

Texas Commission on Environmental Quality

2016 Annual Monitoring Network Plan

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2016 Annual Monitoring Network Plan

Introduction

Title 40 Code of Federal Regulations (CFR) Part 58.10 requires states to submit an annual monitoring network plan (AMNP) to the United States (U.S.) Environmental Protection Agency (EPA) by July 1 of each year. This monitoring plan is required to provide the implementation and maintenance framework for an air quality surveillance system, known commonly as the ambient air quality monitoring network. The AMNP must be made available for public inspection and comment for at least 30 days prior to submission to the EPA. The AMNP is forwarded to the EPA for final review and approval along with any comments received during the 30-day inspection period and the associated Texas Commission on Environmental Quality (TCEQ) responses as an appendix.

This document provides information on the TCEQ ambient air monitoring network established to meet the National Ambient Air Quality Standards (NAAQS) regulatory requirements and other monitors that support this effort. This document presents the current Texas network, as well as recommended changes to the network, from July 1, 2015, through December 31, 2017. As described in 40 CFR Part 58, Appendix D, monitors are deployed to meet minimum design requirements for the State or Local Air Monitoring Stations (SLAMS), Photochemical Assessment Monitoring Stations (PAMS), and National Core Multipollutant Monitoring Stations (NCore) federally required ambient air monitoring networks. A list of all monitors and their respective networks is located in Appendix A.

Based on annual internal audits performed to date, all monitoring sites are meeting the requirements defined in 40 CFR Part 58 Appendices A, B, C, D, and E, with one exception. The Brownsville site (EPA air quality system [AQS] database number [#] 480610006) is no longer meeting the siting criteria defined 40 CFR Part 58, Appendix E due to a utility structure constructed in the monitoring path of the sampler inlets after the site was deployed. The TCEQ is investigating options for site relocation to meet siting criteria.

Because SLAMS requirements are partially based on population, a summary of core based statistical areas (CBSAs) or metropolitan statistical areas (MSAs), 2015 U.S. Census Bureau population estimates, and a summary count of required monitors is located in Appendix B. The TCEQ relied on this summary in evaluating monitors as documented in this AMNP. The U.S. Census Bureau defines CBSA as a collective term for MSAs, and the terms are used interchangeably in this plan.

Regulatory Network Changes

Nitrogen Dioxide (NO₂)

The TCEQ NO₂ network is designed to meet area-wide, Regional Administrator 40 (RA-40), and near-road monitoring requirements. Title 40 CFR Part 58, Appendix D, Section 5 also requires hourly averaged NO₂, nitrogen oxide (NO), and total reactive nitrogen compounds (NO_y) to be collected at required NCore sites under the PAMS program. The state-wide NO₂ network consists of NO₂ monitoring at 46 sites, with NO_y measured at five sites. Appendix C of this plan summarizes the monitoring requirements and the current number of NO₂ and NO_y monitors in each MSA in Texas.

Area-Wide Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.3.3 requires one area-wide ambient air quality monitoring site in each CBSA with a population of 1,000,000 or more persons in Texas. The requirements stipulate that the site must be located in the area with the expected highest NO₂ concentrations that are 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 4.0 and 50 kilometers according to 40 CFR Part 58, Appendix D, Section 4.3.5(a).

Based on 2015 U.S. Census Bureau population estimates for Texas, area-wide neighborhood or urban scale NO₂ monitoring is required in the Dallas-Fort Worth-Arlington, Houston-Woodlands-Sugar Land, San Antonio-New Braunfels, and Austin-Round Rock CBSAs. The following four NO₂ monitors meet these area-wide requirements, as approved in the TCEQ *2013 Annual Monitoring Network Plan* response letter from EPA Region 6 dated May 28, 2014. These monitors and their identification numbers are:

- Houston-The Woodlands-Sugar Land: Clinton (AQS# 482011035);
- Dallas-Fort Worth-Arlington: Dallas Hinton (AQS# 481130069);
- San Antonio-New Braunfels: San Antonio Northwest (AQS# 480290032); and
- Austin-Round Rock: Austin Northwest (AQS# 484530014).

Regional Administrator Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.3.4 states that the EPA Regional Administrators will collaborate with the states to designate a minimum of 40 NO₂ monitoring stations nationwide that are sited in locations to protect susceptible and vulnerable populations. The TCEQ collaborated with the EPA to identify appropriate monitoring sites to meet this requirement. The following four NO₂ monitors meet this requirement, as approved in the TCEQ *2013 Annual Monitoring Network Plan* response letter from EPA Region 6 dated May 28, 2014:

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

Near-Road NO₂ Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.3.2 requires one microscale near-road monitor in each CBSA with a population of 500,000 or more persons to be located near a major road with high annual average daily traffic (AADT) counts. An additional near-road monitor is required in each CBSA with a population of 2,500,000 or more persons. The current TCEQ near-road monitoring network, summarized in Table 1, is meeting this requirement with six operational near-road sites as approved in the TCEQ 2014 *Annual Monitoring Network Plan* response letter from EPA Region 6 received January 14, 2015.

Table 1: Near-Road Site List

AQS Number	Site Name	Core Based Statistical Area	U.S. Census Bureau 2015 Population Estimate	Parameters Monitored (described below)
481131067	Dallas LBJ Freeway	Dallas-Fort Worth-Arlington	7,102,796	NO ₂ , met
484391053	Fort Worth California Parkway North	Dallas-Fort Worth-Arlington	7,102,796	NO ₂ , CO, PM _{2.5} , met
482011066	Houston Southwest Freeway	Houston-The Woodlands-Sugar Land	6,656,947	NO ₂ , met
482011052	Houston North Loop	Houston-The Woodlands-Sugar Land	6,656,947	NO ₂ , CO, PM _{2.5} , met
480291069	San Antonio Interstate 35*	San Antonio-New Braunfels	2,384,075	NO ₂ , met
484531068	Austin North Interstate 35*	Austin-Round Rock	2,000,860	NO ₂ , met

*Carbon monoxide (CO) and particulate matter of 2.5 micrometers or less (PM_{2.5}) will be added by 1/1/2017.

AQS – Air Quality System

met – meteorological equipment with sensors to monitor wind speed, wind direction, and ambient temperature

NO₂ – nitrogen dioxide

U.S. – United States

Title 40 CFR Part 58, Appendix D, Section 4.3.2 currently requires the establishment of NO₂ near-road sites in the El Paso and McAllen-Edinburg-Mission CBSAs based on each area's 2015 U.S. Census Bureau population estimates. However, on May 5, 2016, the EPA proposed to remove the rule that requires NO₂ near-road monitoring in CBSAs with populations between 500,000 and 1,000,000 persons. The EPA is initiating this action based on a review of data generated by existing near-road NO₂ sites in larger CBSAs beginning in 2012. The data from these near-road sites indicate that the current NO₂ air quality concentrations in the near-road environment are generally well below both the annual and one-hour daily maximum NAAQS levels of 53 parts per billion (ppb) and 100 ppb, respectively. The EPA's proposal does not remove or modify the existing requirements for near-road NO₂ monitoring in CBSAs with 1,000,000 or more persons. The proposal is available at the following web address.

https://www3.epa.gov/airquality/nitrogenoxides/pdfs/nr_no2_rev_050516.pdf

Due to the EPA proposal on May 5, 2016, to revise the near-road NO₂ monitoring requirements, the TCEQ has currently suspended planning activities for near-road sites in the El Paso and McAllen-Edinburg-Mission CBSAs. The TCEQ understands that EPA plans to complete the associated final rule before the January 1, 2017, deadline for operation. The TCEQ will continue to follow this issue and adjust near-road planning as further information becomes available from the EPA.

Changes to the Regulatory NO₂ Monitoring Network

The EPA recently finalized a clarification for NO₂ monitoring requirements in the Federal Register on March 28, 2016, *Revisions to the Ambient Monitoring Quality Assurance and Other Requirements; Final Rule*, stating that NO₂ was never a required NCore measurement and that the definition in 40 CFR Part 58 was erroneous. Based on this clarification, the TCEQ recommends removal of the NCore network designation from the NO₂ monitors at El Paso Chamizal (AQS# 481410044) and Houston Deer Park #2 (AQS# 482011039) from AQS effective April 27, 2016. These two monitors will continue to operate and fulfill PAMS and SLAMS NO₂ network requirements.

The TCEQ NO₂ network, as discussed above and summarized in Appendix C, meets or exceeds monitoring requirements in all areas. No further changes to the network are recommended at this time.

Sulfur Dioxide (SO₂)

Monitoring Requirements

Title 40 CFR Part 58, Appendix D, Section 4.4.2, requires states to establish an SO₂ 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 to obtain the PWEI value. The PWEI monitoring requirements are listed below:

- One monitor in CBSAs with a PWEI value equal to or greater than 5,000;
- Two monitors in CBSAs with a PWEI value equal to or greater than 100,000; and
- Three monitors in CBSAs with a PWEI value equal to or greater than 1,000,000.

As shown in Appendix D, the TCEQ used the 2015 U.S. Census Bureau population estimates and 2011 National Emissions Inventory (NEI) data with 2014 TCEQ point-source EI data to calculate the PWEI and determine the minimum monitoring requirements for each CBSA. The PWEI analysis described in Appendix D confirms that the TCEQ is currently meeting PWEI SO₂ monitoring requirements.

Data Requirements Rule

On June 2, 2010, the EPA established a primary (health based) one-hour SO₂ NAAQS at a level of 75 ppb. On August 10, 2015, the EPA finalized the Data Requirements Rule (DRR) for the 2010 one-hour SO₂ primary standard. This DRR requires air agencies to provide data to characterize air quality around sources that emit 2,000 tons per year (tpy) or more of SO₂ and that are not located in an area already designated nonattainment. The DRR establishes criteria for identifying the emission sources and associated areas for SO₂ air quality characterization. The DRR also provides deadlines for source-oriented monitoring and/or modeling to characterize ambient air quality impacts from the identified SO₂ sources. Air agencies have the option to characterize air

quality by modeling predicted impacts of actual source emissions or by using strategically sited ambient air quality monitors. Monitors must be located in areas surrounding the identified SO₂ sources where maximum one-hour SO₂ concentrations are expected. The agency is required to submit information on deployment of new monitoring stations to the EPA Regional Administrator by July 1, 2016, as part of the AMNP.

Changes to the Regulatory SO₂ Monitoring Network

On January 15, 2016, the TCEQ provided the EPA with a list of 25 SO₂ sources meeting the DRR emissions applicability threshold. Based on the need to characterize air quality for the purposes of making area designations, the TCEQ will deploy source-oriented SO₂ monitors near 14 sources by the January 1, 2017, rule deadline. Due to the close geographical proximity of 4 out of the 14 sources, a total of 12 monitoring stations, listed in Table 2, are proposed for deployment to characterize ambient air quality surrounding each of these sources. The EPA is expected to finalize area designations for the remaining eleven sources by July 2, 2016. The TCEQ will pursue monitoring station locations as expeditiously as practical for any of the 11 remaining sources designated as nonattainment under the EPA’s final action.

Table 2: Recommended Source-Oriented Sulfur Dioxide Monitoring Stations

Facility Name(s)	County Name	New Air Monitoring Station Name	AQS Number
Big Spring Carbon Black	Howard	Big Spring Midway	482271072
Calaveras Plant	Bexar	Heritage Middle School	480290622
Oxbow Calcining	Jefferson	Port Arthur 7 th Street	482451071
AEP Pirkey Power Plant	Harrison	Hallsville Red Oak	482031079
Streetman Plant	Navarro	Streetman Interstate 45*	483491081
Welsh Power Plant	Titus	Cookville FM 4855	484491078
Sandow Steam Electric Station and Sandow 5 Generating Plant	Milam	Rockdale John D. Harper Road*	483311075
Oak Grove Steam Electric Station	Robertson	Franklin Oak Grove*	483951076
Sid Richardson Borger Carbon Black and Orion Borger Carbon Black	Hutchinson	Borger FM 1559*	482331073
Harrington Generating Station	Potter	Amarillo Xcel El Rancho*	483751077
Orion Echo Carbon Black Plant	Orange	Orange 1 st Street*	483611083
Baytown Refinery	Harris	Baytown Oklahoma*	482011082

*Site name and location pending EPA approval
AQS – Air Quality System
FM – farm-to-market

TCEQ Site Selection Process

The TCEQ focused on complying with the directly-applicable federal requirements listed in 40 CFR Part 58, Appendix E regarding siting criteria. In addition, the TCEQ evaluated monitoring station locations that would appropriately and sufficiently characterize air quality in areas around an SO₂ emissions source. The DRR

requirements stipulate that ambient air monitoring stations must be deployed in areas of maximum expected one-hour SO₂ concentrations in ambient air. The TCEQ approach included utilizing multiple techniques and guidance provided in the *SO₂ NAAQS Designations Source-Oriented Monitoring Technical Assistant Document* (Monitoring TAD). The Monitoring TAD suggests that modeling is one technique that may be used to assist in identifying potential ambient air monitoring sites. The TCEQ's modeling for monitor placement used the Comprehensive Air Model with Extensions (CAMx) with model options set as equivalent as possible to American Meteorological Society/Environmental Protection Agency Regulatory Model (AERMOD).

The TCEQ considered the modeling analyses, but did not rely solely on them in the prioritization of potential sites. The latitude and longitude of each SO₂ source designated for ambient air monitoring was plotted on a satellite map. Surrounding properties and associated owners were identified utilizing county appraisal district information. The TCEQ then collectively considered the following parameters: predominant wind flow, modeling analyses, property owner agreement, and logistical constraints, such as space, power availability, terrain, grade, and drainage. Failure to meet criteria for any single parameter did not necessarily exclude the location from consideration.

A monitor placement evaluation was performed for each source-oriented SO₂ air monitoring station listed in Table 2. The evaluations and resultant siting proposals are located in Appendix E. Evaluations with a draft watermark are pending EPA approval.

Lead (Pb)

Monitoring Requirements

The TCEQ Pb network is designed to meet 40 CFR Part 58, Appendix D, Section 4.5 monitoring requirements. This section requires a minimum of one source-oriented ambient air Pb monitoring site to measure maximum concentrations near each facility that emits 0.50 tpy and each airport that emits 1.0 tpy or more of Pb based on either the most recent NEI data or annual EI data submitted to meet state reporting requirements. In addition, state agencies are required to conduct ambient air Pb monitoring near Pb sources that are expected to show, or have shown in the past, to contribute to a maximum Pb concentration in ambient air in excess of the NAAQS of 0.15 micrograms per cubic meter (µg/m³). To meet these requirements, the TCEQ supports total suspended particulate (TSP) Pb monitoring at six source-oriented sites and seven population exposure sites. Three of these sites also support non-source-oriented NCore requirements. The TCEQ network meets or exceeds federal requirements with Pb monitoring at these 13 sites.

Lead Waivers

The EPA Regional Administrator may waive the requirement in 40 CFR Part 58, Appendix D, 4.5(a) for monitoring near specific Pb sources with sufficient demonstration that the Pb source will not contribute to a maximum concentration in ambient air greater than 50 percent (%) of the NAAQS of 0.15 µg/m³ based on historical monitoring data, modeling, or other approved means. All approved waivers must be renewed once every five years as part of the network assessment required under 40 CFR Part 58.10(d).

The TCEQ has submitted five Pb waivers for source-oriented monitoring since 2010, and all were granted by the EPA Region 6. Three of these waivers are no longer required because source emissions have decreased below the 0.50 tpy threshold. Requests to renew the Pb waivers for the Lower Colorado River Authority Fayette Power Plant in Fayette County and the U.S. Department of the Army facility in Fort Hood were submitted in the 2015 TCEQ *Texas Five-Year Ambient Monitoring Network Assessment*. The two waiver renewal requests included information regarding a Pb modeling analysis indicating that the predicted maximum ground level concentration for a rolling three-month average continue to remain below 50% of the NAAQS. These waiver renewal requests were approved in the TCEQ *2015 Annual Monitoring Network Plan* response letter from EPA Region 6 dated October 26, 2015, and are considered valid until July 1, 2020. In addition to the waivers, a Pb ambient air monitor was deployed in 2011 to monitor ambient Pb concentrations downwind of the Conecsus, Limited Liability Company (LLC) facility just west of the City of Terrell, therefore, no waiver request has been submitted for this source.

The TCEQ compared 2013 and 2014 point source EI data to reevaluate sources that reported Pb emissions of 0.50 tpy or more. Table 3 provides information regarding the sources with existing Pb waivers and required Pb monitoring. Three sources reported Pb emissions greater than 0.50 tpy in 2013. All three sources reduced their reported Pb emissions in 2014, with two out of the three sources reporting emissions well below this threshold. Through existing ambient air monitors and current Pb waivers, the TCEQ is meeting or exceeding all federal Pb monitoring requirements.

Table 3: 2013-2014 Lead Point Source Emissions Inventory Data

Company	County	2013 Pb Emissions (tpy)	2014 Pb Emissions (tpy)	TCEQ Comments
United States Department of the Army, Fort Hood	Bell	0.74	0.08	Pb waiver renewal approved on October 26, 2015.
Lower Colorado River Authority	Fayette	0.59	0.51	Pb waiver renewal approved on October 26, 2015.
Conecsus LLC	Kaufman	0.69	0.33	Pb is currently monitored at the Terrell Temtex site.

LLC – limited liability company

Pb - lead

TCEQ – Texas Commission on Environmental Quality

tpy – tons per year

According to 40 CFR Part 58, Appendix D, Section 3, Pb monitoring has been a required NCore measurement at sites in CBSAs with a population of 500,000 or more persons since 2011. However, the requirement to measure airborne particulate Pb at NCore sites was eliminated in the EPA’s final rule published in the Federal Register on March 28, 2016, *Revisions to the Ambient Monitoring Quality Assurance and Other Requirements; Final Rule*. The EPA removed this requirement due to the extremely low concentrations being measured at these sites. The certified NCore non-source Pb data received by the EPA has typically been low: 3-month rolling averages measure around 0.01 µg/m³ as compared to the NAAQS level of 0.15 µg/m³.

In addition, the EPA noted that non-source Pb data will continue to be measured as particulate matter of 10 micrometers or less in diameter (PM₁₀) Pb at National Air Toxics Trends Station (NATTS) sites. The EPA also noted that the ongoing monitoring networks will adequately support the Pb non-source monitoring objectives. The TCEQ currently measures PM₁₀ Pb speciation at two NATTS sites, Houston Deer Park #2 (AQS# 482011039) and Karnack (AQS# 482030002), and PM_{2.5} Pb speciation as a part of the Chemical Speciation Network (CSN) at Houston Deer Park #2, Dallas Hinton (AQS# 481130069), and El Paso Chamizal (AQS# 481410044), as noted in Appendix A. The TCEQ currently measures NCore TSP Pb at three sites: Dallas Hinton, Houston Deer Park #2, and Ascarate Park SE (AQS# 481410055) in El Paso. Table 4 details the locations of the NCore TSP Pb measurements along with NATTS PM₁₀ Pb speciation and CSN PM_{2.5} Pb speciation.

Table 4: Sites Measuring National Core Multipollutant Monitoring Stations Total Suspended Particulate Lead

Sites Measuring NCore TSP Pb	AQS Number	2013-2015 Design Value (µg/m ³)	Other Pb Monitoring in Area
Dallas Hinton	481130069	0.01	PM _{2.5} Pb speciation at this site for CSN
Ascarate Park SE (in El Paso)	481410055	0.01	PM _{2.5} Pb speciation at El Paso Chamizal for CSN
Houston Deer Park #2	482011039	0.00	PM ₁₀ Pb speciation at this site for NATTS

- number
 µg/m³ - micrograms per cubic meter
 AQS - Air Quality System
 CSN - Chemical Speciation Network
 NATTS - National Air Toxics Trends Stations
 NCore - National Core Multipollutant Monitoring Stations
 PM₁₀ - particulate matter 10 micrometers or less
 PM_{2.5} - particulate matter 2.5 micrometers or less
 Pb - lead
 SE - southeast
 TSP - total suspended particulate

Collin County Pb Redesignation Request

On December 31, 2010, the EPA designated an area surrounding Exide Technologies (Exide) located in Frisco, Collin County, as nonattainment for the 2008 Pb NAAQS (75 Federal Register 71033). To demonstrate attainment, the area is required to have three-month rolling average monitoring data below the NAAQS for 36 consecutive months. The Collin County Pb monitoring network consists of four regulatory Pb ambient air quality monitors, two collocated Pb ambient air quality monitors, and a meteorological station. Data from these monitors are used to determine the area’s compliance with the 2008 Pb NAAQS. Between January 1, 2013, and December 31, 2015, there was no measured three-month rolling average above the Pb NAAQS. The current design value is 0.08 µg/m³ as of December 31, 2015. Thus, the area has demonstrated compliance with the 2008 Pb NAAQS.

Based on measured compliance with the standard, the TCEQ proposed the *Collin County Redesignation Request and Maintenance Plan State Implementation Plan Revision for the 2008 Lead National Ambient Air Quality Standard* on April 27, 2016.

With this state implementation plan revision, the TCEQ would request that the Collin County Pb nonattainment area be redesignated as attainment for the 2008 Pb standard and that the EPA approve the associated proposed maintenance plan. The tentatively scheduled adoption is scheduled to occur by October 2016. Once adopted by the Commissioners, the request will be submitted to the EPA for approval. If the EPA approves the TCEQ request to designate the Collin County area as attainment for Pb, the TCEQ will evaluate and may propose changes to the existing Pb monitors in Collin County as allowed by the maintenance plan.

Collocation Requirements

Title 40 CFR Part 58, Appendix A, Section 3.4.4 requires a primary quality assurance organization to select 15% of the Pb monitoring sites within their network, not counting non-source-oriented NCore sites, for collocated sampling with the first of these sites measuring the highest Pb concentrations in the network. Based on the current network of primary Pb monitors, excluding the three NCore sites, the TCEQ is required to have two collocated Pb monitors. The TCEQ has three collocated Pb monitors; two are in Collin County at the Frisco Eubanks site (AQS# 480850009) and the Frisco 7 site (AQS# 480850007), and the third is in El Paso at the Ojo De Agua site (AQS# 481411021). The 2015 average concentration at the Frisco Eubanks site has decreased and is no longer the highest Pb concentration in the state. According to 2015 data, the Terrell Temtex (AQS# 482570020) site now has the highest average concentration (0.029 $\mu\text{g}/\text{m}^3$) in the network. The TCEQ recommends relocation of the collocated monitor in order to maintain compliance, as discussed in the Changes section below.

Changes to the Regulatory Pb Monitoring Network

Pending the EPA's approval of the TCEQ's final Collin County Pb redesignation request, the TCEQ may propose future changes to existing primary Pb monitors in Collin County. However, the collocation needs of the TCEQ Pb network have changed due to the decrease in measured concentrations from the Frisco monitors. To maintain compliance with collocation requirements, the TCEQ recommends the relocation of the collocated Pb monitor from the Frisco 7 site to the Terrell Temtex site.

Due to revisions to 40 CFR Part 58, Appendix D, Section 3(b) published by the EPA on March 28, 2016, TSP Pb monitoring is no longer a required measurement at NCore sites. The TCEQ recommends to discontinue the TSP Pb monitors at the three NCore sites listed in Table 4.

Ozone (O₃)

Network design criteria for SLAMS sites, described in 40 CFR Part 58, Appendix D, Section 4.1, require O₃ monitoring in each CBSA with a population of 350,000 or more persons. Monitoring is also required in CBSAs with lower populations if measured O₃ values in that MSA are within 85% of the NAAQS of 0.070 parts per million (ppm). According to 2015 U.S. Census Bureau population estimates and 2013-2015 eight-hour O₃ design values, the TCEQ is required to operate a minimum of 25 O₃ monitors to meet SLAMS network requirements. The TCEQ is exceeding the requirement with more than 50 O₃ monitors in the SLAMS network, as listed in Appendix A.

Additional monitoring at NCore sites in a CBSA with a population of 1,000,000 or more persons is also required as a part of the PAMS program under 40 CFR Part 58,

Appendix D, Section 5. The TCEQ is exceeding PAMS and NCore requirements with O₃ monitors at all three NCore sites in the Houston, Dallas, and El Paso CBSAs.

The EPA published a final rule on October 26, 2015, revising the primary and secondary NAAQS for O₃. Both the primary and secondary standards were strengthened to 0.070 ppm from the existing standard of 0.075 ppm. The measurement form remains as the annual fourth-highest daily maximum eight-hour concentration, averaged over three years. Revisions to the O₃ NAAQS also include changes to monitoring, network design, and data handling, including updates to the PAMS program requirements. According to 2013-2015 eight-hour O₃ design values, the revisions to the standard will not change the number of overall network monitors required in 2016. This information is shown in Appendix F of this document. The TCEQ is required to operate a minimum of 30 O₃ monitors for all combined network requirements and is currently exceeding the requirements with 70 monitors across the state.

Changes to the Regulatory O₃ Monitoring Network

As described above and summarized in Appendix F of this document, the TCEQ O₃ network is meeting or exceeding the current MSA requirements, and no changes to the network are recommended at this time.

Carbon Monoxide (CO)

Title 40 CFR Part 58, Appendix D, Section 3.0 requires high-sensitivity CO monitors at NCore sites. The TCEQ meets this requirement with CO monitors at all three NCore sites in the Houston-Woodlands-Sugar Land, Dallas-Fort Worth-Arlington, and El Paso CBSAs. Title 40 CFR Part 58, Appendix D, Section 4.2 also requires CO monitors at near-road sites in CBSAs of 1,000,000 or more persons. The TCEQ meets this requirement with CO monitors at near-road sites in the Houston and Dallas CBSAs. The TCEQ will deploy CO monitors to meet the January 1, 2017, deadline at near-road sites in the Austin-Round Rock and San Antonio-New Braunfels CBSAs.

The TCEQ CO monitoring network is required to operate a total of seven CO monitors. The TCEQ is currently exceeding the requirements through the operation of thirteen total CO monitors: eight CO monitors and five high-sensitivity CO monitors. A summary of the required and current CO monitors in each CBSA is included in Appendix G.

The EPA revisions to the PAMS program under the final rule published on October 26, 2015, and as listed in 40 CFR Part 58, Appendix D, Section 5, remove CO from the list of required PAMS measurements. The CO monitors at the Houston Clinton site (AQS# 482011035) and the Beaumont Nederland High School site (AQS# 482451035) are now exceeding minimum requirements. The TCEQ will reevaluate the option to decommission these monitors during the assessment of the PAMS network to be published in the 2018 AMNP.

Changes to the Regulatory CO Monitoring Network

In compliance with near-road requirements in the Austin-Round Rock and San Antonio-New Braunfels CBSAs, the TCEQ will deploy gas filter correlation CO monitors (method 093) at the Austin North Interstate 35 (AQS# 484531068) and San Antonio Interstate 35 (AQS# 480291069) sites by January 1, 2017.

Particulate Matter of 10 Micrometers or Less (PM₁₀)

The TCEQ PM₁₀ network is designed to meet the area requirements of 40 CFR Part 58, Appendix D, Section 4.6, which specifies the range of PM₁₀ monitoring stations required in MSAs based on population and measured concentrations, if available. A sample of this information is provided in Table 5. The TCEQ network consists of PM₁₀ monitoring at 27 sites. Compliance with the PM₁₀ standard is based on the number of measured exceedances of the 150 µg/m³ standard on average over a three year period. The evaluation of PM₁₀ monitoring requirements was completed using the 2015 U.S. Census Bureau population estimates and 2015 measured PM₁₀ concentrations. This evaluation and the associated maximum 2013-2015 concentrations for each MSA are shown in Appendix H, Table 1. From this evaluation, the TCEQ determined that each MSA listed in Appendix H within the PM₁₀ network meets or exceeds minimum PM₁₀ monitoring requirements.

Table 5: Particulate Matter of 10 Micrometers or Less Monitoring Requirements

Population Category	High Concentration ¹	Medium Concentration ²	Low Concentration ³
>1,000,000	6-10	4-6	2-4
500,000-1,000,000	4-8	2-4	1-2
250,000-500,000	3-4	1-2	0-1
100,000-250,000	1-2	0-1	0

¹High Concentration areas are those for which ambient PM₁₀ data show ambient concentrations exceeding the PM₁₀ NAAQS by 20 percent or more

²Medium Concentration areas are those for which ambient PM₁₀ data show ambient concentrations exceeding 80 percent of the PM₁₀ NAAQS

³Low Concentration areas are those for which ambient PM₁₀ data show ambient concentrations less than 80 percent of the PM₁₀ NAAQS

PM₁₀ - particulate matter of 10 micrometers or less in diameter
> - greater than

Collocation Requirements

Title 40 CFR Part 58, Appendix A, Section 3.3.4 requires a primary quality assurance organization to select 15% of the PM₁₀ monitoring sites within the PM₁₀ network for collocated sampling. The selected sites should have an annual mean particulate matter concentration among the highest 25% in the network, if practical. Based on the current network of 27 PM₁₀ monitors, the TCEQ is required to have four collocated monitors. The TCEQ has eight PM₁₀ collocated monitors at the sites listed in Table 6.

Table 6: Particulate Matter of 10 Micrometers or Less Collocation Summary

AQS Number	Sites with PM₁₀ Collocated Monitors	2013-2015 Maximum Concentration (µg/m³)	2013-2015 Annual Average Concentration (µg/m³)	Additional Information
482011035	Clinton	130	39.2	Ranked in the highest 25% network concentration
481410057	Socorro Hueco	145	30.9	Ranked in the highest 25% network concentration
481130050	Convention Center	102	27.0	Ranked in the highest 25% network concentration
481411021	Ojo De Agua	91	20.1	Collocated to support exceptional events
482011039	Houston Deer Park #2	91	19.1	Collocated to meet NATTS requirements
484790016	Laredo Vidaurri	80	23.8	Decreasing trend, not in the highest 25% for 2014 and 2015
483550034	Dona Park	83	23.7	Stable trend, not in the highest 25% for 2013, 2014, and 2015
481670004	Texas City Fire Station	92	18.9	Stable trend, not ranked in the highest 25% network concentration

- number

% - percent

µg/m³ - micrograms per cubic meter

AQS - Air Quality System

NATTS - National Air Toxics Trends Stations

PM₁₀ - particulate matter 10 micrometers or less

PM₁₀ measured annual average concentration data was evaluated from 2013-2015 as shown in Table 6 and in more detail in Appendix H, Table 2. PM₁₀ measurement concentrations at Clinton (AQS# 482011035), Socorro Hueco (AQS# 481410057), and Convention Center (AQS# 481130050) sites had annual mean concentrations among the highest 25% in the network and continue to satisfy collocation requirements. The 3-year average PM₁₀ concentration is not in the network highest 25% at Ojo De Agua (AQS# 481411021); however the 2015 data from this monitor was in the highest 25% at 23.6 µg/m³. Additionally, the Ojo De Agua PM₁₀ collocated monitor supports exceptional events analysis. The PM₁₀ collocated monitor at Houston Deer Park #2 (AQS# 482011039) supports collocation requirements for the NATTS program.

Appendix H, Table 2 lists the maximum concentration measurement during the 3-year period of 2013-2015 and also includes the 2013, 2014, and 2015 annual mean concentrations for each PM₁₀ site. All of these data were utilized during the PM₁₀ collocation assessment. The TCEQ exceeds minimum PM₁₀ collocation requirements through the PM₁₀ monitor operation of the eight sites listed in Table 6. The TCEQ

annually evaluates the data to determine network efficacy for the collocated PM₁₀ monitors.

Changes to the Regulatory PM₁₀ Monitoring Network

The TCEQ recommends the decommission of the Pasadena HL&P site PM₁₀ monitor in the Houston-Woodlands-Sugar Land MSA by December 31, 2016. This MSA is required to have a range of four to eight PM₁₀ monitors; the TCEQ currently operates eight. The Pasadena HL&P PM₁₀ site measured the lowest 2013-2015 three-year maximum concentration (74 µg/m³, 49% of the NAAQS) in the MSA. The area contains adequate spatial coverage with one PM₁₀ monitor four miles to the west and seven total PM₁₀ monitors in the area. The number of required and current PM₁₀ monitors in each MSA is included in Appendix H, Table 1.

According to 2013, 2014, and 2015 monitoring data and trends, PM₁₀ concentrations at Laredo Vidaurri, Dona Park, and Texas City Fire Station are not in the network's highest 25% annual concentrations. The TCEQ recommends the decommission of collocated monitors, with primary monitors remaining active, at the sites listed below:

- Laredo Vidaurri (AQS# 484790016);
- Dona Park (AQS# 483550034); and
- Texas City Fire Station (AQS# 481670004).

Particulate Matter of 2.5 Micrometers or Less (PM_{2.5})

Monitoring Requirements

The TCEQ PM_{2.5} network is designed to meet area, NCore, and near-road monitoring requirements. The state-wide PM_{2.5} network consists of PM_{2.5} federal reference method (FRM) gravimetric monitoring at 25 sites, continuous PM_{2.5} monitoring at 45 sites, and PM_{2.5} speciation monitoring at seven sites, for a total of 53 sites with at least one type of PM_{2.5} monitoring. Title 40 CFR Part 58, Appendix D, Section 4.7 requires PM_{2.5} monitoring in MSAs with populations of 500,000 or more persons and in MSAs with lower populations if measured PM_{2.5} design values for an MSA are within 85% of the NAAQS. The current PM_{2.5} annual arithmetic mean concentration standard is 12.0 µg/m³ averaged over three years and the PM_{2.5} 24-hour average concentration standard is 35 µg/m³ for the 98th percentile, averaged over three years.

Title 40 CFR Part 58, Appendix D, Section 4.7.1(2) requires PM_{2.5} monitoring at near-road stations and 40 CFR Part 58.13 (f) requires the PM_{2.5} monitor to be located in each CBSA with a population of 2,500,000 or more persons by January 1, 2015, and also in each CBSA with a population of 1,000,000 or more persons by January 1, 2017. In addition, 40 CFR Part 58, Appendix D, Section 3 requires PM_{2.5} monitoring at all NCore sites.

A detailed analysis of PM_{2.5} monitoring and siting requirements using the 2015 U.S. Census Bureau population estimates and 2015 measured PM_{2.5} concentrations is provided in Appendix I. A summary of the MSA populations, design values, and requirements is provided in Table 7. Through this evaluation, the TCEQ determined that minimum requirements are met or exceeded for all areas and parameters. The TCEQ's assessment of PM_{2.5} monitoring requirements and current monitors is included in Appendix I, Table 1. Appendix I, Table 2 provides information regarding each PM_{2.5} FRM site.

Table 7: Particulate Matter of 2.5 Micrometers or Less Monitoring Requirements

Metropolitan Statistical Area	PM _{2.5}					
	FRM Required Monitors ¹	FRM Existing Monitors ²	Speciation Required Monitors ^{1,2}	Speciation Existing Monitors ^{1,2}	Continuous Required Monitors ^{1,2}	Continuous Existing Monitors ²
Dallas-Fort Worth-Arlington	4	6	1	2	3	8
Houston-The Woodlands-Sugar Land	4	6	2	2	3	10
San Antonio-New Braunfels	2	2	0	0	1	5
Austin-Round Rock	2	2	0	0	1	3
El Paso	2	2	1	1	2	4
McAllen-Edinburg-Mission ⁴	2	2	0	0	1	1
Corpus Christi	1	2	1	1	1	1
Killeen-Temple	0	0	0	0	0	0
Brownsville-Harlingen	1	1	0	0	1	1
Beaumont-Port Arthur	0	0	0	0	0	3
Lubbock	0	0	0	0	0	1
Laredo	0	0	0	0	0	1
Waco	0	0	0	0	0	1
Amarillo	0	0	0	0	0	1
Odessa	0	0	0	0	0	2
Texarkana	1	1	0	0	1	1
Marshall ³	0	1	0	1	0	1
Eagle Pass ³	0	0	0	0	0	1
Totals	19	25	5	7	14	45

¹Required monitors include State or Local Air Monitoring Stations (SLAMS) and National Core (NCore) requirements.

²Individual monitors may fulfill one or more requirements.

³Area is classified as a micropolitan area and not subject to SLAMS requirements.

⁴Site annual values do not meet completeness criteria.

FRM - federal reference method

PM_{2.5} - particulate matter of 2.5 micrometers or less in diameter

Collocation Requirements

Title 40 CFR Part 58, Appendix A, Section 3.2.3 requires a primary quality assurance organization to select 15% of the PM_{2.5} monitoring sites within the network for collocated sampling. Eighty percent of the collocated audit monitors should be deployed at sites with annual average or daily concentrations estimated to be within 20% of the NAAQS listed in the previous section. Based on the current PM_{2.5} network of 25 FRM

monitors, the TCEQ is required to have four collocated PM_{2.5} monitors and currently has three. To meet this requirement, the TCEQ recommends adding a collocated PM_{2.5} FRM monitor in the El Paso MSA.

The EPA approved a collocated PM_{2.5} FRM monitor at the El Paso Chamizal site (AQS# 481410044) in the TCEQ 2015 AMNP response letter. This site was chosen based on the annual and 24-hour PM_{2.5} concentrations in the El Paso area. This site has an annual 2013-2015 design value of 9.9 µg/m³, which is within 17% of the NAAQS, meeting the collocation requirements listed above.

Changes to the Regulatory PM_{2.5} Monitoring Network

In compliance with near-road monitoring requirements, the TCEQ recommends deployment of PM_{2.5} FRM monitors (method 145 with a 1-in-3 day sampling schedule) at existing near-road stations in the Austin-Round Rock and San Antonio-New Braunfels CBSAs. The TCEQ plans to deploy a new PM_{2.5} FRM monitor to the San Antonio Interstate 35 site (AQS# 480291069) and relocate the PM_{2.5} FRM monitor from the Austin Audubon Society site (AQS# 484530020) to the Austin North Interstate 35 near-road site (AQS# 484531068). The 2013-2015 annual design value of the PM_{2.5} monitor at the Austin Audubon Society site is 7.8 µg/m³, 65% of the annual PM_{2.5} NAAQS of 12.0 µg/m³. The relocation of the Austin Audubon Society PM_{2.5} monitor to the Austin North Interstate 35 station will allow the monitor to support multiple monitoring requirements. PM_{2.5} monitors will be operational by January 1, 2017 at the Austin North Interstate 35 site (AQS# 484531068) and the San Antonio Interstate 35 site (AQS# 480291069).

As discussed in the TCEQ 2015 AMNP, the TCEQ relocated the Texarkana station (AQS# 480370004) approximately one mile northwest to physically accommodate both an FRM monitor and a continuous monitor to comply with requirements. The new location is Texarkana New Boston (AQS# 480371031). The EPA approved this site on March 23, 2016. This site fulfills area requirements for a continuous PM_{2.5} monitor and a PM_{2.5} FRM monitor. The established design value for the Texarkana MSA for 2013-2015 is 9.8 µg/m³, and exhibits a decreasing trend from the 2012-2014 design value of 10.2 µg/m³. The TCEQ requests EPA approval for a reduction in the sampling frequency of the FRM monitor at this site from 1-in-3 days to 1-in-6 days.

Title 40 CFR Part 58, Appendix D, Section 4.7 Table D-5 lists the PM_{2.5} MSA minimum monitoring requirements. Continuous PM_{2.5} monitoring is required for at least one-half of these sites and requires at least one continuous analyzer in each MSA to be collocated with a required FRM monitor. Details regarding the entire TCEQ PM_{2.5} network are found in Appendix I. The TCEQ recommends the decommission of four continuous PM_{2.5} tapered element oscillating microbalances (TEOMs), listed below in Table 8, designated as special purpose monitors. The continuous PM_{2.5} TEOMs are not necessary to meet CFR requirements. The remaining monitors in these MSAs continue to meet and exceed federal requirements.

Table 8: Continuous Particulate Matter of 2.5 Micrometers or Less Decommission Recommendation Summary

Site Name	Metropolitan Statistical Area (MSA)	2015 Annual Mean ($\mu\text{g}/\text{m}^3$)	MSA Required Monitors	MSA Existing Monitors	Reason
Dallas Hinton (AQS# 481130069)	Dallas-Fort Worth-Arlington	8.7	3	8	Redundant due to one FRM and one continuous FEM at this site, excess of continuous monitors in MSA
Kingwood (AQS# 482011042)	Houston-The Woodlands-Sugar Land	8.7	3	10	No longer needed for spatial coverage, excess of continuous monitors in MSA
Italy (AQS# 481391044)	Dallas-Fort Worth-Arlington	7.9	3	8	No longer needed for spatial coverage, excess of continuous monitors in MSA
Odessa Hays Elementary School (AQS# 481350003)	Odessa	7.7	0	2	No longer needed for spatial coverage, excess of continuous monitors in MSA

- number

$\mu\text{g}/\text{m}^3$ - micrograms per cubic meter

AQS - Air Quality System

FRM - federal reference method

FEM - federal equivalent method

Volatile Organic Compounds (VOCs)

Title 40 CFR Part 58, Appendix D, Section 5 requires hourly averaged speciated VOC monitoring at NCore sites located in a CBSA with a population of 1,000,000 or more persons as part of the revised PAMS program requirements. The TCEQ meets this requirement with one automated gas chromatograph (autoGC) at each NCore site. The TCEQ also monitors speciated VOC concentrations using discrete canister sampling. The TCEQ has eight autoGCs and six canister samplers in the PAMS network and an additional four canister samplers to support the NATTS and special purpose monitoring. No changes are recommended for the VOC monitoring network. However, the TCEQ will reevaluate all PAMS measurements during the assessment of the PAMS network to be published in the 2018 AMNP.

The PAMS network canister samplers and autoGC monitors are listed in Table 9, and a complete list of these monitors is in Appendix A of this document.

Table 9: Canister and Automated Gas Chromatograph Site List

AQS Number	TCEQ Region	Site Name	Sampler Type	AQS Network & Monitor Type
481130069	04-Dallas/Fort Worth	Dallas Hinton	Canister	PAMS
481130069	04-Dallas/Fort Worth	Dallas Hinton	AutoGC	PAMS/NCore
481210034	04-Dallas/Fort Worth	Denton Airport South	Canister	PAMS
481391044	04-Dallas/Fort Worth	Italy	Canister	PAMS
482511008	04-Dallas/Fort Worth	Johnson County Luisa	Canister	SPM
484391002	04-Dallas/Fort Worth	Fort Worth Northwest	Canister	PAMS
484391002	04-Dallas/Fort Worth	Fort Worth Northwest	AutoGC	PAMS
484393009	04-Dallas/Fort Worth	Grapevine Fairway	Canister	PAMS
482030002	05-Tyler	Karnack	Canister	SPM
481410044	06-El Paso	El Paso Chamizal	AutoGC	PAMS/NCore
482450009	10-Beaumont	Beaumont Downtown	AutoGC	PAMS
482451035	10-Beaumont	Nederland High School	AutoGC	PAMS
482010026	12-Houston	Channelview	AutoGC	PAMS
482011035	12-Houston	Clinton	AutoGC	PAMS
482011039	12-Houston	Houston Deer Park #2	Canister	NATTS/PAMS
482011039	12-Houston	Houston Deer Park #2	Canister	NATTS, QA Collocated
482011039	12-Houston	Houston Deer Park #2	AutoGC	PAMS/NCore
484790017	16-Laredo	Laredo Bridge	Canister	SPM

- number

AQS - Air Quality System

AutoGC - automated gas chromatograph

NATTS - National Air Toxics Trends Stations

NCore - National Core Multipollutant Monitoring Stations

PAMS - Photochemical Assessment Monitoring Stations

QA - quality assurance

SPM - special purpose monitor

TCEQ - Texas Commission on Environmental Quality

Carbonyls

The TCEQ collects carbonyl samples at three sites in accordance with PAMS requirements listed under 40 CFR Part 58, Appendix D, Section 5. In addition, the TCEQ has two special purpose carbonyl samplers in support of the NATTS program and one additional special purpose sampler. The TCEQ exceeds monitoring requirements with a total of six carbonyl samplers at the sites listed below:

- Dallas Hinton (AQS# 481130069);
- Clinton (AQS# 482011035);
- Houston Deer Park #2 (AQS# 482011039);
- Karnack (AQS# 482030002);
- Fort Worth Northwest (AQS# 484391002); and
- Ascarate Park SE (AQS# 481410055).

As summarized above and in Appendix A of this document, the TCEQ carbonyl monitoring network is meeting or exceeding all requirements, and no changes are recommended this year.

Meteorology

Title 40 CFR Part 58, Appendix D, Section 5 requires surface and upper-air meteorology measurements at all PAMS sites located at NCore stations in CBSAs with a population of 1,000,000 or more persons. The TCEQ collects surface meteorology data at all PAMS sites and most network sites. Surface meteorology includes wind speed, wind direction, and outdoor temperature. The TCEQ operates radar profilers to fulfill the PAMS upper air meteorology requirements. Surface meteorology and upper air meteorology are included in the Appendix A site list.

On March 28, 2016, the EPA published revisions to 40 CFR Part 58.16 (effective April 27, 2016) that removed the requirements for air agencies to report the average daily temperature and average daily pressure from manual PM_{2.5} samplers. It also removed the requirement for Pb sites to report average temperature and average pressure recorded by the sampler or from nearby airports. The TCEQ requests approval to discontinue the submittal of this meteorological data to AQS effective May 1, 2016.

Three meteorological parameters listed in the Special Purpose network in the 2015 AMNP are required to support the PAMS network: relative humidity, ultraviolet (UV) radiation, and solar radiation. The meteorological parameters at the monitoring sites listed below were updated to be listed under the PAMS network as of January 1, 2016:

- Dallas Hinton (AQS# 481130069) relative humidity;
- El Paso University of Texas at El Paso (UTEP) (AQS# 481410037) UV radiation;
- El Paso Chamizal (AQS# 481410044) solar radiation; and
- Houston Aldine (AQS# 482010024) relative humidity.

Summary

Status of Previously Recommended Changes

The following is a summary of changes that have occurred since the 2015 AMNP.

- The EPA approved the Texarkana station (AQS# 480370004) relocation on March 23, 2016, approximately one mile northwest to physically accommodate both a PM_{2.5} FRM monitor and a PM_{2.5} continuous monitor to comply with area requirements. The new station, deployed February 27, 2016, is named Texarkana New Boston (AQS# 480371031). This site fulfills area requirements with a continuous PM_{2.5} monitor (method 702 deployed on April 7, 2016) and a PM_{2.5} FRM monitor (method 145).
- The TCEQ deployed the required McAllen-Edinburg-Mission MSA PM₁₀ monitor (method 141) at the new Edinburg East Freddy Gonzalez Drive (AQS# 482151046) site to meet requirements in the area on July 16, 2015.
- The TCEQ deployed two PM_{2.5} FRM gravimetric samplers (method 145 with a 1-in-3 day sampling schedule) to the existing network at Brownsville station (AQS# 480610006) in the Brownsville-Harlingen MSA and at the new Edinburg East Freddy Gonzalez Drive station (AQS# 482151046) in the McAllen-Edinburg-Mission MSA in June and July of 2015, respectively.
- The continuous PM_{2.5} TEOM special purpose monitor at the City Public Service (CPS) Pecan Valley site (AQS# 480290055) located in the San Antonio area was decommissioned in November 2015. The site was removed at the property owner's request. The San Antonio-New Braunfels MSA population is greater than 1,000,000 persons and requires a minimum of two PM_{2.5} FRM monitors and one PM_{2.5} continuous monitor according to requirements in 40 CFR Part 58, Appendix D, Section 4.7.1. and 4.7.2. Currently, two PM_{2.5} FRM monitors and five PM_{2.5} continuous monitors are located in the area. The PM_{2.5} annual design value for the area is 8.5 µg/m³ and is 71% of the NAAQS. These monitors meet and exceed PM_{2.5} monitoring requirements in this MSA and no further action is proposed for this monitor.
- The EPA indicated in the 2015 TCEQ AMNP approval letter that the AQS network designation on the following monitors be changed from SPM to PAMS. The following parameters were updated in AQS as of January 1, 2016:
 - Relative humidity at Dallas Hinton (AQS# 481130069);
 - UV radiation at El Paso UTEP (AQS# 481410037);
 - Solar radiation at El Paso Chamizal (AQS# 481410044); and
 - Relative humidity at Houston Aldine (AQS# 482010024).

2016 Proposed Network Changes

The following is a summary of proposed changes discussed in this year's assessment.

- The TCEQ recommends removal of the NCore network designation in AQS for the NO₂ monitors at El Paso Chamizal (AQS# 481410044) and Houston Deer Park #2 (AQS# 482011039) and maintaining the PAMS and SLAMS network designations only. The EPA clarified in the March 28, 2016, revision to 40 CFR Part 58 that NO₂ was never a required measurement under NCore and that the previous version was erroneous to include it.
- The TCEQ proposes to deploy 12 SO₂ monitoring stations to characterize the ambient air near designated sources of SO₂ emissions in accordance with the DRR.
- The TCEQ recommends deployment of PM_{2.5} FRM monitors (method 145 with a 1-in-3 day sampling schedule) at existing near-road stations in the Austin-Round Rock and San Antonio-New Braunfels CBSAs. The TCEQ plans to deploy a new PM_{2.5} FRM monitor to the San Antonio Interstate 35 site (AQS# 480291069) and relocate the PM_{2.5} FRM monitor from the Austin Audubon Society site (AQS# 484530020) to the Austin North Interstate 35 near-road site (AQS# 484531068) before January 1, 2017.
- The TCEQ plans to deploy gas filter correlation CO monitors (method 093) to the San Antonio Interstate 35 site (AQS# 480291069) and to the Austin North Interstate 35 near-road site (AQS# 484531068) before January 1, 2017.
- The TCEQ recommends the relocation of a collocated Pb monitor from the Frisco 7 site to the Terrell Temtex site since it measures the highest 2015 Pb average concentration in the network.
- Due to revisions to 40 CFR Part 58, Appendix D, Section 3(b), TSP Pb monitoring is no longer a required measurement at NCore sites. The TCEQ recommends to discontinue the TSP Pb monitors at three NCore sites Houston Deer Park #2 (AQS# 482011039), Dallas Hinton (AQS# 481130069), and El Paso Chamizal site (AQS# 481410044).
- The TCEQ recommends the decommission of the Pasadena HL&P PM₁₀ monitor in the Houston-Woodlands-Sugar Land MSA by December 31, 2016.
- The TCEQ recommends the decommission of collocated PM₁₀ monitors, with primary monitors remaining active, at the Laredo Vidaurri (AQS# 484790016), Dona Park (AQS# 483550034), and Texas City Fire Station (AQS# 481670004) sites.
- The TCEQ recommends the decommission of four continuous PM_{2.5} TEOMs designated as special purpose monitors located at Dallas Hinton (AQS# 481130069), Kingwood (AQS# 482011042), Italy (AQS# 481391044), and Odessa Hays Elementary School (AQS# 481350003).
- The TCEQ plans to deploy a collocated PM_{2.5} FRM monitor to the El Paso Chamizal site (AQS# 481410044) to meet collocation requirements.

- The TCEQ requests to discontinue the submittal of average daily temperature and average daily pressure, effective May 1, 2016, from manual PM_{2.5} samplers, and average temperature and average pressure recorded at Pb sites by the sampler or from nearby airports to AQS, according to changes to 40 CFR 58.16 requirements.

Conclusion

After consideration of the federal regulations, 2015 U.S. Census Bureau population data, and 2015 design values, the TCEQ will meet or exceed all monitoring requirements with the above mentioned recommendations for the next calendar year. This network plan focuses on the current network and changes within this network from July 1, 2015, through December 31, 2017.

Instructions for Comments

Send comments pertaining to this document to the following address.

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