ARKANSAS AMBIENT AIR MONITORING NETWORK

Annual Network Plan for 2025–2026

State of Arkansas
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

Division of Environmental Quality
Office of Air Quality
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Public Review Draft

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I. Introduction

The Arkansas Department of Energy and Environment, 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…*

DEQ has prepared this Ambient Air Monitoring Network Annual Network Plan for 2025–2026 (Network Plan) for submission to EPA. DEQ is making this Network Plan available for public inspection 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. Based on DEQ's assessment, the SLAMS network meets all federal requirements.

Figure 1. Map of Arkansas Ambient Air Monitoring Network

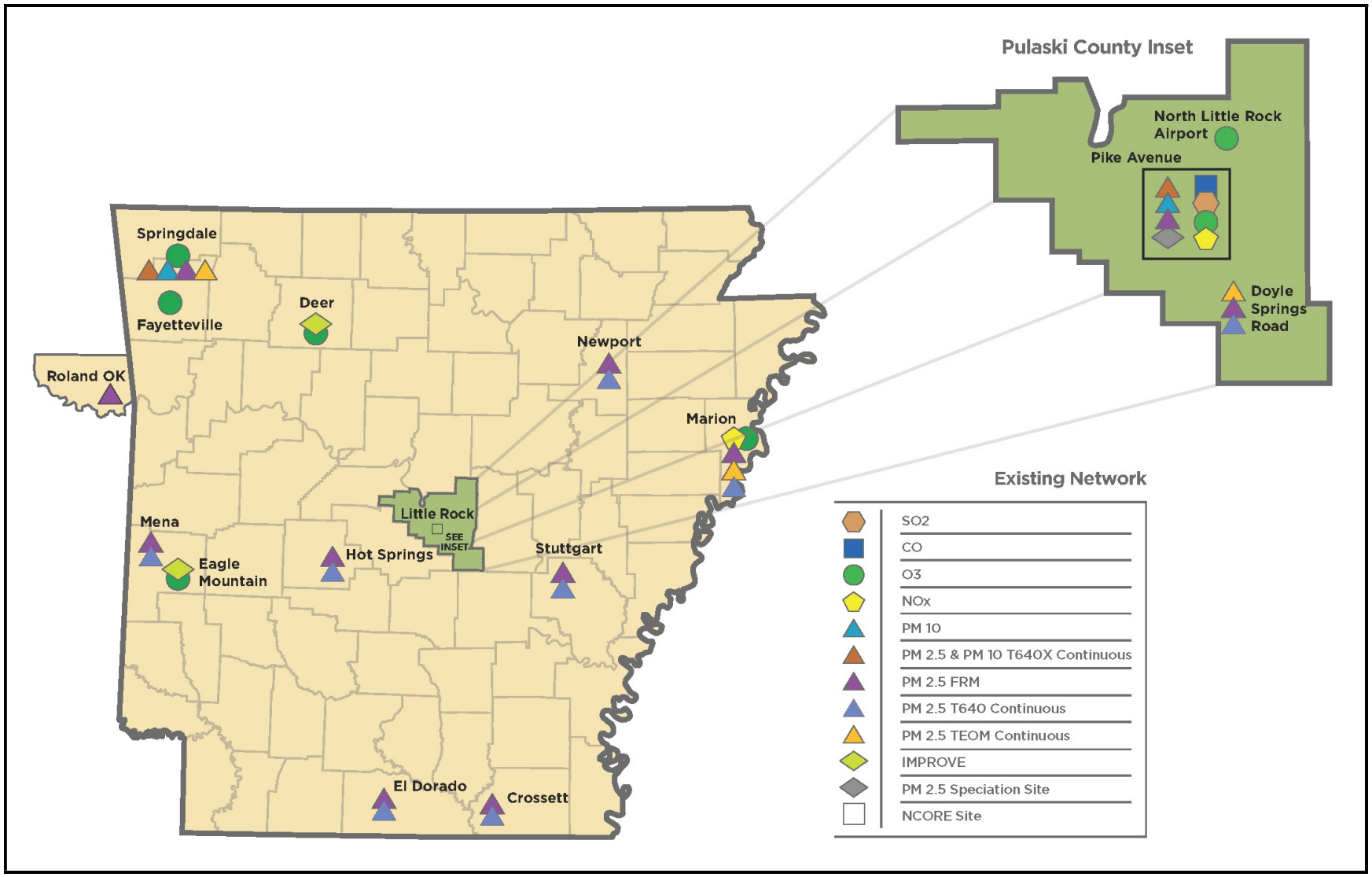


Table 1. DEQ Operated State and Local Air Monitoring System (SLAMS) Monitor Locations[1]

AQS ID #	Site Name	Address/Location	Latitude, Longitude	Pollutants Measured	MSA
05-001-0011	Stuttgart	1703 N. Beurkle	34.518433, -91.558808	$PM_{2.5}$	Not in an MSA
05-003-0005	Crossett	201 Unity Rd.	33.139317, -91.939095	$PM_{2.5}$	Not in an MSA
05-035-0005	Marion	Polk & Colonial Dr.	35.197150, -90.193180	$PM_{2.5}$ Ozone NO_2	Memphis
05-051-0003	Hot Springs	300 Werner	34.469316, -93.063723	$PM_{2.5}$[1]	Hot Springs
05-067-0001	Newport	7648 Victory Blvd.	35.637160, -91.188779	$PM_{2.5}$	Not in an MSA
05-101-0002	Deer	Hwy 16	35.832600, -93.208000	Ozone	Not in an MSA
05-113-0002	Mena	Hornbeck Rd	34.583574, -94.226052	$PM_{2.5}$	Not in an MSA
05-113-0003	Eagle Mtn	463 Polk 631	34.454400, -94.143300	Ozone	Not in an MSA
05-119-0007	PARR (NCore)	Pike Ave at River Road	34.756000, -92.281100	$PM_{2.5}$ PM_{10} Ozone NO_x NO_y Speciation Trace SO_2 Trace CO	Little Rock
05-119-1002	NLRAP	Remount Rd	34.835600, -92.260400	Ozone	Little Rock
05-119-1008	DSR	Doyle Springs Rd	34.681200, -92.328500	$PM_{2.5}$	Little Rock
05-139-0006	El Dorado	Union Memorial Hospital	33.220428, -92.672068	$PM_{2.5}$	Not in an MSA
05-143-0005	Springdale	600 S. Old Missouri Rd	36.179698, -94.116627	$PM_{2.5}$ PM_{10} Ozone	Fayetteville
05-143-0006	Fayetteville	429 Ernest Lancaster Dr.	36.011670, -94.167492	Ozone	Fayetteville
40-135-9021	Roland, OK	207 Cherokee Blvd	35.408140, -94.524413	$PM_{2.5}$	Fort Smith

[1] As a result of a recent review and ground-truthing of monitor latitude/longitude, Table 1 coordinates were revised to increase accuracy.

DEQ maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58[2], 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 EPA's national AQS database. This data is made available to the public within ninety days following the end of each calendar quarter. Table 2 details the methods, operating schedule, and objectives of each SLAMS monitor.

Table 2. DEQ Operated State and Local Air Monitoring System (SLAMS) Methods and Operation

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
05-001-0011 (Stuttgart)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
05-003-0005 (Crossett)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
05-035-0005 (Marion)	$PM_{2.5}$	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
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
	NO_2	35	Chemiluminescence	Continuous	Population Exposure	Neighborhood	Yes
05-051-0003 (Hot Springs)	$PM_{2.5}$[1]	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes

[2] https://www.ecfr.gov/current/title-40/chapter-I/subchapter-C/part-58?toc=1

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
05-067-0001 (Newport)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
05-101-0002 (Deer)	Ozone	19	UV Photometric	Continuous	Background	Neighborhood	Yes
05-113-0002 (Mena)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Regional Background	Neighborhood	Yes
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
05-113-0003 (Eagle Mtn)	Ozone	19	UV Photometric	Continuous	Regional Transport	Neighborhood	Yes
05-119-0007 (PARR)	$PM_{2.5}$[1]	145	R & P 2025 FRM	Daily 1 in 1	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[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
	NO_y	574	Chemiluminescence	Continuous	Population Exposure	Neighborhood	No

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
	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 (NLRAP)	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
05-119-1008 (DSR)	$PM_{2.5}$	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
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
05-139-0006 (El Dorado)	$PM_{2.5}$	143	R&P 2000 FRM	Daily 1 in 3	Population Exposure	Neighborhood	Yes
	$PM_{2.5}$[4]	238	Teledyne T640	Continuous	Population Exposure	Neighborhood	Yes
05-143-0005 (Springdale)	$PM_{2.5}$	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
	$PM_{10-2.5}$[4]	240	Teledyne T640X	Continuous	Population Exposure	Neighborhood	Yes
	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes
05-143-0006 (Fayetteville)	Ozone	19	UV Photometric	Continuous	Population Exposure	Neighborhood	Yes

AQS ID # (Site Name)	Pollutants Measured	Method Code	Sampling Method	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable
40-135-9021 (Roland, OK)	$PM_{2.5}$	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
[4]Recently deployed with vendor data transmission configuration expected by December 31, 2025

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 3 lists population statistics for MSAs located in Arkansas. Table 4 lists the most recent ozone DVs 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.

In 2023, the Eagle Mountain ozone monitor (05-113-0003) experienced extended malfunctions and significant data loss rendering the 2023 data as incomplete and, therefore a most recent three-year ozone DV as invalid. This ozone monitor site is used to enhance EPA's AIRNOW ozone mapping program and as an upwind to downwind long-distance "Regional Transport" monitor that is situated in the extreme western Arkansas Ouachita Mountains at a 683-meter elevation in the 14,460-acre Caney Creek Wilderness Area that is devoid of local emission sources.

Table 3. U.S. Census Population Statistics for Metropolitan Statistical Areas (MSA) in Arkansas

MSA	**2020 Census**[3]	**2023 Estimates**[1]
Fayetteville-Springdale-Rogers, AR-MO	546,725	590,337
Fort Smith, AR-OK	244,308	231,280
Hot Springs, AR	100,173	99,784
Jonesboro, AR	134,207	136,390
Little Rock-North Little Rock-Conway, AR	748,038	764,045
Memphis, TN-MS-AR	1,337,770	1,335,674
Pine Bluff, AR	Changed from Metropolitan to Micropolitan[4]	
Texarkana, TX-AR	147,524	145,907

Table 4. Arkansas Ozone State and Local Air Monitoring System (SLAMS) Monitors Schedule and 2021–2023 Ozone Design Values (DV)

AQS ID # (Site Name)	**Sampling Schedule**	**2021-2023 8-Hour Ozone (ppm)**[5]				
		2021	**2022**	**2023**	**DV**	**DV % of NAAQS**
05-035-0005 (Marion)	Continuous	0.072	0.071	0.074	0.072	**103.3%**
05-101-0002 (Deer)	Continuous	0.058	0.064	0.065	0.062	**89.0%**
05-113-0003 (Eagle Mtn)	Continuous	0.065	0.061	0.054[6]	- - - - -	- - - - - -
05-119-0007 (PARR)	Continuous	0.064	0.064	0.063	0.063	**90.0%**
05-119-1002 (NLRAP)	Continuous	0.067	0.062	0.070	0.066	**94.8%**
05-143-0005 (Springdale)	Continuous	0.064	0.067	0.072	0.067	**95.7%**
05-143-0006 (Fayetteville)	Continuous	0.062	0.067	0.068	0.065	**92.9%**

[3] https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-metro-and-micro-statistical-areas.html#v2024

[4] See Figure 2

[5] https://www.epa.gov/outdoor-air-quality-data/about-air-data-reports

[6] EPA's Air Data Reports indicates an invalid ozone DV at this monitor due to incomplete 2023 data.

Table 5. Arkansas Metropolitan Statistical Area (MSA) Populations and Minimum Ozone Monitors Required in State and Local Air Monitoring System (SLAMS) Network

MSA	2023 Population Estimates	Monitors Required
Fayetteville-Springdale-Rogers, AR-MO	590,337	2
Fort Smith, AR-OK	231,280	1
Hot Springs, AR	99,784	0
Jonesboro, AR	136,390	0
Little Rock-North Little Rock-Conway, AR	764,045	2
Memphis, TN-MS-AR	1,335,674	2
Pine Bluff, AR	Changed from Metropolitan to Micropolitan[7]	
Texarkana, TX-AR	145,907	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 Nation 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 the Caddo Valley (05-019-9991) ozone monitor 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 2021–2023 ozone DV for this site is 0.062 ppm with the NAAQS being 0.070 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 DV. Table 6 lists the most recent area DV and sampling schedule for DEQ operated monitors. 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.

[7] See Figure 2

Table 6. Arkansas $PM_{2.5}$ State and Local Air Monitoring System (SLAMS) Monitor Schedule and 2021–2023 $PM_{2.5}$ Design Value (DV)

AQS ID # (Site Name)	Sampling Schedule	2021–2023 24-Hour $PM_{2.5}$ (µg/m^3)					2021–2023 Annual $PM_{2.5}$ (µg/m^3)					Collocated with TEOM[8]
		2021	2022	2023	DV	DV of % NAAQS	2021	2022	2023	DV	DV of % NAAQS	
05-001-0011 (Stuttgart)	1:3	20.6	16.8	20.4	19	55.0%	7.56	7.77	8.64	8.0	**88.8%**	No
05-003-0005 (Crossett)	1:3	14.7	17	19.9	17	49.1%	7.92	7.82	8.58	8.1	**90.1%**	No
05-035-0005 (Marion)	1:3	18.4	18.3	19.1	19	53.1%	8.12	7.75	8.78	8.2	**91.3%**	Yes
05-051-0003 (Hot Springs)	1:3	22.7	22.5	17.8	21	60.0%	8.77	8.18	8.98	8.6	**96.0%**	No
05-067-0001 (Newport)	1:3	26.3	23.8	22.5	24	69.1%	7.98	7.96	8.96	8.3	**92.2%**	No
05-113-0002 (Mena)	1:3	21.9	20.7	18.2	20	57.9%	8.42	7.89	8.73	8.3	**92.7%**	No
05-119-0007 (PARR)	1:1	20.9	19.7	22.5	21	60.1%	9.24	8.81	9.98	9.3	**103.8%**[9]	No
05-119-1008 (DSR)	1:3	24.8	29.5	22.1	25	72.8%	9.66	9.55	10.8	10.0	**111.1%**	Yes

[8] A Tapered Element Oscillating Microbalance (TEOM) sampler is an instrument for continuous measurement of particulate matter in near real time.

[9] $PM_{2.5}$ Exceptional Events Demonstrations (EEDs) for these monitor sites have been submitted to EPA; concurrence has not been made by EPA at the time of the writing of this document. EPA concurrence on these EEDs would revise the 2021-2023 DVs accordingly: PARR (05-119-0007) to 9.0 µg/m^3 (100% of NAAQS); El Dorado (05-139-0006) to 9.0 µg/m^3 (100% of NAAQS).

05-143-0005 (Springdale)	1:3	21.6	19.8	18.7	20	57.2%	8.14	7.3	7.65	7.7	**85.5%**[10]	Yes
05-139-0006 (El Dorado)	1:3	20	26.8	20.2	22	63.8%	9.09	9.12	9.83	9.3	**103.9%**[9]	No
40-135-9021 (Roland, OK)	1:3	19.8	22.4	19.5	21	58.8%	8.33	7.54	8.42	8.1	**90.0%**	No

[10] DEQ is also currently developing an additional set of $PM_{2.5}$ EEDs for Springdale. EPA concurrence on these EEDs would revise the 2021-2023 DV accordingly: Springdale (05-143-0005) to 7.6 µg/m^3 (84.4% of NAAQS).

Table 7. Arkansas Metropolitan Statistical Area (MSA) Populations and Minimum $PM_{2.5}$ Monitors Required in State and Local Air Monitoring System (SLAMS) Network

MSA	2023 Estimates	Monitors Required
Fayetteville-Springdale-Rogers, AR-MO	590,337	1
Fort Smith, AR-OK	231,280	0
Hot Springs, AR	99,784	0
Jonesboro, AR	136,390	0[11]
Little Rock-North Little Rock-Conway, AR	764,045	1
Memphis, TN-MS-AR	1,335,674	2
Pine Bluff, AR	Changed from Metropolitan to Micropolitan[12]	
Texarkana, TX-AR	145,907	0

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 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.

DEQ also operates five additional $PM_{2.5}$ monitors. For Hot Springs (05-051-0003), the site includes two FRM (POC 1 & POC4) monitors operating on a combined 1:3 (each on an alternating 1:6) and one QC monitor (POC 2) operating on a 1:12. For PARR (05-119-0007), the site includes one FRM (POC 1) monitor operating on a 1:1 and one QC monitor (POC 2) operating 1:12. Also at PARR (05-119-0007) is a collocated T640x FEM continuous monitor.

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 public-facing air quality particulate mapping.

Table 8. Continuous $PM_{2.5}$ Air Quality Index (AQI) Monitoring Site Information

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

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 9 lists the most recent

[11] Pending an EPA concurrence on a DEQ Exceptional Events Demonstration, as described in footnote 10, this area may be approaching the 85% threshold referenced in Table D-4 of 40 CFR Part 58 Appendix D.
[12] See Figure 2

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 10 lists populations of 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 9. Arkansas PM_{10} State and Local Air Monitoring System (SLAMS) Monitors Schedule and 2021–2023 PM_{10} Annual Maximum and Three-Year Average

AQS ID #	Sampling Schedule	2021–2023 24-Hour PM_{10} ($\mu g/m^3$)				
		2021 Annual Maximum	2022 Annual Maximum	2023 Annual Maximum	3-Yr Avg.	3-Yr Avg. % of NAAQS
05-119-0007 (PARR)	1:3	37	35	39	37	25.0
05-143-0005 (Springdale)	1:6	36	47	37	40	27.0

Table 10. Arkansas Metropolitan Statistical Area (MSA) Populations and Minimum PM_{10} Monitors Required in State and Local Air Monitoring System (SLAMS) Network

MSA	2023 Estimates	Monitors Required[13]
Fayetteville-Springdale-Rogers, AR-MO	590,337	1–2
Fort Smith, AR-OK	231,280	0
Hot Springs, AR	99,784	0
Jonesboro, AR	136,390	0
Little Rock-North Little Rock-Conway, AR	764,045	1–2
Memphis, TN-MS-AR	1,335,674	2–4
Pine Bluff, AR	71,039	0
Texarkana, TX-AR	145,907	0

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.

[13] 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."

4. $PM_{2.5}$ Speciation

$PM_{2.5}$ speciation sampling occurs at the PARR (05-119-0007) 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), which is 2020. Table 11 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 11. Arkansas Core-based Statistical Areas (CBSAs) Populations and Minimum SO_2 Monitors Required in State and Local Air Monitoring System (SLAMS) Network

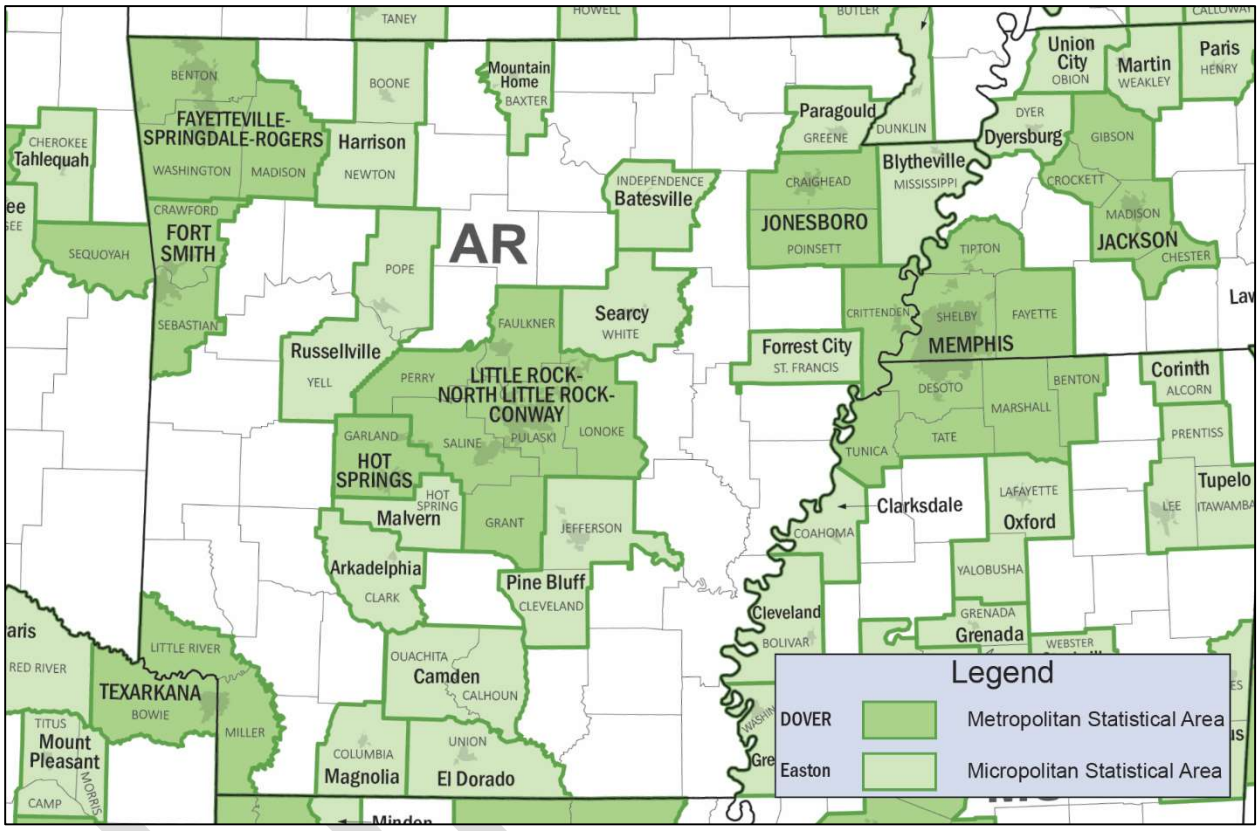
CBSA	2023 Estimate	2020 SO_2 Emissions (tpy)	PWEI	Monitors Required[14]
Metropolitan Statistical Areas				
Fayetteville-Springdale-Rogers, AR-MO	590,337	1006	594	0
Fort Smith, AR-OK	231,280	1097	254	0
Hot Springs, AR	99,784	77	8	0
Jonesboro, AR	136,390	195	27	0
Little Rock-North Little Rock-Conway, AR	764,045	579	442	0
Memphis, TN-MS-AR	1,335,674	968	1293	0
Texarkana, TX-AR	145,907	1173	171	0
Micropolitan Statistical Areas				
Arkadelphia, AR	21,274	100	2	0
Batesville, AR	38,320	10559	405	0
Blytheville, AR	38,663	3150	120	0
Camden, AR	26,434	183	5	0
El Dorado, AR	37,397	639	24	0
Forrest City, AR	22,101	21	0	0
Harrison, AR	45,601	223	10	0
Helena-West Helena, AR	No Longer Micropolitan Area[15]			
Magnolia, AR	22,150	1766	39	0
Malvern, AR	33,258	143	5	0
Mountain Home, AR	42,875	61	3	0
Paragould, AR	49,928	44	2	0
Pine Bluff, AR	71,039	11,355	807	0
Russellville, AR	84,637	275	23	0
Searcy, AR	78,573	106	8	0

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

[15] See Figure 2

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.

Figure 2. Metropolitan and Micropolitan Statistical Areas of Arkansas (as of July 2023[16])



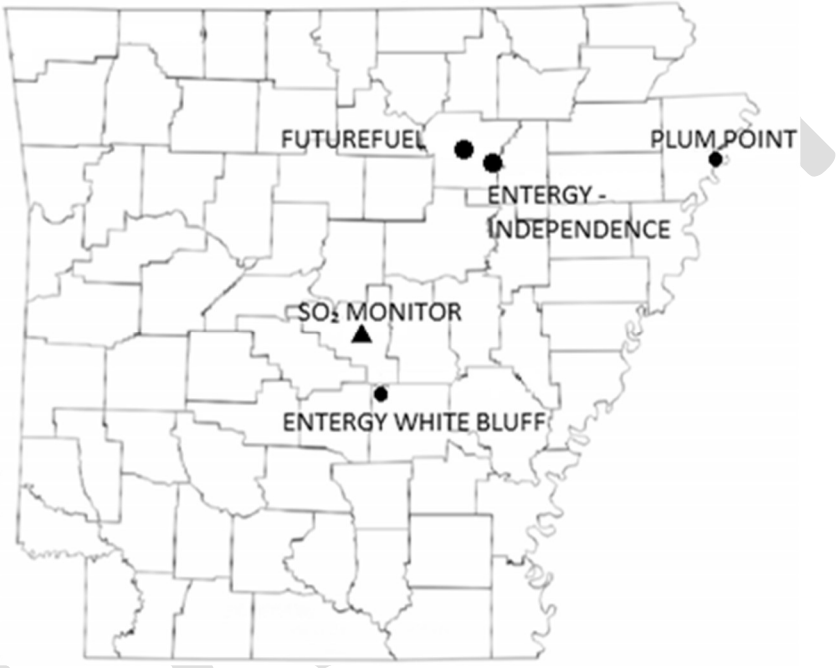
In addition to the population-based monitoring location, DEQ also used modeling data to characterize air quality in counties with facilities that emit greater than 2000 tons per year (tpy) SO_2, in accordance with the SO_2 Data Requirements Rule at 40 CFR Part 51 Subpart BB. Table 12 lists facilities 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).

[16] https://www.census.gov/geographies/reference-maps/2023/geo/cbsa.html

Table 12. Facilities Emitting Greater Than or Equal to 2000 tpy SO_2

FIPS Code[17]	County	Facility Name	2022 SO_2 Emissions (tpy)[18]	Latitude	Longitude
0506900110	Jefferson	Entergy Arkansas, Inc. – White Bluff	9517.36	34.4231	-92.1398
0506300042	Independence	Entergy Arkansas, Inc. – Independence	12847.96	35.6775	-91.4118
0509300461	Mississippi	Plum Point	2295.01	35.6581	-89.9422
0506300036	Independence	FutureFuel	2036.50	35.7181	-91.5242

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



For each facility listed in Table 12 and depicted in Figure 3, modeling was performed, as described below, to determine attainment with the 1-hour SO_2 NAAQS.

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

[17] Facility-specific Federal Information Processing Standards (FIPS) Code
[18] Emissions data source: 2022 Arkansas Department of Energy and Environment, State and Local Emissions Inventory System (SLEIS)

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 SO_2 NAAQS.

On September 11, 2015, DEQ submitted to the EPA an actual emissions SO_2 air dispersion modeling analysis for the Entergy Arkansas, 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 Arkansas, White Bluff Station 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 with more than a million people that includes Arkansas. 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 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 one million 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 with more than a million people that includes Arkansas. 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/Lead Waivers

40 CFR Part 58 Appendix D § 4.5 requires source-oriented monitoring near lead (Pb) sources that are expected to or have been shown to contribute to a maximum lead concentration in ambient air in excess of 50% 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 Pb. 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, Independence and Entergy Arkansas, LLC, 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 13. Current Source-Oriented Lead Waiver Status by Facility

EIS #	Facility Name	2008 Modeled Emissions (tpy)	Annual Facility-level Lead Emissions (tpy)							Most Recent Waiver Status
			2017 NEI	2018 State EI	2019 State EI	2020 NEI	2021 State EI	2022 State EI	2023 NEI[19]	
1083411	Entergy Independence	1.42	0.97	1.22	0.74	0.39	0.53	0.59	0.61	Approved April 29, 2021
893911	Entergy White Bluff	1.43	1.00	1.06	0.93	0.53	0.89	0.68	0.44	Approved April 29, 2021

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).

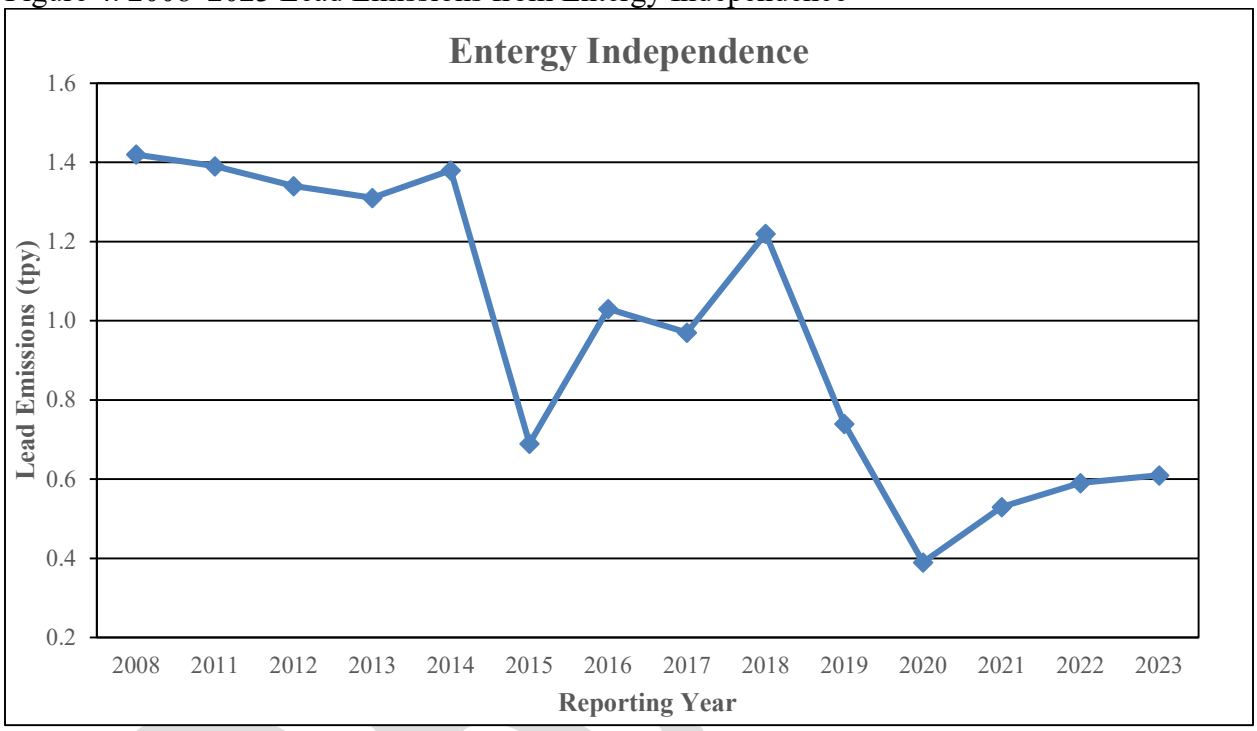
5. Entergy Independence

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 ($\mu g/m^3$), which is 20% of the Pb NAAQS. Pb emissions from Independence have decreased since the 2008 emissions used in the modeling (Figure 4). Therefore, DEQ requested

[19] Data submitted by facilities to Arkansas' SLEIS Emissions Inventory Program and the finalized data not yet released publicly by EPA.

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. Separate from this document, DEQ is submitting to EPA a renewal of the lead waiver for Entergy Independence prior to the April 28, 2026, expiration of the current waiver.

Figure 4. 2008–2023 Lead Emissions from Entergy Independence[20]

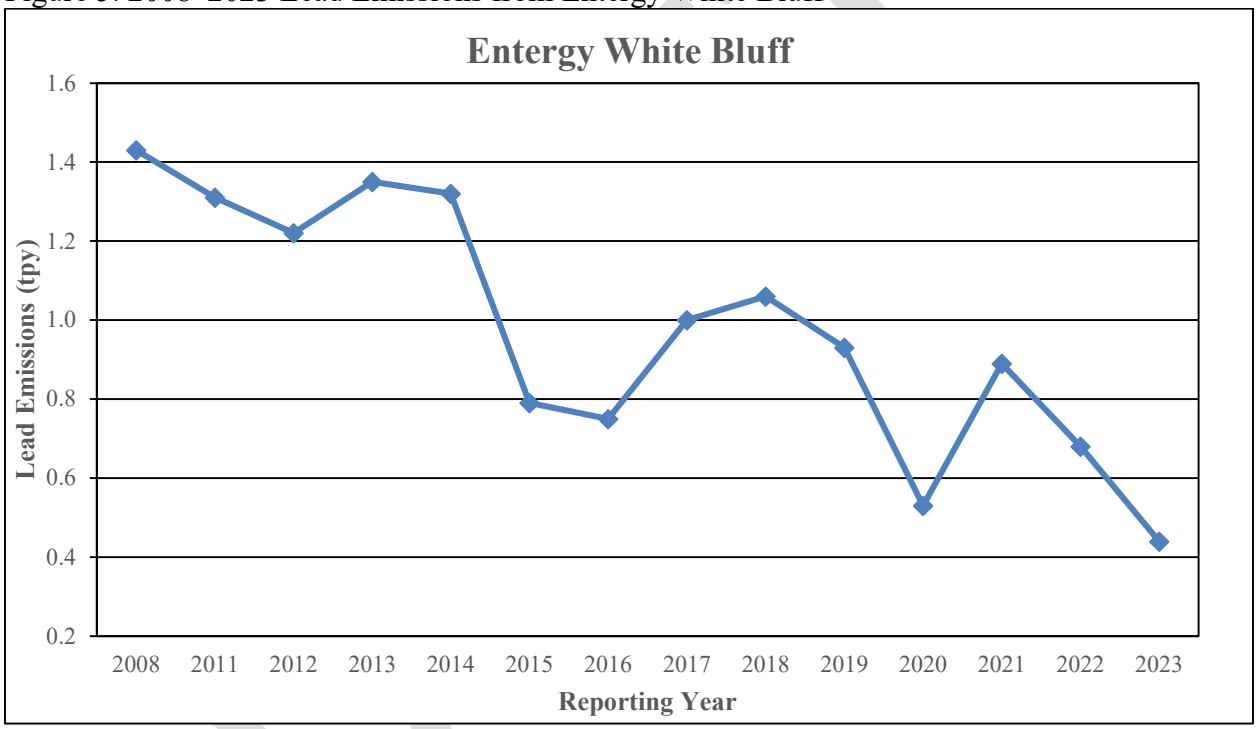


[20] Data Sources: NEI (2008, 2011, 2014, 2017, 2020, 2023*) and State EI (2012, 2013, 2015, 2016, 2018, 2019, 2021, 2022, 2024); *Data submitted by facilities to Arkansas' SLEIS Emissions Inventory Program and the finalized data not yet released publicly by EPA.

6. 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 (Figure 5). 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. Separate from this document, DEQ is submitting to EPA a renewal of the lead waiver for Entergy Independence prior to the April 28, 2026 expiration of the current waiver.

Figure 5. 2008–2023 Lead Emissions from Entergy White Bluff[21]



[21] Data Source: NEI (2008, 2011, 2014, 2017, 2020, 2023*) and State EI (2009, 2010, 2012, 2013, 2015, 2016, 2018, 2019, 2021, 2022, 2024); *Data submitted by facilities to Arkansas' SLEIS Emissions Inventory Program and the finalized data not yet released publicly by EPA.

III. Contact Information

Inquiries should be sent to the Arkansas Department of Energy and Environment, Office of Air Quality, Policy and Planning Branch at ee.comment@arkansas.gov.

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

[Public Review Draft]

Mr. David F. Garcia
Director, Air and Radiation Division
United States 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 (FIPS: 0506900110)

Dear Mr. Garcia:

Per 40 CFR 51.1205(b)(1), in August 2015 the Arkansas Department of Energy and Environment, Division of Environmental Quality (DEQ) presented to the U.S. Environmental Protection Agency (EPA) a 2012-2014 modeling analysis to compare the 2010 one-hour sulfur dioxide (SO_2) Primary National Ambient Air Quality Standard (NAAQS) to the annual SO_2 actual emissions for the Entergy Arkansas, LLC, White Bluff Steam Electric Station ("White Bluff"). More recent actual emissions data from White Bluff for the period spanning 2015-2024 indicates that SO_2 emissions for the facility are lower than emissions inputs used in the August 2015 modeling analyses. Therefore, DEQ recommends to EPA that no additional modeling analysis is necessary 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 SO_2 Primary 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, 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 EPA providing updated emissions information and recommending to EPA whether further modeling is warranted to assess any expected changes in recent air quality.

On September 11, 2015, DEQ submitted to EPA an SO_2 air dispersion modeling analysis (August 2015 modeling analysis) using actual emissions for White Bluff located in Jefferson County, AR. The August 2015 modeling analysis reported that the maximum model-predicted impact of 162.4

$\mu g/m^3$ was below the 2010 1-hour SO_2 NAAQS of 196.5 $\mu g/m^3$. Therefore, DEQ recommended to 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 DEQ 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 1-hour SO_2 NAAQS modeling analysis, all five sources of SO_2 at White Bluff 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 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.*

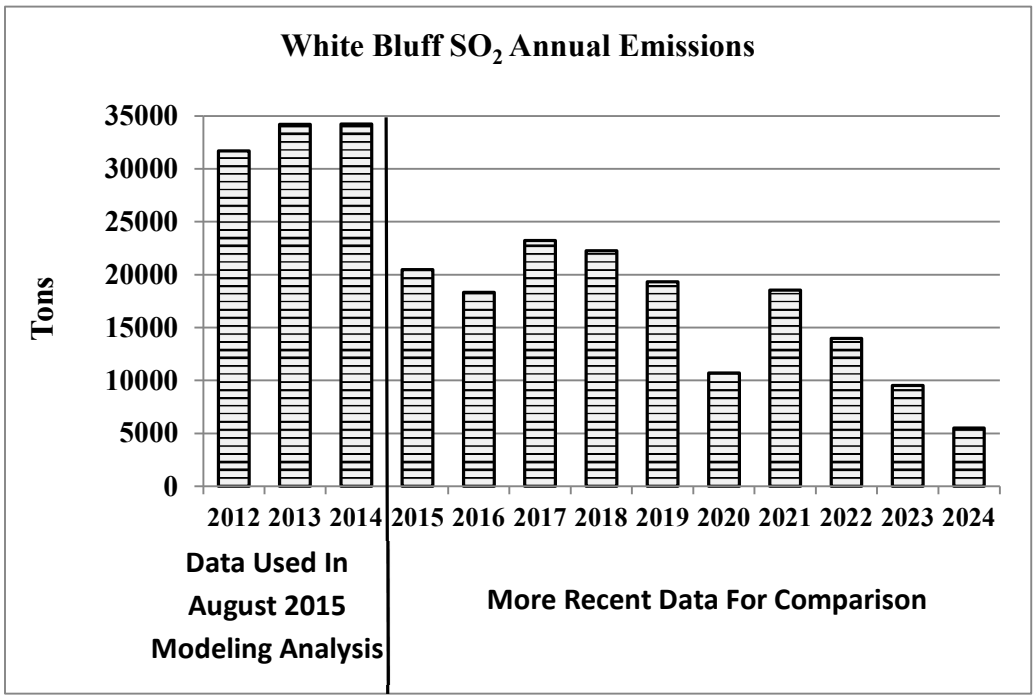
A current assessment of the annual SO_2 actual emissions for the three years (2012-2014) included in the August 2015 modeling analysis and the ten years after the August 2015 modeling analysis (2015–2024) indicate that SO_2 emissions at White Bluff for the years following the 2015 modeling analysis are lower than the levels included in the 2015 modeling analysis (Table 2 and Figure 1).

Table 2: White Bluff SO_2 Actual Emissions for the previously modeled years (2012-2014) and the more recent years (2015-2024) as an update.

Annual SO_2 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
	2022	7,578.8	6,379.9	0.020	0.0023	0.0040	13,958.7
	2023	3,480.8	6,036.5	0.120	0.0018	0.0083	9,517.4
Most Recent Annual Data Available	**2024**	**1,579.9**	**3,934.8**	**0.013**	**0.0033**	**0.0163**	**5,514.7**

[1]Emissions from EGUs Unit 1 and Unit 2 boilers as measured by facility CEMS and reported to the EPA Clean Air Markets Program Data (CAMPD).
[2]Emissions from aux. boiler calculated based on actual annual fuel usage and measured fuel oil sulfur content.
[3]Emissions from emergency generator and emergency fire pump calculated based on actual annual hours of operation and US EPA AP-42 factors.

Figure 1: White Bluff SO_2 Actual Emissions for the previously modeled years (2012-2014) and the more recent years (2015-2024) 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 SO_2 emissions update assessment for White Bluff, please contact David Clark (Policy and Planning, Technical Section Supervisor; 501 682-0070 or David.Clark@Arkansas.gov) of my staff or myself at 501 682-0927 or Demetria.Kimbrough@Arkansas.gov.

Sincerely,

Demetria Kimbrough, MPH
Associate Director
Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy & Environment

Appendix B. 2023 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
Protect. Promote. Protect.
Shelby County Health Department

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

May 12, 2025

Ms. Michelle Walker Owenby, Air Director
Tennessee Department of Environment and Conservation Air Pollution Control Division
Davy Crockett Tower
500 James Robertson Parkway, 7th Floor
Nashville, Tennessee 37243

Mr. Jaricus Whitlock, P.E., Chief, Air Division
Mississippi Department of Environmental Quality
Office of Pollution Control
P.O. Box 2261
Jackson, Mississippi 39225

Demetria Kimbrough, Associate Director, Office of Air Quality
Division of Environmental Quality
Arkansas Department of Energy and Environment
5301 Northshore Drive
North Little Rock, AR 72118

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. Although no changes have occurred, there are a few planned changes later in the year (see chart below) within the SCHD and DEQ portions of the network. With this MOA, all agencies are meeting EPA monitoring requirements.

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

Sincerely,

Kasia Smith Alexander

Kasia Smith Alexander
Bureau Director, Environmental Health and Sustainability Bureau
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*)	**3***		1	**2**
Crittenden County, AR **DEQ**	1		1**		
DeSoto County, MS **MDEQ**		1			

*The SCHD plans to replace one FRM PM2.5 samplers with a T640x at Alabama Ave. later this year. Plans also include adding a T640x at Near Rd site.
**The DEQ has plans to replace a broken TEOM later this year at the Marion, AR site.

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**	4 (1 TEOM at Alabama Ave., 3-T640x at NCore, Near Rd., & Alabama Ave***.	1	3	3 (includes 1 NO/ NO_2/NO_x at Near Road Station, 1 NO/NO_y (trace) at NCore/, 1 True NO_2 (trace) 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			

***The SCHD plans to replace the continuous PM10 TEOM with a T640x at Alabama Ave. and add PM10 at the Near Rd. site with a new T640x later this year. After the replacement, there will be three (3) PM10 samplers (all T640x), three (3) FRM PM2.5 samplers, and three FEM PM2.5 (same T640x) samplers operating in Shelby County.

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.

Appendix C. Newspaper Public Notice