



June 30, 2023

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: 2023 Annual Network Review

Please find enclosed the 2023 Annual Network Plan (ANP) from the Oklahoma Department of Environmental Quality (DEQ). This document was posted on our website for the required 30-day public comment period and is now ready for submittal to your office. As in recent years, this submittal is now being provided in an electronic-only version and no hard copy will be mailed. No comments or inquiries were received from the public.

The SO₂ Annual Report requested by EPA and required under 40 CFR §51.1205 will be a separate submission from the Oklahoma DEQ 2023 ANP. Should your staff find that further changes to this ANP are necessary, please address those in the official response to our submittal.

We look forward to EPA's response and working with your staff to ensure that our network continues to be the best possible to better protect the environment and the health of Oklahoma's citizens. Should you have any questions regarding this submittal, feel free to contact Ryan Biggerstaff at 405.702.4140 or Bryan Sims at 405.702.4139.

Sincerely,

Cheryl E. Bradley
Environmental Programs Manager
Data and Planning Section

**Oklahoma Department of Environmental Quality
Air Quality Division
2023**

Air Monitoring Network Plan



Oklahoma Department of Environmental Quality
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P.O. Box 1677
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Introduction

This report documents the annual review of the air-monitoring network operated by the Oklahoma Department of Environmental Quality's ("DEQ") Air Quality Division ("AQD"). When finalized as the Annual Monitoring Network Plan ("ANP"), it will be submitted by July 1, 2023 to the United State Environmental Protection Agency ("EPA") as required by 40 CFR 58.10 and provide the framework for establishing and maintaining Oklahoma's air quality surveillance system. AQD uses data collected by this network for comparison to the National Ambient Air Quality Standards ("NAAQS"). AQD maintains its ambient air monitoring network in accordance with the quality assurance requirements of 40 CFR Part 58, Appendix A; performs within specifications in accordance with 40 CFR Part 58, Appendix B; follows procedures outlined within 40 CFR Part 58, Appendix C; designs its network in accordance with 40 CFR Part 58, Appendix D; and locates its sites to meet all requirements of 40 CFR Part 58, Appendix E.

Below is a summary of changes that have been approved by Region 6 EPA, and implemented since the last ANP:

- 40-143-0235: State and Local Air Monitoring Station ("SLAMS") SO₂ resumed collection on 12/19/2022 following completion of construction.
- 40-019-0297: Ozone Special Purpose Monitor ("SPM") began collection on 02/23/2023.
- 40-085-0300: Ozone SPM halted collection on 12/06/2022.
- 40-069-0324: Ozone SPM began collection on 02/28/2023.
- 40-067-0671: Ozone SPM began collection on 03/27/2023.
- 40-075-0711: Ozone SPM halted collection on 12/05/2022.

Table 1 is a list of all currently existing ambient air monitoring sites that AQD operates and maintains as of 05/02/2023. Table 3 is a list of proposed changes. "Air Quality System ("AQS") Site ID#" in column one is a unique identification number assigned to each monitoring site in the state network. AQS is a national air-monitoring database maintained by the EPA.

AQD made the ANP available for public inspection and comment from 05/19/2023 through 06/19/2023 by posting the ANP on its website (40 CFR 58.10(a)(1)). An image of this posting will be included in Appendix E of this document.

Contact Information

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Table 1. Air Monitoring Site Information:

AQS Site #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling/Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	CSA - CBSA ¹
40-109-0035	N.W. 5th and Shartel, OKC	35.472920	-97.527090	PM 2.5	Sequential FRM/ Micro-gravimetric filter weighing	SLAMS	(1 in 6)	Population Exposure	Neighborhood	Yes	OKC-Shawnee CSA - OKC CBSA
				PM 10	Sequential FRM/ Micro-gravimetric filter weighing	SLAMS	(1 in 6)	Population Exposure	Neighborhood	Yes	
				PM 10	Sequential FRM/ Micro-gravimetric filter weighing	SLAMS	(1 in 12) Collocated	Quality Assurance Collocation	Neighborhood	Yes	
				PM 10 - PM 2.5	Paired Gravimetric	SPM	(1 in 6)	Population Exposure	Neighborhood	No	
40-027-0049	S.E. 19th St., Moore Water Tower, Moore	35.320105	-97.484099	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Urban	Yes	OKC-Shawnee CSA - OKC CBSA
				PM 2.5	Broadband Spectroscopy	SPM ³	Continuous	Population Exposure	Urban	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Urban	No	
40-109-0096	12880 A N.E. 10th, Choctaw	35.477801	-97.303044	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Urban	Yes	OKC-Shawnee CSA - OKC CBSA
40-109-0097	3112 N. Grand Blvd, OKC	35.503070	-97.577981	NO ₂	Chemiluminescence	SLAMS	Continuous	Highest Concentration / Near-Road	Micro	Yes	OKC-Shawnee CSA - OKC CBSA
				PM 2.5	Broadband Spectroscopy	SLAMS	Continuous	Population Exposure	Micro	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Micro	No	
				CO	Gas Filter Correlation	SLAMS	Continuous	Population Exposure	Micro	Yes	
				Black Carbon	Optical Absorption	SLAMS	Continuous	Population Exposure	Micro	No	
40-017-0101	12575 NW 10 th , Water Tower, Yukon	35.479215	-97.751503	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Neighborhood	Yes	OKC-Shawnee CSA - OKC CBSA
40-037-0144	City Water Plant, Mannford	36.105481	-96.361196	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Urban	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA

AQS Site #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling/Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	CSA - CBSA ¹
40-143-0174	502 E. 144th Pl., Tulsa South, Tulsa	35.953708	-96.004975	Ozone	U.V. Absorption	SLAMS	Continuous	Upwind Background	Urban	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA
				PM 2.5	Broadband Spectroscopy	SPM ³	Continuous	Population Exposure	Urban	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Urban	No	
40-143-0175	1710 W. Charles Page Blvd. Tulsa	36.149877	-96.011664	SO ₂ ⁴	U.V. Fluorescence	SLAMS	Continuous	Source Oriented	Neighborhood	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA
				H ₂ S	U.V. Fluorescence	SPM ⁵	Continuous	Source Oriented	Neighborhood	No	
40-143-0178	18707 E. 21st St., Tulsa East, Tulsa	36.133802	-95.764537	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Urban	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA
40-147-0207	OK-10, Oklahoma Union School, Lenapah	36.918242	-95.632127	Ozone	U.V. Absorption	SPM	Continuous	Regional Transport	Regional	No ⁶	Tulsa-Muskogee-Bartlesville CSA - Bartlesville CBSA
				PM 2.5	Broadband spectroscopy	SPM ³	Continuous	Regional Transport	Regional	No ⁶	
				PM 10	Broadband spectroscopy	SPM	Continuous	Regional Transport	Regional	No ⁶	
40-113-0226	1521 S. Lombard, Skiatook	36.355860	-96.012430	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Urban	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA
40-143-0235	2443 S. Jackson Ave., Tulsa	36.126945	-95.998941	SO ₂ ⁴	U.V. Fluorescence	SLAMS	Continuous	Source Oriented	Middle	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA
				H ₂ S	U.V. Fluorescence	SPM	Continuous	Source Oriented	Middle	No	
40-019-0297	Memorial Dr., Haldton City Lake, Haldton	34.244189	-97.462931	Ozone	U.V. Absorption	SPM	Continuous	Regional Transport	Regional	No ⁶	Not in CSA - Ardmore CBSA
				PM 2.5	Broadband Spectroscopy	SLAMS	Continuous	Regional Transport	Regional	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Regional Transport	Regional	No	

AQS Site #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling/Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	CSA - CBSA ¹
40-069-0324	Murray State College, Tishomingo	34.2114818	-96.676936	Ozone	U.V. Absorption	SPM	Continuous	Regional Transport	Regional	No ⁶	Not in MSA/ CBSA
40-121-0415	104 Airport Rd., McAlester Municipal Airport, McAlester	34.885608	-95.784410	Ozone	U.V. Absorption	SLAMS	Continuous	Regional Transport	Regional	Yes	Not in CSA - McAlester CBSA
				PM 2.5	Broadband Spectroscopy	SLAMS	Continuous Primary	Population Exposure	Regional	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Regional	No	
				PM 2.5	Sequential FRM/ Micro-gravimetric Filter Weighing	SLAMS	(1 in 6) Collocated	Quality Assurance/ Method Collocation	Regional	Yes	
40-121-0416	108 N Main St., Savanna	34.829396	-95.843642	Lead	Hi-Volume	SLAMS	(1 in 6)	Source Oriented	Neighborhood	Yes	Not in CSA - McAlester CBSA
				Lead	Hi-Volume	SLAMS	(1 in 12) Collocated	Quality Assurance	Neighborhood	Yes	
40-047-0555	11826 N 30th St, Kremlin	36.512363	-97.845959	SO ₂ ⁴	U.V. Fluorescence	SLAMS	Continuous	Source Oriented	Neighborhood	Yes	Not in CSA - Enid CBSA
40-071-0604	306 E Otoe, Ponca City	36.697186	-97.081350	SO ₂ ⁴	U.V. Fluorescence	SLAMS	Continuous	Population Exposure/ Source Oriented	Neighborhood	Yes	Not in CSA - Ponca City CBSA
				PM 2.5	Broadband Spectroscopy	SLAMS	Continuous	Population Exposure	Neighborhood	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Neighborhood	No	
40-031-0651	2211 NW 25 th , Lawton	34.632980	-98.428790	Ozone	U.V. Absorption	SLAMS	Continuous	Population Exposure	Urban	Yes	Not in CSA - Lawton CBSA
				PM 2.5	Broadband Spectroscopy	SPM ³	Continuous	Population Exposure	Urban	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Urban	No	
40-067-0671	Lake Waurika Corp. of Eng. Office, Waurika	34.226639	-98.035440	Ozone	U.V. Absorption	SPM	Continuous	Regional Transport	Regional	No ⁶	Not in CSA/ CBSA

AQS Site #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling/Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	CSA - CBSA ¹
40-043-0860	Seiling Municipal Airport, Seiling	36.158414	-98.931973	Ozone	U.V. Absorption	SLAMS	Continuous	General Background	Regional	Yes	Not in CSA/ CBSA
				PM 2.5	Broadband Spectroscopy	SLAMS	Continuous	General Background	Regional	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	General Background	Regional	No	
40-109-1037	2501 E. Memorial Rd., Oklahoma Christian University, OKC	35.614131	-97.475083	SO ₂ ⁴	U.V. Fluorescence	SLAMS	Continuous	Population Exposure	Urban	Yes	OKC-Shawnee CSA - OKC CBSA
				Ozone	U.V. Absorption	SLAMS	Continuous	Highest Concentration	Urban	Yes	
				CO	Gas Filter Correlation	SLAMS	Continuous	General Background	Urban	Yes	
				NO ₂	Chemiluminescence	SLAMS	Continuous	Max Precursor Emissions Impact/ Area-wide NO ₂ and RA40 NO ₂ for OKC CBSA	Urban	Yes	
				Chemical Speciation	Low Volume Gravimetric/Micro-gravimetric filter weighing	SLAMS	(1 in 6)	Population Exposure	Urban	No	
				PM 2.5	Sequential FRM/ Micro-gravimetric filter weighing	SLAMS	(1 in 3) Collocated	Population Exposure/ Method Collocation	Urban	Yes	
				PM 2.5	Broadband Spectroscopy	SLAMS	Continuous Primary	Population Exposure	Urban	Yes	
				PM 10	Broadband Spectroscopy	SLAMS	Continuous	Population Exposure	Urban	Yes	
40-087-1074	Kessler, McClain County	34.984686	-97.522753	Ozone	U.V. Absorption	SLAMS	Continuous	Background	Regional	Yes	OKC-Shawnee CSA - OKC CBSA

AQS Site #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling/Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	CSA - CBSA ¹
40-143-1127	3520 1/2 N. Peoria, North Tulsa-Fire Station #24, Tulsa	36.204902	-95.976537	Ozone	U.V. Absorption	NCore/SLAMS	Continuous	Maximum Precursor Emissions Impact	Urban	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa CBSA
				Trace Level NO ₂	Chemiluminescence	NCore/SLAMS	Continuous	Maximum Precursor Emissions Impact/ Area-wide NO ₂ and RA40 NO ₂ for Tulsa CBSA	Urban	Yes	
				Trace level NO _y	Chemiluminescence	NCore/SLAMS	Continuous	Maximum Precursor Emissions Impact	Urban	No	
				Trace level CO	Gas Filter Correlation	NCore/SLAMS	Continuous	Population Exposure	Urban	Yes	
				Trace level SO ₂ ⁴	U.V. Fluorescence	NCore/SLAMS	Continuous	Population Exposure	Urban	Yes	
				PM 2.5	Sequential FRM/ Micro-gravimetric filter weighing	NCore/SLAMS	(1 in 3) Primary	Population Exposure	Urban	Yes	
				PM 2.5	Sequential FRM/ Micro-gravimetric filter weighing	NCore/SLAMS	(1 in 6) Collocated	Quality Assurance Collocation	Urban	Yes	
				PM 2.5	Broadband Spectroscopy	NCore/SPM ³	Continuous	Population Exposure	Urban	Yes	
				PM 10	Broadband Spectroscopy	NCore/SPM ³	Continuous	Population Exposure	Urban	Yes	
				PM 10	Sequential FRM/ Micro-gravimetric filter weighing	NCore/SLAMS	(1 in 3)	Population Exposure	Urban	Yes	
				PM 10 - PM 2.5	Paired Gravimetric – “calculated”	NCore/SPM	(1 in 3)	Population Exposure	Urban	No	
				Chemical Speciation	Low Volume Gravimetric/Micro-gravimetric filter weighing	NCore/SLAMS	(1 in 3)	Population Exposure	Urban	No	

¹ Combined Statistical Area and Core-Based Statistical Area abbreviated to CSA and CBSA, respectively, for all tables.

² Oklahoma City has been abbreviated to OKC for all tables.

³ PM 2.5 SPM monitors are used to support the state’s Health Advisory Program and will remain SPMs.

⁴ AQS shows two SO₂ monitors due to reports being entered for both hourly and 5-minute data.

⁵ H₂S SPMs are used to monitor major sources in the Tulsa area in response to the state-implemented H₂S ambient standard and will remain SPMs.

All AQD sites and monitors conform to 40 CFR, Subchapter C, Part 58 Appendix A, Appendix C (see methods in column 6 of table 2), and Appendices D & E.

⁶ 40-147-0207, 40-019-0297, 40-069-0324, 40-067-0671, are intentionally designed as SPMs to capture less than 3 years of data and therefore will not be compared to NAAQS values for the purpose of attainment/non-attainment.

Note – The PM 2.5/10 (2 parameters/1 monitor) listed as “broadband spectroscopy” at 40-109-1037 and 40-143-1127 are API Model T640x instruments designated NAAQS comparable for PM 2.5 and PM 10. All others are API Model T640 instruments designated NAAQS comparable for PM 2.5 and Non-NAAQS comparable for PM 10.

Table 2. AQD NAAQS Monitor Instrument Types

Pollutant Measured	Manufacturer	Instrument
PM 2.5	Thermo Scientific	2025i Sequential Air Sampler
PM 10		
PM 2.5	Teledyne API	T640
PM 2.5 PM 10	Teledyne API	T640X
PM 2.5 Speciation	URG	3000N
	Met One	SASS
Ozone	Teledyne API	T400
	Thermo Scientific	49iQ
	Ecotech	Serinus 10
CO	Teledyne API	T300
	Teledyne API	T300U
	Thermo Scientific	48iQ
NO _x	Thermo Scientific	42iQ
	Teledyne API	T200U
	Ecotech	Serinus 40
NO _y	Thermo Scientific	42iY
SO ₂	Thermo Scientific	43iQ
	Teledyne API	T100
	Teledyne API	T100U
H ₂ S	Teledyne API	T101
	Thermo Scientific	450iQ
Lead	Tisch	High Volume Air Sampler
Black Carbon	Magee Scientific	Aethalometer AE33

Table 3. AQD Network Proposed Changes**Monitoring Sites to be Relocated:**

AQS Site #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling/ Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	CSA-MSA/ CBSA
40-143-0174	502 E. 144th Pl., Tulsa South, Tulsa	35.953708	-96.004975	Ozone	U.V. Absorption	SLAMS	Continuous	Upwind Background	Urban	Yes	Tulsa-Muskogee-Bartlesville CSA - Tulsa MSA
				PM 2.5	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Urban	Yes	
				PM 10	Broadband Spectroscopy	SPM	Continuous	Population Exposure	Urban	No	
40-121-0416	108 N Main St., Savanna	34.829396	-95.843642	Lead	Hi-Volume	SLAMS	(1 in 6)	Source Oriented	Neighborhood	Yes	Not in CSA - McAlester CBSA
				Lead	Hi-Volume	SLAMS	(1 in 12) Collocated	Quality Assurance	Neighborhood	Yes	

- 40-143-0174: ODEQ is currently discussing the relocation of Site 40-143-0174 with the City of Glenpool. The site is on the verge of not meeting siting criteria as specified by 40 CFR Part 58 Appendix E §5.a. EPA will be provided with specifics of the location including latitude, longitude, and pictures of the proposed site upon completion of a contract with the city.
- 40-121-0416: ODEQ is currently discussing the relocation of Site 40-143-0174 with the City of Savannah. Due to the addition of a collocated sampler at the site, current deck space does not allow for additional sampling required by EPA audits. In order to create extra space, the site will need to be lowered from its current platform and relocated a short distance to the North in order to be an acceptable distance from nearby buildings.

Appendix A: Network Requirements

Parameter	Number of Monitors Required in Part 58 App D	Reason(s) for Requirement Part 58 App D	Number of Other Non-Required SLAMS/SPM Monitors Currently in Operation	Reason(s) for Optional Monitors	Total Monitors Operated
Ozone	2	OKC MSA/Population			2
	2	Tulsa MSA/Population			2
	1	Lawton MSA/Population			1
	1	NCore			1
			5	SPM and/or Transport	5
			6	AQI/Advisories	6
Total	6		11		17
Carbon Monoxide	1	Near-Road			1
	1	NCore			1
			1	Background	1
Total	2		1		3
Nitrogen Dioxide	1	Near-Road			1
	1	NCore ; Area-wide NO ₂ and RA40 NO ₂ for Tulsa MSA			1
	1	Area-wide NO ₂ and RA40 NO ₂ for OKC MSA			1
Total	3				3
NOy	1	NCore			1
Total	1				1
Sulfur Dioxide	1	NCore			1
	1	SO ₂ DRR ²			1
	1	Tulsa CBSA PWEI			1
			2	Major Source	2
			1	OKC MSA/Population	1
Total	5		3		6
Hydrogen Sulfide			2	Population/State Standard	2
Total			2		2
Lead	1	Sources > 0.5 tons/year			1
	1	QA Collocation			1
Total	2				2
PM2.5 ³	2	OKC MSA/Population			2
	1	Tulsa MSA - Population/NCore			1
	2	Method Collocation			2
	1	QA Collocation			1
	1	Background			1
	1	Transport			1
	1	Near-Road			1
			6	AQI/Advisories	6
			1	SPM/Transport	1
Total	9		7		16

Parameter	Number of Monitors Required in Part 58 App D	Reason(s) for Requirement Part 58 App D	Number of Other Non-Required SLAMS/SPM Monitors Currently in Operation	Reason(s) for Optional Monitors	Total Monitors Operated
PM10 ^{1,4}	2	OKC MSA/Population			2
	1	Tulsa MSA/NCore			1
	1	QA Collocation			1
			1	AQI/Advisories (NAAQS Comparable)	1
			1	Background (Non-NAAQS Comparable)	1
			6	AQI/Advisories (Non-NAAQS Comparable)	6
			2	SPM/Transport (Non-NAAQS Comparable)	2
Total	4		10		14
PM10 - 2.5 (Coarse)	1	NCore			1
			1	Supplemental	1
Total	1		1		2

¹There are 9 sites utilizing the API T640 technology, currently collecting non-NAAQS PM10 data.

²Though listed as being required under 40 CFR Part 58 Appendix D, the DRR monitors are required under 40 CFR Part 51.

³ Per 40 CFR Part 58 Table D-5 of Appendix D, while the Enid MSA has a population of >50,000, Oklahoma DEQ has met the minimum monitoring requirements due to the statewide PM 2.5 being <85% of PM 2.5 NAAQS.

⁴Per 40 CFR Part 58 Table D-4 of Appendix D, while the Lawton MSA has a population of >100,000, Oklahoma DEQ has met the minimum monitoring requirements due to statewide PM 10 being <80% of PM 10 NAAQS.

Note – This chart reflects existing network conditions.

Appendix B: PWEI¹ Numbers for Determination of Minimum SO₂ Sites

MSA/CBSA	Counties	2021 SO ₂ Emissions ² (tons)	Total Emissions ² (tons)	2021 Population ³ (people)	PWEI ² (tons/million people)
Oklahoma City	Oklahoma County	176	421	1,441,647	606
	Cleveland County	6			
	Canadian County	182			
	Grady County	40			
	Logan County	1			
	McClain County	15			
	Lincoln County	1			
Tulsa	Tulsa County	318	5,420	1,023,988	5,550
	Rogers County	4,653			
	Wagoner County	10			
	Creek County	251			
	Osage County	4			
	Okmulgee County	182			
	Pawnee County	2			
Lawton	Comanche County	4	4	127,543	0
	Cotton County	0			
Stillwater	Payne County	14	14	81,989	1
Shawnee	Pottawatomie County	2	2	73,019	0
Muskogee	Muskogee County	6,848	6,848	66,146	452
Enid(cbsa)	Garfield County	16,976	16,976	61,926	1,051
Bartlesville	Washington County	2	2	52,772	0
Tahlequah	Cherokee County	4	4	47,627	0
Ardmore	Carter County	327	328	58,507	19
	Love County	1			
Ponca City	Kay County	2,533	2,533	43,732	110
McAlester	Pittsburg County	29	29	43,633	1
Duncan	Stephens County	61	61	43,129	2
Durant	Bryan County	230	230	47,105	10
Ada	Pontotoc County	125	125	38,163	4
Miami	Ottawa County	1	1	30,340	0
Weatherford	Custer County	6	6	28,163	0
Altus	Jackson County	0	0	24,777	0
Elk City	Beckham County	13	13	22,046	0
Guymon	Texas County	18	18	20,865	0
Woodward	Woodward County	13	13	23,967	0

¹40 CFR Appendix D to Part 58 §4.4.2 *Requirement for Monitoring by the Population Weighted Emissions Index*. (a) The population weighted emissions index (PWEI) shall be calculated by States for each core based statistical area (CBSA) they contain or share with another State or States for use in the implementation of or adjustment to the SO₂ monitoring network. The PWEI shall be calculated by multiplying the population of each CBSA, using the most current census data or estimates, and the total amount of SO₂ in tons per year emitted within the CBSA area, using an aggregate of the most recent county level emissions data available in the National Emissions Inventory for each county in each CBSA. The resulting product shall be divided by one million, providing a PWEI value, the units of which are million persons-tons per year. For any CBSA with a calculated PWEI value equal to or greater than 1,000,000, a minimum of three SO₂ monitors are required within that CBSA. For any CBSA with a calculated PWEI value equal to or greater than 100,000, but less than 1,000,000, a minimum of two SO₂ monitors are required within that CBSA. For any CBSA with a calculated PWEI value equal to or greater than 5,000, but less than 100,000, a minimum of one SO₂ monitor is required within that CBSA.

²Values truncated to whole tons or whole tons/million people.

³All population estimates based on the 2021 Census estimations found at <https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-metro-and-micro-statistical-areas.html>.

Appendix C: Further Comments

Monitoring of NAAQS Parameters:

Oklahoma DEQ is monitoring for all NAAQS parameters in the state of Oklahoma as well as additional parameters such as H₂S.

Areas of Environmental Concerns:

The Oklahoma ambient air-monitoring network includes coverage of Oklahoma's most populated cities, Oklahoma City and Tulsa, as well as coverage throughout the state in less populated cities and rural communities. As seen in Figure 1, the Oklahoma DEQ maintains extensive coverage in both Tulsa and Oklahoma City by having sites within the cities, as well as sites placed on the outskirts of the cities in each of the cardinal directions. The ambient air-monitoring network is also designed to help monitor transport from surrounding areas. Transport monitoring sites are located around the state borders to monitor for both Ozone and PM from surrounding metropolitan areas or local burning for field management into or out of the state. These sites are typically not considered NAAQS comparable as they often transition between different locations to allow for a wider view of Oklahoma's air quality over time, so the data is primarily used for our real-time Health Advisory network, which provides Oklahoma citizens with consistent updates of their Air Quality. This network coverage includes a variety of sources such as SO₂, Ozone, and Particulate Matter ("PM").



Figure 1: Oklahoma Department of Environmental Quality's Air Monitoring Network.

The EPA Environmental Justice ("EJ") Screening Tool provides insights into how the air-monitoring network covers a variety of communities in the state. Figure 2 and Figure 3, which show PM and Ozone respectively, provide a macro view of the state in relation to these pollutants. The Oklahoma ambient air-monitoring network provides coverage for these sources through the metropolitan and rural monitoring sites.

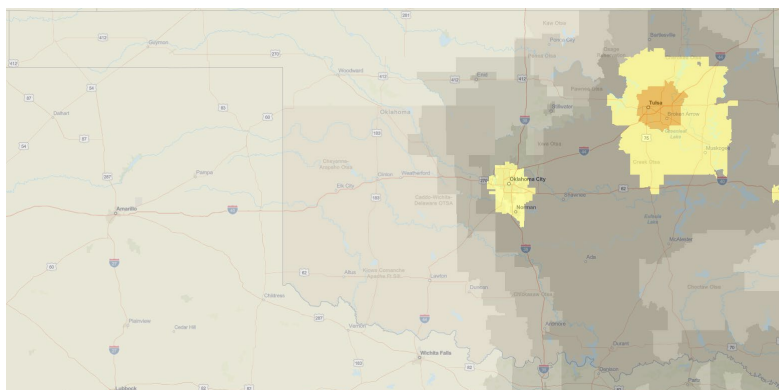


Figure 2: PM level based on national percentile from EPA EJ Screen Tool

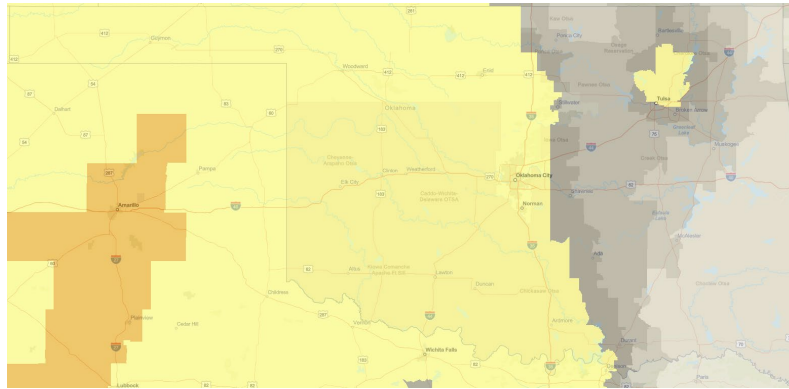


Figure 3: Ozone level based on national percentile from EPA EJ Screen Tool

The EPA EJ Screen Tool also provides insights into how individual ambient air-monitoring sites are meeting community needs. Tulsa, being a primary EJ concern, also contains our National Core (“NCore”) Multi-pollutant site and National Air Toxics Trend Station (“NATTS”) to provide an extensive array of data for the Tulsa community. Tulsa site 40-143-1127 is indicated with a black “+” in Figure 4. Figure 4 and Figure 5 show the EPA EJ Screen Tool Demographic Index (“DI”) in Tulsa around site 40-143-1127 as well as a breakdown of the DI of the community immediately around the site.

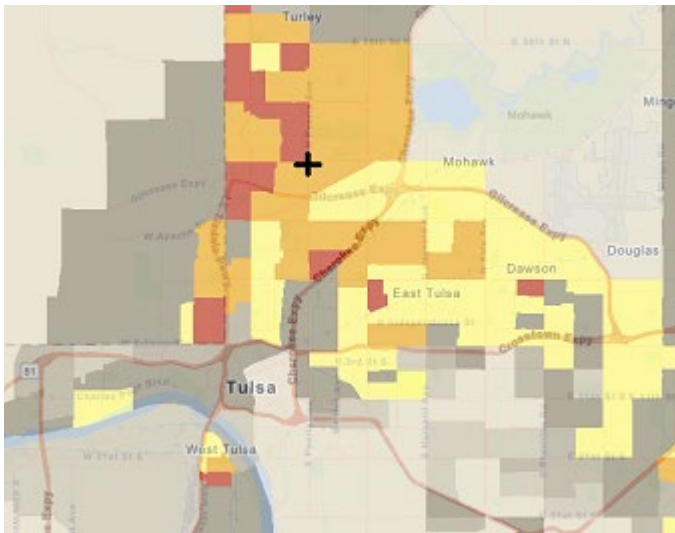


Figure 4: Site 40-143-1127 DI from EPA EJ Screen Tool

Tulsa County, OK		US Percentile	✕
Population: 1689			
Demographic Index:	94 %ile		
Supplemental Demographic Index:	84 %ile		
People of Color:	91 %ile		
Low Income:	89 %ile		
Unemployment Rate:	62 %ile		
Limited English Speaking:	0 %ile		
Less Than High School:	75 %ile		
Under Age 5:	59 %ile		
Over Age 64:	47 %ile		

Figure 5: Site 40-143-1127 local DI Breakdown

Transport monitoring sites also assist in providing information to rural communities about their local air quality. Healdton site 40-019-0297 is indicated with a black “+” in Figure 6. Figure 6 and Figure 7 show the EPA EJ Screen Tool set to show Ozone level with Supplemental Demographic Index (“SDI”) in Healdton around site 40-019-0297 as well as a breakdown of the SDI of the community immediately around the site.

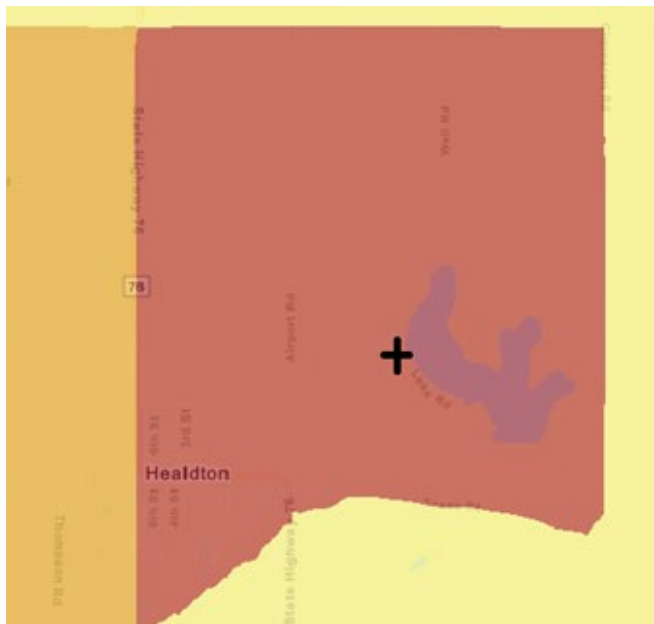


Figure 6: Site 40-019-0297 SDI from EPA EJ Screen Tool

Carter County, OK		US Percentile	✕
Population: 633			
Suppl. Index Ozone:	95 %ile		
Suppl. Demographic Index:	86 %ile		
Low Income:	87 %ile		
Low Life Expectancy:	74 %ile		
Unemployment Rate:	84 %ile		
Less Than High School:	88 %ile		
Limited English Speaking:	0 %ile		
Ozone:	86 %ile		

Figure 7: Site 40-019-0297 local SDI Breakdown

Near-Road Addition to Tulsa:

EPA's current regulatory requirements from 40 CFR Appendix D to Part 58 § 4.3.2(a) states as follows:

Within the NO₂ network, there must be one microscale near-road NO₂ monitoring station in each CBSA with a population of 1,000,000 or more persons to monitor a location of expected maximum hourly concentrations sited near a major road with high AADT counts as specified in paragraph 4.3.2(a)(1) of this appendix. An additional near-road NO₂ monitoring station is required for any CBSA with a population of 2,500,000 persons or more, or in any CBSA with a population of 1,000,000 or more persons that has one or more roadway segments with 250,000 or greater AADT counts to monitor a second location of expected maximum hourly concentrations. CBSA populations shall be based on the latest available census figures.

The Tulsa MSA has the second largest population in Oklahoma behind the Oklahoma City MSA, with an estimated population of 1,023,988 based on the 2021 Census Data Estimates found on the US Census Bureau website, (<https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-metro-and-micro-statistical-areas.html>).

As per 40 CFR Appendix D to Part 58 § 4.3.2(a), the Tulsa MSA will now require a near-road NO₂ monitoring site, as the population has exceeded 1,000,000 persons. DEQ will now begin the process of grant application and site evaluations to establish a new Near Road NO₂ monitoring site, with operation anticipated to begin around Summer 2025.

Photochemical Assessment Monitoring Station (PAMS) Addition to Tulsa:

EPA's current regulatory requirements from 40 CFR Appendix D to Part 58 § 5(a) states as follows:

State and local monitoring agencies are required to collect and report PAMS measurements at each NCore site required under paragraph 3(a) of this appendix located in a CBSA with a population of 1,000,000 or more, based on the latest available census figures.

The Tulsa MSA has the second largest population in Oklahoma behind the Oklahoma City MSA, with an estimated population of 1,023,988 based on the 2021 Census Data Estimates found on the US Census Bureau website, (<https://www.census.gov/data/tables/time-series/demo/popest/2020s-total-metro-and-micro-statistical-areas.html>).

As per 40 CFR Appendix D to Part 58 § 4.3.2(a), the Tulsa MSA will now require a PAMS monitoring site, as the population has exceeded 1,000,000 persons. DEQ will now begin the process of grant application and site evaluations to establish a new PAMS monitoring site, with operation anticipated to begin around Summer 2025.

Prevention of Significant Deterioration Air Monitoring:

The Oklahoma DEQ monitoring network meets all requirements found in 40 CFR Part 58, Appendix B. PSD monitoring is currently not necessary for the Oklahoma DEQ.

Maintenance Plans for Discontinuation of SLAMS Monitors:

Oklahoma currently is in attainment with all NAAQS and is not under a SIP Maintenance Plan.

Division of MSA/CBSA Monitoring Responsibilities with other Agencies:

Oklahoma DEQ understands some of its monitoring area is shared with Tribal Nations and Arkansas DEQ. Oklahoma DEQ has no standing agreements with Tribal Nations or Arkansas DEQ for the division of monitoring responsibilities to fulfill monitoring requirements at this time. Oklahoma DEQ will continue to monitor the situation and maintain its current connections with these two entities and address any deficiencies should they arise.

National Air Toxics Trends Station, State Air Toxics Monitoring Network, and National Atmospheric Deposition Programs

Oklahoma DEQ maintains a list of Toxic Air Contaminants (“TAC”) of concern. When these toxins routinely violate the Maximum Acceptable Ambient Concentration (“MAAC”) an Area of Concern (“AOC”) is designated. Oklahoma DEQ operates three air toxics sites, one National Air Toxics Trends Station (“NATTS”) in Tulsa, Oklahoma (“TMOK”) and two non-NATTS sites, one in Oklahoma City, Oklahoma (“OCOK”), and one in Tulsa, Oklahoma (“TOOK”).

Oklahoma DEQ just opened a new non-NATTS air toxics short term special study monitoring site in partnership with the Quapaw Nation Environmental Department in Commerce, Oklahoma (“COOK”). Additionally, Oklahoma DEQ operates four Mercury Deposition Network (“MDN”) sites, OK01, OK04, OK06, OK31 and one National Trends Network (“NTN”) site, OK01. See chart below for detailed location data.

TMOK is comparable to OCOK due to their siting locations in their respective cities. TOOK is an outlier being more of an industrial station. Primarily, we see many of Oklahoma’s concentrations affected by temperatures, often increasing in the summer and decreasing in the cooler winter months. Due to construction surrounding TOOK causing a temporary site shutdown, not enough data is available for meaningful analysis.

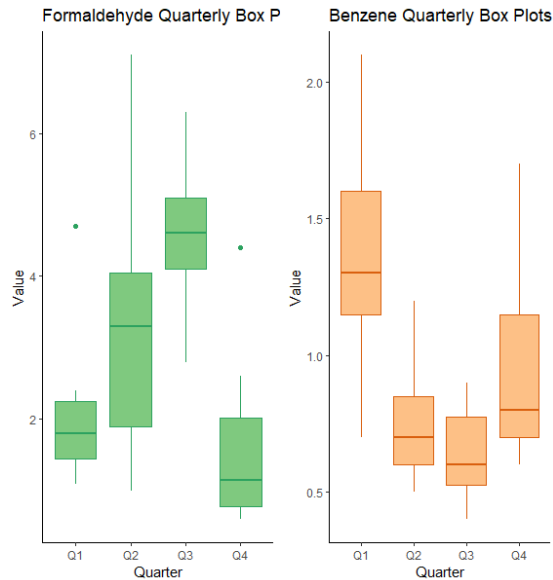


Figure 8: OCOK Quarterly Formaldehyde and Benzene analysis

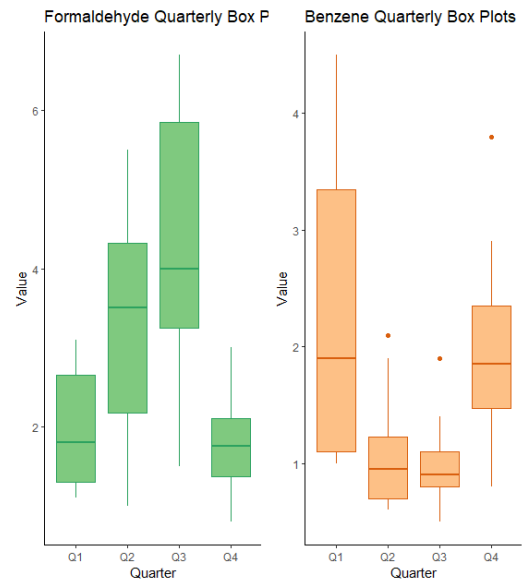


Figure 9: TMOK Quarterly Formaldehyde and Benzene analysis

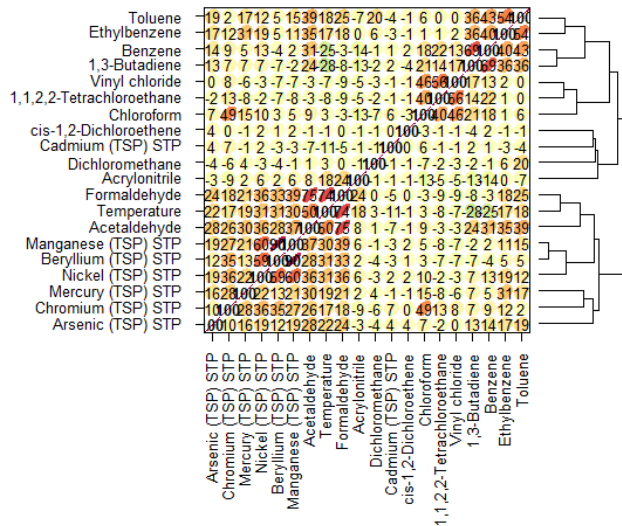


Figure 10: OCOK Toxics Comparison

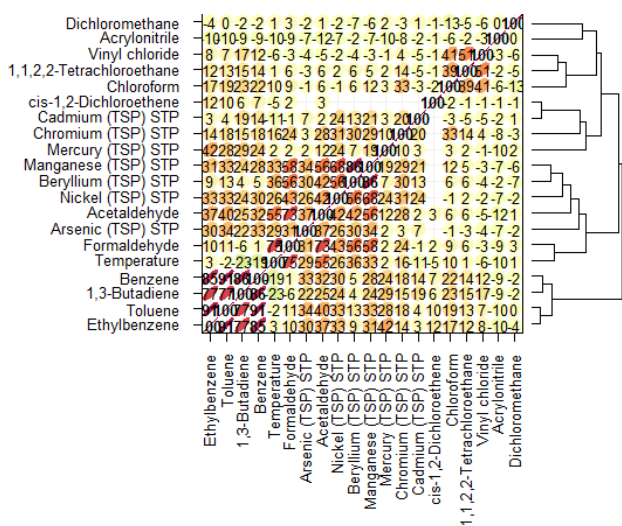


Figure 11: TMOK Toxics Comparison

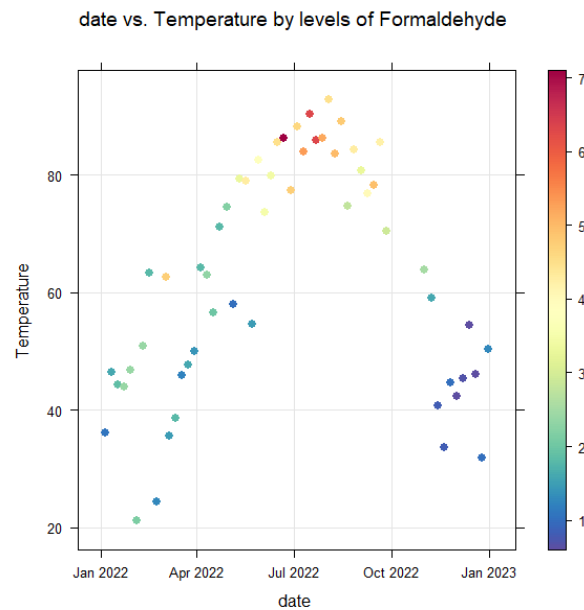


Figure 12: OCOK Formaldehyde Temperature Analysis

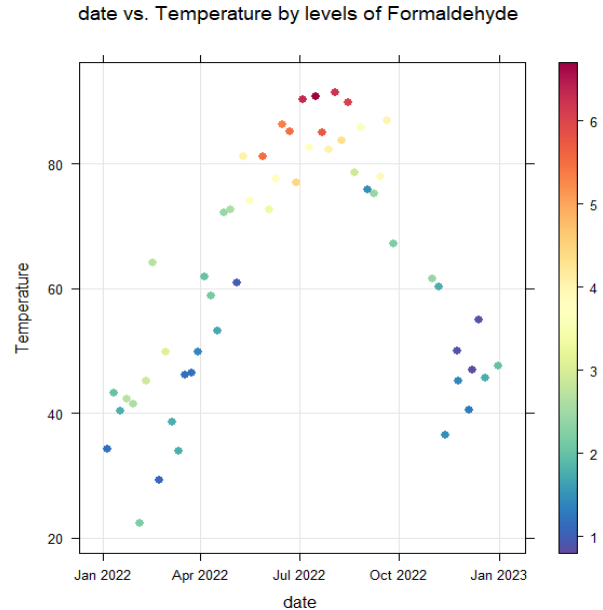


Figure 12: TMOK Formaldehyde Temperature Analysis

Site Identifier	Address/Location	Latitude	Longitude	Pollutants Measured
40-143-0235 TOOK	2443 S. Jackson Ave., Tulsa	36.126945	-95.998941	Toxics
40-155-0522 COOK	Commerce OK	36.926603	-94.873439	Toxics
40-109-1037 OCOK	2501 E. Memorial Rd., Oklahoma Christian University, OKC	35.614131	-97.475083	Toxics
40-143-1127 TMOK	3520 1/2 N. Peoria, North Tulsa- Fire Station #24,Tulsa	36.204902	-95.976537	Toxics
OK01	McGee Creek State Park	34.315439	-95.8894	Mercury
				NTN
OK04	Lake Murray Sate Park	34.103233	-97.070817	Mercury
OK06	Wichita Mountains Wildlife Refuge	34.73425	-98.709517	Mercury
OK31	Copan, Oklahoma	36.908115	-95.88235	Mercury

Lead (Pb) Monitoring

Currently only one lead monitoring site location, with an associated collocated sampler, is operated at 108 N Main St., Savanna Oklahoma (AQS Site # 40-121-0416).

DEQ's Pb monitoring network is sufficient to meet 40 CFR Part 58 Appendix D Section 4.5 requirements, which states "At a minimum, there must be one source-oriented SLAMS site located to measure the maximum Pb concentration in ambient air resulting from each non-airport Pb source which emits 0.50 or more tons per year and from each airport which emits 1.0 or more tons per year based on either the most recent National Emission Inventory (<http://www.epa.gov/ttn/chief/eiinformation.html>) or other scientifically justifiable methods and data (such as improved emissions factors or site-specific data) taking into account logistics and the potential for population exposure"

The 2020 National Emissions Inventory includes air emissions sources of both criteria and hazardous air pollutants, and data are available for many facilities and county totals. However, as this data is compiled on a triennial basis, DEQ has many datasets reflecting more up to date information. In all cases possible, the most recent site specific data is utilized in making these determinations.

There are currently no facilities reporting over 0.5 tons of Pb emissions.

Review of Site Conditions

The ODEQ home office currently has inadequate laboratory space for use by monitoring staff when conducting instrument maintenance and repair operations. This has also affected our ability to maintain accurate inventories. Multiple solutions to this issue are being evaluated.

Appendix D: EPA Response to 2022 Annual Network Plan



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

November 2, 2022

Ms. Cheryl E. Bradley
Environmental Programs Manager
Data and Planning Section
Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

Dear Ms. Bradley:

Thank you for your correspondence to the U.S. Environmental Protection Agency from the Oklahoma Department of Environmental Quality submitting the Oklahoma 2022 Annual Monitoring Network Plan (2022 Plan) for ambient air. The EPA has completed its review of the 2022 Plan to ensure it meets the minimum requirements of 40 Code of Federal Regulations Part 58 and its appendices.

We appreciate your efforts in submitting a timely 2022 Plan, which we received on July 1, 2022. Also, we appreciate the efforts of the ODEQ to manage and maintain the ambient air monitoring network in Oklahoma in compliance with the Clean Air Act.

The network review process presents an opportunity for the EPA and the ODEQ to collaborate on the air monitoring network design. See 40 CFR Part 58 Appendix D, Section 1.1.2. The EPA has conducted its review of the 2022 Plan including proposed network modifications to ensure the air quality surveillance system continues to meet applicable requirements. The EPA is approving your 2022 plan as meeting the minimum requirements per 40 CFR Part 58 and Appendices, including Section 58.10 and Section 58.14.

Also, the EPA acknowledges your update regarding environmental justice considerations, including the ODEQ's non-NAAQS transport monitoring, and toxics monitoring, neither of which is specifically required by federal monitoring requirements in 40 CFR Part 58; rather, it is at the discretion of

Oklahoma. Additionally, for next year's Plan, monitoring requirements in the Tulsa area will change, as the most recent (2021) U.S. Census population estimate for the Tulsa MSA is 1,000,000 or more persons; updates needed include: nitrogen dioxide (NO₂) near road, carbon monoxide (CO), Photochemical Assessment Monitoring Stations and particulate matter monitoring. Details regarding these requirements, and other specifics from our review of the 2022 Plan, are enclosed. We are available to discuss our review with you if you have any questions.

For the 2022 Plan, this approval action is consistent with EPA's determination that the 2022 Plan meets federal requirements for Oklahoma's ambient air monitoring network.

As described in EPA's enclosed Technical Comments, the EPA is also approving the 2022 Plan consistent with EPA's October 1, 2020, approval of Oklahoma's request under section 10211(a) of SAFETEA to administer this program in certain areas of Indian country.

We note, however, that the EPA is currently reviewing our October 1, 2020, SAFETEA approval and anticipates engaging in further discussions with tribal governments and the State of Oklahoma as part of this review. The EPA also notes that the October 1, 2020, approval is the subject of a pending challenge in federal court. (*Pawnee v. Regan*, No. 20-9635 (10th Cir.)). Pending completion of the EPA's review, the EPA is proceeding with this action in accordance with the October 1, 2020, approval. The EPA may make any appropriate adjustments to the approval of Oklahoma's 2022 Plan to reflect the outcome of the SAFETEA review. Additional details about the EPA's SAFETEA approval are enclosed.

We look forward to our continued partnership with the ODEQ on our common goal to establish and maintain an approvable and comprehensive monitoring. If you have any questions, please contact me at (214) 665-7593, or your staff may contact Mr. Jeffrey Robinson, Branch Manager, Air Permits, Monitoring and Grants Branch, at (214) 665-6435.

Sincerely,

David F. Garcia, P.E.

Director

Air and Radiation Division

Enclosure: Technical Comments

Technical Comments

2022 Annual Monitoring Network Plan Technical Comments

The Oklahoma 2022 Annual Monitoring Network Plan (ANP) was received on July 1, 2022 (2022 Plan). In accordance with the requirements of 40 Code of Federal Regulations (CFR) Part 58 and its appendices, the U.S. Environmental Protection Agency (EPA) has reviewed the 2022 Plan and our comments are provided below. These comments reflect the EPA's efforts in collaboration with the Oklahoma Department of Environmental Quality (ODEQ) to maintain minimum monitoring requirements required under Part 58.

General Comments – Indian country

Following the U.S. Supreme Court decision in *McGirt v Oklahoma*, 140 S.Ct. 2452 (2020), the Governor of the State of Oklahoma requested approval under Section 10211(a) of the Safe, Accountable, Flexible, Efficient Transportation Equity Act of 2005: A Legacy for Users, Pub. Law 109-59, 119 Stat. 1144, 1937 (August 10, 2005) ("SAFETEA"), to administer in certain areas of Indian country (as defined at 18 U.S.C. § 1151) the State's environmental regulatory programs that were previously approved by the EPA outside of Indian country.

On October 1, 2020, the EPA approved Oklahoma's SAFETEA request to administer all of the State's EPA-approved environmental regulatory programs, including the Ambient Air Quality Surveillance requirements in 40 CFR Part 58 [specifically, the 2021 Annual Monitoring Network Plan (2021 Plan)¹], in the requested areas of Indian country. As requested by Oklahoma, the EPA's approval under SAFETEA does not include Indian country lands, including rights-of-way running through the same, that: (1) qualify as Indian allotments, the Indian titles to which have not been extinguished, under 18 U.S.C. § 1151(c); (2) are held in trust by the United States on behalf of an individual Indian or Tribe; or (3) are owned in fee by a Tribe, if the Tribe (a) acquired that fee title to such land, or an area that included such land, in accordance with a treaty with the United States to which such Tribe was a party, and (b) never allotted the land to a member or citizen of the Tribe (collectively "excluded Indian country lands").

EPA's approval under SAFETEA expressly provided that to the extent EPA's prior approvals of Oklahoma's environmental programs excluded Indian country, any such exclusions are superseded for the geographic areas of Indian country covered by the EPA's approval of Oklahoma's SAFETEA request.² The approval also provided that future revisions or amendments to Oklahoma's approved environmental regulatory programs would extend to the covered areas of Indian country (without any further need for additional requests under SAFETEA).

¹ 40 CFR Part 58.10.

² The EPA approved the 2021 Plan in accordance with EPA's October 1, 2020. SAFETEA approval. The EPA's approval of Plans prior to 2021 relating to Oklahoma's ambient air quality, including the 2020 Annual Monitoring Network Plan approved on October 22, 2020, were not approved to apply in areas of Indian country located in the state. Such prior limitations are superseded by the EPA's approval of Oklahoma's SAFETEA request.

As explained above, the EPA is approving Oklahoma's 2022 Annual Monitoring Network Plan. Consistent with EPA's October 1, 2020, SAFETEA approval, this 2022 Plan will apply to all Indian country within the State of Oklahoma, other than the excluded Indian country lands.¹

General Comments – Clean Air Act

We appreciate the ODEQ's submittal of the 2022 Plan in accordance with 40 CFR §58.10.

Environmental Justice Considerations

The EPA recognizes that the 2022 Plan meets the minimum federal regulatory requirements outlined at 40 CFR 58.10 and Appendices A through E. The EPA acknowledges the update regarding environmental justice considerations² provided in the 2022 Plan, including the ODEQ's non-NAAQS transport monitoring, and toxics monitoring, neither of which is specifically required by federal monitoring requirements in 40 CFR Part 58; rather, it is at the discretion of Oklahoma. (See the 2022 Plan, Appendix C, pp. 19 - 22).

Pb Monitoring

For the 2023 Plan, for Pb monitoring, please provide an explanatory statement as part of the Plan text, confirming that the Pb monitoring network is sufficient to meet 40 CFR Part 58 Appendix D Section 4.5 requirements. We recognize that Pb monitoring is included in Table 1, and would appreciate discussion of the network in the Plan.

Operation of monitoring network in accordance with 40 CFR Part 58 and Appendices A, B, C, D, and E. We appreciate the ODEQ's operation of the ambient air monitoring network in accordance with minimum federal requirements defined in 40 CFR Part 58 and Appendices A through E.

Air Quality System (AQS). Thank you for your efforts to ensure that the information in the ANP and the AQS is complete and consistent. Please continue to update the AQS, and to correlate the details of each monitoring location in the ANP with the AQS.

¹ In accordance with Executive Order 13990, the EPA is currently reviewing our October 1, 2020, SAFETEA approval and is engaging in further consultation with tribal governments and discussions with the state of Oklahoma as part of this review.

The EPA also notes that the October 1, 2020, approval is the subject of a pending challenge in federal court. (*Pawnee v. Regan*, No. 20-9635 (10th Cir.)). Pending completion of EPA's review, the EPA is proceeding with this action in accordance with the October 1, 2020, approval. The EPA may make any appropriate adjustments to the approval of Oklahoma's 2022 Plan and SO₂ Annual Report to reflect the outcome of the SAFETEA review.

² Executive Order 14008, January 27, 2021. Federal Register / vol. 86, No. 19, February 1, 2021, p. 7619. Securing Environmental Justice and Spurring Economic Opportunity. Section 219. *Policy*.

"To secure an equitable economic future, the United States must ensure that environmental and economic justice are key considerations in how we govern. That means . . . turning disadvantaged communities – historically marginalized and overburdened – into healthy, thriving communities . . .".

Monitoring Requirements in the Tulsa Area

To meet the minimum monitoring requirements in CBSA's with 1,000,000 or more persons, for ambient air monitoring in the Tulsa area, please coordinate with the EPA for approval in advance of updates needed for the following: NO₂ near road, CO, Photochemical Assessment Monitoring Stations (PAMS), and PM; see specific requirements in the discussion per pollutant below.

Ozone (O₃) Monitoring (40 CFR Part 58, Appendix D Section 4.1)

The ODEQ is meeting the minimum requirements for its Ozone monitoring network design.

The EPA appreciates the updates on the Special Purpose Monitors (AQS #s 40-147-0217 and AQS ID 40-147-0207) for ozone measurements. Also, we thank the ODEQ for the update on all non-essential ozone sites being temporarily shut down for maintenance during the ozone season hiatus.

We look forward to receiving information in the future from the ODEQ regarding a proposed short relocation of the existing Glenpool ozone monitoring site in Tulsa (AQS ID 40-143-0174).

Carbon Monoxide (CO) Monitoring (40 CFR Part 58, Appendix D Section 4.2)

The ODEQ is meeting the minimum requirements for its carbon monoxide (CO) monitoring network design. In next year's Plan, based on the most recent population estimate, additional CO monitoring requirements will need to be met in the Tulsa area. See details above: *Monitoring Requirements in the Tulsa Area*.

Additional requirements for next year's Plan for the Tulsa MSA include an additional CO monitor in conjunction with additional near-road NO₂ monitoring. We look forward to working with the ODEQ on these changes.

Nitrogen Dioxide (NO₂) Monitoring (40 CFR Part 58, Appendix D Section 4.3)

The ODEQ is meeting the minimum requirements for its nitrogen dioxide (NO₂) monitoring network design.

For next year's Plan, please see the sections above (*Monitoring Requirements in the Tulsa Area*) and below regarding additional near-road monitoring for nitrogen oxides (NO, NO₂, NO_x).

Near-Road (NO₂) Monitoring Site [40 CFR 58 Appendix D Section 4.3.2(a)]

The ODEQ is meeting the minimum requirements for its Near-Road (NO₂) monitoring network design. In next year's Plan, additional Near-Road (NO₂) monitoring requirements need to be met in the Tulsa area.

Additional requirements for next year's Plan for the Tulsa MSA include an additional near-road NO₂ monitoring station. The EPA looks forward to working with the ODEQ on these changes.

Photochemical Assessment Monitoring Stations (PAMS) parameters addition to the Tulsa NCore site (40 CFR Part 58, Appendix D Section 5(a))

Previously for the Tulsa MSA, PAMS monitoring was not required; however, based on the most recent population estimate, for next year's Plan, PAMS monitoring will need to be added in the Tulsa area.

Additional requirements for next year's Plan for the Tulsa MSA include PAMS monitoring. We look forward to working with the ODEQ on these changes.

Sulfur Dioxide (SO₂) Monitoring (40 CFR Part 58, Appendix D Section 4.4)

The ODEQ is meeting the minimum requirements for its SO₂ monitoring network design. See 40 CFR Part 58, Appendix D Section 4.4. The EPA acknowledges that no changes were proposed to the Oklahoma SO₂ network in the 2022 Plan.

Lead (Pb) Monitoring (40 CFR Part 58, Appendix D Section 4.5)

The ODEQ is meeting the minimum network design requirements for ambient air quality monitoring for Pb. The EPA acknowledges that no changes were proposed to Oklahoma's monitoring network for Pb in the 2022 Plan.

Particulate Matter (PM) Monitoring (40 CFR Part 58, Appendix D Section 4.6 and 4.7)

The ODEQ is meeting the minimum network design requirements for ambient air quality monitoring for particulate matter (PM).

Particulate Matter of 2.5 Microns or Less (PM_{2.5}) (40 CFR Part 58, Appendix D Section 4.7)

The plan to relocate the PM_{2.5} monitor at the Tulsa Glenpool site (AQS ID 40-143-0174) will be reviewed when specifics of the new location are provided.

PM_{2.5} Quality Assurance Collocation

For the PM_{2.5} monitors which the ODEQ operates using Federal Reference Method (FRM) number 145, collocation is met at the North Tulsa site (AQS ID 40-143-1127).

For the PM_{2.5} monitors which the ODEQ operates using Federal Equivalent Method (FEM) number 236, collocation is met at the McAlester site (AQS ID 40-121-0415).

For the PM_{2.5} monitors which the ODEQ operates using FEM number 238, collocation is met at the Oklahoma City North site (AQS ID 40-109-1037).

Multiple PM Measurements from an individual monitor

The EPA appreciates the continued use of the T640X monitors to report both NAAQS and non-NAAQS measurements throughout ODEQ's monitoring network.

Particulate Matter of 10 Microns or Less (PM₁₀) (40 CFR Part 58, Appendix D Section 4.6)

For the 2023 plan, we note that monitoring requirements in Tulsa will change, as the most recent U.S. Census population estimate for the Tulsa MSA is over 1,000,000 or more persons. The establishment of a new PM₁₀ monitor will be required. We look forward to working with ODEQ on this as needed.

The plan to relocate the PM₁₀ monitor at the Tulsa Glenpool site (AQS ID 40-143-0174) will be reviewed when specifics of the new location are provided.

PM₁₀ Quality Assurance Collocation

For the PM₁₀ Manual monitors which the ODEQ operates using Federal Reference Method (FRM) number 127, collocation is met at the Central Fire Station site (AQS ID 40-109-0035).

Near-Road (PM_{2.5}) Monitoring Site [40 CFR 58 Appendix D Section 4.3.2(a) and 4.7.1(b)(2)]


The ODEQ is meeting the minimum requirements for its Near-Road (PM_{2.5}) monitoring network design. In next year's Plan, additional Near-Road (PM_{2.5}) monitoring requirements need to be met in the Tulsa area.

Appendix E: 2022 Annual Network Plan Posted for Public Comment from








Ambient Air Monitoring - Oklah...
https://www.deq.ok.gov/air-quality-division/ambient-monitoring/





OKLAHOMA

Agencies Calendar Services



OKLAHOMA
Environmental
Quality

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Emissions Inventory >

Air Compliance/Enforcement >

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Rules & Planning >

Forms & Public Participation >

AMBIENT AIR MONITORING

The 2023 Air Monitoring Network Plan is available for public review and comment through June 16, 2023. It contains planned changes to the Oklahoma DEQ ambient monitoring network. Comments should be submitted to the attention of Ryan Biggerstaff and Bryan Sims, Environmental Programs Managers, Air Quality Division, PO Box 1677, Oklahoma City, OK 73101 or email Ryan Biggerstaff and Bryan Sims.

The Air Monitoring Section operates a statewide network of ambient (outdoor) air pollution monitors. These monitors serve three primary functions:

1. To determine compliance with the Clean Air Act's pollution standards
2. To inform the public on the state of Oklahoma's air quality
3. To monitor areas of special or immediate concern

National Ambient Air Quality Standards (NAAQS)

NAAQS Table and Current Highs - lists each standard and highest monitored values for the current year

These standards define the maximum permissible concentrations for common air pollutants, or criteria pollutants. Click on the name to read the factsheet.

- CO - Carbon Monoxide
- Pb - Lead
- NO₂ - Nitrogen Dioxide
- O₃ - Ozone
- SO₂ - Sulfur Dioxide
- PM - Particulate Matter
 - PM-10: particulate matter <10 μm
 - PM-2.5: particulate matter <2.5 μm

Air Data Report - annual summary of air quality monitoring data in comparison to the NAAQS

Informing the Public

Our primary methods of informing the public are:

AQI (Air Quality Index), Ozone & PM Alerts, Health Advisories

Current Air Quality & AQI Forecasts - includes map and table of current monitoring sites

Past Data (Including Archives)


The Air Monitoring Network Plan, which details DEQ's planned changes to the ambient monitoring network, is available annually in June for public review. View final network plans for: **2022, 2021, 2020, 2019, 2018**

Special Studies

Air Toxics including Mercury (Hg)

Hydrogen Sulfide (H₂S) - a toxic gas which is monitored at two locations

Smoke Management




12:44:53 PM
Tuesday, May 16, 2023

May 2023

Su	Mo	Tu	We	Th	Fr	Sa
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Today

 Set up your calendars to see where you need to be

Get started