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

NOV 04 2016

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 2016 Ambient Air Monitoring Network Plan (Network Plan) dated July 8, 2016, and the network plan addendum on October 28, 2016. 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 and network plan addendum. The EPA has reviewed the Network Plan and the public comments provided by ADEM. Our response is enclosed.

In the July 8, 2016, letter transmitting the Network Plan to the EPA, ADEM stated, "During the 30-day public review period, ADEM received comments from several individuals and organizations. ADEM and the Jefferson County Department of Health reviewed the comments and responded to the commenters. No changes were made to the plan based on these comments." As an attachment to the Network Plan, ADEM submitted several of its response letters to commenters and some of the comments received from the public with the Network Plan. However, it appears that some of the public comments received by ADEM were not submitted in the attachment to the plan. The EPA requests that ADEM submit a copy of all public comments received about the Network Plan as required by 40 CFR §58.10(a)(1), by December 31, 2016.

In the EPA's response to last year's Network Plan, we noted that ADEM failed to request a lead (Pb) source monitoring waiver or provide a monitoring plan for the Anniston Army Depot. No such request was included in this year's Network Plan either. Pb source monitoring waivers are specifically required by 40 CFR Part 58, Appendix D, Section 4.5 to be renewed in each 5-year network assessment. The state will need to request a waiver from monitoring. If a waiver is not submitted, the EPA will require ADEM to site a Pb monitor near the depot using the siting criteria listed in 40 CFR Part 58, Appendix D, Section 4.5(a) and 40 CFR Part 58, Appendix E. ADEM must submit a Pb source monitoring waiver request or an addendum proposing a source-oriented Pb monitoring site by December 31, 2016. Please note that per 40 CFR §58.14, the EPA Regional Administrator must approve all changes to an agency's state or local air monitoring station (SLAMS) network, including site closures and relocations. Please request approval to shutdown, start-up, or re-site all SLAMS monitors.

Also, ADEM proposed in its Network Plan to conduct SO_2 monitoring near the Lhoist North America plant in Montevallo, Alabama to meet its obligations under the SO_2 Data Requirements Rule (40 CFR Part 51, Subpart BB). EPA staff have discussed the proposed site with ADEM staff and even accompanied them on a visit to the site. As a result of this work, ADEM changed slightly the location of the SO_2 monitoring site that required an addendum to the Network Plan. ADEM then conducted a public comment period for an addendum. The comment period ended on October 20, 2016, and no comments were received. The EPA has reviewed the addendum and has determined it is complete. The EPA approves the site, and its operation is expected to commence on or by January 1, 2017.

Finally, the EPA would also like to discuss with ADEM the concerns about coal dust raised by the communities near the Port of Mobile coal terminal and the need for PM_{10} monitoring as described by several commenters to the Network Plan. The EPA requests that ADEM provide any additional historical PM_{10} monitoring data in the Mobile area that is not referenced in the Network Plan or previously reported to the Air Quality System (AQS) database. We request that ADEM submit these data by December 31, 2016.

With this letter, the EPA approves ADEM's Network Plan with the exception of the Pb monitoring network. In addition to the comments provided above, we have enclosed additional comments on your Network Plan. We look forward to working with your staff to address the comments.

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,

Mark J. Fite

for Jeaneanne M. Gettle
Acting Director
Air, Pesticides and Toxics Management Division

Enclosure

cc: Jonathan Stanton, Director
Jefferson County Department of Health

Daniel E. Shea, Director
Huntsville Department of Natural Resources

2016 State of Alabama Ambient Air Monitoring Network Plan
U.S. EPA Region 4 Comments and Recommendations

This document contains the U.S. EPA comments and recommendations on the state of Alabama's 2016 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, 2015, 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 of 50,000 or more population. OMB currently defines 13 MSAs in the state of Alabama. These MSAs and the respective July 1, 2015, population estimates from the U.S. Census Bureau are shown in Table 1.

Table 1: Metropolitan Statistical Areas and July 1, 2015 Population Estimates

MSA Name	Population
Anniston-Oxford-Jacksonville, AL	115,620
Auburn-Opelika, AL	156,993
Birmingham-Hoover, AL	1,145,647
Columbus, GA-AL	313,749
Daphne-Fairhope-Foley, AL	203,709
Decatur, AL	152,680
Dothan, AL	148,171
Florence-Muscle Shoals, AL	146,950
Gadsden, AL	103,057
Huntsville, AL	444,752
Mobile, AL	415,395
Montgomery, AL	373,792
Tuscaloosa, AL	239,908

Proposed Monitoring Network Changes

There are three primary quality assurance organizations (PQAO) in the state of Alabama with the responsibility of 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).

During the review of last year's Network Plan, we determined the HDNREM needed to install a collocated PM_{10} sampler and report the data to AQS in order to meet the quality assurance requirements for manual methods found in 40 CFR Part 58, Appendix A, Section 3.3.4. HDNREM subsequently

installed a collocated sampler and is now meeting the regulatory requirement at the Airport Road site (AQS ID 01-089-0014).

In the response to the Network Plan submitted by ADEM in 2015, the 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 2015 Network Plan

Agency	AQS Site ID	Pollutant	Monitor Type	Action Taken
ADEM	01-101-1002	$PM_{2.5}$ Speciation	CSN	Discontinued. EPA Defunded.
	01-113-0001	$PM_{2.5}$	SLAMS	Relocated nearby.
	01-097-0016	PM_{10}	SLAMS	Discontinued PM_{10} Site
HDNREM	01-089-0014	$PM_{2.5}$ Speciation	CSN	Discontinued. EPA Defunded.
JCDH	01-073-1003	PM_{10}	SLAMS	Discontinued Low Volume PM_{10}
	01-073-1005	PM_{10}	SLAMS	Discontinued Low Volume PM_{10}
	01-073-6002	PM_{10}	SLAMS	Discontinued Low Volume PM_{10}
	01-073-6004	PM_{10}, CO	SLAMS	Discontinued Low Volume PM_{10} and CO
	01-073-2059	NO_2, CO, $PM_{2.5}$	SLAMS	Established Near-road Site

In early 2016, ADEM relocated the Phenix City $PM_{2.5}$ site (AQS ID 01-113-0001) to a nearby location due to loss of access to that site. The EPA and ADEM agreed on the new location and the information was made available for public comment, which closed on March 10, 2016. No comments were received. Subsequently, the property owner of the new location raised the lease fee and ADEM lost access to the new location. ADEM must now find a new site in the downtown urban core unless it enters into a memorandum of agreement with the state of Georgia to share monitoring requirements in the Columbus, GA-AL CBSA. If ADEM chooses to establish a new site, it needs to submit the site proposal for a 30-day public comment period before submitting to the EPA for approval. To save time and resources, the EPA recommends that ADEM reach agreement with the EPA on a new site location prior to going to public comment.

In comments to last year's plan, the EPA noted that the Shuttlesworth site (AQS ID 01-073-6004) is the PM_{10} maximum concentration site for the Birmingham area and requested that the JCDH change the monitoring objective to reflect this finding. This change has not yet been applied in AQS. The EPA once again requests that the JCDH change the monitoring objective to "maximum concentration" or provide rationale as to why the monitor should not be characterized as "maximum concentration". The EPA asks that JCDH act on this by December 31, 2016. Finally, we appreciate the JCDH reporting both continuous PM_{10} and $PM_{2.5}$ measurements from their Shuttlesworth site to the EPA's AirNow system. While the $PM_{2.5}$ measurements are made utilizing a non-regulatory method, the data are useful in informing the EPA, the JCDH, and the local community about the general levels of $PM_{2.5}$ in the immediate vicinity of the Walter Energy facility.

Proposed monitoring network changes for 2016 are found on Page 3 of the Network Plan (see Table 3). No changes were proposed to the HDNREM's air monitoring network other than the discontinuation of the chemical speciation monitor that was defunded by the EPA.

Table 3: Proposed Changes in the 2016 Network Plan

Agency	AQS Site ID	Pollutant	Monitor Type	Action Taken	EPA Comments
ADEM	01-117-9001	SO_2 DRR	SLAMS	Startup	Approved. Operation should commence on or by January 1, 2017.
	01-051-0001	O_3	SLAMS	To be relocated	Waiting on site submittal
JCDH	01-073-6004	$PM_{2.5}$	SPM	Startup	Approved, non-regulatory
	01-073-0023	Pb	SLAMS	Shutdown	Approved, effective June 30, 2016

In addition to the changes identified in Table 3, JCDH replaced the shelter at its Shuttlesworth site earlier this year and plans to replace the shelter at its North Birmingham site by the end of 2016.

Air Quality Index (AQI) Reporting
40 CFR §58.50

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 2 contains links to ADEM, the JCDH and the HDNREM web sites where this information can be obtained. This satisfies the AQI reporting requirement for the state.

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

The state is required to have one NCore 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. We understand that ADEM will have to relocate the Dewberry Trail O_3 site (AQS ID 01-051-0001) because the property was sold and the new owners would no longer allow ADEM access to the property. On a recent visit, the EPA staff looked at proposed locations along with Gina Curvin and Mike Malaier of ADEM. The EPA staff are willing to have further discussions with your staff as you work to identify a suitable location for the monitoring station. Since the Montgomery MSA is required to have two O_3 monitors, it is important that this station be relocated before the 2017 O_3 season begins on March 1, 2017. Once ADEM identifies a suitable location, it should prepare a network plan addendum addressing this site proposal that includes all the applicable information in 40 CFR Part 58.10(b). The proposal should be submitted for a 30-day public comment period, as required, and then it should be submitted to the EPA for approval.

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. Forty (40) CFR §58.13(e)(2) requires the monitor be operational by January 1, 2017. This requirement is already met for the Birmingham CBSA by the CO monitor at the Arkadelphia near-road site (AQS ID 01-073-2059). CO monitoring is also required for the NCore network 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 station 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 the only CBSA in Alabama required to have an area-wide NO_2 monitoring station. 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, 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.

All of the NO_2 monitoring requirements are being met in the Birmingham CBSA and no other CBSA in Alabama is required to monitor for NO_2 at this time.

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. An 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. At this time, 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

EPA's SO_2 Data Requirements Rule (DRR) (see 80 *Federal Register*, No. 162, August, 21, 2015) requires characterization of the air quality near sources with SO_2 emissions greater than 2,000 tons per year (tpy) by conducting ambient air monitoring or modeling. On July 1, 2016, ADEM submitted a final list of sources in the state around which SO_2 air quality must be characterized. Only the L'hoist North America – Montevallo Plant will be characterized using monitoring. The remaining sources will be characterized using modeling or will need to take a federally enforceable emissions limit.

Since the Network Plan was submitted to the EPA, the EPA and ADEM have agreed on an alternate location to represent the maximum concentration for the Lhoist facility. The original proposed site was identified in the Network Plan on Pages 126-150. The EPA staff conducted a site visit on June 20, 2016 to assess the proposed alternate location and ADEM provided information on that site to the EPA on Friday, September 2, 2016. ADEM subsequently submitted the network plan addendum for this site proposal for a 30 day public comment period which ended Oct 20, 2016, and no comments were received. The EPA has reviewed the addendum and has concluded it contains all the applicable information listed in 40 CFR Part 58.10(b) for this new site. This site is approved and should commence operation on or by January 1, 2017.

The appropriate quality assurance project plan covering the SO_2 DRR monitoring must be updated as necessary and approved by the EPA Region 4's Science and Ecosystem Support Division before data are collected.

Based on conversations with ADEM and the JCDH, it is the EPA's understanding that ADEM has decided not to characterize the Walter Energy and ABC Coke facilities in North Birmingham under the DRR because the annual SO_2 emissions from each facility were individually below 2,000 tons per year (the threshold that requires characterization under the DRR). ADEM and the JCDH also believe that the SO_2 air quality in the area is already adequately characterized by the SO_2 monitor at the nearby North Birmingham NCore site. However, the EPA, ADEM, and the JCDH have agreed that the JCDH will install an SO_2 monitor at the existing Shuttlesworth site in order to determine whether SO_2 concentrations near the source are higher than those measured at the North Birmingham NCore site. This monitor must operate as a SLAMS for a minimum of one year, beginning January 1, 2017. If, after one year of monitoring, 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. However, if the monitored concentrations at Shuttlesworth are lower than those at North Birmingham, then ADEM and the JCDH may request approval to discontinue the SO_2 monitor at Shuttlesworth.

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…" Monitoring is ongoing as required near the Sanders Lead Company in Troy, Alabama (AQS ID 01-109-0003). The requirement to

monitor for Pb at NCore sites was removed from the new version of the ambient air monitoring rule that became effective April 27, 2016. We understand that the JCDH has stopped all Pb monitoring efforts effective June 30, 2016, at the North Birmingham NCore site (AQS ID 01-073-0023). The EPA approves this action retroactively.

Region 4 identified one deficiency in the Pb source monitoring network that was not addressed in last year's 5-year network assessment or annual network plan, or in this year's annual network plan, as requested in our response to last year's Network Plan. Based on the most current emissions data available, the 2011 national emissions inventory (NEI), the Anniston Army Depot emits 1.79 tpy of Pb, which is greater than the 0.50 tpy monitoring trigger. Pb source monitoring waivers are required by 40 CFR Part 58, Appendix D, Section 4.5 and are to be renewed in each 5-year network assessment. There was no discussion in any of the documents mentioned above regarding whether monitoring is appropriate at this facility or whether the state is requesting a waiver of monitoring requirements. If compelling documentation supporting a waiver of the monitoring requirements cannot be provided, the state will then be required to submit an addendum to the Network Plan by December 31, 2016, addressing the monitoring requirements for this facility, including a schedule of when Pb source monitoring will be established. Monitoring must begin no later than December 31, 2017. We will work with ADEM as necessary to determine the most appropriate location for ambient air monitoring around the facility.

Other than the one monitoring deficiency near the Anniston Army Depot, the Pb monitoring network described in the state's Network Plan meets all of the design criteria of 40 CFR Part 58. However, until ADEM addresses this deficiency, the EPA cannot approve the Pb portion of the Network Plan.

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

Region 4 has determined that the PM_{10} monitoring network described on Pages 16 and 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 for all areas. Collocation requirements apply to each PQAO and are based on the sampling methods employed.

Several public comments were submitted regarding PM_{10} monitoring in Mobile, AL. Specifically, the commenters have requested PM_{10} monitoring be conducted closer to the population and industrial centers of Mobile due to concerns about fugitive dust emissions from coal loading and unloading activities. The EPA would like to work with ADEM on additional PM_{10} monitoring efforts in the communities near these activities. Monitoring has previously been conducted in other areas of Mobile, but not in the communities closest to the largest sources of coal dust emissions.

In ADEM's response to comments, it referenced a special study that was conducted in 2006. ADEM stated in the study's report that a PM_{10} monitor at the Mobile Red Cross office measured concentrations below the 24-hr. PM_{10} NAAQS and the (since revoked) annual PM_{10} NAAQS. Based on these data, ADEM stated that it "has no basis to conclude that the concentrations of coal dust in downtown Mobile pose a danger to human health." The Mobile Red Cross monitoring site referenced in this study was located approximately 5.1 miles northwest of the McDuffie coal terminal. This 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.

The most recent PM_{10} data collected near the McDuffie coal terminal that ADEM has reported to AQS is from a fenceline special purpose monitor (AQS ID 01-097-0030) that ADEM operated at a wastewater treatment plant north of the coal terminal from 1996-2005. This monitor violated the 24-hr PM10 NAAQS in 9 of the 10 years in which it produced a valid 24-hr PM_{10} design value. The monitor had a violating design value from 2003-2005, the most recent three-year period before the monitor was discontinued at the end of 2005.

While these fenceline ambient concentrations may not be representative of community exposure, the EPA does not agree that the historical data cited by ADEM is sufficient to characterize the maximum concentrations of PM_{10} in the communities closest to the coal terminals in Mobile. The EPA would like to have additional discussions with ADEM about future monitoring efforts in the surrounding communities to adequately characterize exposure to coal dust or other coarse particles. If ADEM collected any additional data during the 2006 monitoring study that was not discussed in the Network Plan or already reported to AQS, please forward this information to our office by December 31, 2016, for our review. ADEM is also required to submit copies of all public comments received about the Network Plan as required by 40 CFR §58.10(a)(1) and discussed in the cover letter, by December 31, 2016.

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

Region 4 has determined that the $PM_{2.5}$ monitoring network described on Pages 22-26 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 for all three agencies. 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 for "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." Based on the information provided in the Network Plan, Region 4 has determined that the $PM_{2.5}$

continuous monitoring network meets or exceeds the minimum monitoring requirements in all of the MSAs in the state.

A recent technical systems audit confirmed that ADEM has modified its FEM monitors by replacing the particle separator for all but one of its continuous $PM_{2.5}$ monitors so that any data collected by these monitors do not meet FEM criteria and cannot be used for regulatory decision making. These FEM samplers are being operated with a sharp cut cyclone (SCC) instead of a very sharp cut cyclone (VSCC) as required by the method designation. The EPA has developed a process found at 40 CFR §58.11(e) for agencies to statistically evaluate the data collected from a collocated continuous FEM. This process allows monitoring agencies to request exclusion from comparisons to the NAAQS if the collocated FRM and FEM data do not satisfy the regulatory Class III FEM comparability criteria. The EPA discourages agencies from modifying equipment in the manner that ADEM has, because it likely reduces the quality of the data collected. The EPA requests that ADEM operate these monitors so that they meet the FEM method requirements beginning January 1, 2017. After collecting two years of collocated FRM and FEM data, ADEM may request exclusion of the data from NAAQS comparisons. If the collocated data do not demonstrate sufficient comparability, using the process described in §58.11(e), ADEM may request the exclusion via the Network Plan process.

$PM_{2.5}$ 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 2016 Network Plan identifies the Crossville site (AQS ID 01-149-1003) 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. Regulatory FRM monitors are operated at these two sites. 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

In 2015, the EPA conducted an assessment of the CSN in an effort to optimize the network and create a network that is sustainable going forward. As a result of this assessment, the EPA defunded a number of monitoring sites, eliminated CSN $PM_{2.5}$ mass measurements, reduced the frequency of carbon blanks, reduced sample frequency at some monitoring sites, and reduced the number of icepacks in shipment during cooler months of the year. As noted in the Network Plan, the following CSN monitors at two monitoring sites in Alabama were defunded and have been shutdown: the Huntsville Old Airport site (AQS ID 01-089-0014) and the Montgomery MOMS site (AQS ID 01-101-1002). The remaining CSN network, with sites in Birmingham (AQS ID 01-073-0023 and 01-073-2003) and Phenix City (AQS ID 01-113-0001), meets the requirements.

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

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

Other Concerns

On page 7 of the Network Plan ADEM indicates that 40 CFR Part 58, Appendix E siting criteria are being met at all sites operated in Alabama. However, other than pictures no additional evidence of that was provided, such as information on the heights of obstructions and distances from the probes or inlets to those obstructions. Because most of these sites are used in regulatory decision-making, evaluating the conditions at these monitoring sites on an ongoing basis is critically important to ensure the data collected are of sufficient quality. The EPA requests that next year's plan include recent pictures of all sites with a statement indicating that the siting criteria for each site have been evaluated, the dates on which the evaluations occurred, and whether the sites meet or do not meet the current requirements. If sites do not meet the current requirements, a statement on the corrections that need to be made and a schedule of when these corrections will be made should be included. The EPA can share with ADEM examples of how other agencies are meeting this requirement in the context of their annual network plans, if that would be beneficial.

We have been conducting a review of all metadata in AQS for all Region 4 agencies. We have identified the following metadata that should be updated and included in the Network Plan submitted by July 1, 2017. This affects all three agencies.

AGENCY	AQS ID	COUNTY	SITE NAME	COMMENTS
ADEM	01-101-1002	Montgomery	MOMS	Update Latitude and Longitude
	01-033-1002	Colbert	Muscle Shoals	Update Latitude and Longitude
	01-055-0010	Etowah	Gadsden	Update Latitude and Longitude
JCDH	01-073-0028	Jefferson		Add END DATE
	01-073-1005	Jefferson	McAdory	Update Latitude and Longitude
HDNREM	01-089-0002	Madison		Add Local Site Name
	01-089-0003	Madison		Add Local Site Name
	01-089-0004	Madison		Add Local Site Name