ARKANSAS AMBIENT AIR MONITORING NETWORK

Annual Network Plan for 2023–2024

Division of Environmental Quality
Office of Air Quality
Public Review Draft

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I. Introduction

The Arkansas Division of Environmental Quality (DEQ) operates a network of air quality monitors to support state implementation plans, national air quality assessments, and policy decisions with respect to pollutants for which the United States Environmental Protection Agency (EPA) has set national ambient air quality standards (NAAQS) under the Federal Clean Air Act. These pollutants include ozone, sulfur dioxide (SO_2), particulate matter ($PM_{2.5}$ and PM_{10}), nitrogen dioxide (NO_2), carbon monoxide (CO), and lead (Pb). DEQ is required to submit an annual air monitoring network plan to EPA's Region 6 office in Dallas, Texas (EPA Region 6). Specifically, 40 CFR Part 58, Subpart B §58.10(a)(1) requires that:

> … the State, or where applicable local, agency shall adopt and submit to the Regional Administrator an annual monitoring network plan which shall provide for the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme ozone nonattainment areas, PAMS stations, and SPM monitoring stations…

The DEQ has prepared this Ambient Air Monitoring Network Annual Network Plan for 2023–2024 (Network Plan) for submission to EPA by July 1, 2023. Consistent with federal regulations, DEQ is making this Network Plan available for public inspection for thirty days prior to submission to EPA Region 6.

The Network Plan provides the framework for the establishment and maintenance of the statewide air quality surveillance (AQS) system. The Network Plan represents DEQ's commitment to protect the health of Arkansas citizens through ambient air monitoring using the latest and best technology that is available and to communicate the data collected to the public as quickly and accurately as possible. This Network Plan does not include any proposed modifications to Arkansas's existing ambient air monitoring network.

II. The Arkansas Ambient Air Monitoring Network

DEQ operates numerous air monitors at various monitoring sites throughout the State of Arkansas as shown in Figure 1 and listed in Table 1. Each site has a unique AQS identification number. All monitors listed in Table 1 belong to the State and Local Air Monitoring System (SLAMS). DEQ sites the monitors according to federal requirements based on a number of factors including pollutant concentrations, population density in metropolitan statistical areas (MSAs) and core-based statistical areas (CBSAs), location of sources with significant emissions, and other factors. In addition, DEQ has reviewed its SLAMS network to determine whether the monitors adequately capture air quality conditions across the state, including in disadvantaged communities as identified in the White House Council on Environmental Quality's Climate and Environmental Justice Tool (CJEST). Based on DEQ's assessment, the SLAMS network meets all federal requirements and each monitor is located in or representative of one or more areas designated as disadvantaged by CJEST (Figure 2).

Figure 1. Map of Arkansas Ambient Air Monitoring Network

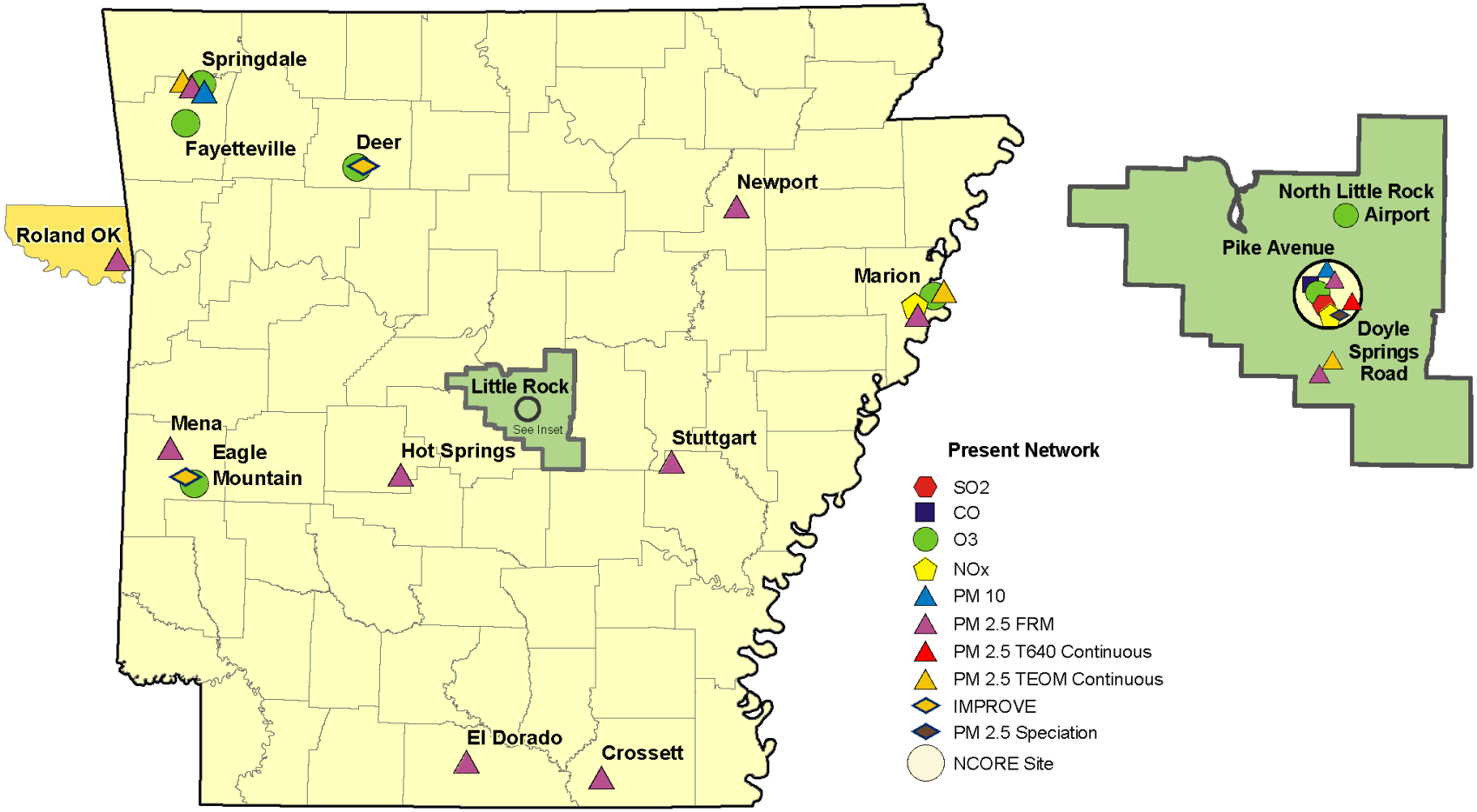
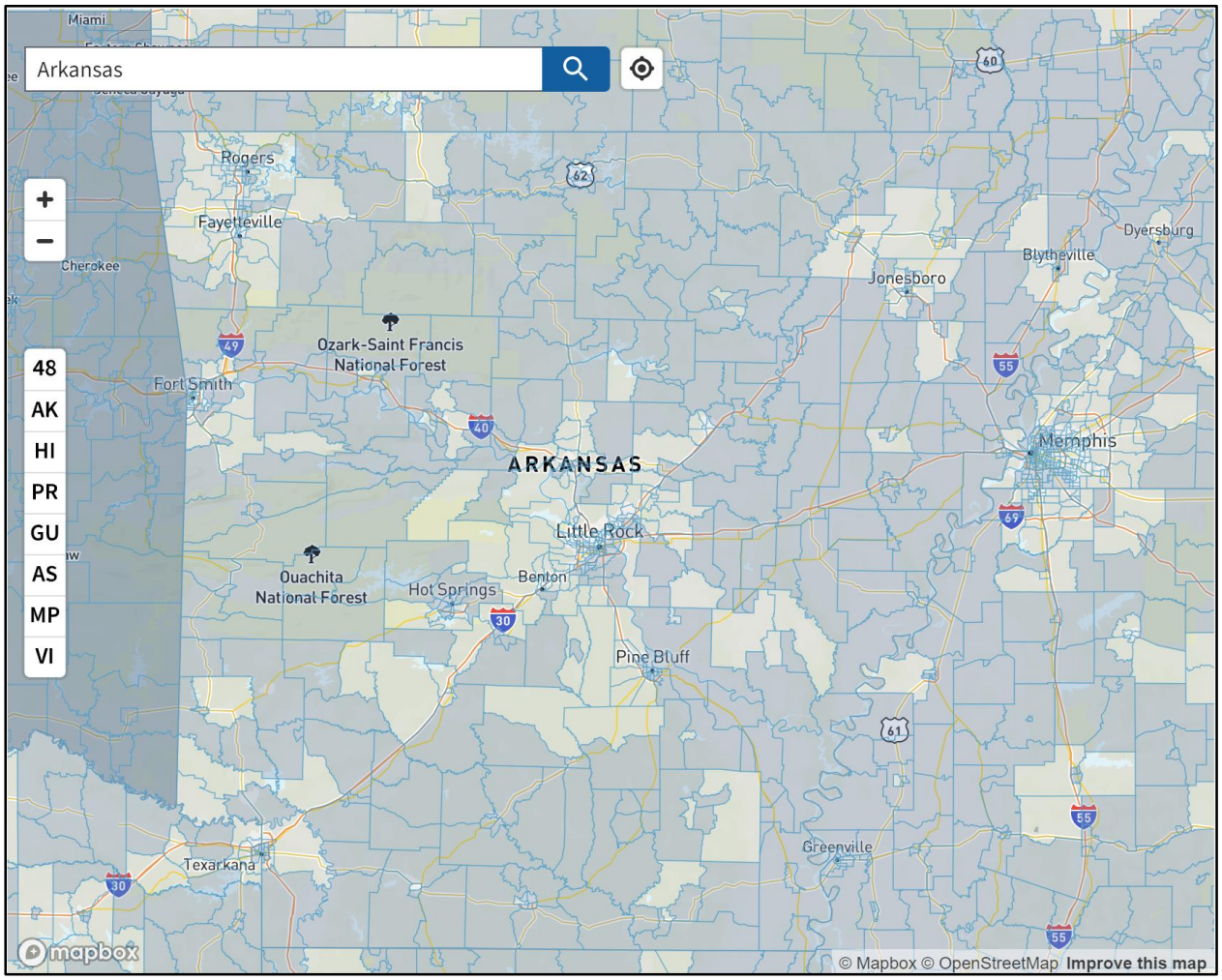


Figure 2. CJEST Map of Disadvantaged Communities by Census Tract in Arkansas[1]



[1] White House Council on Environmental Quality (2022). "Climate and Economic Justice Screening Tool." Accessed April 20, 2023. < https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5> Darker shade indicates census tracts that meet one or more of the White House Council on Environmental Quality disadvantaged criteria.

Table 1. DEQ Operated SLAMS Monitor Locations

AQS ID #	Site Name	Address/Location	Latitude, Longitude	Pollutants Measured	MSA
05-001-0011	Stuttgart	1703 N. Beurkle	34.518392, -91.558822	$PM_{2.5}$	Not in an MSA
05-003-0005	Crossett	201 Unity Rd.	33.136708, -91.950233	$PM_{2.5}$	Not in an MSA
05-035-0005	Marion	Polk & Colonial Dr.	35.197178, -90.193047	$PM_{2.5}$ Ozone NO_2	Memphis
05-051-0003	Hot Springs	300 Werner	34.469309, -93.000000	$PM_{2.5}$[1]	Hot Springs
05-067-0001	Newport	7648 Victory Blvd.	35.637192, -91.188771	$PM_{2.5}$	Not in an MSA
05-101-0002	Deer	Hwy 16	35.832633, -93.208072	Ozone	Not in an MSA
05-113-0002	Mena	Hornbeck Rd	34.583581, -94.226019	$PM_{2.5}$	Not in an MSA
05-113-0003	Eagle Mtn	463 Polk 631	34.454428, -94.143317	Ozone	Not in an MSA
05-119-0007	PARR (NCore)	Pike Ave at River Road	34.756072, -92.281139	$PM_{2.5}$ PM_{10} Ozone NO_x NO_y Speciation Trace SO_2 Trace CO	Little Rock
05-119-1002	NLRAP	Remount Rd	34.835606, -92.260425	Ozone	Little Rock
05-119-1008	DSR	Doyle Springs Rd	34.681225, -92.328539	$PM_{2.5}$	Little Rock
05-139-0006	El Dorado	Union Memorial Hospital	33.220403, -92.672092	$PM_{2.5}$	Not in an MSA
05-143-0005	Springdale	600 S. Old Missouri Rd	36.179617, -94.116611	$PM_{2.5}$ PM_{10} Ozone	Fayetteville
05-143-0006	Fayetteville	429 Ernest Lancaster Dr.	36.011703, -94.167436	Ozone	Fayetteville
40-135-9021	Roland, OK	207 Cherokee Blvd	35.40814, -94.524413	$PM_{2.5}$	Fort Smith

Table 2. U.S. Census Bureau Population Statistics for MSAs in Arkansas

MSA	2020 Census	2021 Estimates
Fayetteville-Springdale-Rogers, AR-MO	546,725	558,507
Fort Smith, AR-OK	244,310	247,661
Hot Springs, AR	100,180	100,330
Jonesboro, AR	134,196	134,878
Little Rock-North Little Rock-Conway, AR	748,031	749,673
Memphis, TN-MS-AR	1,337,779	1,336,438
Pine Bluff, AR	87,751	86,747
Texarkana, TX-AR	147,519	146,424

DEQ maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, App. A, designs its network in accordance with App. D, and locates its sites to meet all requirements of App. A, D, and E. The operation of each monitor meets the requirements of 40 CFR Part 58 Appendices B and C, where applicable. DEQ operates and maintains the monitors, as well as enters data from these monitoring sites into the national Air Quality Systems (AQS) database. This data is made available to the public within ninety days following the end of each calendar quarter. Table 3 details the methods, operating schedule, and objectives of each SLAMS monitor.

Table 3. DEQ Operated SLAMS Methods and Operation

AQS ID #	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
05-001-0011	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-003-0005	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-035-0005	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
	NO_2	35	Chemiluminescence	Continuous	Population Exposure	Neighborhood	Yes

AQS ID #	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
05-051-0003	$PM_{2.5}$[1]	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-067-0001	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-101-0002	Ozone	19	UV Photometric	Continuous	Background	Neighborhood	Yes
05-113-0002	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Regional Background	Neighborhood	Yes
05-113-0003	Ozone	19	UV Photometric	Continuous	Regional Transport	Neighborhood	Yes
05-119-0007	$PM_{2.5}$[1]	145	R & P 2025 FRM	Daily 1 in 1	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[3]	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
	$PM_{2.5}$[1,2]	238	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes
	PM_{10}[1]	127	Gravimetric	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	PM_{10}[1,2]	239	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes
	$PM_{10-2.5}$[1]	176	Gravimetric/FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{10-2.5}$[1,2]	240	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
	NO_x	74	Chemiluminescence	Continuous	Susceptible and Vulnerable Population Exposure	Neighborhood	Yes

AQS ID #	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
	NO_y	574	Chemiluminescence	Continuous	Population Exposure	Neighborhood	No
	Speciation	810	Low Volume	Daily 1 in 3	Population Exposure	Neighborhood	No
	Trace SO_2	560	Infrared	Continuous	Population Exposure	Neighborhood	Yes
	Trace CO	554	Infrared	Continuous	Population Exposure	Neighborhood	Yes
05-119-1002	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
05-119-1008	$PM_{2.5}$	143	R&P 2025 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
05-139-0006	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
05-143-0005	$PM_{2.5}$	145	R&P 2025 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$	701	R&P TEOM	Continuous	Population Exposure	Neighborhood	No
	PM_{10}	127	Gravimetric	Daily 1 in 6	Population Exposure	Neighborhood	Yes
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
05-143-0006	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
40-135-9021	$PM_{2.5}$	145	R&P 2025 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes

1. Collocated Monitors

2.Teledyne T640X Began Operation at AQS 05-119-0007 on 1/1/2021

3. Discontinued operation of R&P TEOM at PARR on 3/31/2021

A. Ozone Monitoring Network

Table D-2 of 40 CFR Part 58 Appendix D specifies the number of SLAMS ozone monitors required based on MSA population and the previous year's design value (DV) for the area. Table 4 lists the most recent DV and sampling schedule for the DEQ operated monitors. DVs as a percent of an ozone NAAQS that are greater than or equal to 85% are bolded in Table 4. Table 5 lists the populations of the MSAs in Arkansas and the minimum number of monitors required in each MSA based on population and the most recent DV. DEQ is not proposing any changes to the ozone network, including the sampling schedule, in this Network Plan.

Table 4. Arkansas Ozone SLAMS Monitors Schedule and 2019–2021 Ozone DVs

AQS ID # (Site Name)	Sampling Schedule	2019-2021 8-Hour Ozone (ppm)				
		2019	2020	2021	DV	DV % NAAQS
05-035-0005 (Marion)	Continuous	0.064	0.069	0.072	0.068	**97.1**
05-101-0002 (Deer)	Continuous	0.058	0.060	0.058	0.058	82.9
05-113-0003 (Eagle Mtn)	Continuous	0.062	0.058	0.065	0.061	**87.1**
05-119-0007 (PARR)	Continuous	0.057	0.060	0.064	0.060	**85.7**
05-119-1002 (NLRAP)	Continuous	0.060	0.064	0.067	0.063	**90**
05-143-0005 (Springdale)	Continuous	0.061	0.055	0.064	0.060	**85.7**
05-143-0006 (Fayetteville)	Continuous	0.060	0.055	0.062	0.059	84.3

Table 5. Arkansas MSA Populations and Minimum Ozone Monitors Required in SLAMS Network

Metropolitan Statistical Area (MSA)	2021 Population Estimates	Monitors Required
Fayetteville-Springdale-Rogers, AR-MO	558,507	2
Fort Smith, AR-OK	247,661	1
Hot Springs, AR	100,330	0
Jonesboro, AR	134,878	0
Little Rock-North Little Rock-Conway, AR	749,673	2
Memphis, TN-MS-AR	1,336,438	2
Pine Bluff, AR	86,747	0
Texarkana, TX-AR	146,424	0

Arkansas's network meets or exceeds the minimum SLAMS ozone requirement for each MSA. The Little Rock MSA meets the required number and the Memphis MSA exceeds the minimum number of SLAMS monitors with five monitors. DEQ operates one of the five SLAMS ozone monitors in the Memphis MSA, with the other four operated by either Shelby County Health Department (SCHD) or Mississippi Department of Environmental Quality (MDEQ). The Fayetteville MSA has two monitors, which meets the requirement for the MSA. A monitor in Roland, OK operated by the Cherokee National satisfies ozone monitoring requirements for the Fort Smith MSA. There are two additional SLAMS ozone monitors in the rural areas of Deer and Eagle Mountain, which are used to enhance EPA's AIRNOW ozone mapping program and to determine background and transport ozone.

In addition to the SLAMS network, EPA operates one ozone monitor (05-019-9991) as part of the Clean Air Status and Trends Network (CASTNET). This ozone monitor is compliant with the regulatory requirements in 40 CFR Parts 50, 53, and 58. Therefore, this site is also used to determine if an area meets or exceeds the NAAQS. The 2019–2021 DV for this site is 0.057 ppm.

B. Particulate Matter Monitoring Network

1. Fine Particulate Matter ($PM_{2.5}$) Network

Table D-5 of 40 CFR Part 58 Appendix D specifies the number of SLAMS $PM_{2.5}$ monitors required based on MSA population and the previous year's DV. Table 6 lists the most recent area DV and sampling schedule for DEQ operated monitors. There are no DVs as a percent of any $PM_{2.5}$ NAAQS values that are greater than or equal to 85%. Table 7 lists populations the MSAs in Arkansas and the minimum number of monitors required in each MSA based on population and the most recent DV. DEQ is not proposing any changes to the $PM_{2.5}$ network, including the sampling schedule, in this Network Plan.

Table 6. Arkansas $PM_{2.5}$ SLAMS Monitors Schedule and 2020–2022 $PM_{2.5}$ DVs

AQS ID # (Site Name)	Sampling Schedule	2019–2021 24-Hour $PM_{2.5}$ (µg/m^3)					2019–2021 Annual $PM_{2.5}$ (µg/m^3)					Collocated with TEOM[2]
		2019	2020	2021	DV	DV % NAAQS	2019	2020	2021	DV	DV % NAAQS	
05-001-0011 (Stuttgart)	1:3	19.1	17.3	20.6	19.0	54.3	7.9	7.2	7.6	7.6	63.3	No
05-003-0005* (Crossett)	1:3	17.4	18.0	15.4	17.0	48.6	8.2	7.5	7.9	7.8	65.0	No
05-035-0005 (Marion)	1:3	18.0	17.2	18.4	18.0	51.1	8.3	7.5	8.1	8.0	66.7	Yes
05-051-0003* (Hot Springs)	1:3	19.9	18.7	22.7	20.0	57.1	8.8	8.0	8.8	8.5	71.7	No
05-067-0001* (Newport)	1:3	22.4	20.7	26.3	23.0	65.7	8.2	7.1	8.0	7.8	65.0	No
05-113-0002 (Mena)	1:3	17.2	20.8	21.9	20.0	57.1	8.6	7.2	8.4	8.1	67.5	No
05-119-0007 (PARR)	1:1	18.5	17.7	20.9	19.0	54.3	9.5	8.2	9.3	9.0	75.0	No
05-119-1008* (DSR)	1:3	23.5	24.1	24.8	24.0	68.6	10.3	9.7	9.7	9.9	82.5	Yes
05-143-0005 (Springdale)	1:3	18.9	16.2	21.6	19.0	54.3	8.0	6.9	8.1	7.7	64.2	Yes
05-139-0006 (El Dorado)	1:3	18.9	21.8	20.0	20	57.1	9.04	8.48	9.09	8.9	74.2	No
40-135-9021 (Roland, OK)	1:3	16.5	19.7	19.8	19.0	54.3	8.1	7.2	8.3	7.9	65.8	No

[2] A Tapered Element Oscillating Microbalance (TEOM) sampler is an instrument for continuous measurement of particulate matter in near real time. The * indicates preliminary EPA-calculated design values where DEQ is in conversation with EPA to ensure that data from all Parameter Occurrence Codes at a given site has been included in the calculations.

Table 7. Arkansas MSA Populations and Minimum $PM_{2.5}$ Monitors Required in SLAMS Network

Metropolitan Statistical Area (MSA)	**2021 Estimates**	**Monitors Required**
Fayetteville-Springdale-Rogers, AR-MO	558,507	1
Fort Smith, AR-OK	247,661	0
Hot Springs, AR	100,330	0
Jonesboro, AR	134,878	0
Little Rock-North Little Rock-Conway, AR	749,673	1
Memphis, TN-MS-AR	1,336,438	2
Pine Bluff, AR	86,747	0
Texarkana, TX-AR	146,424	0

Arkansas's network meets or exceeds the minimum SLAMS $PM_{2.5}$ requirement for each MSA. DEQ operates two monitors that report NAAQS-comparable data and one quality assurance (QA) monitor in the Little Rock MSA. There are two additional monitors in the Little Rock MSA that report data that is not NAAQS-comparable. There are a total of four monitors in the Memphis MSA, exceeding the requirement for the MSA. In addition to one DEQ operated monitor, there are three additional SLAMS monitors operated by either SCHD or MDEQ in the Memphis MSA. SCHD operates a $PM_{2.5}$ monitor at site 47-157-0100 that meets the near-road monitoring requirement for the Memphis MSA (See MOA in Appendix B). The Fayetteville MSA and Fort Smith MSA each have one monitor to fulfill the MSA requirements. The Hot Springs MSA monitor, operated by DEQ, and the Texarkana MSA monitor, operated by the Texas Commission on Environmental Quality (TCEQ), were put in place to fulfill previous monitoring requirements that are no longer in force.

DEQ also operates five additional $PM_{2.5}$ monitors. The co-located Quality Control (QC) federal reference method (FRM) monitors, which are located at Hot Springs (05-051-0003) and PARR (05-119-0007), which are operating on a 1:12 sampling schedule. In addition, the following sites are co-located with a TEOM continuous monitor: Marion (05-035-0005), DSR (05-119-1008), and Springdale (05-143-0005).

Table 8 lists the monitoring sites used for daily Air Quality Index (AQI) reporting. The monitors at these locations, which include Springdale and PARR, also report hourly data to the AIRNOW web page to be used for real-time air quality particulate mapping.

Table 8. Continuous $PM_{2.5}$ AQI Monitoring Site Information

AQS ID #	Site Name	Sampling Frequency
05-143-0005	Springdale	Hourly
05-119-0007	PARR	Hourly

DEQ anticipates deploying additional Teledyne T640 samplers at all PM monitoring sites in calendar year 2023.

Table 9. Anticipated schedule of Teledyne T640 deployment

AQS Number	Description of Existing Equipment	Location	Calendar Year 2023 Activity	Proximity to Disadvantaged Communities[3]
05-119-1008	2000i FRM, TEOM	DSR	Collocate Teledyne T640 Continuous Monitor	Located in and representative of one or more disadvantaged areas
05-051-0003	2000i FRM	Hot Springs	Collocate Teledyne T640 Continuous Monitor	Representative of one or more disadvantaged areas
05-003-0005	2000i FRM	Crossett	Collocate Teledyne T640 Continuous Monitor	Representative of one or more disadvantaged areas
05-139-0006	2000i FRM	El Dorado	Collocate Teledyne T640 Continuous Monitor	Located in and representative of one or more disadvantaged areas
05-067-0001	2000i FRM	Newport	Collocate Teledyne T640 Continuous Monitor	Located in and representative of one or more disadvantaged areas
05-001-0011	2000i FRM	Stuttgart	Collocate Teledyne T640 Continuous Monitor	Located in and representative of one or more disadvantaged areas
05-113-0002	2000i FRM	Mena	Collocate Teledyne T640 Continuous Monitor	Located in and representative of one or more disadvantaged areas
05-035-0005	2000i FRM, TEOM	Marion	Collocate Teledyne T640 Continuous Monitor	Representative of one or more disadvantaged areas

[3] As identified by the Council on Environmental Quality's Climate and Environmental Justice Tool; Accessed April 20, 2023. < https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>

2. Coarse Particulate Matter (PM_{10}) Network

Table D-4 of 40 CFR Part 58 Appendix D specifies the number of SLAMS PM_{10} monitors required based on MSA population and the recent concentrations for the area. Table 10 lists the most recent three-year average and sampling schedule for DEQ operated monitors. DEQ's monitors fall within the low-concentration category (ambient concentrations less than 80% of the PM_{10} NAAQS) based on recent three-year averages as a percentage of the NAAQS. Table 11 lists populations the MSAs in Arkansas and the minimum number of monitors required in each MSA based on population in areas with low ambient concentrations of PM_{10}. DEQ is not proposing any changes to the PM_{10} network, including the sampling schedule, in this Network Plan.

Table 10. Arkansas PM_{10} SLAMS Monitors Schedule and 2019–2021 PM_{10} Three-Year Average

AQS ID #	Sampling Schedule	2019–2021 24-Hour PM_{10} (µg/m^3)				
		2019	2020	2021	3-Yr Avg.	3-Yr Avg. % NAAQS
05-119-0007 (PARR)	1:3	40	44	37	40.3	26.9
05-143-0005 (Springdale)	1:6	37	37	36	36.7	24.5

Table 11. Arkansas MSA Populations and Minimum PM_{10} Monitors Required in SLAMS Network

Metropolitan Statistical Area (MSA)	2021 Estimates	Monitors Required[4]
Fayetteville-Springdale-Rogers, AR-MO	558,507	1–2
Fort Smith, AR-OK	247,661	0
Hot Springs, AR	100,330	0
Jonesboro, AR	134,878	0
Little Rock-North Little Rock-Conway, AR	749,673	1–2
Memphis, TN-MS-AR	1,336,438	2–4
Pine Bluff, AR	86,747	0
Texarkana, TX-AR	146,424	0

[4] 40 CFR 58 Appendix D.4.d. provides that "a range of monitoring stations is specified in Table D-4 because sources of pollutants and local control efforts can vary from one part of the country to another and therefore, some flexibility is allowed in selecting the actual number of stations in any one locale."

Arkansas's network meets the minimum SLAMS PM_{10} requirement for each MSA. DEQ operates two PM_{10} monitoring sites, one in the Little Rock MSA and one in the Fayetteville MSA. The PARR site (05-119-0007) also has a collocated PM_{10} monitor operating on a 1:12 sampling schedule. SCHD operates two PM_{10} sites in the Memphis MSA.

3. $PM_{10-2.5}$ Particle Mass

DEQ performs $PM_{10-2.5}$ monitoring at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. The monitor is also operating on a 1:12 sampling schedule and the QC sampler runs on a 1:12 schedule, as required. DEQ is not proposing any changes for this monitor.

4. $PM_{2.5}$ Speciation

DEQ performs $PM_{2.5}$ speciation sampling at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. DEQ is not proposing any changes for this monitor.

C. Sulfur Dioxide (SO_2) Monitoring Network

The number of SLAMS SO_2 monitors required for Arkansas CBSAs is determined using a Population Weighted Emissions Index (PWEI). PWEI values are calculated by multiplying the CBSA population by the total SO_2 emitted within the CBSA using data available from the most recent National Emissions Inventory (NEI). Table 12 lists the PWEI and number of monitors required in each Arkansas CBSA in accordance with 40 CFR Part 58 Appendix D §4.4.2. DEQ is not proposing any SO_2 network changes in this Plan.

Table 12. Arkansas CBSA Populations and Minimum SO_2 Monitors Required in SLAMS Network

CBSA	2021 Estimate	2020 SO_2 Emissions (tpy)	PWEI	Monitors Required[5]
Metropolitan Statistical Areas				
Fayetteville-Springdale-Rogers, AR-MO	558,507	1006	562	0
Fort Smith, AR-OK	247,661	1097	272	0
Hot Springs, AR	100,330	77	8	0
Jonesboro, AR	134,878	195	26	0
Little Rock-North Little Rock-Conway, AR	749,673	579	434	0

[5] PWEI $\geq 10^6$: Three monitors required
$10^6 >$ PWEI $\geq 10^5$: Two monitors required
10^5 PWEI $\geq$ 5000 : One monitor required

Memphis, TN-MS-AR	1,336,438	968	1294	0
Pine Bluff, AR	86,747	11,355	985	0
Texarkana, TX-AR	146,424	1173	172	0
Micropolitan Statistical Areas				
Arkadelphia, AR	21,569	100	2	0
Batesville, AR	55,039	10559	581	0
Blytheville, AR	41,061	3150	129	0
Camden, AR	27,669	183	5	0
El Dorado, AR	39,262	639	25	0
Forrest City, AR	23,623	21	0	0
Harrison, AR	44,788	223	10	0
Helena-West Helena, AR	16,923	35	1	0
Magnolia, AR	22,947	1766	41	0
Malvern, AR	33,096	143	5	0
Mountain Home, AR	41,476	61	3	0
Paragould, AR	45,665	44	2	0
Russellville, AR	83,944	275	23	0
Searcy, AR	77,207	106	8	0

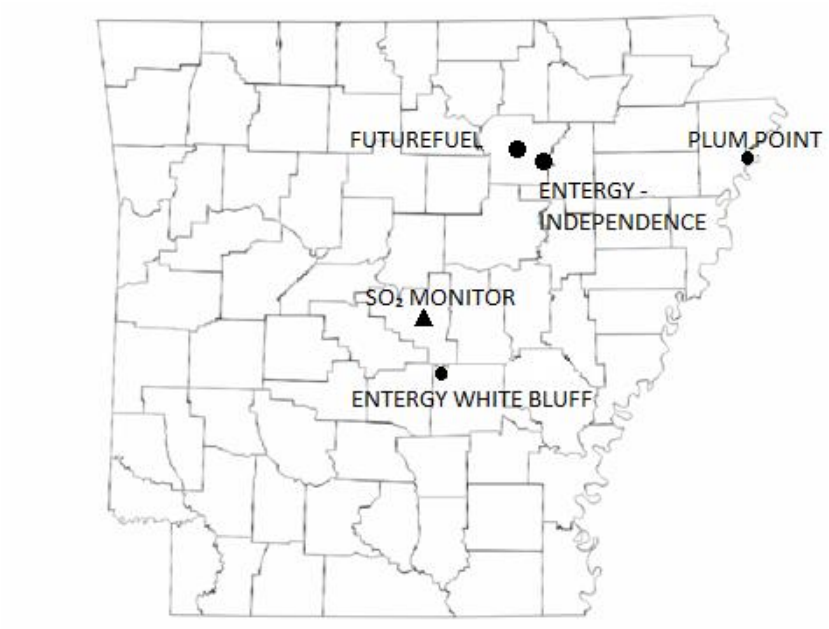
Arkansas's network meets or exceeds the minimum SLAMS SO_2 requirement for each CBSA. SCHD operates an SO_2 monitor in the Memphis CBSA. DEQ operates one trace SO_2 monitor at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D §3.

In addition to the population-based monitoring location, DEQ also uses modeling data to characterize air quality in counties with facilities that emit greater than 2000 tons per year (tpy) SO_2, in accordance with the SO_2 Data Requirements Rule at 40 CFR Part 51 Subpart BB. Table 13 lists facilities emitting greater than or equal to 2000 tpy SO_2 in Arkansas. Figure 3 provides the location of these facilities relative to the trace SO_2 monitor located at PARR (05-119-0007).

Table 13. Facilities Emitting Greater Than or Equal To 2000 tpy SO_2

FIPS Code[6]	County	Facility Name	2021 SO_2 Emissions (tpy)	Latitude	Longitude
0506900110	Jefferson	Entergy Arkansas, Inc.– White Bluff[7]	18,523.28	34.4231	-92.1398
0506300042	Independence	Entergy Arkansas, Inc. – Independence[7]	11,041.84	35.6775	-91.4118
0509300461	Mississippi	Plum Point[7]	2,806.61	35.6581	-89.9422
0506300036	Independence	Futurefuel[7]	2,133.73	35.7181	-91.5242

Figure 3. Relative Location of Facilities Emitting Greater than or Equal to 2000 TPY SO_2



[6] Facility-specific Federal Information Processing Standards (FIPS) Code
[7] Emissions data source: 2021 Arkansas Department of Energy and Environment, State and Local Emissions Inventory System (SLEIS)

None of the facilities listed in Table 13 are within the spatial scale covered by the current SO_2 monitor. Therefore, modeling was performed that included each listed facility.

On January 24, 2017, based on modeling for Plum Point, DEQ sent EPA a Designation Recommendations letter that included Unclassifiable/Attainment for Mississippi County, which EPA confirmed in their September 27, 2017 Intended Designations letter to DEQ.

On September 11, 2015, DEQ submitted modeling to EPA demonstrating attainment with the 1-hour SO_2 NAAQS and a recommendation of "Attainment/Unclassifiable" for Independence County AR. In October 2015 Sierra Club provided EPA with modeling that contradicted DEQ's modeling and on June 30, 2016, EPA designated Independence County as "unclassifiable" based on "insufficient information". On April 20, 2018, DEQ submitted to EPA a refined modeling simulation and an "Unclassifiable" to "Attainment/ Unclassifiable" re-designation request for Independence County. On April 12, 2019, EPA reclassified Independence County to "Attainment/Unclassifiable" for the 2010 SO2 NAAQS.

On September 11, 2015, DEQ submitted to the EPA an actual emissions SO_2 air dispersion modeling analysis for the Entergy Arkansas, LLC. White Bluff Steam Electric Station (White Bluff Station) located in Jefferson County, AR and recommended a designation of "Attainment/Unclassifiable". On July 12, 2016 (FR Vol. 81, No. 133, 45039), EPA concurred with the DEQ recommendation and designated Jefferson County, AR as having a designation of "Attainment/Unclassifiable". In addition, a copy of the Entergy – White Bluff Ongoing Data Requirements (40 CFR § 51.1205) Annual Emissions Update Information is attached as Appendix A.

D. Nitrogen Dioxide (NO_2) Monitoring Network

40 CFR Part 58 Appendix D § 4.3 requires SLAMS networks to meet requirements for near-road NO_2 monitoring, area-wide NO_2 monitoring, and any additional monitoring required by the EPA Regional Administrator. Each CBSA with a population of one million or more persons must have a microscale near-road NO_2 monitoring station. Each CBSA with a population of one million or more persons must have an area-wide NO_2 monitor. In addition, Regional Administrators may require NO_2 monitors above and beyond minimum network requirements.

DEQ operates NO_2 monitors at two sites in Arkansas: PARR (05-119-007) and Marion (05-035-0005). The Marion monitor (05-035-0005) serves as an area-wide NO_2 monitor for the Memphis CBSA, which is the only CBSA located partially in Arkansas with more than a million people. SCHD operates a near-road NO_2 monitor, Southwest Tennessee Community College (47-157-0100), in the

Memphis CBSA required under 40 CFR Part 58, Appendix D § 4.3.2. The PARR site serves as one of the minimum of forty additional NO_2 monitoring stations nationwide required by Regional Administrators for areas with susceptible and vulnerable populations under 40 CFR Part 58, Appendix D § 4.3.4.

DEQ performs NO/NO_2 monitoring at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. These measurements produce conservative estimates for NO_2 consistent with the requirements of 40 CFR Part 58, Appendix D § 4.3.6.

DEQ is not proposing any changes for the NO_2 monitoring network.

E. Carbon Monoxide (CO) Monitoring Network

40 CFR Part 58 Appendix D § 4.2 requires a minimum of one CO monitor co-located with a near-road NO_2 monitor in CBSAs have a population of 1,000,000 or more persons. The Regional Administrator may require additional monitoring.

SCHD operates a CO monitor collocated with the near-road NO_2 monitor (47-157-0100) in the Memphis CBSA, which is the only CBSA located partially in Arkansas with more than a million people. This monitor satisfies the minimum required CO monitors.

DEQ operates a Trace CO monitor at PARR (05-119-0007) as part of an NCore monitoring site in accordance with 40 CFR Part 58 Appendix D § 3. DEQ is not proposing any changes for the CO monitoring network.

F. Lead (Pb) Network

40 CFR Part 58 Appendix D § 4.5 requires source-oriented monitoring near Pb sources that are expected to or have been shown to contribute to a maximum lead concentration in ambient air in excess of the NAAQS. Specifically, there must be a source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source that emits 0.5 tpy or more and from each airport that emits 1.0 tpy based on the most recent NEI or other scientifically justifiable methods and data. EPA may waive source-oriented monitoring requirements if the State can demonstrate that the source will not contribute to a maximum Pb concentration in ambient air in excess of 50% of the NAAQS. These waivers must be renewed once every five years in accordance with 40 CFR Part 58.10(d).

DEQ does not operate any source-oriented monitors for lead. DEQ ensures that all sources emitting above the thresholds in 40 CFR Part 58 Appendix D § 4.5 are identified by requiring each facility with Pb permit limits greater than or equal to 0.5 tpy Pb to submit actual annual Pb emissions for the facility. There are two sources in Arkansas with a Pb waiver based on their actual lead emissions: Entergy Arkansas, LLC (Entergy) Independence Plant and Entergy White Bluff. See Sections F.1. and F.2. for additional details regarding these two facilities. There are five additional facilities for which EPA previously issued Pb waivers. These waivers have not been renewed because recent annual Pb emissions have not exceeded the thresholds listed in 40 CFR Part 58 Appendix D § 4.5. Table 14 lists recent emissions and waiver status for facilities for which DEQ previously requested waivers from EPA. DEQ is currently working with EPA and Aerojet Rocketdyne, Inc. to evaluate the facility's Pb emissions and the potential placement of a source-specific Pb monitor or the submittal to EPA of an additional Pb waiver. This facility was identified as reporting greater than 0.5 tpy Pb of actual emissions in a recent emission inventory submittal.

Table 14. Source-Oriented Pb Waiver Status by Facility

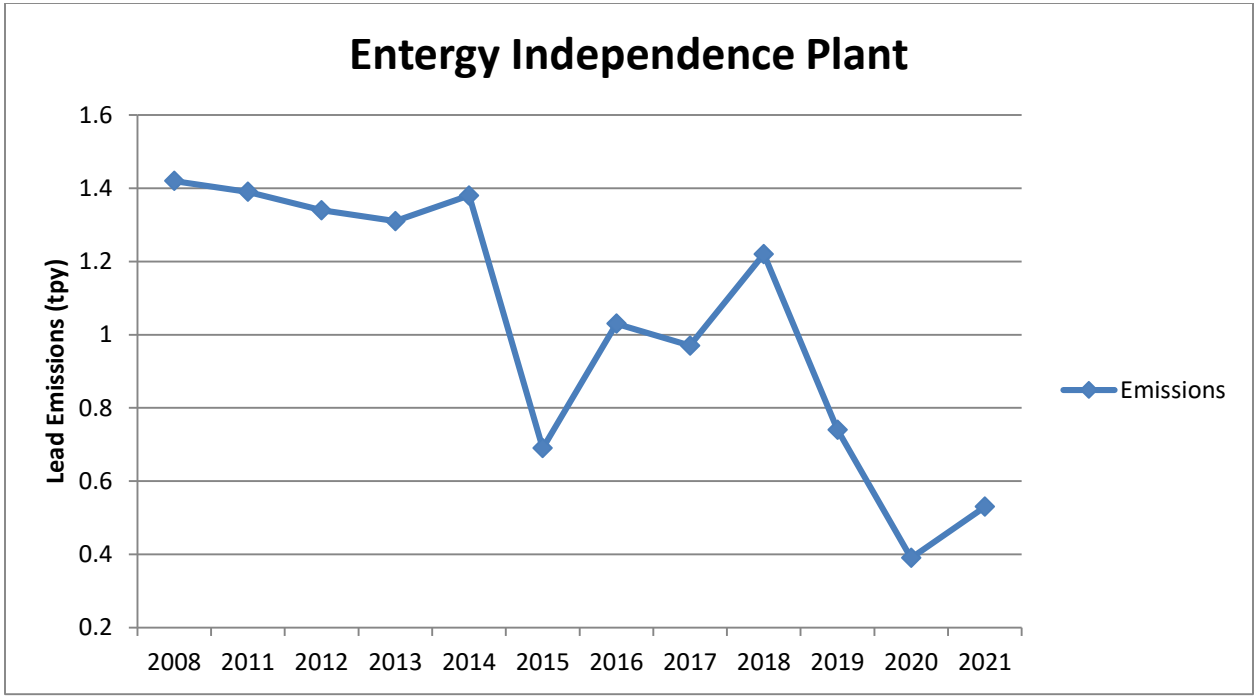
EIS #	Facility Name	Annual Lead Emissions (tpy)					Renewal Requested
		2017 NEI	2018 State EI	2019 State EI	2020 NEI	2021 State EI	
1083611	Arkansas Steel Associates, LLC	0.38	n/a*	n/a*	0.17	n/a*	No
1083411	Entergy Independence Plant	0.97	1.22	0.74	0.39	0.53	**Approved 4/29/2021**
893911	Entergy White Bluff Plant	1.00	1.06	0.93	0.53	0.89	**Approved 4/29/2021**
1091211	Georgia Pacific, LLC (Crossett Paper)	0.12	0.10	0.08	<0.01	<0.01	No
976111	Gerdau MacSteel	0.01	n/a*	n/a*	<0.01	n/a*	No
1084511	Nucor Corporation (Nucor Steel, Arkansas)	0	0.30	<0.01	<0.01	<0.01	No
1008911	Nucor-Yamato Steel Co.	0.28	0.21	0.19	0.35	0.29	No

DEQ previously operated a Pb sampler at PARR (05-119-0007) as part of an NCore monitoring site. However, DEQ discontinued Pb monitoring after meeting the three-year data collection requirements and obtaining EPA approval in 2016 consistent with revised network design criteria for non-source oriented lead monitoring (81 FR 17247).

1. Entergy Independence Plant

EPA approved a lead waiver for Entergy Independence on January 20, 2011. This approval was based on AERMOD modeling results that indicated that Independence's 2008 emissions of 1.42 tpy would result in a maximum three-month average concentration level of 0.03 micrograms per cubic meter (µg/m^3), which is 20% of the Pb NAAQS. Pb emissions from Independence have decreased since the 2008 emissions used in the modeling. See Figure 3. Therefore, DEQ requested renewal of the waiver in 2015 and again in 2020 as part of DEQ's Five Year Network Assessments submitted to EPA. EPA granted the 2015 renewal request in a letter dated November 16, 2015 and again on April 29, 2021.

Figure 4. 2008–2020 Pb Emissions from Entergy Independence[8]

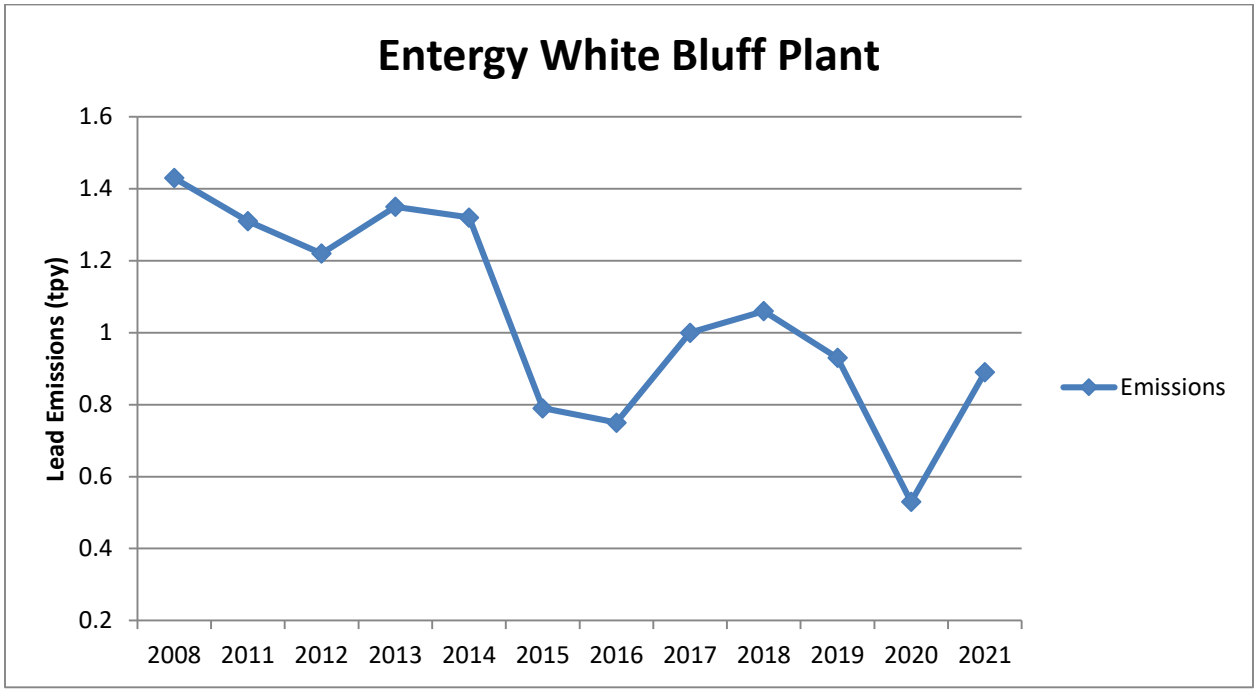


[8] Data Source: NEI (2008, 2011, 2014, 2017, 2020) and State EI (2012, 2013, 2015, 2016, 2018, 2019, 2021)

2. Entergy White Bluff

EPA approved a lead waiver for Entergy White Bluff on January 20, 2011. This approval was based on AERMOD modeling results that indicated that White Bluff's 2008 emissions of 1.43 tpy would result in a maximum three-month average concentration level of <0.01 µg/m^3. Pb emissions from White Bluff have decreased since the 2008 emissions used in the modeling. See Figure 4. Therefore, DEQ requested renewal of the waiver in 2015 and again in 2020 as part of Five Year Network Assessments that DEQ submitted to EPA. EPA granted the 2015 renewal request in a letter dated November 16, 2015 and again on April 29, 2021.

Figure 5. 2008–2020 Pb Emissions from Entergy White Bluff[9]



[9] Data Source: NEI (2008, 2011, 2014, 2017, 2020) and State EI (2009, 2010, 2012, 2013, 2015, 2016, 2018, 2019, 2021)

III. Contact Information

Comments or questions should be sent to the Arkansas Department of Energy and Environment, Office of Air Quality, Policy and Planning Branch staff at:

Email: airplancomments@adeq.state.ar.us

Postal Mail: Annual Network Plan Comments
Arkansas Department of Energy and Environment
Office of Air Quality, Policy and Planning Branch
5301 Northshore Drive
North Little Rock, AR 72118

Appendix A. Entergy White Bluff- Ongoing Data Requirement for Annual Updated SO_2 Emissions Information

ARKANSAS
ENERGY & ENVIRONMENT

[Insert Submittal Date]

Mr. David F. Garcia, P.E.
Director, Air and Radiation Division
U.S. Environmental Protection Agency, Region 6
1201 Elm Street, Suite 500
Dallas, Texas 75270-2102

Re: 2010 SO_2 NAAQS Ongoing Data Requirements Annual Updated Emissions Information and Further Modeling Recommendation - Entergy Arkansas, LLC White Bluff Steam Electric Station

Dear Mr. Garcia:

A comparison, per 40 CFR 51.1205(b)(1), of the annual SO_2 actual emissions included in the August 2015 modeling analysis (2012-2014) for the Entergy Arkansas, LLC White Bluff Steam Electric Station (hereafter, White Bluff Station) and the eight years of data (2015-2022) since this August 2015 modeling analysis indicate that SO_2 emissions at the White Bluff Station for the years following the August 2015 modeling analysis are lower than those included in the 2015 modeling analysis. Therefore, the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) recommends to the U.S. Environmental Protection Agency (EPA) that no additional modeling analysis is needed at this time and that Jefferson County, AR remains "Attainment/Unclassifiable" for the 2010 SO_2 NAAQS.

As background, on June 3, 2010, the EPA revised the 2010 one-hour sulfur dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS) by establishing a new one-hour standard at a level of 75 parts per billion (equivalent to 196.5 $\mu g/m^3$). On August 21, 2015 the EPA issued its SO_2 Data Requirements Rule (SO_2 DRR), which required characterization of air quality based on modeling or actual monitoring for categories of sources based on annual SO_2 emission rates. For areas that were characterized using air quality modeling, the *Ongoing Data Requirements* in 40 C.F.R. § 51.1205(b)(1) apply when the modeling was based on actual emissions. In such cases, the air agency will be required to submit an annual report to the EPA providing updated emissions information and recommending to the EPA whether further modeling is warranted to assess any expected changes in recent air quality.

On September 11, 2015, the DEQ submitted to the EPA an SO_2 air dispersion modeling analysis (August 2015 modeling analysis) using actual emissions for the White Bluff Station located in Jefferson County, AR. The August 2015 modeling analysis reported that the maximum model-

predicted impact of 162.4 µg/m^3 was below the 2010 1-hour SO_2 NAAQS of 196.5 µg/m^3. Therefore, DEQ recommended to the EPA a designation of "Attainment/Unclassifiable" (meeting the SO_2 NAAQS requirements) for Jefferson County. On July 12, 2016 (FR Vol. 81, No. 133, 45039), EPA concurred with the ADEQ recommendation and published the Final Rule: *Air Quality Designations for the 2010 Sulfur Dioxide (SO_2) Primary National Ambient Air Quality Standard—Round 2*, that designated Jefferson County, AR as having a designation of "Attainment/Unclassifiable".

For the August 2015 White Bluff Station 1-hour SO_2 NAAQS modeling analysis, all five sources of SO_2 at the White Bluff Station were included in the modeling analysis (Table 1) and actual emission data for the years 2012–2014 were used. Because actual emissions data were used in the August 2015 modeling analysis, DEQ is subject to the annual follow-up analysis described in 40 C.F.R. §51.1205(b)(1).

Table 1: White Bluff Station SO_2 Sources

Source Description	Source ID
Unit No. 1 Boiler	SN-01
Unit No. 2 Boiler	SN-02
Auxiliary Boiler	SN-05
Emergency Diesel Generator	SN-21
Emergency Fire Pump Engine	SN-22

The requirements of 40 C.F.R. §51.1205(b)(1) entail DEQ submitting an annual assessment to the EPA by July 1 of each year that provides updated actual emissions and recommends whether further modeling is warranted to assess any expected changes in recent air quality:

> ***§ 51.1205 Ongoing data requirements.***
> *(b) Modeled areas. For any area where modeling of actual SO_2 emissions serve as the basis for designating such area as attainment for the 2010 SO_2 NAAQS, the air agency shall submit an annual report to the EPA Regional Administrator by July 1 of each year, either as a stand-alone document made available for public inspection, or as an appendix to its Annual Monitoring Network Plan (also due on July 1 each year under 40 CFR 58.10), that documents the annual SO_2 emissions of each applicable source in each such area and provides an assessment of the cause of any emissions increase from the previous year. The first report for each such area is due by July 1 of the calendar year after the effective date of the area's initial designation.*
> *(1) The air agency shall include in such report a recommendation regarding whether additional modeling is needed to characterize air quality in any area to determine whether the area meets or does not meet the 2010 SO_2 NAAQS. The EPA Regional Administrator will consider the emissions report and air agency recommendation, and may require that the air agency conduct updated air quality modeling for the area and submit it to the EPA within 12 months.*

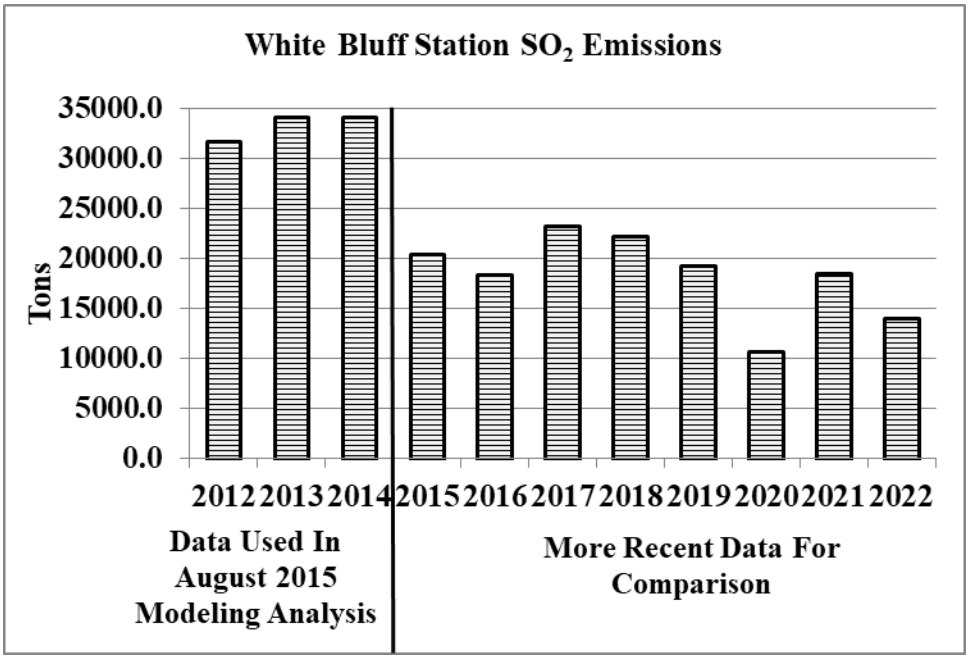
A current assessment of the annual SO_2 actual emissions for the three years (2012-2014) included in the August 2015 modeling analysis and the eight years subsequent to the August 2015 modeling analysis (2015–2022) indicate that SO_2 emissions at the White Bluff Station for the years following the 2015 modeling analysis are lower than the levels included in the 2015 modeling analysis (Table 2 and Figure 1).

Table 2: White Bluff Station SO_2 Actual Emissions for the previously modeled years (2012-2014) and the more recent years (2015-2022) as an update.

Annual SO_2 Actual Emissions (Tons/Year)							
Data Period	**Year**	**Unit No. 1 Boiler[1]**	**Unit No. 2 Boiler[1]**	**Auxiliary Boiler[2]**	**Emergency Diesel Generator[3]**	**Emergency Diesel Fire Pump[3]**	**Total Emissions**
Data used in August 2015 Modeling Analysis	2012	15,231.9	16,455.3	0.030	0.0007	0.0013	31,687.2
	2013	17,227.1	16,969.2	0.001	0.0016	0.0021	34,196.3
	2014	17,503.5	16,719.1	0.003	0.0004	0.0026	34,222.6
Data included in previous Ongoing Data Requirements submittals	2015	10,149.4	10,331.1	0.001	0.0130	0.0039	20,480.5
	2016	7,984.0	10,352.0	0.068	0.0128	0.0025	18,336.1
	2017	14,356.1	8,856.0	0.007	0.0012	0.0030	23,212.1
	2018	9,273.4	12,981.5	0.019	0.0017	0.0030	22,254.9
	2019	10,326.9	8,983.7	0.016	0.0123	0.0033	19,310.7
	2020	6,255.0	4,456.0	0.085	0.0020	0.0027	10,711.1
	2021	8,488.9	10,034.4	0.005	0.0020	0.0033	18,523.3
Most Recent Annual Data Available	**2022**	**7,578.8**	**6,379.9**	**0.02**	**0.0023**	**0.0040**	**13,958.7**

[1]Emissions from Electrical Generating Units (Unit No. 1 and Unit No. 2 Boilers) as measured by the facility Continuous Emission Monitoring System (CEMS) and reported to the EPA's Clean Air Markets Program Data (CAMPD).
[2]Emissions from Auxiliary Boiler calculated on actual annual fuel oil usage and measured fuel oil sulfur content.
[3]Emissions from Emergency Diesel Generator and Emergency Diesel Fire Pump calculated based on actual annual hours of operation and EPA AP-42 emissions factors.

Figure 1: White Bluff Station SO_2 Actual Emissions for the previously modeled years (2012-2014) and the more recent years (2015-2022) as an update.



This 2010 SO_2 NAAQS annual report fulfills the requirement of 40 CFR Part 51, Subpart BB, §51.1205(b)(1) that DEQ submit an emissions update assessment and additional modeling recommendation to the EPA Regional Administrator. If you have any questions regarding this emissions update assessment for the White Bluff Station, please contact David Clark (Policy and Planning, Technical Section Supervisor, at (501) 682-0070 or clarkd@adeq.state.ar.us) of my staff or myself at (501) 682-0639 or witherowd@adeq.state.ar.us.

Sincerely,

David Witherow, P.E.
Associate Director
Office of Air Quality
Division of Environmental Quality

Appendix B. 2020 Update to May/June 2008 Memorandum of Agreement between SCHD, MDEQ and DEQ concerning air quality monitoring requirements for the Memphis MSA

LEE HARRIS
MAYOR

SHELBY COUNTY HEALTH DEPARTMENT

Public Health
Prevent. Promote. Protect.
Shelby County Health Department

MICHELLE A. TAYLOR, MD DRPH, MPA
HEALTH DIRECTOR & OFFICER

May 5, 2023

Ms. Michelle Walker Owenby, Air Director
Tennessee Department of Environment and Conservation Air Pollution Control Division
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Ave., 15th Floor
Nashville, TN 37243-1531

Ms. Melissa Fortenberry, Air Division Chief
Mississippi Department of Environmental Quality
Office of Pollution Control
Air Division
P.O. Box 2261
Jackson, MS 39201

Mr. David Witherow, P.E., Associate Director
Office of Air Quality
Arkansas Department of Energy and Environment
5301 Northshore Dr.
North Little Rock, AR 72118-5317

Dear All,

In accordance with the provisions of the Memorandum of Agreement (MOA) signed in May and June of 2008 between the Shelby County Health Department (SCHD), Mississippi Department of Environmental Quality (MDEQ) and the Arkansas Department of Energy and Environment - Division of Environmental Quality (DEQ), this letter serves as a notification that each respective agency in the MOA have been contacted by the SCHD and no changes have been made in the current monitoring network. With this MOA, all agencies are meeting EPA monitoring requirements.

If changes to the network will or will not be made in the future, please notify the respective agencies of your intent.

If you have any questions, please call me at (901) 222-9193.

Sincerely,

Kasia S. Alexander

Kasia Smith-Alexander
Bureau Director, Environmental Health Services
Shelby County Health Department

MEMORANDUM OF AGREEMENT
ON AIR QUALITY MONITORING FOR CRITERIA POLLUTANTS FOR THE MEMPHIS, TN- MS- AR METROPOLITAN STATISTICAL AREA (MSA)

Participating Agencies:

Shelby County Health Department (SCHD)
Air Pollution Control Program

Mississippi Department of Environmental Quality (MDEQ)
Office of Pollution Control, Air Division

Arkansas Department of Energy and Environment
Division of Environmental Quality (DEQ)

PURPOSE / OBJECTIVE / GOALS

The purpose of this Memorandum of Agreement (MOA) is to inform the entities of the Memphis, Tennessee-Mississippi-Arkansas Metropolitan Statistical Area of monitoring network changes. The MOA between SCHD, MDEQ, and DEQ is to collectively meet United States Environmental Protection Agency (EPA) minimum monitoring requirements for particles of an aerodynamic diameter of 10 micrometers and less ($PM_{2.5}$), and ozone; as well as other criteria pollutants air quality monitoring deemed necessary to meet the needs of the MSA as determined reasonable by all parties. This MOA will formalize and reaffirm the collective agreement in order to provide adequate criteria pollutant monitoring for the Memphis, TN-MS-AR MSA as required by 40 CFR 58 Appendix D, Section 2, (e).

$PM_{2.5}$ MSA monitoring network include:

County	Federal Referenced Method $PM_{2.5}$	Federal Equivalent Method $PM_{2.5}$	Continuous $PM_{2.5}$	Speciation $PM_{2.5}$	Collocated $PM_{2.5}$
Shelby County, TN **SCHD**	**4** (includes 2 at Alabama, 1 at NCore, and 1 at the Near Road station)	**1**		1	**2**
Crittenden County, AR **DEQ**	**1**		**1**		
DeSoto County, MS **MDEQ**		**1**			

Criteria Air Pollutant MSA monitoring network include:

County	PM_{10}	$PM_{10-2.5}$	O_3	$NO_x/NOy/NO/NO_2$	CO	SO_2
Shelby County, TN **SCHD**	2 (TEOM at Alabama Ave. and T640x at NCore)	1	3	3 (includes 1 NO_x/NO_2 at the Near Road Station, 1 NO/NO_y at NCore/PAMS, 1 true NO_2 at NCore/PAMS)	2 (includes 1 trace at NCore and 1 at the Near Road Station)	1 (trace at NCore)
Crittenden County, AR **DEQ**			1	1		
DeSoto County, MS **MDEQ**			1			

RESPONSIBILITIES / ACTIONS

Each of the parties to this Agreement is responsible for ensuring that its obligations under the MOA are met. As conditions warrant, the affected agencies may conduct telephone conference calls, meetings, or other communications to discuss monitoring activities for the MSA. Each affected agency shall inform the other affected agencies via telephone or email of any monitoring changes occurring within its jurisdiction of the MSA at its earliest convenience, after learning of the need for the change or making the changes. Such unforeseen changes may include evictions from monitoring sites, destruction of monitoring sites due to natural disasters, or any occurrences that result in an extended (greater than one quarter) or permanent change in the monitoring network.

LIMITATIONS

- All commitments made in this MOA are subject to the availability of appropriated funds and each agency's budget priorities. Nothing in this MOA obligates SCHD, MDEQ, or DEQ to expend appropriations or to enter into any contract, assistance agreement, interagency agreement or other financial obligation.

- This MOA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between parties to this agreement will be handled in accordance with applicable laws, regulations, and procedures, and will be subject to separate agreements that will be affected in writing by representatives of the parties.

- This MOA does not create any right or benefit enforceable by law or equity against SCHD, MDEQ, or DEQ, their officers or employees, or any other person. This MOA does not apply to any entity outside SCHD, MDEQ, or DEQ.

- No proprietary information or intellectual property is anticipated to arise out of this MOA.

TERMINATION

This Memorandum of Agreement may be revised upon the mutual consent of SCHD, MDEQ and DEQ. Each party reserves the right to terminate this MOA. A thirty (30) day written notice must be given prior to the date of termination.