

**Oklahoma Department of Environmental Quality
Air Quality Division
Monitoring Section
Annual Network Review for Ambient Air Monitoring
Fiscal Year 2011**

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 2011 (FY11).

Oklahoma Air Quality Division continually updates the ambient monitoring network using the latest and best technology that is commercially available, and disseminates the data collected as quickly and accurately as possible. Minimal changes in the network are planned for this fiscal year.

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
				PM2.5	Low Volume TEOM FDMS		SPM	Continuous	AQI	Urban	No	OKC
40-031-0649	Lawton South	34.507665	-98.400872	Ozone	U.V. Photometric		SLAMS	Continuous	Upwind Background	Regional	Yes	Lawton
40-031-0651	Lawton	34.63298	-98.42879	Ozone	U.V. Photometric		SLAMS	Continuous	Population Exposure	Urban	Yes	Lawton
				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	Regional Background	Regional	Yes	Not in MSA
				PM2.5	Low Volume TEOM FDMS		SPM	Continuous	AQI	Regional	No	Not in MSA
40-071-0602	314 W. Cleveland, Ponca City	36.705328	-97.087656	SO2	Pulsed Fluorescence		SLAMS	Continuous	Population Exposure	Neighborhood	Yes	Not in MSA
				PM2.5	Low Volume TEOM FDMS		SPM	Continuous	Population Exposure	Neighborhood	No	Not in MSA
40-087-1073	310 E. Burr Oak Rd., Goldsby	35.159649	-97.473794	Ozone	U.V. Photometric		SLAMS	Continuous	Upwind Background	Regional	Yes	OKC
40-097-0186	521 S.E. 1st St., Pryor	36.304624	-95.310616	PM2.5	Sequential FRM		SLAMS	(1 in 3)	Population Exposure	Neighborhood	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
				PM10	Low Volume TEOM		SLAMS	Continuous	Source Oriented	Middle	Yes	Not in MSA

40-101-0169	901 Emporia, Muskogee	35.755273	-95.377669	PM2.5	Sequential FRM		SLAMS	(1 in 3)	Population Exposure	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
				CO	Gas Filter Correlation		SPM	Continuous	Population Exposure	Neighborhood	Yes	OKC
				NO2	Chemiluminescence		SLAMS	Continuous	Population Exposure	Neighborhood	Yes	OKC
40-109-0035	N.W. 5th and Shartel, OKC	35.47292	-97.52709	PM2.5	Sequential FRM		SLAMS	(1 in 3)	Population Exposure	Neighborhood	Yes	OKC
				PM10	High Volume Gravimetric		SLAMS	(1 in 6)	Population Exposure	Neighborhood	Yes	OKC
40-109-1037	Okla. Christian Univ., OKC	35.614131	-97.475083	SO2	Pulsed Fluorescence		SLAMS	Continuous	General background	Urban	Yes	OKC
				Chemical Speciation	Low Volume Gravimetric		SPM	(1 in 6)	Population Exposure	Urban	No	OKC
				PM10	High volume Gravimetric		SLAMS	(1 in 6)	Population Exposure	Urban	Yes	OKC
				PM2.5	Sequential FRM		SLAMS	(1 in 3)	Population Exposure	Urban	Yes	OKC
				PM2.5	Low Volume TEOM FDMS		SLAMS	Continuous	AQI	Neighborhood	No	OKC
				NO2	Chemiluminescence/trace		SPM	Continuous	Max. precursor	Urban	No	OKC
				Ozone	U.V. Photometric		SLAMS	Continuous	Highest Conc.	Urban	Yes	OKC

40-121-0415	104 Airport Rd., McAlester	34.90227	-95.784375	Ozone	U.V. Photometric		SLAMS	Continuous	Regional Transport	Regional	Yes	Not in MSA
				PM2.5	Low Volume TEOM FDMS		SPM	Continuous	AQI	Regional	No	Not in MSA
				PM2.5	Sequential FRM		SLAMS	(1 in 3)	General Background	Regional	Yes	Not in MSA
40-121-0416	108 N Main St., Savanna	34.829396	-95.843642	Lead	HiVol		SLAMS	(1 in 6)	Source Orientated	Urban	Yes	Not in MSA
40-045-0890	Ellis County WMA, Arnett	36.085509	-99.935376	IMPROVE Visibility	IMPROVE protocol		NA	(1 in 3)	Visibility/ Regional Haze	Regional	No	Not in MSA
40-085-0300	Burneyville	33.880812	-97.275896	Ozone	U.V. Photometric		SPM	Continuous	AQI & Regional Transport	Regional	No	Not in MSA
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	High Volume Gravimetric		SLAMS	(1 in 6)	Population Exposure	Neighborhood	Yes	Tulsa

40-143-1127	3520 1/2 N. Peoria, Tulsa	36.204902	-95.976537	Ozone	U.V. Photometric		NCore	Continuous	Max. downwind	Urban	Yes	Tulsa
				NO2	Chemiluminescence		NCore	Continuous	Max precursor emissions impact	Urban	Yes	Tulsa
				Trace level NOy	Chemiluminescence		NCore	Continuous	Max precursor emissions impact	Urban	No	Tulsa
				Trace level CO	Gas Filter Correlation		NCore	Continuous	Population Exposure	Urban	Yes	Tulsa
				Trace level SO2	Pulsed Fluorescence		NCore	Continuous	General background	Urban	Yes	Tulsa
				PM2.5	Sequential FRM		NCore	Daily	Max. Downwind	Urban	Yes	Tulsa
				PM10	Sequential TEI 2025 LowVol		NCore	(1 in 3)	Population Exposure	Urban	Yes	Tulsa
				PM10-PM2.5	See above		NCore	(1 in 3)	Population Exposure	Urban	NO	Tulsa
				Chemical Speciation	Low Volume Gravimetric		NCore/Spec. Trends	(1 in 3)	Population Exposure	Urban	No	Tulsa
				PM2.5	Low Volume TEOM FDMS		SPM	Continuous	AQI	Urban	No	Tulsa
40-143-0137	900 S. Osage Dr., Skiatook	36.357438	-95.999247	Ozone	U.V. Photometric		SLAMS	Continuous	Extreme Downwind	Urban	Yes	Tulsa

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
40-143-0191	1413 S. Cincinnati, Tulsa	36.141697	-95.983793	CO	Gas Filter Correlation		SLAMS	Continuous	Population Exposure	Middle	Yes	Tulsa
				PM10	High Volume Gravimetric		SLAMS	(1 in 6)	Population Exposure	Middle	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).

Summary of suggested changes

DEQ is proposing the following changes in the monitoring network for the period of FY11:

Discontinue PM-2.5 FRM (Federal Reference Method) sampling at Sites 169 (Muskogee) and 186 (Pryor).

Discontinue PM-10 FRM sampling at Site 191 (Tulsa).

Discontinue CO monitoring at Site 191 (Tulsa).

The CO monitor from Site 033 (Oklahoma City) will be re-located to Site 1037 (Oklahoma Christian University).

The Lawton South ozone site 649 will be re-located following the 2010 ozone season to Walters site 680.

Population Statistics

Oklahoma's largest Metropolitan Statistical Areas (MSAs) according to 2008 U.S. Census Bureau population estimates:

1. Oklahoma City – 1,206,142
2. Tulsa – 916,079
3. Lawton – 111,772

Ozone

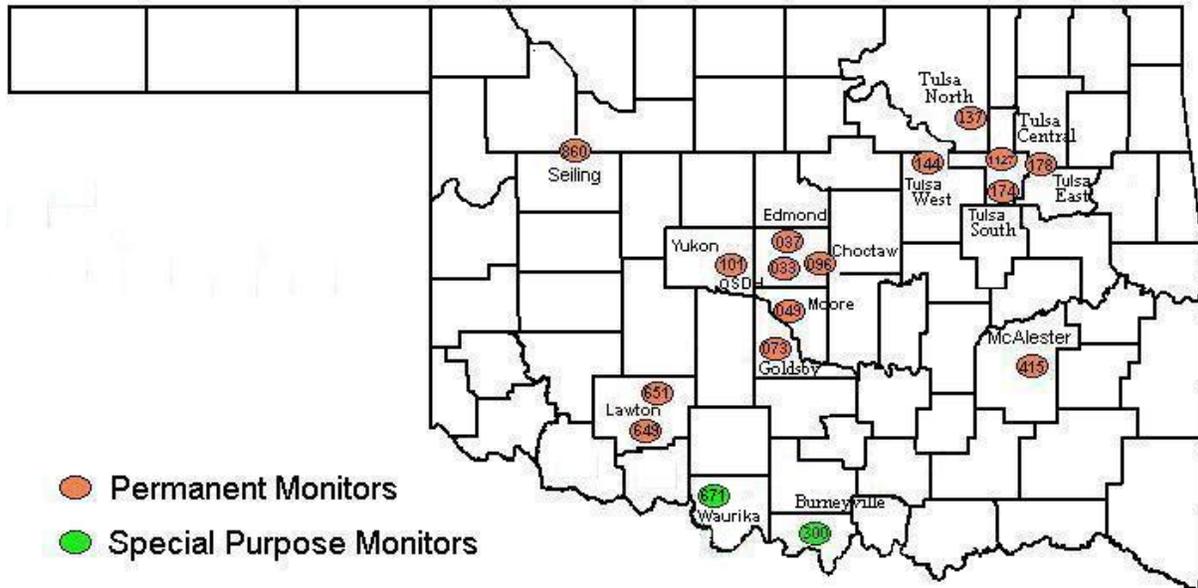
According to Table D-2 of Appendix D to Part 58, 40 CFR the minimum number of SLAMS (State and Local Air Monitoring Stations) ozone monitors required based on population are:

Oklahoma City – 2

Tulsa – 2

Lawton – 1

2010 Oklahoma DEQ Ozone Monitoring Network



The ozone monitoring network consists of seventeen sites and currently meets minimum network requirements. Eleven of those sites are situated in and around the two major metropolitan areas of the state, Oklahoma City and Tulsa. Current population estimates indicate that of the 3.7 million Oklahoma residents, 1.2 million live in the Oklahoma City Metropolitan Area and 0.9 million live in the Tulsa Metropolitan Area. The six monitors in and around the Oklahoma City Metro Area and five monitors in and around the Tulsa Metro Area exceed the number required by EPA. The monitors are strategically situated around both metro areas to increase the chances of sensing high ozone concentrations regardless of wind direction. Each metro area has monitors to each of the four compass points approximately ten to fifteen miles from the center of downtown, plus one near downtown. Oklahoma City has an additional site to the south of downtown. This insures good monitoring for population exposure. Lawton is the next largest populated area. Two ozone monitors are currently located in the Lawton area. McAlester, located in southeast Oklahoma, and Seiling, located in northwest Oklahoma, each have an ozone monitoring site. These sites are used to enhance EPA's AIRNOW ozone mapping program and to determine background and transport concentrations. The other two sites are considered special purpose monitors. They are situated just north of the Red River, currently near Burneyville and Waurika, to detect ozone transport from the Dallas/Ft. Worth area. While all the data obtained is used by AIRNow and the DEQ Air Quality Health Advisory Program to

generate near real time ozone maps, the sites in Seiling and McAlester were chosen to fill the large gaps that existed in their respective parts of the state.

DEQ feels the current ozone network is more than adequate to assess population exposure, background levels and interstate transport, and plans/proposes the following changes: The two Red River sites to be used during the 2010 ozone seasons will be Burneyville (40-085-0300) and Lake Waurika (40-067-0671). The two (2) SPM monitors located near the Southern border are re-located along the I-35 and I-44 corridors every 2 years. Terral (40-067-0670) and Walters (40-033-0680) have alternated as Red River sites for the past few years as have Burneyville (40-085-0300) and Healdton (40-019-0297). Terral may no longer be used as per request of the land owner. Burneyville and Healdton will continue as alternate locations. Lake Waurika will be used in place of Terral and will alternate with a new site to be determined before the 2011 ozone season. The Lawton South ozone site (649) will be re-located to Walters site (680).

Lead

Under 40 CFR part 58, appendix D 4.5 of the new monitoring regulations, at a minimum, there must be one source-oriented SLAMS site located to measure the maximum lead concentration in ambient air resulting from each lead source 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.

Currently, according to the 2005 National Emissions Inventory database, there is only one lead source which emits 1.0 or more tons per year in Oklahoma. That source is the U.S Army Ammunition Plant located near Savanna, Oklahoma. DEQ began sampling for lead to satisfy this requirement in January 2010 at the new monitoring site in Savanna.

Also, under 40CFR part 58, appendix D 4.5, lead monitoring is required in each Core Based Statistical Area (CBSA) with a population of 500,000 or greater. DEQ plans to meet that requirement with the installation of lead monitors in the Oklahoma City and Tulsa areas before the end of year.

DEQ is aware of the new lead NAAQS proposal and the possibility that the monitoring requirements for lead may change in the next few months. DEQ fully intends to revise its network at that time to meet any and all requirements that the new regulations will bring.

PM2.5

The Oklahoma Network for Manual PM2.5 FRM Monitors includes 3 urban sites (2 in Oklahoma City and 1 in Tulsa), 1 background site (McAlester), and 2 additional SLAMS sites (Pryor & Muskogee).

According to Table D-5 of Appendix D to Part 58, 40 CFR the minimum number of SLAMS PM2.5 monitors required for areas reading <85% of any standard are:

Oklahoma City – 2 Tulsa – 1

The minimum number of monitors required for areas reading >85% of the standard are:

Oklahoma City – 3 Tulsa – 2

Since all areas in Oklahoma have concentrations less than 85% of the standard (see Table 2, the max is 76%), the required number of monitors is 2 in Oklahoma City and 1 in Tulsa. The manual PM2.5 sampler in Tulsa is at our NCORE site and is operating on an everyday schedule. The two manual PM2.5 samplers in Oklahoma City operate every third day. These three samplers currently meet the NAAQS standards and are adequate for the upcoming review period for minimum sampling frequency requirements (column 2&3 of Table 2) as required under 40 CFR, part 58.12, “Operating Schedules”.

DEQ currently operates three additional manual PM2.5 FRM samplers: one at our background site in McAlester, and two population oriented sites in Pryor and Muskogee. We have collected data at these three sites since 2001 and a data summary table and graphs for these sites is located in Attachment 1.

As shown in Table 2 below, the FRM samplers at Sites 186 (Pryor) and 169 (Muskogee) produce virtually identical readings to those at site 1127 in Tulsa. DEQ has 10 years of data from Sites 186 & 169 and feels that additional data collection would be unjustified, and that resources could be better used to establish newly required future sites elsewhere in the network. We propose to cease data collection at the Pryor and Muskogee sites at the end of this calendar year.

Table 3 shows a comparison of the Design Values for both the Daily MAX and the Annual Mean at these sites. On average the Tulsa site reports an annual average of .26 $\mu\text{g}/\text{m}^3$ less than the Muskogee site and only .17 $\mu\text{g}/\text{m}^3$ less than the Pryor site. The Tulsa site reports a Daily MAX value that is on average 1-2 $\mu\text{g}/\text{m}^3$ higher than either site. As shown in table 2, all three sites are well below the Annual and Daily NAAQS. Graphs 1 and 2 graphically display the data contained in Table 3.

DEQ is very confident that the single FRM at Site 1127, which samples every day, is sufficient to protect public health in these areas, and that the FRMs at Sites 169 & 186 can be closed. The trend so far at these sites continues downward and thus not likely to change in the coming years because of national control efforts. The continued expenditure of resources for PM2.5 monitoring in Muskogee and Pryor is not necessary at this time.

Manual Method PM2.5 Sites	Current sampling schedule	Proposed sampling Schedule	Type of Collocated PM2.5 Sampler	2007 Daily 98th%	2008 Daily 98th%	2009 Daily 98th%	Est. Design Value (% Daily NAAQS)	2007 Annual Arithmetic Mean	2008 Annual Arithmetic Mean	2009 Annual Arithmetic Mean	Est. Design Value (% Annual NAAQS)
OKC											
40-109-1037	1/3	No change	FDMS	26.5	22.8	19.8	66%	11.08	10.72	9.47	69%
McAlester											
40-121-0415	1/3	No change	FDMS	28.0	22.0	21.9	68%	11.95	11.15	9.85	73%
Tulsa											
40-143-1127	1/1	No change	FDMS	30.3	23.8	24.4	75%	12.17	11.40	10.67	76%
Pryor											
40-097-0186	1/3	No change		28.0	21.8	20.6	67%	12.09	11.61	10.34	76%
Muskogee											
10-101-0169	1/3	No change		34.2	22.0	21.5	74%	12.57	11.48	10.33	76%
Tulsa											
40-143-0110	1/3	No change		27.8	24.2	22.5	71%	12.15	11.61	10.66	76%
OKC											
40-109-0035	1/3	No change	FRM	23.9	23.2	19.0	63%	11.05	10.19	9.04	67%

Table 2 - PM2.5 FRM Data Summary and NAAQS Comparison

PM2.5 FRM -- Annual Arithmetic Mean

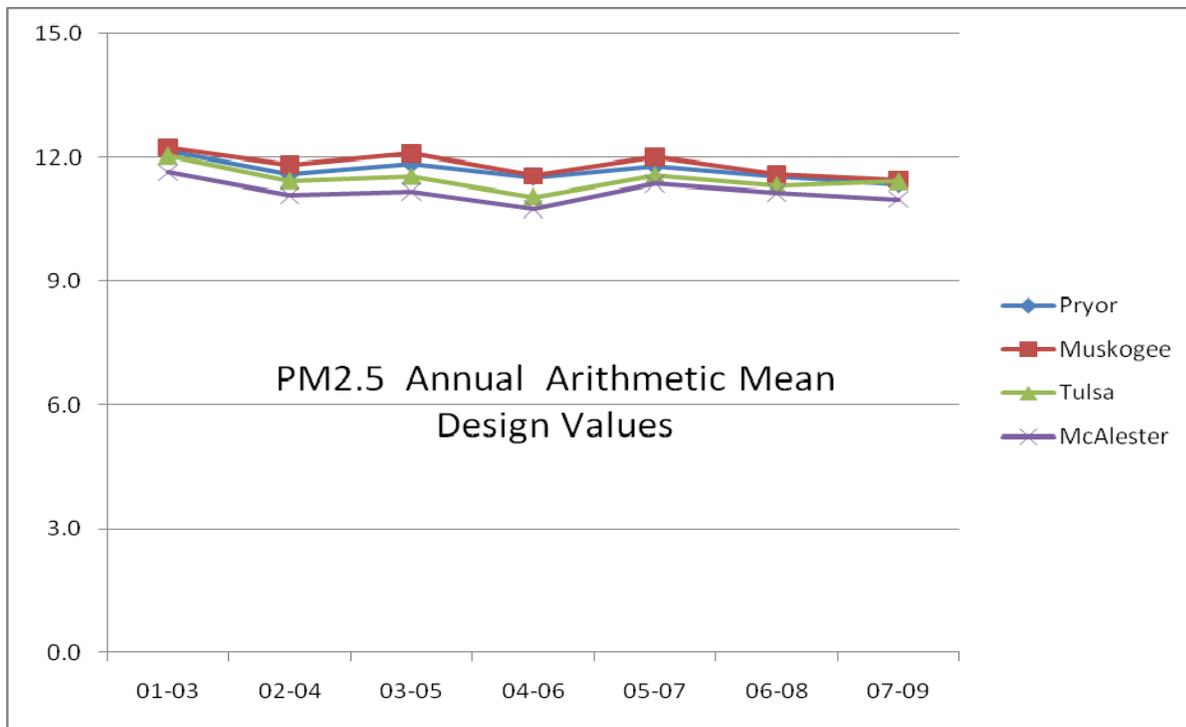
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Pryor	12.98	11.60	11.85	11.29	12.38	10.87	12.09	11.61	10.34
Muskogee	12.44	11.93	12.36	11.16	12.79	10.70	12.57	11.48	10.33
Tulsa	12.41	11.84	11.85	10.59	12.15	10.37	12.17	11.40	10.67
McAlester	11.76	11.55	11.60	10.07	11.84	10.31	11.95	11.15	9.85
	Design Value		01-03	02-04	03-05	04-06	05-07	06-08	07-09
Pryor			12.1	11.6	11.8	11.5	11.8	11.5	11.3
Muskogee			12.2	11.8	12.1	11.6	12.0	11.6	11.5
Tulsa			12.0	11.4	11.5	11.0	11.6	11.3	11.4
McAlester			11.6	11.1	11.2	10.7	11.4	11.1	11.0

PM2.5 FRM -- 98th Percentile Daily MAX

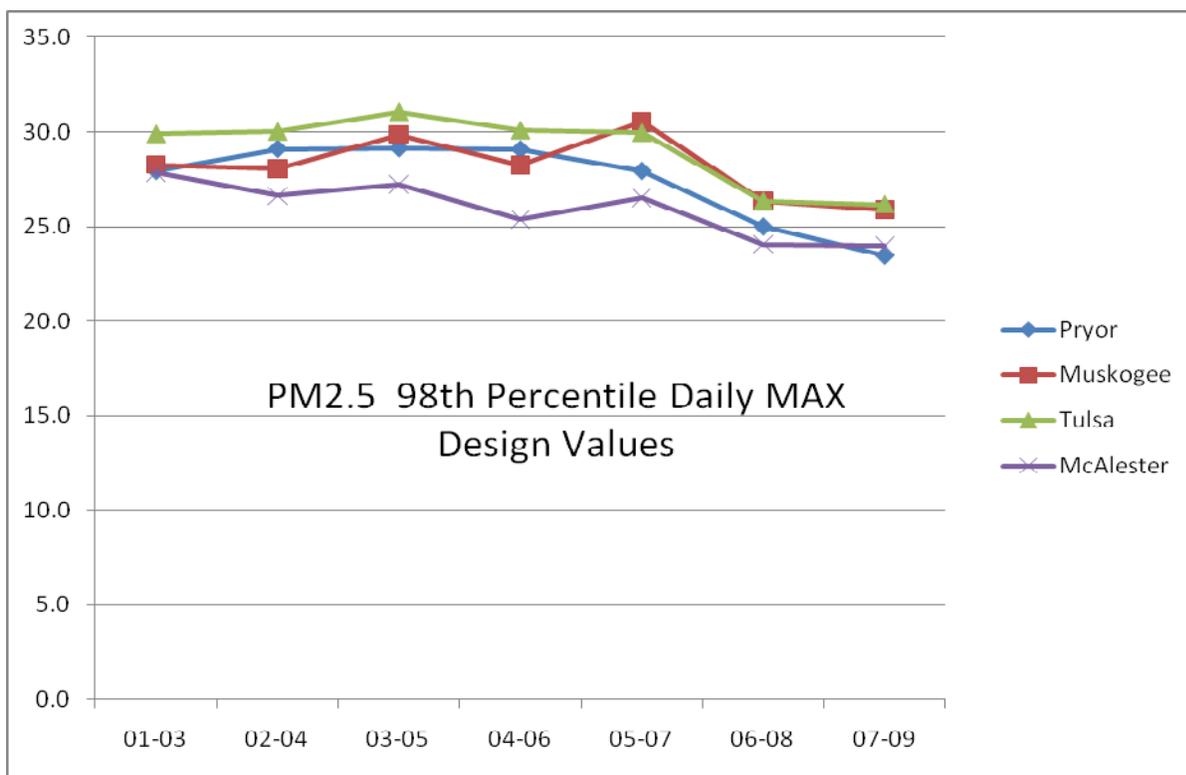
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Pryor	27.9	30.5	25.4	31.4	30.6	25.2	28.0	21.8	20.6
Muskogee	27.9	29.2	27.7	27.3	34.6	22.8	34.2	22.0	21.5
Tulsa	30.3	31.6	27.8	30.7	34.7	24.9	30.3	23.8	24.4
McAlester	28.2	27.6	27.8	24.5	29.4	22.2	28.0	22.0	21.9
	Design Value		01-03	02-04	03-05	04-06	05-07	06-08	07-09
Pryor			27.9	29.1	29.1	29.1	27.9	25.0	23.5
Muskogee			28.3	28.1	29.9	28.2	30.5	26.3	25.9
Tulsa			29.9	30.0	31.1	30.1	30.0	26.3	26.2
McAlester			27.9	26.6	27.2	25.4	26.5	24.1	24.0

NOTE: The sampler at Site 1127 in Tulsa operates everyday, whereas the samplers at Pryor, Muskogee & McAlester operate every 3 days. This fact would account for some of the small variation noted.

Table 3 – PM2.5 Trends Data



Graph 1



Graph 2

The following sites (see Table 4) use continuous PM2.5 monitors that are useful for calculating daily Air Quality Index (AQI) values. The monitors at these locations also report data hourly to EPA’s AIRNow web page to be used for real-time Air Quality particulate mapping and for Oklahoma’s Air Quality Health Advisory Program. During the coming year our continuous PM2.5 network will continue unchanged.

Continuous PM2.5 AQI sites	Sampling Frequency	AQS #
N. OKC	Hourly	40-109-1037
Lawton	Hourly	40-031-0651
McAlester	Hourly	40-121-0415
N. Tulsa	Hourly	40-143-1127
Moore	Hourly	40-027-0049
Healdton	Hourly	40-019-0297
Glenpool	Hourly	40-143-0174
Ponca City	Hourly	40-071-0602
Seiling	Hourly	40-043-0860

Table 4 – List of Continuous PM2.5 Sites

PM10

According to CFR 40, Table D-4 of Appendix D to Part 58, the minimum Requirements for low concentration sites and number of stations per MSA are as follows:

1. Oklahoma City – (2-4)
2. Tulsa – (1-2)
3. Lawton – 0

The following table describes our current PM-10 monitoring network:

PM10 Sites	Current Sampling Schedule	2007 Annual Max Conc.	2008 Annual Max Conc.	2009 Annual Max Conc.	Collo-cated	# of exceedances 2007-2009	Proposed Sampling Schedule
40-101-0167	Daily	106	112	137	No	0	Daily
40-109-0035	1/6	54	61	120	Yes	0	1/6
40-109-1037	1/6	—	64	116	No	0	1/6
40-143-0110	1/6	107	85	115	Yes	***	1/6
40-143-0191	1/6	54	40	84	No	0	—
40-143-1127	1/3	—	—	—	No	—	1/3

Table 5 – PM10 Data summary and NAAQS Comparison

*** An exceedance was observed in the 12/08/08 at the primary monitor. The observed concentration was 225 $\mu\text{g}/\text{m}^3$. We have determined that this value qualified as an exceptional event and should not be considered for routine data analysis or NAAQS compliance. We have not yet received an EPA concurrence determination.

DEQ installed a PM-coarse sampler at NCORE site, 40-143-1127, in April 2010. This PM-coarse sampler includes a PM-10 FRM sampler that will sample every third day. This increased our total PM-10 monitors in the Tulsa MSA to 3, which is one more than the CFR requires. We request approval to cease PM-10 sampling at our lowest concentration Tulsa MSA site (40-143-0191). After this change, our total number of NAAQS monitors in Tulsa would return to 2. In effect, this request would amount to relocating the PM-10 at Site 40-143-0191 to the NCORE site and increasing the sample frequency from every 6th day to every 3rd day.

DEQ believes this change will better leverage our resources by merging NCORE and NAAQS monitoring requirements into a single site location. Public health protection is enhanced as well due to the increased sampling frequency.

Sulfur Dioxide (SO₂), Hydrogen Sulfide (H₂S), Nitrogen Oxides (NO₂, NO_y), and Carbon Monoxide (CO)

Under 40 CFR part 58, appendix D 4 of the monitoring regulations, there are no minimum requirements for the number of SO₂, NO₂, or CO sites, however, discontinuation of existing sites must be approved by the EPA Regional Administrator.

SO₂ – Currently there are seven (7) SO₂ sites in Oklahoma. Three (3) of these are located in Tulsa and are source-oriented sites. There are also two (2) source-oriented sites in Ponca City and Muskogee. One (1) background site is maintained in Oklahoma City for trends and modeling purposes. One (1) trace-level SO₂ will be maintained for the proposed NCore site in North Tulsa (AQS site #40-143-1127). No changes in the SO₂ network are being requested during FY10.

H₂S – There are 2 sites located in the highly industrialized portion of West Tulsa that are used to determine compliance with the State H₂S standard. No changes are being planned during FY11.

NO₂, NO_y – There are four (4) Nitrogen Oxide sites in the state. These are maintained for NAAQS comparison, trends and modeling purposes and for use in studying pre-cursors of ozone. Two (2) of these monitors however, an NO₂ and a NO_y (trace level – requirement for NCore sites), are located at the states NCore Site #40-143-1127 in North Tulsa. No changes in the Nitrogen Oxide network are being planned at this time as roadside monitoring required by the new NO₂ rules do not have to be operational until January 1, 2013. The States network meets current regulations.

CO – DEQ currently operates three (3) CO monitors statewide. One of these is a trace level CO that was added as part of a pilot project funded by EPA. It was added as new technology and will be required instrumentation for the NCore site in Tulsa AQS site #40-143-1127. It is proposed that the CO monitor currently at site #40-109-033 be relocated to site #40-109-1037. Site #40-109-1037 is a multiple pollutant site in Oklahoma City so the addition of CO will compliment the current monitoring activities there. Site #40-109-033 is unique in that the inlet is 16.5 meters above ground level and the inlet at site #40-109-1037 is more appropriate for CO monitoring. It is also proposed that the CO monitor at site #40-143-191 be removed since the site will be closed. CO will be monitored in Tulsa by the trace level instrument at site #40-143-1127. With a CO monitor in Tulsa and Oklahoma City the trends monitoring will be maintained.

NCORE – According to CFR 40, part 58, appendix D, each state is required to operate at least one NCORE site. Sites are required to be operational by January 1, 2011 and shall contain the following minimum sampling equipment:

PM2.5 FRM Mass
PM2.5 Speciation
PMCoarse (10-2.5) FRM Mass
continuous PM2.5 Mass
ozone
trace level carbon monoxide
trace level sulfur dioxide
trace level nitrogen oxide
total reactive nitrogen
surface meteorology

ODEQ has installed monitors for all of the above parameters and currently meets minimum requirements. ODEQ has received official designation from EPA for this site as an NCore site.

PM2.5 Chemical Speciation

The new CFR 40 monitoring regulations require these sites only at approved NCore locations. The state currently operates a “National Trends Speciation Sampler” at our NCore site at AQS site # 40-143-1127 and a 2nd supplemental speciation sampler (not required) in Oklahoma City at AQS site #40-109-1037. No additions or reductions of this network are being planned during FY11.

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 states 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 a state wildlife management area (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 good background speciated data for PM2.5 and will be operated until EPA grant funding has ceased. The Class I IMPROVE monitor in the Wichita Mountains Wildlife Refuge will remain operational.

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. Comments concerning this review are encouraged and will be accepted during this 30 day period. Comments should be sent through regular postal service mail or through e-mail as listed below.

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