

Texas Commission on Environmental Quality

# 2014 Annual Monitoring Network Plan

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# 2014 Annual Monitoring Network Plan

## ***Introduction***

Under 40 Code of Federal Regulations (CFR) §58.10, states are required to submit an annual monitoring network plan to the U.S. Environmental Protection Agency (EPA) by July 1 of each year. This monitoring plan is required to provide the framework for establishment and maintenance of an air quality surveillance system, known commonly as the ambient air quality monitoring network. This document provides information on the Texas network of ambient air monitors established to meet regulatory requirements of the National Ambient Air Quality Standards (NAAQS) and other monitors that support this effort. The annual monitoring network plan must be made available for public inspection for at least 30 days prior to submission to the EPA. The plan and any comments received during the 30 day inspection period are forwarded to the EPA for final review and approval. This document presents the current Texas network, as well as proposed changes to the network from July 1, 2013, through December 31, 2015.

## **TCEQ Networks**

TCEQ operates an extensive network of monitors in support of assessing ambient air quality throughout the state of Texas. A list of monitors that fall under the State and Local Air Monitoring Stations (SLAMS), Photochemical Assessment Monitoring Stations (PAMS), Chemical Speciation Network (CSN), National Air Toxics Trends Stations (NATTS), National Core (NCore), and federally funded Special Purpose Monitors (SPM) Networks is located in Appendix A. A table of metropolitan statistical areas (MSAs), 2013 U.S. Census population estimates, and a summary count of required monitors is located in Appendix B.

## ***Regulatory Network Changes***

### **Nitrogen Dioxide (NO<sub>2</sub>)**

#### **Area-Wide Requirements**

Title 40 CFR Part 58, Appendix D, 4.3.3 requires one area-wide ambient air quality monitoring site (site) in each core based statistical area (CBSA) with a population greater than or equal to 1,000,000 people. The requirements stipulate that the site must be located in the area of highest expected NO<sub>2</sub> concentration that is also representative of a neighborhood or larger (urban) spatial scale. Neighborhood scale monitoring is representative of air quality conditions in an area with dimensions between 0.5 and 4.0 kilometers and urban scale monitoring is representative of air quality conditions in an area with dimensions between 4 and 50 kilometers. Based on 2013 U.S. Census estimates for Texas, area-wide neighborhood or urban scale NO<sub>2</sub> monitoring is required in the Dallas-Fort Worth-Arlington, Houston-The Woodlands-Sugarland, San Antonio-New Braunfels, and Austin-Round Rock CBSAs. The NO<sub>2</sub> monitors at the sites listed below were proposed in the 2012 and 2013 annual monitoring network plans as monitors meeting the area-wide requirements. This proposal is pending EPA Regional Administrator approval.

- Houston-The Woodlands-Sugarland: Clinton (AQS 482011035)

- Dallas-Fort Worth-Arlington: Dallas Hinton (AQS 481130069)
- San Antonio-New Braunfels: San Antonio Northwest (AQS 480290032)
- Austin-Round Rock: Austin Northwest (AQS 484530014)

### **Regional Administrator Required Monitoring (RA-40)**

Title 40 CFR Part 58, Appendix D, 4.3.4 states that the EPA Regional Administrators will collaborate with the States to designate a minimum of 40 NO<sub>2</sub> monitoring stations nationwide that are sited in locations to protect susceptible and vulnerable populations. In the 2012 and 2013 annual monitoring network plans, the TCEQ proposed the four NO<sub>2</sub> monitors listed below for RA-40 classification to meet this requirement. This proposal is pending EPA Administrator approval.

- El Paso: Ascarate Park SE (AQS 481410055)
- Houston: Clinton (AQS 482011035)
- Arlington: Arlington Municipal Airport (AQS 484393011)
- Nederland: Nederland High School (AQS 482451035)

### **Near-Road Monitoring Requirements**

#### *Federal Site Selection Requirements*

Title 40 CFR Part 58, Appendix D, 4.3.2 requires near-road monitors for CBSAs with populations over 500,000 people. For near-road monitoring, a microscale site must be located within 50 meters of a major roadway with high annual average daily traffic (AADT) counts. Microscale sites are representative of areas in close proximity to major roadways or emission sources. The EPA promulgated a final rule for the phased implementation of this near-road NO<sub>2</sub> monitoring on March 7, 2013. The first phase of the rule requires that one near-road site be deployed in CBSAs with populations greater than or equal to 1,000,000 people by January 1, 2014. An additional near-road site is required by January 1, 2015, in CBSAs with greater than or equal to 2,500,000 people or in any CBSA with a population greater than or equal to 500,000 people and one or more road segments with AADT counts of 250,000 or greater. One site is also required in CBSAs with a population greater than 500,000 people, but less than 1,000,000 people, by January 1, 2017. The requirements also stipulate that sites must be deployed in areas of maximum expected hourly NO<sub>2</sub> concentrations near a major road with high AADT counts with consideration to fleet mix, roadway design, congestion patterns, terrain, and meteorology. These monitors must be deployed away from obstructions or obstacles, within 50 meters of the major roadway, and with an inlet probe height between two and seven meters.

In Texas, this requirement results in a need for eight new near-road monitors. In the first phase, one near-road monitor was deployed in each of the following CBSAs: 1) Houston-The Woodlands-Sugarland, 2) Dallas-Fort Worth-Arlington, 3) Austin-Round Rock, and 4) San Antonio-New Braunfels. In the second phase, an additional near-road

monitor will be deployed by January 1, 2015, in the following CBSAs: 1) Houston-The Woodlands-Sugarland and 2) Dallas-Fort Worth-Arlington . In the final phase, one near-road monitor will be deployed by January 1, 2017, in the following CBSAs: 1) El Paso and 2) McAllen-Edinburg-Mission. See Table 1 for phase one sites deployed in 2014. Appendix C shows the number of existing and required NO<sub>2</sub> monitors.

**Table 1: Phase One Site List**

<b>AQS#</b>	<b>Site Name</b>	<b>AADT Ranking</b>	<b>FEAADT Ranking</b>	<b>Distance to Nearest Traffic Lane* (meters)</b>	<b>Probe Height** (meters)</b>
481131067	Dallas LBJ Freeway	15	7	24	4
482011066	Houston Southwest Freeway	1	1	24	4
484531068	Austin North Interstate 35	7	10	27	4
480291069	San Antonio Interstate 35	21	3	20	4

\*Distance is measured using mapping software and range finder equipment.

\*\*Meteorological parameters are measured at 10 meters above the ground.

#### *TCEQ Site Selection Process*

The TCEQ received the highest ranked AADT and Fleet Equivalent (FE) AADT counts for each CBSA with populations over 500,000 from the Texas Department of Transportation (TxDOT). The latitude and longitude of the AADT rankings provided by TxDOT and detailed in Appendix C represent the location of TxDOT traffic counting cameras along the targeted roadway. Through coordination between TCEQ and EPA Region 6, road segments were identified by establishing boundaries encompassing the area along the roadway of the traffic counting camera up to the point of a major roadway intersection or significant traffic divergence. These defined road segments were then ranked, as discussed below.

The TCEQ relied on the requirements in 40 CFR Part 58, Appendix D, 4.3.2(1) for the evaluation of potential near-road sites. The regulation states that:

The near-road NO<sub>2</sub> monitoring stations shall be selected by ranking all road segments within a CBSA by AADT and then identifying a location or locations adjacent to those highest ranked road segments, considering fleet mix, roadway design, congestion patterns, terrain, and meteorology, where maximum hourly NO<sub>2</sub> concentrations are expected to occur and siting criteria can be met in accordance with appendix E of this part. Where a State or local air monitoring agency identifies multiple acceptable candidate sites where maximum hourly NO<sub>2</sub> concentrations are

expected to occur, the monitoring agency shall consider the potential for population exposure in the criteria utilized to select the final site location. Where one CBSA is required to have two near-road NO<sub>2</sub> monitoring stations, the sites shall be differentiated from each other by one or more of the following factors: fleet mix; congestion patterns; terrain; geographic area within the CBSA; or different route, interstate, or freeway designation.

Therefore, the TCEQ first sorted the list of AADT counts provided by TxDOT in ascending order. Using the criteria discussed above, the TCEQ then determined the boundaries for each road segment encompassing the top 50 AADT counts. The TCEQ then conducted a physical site reconnaissance to locate potential monitoring sites within each of the top 50 AADT road segments. All areas within each defined road segment were considered for the potential to locate a near-road site.

During this reconnaissance, the TCEQ evaluated the logistical considerations provided under 40 CFR Part 58, Appendix E and the *Near-road NO<sub>2</sub> Monitoring Technical Assistance Document (TAD)* guidelines, including roadway design (at-grade or close to at-grade spaces were preferred), level terrain, distance from obstructions, and meteorology. Additional logistical considerations were also considered, including power availability and sufficient space to accommodate the monitoring station and equipment.

The TCEQ's standard site size is 40-foot by 40-foot, which allows for the inclusion of meteorological equipment and long-term site flexibility to accommodate additional equipment and safe ingress and egress to the site. Meteorological data are valuable in determining potential nearby receptors and sources, as well as assessing data trends. The rigid, 10-meter meteorological tower requires four guy-wires anchored to the fence for safety. The angle and tension of the guy-wires allow the structure to withstand lateral loads such as wind and the cantilevered sensor boom. In addition, the larger 40-foot by 40-foot site provides long-term flexibility for addressing any future near-road monitoring requirements that may target additional parameters. Prior planning for multi-parameter monitoring ensures that the addition of monitoring equipment will not require site improvements, such as site pad or electrical expansion that may affect existing monitoring equipment. Expansion of an existing site can be costly, therefore planning for future expansion from the beginning of site preparation saves money and time in the long-term use of the site.

In addition to conducting the physical site reconnaissance, the TCEQ requested input from TxDOT and local metropolitan planning organizations regarding congestion patterns, fleet mix, traffic diversion plans, future roadway expansions, and long-term construction projects that may later jeopardize continuous site operation or invalidate site representativeness.

After receiving feedback from TxDOT and the local metropolitan planning organizations, the TCEQ made a final evaluation using all available data for each road segment to determine the road segment's overall viability and ranking. The TCEQ focused on complying with the directly-applicable federal requirements listed in 40 CFR Part 58, Appendix D, 4.3.2 by primarily prioritizing potential sites based on AADT ranking. The TCEQ considered road segment FE-AADT rankings, but did not rely solely

on FE-AADT in the prioritization of potential sites since FE-AADT is not a specific siting requirement under 40 CFR Part 58, Appendix D, 4.3.2. The TCEQ then collectively considered logistical constraints, such as space, power availability, terrain, highway grade, and long-term risk to continued viability of site use due to planned roadway construction projects. Failure to meet the criteria for any single parameter did not necessarily preclude the segment from consideration. Appendix D of this plan details the specific reasons for each roadway segment's viability determination.

*Near-Road Phase Two Sites*

Based on this evaluation process, a final TCEQ ranking was assigned to each roadway segment with a viable site for phase two monitoring. The TCEQ worked closely with EPA Region 6 staff throughout this ranking process to ensure sites were selected in accordance with 40 CFR Part 58, Appendix D, 4.3.2. Although TCEQ evaluated between 50 and 120 of the top-ranked segments in each CBSA for phase two monitoring, only the top three road segments that include a viable monitoring location consistent with the requirements set forth in 40 CFR Part 58, Appendices D and E, are included in Table 2. TCEQ will pursue site agreements for the proposed phase two sites listed below and will work with EPA Region 6 to determine the final location of the phase two site for each CBSA. Appendix D contains detailed information regarding the viability determination for each road segment starting with the highest AADT ranked segments.

**Table 2: Potential Phase Two NO<sub>2</sub> Near-Road Sites**

<b>TCEQ Rank</b>	<b>AADT Rank</b>	<b>FE AADT Rank</b>	<b>Latitude</b>	<b>Longitude</b>	<b>Location</b>
<b>Houston</b>					
1	8	13	29.85462	-95.39928	On Interstate 45 and Troy Road
2	10	15	29.88090	-95.41198	On Interstate 45 north of Deqalt Street
3	19	20	29.80862	-95.37349	On Interstate 45 south of Wynne Street
<b>Dallas</b>					
1	26	27	32.67594	-97.02460	On Interstate 20 East of State Highway 161
2	36	90	32.66571	-97.32595	On Interstate 20 and South Adams Street
3	49	46	32.67596	-97.03442	On Interstate 20 east of South Great Southwest Parkway

## Sulfur Dioxide (SO<sub>2</sub>)

Under 40 CFR Part 58, Appendix D, 4.4.2, states are required to establish an SO<sub>2</sub> monitoring network based on a calculated population weighted emissions index (PWEI). This index is calculated by multiplying the population of a CBSA with the emissions inventory (EI) data for counties within that CBSA. The calculated value is then divided by one million in order to obtain the PWEI value. PWEI monitoring requirements are as follows: 1) one monitor in CBSAs with a PWEI value greater than 5,000, 2) two monitors in CBSAs with a PWEI value greater than 100,000, and 3) three monitors in CBSAs with a PWEI value greater than 1,000,000. As shown in Appendix E, the TCEQ used 2013 U.S. Census population estimates and 2011 National Emissions Inventory data with 2012 point source EI data to determine that no additional SO<sub>2</sub> monitors are required beyond the new Amarillo SO<sub>2</sub> monitor previously discussed in the 2013 annual monitoring network plan. The Amarillo 24<sup>th</sup> Avenue site (AQS 483751025) was deployed in October 2013.

## Lead (Pb)

Title 40 CFR Part 58, Appendix D, 4.5, requires a minimum of one source-oriented ambient air Pb monitoring site to measure maximum concentrations near each facility that emits 0.50 tons per year (tpy) or more of Pb based on the most recent National Emission Inventory or other scientifically justifiable methods and data. The EPA may waive this requirement if documentation is included demonstrating that Pb emissions from the source do not contribute to concentrations in excess of 50% of the NAAQS. In addition to source oriented lead monitoring, lead monitors are also required as part of the NCore network at Dallas Hinton (AQS 481130069), Houston Deer Park #2 (AQS 482011039), and Ascarate Park SE (AQS 481410055).

## Current Regulatory Pb Monitoring Sites

The TCEQ reviewed 2012 point source EI data to evaluate sources that reported Pb emissions of 0.50 tpy or more. Table 3 lists the sources emitting greater than 0.50 tpy of Pb in 2012. No new sources emitting above 0.50 tpy were identified.

**Table 3: 2012 Pb Point Source Emissions Inventory Data > 0.50 TPY**

Company	County	Pb Emissions (TPY)	TCEQ Response
Exide Technologies	Collin	0.6016	Pb is currently monitored at the Frisco 5 <sup>th</sup> St., Frisco 7, Frisco Eubanks, and Frisco Stonebrook sites.
Conesus LLC	Kaufman	2.4123	Pb is currently monitored at the Terrell Temtex site.

The Pb samplers at Skyline Park (AQS 481410058) and Houston East (AQS 482011034) were proposed to be decommissioned in the 2013 annual monitoring network plan. These monitors are not oriented near Pb sources emitting greater than 0.50 tpy and design values have remained well below 50% of the Pb NAAQS. This proposal is pending EPA approval.

### **Current Pb waivers**

Although the 2012 point source EI data was below 0.50 tpy, TCEQ previously obtained Pb waivers for the sources listed below. In 2009, the TCEQ submitted waiver requests for the source-oriented Pb monitoring required at the Red River Army Depot near Texarkana, the U.S. Army Fort Hood facility near Killeen, and the Oxbow Calcining facility in Port Arthur. These waivers were approved by EPA Region 6 in their response letter to the 2010 annual monitoring network plan dated December 23, 2010. In the 2011 annual monitoring network plan, the TCEQ also submitted waiver requests for the source-oriented Pb monitoring required at Coletto Creek Power LP in Goliad County and San Miguel Electric Cooperative, Incorporated in Atascosa County. These waivers were approved by EPA Region 6 in their response letter to the 2011 annual monitoring network plan received July 30, 2012. The TCEQ has reviewed these sites as part of this year's network assessment and determined that they continue to meet eligibility requirements. In 2015 and 2016, the TCEQ will reapply for these waivers as required by 40 CFR Part 58, Appendix D, 4.5(a) (ii).

In February 2013, TCEQ submitted a waiver request for the source-oriented Pb monitoring required at the Lower Colorado River Authority Fayette Power Plant in Fayette County. This waiver request was included in the 2013 annual monitoring network plan and is pending EPA approval.

### **Special Airport Pb Monitoring**

Title 40 CFR Part 58, Appendix D, 4.5, (iii), requires additional Pb monitoring for one year at select airports with Pb EI data above 0.50 tpy but less than 1.0 tpy. EPA identified these airports as having characteristics that may cause or contribute to ambient Pb concentrations that approach or exceed the NAAQS.

As part of this one year monitoring effort, the TCEQ deployed a new Pb monitoring station at Stinson Municipal Airport in Bexar County. This site, San Antonio 99<sup>th</sup> Street (AQS 480291052), began sampling on July 23, 2012. As shown in Table 4 below, the rolling 3-month average of the monitoring data was below 50% of the Pb NAAQS. With EPA concurrence via letter on December 18, 2013, the TCEQ decommissioned the site on December 19, 2013.

**Table 4: San Antonio 99<sup>th</sup> Street Maximum Rolling 3-Month Averages**

<b>Month</b>	<b>Pb-TSP Rolling 3-Month Average (<math>\mu\text{g}/\text{m}^3</math>)</b>	<b>Percent of Pb NAAQS</b> Current Pb NAAQS is 0.15 $\mu\text{g}/\text{m}^3$
August 2012	N/A	N/A
September 2012	N/A	N/A
October 2012	0.0284	19%
November 2012	0.02295	15%
December 2012	0.02231	15%
January 2013	0.01684	11%
February 2013	0.01177	8%
March 2013	0.01006	7%
April 2013	0.01013	7%
May 2013	0.01342	9%
June 2013	0.01649	11%
July 2013	0.01797	12%
August 2013	0.01663	11%

### **Ozone ( $\text{O}_3$ )**

Title 40 CFR Part 58, Appendix D, 4.1, requires  $\text{O}_3$  monitoring in MSAs with populations above 350,000 people. Monitors are also required in MSAs with lower populations if measured  $\text{O}_3$  values within that MSA are within 85% of the NAAQS. After assessing  $\text{O}_3$  monitoring requirements using the most recently available population estimates and design values, the TCEQ determined that no additional  $\text{O}_3$  monitors are required beyond the Killeen-Temple  $\text{O}_3$  monitor previously proposed in the 2013 annual monitoring network plan. The Temple Georgia site (AQS 480271045) was deployed in October 2013 within West Temple Park in Temple, Texas, to satisfy the  $\text{O}_3$  monitoring requirements for the Killeen-Temple MSA. The  $\text{O}_3$  monitoring requirements assessment is included in Appendix F.

### **Carbon Monoxide (CO)**

Title 40 CFR Part 58, Appendix D, 3.0 and 5.0, require high sensitivity CO monitors at NCore sites and one PAMS site per  $\text{O}_3$  non-attainment area. Title 40 CFR Part 58, Appendix D, 4.2, also requires the future deployment of CO monitors at near-road sites in 2015 and 2017. In order to meet near-road monitoring requirements in the Dallas-Fort Worth-Arlington and Houston-The Woodlands-Sugarland CBSAs, the TCEQ plans to add CO monitors to one of the two near-road sites in each of these CBSAs by January 1, 2015.

The total number of required and current CO monitors in each MSA is included in Appendix G. TCEQ exceeds minimum requirements through the operations of 19 CO monitors and 4 high sensitivity CO monitors throughout the state. In the 2013 annual monitoring network plan, the TCEQ proposed to decommission CO monitors being

operated beyond minimum requirements at the nine sites listed below. The CO monitors listed below have maintained design values well below the 1-hour and 8-hour CO NAAQS. This proposal is pending EPA approval.

- El Paso UTEP (AQS 481410037)
- Skyline Park (AQS 481410058)
- Houston Aldine (AQS 482010024)
- Lang (AQS 482010047)
- Houston Texas Avenue (AQS 482010075)
- Park Place (AQS 482010416)
- Fort Worth Northwest (AQS 484391002)
- Arlington Municipal Airport (AQS 484393011)
- Austin Northwest (AQS 484530014)

### **Particulate Matter of 10 Microns or Less (PM<sub>10</sub>)**

Title 40 CFR Part 58, Appendix D, 4.6, specifies PM<sub>10</sub> monitoring requirements in MSAs based on population and monitored design values, if available. After evaluating PM<sub>10</sub> monitoring requirements using the most recently available U.S. Census population data and measured PM<sub>10</sub> concentrations, the TCEQ determined that minimum monitoring requirements are met or exceeded for all areas except that one additional PM<sub>10</sub> monitor is required in the McAllen-Edinburg-Mission MSA. TCEQ proposes to deploy the required PM<sub>10</sub> monitor at the new proposed PM<sub>2.5</sub> site scheduled to be deployed in this MSA in 2014. A map depicting the proposed location of this monitor is provided in Appendix H. The number of required and current PM<sub>10</sub> monitors in each MSA is included in Appendix I.

During 2013, TCEQ replaced aging PM<sub>10</sub> equipment at several sites to ensure that we continue to meet data completeness requirements. The aging equipment are no longer manufactured and difficult to maintain due to the unavailability of replacement parts and technical support. PM<sub>10</sub> equipment at the sites listed below were replaced with federal reference method (FRM) equipment with a different sampling method.

- Austin Webberville (AQS 484530021)
- Austin Audubon Society (AQS 484530020)
- Dona Park primary and collocated QC samplers (AQS 483550034)
- Karnack (AQS 482030002)

Additionally, with EPA concurrence, the PM<sub>10</sub> collocated QC monitor at Laredo Vidaurri was replaced with the same equipment model as the primary monitor so that both monitors have matching sampling methods. The method codes for these monitors have been updated in AQS, and the PM<sub>10</sub> network assessment in Appendix I lists the current method codes.

TCEQ also re-evaluated PM<sub>10</sub> collocation requirements in 40 CFR Part 58, Appendix A, 3.3.1, which requires PM<sub>10</sub> collocation at 15% of the sites within the network to assess precision. A minimum of one PM<sub>10</sub> collocated QC monitor is required per method, and these collocated monitors must be located at sites that measure within the highest 25<sup>th</sup> percentile within the network. In the 2013 annual monitoring network plan, TCEQ proposed to decommission the PM<sub>10</sub> collocated QC monitors at Stage Coach (AQS 484393010) and Texas City Fire Station (AQS 481670004). Due to the equipment replacements discussed above, TCEQ proposes to retain the Texas City Fire Station (AQS 481670004) PM<sub>10</sub> collocated QC monitor at this time to continue to meet EPA collocation requirements. TCEQ still proposes to decommission the PM<sub>10</sub> collocated QC monitor at Stage Coach (AQS 484393010), pending EPA approval.

TCEQ also commits to replacing the PM<sub>10</sub> collocated QC monitor at Socorro Hueco (AQS 481410057) with the same equipment model as the primary monitor so that both monitors have matching sampling methods. TCEQ will continue collocated QC monitoring at the Ojo de Agua (AQS 481411021), Clinton (AQS 482011035), Convention Center (AQS 481130050), Houston Deer Park #2 (AQS 482011039), Laredo Vidaurri (AQS 484790016), and Socorro Hueco (AQS 481410057) sites. Table 5 summarizes PM<sub>10</sub> collocation requirements.

**Table 5: Summary of PM<sub>10</sub> Collocation Requirements**

<b>Sampling Method Code</b>	<b>Total # Primary Monitors</b>	<b>Required # Collocated Monitors</b>	<b>Current # Collocated Monitors</b>	<b>Additional Collocated Monitors Needed</b>	<b>Excess Collocated Monitors</b>	<b>Excess Collocated Monitors for Decommission</b>
62	8	1	2	0	1	
63	1	1	2	0	1	
64	5	1	2	0	1	Stage Coach
141	12	2	3	0	1	
<b>Total</b>	<b>27</b>	<b>5</b>	<b>9</b>	<b>0</b>	<b>4</b>	

### **Particulate Matter of 2.5 Microns or Less (PM<sub>2.5</sub>)**

Title 40 CFR Part 58, Appendix D, 4.7, requires PM<sub>2.5</sub> monitoring in MSAs with populations above 500,000 people and in MSAs with lower populations if measured PM<sub>2.5</sub> values for an MSA are within 85% of the NAAQS. On December 14, 2012, EPA lowered the annual average primary standard from 15 to 12 micrograms per cubic meter (µg/m<sup>3</sup>). In order to meet PM<sub>2.5</sub> monitoring requirements based on 2011 - 2013 design values, the TCEQ plans to add a PM<sub>2.5</sub> FRM gravimetric monitor for the Brownsville-

Harlingen CBSA at Brownsville (AQS 480610006) by January 1, 2015, and at a new site in the McAllen-Edinburg-Mission CBSA by January 1, 2015. TCEQ proposes to collocate PM<sub>2.5</sub> tapered element oscillating microbalance (TEOM) monitors at these sites and operate the FRM monitors once every sixth day. A map depicting the proposed location of the McAllen-Edinburg-Mission FRM monitor is located in Appendix H. TCEQ's assessment of PM<sub>2.5</sub> monitoring requirements and current monitors is included in Appendix J.

The TCEQ proposed to add a PM<sub>2.5</sub> FRM gravimetric monitor to the Austin Northwest site (AQS 484530014) in the 2013 annual monitoring network plan based on the 2010-2012 design value of 10.2 µg/m<sup>3</sup>. After further evaluation using 2011-2013 design values, the additional monitor is not required to meet regulatory requirements in the Austin-Round Rock MSA based on the new design value of 9.6 µg/m<sup>3</sup>. As a result, no additional PM<sub>2.5</sub> FRM gravimetric monitors will be deployed in the Austin-Round Rock MSA at this time.

Title 40 CFR Part 58, Appendix D, 4.7.1 (b)(2) requires a minimum of one PM<sub>2.5</sub> monitor in each CBSA with a population greater than or equal to 2,500,000 people to be collocated at a near-road NO<sub>2</sub> monitoring station by January 1, 2015. In order to meet PM<sub>2.5</sub> near-road monitoring requirements in the Dallas-Fort Worth-Arlington and Houston-The Woodlands-Sugarland CBSAs, the TCEQ will deploy a PM<sub>2.5</sub> FRM gravimetric sampler operated every sixth day and a collocated PM<sub>2.5</sub> TEOM monitor at one of the two near-road sites in each of these CBSAs by January 1, 2015.

The TCEQ proposes to continue PM<sub>2.5</sub> FRM gravimetric sampling at Convention Center (AQS 481130050) in Dallas and to discontinue the PM<sub>2.5</sub> speciation monitoring at this site. The Dallas Hinton NCore site is located within five miles of this site and provides similar speciation data.

The TCEQ currently operates a PM<sub>2.5</sub> FRM and TEOM monitor at the Haws Athletic Center site (AQS 484391006) in Fort Worth on a one in three day frequency. The TCEQ proposes to change the sampling frequency for the FRM monitor to once every sixth day due to the collocation of the TEOM monitor.

In March 2013, the TCEQ deployed a PM<sub>2.5</sub> FRM gravimetric monitor with speciation analysis at the Galveston 99<sup>th</sup> Street site (AQS 481671034) to support an exceptional events special study. The sampler will operate daily from April 2014 through August 2014 and then once every sixth day from September 2014 through March 2015. The special purpose speciation study will end March 2015. The PM<sub>2.5</sub> FRM gravimetric monitor will continue to operate once every sixth day after March 2015.

In the 2013 annual monitoring network plan, the TCEQ proposed to add a TEOM monitor at the Texarkana site (AQS 480370004) to meet sampling frequency requirements. Due to logistical issues, the TCEQ was unable to add the TEOM monitor. In January 2014, the PM<sub>2.5</sub> FRM sampler began sampling once every third day to meet sample frequency requirements, eliminating the need to deploy the TEOM.

## **Volatile Organic Compounds (VOC)**

### **Automated Gas Chromatographs (AutoGCs)**

Title 40 CFR Part 58, Appendix D, 5.3, requires speciated VOC monitoring at two sites per O<sub>3</sub> nonattainment area. AutoGC monitoring includes the continuous analysis of ambient air samples for up to 46 individual compounds on an hourly basis. The TCEQ owns and operates eight AutoGCs as part of the PAMS network. These AutoGCs are sited throughout the state to aid in characterizing specific regional and local ambient air conditions in the state.

Under the U.S./Mexico Border grant, the TCEQ also operated a special purpose AutoGC at the El Paso Delta site (AQS 481411011) to characterize maximum precursor emissions impact. The El Paso Delta site (AQS 481411011) was decommissioned in August 2013.

### **Canisters**

Canisters collect discrete samples over a 24-hour period that are analyzed for 86 individual VOCs. Several PAMS canister monitors were approved by the EPA for decommissioning in the 2012 annual monitoring network plan because the monitors were beyond minimum requirements. As stated in the 2013 annual monitoring network plan, the Italy (AQS 481391044) canister sampler was retained to provide information regarding regional transport of VOCs into the Dallas/Fort Worth areas. The following canister samplers were decommissioned in May 2013.

- Ascarate Park SE (AQS 481410055)
- Galveston 99<sup>th</sup> Street (AQS 481671034)
- Houston Aldine (AQS 482010024)
- Northwest Harris County (AQS 482010029)
- Kaufman (AQS 482570005)
- Conroe Relocated (AQS 483390078)

### ***Status of Changes Proposed in 2012***

- Dona Park (AQS 483550034) - The TCEQ relocated the PM<sub>2.5</sub> TEOM monitor from Corpus Christi West (AQS 483550025) to this site in June 2013 to meet sampling frequency requirements. This change was approved by EPA in their response letter to the 2012 annual monitoring network plan dated January 2, 2013.
- Austin Audubon Society (AQS 484530020) - The TCEQ discontinued the speciated PM<sub>2.5</sub> analysis in May 2013 but continued the gravimetric FRM analysis to meet federal requirements. This change was approved by EPA in their response letter to the 2012 annual monitoring network plan dated January 2, 2013.

- Baytown (AQS 482010058) - The TCEQ relocated the PM<sub>2.5</sub> TEOM monitor from Channelview (AQS 482010026) to this site in June 2013 to meet sampling frequency requirements. This change was approved by EPA in their response letter to the 2012 annual monitoring network plan dated January 2, 2013.
- Isla Blanca Park (AQS 480612004) - The TCEQ replaced the PM<sub>2.5</sub> speciation monitor at this site with a continuous PM<sub>2.5</sub> TEOM monitor in June 2013. This change was approved by EPA in their response letter to the 2012 annual monitoring network plan dated January 2, 2013.

### ***Status of Changes Proposed in 2013***

- Dew Point Monitors – The TCEQ proposed to re-designate all dew point monitors in the TCEQ network as SPM in the 2013 annual monitoring network plan. These monitors were previously used to meet humidity reporting requirements for the PAMS network but are now beyond minimum requirements. The TCEQ reports data measured by relative humidity sensors to meet this PAMS requirement. This proposal is pending EPA approval.

### ***Additional Changes in 2014***

- Wichita Falls (AQS 48450315) - The PM<sub>2.5</sub> TEOM monitor at this site was decommissioned in February 2014. This monitor was beyond minimum requirements. This change was approved by EPA via email in March 2014.
- Baytown Eastpoint (AQS 482011017) – The Baytown Eastpoint site was temporarily decommissioned in September 2013 at the request of the property owner. In February 2014, the site was redeployed at a new location on Garth Road within one mile of the original location. Due to the close proximity, the AQS number remained the same, but the site name was changed to Baytown Garth to reflect the new location. This change was approved by EPA via email in September 2013.
- SETRPC 40 Sabine Pass (AQS 482450101) NO<sub>y</sub> – TCEQ proposes to decommission this NO<sub>y</sub> monitor. The Beaumont-Port Arthur area was re-designated as a maintenance area on October 20, 2010. As a result, this monitor is beyond minimum requirements and is no longer needed to meet PAMS monitoring requirements.
- Fort Worth Northwest (AQS 484391002) carbonyl monitor – Title 40 CFR Part 58, Appendix D, Table D-6, requires one carbonyl monitor at a PAMS Type 2 site per O<sub>3</sub> nonattainment area. TCEQ meets this requirement for the Dallas-Fort Worth-Arlington CBSA through the operation of the carbonyl monitor at the Dallas Hinton (AQS 481130069) site. As a result, TCEQ proposes to re-designate the Fort Worth Northwest (AQS 484391002) carbonyl monitor from PAMS to SPM. This monitor is beyond minimum requirements and is not needed to meet PAMS monitoring requirements.

- Ascarate Park SE (AQS 481410055) carbonyl monitor - The TCEQ proposes to re-designate this monitor from PAMS to SPM. The El Paso area was re-designated as a maintenance area on January 15, 2009. As a result, this monitor is beyond minimum requirements and no longer needed to meet PAMS monitoring requirements.
- El Paso UTEP (AQS 481410037) radar profiler - TCEQ proposes to re-designate this monitor from PAMS to SPM. The El Paso area was re-designated as a maintenance area on January 15, 2009. As a result, this monitor is beyond minimum requirements and no longer needed to meet PAMS monitoring requirements.
- Due to recent public comments, TCEQ commits to further evaluate the El Paso network in advance of the 2015 annual monitoring network plan.

### ***Instructions for Comments***

Any comments pertaining to this document should be sent to the following contact:

Texas Commission on Environmental Quality  
P.O. Box 13087  
Attention: Stephanie Ma, MC-165  
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Or email at: [monops@tceq.texas.gov](mailto:monops@tceq.texas.gov)