabama*, February 15, 2018, http://www.madeinalabama.com/2018/02/alabama-exports-2017/. (Last accessed June 19, 2018).

[5] Ron Sivak,"10 new downtown Mobile residential projects in play," *Lagniappe*, December 13, 2017, https://lagniappemobile.com/10-new-downtown-mobile-residential-projects-play/ (Last accessed June 19, 2018).

[6] "In a world of uncertainty, Mobile's business community feeling bullish," *al.com*, December 6, 2017, https://www.al.com/news/index.ssf/2017/12/in_a_world_of_uncertainty_mobi.html (Last accessed June 19, 2018).

[7] ADEM, State of Alabama Ambient Air Monitoring 2014 Consolidated Network Review at 21 (2017).

[8] Letter from Beverly Bannister, Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Ron Gore, Chief, Air Division, Alabama Department of Environmental Management (Nov. 7, 2017); *see also*, Letter from Jeananne Gettle, Acting Director, Air Pesticides and Toxic Management Division, EPA Region 4, to Michael Malaier, Chief, Air Division, Alabama Department of Environmental Management (Nov. 4, 2016).

[9] 2018 Plan at 26.

[10] *What is Particulate Matter*, Pima County Government, https://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Environmental%20Quality/Air/Air%20Monitoring/AWhatisParticulateMatter1.pdf (Last accessed June 19, 2018).

[11] Id. at 2.

[12] "Particle Pollution PM," *Air Now*, https://cfpub.epa.gov/airnow/index.cfm?action=aqibasics.particle (last updated January 31, 2017) (Last accessed June 19, 2019).

exposure to coarse particles (PM10) may be linked to premature death and increased hospital admissions and emergency department visits for heart and lung disease." [13] Older adults, children and those with heart and lung disease are particularly vulnerable.[14]

An ambient air monitoring plan that adequately protects human health necessitates implementing the additional monitoring, particularly in light of the proximity of vulnerable populations, as well as the general increase in residential and business activity in the downtown and surrounding areas. LWVM requests that ADEM reestablish PM10 monitoring in the Mobile MSA in the communities closest to the largest sources of the coal dust emissions and, at the very least, establish special purpose PM10 monitoring in the Mobile MSA in the communities closest to the largest sources of the coal dust emissions to address community concerns, with data made publicly available.[15]

LWV Mobile appreciates the opportunity to comment.

Respectfully submitted,

Mary Anne Wilson
President, League of Women Voters of Mobile

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[13] "Particle Pollution and Health," *National Ambient Air Quality Standards for Particle Pollution,* https://www.epa.gov/sites/production/files/2016-04/documents/health_2012_factsheet.pdf (Last accessed June 19, 2018).

[14] "Particle Pollution PM," *Air Now,* https://cfpub.epa.gov/airnow/index.cfm?action=aqibasics.particle (last updated January 31, 2017) (Last accessed June 19, 2019).

[15] LWV Mobile also concurs in the comments submitted by the League of Women Voters of Alabama regarding the 2018 Plan as they relate to Mobile.

League of Women Voters of Alabama
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Phone: 205-871-8194
President@lwval.org

June 21, 2018

Via E-Mail and U.S. Mail

Mr. Michael E. Malaier
Chief, Air Assessment Unit
Field Operations Division
Alabama Department of Environmental Management
PO Box 301463
Montgomery, AL 36130-1463
mml@adem.state.al.us

Dear Mr. Malaier;

The League of Women Voters of Alabama (LWVAL) is a non-partisan, volunteer, community-based organization, affiliated with the League of Women Voters of the U.S. It promotes political responsibility and is engaged in advocacy on a range of issues, including environmental ones. Since 1971, league members have supported efforts to promote clean air and have encouraged regulators to be transparent in their provision of information to the public.

As President of the League of Women Voters of Alabama, I submit the following comments on the State of Alabama Ambient Air Monitoring Network Plan for 2018.

First, I want to commend the staff of the ADEM Air Division for their prompt attention to my requests for information. You and Mr. Gore both returned my telephone calls promptly and provided answers to my questions. The LWVAL respects public officials who are open in providing information since transparency in decision-making is critical to effective environmental policy.

One of our concerns with the 2018 plan is that it seems confusing when describing some regulatory activities. On page 27, the plan states that an evaluation of monitoring equipment will be submitted by ADEM to the USEPA by July 1. Unfortunately, public comments on the plan itself are due on June 22, well before that deadline. If monitoring equipment was found to be defective on July 1,that could cast a shadow of doubt over the accuracy of monitoring previously done by this equipment as well as make some public comments inaccurate.

An example of this concern lies on page 42 of the plan; there we see that the $PM_{2.5}$ monitors in Tuscaloosa and Gadsden are recommended to be removed since the data they provided seemed to reveal that ambient air quality standards have been met for the pollutants they track. However, we also learn that these monitors are in disrepair, not cost-effective to replace, and recommended for removal. We wonder about the accuracy of the reporting done by these "defective" monitors.

The LWVAL requests, therefore, that these monitors not be removed and that they be reinstated as working equipment. Monitoring needs to be accurate and also needs to be seen to be accurate.

We understand that measuring air pollution is very complex and must take into account such factors as weather patterns, atmosphere, wind, human activities, and chemical interactions. Accurate measures of pollution also are site-sensitive and require specific equipment. For example, $PM_{2.5}$ monitors measure pollutants with different risks to health than do PM_{10} monitors. Location of the monitoring devices with respect to sources of emissions and to the location of vulnerable populations is additionally important to environmental enforcement. And, finally, changes in activity of the emitting entities must be addressed.

Taking these factors into consideration, the LWVAL respectfully requests the following:

- Reinstating the $PM_{2.5}$ monitors in Tuscaloosa and Gadsden in order to ascertain the accuracy of the reporting data
- Installing more PM_{10} monitors state-wide in MSAs beyond Montgomery. In this, we agree with the arguments made by our colleagues in the League of Women Voters of Mobile. At a minimum, we ask for Special Purpose monitors to be installed.
- Data from these monitors should be made available to the public in an understandable fashion.

Thank you for the opportunity to make these comments.

Respectfully,

Barbara Caddell

Barbara Caddell
President, League of Women Voters of Alabama

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

OCT 30 2018

Mr. Ron Gore
Chief
Alabama Department of Environmental
Management Air Division
1400 Coliseum Boulevard
Montgomery, Alabama 36130

Dear Mr. Gore:

Thank you for submitting the state of Alabama's 2018 Ambient Air Monitoring Network Plan (Network Plan) dated July 2, 2018. The Network Plan is required by 40 Code of Federal Regulations (CFR) §58.10.

The U.S. Environmental Protection Agency understands that the Alabama Department of Environmental Management (ADEM) provided the public a 30-day review and comment period for the Network Plan. Thank you for including all public comments received and your responses to comments. The EPA has reviewed the Network Plan and the public comments provided by the ADEM.

The EPA approves the ADEM's Network Plan on the condition that the ADEM begin reporting sulfur dioxide (SO_2) data from the L'hoist Data Requirements Rule site in Shelby County, Alabama (AQS ID 01-117-9001) to the EPA's AirNow database by January 1, 2019. This reporting is required under 40 CFR §58.50 and 40 CFR Part 58, Appendix G. We have provided additional feedback on your Network Plan in the enclosure.

Thank you for your work with us to monitor air pollution and promote healthy air quality in Alabama. If you have any questions or concerns, please contact Gregg Worley at (404) 562-9141 or Darren Palmer at (404) 562-9052.

Sincerely,

Beverly H. Banister

Beverly H. Banister
Director
Air, Pesticides and Toxics Management Division

Enclosure

2018 State of Alabama Ambient Air Monitoring Network Plan
U.S. EPA Region 4 Comments and Recommendations

This document contains the U.S. Environmental Protection Agency comments and recommendations on the state of Alabama's 2018 ambient air monitoring network plan (Network Plan). Ambient air monitoring rules, which include regulatory requirements that address network plans, data certification, and minimum monitoring requirements, among other requirements, are found in 40 CFR Part 58. Minimum monitoring requirements for criteria pollutants are listed in 40 CFR Part 58, Appendix D. Minimum monitoring requirements are listed for ozone (O_3), particulate matter less than 2.5 microns ($PM_{2.5}$), particulate matter less than 10 microns (PM_{10}), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), carbon monoxide (CO), and lead (Pb).

The minimum monitoring requirements are based on core based statistical area (CBSA) boundaries, as defined by the U.S. Office of Management and Budget's (OMB) July 1, 2017, population estimates from the U.S. Census Bureau, and historical ambient air monitoring data. Minimum monitoring requirements for O_3, $PM_{2.5}$, and PM_{10}, only apply to metropolitan statistical areas (MSAs), which are a subset of CBSAs containing an urban core population of greater than 50,000. OMB currently defines 13 MSAs in the state of Alabama. These MSAs and the respective July 1, 2017, population estimates from the U.S. Census Bureau are shown in Table 1.

Table 1: Metropolitan Statistical Areas and July 1, 2017 Population Estimates

MSA Name	Population
Anniston-Oxford-Jacksonville, AL	114,728
Auburn-Opelika, AL	161,604
Birmingham-Hoover, AL	1,149,807
Columbus, GA-AL	303,811
Daphne-Fairhope-Foley, AL	212,628
Decatur, AL	151,867
Dothan, AL	147,914
Florence-Muscle Shoals, AL	147,038
Gadsden, AL	102,755
Huntsville, AL	455,448
Mobile, AL	413,955
Montgomery, AL	373,903
Tuscaloosa, AL	242,799

Proposed Monitoring Network Changes

Three primary quality assurance organizations (PQAOs) in the state of Alabama are responsible for maintaining an adequate ambient air monitoring network: the Alabama Department of Environmental Management (ADEM), the Jefferson County Department of Health (JCDH), and the Huntsville Department of Natural Resources and Environmental Management (HDNREM). This review focuses on the ADEM's ambient air monitoring network.

Last year, EPA approved several changes to the state of Alabama's monitoring network that have since been implemented. These changes are summarized in Table 2 below.

Table 2: EPA Approved Changes from 2017 Network Plan

AQS Site ID	Pollutant	Monitor Type[1]	Action Taken
01-113-0002	O_3	SLAMS	Shutdown as of 10/31/2017. Relocated to 01-113-0003.
01-113-0003	$PM_{2.5}$, PM_{10}, O_3	SLAMS	New site approved for PM_{10} and $PM_{2.5}$ on 06/05/2017. O_3 approved to start up on March 1, 2018. This site consolidation replaces both 01-113-0001 and 01-113-0002.
01-119-0003	SO_2	SPM	Short-term SO_2 monitoring to assess background concentrations.
01-121-0002	$PM_{2.5}$	SLAMS	Shutdown December 31, 2017.

[1] SLAMS = State and Local Air Monitoring Station; SPM = Special Purpose Monitor

Proposed air monitoring network changes for 2018-2019 are found on Page 6 of the Network Plan (see Table 3).

Table 3: Proposed Changes in the 2018 Network Plan

AQS Site ID	Pollutant	Monitor Type	Action Taken	EPA Comments
01-051-0003	O_3	SLAMS	Relocated	Lost access to site due to change in property owner. Shutdown approved. New site is 01-051-0004.
01-051-0004	O_3	SLAMS	Startup	New site. Monitoring started March 21, 2018. Approved. EPA approves site-data combination of sites 01-051-0003 and 01-051-0004.
01-055-0010	$PM_{2.5}$ NR[1]	SPM	Shutdown	Shutting down non-regulatory continuous sampler. Not required. $PM_{2.5}$ regulatory sampling will continue. Shutdown approved.
01-125-0004	$PM_{2.5}$ NR[1]	SPM	Shutdown	Shutting down non-regulatory continuous sampler. Not required. $PM_{2.5}$ regulatory sampling will continue. Shutdown approved.

[1] NR = Non-regulatory

Air Quality Index (AQI) Reporting
40 CFR §58.50 & 40 CFR Part 58, Appendix G

AQI reporting is required for MSAs with populations over 350,000. Four MSAs in Alabama are required to report an AQI: Birmingham, Huntsville, Mobile, and Montgomery. The state's Network Plan on Page 6 contains links to the ADEM, the JCDH and the HDNREM web sites where this information can be obtained. Presently, the ADEM is not reporting SO_2 data from the L'hoist Data Requirements Rule (DRR) site (AQS ID 01-117-9001) to AirNow. Per 40 CFR Part 58, Appendix G, Section 10, these data should be submitted to the EPA's AirNow database; they do not meet the conditions for exemption found in 40 CFR Part 58, Appendix G, Section 8. ADEM should begin submitting this data to AirNow by January 1, 2019. Alternatively, the ADEM may calculate the AQI using the data from its SLAMS network and then report it to the public. This alternative would not involve submitting data to AirNow. Except for this one aspect, the AQI reporting requirement is satisfied for the network operated by the ADEM.

National Core (NCore) Monitoring Network
40 CFR Part 58, Appendix D, Section 3.0

The state is required to have one NCore monitoring site. The NCore site must measure, at a minimum, $PM_{2.5}$ particle mass using continuous and integrated/filter-based samplers, speciated $PM_{2.5}$, $PM_{10-2.5}$ particle mass, O_3, SO_2, CO, NO/NOy, wind speed, wind direction, relative humidity, and ambient temperature. The North Birmingham site (AQS ID 01-073-0023) was approved as the state's NCore site by the EPA's Office of Air Quality Planning and Standards (OAQPS) on October 30, 2009, and meets all requirements for the state.

O_3 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.1 and Table D-2

The EPA determined that the O_3 monitoring network outlined in the Network Plan meets the minimum requirements found in 40 CFR Part 58, Appendix D, Section 4.1 and Table D-2 for all MSAs. The Dewberry Trail O_3 site (AQS ID 01-051-1001) was relocated in 2017 in the Wetumpka area at 206 Queen Ann Road (AQS ID 01-051-1002). Unfortunately, the property was sold and site access was lost. A new site was established approximately 1.3 miles away at 3148 Elmore Rd. in Wetumpka (AQS ID 01-051-0004) and monitoring began on March 21, 2018. The EPA approves this site relocation and approves the data from these sites to be combined to maintain design value trends. The Phenix City-Ladonia O_3 site (AQS ID 01-113-0002) has been relocated to the new site at South Gerard School (AQS ID 01-113-0003) and the monitor began operating at the beginning of the 2018 O_3 season, March 1, 2018. This change was previously approved on June 5, 2017.

CO Monitoring Requirements
40 CFR, Part 58, Appendix D, Sections 3.0(b) and 4.2

Ambient air monitoring network design criteria for CO are found in 40 CFR Part 58, Appendix D, Sections 3.0(b) and 4.2. This section requires CBSAs with populations over one million to operate one CO monitor collocated with a near-road monitor. The CO monitor at the Arkadelphia near-road site (AQS ID 01-073-2059) fulfills the requirement for the Birmingham CBSA. CO monitoring is also required at NCore sites as listed in Section 3.0(b). The CO monitor located at the Birmingham NCore site (AQS ID 01-073-0023) meets this requirement. In summary, the CO monitoring network outlined in the Network Plan meets the minimum requirements for all CBSAs.

NO_2 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.3

Three types of NO_2 monitoring are required: near-road, area-wide, and Regional Administrator. These are described in 40 CFR Part 58, Appendix D, Sections 4.3.2, 4.3.3, and 4.4.4, respectively.

The Birmingham area is the only CBSA required to have a near-road NO_2 monitoring site in Alabama. The JCDH operates a NO_2 monitor at the Arkadelphia near-road site (AQS ID 01-073-2059) to meet this requirement. The Arkadelphia near-road monitoring site was approved in the EPA's response to Alabama's 2013 Network Plan.

The Birmingham area is also the only CBSA in Alabama required to have an area-wide NO_2 monitoring site. The JCDH operates a NO_2 monitor at the North Birmingham NCore site (AQS ID 01-073-0023) to meet this requirement.

The EPA has not identified any monitor in Alabama that is needed to meet the Regional Administrator NO_2 monitoring requirement. Thus, the ADEM is not deficient with this requirement. The full list of NO_2 monitors identified by the Regional Administrators can be found on the EPA's website at: http://www.epa.gov/ttnamti1/svpop.html.

In summary, all the NO_2 monitoring requirements for Alabama are being met.

SO_2 Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.4

Ambient air monitoring network design criteria for SO_2 are found in 40 CFR Part 58, Appendix D, Section 4.4. This section requires that "[t]he population weighted emissions index (PWEI) shall be calculated by states for each core based statistical area (CBSA)." As a result, the SO_2 monitoring site(s) required in each CBSA will satisfy minimum monitoring requirements if the monitor(s) is sited within the boundaries of the parent CBSA and is of the following site types: population exposure, maximum concentration, source-oriented, general background, or regional transport. A SO_2 monitor at an NCore station may satisfy minimum monitoring requirements if that monitor is located within a CBSA with minimally required monitors consistent with Appendix D, Section 4.4. Currently, the Birmingham and Mobile CBSAs are required to have two and one SO_2 monitors, respectively. The SO_2 monitoring network design outlined in the Network Plan meets the minimum requirements with the following monitors in Table 4.

Table 4: SO_2 PWEI Monitors

CBSA	COUNTY	SITE NAME	SITE ID
Birmingham	Jefferson	North Birmingham	01-073-0023
	Jefferson	Fairfield	01-073-1003
Mobile	Mobile	Chickasaw	01-097-0003

In addition to the PWEI monitors, the SO_2 Data Requirements Rule requires the state to monitor SO_2 concentrations near the L'hoist North America – Montevallo Plant in the Birmingham MSA. The EPA approved the location of the SO_2 DRR site (AQS ID 01-117-9001) in EPA's response to the 2016 Network Plan. The state began operating the site by January 1, 2017. As previously indicated in the Air Quality Index Reporting Section, the ADEM should begin reporting these data to AirNow by January 1, 2019. Alternatively, the ADEM may calculate the AQI using data from its SLAMS network and then report it to the public. The SO_2 monitoring network described in the state's Network Plan meets the design criteria of 40 CFR Part 58.

Pb Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.5

Forty (40) CFR Part 58, Appendix D, Section 4.5 requires that "[a]t a minimum, there must be one source-oriented SLAMS [State and Local Air Monitoring Station] site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source which emits 0.50 or more tons per year and from each airport which emits 1.0 or more tons per year…" One Alabama source emits Pb above the 0.50 tpy threshold, the Sanders Lead Company in Troy, Alabama. The ADEM operates a monitor near this facility (AQS ID 01-109-0003) and, as a result, meets the Pb monitoring design criteria of 40 CFR Part 58.

PM_{10} Monitoring Requirements
40 CFR Part 58, Appendix A, 3.3
40 CFR Part 58, Appendix D, Section 4.6 and Table D-4

The EPA has determined that the PM_{10} monitoring network described on Page 17 of the Network Plan meets or exceeds the minimum requirements found in 40 CFR Part 58, Appendix D, Table D-4 for all MSAs. The collocation requirements for manual PM_{10} monitors are also being met. Collocation requirements apply to each PQAO and are based on the manual sampling methods employed.

Public commenters have requested PM_{10} monitoring in Mobile due to concerns about fugitive dust emissions from coal loading and unloading activities at the Port of Mobile. The ADEM previously conducted monitoring in the Mobile area and at the fence line of the coal terminals; however, no monitoring has been conducted in the communities closest to the terminals. While, the monitoring being requested by the commenters is not regulatory required, EPA is available to continue discussions on potential options if the State decides to establish a PM_{10} monitor in one of the communities near the Port of Mobile.

$PM_{2.5}$ Monitoring Requirements
40 CFR Part 58, Appendix A, 3.2.3
40 CFR Part 58, Appendix D, Section 4.7 and Table D-5

The EPA determined that the $PM_{2.5}$ monitoring network described on Pages 21-24 of the Network Plan meets or exceeds the minimum requirements found in 40 CFR Part 58, Appendix D, Table D-5 for all MSAs. The $PM_{2.5}$ collocation requirement found in 40 CFR Part 58, Appendix A, 3.2.3.2 for manual reference and equivalent methods collocated $PM_{2.5}$ monitoring is also being met. The state operates twelve sites all using the same federal reference method (FRM). Collocation is required at two sites and this requirement is met by collocated monitors at the main Montgomery site (AQS ID 01-101-1002) and Phenix City site (AQS ID 01-113-0003). Collocation requirements apply to each PQAO and are based on the sampling methods employed.

$PM_{2.5}$ Near-road Monitoring Requirement
40 CFR Part 58, Appendix D, Section 4.7.1(b)(2)

Regulatory requirements in 40 CFR Part 58, Appendix D, Section 4.7.1(b)(2) require that "CBSAs with a population of 1,000,000 or more persons, at least one $PM_{2.5}$ monitor, is to be collocated at a near-road NO_2 station." The $PM_{2.5}$ monitor at the Arkadelphia near-road site (AQS ID 01-073-2059) in Birmingham fulfills this requirement.

$PM_{2.5}$ Continuous Monitoring Requirements
40 CFR Part 58, Appendix D, Section 4.7.2

Regulatory provisions for continuous $PM_{2.5}$ monitoring require that "[t]he state, or where appropriate, local agencies must operate continuous $PM_{2.5}$ analyzers equal to at least one-half (round up) the minimum required sites listed in Table D-5 of this appendix. At least one required continuous analyzer in each MSA must be collocated with one of the required FRM, Federal Equivalent Method (FEM), Approved Regional Method (ARM) monitors, unless at least one of the required FRM/FEM/ARM monitors is itself a continuous FEM or ARM monitor in which case no collocation requirement applies."

As previously indicated, the non-regulatory continuous $PM_{2.5}$ samplers in Tuscaloosa (AQS ID 01-125-0004) and Gadsden (AQS ID 01-055-0010) are approved to be shutdown. We understand those samplers are beyond their useful life and both are not functioning. Since they are not required, the ADEM should include an "End Date" in AQS as of the last valid sample date this calendar year. Regulatory $PM_{2.5}$ monitoring will continue at these sites.

The EPA has determined that the $PM_{2.5}$ continuous monitoring network meets or exceeds the minimum monitoring requirements in all the MSAs in the state.

$PM_{2.5}$ Background and Transport Sites
40 CFR Part 58, Appendix D, Section 4.7.3

Forty (40) CFR Part 58, Appendix D, Section 4.7.3 requires that "[e]ach state shall install and operate at least one $PM_{2.5}$ site to monitor for regional background levels and at least one $PM_{2.5}$ site to monitor for regional transport." The 2018 Network Plan identifies on Page 24 the Crossville site (AQS ID 01-049-1003) in Dekalb County as a rural background site and the Ashland site (AQS ID 01-027-0001) in Clay County as a regional transport site. The ADEM operates regulatory FRM monitors at these two sites. The ADEM has satisfied the requirements for regional background and transport sites.

$PM_{2.5}$ Chemical Speciation Network (CSN)
40 CFR Part 58, Appendix D, Section 4.7.4

This requirement states that "[e]ach State shall continue to conduct chemical speciation monitoring and analyses at sites designated to be part of the $PM_{2.5}$ Speciation Trends Network (STN)." As noted in the Network Plan on Page 12, the required CSN now consists of two sites in Birmingham (AQS ID 01-073-0023 and 01-073-2003) and Phenix City (AQS ID 01-113-0003). The Birmingham NCore site (AQS ID 01-073-0023) serves as the primary site in state's STN. The other two sites serve as supplemental speciation sites. These sites meet this requirement.

Photochemical Assessment Monitoring Station (PAMS)
40 CFR Part 58, Appendix D, Section 5.0

With the promulgation of a new O_3 NAAQS on October 1, 2015, the EPA also finalized changes to the PAMS program. By June 1, 2019, PAMS monitoring will be required at the NCore site in Birmingham. While the EPA recognizes there are several implementation challenges to work through, we will work closely with the ADEM and the JCDH to minimize the burden of this new monitoring program. At this time, however, no PAMS monitoring is required anywhere else in the state of Alabama.