

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 6 1201 ELM STREET, SUITE 500 DALLAS, TEXAS 75270 – 2102

March 3, 2023

Mrs. Brandy Brooks Deputy Director, Monitoring Division Texas Commission on Environmental Quality Post Office Box 13087 Austin, Texas 78711-3087

Dear Mrs. Brooks:

Thank you for your correspondence from the Texas Commission on Environmental Quality (TCEQ) submitting the Texas 2022 Annual Monitoring Network Plan (2022 Plan) for ambient air. The U.S. Environmental Protection Agency (EPA) has completed its review of the 2022 Plan to ensure it meets the minimum requirements of 40 Code of Federal Regulations (CFR) Part 58 and its appendices.

We appreciate your efforts in submitting a timely 2022 Plan; we received the Plan and cover letter on July 1, 2022. Also, we appreciate the efforts of the TCEQ to manage and maintain the ambient air monitoring network in Texas in compliance with the minimum air monitoring requirements under the Clean Air Act.

The network review process presents an opportunity for the EPA and the TCEQ to collaborate on the air monitoring network design. *See* 40 CFR Part 58, Appendix D, Section 1.1.2. The EPA has conducted its review of the 2022 Plan including proposed network modifications to ensure the air quality surveillance system continues to meet minimum applicable air monitoring requirements.

The EPA is approving your 2022 Plan as meeting the minimum requirements per 40 CFR Part 58 and Appendices, including Section 58.10 and Section 58.14. While we are approving the AMNP, we are also providing some recommendations for the TCEQ to consider for installing one or more additional monitors in the Permian Basin, in the west Dallas community, and in the Port Arthur, Jefferson County, area. These recommendations are discussed in greater detail in the paragraphs below.

The EPA believes the TCEQ should deploy one or more ozone monitors in the Permian Basin pursuant to 40 CFR § 58, appendix D, section 4 for NO₂, VOCs, and ozone, to ensure that the impacts of the burgeoning oil production are accurately monitored and recorded. As you know, monitors in the Carlsbad area in New Mexico indicate that the Permian Basin emissions are leading to monitored concentrations above the national ozone standard of 70 parts per billion. We believe that information regarding the levels of ozone in Texas should also be collected for the health benefits of both citizens in Texas and New Mexico. While Table D-2 of appendix D does not account for the full breadth of additional factors that would be considered in designing a complete O₃ monitoring program for an area, additional factors including geographic size, population density, complexity of terrain and meteorology, adjacent O₃ monitoring programs, air pollution transport from neighboring areas, and measured air quality in comparison to all forms of the O₃ NAAQS (i.e., 8-hour and 1-hour forms) can be considered. Air monitoring networks must be designed to account for all these area characteristics. The EPA Regional Administrator and the responsible State or local air monitoring agency must work together to

design and/or maintain the most appropriate O_3 network to service the variety of data needs in an area. Therefore, we strongly encourage the TCEQ to start evaluating siting options and potential options for near term installation of additional monitoring in the Permian Basin for ozone, NO₂, and VOCs to complete a comprehensive O_3 monitoring program for the area. Therefore, EPA is strongly recommending installation of one or more monitors in the Permian Basin that complements the monitoring already occurring in the New Mexico portion of the Permian Basin region.

Also, in accordance with 40 CFR §58.14, the following proposed system modification in the 2022 Plan is approved: at the San-Antonio Garner Road site, decommissioning the SO₂ and meteorological monitors. Going forward, please keep us updated regarding monitoring at the new Sherwood Drive site in the San Antonio area, as the most recent population estimate requires an additional NO₂ near-road monitor. Details regarding these requirements, and other specifics from our review of the 2022 Plan, are enclosed. We are available to discuss our review with you if you have any questions.

We acknowledge that, at the time the 2022 Plan was submitted, all of Texas' monitoring sites supporting federal requirements and monitoring objectives were meeting the minimum requirements in 40 CFR Part 58 and Appendices A, B, C, D, and E, with the following exception: the Midlothian Old Fort Worth (OFW) Road site which was temporarily decommissioned on April 22, 2022 due to the property owner revoking the TCEQ's access to the site. We acknowledge the TCEQ is evaluating viable locations to relocate this site and request that you please continue to keep us informed with a written update every 90 days until monitoring operations are restored.

Further, we acknowledge the discussion of environmental justice considerations provided in response to comments in Appendix M of the 2022 Plan, including the addition of monitors proposed in the Fifth Ward, Bayland Park, and Pleasantville as a result of previously received public comments, as well as the new Gregory-Portland site in San Patricio County / Corpus Christi; these monitors are not specifically required by federal monitoring requirements in 40 CFR Part 58, but rather are at the discretion of Texas. We encourage the TCEQ to continue to evaluate areas with respect to environmental justice¹ related to ambient air monitoring. Additionally, as you are aware, monitoring requirements in the San Antonio area have changed, as the most recent U.S. Census population estimate for area is 2,500,000 or more persons; updates that are required include: NO₂ near road and PM monitoring.

We also recently reviewed Purple Air $PM_{2.5}$ sensor data in west Dallas that routinely show spikes in elevated $PM_{2.5}$ sensor measurements, but it is currently unclear whether these are "channel" issues with the monitor. There are currently three Purple Air sensors around the GAF facility. They are identified as the Akron, Kingbridge, and Bedford sensors and the data can be accessed on Purple Air's website. We believe the TCEQ should review that local sensor data and engage in discussions with the community about the current data. and based on this review consider siting a $PM_{2.5}$ monitor in the west Dallas area to better understand the $PM_{2.5}$ levels in the community. We are also aware that the City of Dallas has recently started monitoring $PM_{2.5}$ in the area, and we encourage you to review that data as they begin posting it to assist in determining whether a new monitor is needed in the community. If a new monitor is located in the west Dallas community, the monitor(s) could be either a microscale located monitor to

¹ Executive Order 14008, January 27, 2021. Federal Register / vol. 86, No. 19, February 1, 2021, p. 7619. Securing Environmental Justice and Spurring Economic Opportunity. Section 219. *Policy*.

[&]quot;To secure an equitable economic future, the United States must ensure that environmental and economic justice are key considerations in how we govern. That means . . . turning disadvantaged communities – historically marginalized and overburdened – into healthy, thriving communities . . . ".

determine if there is a local source issue and/or a neighborhood scale located monitor to determine if there is a broader $PM_{2.5}$ issue in the area.

In addition, we acknowledge receipt of the SO₂ annual report received as an appendix to the 2022 Plan. The annual report is required under 40 CFR 51.1205(b) from the State for seven modeled SO₂ sources whose air quality was characterized by modeling instead of monitoring. I am pleased to inform you that we agree with the State's conclusion that no additional SO₂ modeling is needed for any of these seven sources to determine compliance and that Atascosa, Fort Bend, Goliad, Lamb, Limestone, Robertson, and Wilbarger Counties remain "Attainment/Unclassifiable" for the 2010 one-hour SO₂ primary NAAQS. Details of our review of the State's assessment and recommendations for these modeled sources are enclosed. In response to ongoing community concerns, we are recommending TCEQ install an additional SO₂ monitor in Jefferson County (Port Arthur, Texas) giving primary consideration of the siting towards further characterizing air quality in the neighborhood nearest the large SO₂ sources in the area.

We look forward to our continued partnership with the TCEQ on our common goals to establish and maintain an approvable and comprehensive monitoring network as well as maintenance of the 2010 one-hour SO₂ primary NAAQS for area designations based on modeling for the state of Texas. If you have any questions, please contact me at (214) 665-7593, or your staff may contact Mr. Jeffrey Robinson, Branch Manager, Air Permits, Monitoring and Grants Branch, at (214) 665-6435. For questions specific to the SO₂ annual report, please call Michael Feldman, Regional Haze and SO₂ Section Chief, at (214) 665-9793.

Sincerely,

David F. Garcia, P.E. Director Air and Radiation Division

Enclosure: Technical Comments

2022 Annual Monitoring Network Plan Technical Comments

The Texas 2022 Annual Monitoring Network Plan (ANP) was received on July 1, 2022 (2022 Plan). In accordance with the requirements of 40 Code of Federal Regulations (CFR) Part 58 and its appendices, the U.S. Environmental Protection Agency (EPA) has reviewed the 2022 Plan and our comments are provided below. These comments reflect the EPA's efforts in collaboration with the Texas Commission on Environmental Quality (TCEQ) to maintain minimum monitoring requirements required under Part 58.

General Comments

We appreciate the TCEQ's submittal of the 2022 Plan in accordance with 40 CFR §58.10.

Areas with Environmental Justice Concerns

The EPA recognizes that the 2022 Plan meets the minimum federal regulatory requirements outlined at 40 CFR 58.10 and Appendices A through E. Also, the EPA acknowledges the environmental justice considerations² provided in response to public comments in appendix M of the 2022 Plan, including the addition of monitors proposed in the Fifth Ward, Bayland Park, and Pleasantville neighborhoods as a result of previously received public comments. (See the 2022 Plan, Appendix M, pp. 115-150). The Plan includes examples of air monitoring in fence line communities and underserved areas such as those mentioned above, as well as Houston Ship Channel communities, Charlton-Pollard community in Beaumont, west Port Arthur, and Corpus Christi Ship Chanel communities. These monitors are not specifically required by federal monitoring requirements in 40 CFR Part 58, but rather are at the discretion of Texas.

Operation of monitoring network in accordance with 40 CFR Part 58 and Appendices A, B, C, D and E We appreciate the TCEQ's operation of the ambient air monitoring network in accordance with minimum federal requirements, with the following exceptions:

• We acknowledge that the TCEQ is evaluating viable locations to relocate the Midlothian Old Fort Worth (OFW) air monitoring site to meet siting criteria because the site was temporarily decommissioned on April 22, 2022, due to the property owner revoking the TCEQ's access to the site. Please continue to keep us informed regarding Midlothian OFW, with a written update every 90 days until monitoring operations are restored.

Air Quality System (AQS). Thank you for your efforts to ensure that the information in the ANP and the AQS is complete and consistent. Please continue to update the AQS, and to correlate the details of each monitoring location in the ANP with the AQS.

² Executive Order 14008, January 27, 2021. Federal Register / vol. 86, No. 19, February 1, 2021, p. 7619. Securing Environmental Justice and Spurring Economic Opportunity. Section 219. *Policy*.

[&]quot;To secure an equitable economic future, the United States must ensure that environmental and economic justice are key considerations in how we govern. That means . . . turning disadvantaged communities – historically marginalized and overburdened – into healthy, thriving communities . . . ".

Monitoring Requirements in the San Antonio Area

To meet the minimum monitoring requirements in CBSA's with 2,500,000 or more persons, for ambient air monitoring in the San Antonio area, please coordinate with EPA for approval in advance of updates needed for the following: NO_2 near road; see specific requirements in the discussion below.

Ozone (O₃) Monitoring (40 CFR Part 58, Appendix D Section 4.1)

While the TCEQ is currently meeting the minimum network design requirements for ambient air quality monitoring for ozone, we recommend additional monitors in the Permian Basin area.

Ozone Photochemical Assessment Monitoring Stations (PAMS) (ozone precursor monitoring)

Ozone: PAMS-Related Carbonyl Monitoring. The EPA acknowledges that no additional changes were made to the TCEQ carbonyl monitoring network.

Ozone: PAMS-Related Volatile Organic Compounds (VOC) and Meteorological Monitoring. The EPA notes the TCEQ's initiative, in response to previously received AMNP public comments, to establish new Special Purpose Monitoring (SPM) sites in the Houston Fifth Ward and Gregory Portland area to measure VOCs by canister every sixth day (pending site selection), as well as wind speed, wind direction, and outdoor temperature. These monitors are not specifically required by federal monitoring requirements in 40 CFR Part 58, but rather are at the discretion of Texas. We understand that these monitors are expected to be operational by December 2022. We request that you update us as the monitor deployments occur.

Ozone: PAMS-Related Meteorological Monitoring. We acknowledge the information in the Plan on the San Antonio Northwest ceilometer, which is expected to be operational in 2023. We request communication by email when these actions are completed. (Approval for these actions were provided by letter dated November 4, 2019.)

Carbon Monoxide (CO) Monitoring (40 CFR Part 58, Appendix D Section 4.2)

The TCEQ is currently meeting the minimum network design requirements for ambient air quality monitoring for CO.

The EPA acknowledges the previous approval by letter dated November 4, 2019, of the replacement of the San Antonio I-35 site (AQS ID 48-029-1069) regular CO monitor with a high-sensitivity CO monitor for higher resolution CO measurements, which we understand will be deployed by December 2022. We request communication by email when this action is completed.

Nitrogen Dioxide (NO₂) Monitoring (40 CFR Part 58, Appendix D Section 4.3)

The TCEQ is currently meeting the minimum network design requirements for ambient air quality monitoring for NO₂.

As mentioned in our cover letter, monitoring requirements in the San Antonio need to be updated to add a second near-road NO_2 monitoring station, as the most recent U.S. Census population estimate for area

is 2,500,000 or more persons. We understand this additional monitoring station will be installed at the new Sherwood Drive site by December 31, 2022, and will measure $NO/NO_2/NO_x$, wind speed, wind direction, and outdoor temperature. This site was previously approved, see letter from Garcia to Chism dated August 16, 2021. Please keep us updated regarding progress at this new site.

Sulfur Dioxide (SO₂) Monitoring (40 CFR Part 58, Appendix D Section 4.4)

The TCEQ is currently meeting the minimum network design requirements for ambient air quality monitoring for SO₂.

The proposed system modification to decommission monitors for SO_2 and meteorology (wind speed, wind direction, and outdoor temperature) at the San Antonio Gardner Road site is approved. We request you update us when this action is complete.

The EPA acknowledges the changing of network designation from state initiative to federal SPM for the Freeport South Avenue I site, adding monitors for SO_2 and meteorology (wind speed, wind direction, and outdoor temperature) to the federal network. We request you update us when this action is complete.

Regarding the Fairfield Farm to Market (FM) 2570 Ward Ranch monitors for SO₂ and wind speed, wind direction, and outdoor temperature (AQS ID 48-161-1084), this will be revisited after the Redesignation Request and Maintenance Plan SIP Revision for the Freestone-Anderson and Titus 2010 SO₂ NAAQS Nonattainment Areas action is completed.

Lead (Pb) Monitoring (40 CFR Part 58, Appendix D Section 4.5)

The TCEQ is currently meeting the minimum network design requirements for ambient air quality monitoring for Pb.

Pb Collocation (40 CFR Part 58, Appendix A, Section 3.3.4.3)

The TCEQ is currently meeting the minimum network design requirements for ambient air quality for collocated Pb monitors.

Particulate Matter (PM) Monitoring (40 CFR Part 58, Appendix D, Sections 4.6 and 4.7)

The TCEQ is currently meeting the minimum network design requirements for ambient air quality monitoring for PM.

Particulate Matter of 10 Microns or Less (PM₁₀) (40 CFR Part 58, Appendix D Section 4.6)

The TCEQ request to install a Continuous PM_{10} monitor at the Houston North Wayside site (AQS ID 48-201-0046) is approved. We understand that the anticipated date of operation is Summer 2021. In the TCEQ's 2022 AMNP it is listed as being completed on 9/1/2021.

The TCEQ requests to change the sampling frequency of the Manual PM₁₀ FRM QA Collocated monitors at the Clinton (AQS ID 48-201-1035), Convention Center (AQS ID 48-113-0050), Ojo de Agua (AQS ID 48-141-1021), Socorro Hueco (AQS ID 48-141-0057) from 1-in-6 days to 1-in-12 days, are approved. The EPA notes that these changes have been made.

The EPA future review of the TCEQ request to locate a PM₁₀ monitor in the Portland-Gregory area is contingent on information submitted by the TCEQ about the proposed new location.

We note the update on the deployment of a PM_{10} FRM sampler to the Dallas County southern sector industrial corridor: the Dallas Bexar Street monitoring site. We understand that this monitor was deployed on 9/7/2021 and that the site AQS number is 48-113-1096.

Particulate Matter of 2.5 Microns or Less (PM_{2.5}) (40 CFR Part 58, Appendix D Section 4.7)

PM_{2.5} Network General

For future plans, please include identification of any monitors that are suitable and monitors that are not suitable for comparison against the annual $PM_{2.5}$ NAAQS as described in §58.30.

PM_{2.5} Network Updates Since Last Year

We note the update on the temporary changes at the Midlothian Old Fort Worth (OFW) site; please keep us informed.

We note the update about the plans to discontinue the $PM_{2.5}$ NAAQS comparable 2025 monitors and install Continuous BAM 1022 monitors at the Convention Center (AQS ID 48-113-0050) and Houston North Loop (AQS ID 48-201-1052) sites. We approved these modification plans on October 19, 2018. We understand that the Houston North Loop site monitor replacement was completed on 05/12/2021.We understand that the Convention Center site monitor replacement was completed on 04/25/2022.

We note the update about the plans to discontinue the $PM_{2.5}$ non-NAAQS comparable TEOM monitors and install Continuous BAM 1022 monitors at the Houston Aldine (AQS ID 48-201-0024), Corsicana Airport (AQS ID 48-349-1051), and Kaufman (AQS ID 48-257-0005) sites. We approved these modification plans on October 19, 2018. According to AQS, we understand that the Houston Aldine monitor has been replaced with a start date of 05/22/2019.We understand that both the Kaufman site and Corsicana Airport site monitors have been replaced with a start date of 04/25/2022.

PM_{2.5} Network Proposed Revisions

The TCEQ requests to install a Continuous $PM_{2.5}$ BAM 1022 monitor at the Ojo de Agua site (AQS ID 48-141-1021) and a $PM_{2.5}$ Continuous $PM_{2.5}$ TEOM monitor at the Houston North Wayside site (AQS ID 48-201-0046) are approved. We understand that the Houston North Wayside monitor deployment was completed on 05/04/2021. We request you update us when the monitor replacement at El Paso is complete.

The TCEQ requests to install Continuous $PM_{2.5}$ BAM 1022 monitors at the Austin North Hills Drive (AQS ID 48-453-0014), Conroe (AQS ID 48-339-0078), Socorro Hueco (AQS ID 48-141-0057), and Seabrook (AQS ID 48-201-1050) sites are approved. The TCEQ requests to discontinue the existing Continuous $PM_{2.5}$ TEOM monitors at these sites are approved (AQS IDs 48-453-0014-88502-3, 48-339-0078-88502-3, 48-141-0057-88502-3, 48-201-1050-88502-3). We understand that the monitor replacement was completed at the Austin North Hills site on 10/15/2020. We understand that the

monitor replacement was completed at the Seabrook and Conroe sites on 09/30/2021. We request you update us when the monitor replacements are complete at Socorro Hueco.

The TCEQ requests to install Continuous $PM_{2.5}$ BAM 1022 monitor at the Edinburg site (AQS ID 48-215-1046) is approved. The TCEQ request to discontinue the existing Manual $PM_{2.5}$ 2025 monitor at this site is approved (AQS ID 48-215-1046-88101-1). We understand that the monitor replacement at this site was completed on 06/06/2022.

The TCEQ request to install a Continuous PM_{2.5} BAM 1022 monitor at the El Paso UTEP site (AQS ID 48-141-0037) was previously approved; specifically, the request was to:

"Replace the existing non-regulatory $PM_{2.5}$ tapered element oscillating microbalance monitor with a $PM_{2.5}$ FEM 209 primary monitor and changing the existing $PM_{2.5}$ federal reference method (FRM) 145 monitor to a QC-collocated monitor at the El Paso UTEP air monitoring site." (see the TCEQ's El Paso UTEP letter requesting a system modification dated August 2, 2021 and EPA's response dated August 13, 2021).

Please keep us informed of the progress at the El Paso UTEP site.

We note the TCEQ's update on the deployment of a $PM_{2.5}$ non-NAAQS comparable monitor to the Dallas County southern sector industrial corridor at the Dallas Bexar Street site. Approval for this action was dated 04/10/2020.-We understand that this monitor started operating on 02/01/2022.

The EPA appreciates the TCEQ's efforts to continue to replace aging $PM_{2.5}$ non-NAAQS comparable equipment with new FEM monitoring technology. We understand that the Houston Westhollow, Ascarate Park Southeast, Clinton, Dona Park, and Midlothian OFW sites with $PM_{2.5}$ TEOM monitors were to be replaced by new $PM_{2.5}$ FEM continuous monitors by 12/31/2021. We request that you update us as the monitor replacements occur. Thank you for the update on the Houston Westhollow monitor replacement. We understand that the Dona Park monitor was replaced with a deployment date of 05/25/2022. Please keep us updated us as the other monitor replacements occur.

Regarding the proposal to deploy a $PM_{2.5}$ federal equivalent method (FEM) 209 collocated quality control (QC) monitor at the Mission air monitoring site (EPA Air Quality System (AQS) identification number 48-215-0043) to complement the existing primary $PM_{2.5}$ FEM method 209 monitor, this request is approved. Please keep us updated as to the deployment of this monitor.

The EPA acknowledges the changing of network designation from state initiative to federal SPM for the Freeport South Avenue I $PM_{2.5}$ FRM monitor. We request you update us when this action is complete.

PM_{2.5} Network Proposed QA Collocation

The PM_{2.5} Quality Assurance (QA) Collocation requirements of 40 CFR 58 Appendix A Section 3.2.3 apply to monitors that measure NAAQS comparable data (and do not apply to monitors reporting non-NAAQS comparable data). The TCEQ operates primary PM_{2.5} NAAQS-comparable 2025 and BAM 1022 monitors using the FRM 145 and FEM 209 methods, respectively.

We appreciate the TCEQ's collocated monitors for PM; based on information provided by the TCEQ in the 2022 AMNP, currently with 44 FEM monitors, 7 QC collocated monitoring sites are needed and are located as follows: (Austin Webberville AQS ID 48-453-0021, Corpus Christi Huisache AQS ID 48-355-0032, Houston Aldine AQS ID 48-201-0024, Fort Worth California Parkway AQS ID 48-439-1053,

San Antonio Northwest AQS ID 48-029-0032), Port Authur Memorial AQS ID 48-245-0021, Dona Park AQS ID 48-355-0034.

During the proposed network changes, the TCEQ is responsible for ensuring that QA Collocation requirements continue to be met for all PM methods.

Meteorological Monitoring

We note the TCEQ's Plan information on the deployment of wind speed, wind direction, and outdoor temperature monitors in the Dallas County southern sector at the Dallas Bexar Street site. We request an update, by email to Apodaca.Suzanne@epa.gov, when this is completed.

For additional detail regarding meteorological monitoring, see the SO₂ Monitoring section above.

Data Requirements Rule Provisions: 2022 SO₂ Annual Report Technical Comments

As required under 40 CFR 51.1205(b), the SO₂ annual report provides the TCEQ's annual assessment of SO₂ emissions changes for areas designated attainment/unclassifiable for the 2010 SO₂ NAAQS where the designations were based on modeling actual SO₂ emissions. The TCEQ submitted its SO₂ annual report for seven sources where the air quality was characterized by modeling instead of monitoring. Seven Texas counties were designated based on the modeled actual SO₂ emissions from these sources: Atascosa, Fort Bend, Goliad, Lamb, Limestone, Robertson, and Wilbarger Counties.

The State compared annual SO_2 emissions from 2019 and 2020 for the relevant sources in each county. A comparison of these data sets indicates that SO_2 emissions decreased for Fort Bend, Goliad, Lamb, Limestone, Robertson, and Wilbarger Counties. These decreases in emissions compared to the original designation modeling provide reasonable assurance that these areas continue to meet the 2010 one-hour SO_2 primary NAAQS.

The one relevant source in Atascosa County, the San Miguel Electric plant, had an emission increase from the previous year due to increased operations. The State provided the most recent average annual SO₂ emissions from 2018 to 2020 for Atascosa County and compared to the 2012 to 2014 modeled average emissions used for designation. The 2018 to 2020 emissions exceed the modeled emissions by 1,469 tons per year. The State concluded that this increase of approximately 16.4 percent of SO₂ emissions would not be expected to change the attainment/unclassifiable designation determined from the original modeling. When considering how the 2012 to 2014 modeled design value (111.5 μ g/m³) would be adjusted to reflect the emission increase, a conservative assumption (ignoring background concentration) would be a 16.4 percent increase in modeled concentration to 129.8 μ g/m³. This is sufficiently low compared to the NAAQS (196.4 μ g/m³), and provides reasonable assurance that this area continues to meet the 2010 one-hour SO₂ primary NAAQS.

The EPA, therefore, agrees with the State's conclusion that no additional SO₂ modeling is needed for any of these seven sources to determine compliance and that Atascosa, Fort Bend, Goliad, Lamb, Limestone, Robertson, and Wilbarger Counties remain "Attainment/Unclassifiable" for the 2010 one-hour SO₂ primary NAAQS.