Texas Commission on Environmental Quality

2011 Annual Ambient Air Monitoring Network Review

P.O. Box 13087, Austin, Texas 78711-3087

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2011 Annual Ambient Air Monitoring Network Review

Introduction

Under 40 Code of Federal Regulations (CFR), Part 58, Subpart B, states are required to submit an annual monitoring network review to the Environmental Protection Agency (EPA) by July 1 of each year. This network review is required to provide the framework for establishment and maintenance of an air quality surveillance system. The annual monitoring network review must be made available for public inspection for at least 30 days prior to submission to EPA. The review, and any comments received during the 30 day inspection period, will then be forwarded to EPA for final review and approval. The following document presents the current Texas network of ambient air monitors for which there are National Ambient Air Quality Standards (NAAQS), as well as proposed changes to the network from July 1, 2011, through June 30, 2012.

Regulatory Network Changes

Lead Monitor Sites

The lead monitoring rule issued with the revised NAAQS for lead was published at 73 Federal Register (FR) 66964 on November 12, 2008. EPA published amendments to lead ambient air monitoring requirements on December 27, 2010, at 75 FR 81126. The amendments reduced the emissions threshold for required monitoring. The current rule requires a minimum of one maximum-concentration source-oriented ambient air lead monitoring site near each facility that emits over 0.5 tons per year (tpy) of lead, unless EPA approves a request for a waiver of the requirement.

Current Lead Rule Sites

The required maximum-concentration source-oriented lead monitoring site at the Exide Technologies lead acid battery recycling plant in Frisco was reinstalled (July 2010) at a different location, but maintained the same EPA Air Quality System number (AQS) (480850009). The Texas Commission on Environmental Quality (TCEQ) has three additional monitors surrounding Exide Technologies. One monitor is located on the south side of the property (AQS 480850029 installed January 2011), and one monitor is located on the east side of the property (AQS 480850003 reinstalled August 2010). A neighborhood site (AQS 480850007) located on Ash Street north-northeast of the Exide plant continues to operate at the same site since its installation in mid-1999. All four sites meet current federal ambient air monitor siting requirements.

In addition to the four lead monitors in Frisco, Texas, two other lead monitors were deployed in 2010.

- Terrell Temtex (AQS 482570020) was installed to monitor ECS Refining in December 2010.

- Amarillo SH 136 (AQS 483750024) was installed to monitor ASARCO LLC in April 2010.

Current Lead Waivers

In 1999, TCEQ submitted waiver requests for the source-oriented lead monitoring required at the Red River Army Depot near Texarkana, the U.S. Army Fort Hood facility near Killeen, and Oxbow Calcining in Port Arthur. These waivers were subsequently approved by EPA-Region 6. TCEQ has reviewed these sites to ensure they continue to meet eligibility requirements. In 2015, TCEQ will reapply for these waivers as required by the federal rules.

2010 Lead Waiver Requests

TCEQ, working with the most recent available point source emissions inventory and toxic release inventory data, has determined that two new source-oriented lead sites will be required under the new lead rule unless waiver requests are submitted and approved. Based on modeling results, TCEQ is requesting waivers for Coleto Creek Power LP in Goliad County and San Miguel Electric Cooperative, Incorporated in Atascosa County. Specific details related to these waiver requests are included in Appendix A.

TCEQ has determined that due to the lead monitoring threshold change, monitoring of the following three sources is not required because their lead emissions are below 0.5 tpy: Ennis Paint Manufacturing – Ellis County; Ennis Paint, Inc., Metal Coating and Allied Services – Ellis County; and Nibco, Inc., Nacogdoches Plant – Nacogdoches County.

Special Lead Study

EPA has asked TCEQ to conduct a lead monitoring study for at least one year at two airports in Texas. This study will include lead monitoring at the Stinson Municipal Airport in San Antonio, Texas, and at the Northwest Regional Airport in Roanoke, Texas.

Ozone Monitor Sites

Brownsville-Harlingen

The Brownsville-Harlingen Metropolitan Statistical Area (MSA) has been identified as an area that requires an additional ozone monitor under the current ozone rule. In order to meet this requirement, TCEQ proposes to move the current ozone monitor located at 325 Golf Course Road, Mercedes, Texas, (AQS 482151048) to the Brownsville-Harlingen MSA. The Mercedes ozone monitor (AQS 482151048) is not required under the current rule, and moving the Mercedes ozone monitor to the Brownsville-Harlingen MSA will allow the TCEQ to meet regulatory requirements. TCEQ is currently working on siting for this monitor, with deployment planned for early 2012.

Wallisville

In response to EPA's request for an ozone monitor in the east Houston area around Wallisville, TCEQ has initiated exploration of several options. TCEQ is in discussion with the Houston Regional Monitoring (HRM) group, the owner of the air monitoring site at Wallisville Road (AQS 482010617), to assess the possibility of having their data certified by the state. We are also discussing the possibility of TCEQ locating a second ozone monitor at this site, either in the HRM trailer or in a second trailer. Finally, TCEQ has begun to consider alternative locations for siting an ozone monitor in the general vicinity of interest to EPA. As we anticipate that resources will be constrained in the coming fiscal biennium, TCEQ expects that at least one other ozone monitor will be decommissioned in order to manage limited resources. TCEQ anticipates having the situation resolved such that there will be ozone data from the vicinity of interest for the 2012 Data Certification submittal.

New Sites

In anticipation of the proposed ozone rule change in 2011, ten MSAs in Texas have been identified as areas that will require additional ozone monitoring. The ten MSAs are: Abilene, Amarillo, College Station, Lubbock, Midland, Odessa, San Angelo, Sherman-Dennison, Texarkana, and Wichita Falls. Because Midland and Odessa are adjoining MSAs, EPA has agreed that one ozone monitor may represent both MSAs. General monitor locations are outlined below, and during the next year, TCEQ will be working on specific locations for these new monitors.

- Abilene: TCEQ proposes to locate the new ozone monitor northwest of the urban core.
- Amarillo: TCEQ proposes to locate the new ozone monitor northeast of the urban core.
- College Station: TCEQ proposes to locate the new ozone monitor west of the College Station urban core.
- Lubbock: TCEQ proposes to locate the new ozone monitor north of the urban core.
- Midland/Odessa: TCEQ proposes to locate the new ozone monitor either north of the Odessa urban core, or northwest of the Midland urban core.
- San Angelo: TCEQ proposes to locate the new ozone monitor north or northeast of the urban core.
- Sherman-Dennison: TCEQ proposes to locate the new ozone monitor north or northwest of the Sherman urban core.
- Texarkana: TCEQ proposes to locate the new ozone monitor north of the urban core.

- Wichita Falls: TCEQ proposes to locate the new ozone monitor northwest of the urban core.

Sulfur Dioxide (SO_2) Monitor Sites

In response to the 2010 rule change, TCEQ has identified seven core-based statistical areas (CBSAs) that will require SO_2 monitoring. The seven CBSAs are Houston-Sugar Land-Baytown, Dallas-Fort Worth-Arlington, San Antonio, Austin-Round Rock, Longview, Beaumont-Port Arthur, and Amarillo. Based on current SO_2 monitor locations, TCEQ has met the regulatory requirements for SO_2 in the following CBSAs: Houston-Sugar Land-Baytown, Dallas-Fort Worth-Arlington, and Beaumont-Port Arthur. In addition, TCEQ currently operates a seasonal SO_2 monitor in Longview. TCEQ plans to change the operating schedule of this monitor from seasonal to year-round in order to meet the new regulatory requirements. TCEQ is currently working on identifying locations for new SO_2 monitors in the following CBSAs: San Antonio, Austin-Round Rock, and Amarillo. Proposed monitor locations are outlined below but may change due to logistics.

- San Antonio: TCEQ proposes to locate two new SO_2 monitors at the following existing air monitoring sites: Calaveras Lake (AQS 480290059) and San Antonio Northwest (AQS 480290032).

- Austin-Round Rock: TCEQ proposes to locate the new SO_2 monitor at Austin Northwest (AQS 484530014).

- Amarillo: TCEQ proposes to locate the new SO_2 monitor northeast of the Amarillo urban core, in collocation with the new ozone monitor required under the pending rule change.

Status of Changes Proposed In 2010 Annual Network Review

The status of changes proposed in the 2010 Annual Network Review is outlined below. Due to various issues, TCEQ has been unable to complete some of the planned changes.

- Laredo Bridge (AQS 484790017) – The planned relocation of the carbon monoxide (CO) monitor to the World Trade Bridge location has been delayed by negotiations with the property owner.

- Beaumont Mary (AQS 482451050) – Relocation of the Beaumont site (AQS 482450020) to Mary Street is complete. The Mary Street site has been active since October 2010.

- LaPorte (AQS 482011043) – The proposed relocation of the radar profiler to Waterworks (AQS 482010241) has not been completed. A site agreement has been signed for relocation to Waterworks at 2300 Federal Road, Houston, Texas.

However, TCEQ is still responding to non-standard requests from the City of Houston; consequently, other sites are being considered.

- Clendenin School, El Paso (AQS 481410059) – The relocation of the particulate matter of 10 microns or less (PM_{10}) monitor from this site to Van Buren (AQS 481410693) was completed in August 2010.

- NCore Monitoring Network – All required monitors including the Particulate Matter-Coarse (PM-Coarse) monitors have been deployed at Dallas Hinton (AQS 481130069), El Paso Chamizal (AQS 481410044), and Houston Deer Park #2 (AQS 482011039). The last of the PM-Coarse monitors was activated in February 2011.

- Clinton, Houston (AQS 482011035) – Due to resource constraints and other network requirements, TCEQ has been unable to deploy a continuous PM_{10} monitor at this site. If resources allow, this change may be implemented in 2011.

- Laredo Border (AQS 484790016) – Due to the expansion of Laredo Community College, TCEQ must relocate the CO, ozone, PM_{10}, and Total Suspended Particulate-lead (TSP-lead) monitors at this site. Negotiations with the property owner are pending.

Additional Changes

Completed

Particulate matter of 2.5 microns or less ($PM_{2.5}$) monitors were decommissioned in November 2010 at the following sites:

- Odessa-Hays Elementary School (AQS 481350003).

- Dallas Redbird Airport, Executive (AQS 481130087).

- Port Arthur Memorial School (AQS 482450021).

- West Orange (AQS 483611001).

- Amarillo A&M (AQS 483750320).

- Fort Worth Northwest (AQS 484391002).

- Bravo Big Bend (AQS 480430101) – speciation monitor.

Planned

- Port Arthur West (AQS 482450011) – Due to the sale of the property where the site is located, the ozone and SO_2 monitors at this site must be relocated. TCEQ

proposes to relocate these monitors to City Service Center/PA (AQS 482450019) in summer, 2011.

- Clinton (AQS 482011035) – With the concurrence of the City of Houston, TCEQ plans to designate the precipitation monitor as part of the Photochemical Assessment Monitoring Stations (PAMS) network to meet federal requirements.

- Sun Metro, El Paso (AQS 481410053) – Due to the planned property sale of the present site, the CO, $PM_{2.5}$, and SO_2 monitors at this site will either be moved or decommissioned.

- San Antonio Downtown (AQS 480290046) – Due to building renovation, the monitors (CO, nitrogen oxide [NO]/nitrogen dioxide [NO_2]/nitrogen oxides [NO_x]) at this site were decommissioned in October 2010. The estimated time to complete the renovations is ten months. TCEQ is considering relocating these monitors to fulfill near-road NO_2 requirements.

- Galveston 99th Street (AQS 481671034) – A speciated Federal Reference Method (FRM) monitor is planned for this site to support exceptional event analyses. It is presently on hold pending funding and rules clarification.

- Corpus Christi Huisache (AQS 483550032) – EPA has approved the decommissioning of the $PM_{2.5}$ monitor at this site; the shutdown is pending. The $PM_{2.5}$ Quality Control (QC) monitor at this site will also be decommissioned.

- Dona Park (AQS 483550034) – TCEQ plans to reconfigure this site to have an every sixth day speciation sampler and a $PM_{2.5}$ Tapered Element Oscillating Microbalance (TEOM) by the end of next year.

- Austin Audubon Society (AQS 484530020) – TCEQ proposes to decommission the speciated $PM_{2.5}$ monitor at this site; however, the gravimetric FRM will remain active to meet federal requirements.

- Austin Webberville Rd (AQS 484530021) – TCEQ plans to continue the required FRM sampling on an every sixth day basis and add a supplemental continuous $PM_{2.5}$ monitor.

- Baytown (AQS 482010058) – TCEQ plans to continue the required FRM sampling on an every sixth day basis and add a supplemental continuous $PM_{2.5}$ monitor.

- Isla Blanca (AQS 480612004) – TCEQ proposes to replace the $PM_{2.5}$ speciation samplers with a continuous $PM_{2.5}$ monitor.

- Dallas Hinton (AQS 481130069) – Due to the reclassification of the DFW ozone nonattainment area to serious, the TCEQ will conduct intensive carbonyl sampling at this site beginning in summer, 2011. As preliminarily agreed upon with the EPA-Region 6, the TCEQ will collect a total of 240 carbonyl samples at a

sampling frequency of eight, three-hour samples per day every three days from June 1 through August 31 at the Dallas Hinton site.

- El Paso Chamizal (AQS 481410044) – Due to spatial limitations, TCEQ is unable to locate a lead monitor at this NCore site. TCEQ requests to locate the new lead monitor at Ascarate Park SE (AQS 481410055). The two sites are located approximately four miles apart, and operate under the same spatial scale with similar environmental conditions. TCEQ proposes to deploy this monitor by December, 2011.

Evaluation of PM Network

Utilizing 2009 population estimates from the U.S. Census Bureau and measured PM concentrations for 2008 - 2010, TCEQ staff has reviewed the required number of PM_{10} and $PM_{2.5}$ monitors along with the associated collocated QC monitors and sample schedules. This review showed that all areas have at least the minimum number of required monitors, and some areas have more than required. Therefore, no additions to the network are necessary in this regard.

Evaluation of the collocated QC monitors showed that after the 2010 decommissions approved by EPA are completed, the $PM_{2.5}$ network will have 18 monitoring sites with four QC sites; only three QC sites are required. The PM_{10} network will have 26 monitoring sites with six QC sites; only four QC sites are required. Because of expected budget reductions and increased monitoring costs, TCEQ proposes to decommission QC monitors as described below which will result in three $PM_{2.5}$ QC sites and four PM_{10} QC sites.

$PM_{2.5}$

TCEQ has identified a need for upwind speciation data for the Houston area in support of exceptional event analyses and potential source apportionment studies. To support this effort, TCEQ proposes to move the $PM_{2.5}$ FRM speciation monitor, which exceeds minimum requirements, from Isla Blanca Park, South Padre Island (AQS 480612004) to Galveston 99th Street (AQS 481671034) to operate as a special purpose speciation monitor. TCEQ proposes to replace the Isla Blanca Park every sixth day sampler with a continuous $PM_{2.5}$ TEOM monitor that will help quantify incoming high background levels during exceptional event situations.

TCEQ also proposes to continue FRM $PM_{2.5}$ monitoring at Austin Audubon Society (AQS 484530020) but to discontinue $PM_{2.5}$ speciation monitoring at this site.

In addition, TCEQ proposes to decommission the Huisache, Corpus Christi $PM_{2.5}$ QC monitor (AQS 483550032).

PM_{10}

TCEQ proposes to decommission two PM_{10} QC monitors at the sites with the lowest measured concentrations - Dallas Convention Center (AQS 481130050) and Fort Worth

Stagecoach (AQS 484393010). TCEQ also proposes to move one of the decommissioned monitors to the site identified as having the highest measured PM_{10} concentration - El Paso Socorro (AQS 481410057).

Evaluation of Automatic Gas Chromatograph (AutoGC) Network

TCEQ owns and operates 16 AutoGC monitors sited to better characterize specific regional and local ambient air conditions in the state. Three of these sites are operated with state funds only; the remaining are partially funded with federal funds. Eight of the AutoGCs are part of the PAMS network.

TCEQ does not anticipate any changes to the AutoGC monitors currently collecting data (listed below) other than the addition of the Barnett Shale monitors as noted below.

- Dallas Hinton (AQS 481130069 - located in Barnett Shale area).
- Odessa-Hays Elementary School (AQS 481350003).
- El Paso Chamizal (AQS 481410044).
- Channelview (AQS 482010026).
- Clinton, Houston (AQS 482011035).
- Houston Deer Park #2 (AQS 482011039).
- Beaumont Downtown (AQS 482450009).
- Nederland High School (AQS 482451035).
- Fort Worth Northwest (AQS 484391002 - located in Barnett Shale area).
- Milby Park, Houston (AQS 482010069).
- Cesar Chavez, Houston (AQS 482016000).
- Corpus Christi Palm (AQS 483550083).

Barnett Shale Auto GC Monitors

Due to interest in oil and gas production in the Barnett Shale Formation area, four AutoGC sites have been added in this area to gain a more comprehensive understanding of the potential impacts of natural gas drilling over a long period of time. These four additional sites include:

- Decatur Thompson (AQS 484970088)

- DISH Airfield (AQS 481211013)
- Eagle Mountain Lake (AQS 484390075)
- Flower Mound Shiloh (AQS 481211007)

A seventh site in southeast Tarrant County is currently in the siting stage. TCEQ has recently executed a contract for four additional AutoGCs to be located in areas with ongoing interest in oil and gas production. These are slated for deployment by December, 2012.

Additional Monitors

Senate Bill 527 of the 82nd Legislative session was signed by Governor Rick Perry on May 9, 2011, and becomes effective September 1, 2011. This new statute allocates not more than $7 million in 2012 and 2013 and not more than $3 million in 2014 and subsequent years to fund a regional air monitoring program in TCEQ Regions 3 and 4. TCEQ will provide oversight of the program which is to be implemented through a regional non-profit entity located in North Texas. Funding for this program is provided under the Texas Emissions Reduction Plan (TERP).

Reduction of Non-Required Monitors

Due to increased resource constraints, TCEQ has initiated an evaluation of all non-required monitors. Several PAMS canister sampling monitors have been identified for potential decommission because the sites are not required in order to meet the PAMS requirements. TCEQ will continue the evaluation of non-required monitors and will follow up with a formal request in the future.

Though not considered an exhaustive list, the canister sampling monitors identified for potential decommission include the following:

- Italy, Dallas (AQS 481391044)
- Ascarate Park SE, El Paso (AQS 481410055)
- Galveston 99th Street (AQS 481671034)
- Houston Aldine (AQS 482010024)
- Northwest Harris County (AQS 482010029)
- Kaufman, Dallas (AQS 482570005)
- Conroe Relocated (AQS 483390078)

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: Daphne McMurrer MC-165
Austin, Texas 78711-3087

Or email at:

Daphne.McMurrer@tceq.texas.gov

Appendix A: Lead Waiver Requests

Request for a Waiver of the Source-Oriented Lead Monitoring Requirement at the Coleto Creek Power Station, Goliad County, Texas

The TCEQ requests a waiver of the source-oriented lead monitoring requirement for the Coleto Creek Power Station, Goliad County, because lead emissions from the site do not contribute to lead concentrations as high as 50% of the 2008 lead National Ambient Air Quality Standard (NAAQS).

The Texas Commission on Environmental Quality (TCEQ) used the most current, complete, and validated emissions inventory (EI) information available when identifying non-airport lead sources with emissions at or above 0.5 ton per year (tpy) for potential monitoring under the December 14, 2010, EPA final rule on lead (75 Federal Register 81134 [December 27, 2010]). The 2009 TCEQ point source EI and 2009 Toxic Release Inventory (TRI) databases were used as the initial basis for this comparison.

The Coleto Creek Power Station, Goliad County, was one of the facilities identified as having lead emissions at or above 0.5 tpy based on 0.6456 tons of lead emissions listed in TCEQ's 2009 annual EI, which is larger than the 2009 emissions listed in the TRI. Air dispersion modeling conducted by the TCEQ predicts, however, that the maximum rolling three-month average ground level concentration (GLCmax) resulting from the Coleto Creek Power Station's lead emissions sources is 0.000117 micrograms per cubic meter ($\mu g/m^3$).

A provision in the December 2010 lead monitoring final rule states that, "The Regional Administrator may waive the requirement in paragraph 4.5(a) for monitoring near Pb sources if the State . . . can demonstrate the Pb source will not contribute to a maximum Pb concentration in ambient air in excess of 50 percent of the NAAQS (based on historical monitoring data, modeling, or other means)." (75 FR 81130, 81138 [December 27, 2010]) Because the predicted GLCmax of 0.000117 $\mu g/m^3$ resulting from reported lead emissions at the Coleto Creek Power Station, Goliad County, coke calcining plant is less than 0.1% of the 2008 lead NAAQS, a monitoring waiver is appropriate.

SUPPORTING DOCUMENTATION: The modeling analysis of lead for the Coleto Creek Power Station, Goliad County, and the accompanying map detailing the predicted GLCmax and lead concentrations at the ambient air modeling grid points are enclosed.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: David Brymer
Air Quality Planning Division

Date: March 30, 2011

Thru: Robert Opiela, P.E., Technical Specialist
Technical Program Support Section
Air Permits Division

From: Jessica Carter, Justin Cherry
Air Dispersion Modeling Team
Air Permits Division

Subject: Modeling Analysis of Lead for Coleto Creek Power Station (RN100226919)

1.0 Project Identification Information.

On November 12, 2008, the U.S. Environmental Protection Agency (EPA) finalized the new 0.15 microgram per cubic meter ($\mu g/m^3$) NAAQS for lead based on a rolling three-month average. On December 14, 2010, the EPA lowered the emission threshold from annual lead emissions of one ton or more to a half a ton or more in actual emissions that state agencies must use to determine if an air quality monitor should be placed near an industrial facility that emits lead (*75 Federal Register 81134*). The rule further requires that this monitoring be conducted at or near the maximum off-site ambient air lead concentration, as predicted by modeling. In general, the rule requires source-oriented ambient air lead monitoring by December 27, 2011 at sites with actual annual lead emissions of half a ton or more per year. Coleto Creek Power Station was identified as having emissions at or above this level based on the reported 2009 TCEQ Emissions Inventory and/or 2009 Toxics Release Inventory.

The TCEQ conducted air dispersion modeling of all the lead emission sources at the site using the most current modeling parameters and associated permitted allowable emissions rates. The TCEQ will use the dispersion modeling results to determine the optimal location of any required source-oriented monitors.

ArcReader Published Map:
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2.0 Report Summary. The predicted maximum ground level concentration (GLCmax) is 0.000117 $\mu g/m^3$ for a rolling three-month average. The location of the GLCmax is along the northern property line. Table 1 lists the location of the predicted GLCmax. The location coordinates are in the UTM Zone 14 North, North American Datum of 1983 (NAD83) coordinate system.

Table 1. Modeling Results for Lead				
Location		Averaging Time	GLC ($\mu g/m^3$)	Standard ($\mu g/m^3$)
Easting (meters)	Northing (meters)			
674100	3179300	rolling three-month	0.000117	0.15

3.0 Land Use and Terrain. A land use/land cover analysis was performed using AERSURFACE consistent with guidance given in the AERMOD Implementation Guide (March 19, 2009). The recommended input data, the National Land Cover Data 1992 archives (NLCD92), were used for this analysis.

Terrain elevations within the modeling domain were determined using AERMAP (Version 09040). The input data used for this analysis were United States Geological Survey (USGS) seamless data that covers digital elevation models (DEMs) for Fannin, Hensley Lake, Schroeder, and Ander data sets.

4.0 Modeling Emissions Inventory. The modeled emission source parameters and emission rates were provided by Coleto Creek Power Station. The source locations were validated by ADMT using aerial photography. No sources have a listed maximum allowable emission rate for lead. For all three sources, emissions estimates were submitted by Coleto Creek Power Station and then validated by APD permit reviewing staff for use in this analysis. The emission rates represent worst case 1-hour average emission rates and may be more conservative than 24-hour or monthly average emission rates. The emission source coordinates are in the UTM Zone 14 North, North American Datum of 1983 (NAD83) coordinate system.

Table 2. On-Property Point Source Parameter Information						
ID	Easting (meters)	Northing (meters)	Stack Height (meters)	Stack Temp (K)	Stack Exit Velocity (meters/sec)	Stack Diameter (meters)
UNIT 1	674412	3177468	124.66	448.2	35.51	6.096
EMG 1	674495.35	3177551.44	5.33	735.9	35.72	0.253
FWP 1	674499.647	3177628.32	3.89	722	42	0.204

Table 3. On-Property Source Modeled Emission Rates			
Source ID	Pollutant	Averaging Time	Emission Rates (lb/hr)
UNIT 1	Lead	1-hr	0.0683
EMG 1	Lead	1-hr	0.0000468

Table 3. On-Property Source Modeled Emission Rates			
Source ID	Pollutant	Averaging Time	Emission Rates (lb/hr)
FWP 1	Lead	1-hr	0.0000359

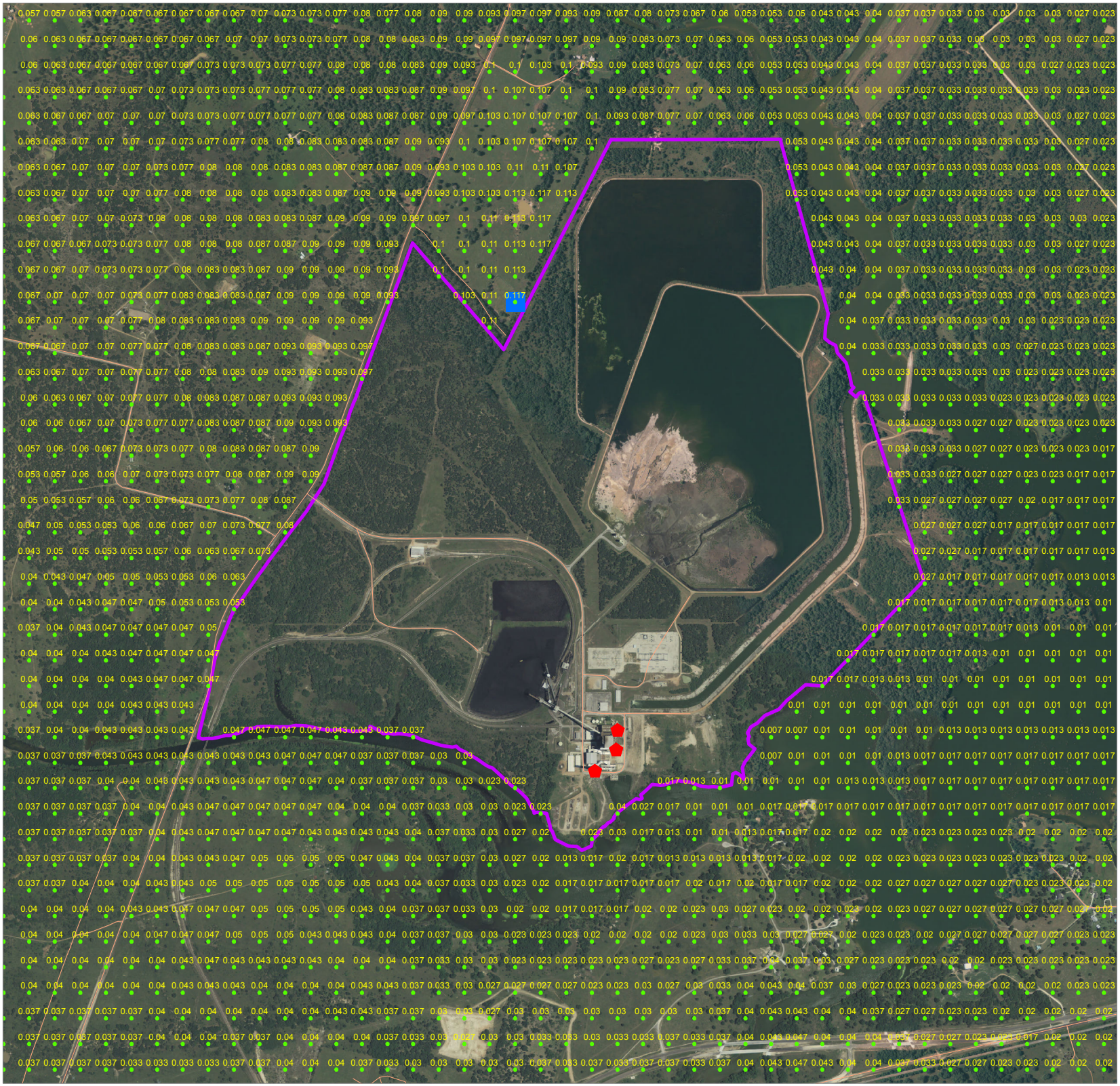
5.0 Building Wake Effects (Downwash). Input data to Building Profile Input Program Prime (BPIP-PRM Version 04274) were provided by Coleto Creek Power Station. The building locations were validated by ADMT using aerial photography.

6.0 Meteorological Data.
Surface Station and ID: Victoria, TX (Station #: 12912)
Upper Air Station and ID: Victoria, TX (Station #: 12912)
Meteorological Dataset: 1983, 1984, 1986, 1987, 1988
Profile Base Elevation: 107 feet

The AERSURFACE analysis conducted of the area surrounding the Coleto Creek Power Station site resulted in a calculated roughness length of 0.081 meters. The vast majority of the area considered water bodies such as the Coleto Creek Resevoir and cooling water lakes at the Coleto Creek Power Station (and with a lower roughness length) is concentrated near the emission sources. The dispersion of emissions from the sources will be highly influenced by this lower roughness length. A representative roughness length for the area would be approximately 0.05 meters. For this reason, the meteorological data set used for this analysis was developed using a roughness length of 0.05 meters.

7.0 Receptor Grid. The receptor grid used in the modeling analysis consisted of receptors with 100 meter spacing and extended approximately 1.5 kilometers (km) from the Coleto Creek Power Station site property line to the north and east, 1.9 km to the west, and 2.6 km to the south. The purpose of the receptor grid was to determine a representative maximum ground-level concentration and the extent of ground-level concentrations at or above half of the lead NAAQS standard.

8.0 Model Used and Modeling Techniques. AERMOD (Version 09292) was used in a refined screening mode. For refined screening, National Weather Service (NWS) meteorological raw input data are used with generalized surface characteristics of the application site. Since the current version of AERMOD is not capable of calculating rolling three-month average concentrations, the EPA post processor LeadPost was used. The input values to LeadPost are monthly average values at each receptor in the POSTFILE output format from AERMOD. The results from the LeadPost reports are limited to three decimal places; therefore, the monthly average predicted concentrations were examined from the AERMOD output files using the MAXIFILE option since the AERMOD output files display results out to five decimal places. The rolling 3-month averages to five decimal places were calculated from the monthly averages from the MAXIFILE output.



Protecting Texas by Reducing and Preventing Pollution

TCEQ

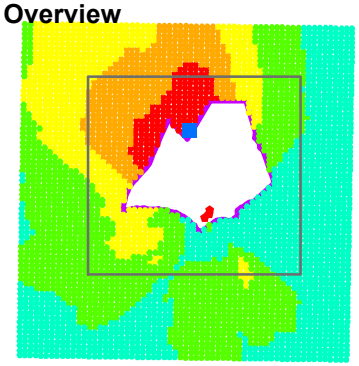
Texas Commission on Environmental Quality
Chief Engineer's Office
Air Quality Division
PO Box 13087 (Mail Code 164)
Austin, Texas 78711-3087

Modeling Analysis of Lead for Coleto Creek Power Station Goliad Co., Texas

Legend

- EGU
- Rolling 3 Month Max
- Max Modeled Lead Impact in nanograms per cubic meter

Overview



Nanograms

- 0.007 - 0.027
- 0.028 - 0.040
- 0.041 - 0.060
- 0.061 - 0.083
- 0.084 - 0.117

TCEQ Disclaimer: This map was generated by the Chief Engineer's Office, Air Quality Division of the Texas Commission on Environmental Quality and is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For information concerning this map, contact the Air Quality Division at (512) 239-1459.

0.1 0.05 0 0.1 0.2 0.3 0.4

Miles

Raj Nadkarni 512-239-1934

April 28, 2011

Request for a Waiver of the Source-Oriented Lead Monitoring Requirement at the San Miguel Electric Cooperative, Atascosa County, Texas

The TCEQ requests a waiver of the source-oriented lead monitoring requirement for the San Miguel Electric Cooperative lignite-fired power plant, Atascosa County, because lead emissions from the site do not contribute to lead concentrations as high as 50 percent of the 2008 lead National Ambient Air Quality Standard (NAAQS).

The Texas Commission on Environmental Quality (TCEQ) used the most current, complete, and validated emissions inventory (EI) information available when identifying non-airport lead sources with emissions at or above 0.5 ton per year (tpy) for potential monitoring under the December 14, 2010, EPA final rule on lead (75 Federal Register 81134 [December 27, 2010]). The 2009 TCEQ point source EI and 2009 Toxic Release Inventory (TRI) databases were used as the initial basis for this comparison.

The San Miguel Electric Cooperative lignite-fired power plant, Atascosa County, was one of the facilities identified as having lead emissions at or above 0.5 tpy based on the 0.7080 tons of lead emissions listed in the TCEQ's 2009 annual EI, and 0.7081 tons of lead emissions listed in the 2009 TRI. Air dispersion modeling conducted by the TCEQ predicts, however, that the maximum rolling three-month average ground level concentration (GLCmax) resulting from the San Miguel Electric Cooperative lignite-fired power plant's lead emissions sources is 0.00091 micrograms per cubic meter ($\mu g/m^3$).

A provision in the December 2010 lead monitoring final rule states that, "The Regional Administrator may waive the requirement in paragraph 4.5(a) for monitoring near Pb sources if the State . . . can demonstrate the Pb source will not contribute to a maximum Pb concentration in ambient air in excess of 50 percent of the NAAQS (based on historical monitoring data, modeling, or other means)." (75 FR 81130, 81138 [December 27, 2010]) Because the predicted GLCmax of 0.00091 $\mu g/m^3$ resulting from reported lead emissions at the San Miguel Electric Cooperative lignite-fired power plant is less than 1% of the 2008 lead NAAQS, a monitoring waiver is appropriate.

SUPPORTING DOCUMENTATION: The modeling analysis of lead for the San Miguel Electric Cooperative lignite-fired power plant, Atascosa County, and the accompanying map detailing the predicted GLCmax and lead concentrations at the ambient air modeling grid points are enclosed.

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: David Brymer
Air Quality Planning Division

Date: March 30, 2011

Thru: Robert Opiela, P.E., Technical Specialist
Technical Program Support Section
Air Permits Division

From: Jessica Carter, Justin Cherry
Air Dispersion Modeling Team
Air Permits Division

Subject: Modeling Analysis of Lead for San Miguel Electric Cooperative Inc (RN100226539)

1.0 Project Identification Information.

On November 12, 2008, the U.S. Environmental Protection Agency (EPA) finalized the new 0.15 microgram per cubic meter ($\mu g/m^3$) NAAQS for lead based on a rolling three-month average. On December 14, 2010, the EPA lowered the emission threshold from annual lead emissions of one ton or more to a half a ton or more in actual emissions that state agencies must use to determine if an air quality monitor should be placed near an industrial facility that emits lead (*75 Federal Register 81134*). The rule further requires that this monitoring be conducted at or near the maximum off-site ambient air lead concentration, as predicted by modeling. In general, the rule requires source-oriented ambient air lead monitoring by December 27, 2011 at sites with actual annual lead emissions of half a ton or more per year. San Miguel Electric Cooperative Inc was identified as having emissions at or above this level based on the reported 2009 TCEQ Emissions Inventory and/or 2009 Toxics Release Inventory.

The TCEQ conducted air dispersion modeling of all the lead emission sources at the site using the most current modeling parameters and associated permitted allowable emissions rates. The TCEQ will use the dispersion modeling results to determine the optimal location of any required source-oriented monitors.

ArcReader Published Map:
\\Msgiswrk\apd\MODEL PROJECTS\3425\3425_San_Miguel.pmf

2.0 Report Summary. The predicted maximum ground level concentration (GLCmax) is 0.00091 $\mu g/m^3$ for a rolling three-month average. The location of the GLCmax is approximately 900 meters from property line to the north. Table 1 lists the location of the predicted GLCmax. The location coordinates are in the UTM Zone 14 North, North American Datum of 1983 (NAD83) coordinate system.

Table 1. Modeling Results for Lead				
Location		Averaging Time	GLC ($\mu g/m^3$)	Standard ($\mu g/m^3$)
Easting (meters)	Northing (meters)			
551000	3176600	rolling three-month	0.00091	0.15

3.0 Land Use and Terrain. A land use/land cover analysis was performed using AERSURFACE consistent with guidance given in the AERMOD Implementation Guide (March 19, 2009). The recommended input data, the National Land Cover Data 1992 archives (NLCD92), were used for this analysis.

Terrain elevations within the modeling domain were determined using AERMAP (Version 09040). The input data used for this analysis were United States Geological Survey (USGS) digital elevation models (DEMs) for Christine East, Christine West, Cross NE, and Caballos Creek data sets.

4.0 Modeling Emissions Inventory. The modeled emission source parameters and emission rates were provided by San Miguel Electric Cooperative Inc. The source locations were validated by ADMT using aerial photography. Source 6 has a listed maximum allowable emission rate for lead in tons per year only. The maximum hourly emission rate was derived from the tons per year and based on 8,064 operating hours per year. The emission rates represent worst case 1-hour average emission rates and may be more conservative than 24-hour or monthly average emission rates. The emission source coordinates are in the UTM Zone 14 North, North American Datum of 1983 (NAD83) coordinate system.

Table 2. On-Property Point Source Parameter Information						
ID	Easting (meters)	Northing (meters)	Stack Height (meters)	Stack Temp (K)	Stack Exit Velocity (meters/sec)	Stack Diameter (meters)
6	551044.673	3175346.667	137.16	347	32.3	6.09

Table 3. On-Property Source Modeled Emission Rates			
Source ID	Pollutant	Averaging Time	Emission Rates (lb/hr)
6	Lead	1-hr	0.22

5.0 Building Wake Effects (Downwash). Input data to Building Profile Input Program Prime (BPIP-PRM Version 04274) were derived from aerial photography by the ADMT.

6.0 Meteorological Data.

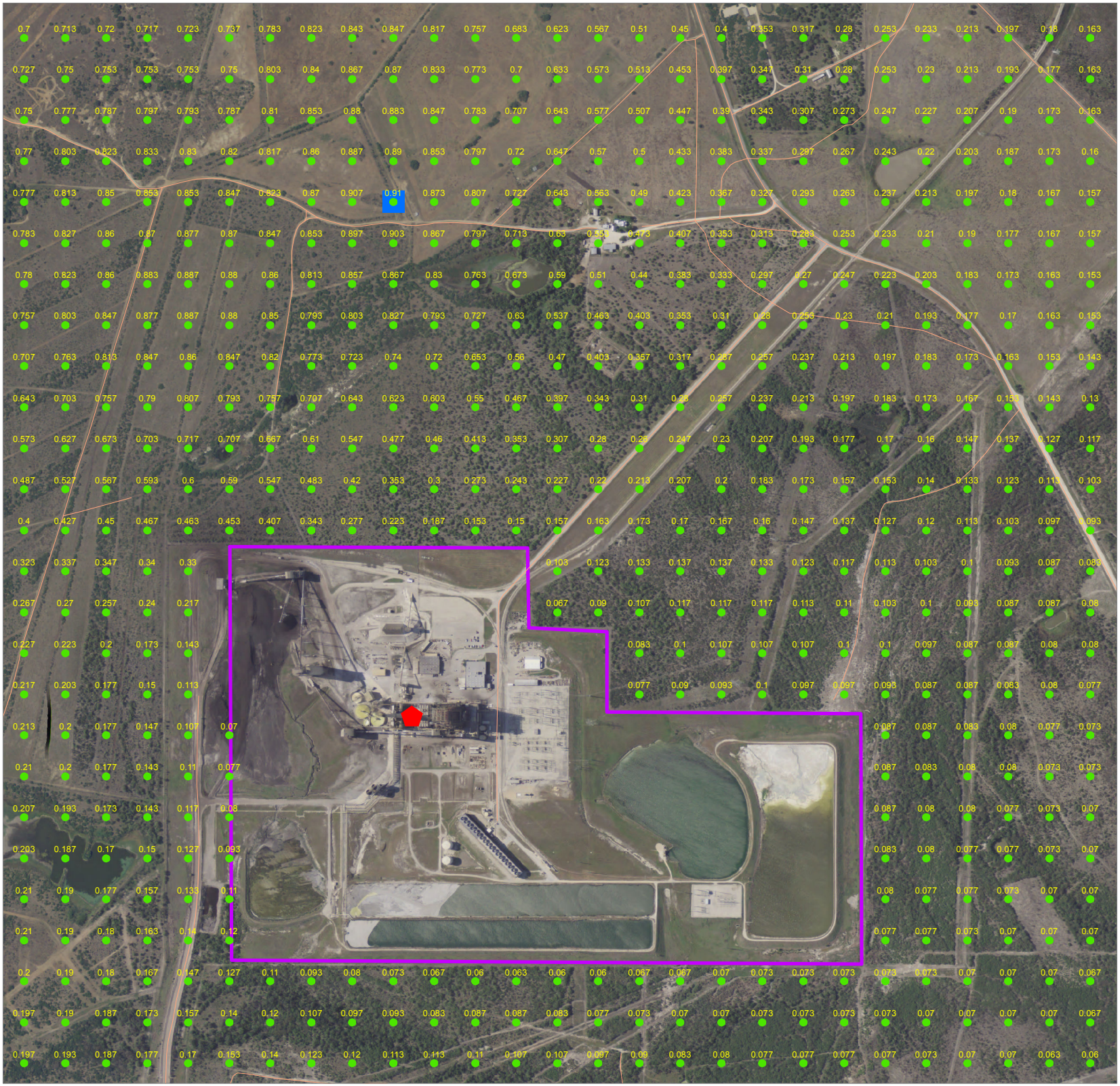
Surface Station and ID: San Antonio, TX (Station #: 12921)
Upper Air Station and ID: Del Rio, TX (Station #: 22010)
Meteorological Dataset: 1986, 1987, 1988, 1989, 1991
Profile Base Elevation: 242.3 meters

The AERSURFACE analysis conducted of the area surrounding the San Miguel Electric Cooperative Inc site resulted in a calculated roughness length of 0.200 meters. The meteorological data set used for this analysis was developed using a roughness length of 0.5 meters. A higher roughness length value would tend to enhance dispersion more than a lower value. However, since the only source of lead is a very tall stack, over 100 meters high, enhanced dispersion would mix air contaminants from the source to ground level to a greater extent. Therefore, use of a roughness length of 0.5 meters is conservative.

According to EPA's *Meteorological Monitoring Guidance for Regulatory Modeling Applications*, the meteorological dataset for 1988 does not meet regulatory completeness (only 86.4% complete). There was a total of 1195 hours of missing data for the entire year (8760 hours). The number of hours missing per month ranged from zero hours to 226 hours. April was the month with the highest number of missing hours (226 hours out of 720 hours). There were zero hours missing for the months of August, September, October, and November. Since the predicted concentrations are extremely small, it is unlikely that the results would significantly change due to these missing hours.

7.0 Receptor Grid. The receptor grid used in the modeling analysis consisted of receptors with 100 meter spacing and extended approximately 2.5 kilometers (km) from the San Miguel Electric Cooperative Inc site property to the north, and approximately 1.5 km from the site property in all other directions. The purpose of the receptor grid was to determine a representative maximum ground-level concentration and the extent of ground-level concentrations at or above half of the lead NAAQS standard.

8.0 Model Used and Modeling Techniques. AERMOD (Version 09292) was used in a refined screening mode. For refined screening, National Weather Service (NWS) meteorological raw input data are used with generalized surface characteristics of the application site. Since the current version of AERMOD is not capable of calculating rolling three-month average concentrations, the EPA post processor LeadPost was used. The input values to LeadPost are monthly average values at each receptor in the POSTFILE output format from AERMOD. The results from the LeadPost reports are limited to three decimal places; therefore, the monthly average predicted concentrations were examined from the AERMOD output files using the MAXIFILE option since the AERMOD output files display results out to five decimal places. The rolling 3-month averages to five decimal places were calculated from the monthly averages.



Protecting Texas by Reducing and Preventing Pollution

TCEQ

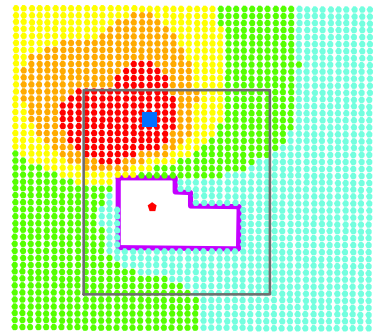
Texas Commission on Environmental Quality
Chief Engineer's Office
Air Quality Division
PO Box 13087 (Mail Code 164)
Austin, Texas 78711-3087

Modeling Analysis of Lead for San Miguel Electric Cooperative Inc. Atascosa Co., Texas

Legend

- EGU
- Rolling 3 Month Max
- Max Modeled Lead Impact in nanograms per cubic meter

Overview



Nanograms

0.040 - 0.147	0.321 - 0.507
0.148 - 0.320	0.508 - 0.687
	0.688 - 0.910

0.060.03 0 0.06 0.12 0.18 0.24

Miles

Raj Nadkarni 512-239-1934 April 28, 2011

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
480271047	Killeen Skylark Field	1605 Stone Tree Drive, Killeen	Killeen	31.0880022	-97.6797343	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	San Antonio	29.51505	-98.62019	Suburban	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale	Y		Changed Monitoring Objective
480290032	San Antonio Northwest	6655 Bluebird Lane, San Antonio	San Antonio	29.51505	-98.62019	Suburban	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
480290046	San Antonio Downtown	615 East Houston, San Antonio	San Antonio	29.42667	-98.48639	Urban/ City Ctr	CO	SLAMS	Gas Filter Correlation	Continuous	Highest Concentration	Micro Scale	Y		Site deactivated 10/6/2010
480290046	San Antonio Downtown	615 East Houston, San Antonio	San Antonio	29.42667	-98.48639	Urban/ City Ctr	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Highest Concentration	Micro Scale	Y		Site deactivated 10/6/2010
480290052	Camp Bullis	Camp Bullis Firing Range, near Wilderness Trail, San Antonio	San Antonio	29.63209	-98.56494	Rural	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Extreme Downwind; Population Exposure	Urban Scale	Y		Changed Monitoring Objective
480290052	Camp Bullis	Camp Bullis Firing Range, near Wilderness Trail, San Antonio	San Antonio	29.63209	-98.56494	Rural	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale	Y		Changed Monitoring Objective
480290053	Selma	16289 North Evans Road #2, Selma	San Antonio	29.58773	-98.31248	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
480290059	Calaveras Lake	14620 Laguna Road, San Antonio	San Antonio	29.27539	-98.31167	Rural	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Source-Oriented; Upwind Background	Urban Scale	Y		
480290059	Calaveras Lake	14620 Laguna Road, San Antonio	San Antonio	29.27539	-98.31167	Rural	O3	SLAMS	UV Photometric	Continuous	Source-Oriented; Upwind Background	Urban Scale	Y		
480290059	Calaveras Lake	14620 Laguna Road, San Antonio	San Antonio	29.27539	-98.31167	Rural	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure; Upwind Background	Urban Scale	Y		
480290060	Frank Wing Municipal Court	401 South Frio Street, San Antonio	San Antonio	29.42111	-98.505	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
480370004	Texarkana	2315 West 10th Street, Texarkana	Texarkana	33.42576	-94.07081	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		To be removed when ozone site established
480391004	Manvel Croix Park	4503 Croix Parkway, Manvel	Brazoria	29.52043	-95.39252	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Urban Scale	Y		
480391004	Manvel Croix Park	4503 Croix Parkway, Manvel	Brazoria	29.52043	-95.39252	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
480391016	Lake Jackson	109-B Brazoria Highway 332 West, Lake Jackson	Brazoria	29.04377	-95.47293	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure; Source-Oriented	Neighborhood	Y		
480391016	Lake Jackson	109-B Brazoria Highway 332 West, Lake Jackson	Brazoria	29.04377	-95.47293	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure; Source-Oriented	Neighborhood	Y		
480430101	Bravo Big Bend	Route 12 and K-Bar Road, Big Bend National Park	None	29.3025	-103.16782	Rural	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	General/Background; Regional Transport	Regional Scale	Y		
480610006	Brownsville	344 Porter Drive, Brownsville	Brownsville-Harlingen-San Benito	25.89251	-97.49382	Urban/ City Ctr	Ambient Temperature	SPM	Derived from NWS site KBRO	24-Hour Average; 1/6 Days	Population Exposure	Urban Scale	NA		
480610006	Brownsville	344 Porter Drive, Brownsville	Brownsville-Harlingen-San Benito	25.89251	-97.49382	Urban/ City Ctr	Barometric Pressure	SPM	Derived from NWS site KBRO	24-Hour Average; 1/6 Days	Population Exposure	Urban Scale	NA		
480610006	Brownsville	344 Porter Drive, Brownsville	Brownsville-Harlingen-San Benito	25.89251	-97.49382	Urban/ City Ctr	CO	SPM	Gas Filter Correlation	Continuous	Highest Concentration	Neighborhood	Y		
480610006	Brownsville	344 Porter Drive, Brownsville	Brownsville-Harlingen-San Benito	25.89251	-97.49382	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
480610006	Brownsville	344 Porter Drive, Brownsville	Brownsville-Harlingen-San Benito	25.89251	-97.49382	Urban/ City Ctr	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
480612004	Isla Blanca Park	Lot B 69½, South Padre Island	Brownsville-Harlingen-San Benito	26.07333	-97.16667	Rural	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure; Regional Transport	Urban Scale	Y		
480850003	Frisco 5th St	East Side of 5th Street, Frisco	Dallas	33.142317	-96.824653	Suburban	Ambient Temperature	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
480850003	Frisco 5th St	East Side of 5th Street, Frisco	Dallas	33.142317	-96.824653	Suburban	Barometric Pressure	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
480850003	Frisco 5th St	East Side of 5th Street, Frisco	Dallas	33.142317	-96.824653	Suburban	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	Y		Site moved about 100 feet 8/17/2010; moved from west side of 5th Street, Frisco (33.14194, -96.82532)
480850005	Frisco	6590 Hillcrest Road, Frisco	Dallas	33.1324	-96.78648	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
480850007	Frisco 7	6931 Ash Street, Frisco	Dallas	33.14746	-96.82577	Suburban	Ambient Temperature	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Neighborhood	NA		Added to ANR in 2011
480850007	Frisco 7	6931 Ash Street, Frisco	Dallas	33.14746	-96.82577	Suburban	Barometric Pressure	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Neighborhood	NA		Added to ANR in 2011

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
480850007	Frisco 7	6931 Ash Street, Frisco	Dallas	33.14746	-96.82577	Suburban	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Neighborhood	Y		
480850007	Frisco 7	6931 Ash Street, Frisco	Dallas	33.14746	-96.82577	Suburban	TSP-Lead, QC	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Neighborhood	Y		
480850009	Frisco Eubanks	6601 East Eubanks St., North of Plant, Frisco	Dallas	33.14463	-96.82884	Suburban	Ambient Temperature	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
480850009	Frisco Eubanks	6601 East Eubanks St., North of Plant, Frisco	Dallas	33.14463	-96.82884	Suburban	Barometric Pressure	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
480850009	Frisco Eubanks	6601 East Eubanks St., North of Plant, Frisco	Dallas	33.14463	-96.82884	Suburban	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	Y		Site moved 7/16/2010; moved from 6931 Eubanks St, Exide Property, north of plant, Frisco (33.14458, -96.8288). Once moved lead became NAAQS comparable.
480850029	Frisco Stonebrook	7202 Stonebrook Parkway, Frisco	Dallas	33.142317	-96.824653	Urban/ City Ctr	Ambient Temperature	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
480850029	Frisco Stonebrook	7202 Stonebrook Parkway, Frisco	Dallas	33.142317	-96.824653	Urban/ City Ctr	Barometric Pressure	SPM	Derived from other AQS site 484393009	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
480850029	Frisco Stonebrook	7202 Stonebrook Parkway, Frisco	Dallas	33.142317	-96.824653	Urban/ City Ctr	TSP-Lead	SPM	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Activated 1/7/2011
481130050	Convention Center	717 South Akard, Dallas	Dallas	32.77417	-96.79778	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481130050	Convention Center	717 South Akard, Dallas	Dallas	32.77417	-96.79778	Urban/ City Ctr	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481130050	Convention Center	717 South Akard, Dallas	Dallas	32.77417	-96.79778	Urban/ City Ctr	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Highest Concentration; Population Exposure	Neighborhood	Y		Changed Monitoring Objective
481130061	Earhart	3434 Bickers Street, Amelia Earhart Learning Center	Dallas	32.785556	-96.877778	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Ambient Temperature	PAMS/NCore	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Carbonyl*	PAMS*	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact	Neighborhood	NA	2	
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	CO, High Sensitivity	PAMS/NCore	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	NO/NO2/NOx	PAMS/NCore	Chemi-luminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	NOy, High Sensitivity	NCore	Chemi-luminescence	Continuous	Highest Concentration	Neighborhood	NA		
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	O3	PAMS/NCore	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	PM10-2.5	NCore	Beta Attenuation	Continuous	Population Exposure	Neighborhood	N		Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	PM2.5	NCore/SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; Daily	Population Exposure	Neighborhood	Y		Changed Monitoring Objective; Changed QAPP to Ncore/SLAMS.
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	PM2.5	NCore/SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood	Y		Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	PM2.5 Speciation	NCore/STN	Sequential Non-FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Population Exposure	Neighborhood	N		
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	PM2.5, QC	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Relative Humidity	PAMS/NCore	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	SO2, High Sensitivity	NCore	Pulsed Fluorescence	Continuous	Population Exposure	Urban Scale	Y		
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Solar Radiation	PAMS/NCore	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Speciated VOC	PAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood	NA	2	
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact	Neighborhood	NA	2	

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	TNMOC	PAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood	NA	2	
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Wind Direction	PAMS/NCore	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481130069	Dallas Hinton	1415 Hinton Street, Dallas, NCore Site	Dallas	32.81995	-96.86008	Urban/ City Ctr	Wind Speed	PAMS/NCore	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481130075	Dallas North #2	12532½ Nuestra Drive, Dallas	Dallas	32.9192	-96.8085	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		Changed Location Setting
481130075	Dallas North #2	12532½ Nuestra Drive, Dallas	Dallas	32.9192	-96.8085	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		Changed Location Setting
481130075	Dallas North #2	12532½ Nuestra Drive, Dallas	Dallas	32.9192	-96.8085	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		Changed Location Setting
481130087	Dallas Redbird Airport, Executive	3277 West Redbird Lane, Dallas	Dallas	32.6766	-96.8716	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
481130087	Dallas Redbird Airport, Executive	3277 West Redbird Lane, Dallas	Dallas	32.6766	-96.8716	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
481130087	Dallas Redbird Airport, Executive	3277 West Redbird Lane, Dallas	Dallas	32.6766	-96.8716	Suburban	PM2.5	SPM	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Urban Scale	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale	Y	3	
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	NOy, High Sensitivity	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale	NA	3	
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Urban Scale	Y	3	
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Precipitation	PAMS	Rain Gauge	Continuous	Max Ozone Concentration	Urban Scale	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Urban Scale	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Ozone Concentration	Urban Scale	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Ozone Concentration; Population Exposure	Urban Scale	NA	3	
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration	Urban Scale	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481210034	Denton Airport South	Denton Municipal Airport South, Denton	Dallas	33.19167	-97.19333	Rural	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration	Urban Scale	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481211007	Flower Mound Shiloh	4401 Shiloh Road, Flower Mound	Dallas	33.0458619	-97.1300022	Suburban	Speciated VOC	SPM	GC	Continuous	Population Exposure	Neighborhood	NA		Activated 10/27/2010
481211013	DISH Airfield	9800 Clark Airport Road, Dish	Dallas	33.13093	-97.29765	Rural	Speciated VOC	SPM	GC	Continuous	Source-Oriented	Neighborhood	NA		Activated 3/31/2010
481211032	Pilot Point	792 East Northside Drive, Pilot Point	Dallas	33.41065	-96.94452	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
481350003	Odessa-Hays Elementary School	Barrett & Monahans Streets, Odessa	Odessa-Midland	31.82658	-102.34198	Suburban	PM2.5	SPM	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	Dallas	32.48194	-97.0275	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Source-Oriented	Neighborhood	Y		
481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	Dallas	32.48194	-97.0275	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	Dallas	32.48194	-97.0275	Suburban	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Neighborhood	Y		
481390016	Midlothian OFW	2725 Old Fort Worth Road, Midlothian	Dallas	32.48194	-97.0275	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source-Oriented	Neighborhood	Y		Changed from SPM to SLAMS due to age
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Upwind Background	Urban Scale	Y	1	
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	O3	PAMS	UV Photometric	Continuous	Upwind Background	Urban Scale	Y	1	
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	Relative Humidity	PAMS	Humidity Sensor	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	SO2	SPM	Pulsed Fluorescence	Continuous	Upwind Background	Urban Scale	Y		
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	Solar Radiation	PAMS	Photovoltaic	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Upwind Background	Urban Scale	NA	1	

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	UV Radiation	PAMS	Ultraviolet Pyranometer	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
481391044	Italy	900 FM 667, Italy	Dallas	32.43694	-97.025	Rural	Wind Speed	PAMS	Cup Anemometer	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	Ambient Temperature	SPM	Derived from other AQS site 481410055	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	Barometric Pressure	SPM	Derived from other AQS site 481410055	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration	Neighborhood	Y		
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration	Neighborhood	Y		
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	TSP-Lead	SPM	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481410002	Tillman	222 South Campbell Street, El Paso	El Paso	31.75765	-106.48292	Urban/ City Ctr	TSP-Lead, QC	SPM	HiVol/GFAA	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481410029	Ivanhoe	10834 Ivanhoe, Ivanhoe Fire Station, El Paso	El Paso	31.78577	-106.32359	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
481410029	Ivanhoe	10834 Ivanhoe, Ivanhoe Fire Station, El Paso	El Paso	31.78577	-106.32359	Suburban	O3	SPM	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
481410029	Ivanhoe	10834 Ivanhoe, Ivanhoe Fire Station, El Paso	El Paso	31.78577	-106.32359	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481410033	Kern	301 East Robinson, El Paso	El Paso	31.77694	-106.50167	Urban/ City Ctr	Ambient Temperature	SPM	Derived from other AQS site 481410055	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
481410033	Kern	301 East Robinson, El Paso	El Paso	31.77694	-106.50167	Urban/ City Ctr	Barometric Pressure	SPM	Derived from other AQS site 481410055	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
481410033	Kern	301 East Robinson, El Paso	El Paso	31.77694	-106.50167	Urban/ City Ctr	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y	3	
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y	3	
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		QAPP changed from SPM to SLAMS due to age.
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Precipitation	PAMS	Rain Gauge	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Radar Profiler	PAMS	Doppler Radar	24-One Hour Averages, Daily	Regional Transport	Regional Scale	NA	NA	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	UV Radiation	PAMS	Ultraviolet Pyranometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410037	El Paso UTEP	250 Rim Road, El Paso	El Paso	31.76827	-106.5012	Urban/ City Ctr	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
481410038	Riverside	301 Midway Drive, Riverside High School, El Paso	El Paso	31.73388	-106.37202	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed Location Setting
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Carbonyl*	PAMS*	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact	Neighborhood	NA	2	
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	CO, High Sensitivity	NCore/SLAMS	Gas Filter Correlation	Continuous	Highest Concentration	Neighborhood	Y		
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	NO/NO2/NOx	PAMS/NCore	Chemi-luminescence	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood	Y	2	
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	NOy, High Sensitivity	NCore	Chemi-luminescence	Continuous	Highest Concentration	Neighborhood	NA		
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	O3	PAMS/NCore	UV Photometric	Continuous	Population Exposure	Neighborhood	Y	2	
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	PM10-2.5	NCore	Beta Attenuation	Continuous	Highest Concentration; Population Exposure	Neighborhood	N		
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood	Y		Added to ANR in 2011
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	PM2.5	NCore/SLAMS	Beta Attenuation	Continuous	Highest Concentration; Population Exposure	Neighborhood	Y		
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	PM2.5 Speciation	NCore/STN	Sequential Non-FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Highest Concentration	Neighborhood	N		
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	SO2, High Sensitivity	NCore	Pulsed Fluorescence	Continuous	Highest Concentration	Neighborhood	Y		
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Speciated VOC	PAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood	NA	2	
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact	Neighborhood	NA	2	
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	TNMOC	PAMS	GC	Continuous	Highest Concentration; Max Precursor Emissions Impact	Neighborhood	NA	2	
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481410044	El Paso Chamizal	800 South San Marcial Street, El Paso, NCore Site	El Paso	31.76567	-106.45523	Urban/ City Ctr	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
481410053	El Paso Sun Metro	700 West San Francisco Avenue, El Paso	El Paso	31.75852	-106.50105	Urban/ City Ctr	CO	SLAMS	Gas Filter Correlation	Continuous	Highest Concentration	Neighborhood	Y		
481410053	El Paso Sun Metro	700 West San Francisco Avenue, El Paso	El Paso	31.75852	-106.50105	Urban/ City Ctr	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration	Micro Scale	Y		
481410053	El Paso Sun Metro	700 West San Francisco Avenue, El Paso	El Paso	31.75852	-106.50105	Urban/ City Ctr	SO2	SPM	Pulsed Fluorescence	Continuous	Highest Concentration	Neighborhood	Y		
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Changed Spatial Scale; Changed PAMS Site Type; Changed Monitoring Objective
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Barometric Pressure	PAMS	Barometer	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Changed Spatial Scale; Changed PAMS Site Type; Changed Monitoring Objective
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Carbonyl*	PAMS*	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Added to ANR in 2011
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Highest Concentration	Neighborhood	Y		Changed Location Setting
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Highest Concentration; Upwind Background	Neighborhood	Y	1/3	Changed Location Setting; Changed PAMS Site Type
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	Y	1/3	Changed Location Setting; Changed Monitoring Objective; Changed PAMS Site Type
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Changed Spatial Scale; Changed PAMS Site Type; Changed Monitoring Objective
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Changed Spatial Scale; Changed PAMS Site Type; Changed Monitoring Objective
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Speciated VOC	PAMS	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Added to ANR in 2011
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Changed Spatial Scale; Changed PAMS Site Type; Changed Monitoring Objective

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
481410055	Ascarate Park SE	650 R. E. Thomason Loop, El Paso	El Paso	31.74675	-106.40281	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration; Upwind Background	Neighborhood	NA	1/3	Changed Spatial Scale; Changed PAMS Site Type; Changed Monitoring Objective
481410057	Socorro	201 South Nevarez Road, El Paso	El Paso	31.66219	-106.30308	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	General/Background; Population Exposure	Neighborhood	Y		
481410057	Socorro	201 South Nevarez Road, El Paso	El Paso	31.66219	-106.30308	Suburban	O3	SLAMS	UV Photometric	Continuous	General/Background; Population Exposure	Neighborhood	Y		
481410057	Socorro	201 South Nevarez Road, El Paso	El Paso	31.66219	-106.30308	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	General/Background; Population Exposure	Neighborhood	Y		Changed from SPM to SLAMS due to age
481410058	Skyline Park	5050-A Yvette Drive, El Paso	El Paso	31.89393	-106.42581	Suburban	Ambient Temperature	SPM	Derived from NWS site KELP	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
481410058	Skyline Park	5050-A Yvette Drive, El Paso	El Paso	31.89393	-106.42581	Suburban	Barometric Pressure	SPM	Derived from NWS site KELP	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
481410058	Skyline Park	5050-A Yvette Drive, El Paso	El Paso	31.89393	-106.42581	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
481410058	Skyline Park	5050-A Yvette Drive, El Paso	El Paso	31.89393	-106.42581	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
481410058	Skyline Park	5050-A Yvette Drive, El Paso	El Paso	31.89393	-106.42581	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		Changed from SPM to SLAMS due to age; Changed Spatial Scale
481410058	Skyline Park	5050-A Yvette Drive, El Paso	El Paso	31.89393	-106.42581	Suburban	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed Spatial Scale; QAPP changed from SPM to SLAMS
481670004	Texas City Fire Station	25th and Texas Avenue, Texas City	Galveston-Texas City	29.38444	-94.93083	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration	Neighborhood	Y		
481670004	Texas City Fire Station	25th and Texas Avenue, Texas City	Galveston-Texas City	29.38444	-94.93083	Urban/ City Ctr	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration	Neighborhood	Y		
481670005	Texas City Ball Park	2516½ Texas Avenue, Texas City	Galveston-Texas City	29.35824	-94.93153	Urban/ City Ctr	SO2	SPM	Pulsed Fluorescence	Continuous	Highest Concentration	Neighborhood	Y		
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Spatial Scale; Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	General/Background; Upwind Background	Urban Scale	Y	1/3	
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale	Y	1/3	Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Spatial Scale; Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Spatial Scale; Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	4 One-Hour Samples on 11 Ozone Forecast Days (May-Sept)	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Spatial Scale; Changed Monitoring Objective
481671034	Galveston 99th Street	Avenue V½, Galveston Airport, Galveston	Galveston-Texas City	29.26332	-94.85657	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration; Upwind Background	Urban Scale	NA	1/3	Changed Spatial Scale; Changed Monitoring Objective
481830001	Longview	Gregg County Airport Longview	Longview-Marshall	32.37871	-94.71183	Rural	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
481830001	Longview	Gregg County Airport Longview	Longview-Marshall	32.37871	-94.71183	Rural	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
481830001	Longview	Gregg County Airport Longview	Longview-Marshall	32.37871	-94.71183	Rural	SO2	SPM	Pulsed Fluorescence	Continuous	General/Background; Population Exposure	Neighborhood	Y		Changed Monitoring Objective
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Barometric Pressure	PAMS	Barometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y	3	

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	NOy, High Sensitivity	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	NA	3	
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y	3	
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Ozone Concentration; Population Exposure	Neighborhood	NA	3	
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	5 One-Hour Samples on 11 Ozone Forecast Days (May-Sept)	Max Ozone Concentration; Population Exposure	Neighborhood	NA	3	
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482010024	Houston Aldine	4510½ Aldine Mail Road, Houston	Houston	29.90111	-95.32694	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y	2	
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	O3	PAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Monitoring Objective
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	Speciated VOC	PAMS	GC	Continuous	Population Exposure	Neighborhood	NA	2	
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	TNMOC	PAMS	GC	Continuous	Population Exposure	Neighborhood	NA	2	
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482010026	Channelview	1405 Sheldon Road, Channelview	Houston	29.8025	-95.12555	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Extreme Downwind; Upwind Background	Urban Scale	NA	4/1	Changed Spatial Scale; Changed Monitoring Objective
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Extreme Downwind; Population Exposure; Upwind Background	Urban Scale	Y	4/1	
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	O3	PAMS	UV Photometric	Continuous	Extreme Downwind; Population Exposure; Upwind Background	Urban Scale	Y	4/1	
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Relative Humidity	PAMS	Humidity Sensor	Continuous	Extreme Downwind; Upwind Background	Urban Scale	NA	4/1	Changed Spatial Scale; Changed Monitoring Objective
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Solar Radiation	PAMS	Photovoltaic	Continuous	Extreme Downwind; Upwind Background	Urban Scale	NA	4/1	Changed Spatial Scale; Changed Monitoring Objective
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Extreme Downwind; Population Exposure; Upwind Background	Urban Scale	NA	4/1	
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Speciated VOC*	PAMS*	Canister/ GC/MS	3 One-Hour Samples on 11 Ozone Forecast Days (May-Sept)	Extreme Downwind; Population Exposure; Upwind Background	Urban Scale	NA	4/1	
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Extreme Downwind; Upwind Background	Urban Scale	NA	4/1	Changed Spatial Scale; Changed Monitoring Objective
482010029	Northwest Harris County	16822 Kitzman, Tomball	Houston	30.03944	-95.675	Rural	Wind Speed	PAMS	Cup Anemometer	Continuous	Extreme Downwind; Upwind Background	Urban Scale	NA	4/1	Changed Spatial Scale; Changed Monitoring Objective
482010046	Houston North Wayside	7330½ North Wayside, Houston	Houston	29.8275	-95.28361	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010046	Houston North Wayside	7330½ North Wayside, Houston	Houston	29.8275	-95.28361	Suburban	SO2	SPM	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
482010047	Lang	4401½ Lang Road, Houston	Houston	29.83472	-95.48917	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Middle Scale	Y		
482010047	Lang	4401½ Lang Road, Houston	Houston	29.83472	-95.48917	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Middle Scale	Y		
482010047	Lang	4401½ Lang Road, Houston	Houston	29.83472	-95.48917	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Middle Scale	Y		
482010047	Lang	4401½ Lang Road, Houston	Houston	29.83472	-95.48917	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
482010051	Houston Croquet	13826½ Croquet, Houston	Houston	29.62361	-95.47361	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010051	Houston Croquet	13826½ Croquet, Houston	Houston	29.62361	-95.47361	Suburban	SO2	SPM	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		Changed Monitoring Objective
482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	Houston	29.69574	-95.49924	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
482010055	Houston Bayland Park	6400 Bissonnet Street, Houston	Houston	29.69574	-95.49924	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010058	Baytown	7210½ Bayway Drive, Baytown	Houston	29.77069	-95.03122	Suburban	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed Monitoring Objective
482010062	Houston Monroe	9726½ Monroe, Houston	Houston	29.62583	-95.2675	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010062	Houston Monroe	9726½ Monroe, Houston	Houston	29.62583	-95.2675	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
482010062	Houston Monroe	9726½ Monroe, Houston	Houston	29.62583	-95.2675	Suburban	SO2	SPM	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		
482010066	Houston Westhollow	3333½ Highway 6 South, Houston	Houston	29.72472	-95.50361	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010066	Houston Westhollow	3333½ Highway 6 South, Houston	Houston	29.72472	-95.50361	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
482010070	Houston Regional Office	5425 Polk Avenue, Suite H, Houston	Houston	29.73513	-95.31558	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010070	Houston Regional Office	5425 Polk Avenue, Suite H, Houston	Houston	29.73513	-95.31558	Urban/ City Ctr	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		
482010071	Pasadena HL&P	1001½ Red Bluff, Pasadena	Houston	29.7165	-95.20129	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
482010075	Houston Texas Avenue	2311 Texas Avenue, Houston	Houston	29.75278	-95.35028	Urban/ City Ctr	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Middle Scale	Y		
482010075	Houston Texas Avenue	2311 Texas Avenue, Houston	Houston	29.75278	-95.35028	Urban/ City Ctr	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
482010075	Houston Texas Avenue	2311 Texas Avenue, Houston	Houston	29.75278	-95.35028	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010416	Park Place	7421 Park Place Boulevard, Houston	Houston	29.68639	-95.29472	Urban/ City Ctr	CO	SPM	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
482010416	Park Place	7421 Park Place Boulevard, Houston	Houston	29.68639	-95.29472	Urban/ City Ctr	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
482010416	Park Place	7421 Park Place Boulevard, Houston	Houston	29.68639	-95.29472	Urban/ City Ctr	O3	SPM	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482010416	Park Place	7421 Park Place Boulevard, Houston	Houston	29.68639	-95.29472	Urban/ City Ctr	SO2	SPM	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		
482011015	Lynchburg Ferry	1001-B Lynchburg Road, Baytown	Houston	29.7646	-95.078	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Source-Oriented	Neighborhood	Y		
482011015	Lynchburg Ferry	1001-B Lynchburg Road, Baytown	Houston	29.7646	-95.078	Suburban	O3	SLAMS	UV Photometric	Continuous	Source-Oriented	Neighborhood	Y		
482011034	Houston East	1262½ Mae Drive, Houston	Houston	29.76799	-95.22058	Suburban	Ambient Temperature	SPM	Derived from other AQS site 482011035	24-Hour Average; 1/6 Days	Population Exposure	Urban Scale	NA		Added to ANR in 2011
482011034	Houston East	1262½ Mae Drive, Houston	Houston	29.76799	-95.22058	Suburban	Barometric Pressure	SPM	Derived from other AQS site 482011035	24-Hour Average; 1/6 Days	Population Exposure	Urban Scale	NA		Added to ANR in 2011
482011034	Houston East	1262½ Mae Drive, Houston	Houston	29.76799	-95.22058	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Highest Concentration; Population Exposure	Middle Scale	Y		
482011034	Houston East	1262½ Mae Drive, Houston	Houston	29.76799	-95.22058	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482011034	Houston East	1262½ Mae Drive, Houston	Houston	29.76799	-95.22058	Suburban	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Carbonyl	PAMS	DNPH Silica/HPLC	8 Three-Hour Samples; 1/3 Days (July-Sept)	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Carbonyl*	PAMS*	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact	Neighborhood	NA	2	

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(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Carbonyl*	PAMS*	DNPH Silica/HPLC	24 One-Hour Samples, Daily	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	CO, High Sensitivity	PAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	O3	PAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration; Population Exposure; Source-Oriented	Neighborhood	Y		Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; Daily	Highest Concentration; Population Exposure; Source-Oriented	Neighborhood	Y		Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	PM2.5, QC	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Speciated VOC	PAMS	GC	Continuous	Highest Concentration; Population Exposure; Source-Oriented	Neighborhood	NA	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Highest Concentration; Population Exposure	Neighborhood	NA	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	TNMOC	PAMS	GC	Continuous	Highest Concentration; Population Exposure; Source-Oriented	Neighborhood	NA	2	Changed Spatial Scale
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	UV Radiation	PAMS	Ultraviolet Pyranometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011035	Clinton	9525 Clinton Drive, Houston	Houston	29.73371	-95.25759	Urban/ City Ctr	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Black Carbon, PM2.5	NATTS	Aethalometer	Continuous	Population Exposure	Neighborhood	NA		
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Carbonyl	NATTS/PAMS*	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	Added NATTS to QAPP
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	CO, High Sensitivity	NCore	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	NO/NO2/NOx	PAMS/NCore	Chemi-luminescence	Continuous	Population Exposure; Source-Oriented	Neighborhood	Y	2	Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	NOy, High Sensitivity	NCore	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	NA		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	O3	PAMS/NCore	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67	-95.128333	Urban/ City Ctr	PM10	SLAMS/NATTS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Added NATTS to QAPP
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67	-95.128333	Urban/ City Ctr	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67	-95.128333	Urban/ City Ctr	PM10-2.5	NCore	Beta Attenuation	Continuous	Population Exposure	Neighborhood	N		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67	-95.128333	Urban/ City Ctr	PM2.5	NCore/SLAMS	Beta Attenuation	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67	-95.128333	Urban/ City Ctr	PM2.5	NCore/STN	Sequential Non-FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Population Exposure	Neighborhood	N		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67	-95.128333	Urban/ City Ctr	PM2.5, QC	NCore/STN	Sequential Non-FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Population Exposure	Neighborhood	N		Changed Spatial Scale; Changed Monitoring Objective

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	SO2, High Sensitivity	NCore	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Speciated VOC	PAMS/NCore	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Speciated VOC	NATTS/PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	Added NATTS to QAPP
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Speciated VOC	NATTS	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA		Added to ANR in 2011
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	SVOC	NATTS	Hi Vol PUF XAD/GC MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA		Added to ANR in 2011
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	SVOC, QC	NATTS	Hi Vol PUF XAD/GC MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA		Added to ANR in 2011
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	TNMOC	PAMS/NCore	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	Changed Spatial Scale
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	TSP-Cr6+	NATTS	Ion Chromatograph UV Visible	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	TSP-Cr6+, QC	NATTS	Ion Chromatograph UV Visible	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011039	Houston Deer Park #2	4514½ Durant Street, Deer Park, NCore Site	Houston	29.67000	-95.128333	Urban/ City Ctr	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482011050	Seabrook Friendship Park	4522 Park Road, Seabrook	Houston	29.58303	-95.01554	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
482011050	Seabrook Friendship Park	4522 Park Road, Seabrook	Houston	29.58303	-95.01554	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482011050	Seabrook Friendship Park	4522 Park Road, Seabrook	Houston	29.58303	-95.01554	Suburban	SO2	SPM	Pulsed Fluorescence	Continuous	Population Exposure; Source-Oriented	Neighborhood	Y		
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	Carbonyl	NATTS	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	General/Background	Regional Scale	NA		Added NATTS to QAPP
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	General/Background	Regional Scale	Y		
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	O3	SLAMS	UV Photometric	Continuous	General/Background	Regional Scale	Y		
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	PM10	NATTS/SPM	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	General/Background	Regional Scale	Y		Added NATTS to QAPP
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	PM2.5	SPM	Non-FRM Speciation/ Gravimetric	24-Hour Sample; 1/6 Days	General/Background	Regional Scale	N		Changed QAPP from SLAMS to SPM; XRF for speciation, gravimetric for mass; Changed Monitor Type
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	Speciated VOC	NATTS	Canister/ GC/FID	24-Hour Sample; 1/6 Days	General/Background	Regional Scale	NA		Added NATTS to QAPP
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	SVOC	NATTS	Hi Vol PUF XAD/GC/MS	24-Hour Sample; 1/6 Days	General/Background	Regional Scale	NA		Added NATTS to QAPP
482030002	Karnack	Highway 134 & Spur 449, Karnack	Longview-Marshall	32.669	-94.16745	Rural	TSP-Cr6+	NATTS	Ion Chromatograph UV Visible	24-Hour Sample; 1/6 Days	General/Background	Regional Scale	NA		Added NATTS to QAPP
482150043	Mission	2300 North Glasscock, Mission	McAllen-Edinburg-Mission	26.22624	-98.29106	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
482150043	Mission	2300 North Glasscock, Mission	McAllen-Edinburg-Mission	26.22624	-98.29106	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
482150043	Mission	2300 North Glasscock, Mission	McAllen-Edinburg-Mission	26.22624	-98.29106	Suburban	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
482151048	Mercedes	325 Golf Course Road, Mercedes	McAllen-Edinburg-Mission	26.13108	-97.93726	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
482210001	Granbury	200 North Gordon Street, Granbury	Fort Worth-Arlington	32.44028	-97.80361	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
482311006	Greenville	824 Sayle Street, Greenville	Dallas	33.15311	-96.11552	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure; Upwind Background	Neighborhood	Y		
482311006	Greenville	824 Sayle Street, Greenville	Dallas	33.15311	-96.11552	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure; Upwind Background	Neighborhood	Y		
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y	2	
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	O3	PAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Monitoring Objective
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	Speciated VOC	PAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	TNMOC	PAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482450009	Beaumont Downtown	1086 Vermont Avenue, Beaumont	Beaumont-Port Arthur	30.03639	-94.07111	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482450011	Port Arthur West	800 El Vista Road & 53rd Street, Port Arthur	Beaumont-Port Arthur	29.89406	-93.9879	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482450011	Port Arthur West	800 El Vista Road & 53rd Street, Port Arthur	Beaumont-Port Arthur	29.89406	-93.9879	Urban/ City Ctr	SO2	SLAMS	Pulsed Fluorescence	Continuous	Source-Oriented	Neighborhood	Y		Changed Spatial Scale
482450018	Jefferson County Airport	End of 90th Street at Jefferson County Airport, Port Arthur	Beaumont-Port Arthur	29.9427953	-94.0007754	Suburban	Precipitation	PAMS	Rain Gauge	Continuous	General/Background	Neighborhood	NA	NA	Changed Spatial Scale; Changed Monitoring Objective
482450018	Jefferson County Airport	End of 90th Street at Jefferson County Airport, Port Arthur	Beaumont-Port Arthur	29.9427953	-94.0007754	Suburban	Radar Profiler	PAMS	Doppler Radar	24-One Hour Averages, Daily	Regional Transport	Regional Scale	NA	NA	Changed Spatial Scale; Changed Monitoring Objective
482450021	Port Arthur Memorial School	2200 Jefferson Drive, Port Arthur	Beaumont-Port Arthur	29.92278	-93.90889	Urban/ City Ctr	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed Spatial Scale
482450022	Hamshire	12552 Second Street, Beaumont	Beaumont-Port Arthur	29.86395	-94.31775	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	General/Background; Regional Transport	Urban Scale	Y		
482450022	Hamshire	12552 Second Street, Beaumont	Beaumont-Port Arthur	29.86395	-94.31775	Suburban	O3	SLAMS	UV Photometric	Continuous	General/Background; Regional Transport	Urban Scale	Y		
482450101	SETRPC 40 Sabine Pass	6019 Mechanic, Sabine Pass	Beaumont-Port Arthur	29.718056	-93.896944	Rural	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482450101	SETRPC 40 Sabine Pass	6019 Mechanic, Sabine Pass	Beaumont-Port Arthur	29.718056	-93.896944	Rural	NOy, High Sensitivity	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration	Neighborhood	NA	3	
482450101	SETRPC 40 Sabine Pass	6019 Mechanic, Sabine Pass	Beaumont-Port Arthur	29.718056	-93.896944	Rural	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration	Neighborhood	Y	3	Changed Monitoring Objective; Changed Spatial Scale; SETRPC ozone sampler; TCEQ buys access to data
482450101	SETRPC 40 Sabine Pass	6019 Mechanic, Sabine Pass	Beaumont-Port Arthur	29.718056	-93.896944	Rural	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482450101	SETRPC 40 Sabine Pass	6019 Mechanic, Sabine Pass	Beaumont-Port Arthur	29.718056	-93.896944	Rural	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
482450102	SETRPC 43 Jefferson Co Airport	Jefferson County Airport, Port Arthur	Beaumont-Port Arthur	29.9425	-94.000556	Suburban	O3	SPM	UV Photometric	Continuous	Max Precursor Emissions Impact	Middle Scale	Y		SETRPC Ozone sampler
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Barometric Pressure	PAMS	Barometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	CO, High Sensitivity	PAMS	Gas Filter Correlation	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	O3	PAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	Changed Spatial Scale
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Speciated VOC	PAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	Changed Spatial Scale
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	TNMOC	PAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	Changed Spatial Scale

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	UV Radiation	PAMS	Ultraviolet Pyranometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451035	Nederland High School	Seattle Street, Nederland	Beaumont-Port Arthur	29.97861	-94.01111	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
482451050	Beaumont Mary	414 Mary Street, Beaumont	Beaumont-Port Arthur	30.06717	-94.09093	Urban/ City Ctr	SO2	SPM	Pulsed Fluorescence	Continuous	Source-Oriented	Neighborhood	Y		Activated 10/13/2010
482451050	Beaumont Mary	414 Mary Street, Beaumont	Beaumont-Port Arthur	30.06717	-94.09093	Urban/ City Ctr	Speciated VOC	SPM	Canister/ GC/MS	24-Hour Average; 1/6 Days	Source-Oriented	Neighborhood	NA		Activated 10/13/2010
482510003	Cleburne Airport	1650 Airport Drive, Cleburne	Fort Worth-Arlington	32.35972	-97.43194	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
482510003	Cleburne Airport	1650 Airport Drive, Cleburne	Fort Worth-Arlington	32.35972	-97.43194	Suburban	Radar Profiler	PAMS	Doppler Radar	24-One Hour Averages, Daily	Regional Transport	Regional Scale	NA	NA	Changed Spatial Scale; Changed Monitoring Objective
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Population Exposure; Upwind Background	Urban Scale	Y	1	
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	O3	PAMS	UV Photometric	Continuous	Population Exposure; Upwind Background	Urban Scale	Y	1	
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure; Upwind Background	Urban Scale	Y		Changed from SPM to SLAMS due to age; Changed Spatial Scale
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Population Exposure; Upwind Background	Urban Scale	NA	1	
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
482570005	Kaufman	3790 South Houston Street, Kaufman	Dallas	32.56917	-96.31583	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Upwind Background	Urban Scale	NA	1	Changed Spatial Scale; Changed Monitoring Objective
482570020	Terrell Temtex	106 Tejas Drive, Terrell	Dallas	32.731919	-96.317911	Rural	Ambient Temperature	SPM	Derived from NWS site KTRL	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
482570020	Terrell Temtex	106 Tejas Drive, Terrell	Dallas	32.731919	-96.317911	Rural	Barometric Pressure	SPM	Derived from NWS site KTRL	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
482570020	Terrell Temtex	106 Tejas Drive, Terrell	Dallas	32.731919	-96.317911	Rural	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	Y		Activated 12/22/2010
483091037	Waco Mazanec	4472 Mazanec Road, Elm Mott	Waco	31.653077	-97.070695	Rural	CO	SLAMS	Gas Filter Correlation	Continuous	Upwind Background	Urban Scale	Y		Changed from SPM to SLAMS due to age
483091037	Waco Mazanec	4472 Mazanec Road, Elm Mott	Waco	31.653077	-97.070695	Rural	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Upwind Background	Urban Scale	Y		Changed from SPM to SLAMS due to age
483091037	Waco Mazanec	4472 Mazanec Road, Elm Mott	Waco	31.653077	-97.070695	Rural	O3	SLAMS	UV Photometric	Continuous	Upwind Background	Regional Scale	Y		Changed from SPM to SLAMS due to age
483091037	Waco Mazanec	4472 Mazanec Road, Elm Mott	Waco	31.653077	-97.070695	Rural	SO2	SLAMS	Pulsed Fluorescence	Continuous	Upwind Background	Urban Scale	Y		Changed from SPM to SLAMS due to age
483390078	Conroe Relocated	9472-A Highway 1484, Conroe	Houston	30.3503	-95.42514	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	General/Background; Population Exposure	Urban Scale	Y		
483390078	Conroe Relocated	9472-A Highway 1484, Conroe	Houston	30.3503	-95.42514	Suburban	O3	SLAMS	UV Photometric	Continuous	General/Background; Population Exposure	Urban Scale	Y		
483390078	Conroe Relocated	9472-A Highway 1484, Conroe	Houston	30.3503	-95.42514	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Extreme Downwind; Population Exposure	Urban Scale	NA	4	
483491051	Corsicana Airport	Corsicana Airport, Corsicana	Dallas	32.031931	-96.399144	Rural	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	Source-Oriented	Urban Scale	Y		Changed Spatial Scale
483491051	Corsicana Airport	Corsicana Airport, Corsicana	Dallas	32.031931	-96.399144	Rural	O3	SPM	UV Photometric	Continuous	Source-Oriented	Urban Scale	Y		Changed Spatial Scale
483491051	Corsicana Airport	Corsicana Airport, Corsicana	Dallas	32.031931	-96.399144	Rural	SO2	SPM	Pulsed Fluorescence	Continuous	Source-Oriented	Urban Scale	Y		Changed Spatial Scale
483550025	Corpus Christi West	902 Airport Boulevard, Corpus Christi	Corpus Christi	27.7653	-97.4342	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
483550025	Corpus Christi West	902 Airport Boulevard, Corpus Christi	Corpus Christi	27.7653	-97.4342	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		Changed Spatial Scale
483550026	Corpus Christi Tuloso	9860 La Branch, Corpus Christi	Corpus Christi	27.8325	-97.5553	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
483550026	Corpus Christi Tuloso	9860 La Branch, Corpus Christi	Corpus Christi	27.8325	-97.5553	Suburban	SO2	SLAMS	Pulsed Fluorescence	Continuous	Population Exposure	Neighborhood	Y		
483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	Corpus Christi	27.8044	-97.4317	Urban/ City Ctr	PM2.5	SPM	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	Corpus Christi	27.8044	-97.4317	Urban/ City Ctr	PM2.5, QC*	SLAMS*	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
483550032	Corpus Christi Huisache	3810 Huisache Street, Corpus Christi	Corpus Christi	27.8044	-97.4317	Urban/ City Ctr	SO2	SLAMS	Pulsed Fluorescence	Continuous	Highest Concentration; Population Exposure	Neighborhood	Y		Changed from SPM to SLAMS due to age
483550034	Dona Park	5707 Up River Road, Corpus Christi	Corpus Christi	27.8118	-97.46563	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed from SPM to SLAMS due to age
483550034	Dona Park	5707 Up River Road, Corpus Christi	Corpus Christi	27.8118	-97.46563	Urban/ City Ctr	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		Changed from SPM to SLAMS due to age.
483550034	Dona Park	5707 Up River Road, Corpus Christi	Corpus Christi	27.8118	-97.46563	Urban/ City Ctr	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
483611001	West Orange	2700 Austin Avenue, West Orange	Beaumont-Port Arthur	30.08444	-93.76167	Urban/ City Ctr	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
483611001	West Orange	2700 Austin Avenue, West Orange	Beaumont-Port Arthur	30.08444	-93.76167	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
483670081	Parker County	3033 New Authon Road, Weatherford	Dallas	32.86879	-97.9059	Rural	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	Population Exposure	Urban Scale	Y		
483670081	Parker County	3033 New Authon Road, Weatherford	Dallas	32.86879	-97.9059	Rural	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Urban Scale	Y		
483750024	Amarillo SH 136	7010 State Highway 136, Amarillo	Amarillo	35.28025	-101.7155768	Rural	Ambient Temperature	SPM	Derived from NWS site KAMA	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
483750024	Amarillo SH 136	7010 State Highway 136, Amarillo	Amarillo	35.28025	-101.7155768	Rural	Barometric Pressure	SPM	Derived from NWS site KAMA	24-Hour Average; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	NA		Added to ANR in 2011
483750024	Amarillo SH 136	7010 State Highway 136, Amarillo	Amarillo	35.28025	-101.7155768	Rural	TSP-Lead	SLAMS	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure; Source-Oriented	Middle Scale	Y		
483750320	Amarillo A&M	6500 Amarillo Boulevard West, Amarillo	Amarillo	35.20159	-101.90924	Urban/ City Ctr	PM2.5	SPM	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
483970001	Rockwall Heath	100 East Heath Street, Rockwall	Dallas	32.93651	-96.45918	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	Tyler	32.34399	-95.41577	Rural	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	General/Background	Urban Scale	Y		
484230007	Tyler Airport Relocated	14790 County Road 1145, Tyler	Tyler	32.34399	-95.41577	Rural	O3	SLAMS	UV Photometric	Continuous	General/Background	Urban Scale	Y		
484390075	Eagle Mountain Lake	14290 Morris Dido Newark Road, Eagle Mountain Lake	Fort Worth-Arlington	32.98782	-97.47719	Rural	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	Highest Concentration	Neighborhood	Y		Changed Spatial Scale
484390075	Eagle Mountain Lake	14290 Morris Dido Newark Road, Eagle Mountain Lake	Fort Worth-Arlington	32.98782	-97.47719	Rural	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration	Neighborhood	Y		Changed Spatial Scale; Changed Monitoring Objective
484390075	Eagle Mountain Lake	14290 Morris Dido Newark Road, Eagle Mountain Lake	Fort Worth-Arlington	32.98782	-97.47719	Rural	Speciated VOC	SPM	GC	Continuous	Highest Concentration	Neighborhood	NA		Changed Spatial Scale
484390075	Eagle Mountain Lake	14290 Morris Dido Newark Road, Eagle Mountain Lake	Fort Worth-Arlington	32.98782	-97.47719	Rural	TNMOC	SPM	GC	Continuous	Highest Concentration	Neighborhood	NA		Changed Spatial Scale
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Carbonyl*	PAMS*	DNPH Silica/HPLC	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact	Neighborhood	NA	2	
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	NO/NO2/NOx	PAMS/SLAMS	Chemi-luminescence	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	O3	PAMS/SLAMS	UV Photometric	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	Y	2	
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Population Exposure	Neighborhood	Y		
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Speciated VOC	PAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	TNMOC	PAMS	GC	Continuous	Max Precursor Emissions Impact; Population Exposure	Neighborhood	NA	2	

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
484391002	Fort Worth Northwest	3317 Ross Avenue, Fort Worth	Fort Worth-Arlington	32.80500	-97.35639	Urban/ City Ctr	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Precursor Emissions Impact	Neighborhood	NA	2	Changed Spatial Scale; Changed Monitoring Objective
484391006	Haws Athletic Center	600½ Congress Street, Fort Worth	Fort Worth-Arlington	32.75889	-97.34222	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Highest Concentration; Population Exposure	Neighborhood	Y		
484392003	Keller	Alta Vista Road, Fort Worth	Fort Worth-Arlington	32.92194	-97.28194	Suburban	NO/NO2/NOx	SPM	Chemi-luminescence	Continuous	Highest Concentration; Population Exposure	Neighborhood	Y		Changed Spatial Scale
484392003	Keller	Alta Vista Road, Fort Worth	Fort Worth-Arlington	32.92194	-97.28194	Suburban	O3	SLAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y		Changed Spatial Scale; Changed Monitoring Objective
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Ambient Temperature	PAMS	Aspirated Thermister	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Barometric Pressure	PAMS	Barometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	NO/NO2/NOx	PAMS	Chemi-luminescence	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y	3	
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	O3	PAMS	UV Photometric	Continuous	Max Ozone Concentration; Population Exposure	Neighborhood	Y	3	
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Relative Humidity	PAMS	Humidity Sensor	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Solar Radiation	PAMS	Photovoltaic	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Speciated VOC*	PAMS*	Canister/ GC/MS	24-Hour Sample; 1/6 Days	Max Ozone Concentration; Population Exposure	Neighborhood	NA	3	
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Wind Direction	PAMS	Single Potentiometer Vane	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
484393009	Grapevine Fairway	4100 Fairway Drive, Grapevine	Fort Worth-Arlington	32.98417	-97.06361	Suburban	Wind Speed	PAMS	Cup Anemometer	Continuous	Max Ozone Concentration	Neighborhood	NA	3	Changed Spatial Scale; Changed Monitoring Objective
484393010	Stage Coach	8900 West Freeway, White Settlement	Fort Worth-Arlington	32.7392	-97.47033	Suburban	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
484393010	Stage Coach	8900 West Freeway, White Settlement	Fort Worth-Arlington	32.7392	-97.47033	Suburban	PM10, QC	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Urban Scale	Y		
484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	Fort Worth-Arlington	32.65639	-97.08889	Suburban	CO	SLAMS	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	Fort Worth-Arlington	32.65639	-97.08889	Suburban	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
484393011	Arlington Municipal Airport	5504 South Collins Street, Arlington	Fort Worth-Arlington	32.65639	-97.08889	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
484530014	Austin Northwest	3724 North Hills Drive, Austin	Austin-San Marcos	30.35443	-97.76026	Suburban	CO	SPM	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		
484530014	Austin Northwest	3724 North Hills Drive, Austin	Austin-San Marcos	30.35443	-97.76026	Suburban	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
484530020	Austin Audubon Society	12200 Lime Creek Road, Austin	Austin-San Marcos	30.48316	-97.87227	Rural	NO/NO2/NOx	SLAMS	Chemi-luminescence	Continuous	Population Exposure	Neighborhood	Y		
484530020	Austin Audubon Society	12200 Lime Creek Road, Austin	Austin-San Marcos	30.48316	-97.87227	Rural	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
484530020	Austin Audubon Society	12200 Lime Creek Road, Austin	Austin-San Marcos	30.48316	-97.87227	Rural	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
484530020	Austin Audubon Society	12200 Lime Creek Road, Austin	Austin-San Marcos	30.48316	-97.87227	Rural	PM2.5	Supplemental Speciation	Sequential FRM/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
484530021	Austin Webberville Rd	2600-B Webberville Road, Austin	Austin-San Marcos	30.26323	-97.71288	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
484530021	Austin Webberville Rd	2600-B Webberville Road, Austin	Austin-San Marcos	30.26323	-97.71288	Urban/ City Ctr	PM2.5	SLAMS	Sequential FRM/ Gravimetric	24-Hour Sample; 1/3 Days	Population Exposure	Neighborhood	Y		
484690003	Victoria	106 Mockingbird Lane, Victoria	Victoria	28.8361	-97.0056	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
484790016	Laredo Border	West End Washington Street, Laredo	Laredo	27.51083	-99.51972	Urban/ City Ctr	Ambient Temperature	SPM	Derived from NWS site KLRD	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
484790016	Laredo Border	West End Washington Street, Laredo	Laredo	27.51083	-99.51972	Urban/ City Ctr	Barometric Pressure	SPM	Derived from NWS site KLRD	24-Hour Average; 1/6 Days	Population Exposure	Neighborhood	NA		Added to ANR in 2011
484790016	Laredo Border	West End Washington Street, Laredo	Laredo	27.51083	-99.51972	Urban/ City Ctr	CO	SPM	Gas Filter Correlation	Continuous	Population Exposure	Neighborhood	Y		

Appendix B TCEQ Criteria Pollutant, Photochemical Air Monitoring Station (PAMS), Speciation Trend (STN), and National Core (NCore) Networks
(Legend at End)

AQS Site ID	Site Name	Address/Location	MSA / CBSA	Latitude	Longitude	Location Setting	Sampler Type	QAPP	Sampling Method / Analysis	Operating Schedule	Monitoring Objective	Spatial Scale	NAAQS Comparable	PAMS Site Type	Comments
484790016	Laredo Border	West End Washington Street, Laredo	Laredo	27.51083	-99.51972	Urban/ City Ctr	O3	SLAMS	UV Photometric	Continuous	Population Exposure	Neighborhood	Y		
484790016	Laredo Border	West End Washington Street, Laredo	Laredo	27.51083	-99.51972	Urban/ City Ctr	PM10	SLAMS	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
484790016	Laredo Border	West End Washington Street, Laredo	Laredo	27.51083	-99.51972	Urban/ City Ctr	TSP-Lead	SPM	HiVol/ICP-AES	24-Hour Sample; 1/6 Days	Population Exposure	Neighborhood	Y		
484790017	Laredo Bridge	700 Zaragoza Street, Laredo	Laredo	27.50167	-99.50306	Urban/ City Ctr	CO	SPM	Gas Filter Correlation	Continuous	Population Exposure; Source-Oriented	Micro Scale	Y		Changed Spatial Scale; Changed Monitoring Objective
484790017	Laredo Bridge	700 Zaragoza Street, Laredo	Laredo	27.50167	-99.50306	Urban/ City Ctr	PM10	SPM	HiVol/ Gravimetric	24-Hour Sample; 1/6 Days	Highest Concentration	Micro Scale	Y		
484970088	Decatur Thompson	301 E Thompson Street, Decatur	Dallas	33.221721	-97.584445	Urban/ City Ctr	Speciated VOC	SPM	GC	Continuous	Population Exposure	Neighborhood	NA		Activated 10/6/2010
TBD		See comment about Precip @ Clinton	Houston	TBD	TBD	TBD	Precipitation	PAMS	Rain Gauge	Continuous	General/Background	Neighborhood	NA		Changed Spatial Scale; Add precip to Clinton as PAMS
TBD		Waterworks move in progress TBD	Houston	TBD	TBD	TBD	Radar Profiler	PAMS	Radar Profiler	24 One-Hour Averages, Daily	Regional Transport	Regional Scale	NA		Changed Spatial Scale; To be assigned an AQS ID

LEGEND

*****	PAMS monitoring beyond minimum requirements of 40 CFR Part 58, Appendix D	**NWS site KTRL**	National Weather Service site Terrell Municipal Airport TX
241-Hr Avg, Daily	24-Hour Averages, Daily	**O3**	Ozone
24-Hour 1/3 Day	24-Hour Sample, Once every Third Day	**PAMS**	Photochemical Assessment Monitoring Stations
24-Hour 1/6 Day	24-Hour Sample, Once every Sixth Day	**PM10**	Particulate Matter ≤10 Microns
AQS	Air Quality System	**PM2.5**	Particulate Matter ≤2.5 Microns
CBSA	Core Based Statistical Area	**QAPP**	Quality Assurance Project Plan
CO	Carbon Monoxide	**QC**	Quality Control Sampler
Cr6+	Chromium IV	**SETRPC**	Southeast Texas Regional Planning Commission
DNPH Silica/HPLC	Dinitrophenylhydrazine coated silica cartridges by High Performance Liquid Chromatograph	**SLAMS**	State and Local Air Monitoring Stations
FID	Flame Ionization Detector	**SO2**	Sulfur Dioxide
FRM	Federal Reference Method	**SPM**	Special Purpose Monitor
GC	Gas Chromatograph	**STN**	Speciation Trend Network
GC/MS	Gas Chromatography/Mass Spectrometry	**SVOC**	Semi-Volatile Organic Compounds
GFAA	Graphite Furnace Atomic Absorption	**TBD**	To Be Determined
HiVol	High Volume	**TCEQ**	Texas Commission on Environmental Quality
ICP-AES	Inductively Coupled Plasma-Atomic Emission Spectroscopy	**TNMOC**	Total Nonmethane Organic Carbon
MSA	Metropolitan Statistical Area	**TSP**	Total Suspended Particles
NA	Not Applicable	**Urban/City Ctr**	Urban and City Center
NAAQS	National Air Quality Standards	**UV**	Ultraviolet
NATTS	National Air Toxics Trends Stations	**VOC**	Volatile Organic Compounds
NCore	National Core	**XAD**	Divinylbenzene/styrene copolymer
NO/NO2/NOx	Nitrogen Oxides		
NOy	Total Reactive Nitrogen	**PAMS Type 1**	Upwind
NWS site KAMA	National Weather Service site Rick Husband Amarillo International Airport	**PAMS Type 2**	Primary Precursor
NWS site KBRO	National Weather Service site Brownsville/South Padre Island International Airport	**PAMS Type 3**	Maximum Ozone Concentration
NWS site KELP	National Weather Service site El Paso International Airport	**PAMS Type 4**	Downwind
NWS site KLRD	National Weather Service site Laredo International Airport		