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MARY FALLIN  
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Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

August 21, 2012

Thomas H. Diggs, Associate Director for Air Programs  
US EPA Region 6  
1445 Ross Avenue, Suite 1200 - 6PD  
Dallas, TX 75202-2733

Dear Mr. Diggs:

In fulfillment of the requirements of 40 CFR, part 53 and 58, Oklahoma submits this request for approval of the Oklahoma Air Monitoring FY2013 Annual Network Review. The network review was posted on the Oklahoma DEQ website for a 30 day comment period. No comments were received.

I look forward to receiving your approval of the FY2013 Annual Network Review for Oklahoma. If you have any questions or concerns please contact Kent Stafford at (405) 702-4139.

Sincerely,

A handwritten signature in black ink, appearing to read 'Eddie Terrill', is written over the word 'Sincerely,'.

Eddie Terrill  
Director, Air Quality Division

Enclosure



**Oklahoma Department of Environmental Quality  
Air Quality Division  
Monitoring Section  
Annual Network Review for Ambient Air Monitoring  
Fiscal Year 2013**

Under 40 CFR, Part 58, Subpart B, states are required to submit an annual monitoring network review to the Environmental Protection Agency (EPA). The Oklahoma Department of Environmental Quality, Air Quality Division (DEQ/AQD) will submit its Annual Network Review (ANR) to the regional EPA office in Dallas Texas. This network plan is required for the purpose of providing the framework for establishment and maintenance of an air quality surveillance system. Data collected by this network is used for comparison to the National Ambient Air Quality Standards (NAAQS). The annual monitoring plan or (ANR) will be made available for public inspection via DEQ web site for at least 30 days prior to submission to EPA. The following document represents the ANR and proposed changes to the Oklahoma Air monitoring network for Fiscal Year 2013 (FY13).

Table 1 contains a listing of all Oklahoma Department of Environmental Quality, Air Quality Division (DEQ/AQD) ambient air monitoring sites currently operated and maintained by the agency. The reference to "AQS Site ID#" in column 1 is a unique identification number that is assigned to each and every monitoring site in the state network. The Air Quality System (AQS) is a national air monitoring database that is maintained by the EPA.

Table 1

AQS Site ID #	Address/ Location	Latitude	Longitude	Pollutants Measured	Sampling Method	Analysis Method	Station Type	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQs Comparable	MSA
40-027-0049	S.E. 19th St./Water Tower, Moore	35.320105	-97.484099	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	OKC
40-031-0651	Lawton	34.63298	-98.42879	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	Lawton
40-033-0680	Walters	34.346901	-98.307503	PM2.5	Low Volume TEOM FDMS		SPM	Continuous	AQI	Urban	No	Lawton
40-043-0860	Municipal Airport, Seiling	36.158414	-98.931973	Ozone	U.V. Photometric		SLAMS	Continuous	AQI & Regional Transport	Regional	No	Not in MSA
40-067-0671	Waurika	34.226700	-98.036697	PM2.5	Low Volume TEOM FDMS		SPM	Continuous	Regional Background	Regional	Yes	Not in MSA
40-071-0604	306 E Otee, Ponca City	36.697186	-97.08135	SO2	Pulsed Fluorescence		SLAMS	Continuous	AQI	Regional	No	Not in MSA
40-087-1073	310 E. Burr Oak Rd., Goldsby	35.159649	-97.473794	PM2.5	LoVol TEI Sharp 5030		SLAMS	Continuous	AQI & Regional Transport	Regional	No	Not in MSA
				Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Neighborhood	Yes	Not in MSA
				PM2.5	LoVol TEI Sharp 5030		SLAMS	Continuous	Population Exposure	Neighborhood	Yes	Not in MSA
				Ozone	U.V. Photometric		SLAMS	Continuous	Upwind Background	Regional	Yes	OKC

40-101-0161	Port of Muskogee	35.768333	-95.293889	PM10	Sequential Low Volume	Gravimetric weighing	SPM	(1 in 1)	Source Oriented	Middle	Yes	Not in MSA
40-101-0167	Water Treatment Plant, Muskogee	35.793134	-95.302235	SO2	Pulsed Fluorescence		SLAMS	Continuous	Source Oriented	Neighborhood	Yes	Not in MSA
40-017-0101	12575 N.W. 10th, Yukon	35.479215	-97.751503	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	OKC
40-109-0096	12880A N.E. 10th, Choctaw	35.477801	-97.303044	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	OKC
40-109-0033	N.E. 10th and Stonewall, OKC	35.477036	-97.494309	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	OKC
40-109-0035	N.W. 5th and Shartel, OKC	35.47292	-97.52709	PM2.5	Sequential FRM	Micro-gravimetric weighing	SLAMS	(1 in 3) Co-located	Population Exposure	Neighborhood	Yes	OKC
40-019-0297	1800 Airport Rd., Healdton	34.257125	-97.474341	PM2.5	Low Volume TEOM FDMS		SPM	Continuous	AQI & Regional Transport	Regional	No	Not in MSA
40-143-0110	4616 E. 15th St., Tulsa	36.14004	-95.925382	PM10	Sequential Lo-Vol FEM	Micro-gravimetric weighing	SLAMS	(1 in 6) Co-located	Population Exposure	Neighborhood	Yes	Tulsa
				Ozone	U.V. Photometric		SPM	Continuous	AQI & Regional Transport	Regional	No	Not in MSA





40-037-0144	City Water Plant, Mannford	36.105481	-96.361196	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	Tulsa
40-143-0174	502 E. 144th Pl., Glenpool	35.953708	-96.004975	Ozone	U.V. Photometric		SLAMS	Continuous	Upwind Background	Urban	Yes	Tulsa
				PM2.5	Low Volume TEOM FDMS		SPM	Continuous	Population Exposure	Urban	No	Tulsa
40-143-0178	Lynn Lane, Tulsa	36.133802	-95.764537	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	Tulsa
40-143-0175	1710 W. Charles Page Blvd., Tulsa	36.149877	-96.011664	SO2	Pulsed Fluorescence		SLAMS	Continuous	Source Oriented	Neighborhood	Yes	Tulsa
40-143-0501	104 Gilcrease Rd., Tulsa	36.161745	-96.015784	SO2,	Pulsed Fluorescence		SLAMS	Continuous	Source Oriented	Neighborhood	Yes	Tulsa
				H2S	PF with Converter		SPM	Continuous	Source Oriented	Neighborhood	No	Tulsa
40-143-0235	2443 S. Jackson Ave., Tulsa	36.126945	-95.998941	SO2	Pulsed Fluorescence		SLAMS	Continuous	Source Oriented	Middle	Yes	Tulsa
				H2S	PF with Converter		SPM	Continuous	Source Oriented	Middle	No	Tulsa

All DEQ/AQD sites and monitors conform to 40 CFR (Code of Federal Regulations), Subchapter C, Part 58 appendix A, Appendix C (see methods in column 6 of table 1), and appendices D & E (see photos located @ <http://www.deq.state.ok.us/AQDnew/monitoring/cpdata.htm> by clicking on desired location of the site map).

### **Population Statistics**

Listed below are Oklahoma's largest Metropolitan Statistical Areas (MSAs) according to 2010 U.S. Census Bureau population estimates:

Oklahoma City – 1,252,987

Tulsa – 937,474

Lawton – 124,098

### **Ozone**

According to Table D-2 of Appendix D to Part 58, 40 CFR the minimum number of SLAMS ozone monitors required based on population and also ozone concentration are:

Oklahoma City – 2

Tulsa – 2

Lawton – 1



The source oriented portion of the network is based on DEQ's most recently approved and quality assured emission inventory from 2011. No additional sources have reported greater than .5 ton per year for lead in this recent inventory, therefore no additional source sites are required to be added to the network.

### **Sulfur Dioxide**

DEQ operates three source oriented monitoring sites in west Tulsa to meet the SO<sub>2</sub> CBSA requirement (40-143-0175, 10-143-0501 and 40-143-0235). DEQ anticipates relocation of site (40-143-0501) if a suitable alternate location can be secured. The existing site no longer meets siting criteria.

DEQ also maintains two source oriented sites in Ponca City (40-071-0604) and Muskogee (40-101-0167) and one background site in Oklahoma City (40-109-1037), that is used for trends and modeling purposes.

The Ponca City site formerly known as AQS site #40-071-0602 has been relocated as approved in last year's ANR and is now AQS site #40-071-0604. No other changes are being proposed for the Sulfur Dioxide network.

### **Hydrogen Sulfide**

DEQ operates 2 sites located in West Tulsa (40-143-0235 and 40-143-0501), which are used to determine compliance with the State H<sub>2</sub>S standard. DEQ anticipates relocation of (40-143-0501) (see paragraph 1 under "Sulfur Dioxide").

### **Oxides of Nitrogen**

DEQ maintains four Nitrogen Oxide monitors for use in NAAQS comparison, trends and modeling, as well as use for studying effects on ozone. Two of these monitors, NO<sub>2</sub> and NO<sub>y</sub>, are located at the NCORE site (40-143-1127); the other two NO<sub>2</sub> monitors are located in Oklahoma City at sites (40-109-1037) and (40-109-0033).

**Area Wide Sampling Requirement:** The NO<sub>2</sub> sampler at the NCORE site will be used to meet the area wide requirement to protect susceptible and vulnerable populations in Tulsa. DEQ also anticipates using site (40-109-0033) to meet the area wide requirement to protect susceptible and vulnerable populations in Oklahoma City. DEQ believes siting of monitors in these Tulsa and Oklahoma City locations will promote continued sampling in "Environmental Justice" areas.

**Near Road Sampling Requirement:** DEQ anticipates being in Phase 2 of the NO<sub>2</sub> near roadside monitoring program implementation. DEQ plans to work with Region 6 during calendar year 2013 to perform a short term study using passive NO<sub>2</sub> devices at several potential near road site locations. This effort should allow for optimum site selection and confidence in data quality to meet the near road siting requirement. These efforts will be dependent on the availability of federal funding in the coming fiscal year.

## Carbon Monoxide

DEQ operates two CO monitors; trace level CO is monitored in Tulsa at site (40-143-1127) and non-trace CO is monitored in Oklahoma City at site (40-109-1037). The CO network currently meets minimum federal requirements with no changes planned for FY13.

## PM-10

DEQ is in the process of phasing out the manual high volume FRM samplers and switching to continuous low volume TEOM samplers and low volume sequential TEI 2025 samplers, resulting in a change in sampling schedules and method codes. Tulsa will continue to have three PM10 TEI 2025 samplers, two collocated samplers being located at site (40-143-0110) and the other sampler at the NCore site (40-143-1127). Oklahoma City will change from high volume FRM samplers to low volume TEI 2025 samplers at sites (40-109-0035 and 40-109-1037).

DEQ maintains a continuous, source oriented PM10 located on the northeast side of Muskogee at site (40-101-0167). DEQ plans to continue using the continuous FEM technology at this site to evaluate local source issues.

An SPM at Muskogee (40-101-0161) was constructed as a result of complaints in the area and is expected to continue at least through the end of calendar year 2012. DEQ will at that time evaluate whether or not to continue this SPM study.

## PM-2.5

**Continuous Sampler Network** - DEQ currently operates seven TEI TEOM/FDMS samplers spread throughout the state and two TEI SHARP 5030 samplers are located in Ponca City (40-071-0604) and McAlester (40-121-0415). We are in the process of replacing the TEOM/FDMS samplers in Lawton (40-031-0651) and the NCore site (40-143-1127) with TEI SHARP 5030 samplers resulting in a change of parameter code from 88502 to 88101, as well as a change in method code. The latter change will allow data from the affected sites to eventually be compared to the NAAQS as Federal Equivalent Methods (FEM's), while maintaining the ability to use the hourly data for the AQL.

**FRM/Manual Sampler Network** – DEQ maintains 5 manual method FRM PM2.5 samplers at 4 different sites. The current network meets minimum requirements and no changes are planned for the PM2.5 network.

## PMcoarse

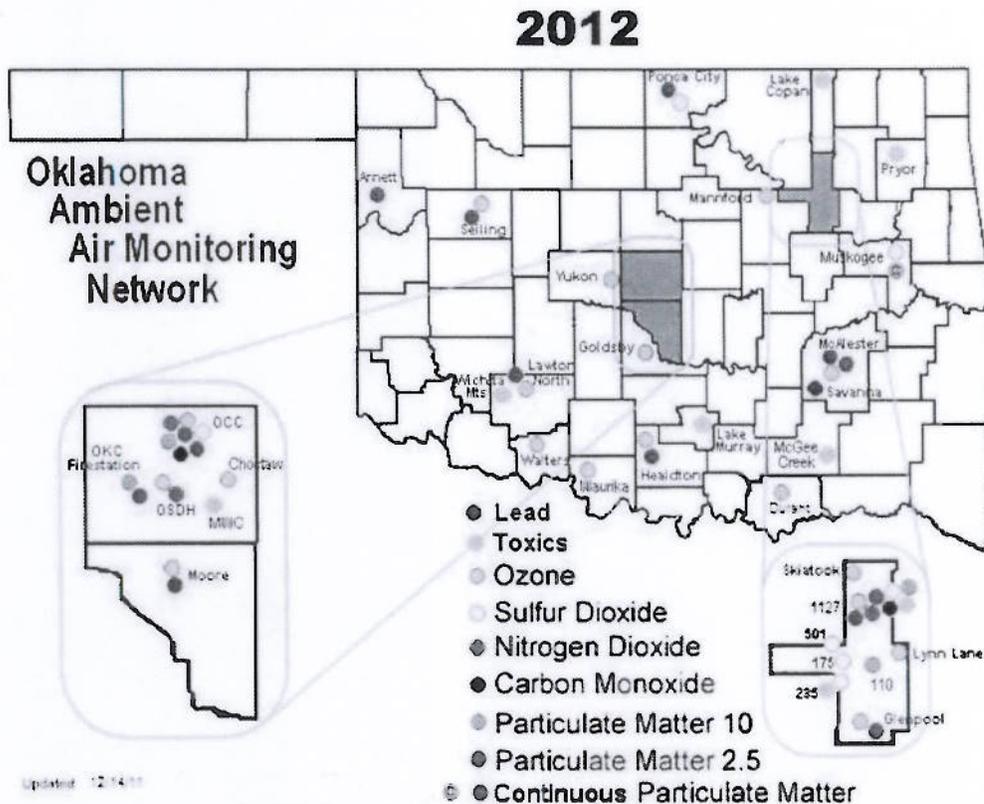
The sole requirement for a PMCoarse network is to sample at NCore locations. DEQ currently operates this required sampler at the Tulsa NCore Site (40-143-1127). No changes are being proposed for FY13.

## PM2.5 Chemical Speciation

The new CFR 40 monitoring regulations require these sites only at approved NCore locations. The state currently operates the required "National Trends Speciation Sampler" at our NCore site (40-143-1127) and a supplemental speciation sampler in Oklahoma City (40-109-1037). No changes are being proposed for FY13.

## Visibility

IMPROVE (Integrated Monitoring of Protected Visual Environments) sites are used to monitor Class I areas in order to track and report reasonable progress toward Regional Haze goals. The Wichita Mountains Wildlife Refuge Federal Land Manager (FLM) is responsible for operation of one IMPROVE sampler that is required in the state's lone Class One area located in the Wichita Mountains Wildlife Refuge. The only other visibility monitor in the state is designated as an "IMPROVE Protocol" site and is located in the Ellis County Wildlife Management Area near Arnett, Oklahoma. This site is operated and maintained by the DEQ/AQD. Data from this site has served its usefulness in terms of collecting speciated PM2.5 background and visibility data and will continue to operate until EPA grant funding has ceased.



**Summary**

This network review will be available for public comment at <http://www.deq.state.ok.us/aqdnew/monitoring/index.htm> for 30 days from the date of posting. Please send comments through postal service mail or through e-mail as listed below.

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