



January 16, 2024

Texas Commission on Environmental Quality
Comments: <siprules@tceq.texas.gov>
Austin, Tx

Docket No.: 2023-117-117-AI; 2023-110-SIP-NR; 2023-116-115-AI; 2023-108-SIP-NR; 2023-107-SIP-NR; 2023-1223-SIP

Subject: Commission Approval for Proposed Houston-Galveston-Brazoria (HGB) and Dallas-Fort Worth (DFW) Severe Area Attainment Demonstration (AD) State Implementation Plan (SIP) Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS), and a cluster of related Clean Air Act SIP NAAQS rules. HGB and DFW fail to comply with the 2008 and 2015 ozone NAAQS, and Bexar County fails to comply with the 2015 ozone NAAQS.

Attention TCEQ SIP staff,

Sierra Club's Lone Star Chapter submits the comments below to the Texas Commission on Environmental Quality (TCEQ) on pending ozone SIP rule packages.

The Texas Commission on Environmental Quality (TCEQ) published a proposal on November 29, 2023 to revise and implement rules for the pending State Implementation Plans (SIPs) necessary to meet federal SIP requirements in the Houston-Galveston-Brazoria and Dallas-Fort Worth 2008 ozone National Ambient Air Quality Standards (NAAQS) severe nonattainment areas. These SIP proposals are for "Severe" Area Attainment Demonstration (AD) SIP Revision for the 2008 Eight-Hour Ozone National Ambient Air Quality Standard (NAAQS).

TCEQ is required to provide these revisions to the state SIP plan because both the Houston-Galveston-Brazoria area (HGB is eight counties) and Dallas-Fort Worth area (DFW is ten counties) have been reclassified by EPA and the areas are now subject to the "Severe" nonattainment requirements in the federal Clean Air Act.

The attainment date for both the DFW and HGB 2008 ozone NAAQS severe nonattainment areas is July 20, 2027. Additionally, the EPA set a May 7, 2024 deadline for states to submit SIP plan revisions to address the 2008 eight-hour ozone standard severe nonattainment area requirements. The SIP rules are implemented in two types of TCEQ rules to control volatile organic compounds (VOCs) and nitrogen oxides (NOx). High ozone smog is an ambient air byproduct of too much VOCs and NOx on hot sunny days cooking up the ozone air pollutant, and stronger rules will reduce this ozone-forming pollution. High ozone smog is a mixture of toxic chemicals in the air and ozone monitors measure this harmful airborne soup as ozone.

As recently as this past October, the EPA has rejected similar state plans proposed by the TCEQ as the agency found that TCEQ failed to submit a plan with revisions that effectively address the reclassified Moderate Nonattainment Areas for the 2015 Ozone NAAQS for the DFW, HGB, and Bexar county areas ([link](#)).

The 2015 Ozone standard is more protective at 70 parts per billion than the 2008 Ozone standard set at 75 parts per billion. Public health experts on EPA's independent science advisory panels who reviewed ozone limits recommended these new health-based standards in 2008 and 2015.

TCEQ's ongoing failure to submit a good state plan to regulate ozone and its precursor VOCs and NO_x, provides us with an opportunity to submit comments to the TCEQ and pressure the agency to implement these changes to the state plan that includes the use of Reasonably Available Control Technologies (RACTs) and more effective contingencies that could help lessen Ozone-forming pollution of VOCs and NO_x at major polluting sources throughout the eighteen counties in the DFW and HGB nonattainment areas.

VOC Rule Revisions in Chapter 115, Regulation 5 - DFW and HGB 2008 Ozone NAAQS Severe and Bexar County 2015 Ozone NAAQS Moderate Designation - The rule project would revise Chapter 115 to implement VOC control rules necessary to meet federal SIP requirements in the DFW and HGB 2008 ozone NAAQS severe nonattainment areas and, as a result of merging 2023-113-115-AI with this project, the Bexar County 2015 ozone NAAQS moderate nonattainment area.

DFW and HGB 2008 Ozone NAAQS Severe and Bexar County 2015 Ozone NAAQS Moderate VOC Rules - Rule Project No. 2023-116-115-AI

NO_x Rule Revisions in Chapter 117, Regulation 7 - DFW and HGB 2008 Ozone NAAQS Severe - The rule project would revise Chapter 117 to implement NO_x rules necessary to meet federal SIP requirements in the DFW and HGB 2008 ozone NAAQS severe nonattainment areas and, as a result of merging 2023-114-117-AI with this project, the Bexar County 2015 ozone NAAQS moderate nonattainment area.

NO_x Rule Revisions for DFW and HGB Ozone Nonattainment Areas - Rule Project No. 2023-117-117-AI

DFW-HGB 2008 Ozone NAAQS Severe RFP SIP Revision - Rule Project Number 2023-108-SIP-NR

HGB 2008 Ozone NAAQS Severe AD SIP Revision - Rule Project Number-2023-110-SIP-NR

DFW 2008 Ozone NAAQS Severe AD SIP Revision - Rule Project Number 2023-107-SIP-NR

Industrial Emissions Inventory, Emissions Air Monitoring and Reductions

The HGB 8-county nonattainment area has ~460 industrial plants many with tons of ozone-forming contaminants as VOC, NO_x and CO emissions operating mainly in Harris, Galveston, Brazoria, Chambers, and Fort Bend counties, and few plants in Montgomery, Liberty, and Waller counties. The group of large industrial plants include 1) one major source coal plant among 19 electric generation plants; 2) nine large petroleum oil refineries; 3) 140 large chemical and petrochemical plants; 4) 55 sites associated with natural gas transmissions; and 5) 18 petroleum bulk stations and terminals, making many of these major sources as the biggest ozone-precursor industrial sources in the HGB area and the need for many large plants to reduce both VOCs and NO_x emissions.

As TCEQ is aware, NRG's Parish coal plant in Fort Bend County is the #1 source of NO_x emissions in the HGB area due it 8 large coal-fired and gas-fired boilers. ExxonMobil's Baytown complex of an oil refinery, chemical and petrochemical plant are the largest sources of VOC pollution and one of the largest sources of NO_x pollution in the HGB region.

Large industrial plants within HGB account for approximately 33,145.83 tons of VOCs, 24,246.34 tons of NO_x, and 29,731.84 tons of CO based on the TCEQ 2020 Emissions Inventory Point Source Database. Thousands of “minor” VOC sources in the Oil & Gas sector need to be addressed in the HGB and DFW ozone SIP rulemaking to ensure VOC reductions are achieved.

The annual tons of VOCs reported by large plants are, in many cases, rough estimates of emissions from multiple stacks and tens of thousands of fugitive sources due to lack of real-time monitoring and tracking technology, and VOC emissions inventories are often being corrected and updated every year at large industrial sites, especially due to so many emissions sources.

As a general comment, TCEQ needs to propose even more VOC and NO_x emissions reductions at both large “major” and small “minor” Clean Air Act industrial sources. For example, VOCs rules under Chapter 115 particularly need to be stronger at both large “major” and small “minor” sources, and improved CAA agency inspections and enforcement could support VOC reductions, especially in view of the large size of so many plants that challenge the TCEQ investigators to perform on the ground field investigations.

Frankly, it’s impossible to thoroughly and meticulously inspect such large sites no matter how well trained TCEQ investigators may be to carry out Comprehensive Compliance Investigations.

Another concern is that the TCEQ has too many VOC Chapter 115 rules that authorize more VOCs than are allowed if the TCEQ enforced the CAA, and the theory is that elevated ozone can be linked to some extent to weak enforcement by TCEQ and weak compliance at large plants.

One example is the HRVOC rules in Chapter 115 that provide potential loopholes for certain large VOC industrial sites to emit excessive levels of HRVOCs if they need to, by combining HRVOCs from multiple process units at certain large sources into unacceptable permitted pounds per hours and tons per year amounts, essentially to escape more HRVOC reductions. More HRVOC reductions and accountability of those reductions are critical to complying with the Severe SIP requirements as HRVOCs are the most reactive ozone precursors among the VOC classes. Evidence: Check the TCEQ’s ozone monitors showing exceedances along the Houston Ship Channel as the HRVOC and NO_x plumes drift West, North West and North forming ozone.

TCEQ treating several “major” sources as “minor” sources and allowing less VOC regulation-controls and higher VOC emissions

A recent example was discovered in Harris County with small “minor” sources and cited in a recent article published by *Inside Climate News* on January 4, 2024 on the Intercontinental Terminals Company (ITC) Pasadena Tank Farm.

The VOC problem at ITC is that TCEQ chose to improperly treat an ITC expansion with many existing and new VOC storage tanks as a small “minor” Clean Air Act source at less than 25 tons per year when, in fact, it exceeded the severe nonattainment’s “major” Clean Air Act threshold of 25 tons per year but TCEQ allowed ITC to keep it’s artificially interpreted small “minor” Clean Air Act source. ITC was able to avoid additional VOC controls as a result.

See *Inside Climate News* article: ‘Major’ Problem in Texas: How Big Polluters Evade Federal Law and Get Away With It

How Texas polluters classify big facilities as smaller ones to avoid stricter environmental rules and public input

Industrial developers describe large facilities as “minor” polluters to avoid federal permitting requirements, and environmental lawyers say the Texas Commission on Environmental Quality lets it happen.

When the Intercontinental Terminals Company sought a permit to expand its tank farm and terminal on the Houston Ship Channel in 2014, a reviewer with Texas’ environmental regulator expressed a long list of concerns.

ITC, the reviewer for the Texas Commission on Environmental Quality wrote, appeared to be evading core provisions of federal environmental law by dividing its “major” facility among nominally separate “minor” permits, which have less stringent pollution standards requirements and require far less review.

In Greater Houston, federal authorities had set a threshold at 25 tons per year of volatile organic compound emissions. Any company wanting to release more was required to undergo a tedious, expensive application process, established in the Clean Air Act, as a so-called “major source.” ITC had already obtained permits for its first group of chemical tanks in 2012 for 24.9 tons per year of volatile organic compound emissions in 2014.

Now it was asking to permit a second group for another 24.9 tons per year. Because both groups fell just under the EPA’s threshold, neither were subject to a federal program called New Source Review, or NSR.

“We have concerns about NSR circumvention,” wrote the permit reviewer, Jesse Lovegren, in a July 2014 email to other agency staff.

Nevertheless, ITC got its permit the next year. And in 2017 it got another for an even larger expansion, bringing its authorized emissions of volatile organic compounds up to 147 tons per year — almost six times Houston’s current major source threshold.

Yet the facility never underwent the process required by federal law for major sources, which is aimed at preventing current air pollution hazards in places like Greater Houston from getting worse.

It wasn’t an isolated error, according to attorneys and regulatory experts in Texas and beyond, but an example of a systemic problem with emissions permitting in the Lone Star State, seat of the nation’s largest oil, gas and petrochemical sectors. By exploiting the legal distinction between major and minor pollution sources, lawyers have argued repeatedly in court papers, companies can dodge pillars of the country’s landmark environmental laws.

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1. Photochemical modeling and modeling episode selection - Appendix A, MODELING TECHNICAL SUPPORT DOCUMENT (TSD) on pp. A-1 to A-7.

In order to comply with the Clean Air Act’s SIP requirements, TCEQ must prepare specific documents including modeling and criteria used to select the base year and accompanying ozone data, meteorology, and other criteria:

Note that the photochemical modeling and modeling episode selection are critical factors in the evaluation of the proposed SIP package.

Among the four calendar ozone data years of 2016, 2017, 2018, and 2019, the TCEQ chose the most recent year of 2019 as the base calendar year for photochemical modeling due to five criteria A.-E., and it's an obvious concern that the base calendar year was a flawed selection by comparing ozone violations and ozone peaks to other years 2018, 2021, 2022 and 2023 as I summarize here in my theory that 2019 was too clean to model despite TCEQ SIP staff making this choice:

- A. has a sufficient number of exceedance days [days with monitors above the 75 parts per billion NAAQS];*
- B. has ozone exceedances following historically observed temporal patterns;*
- C. includes a variety of meteorological conditions that frequently correspond to high ozone;*
- D. has at least five days in the episode for each regulatory monitor in a nonattainment area with a monitored maximum daily eight-hour average (MDA8) ozone greater than or equal to 60 parts per billion (ppb); and*
- E. is in the recent past, preferably close to a National Emissions Inventory (NEI) year.*

Comments on the “base calendar year” under A. selected for photochemical modeling:

The chief and surprising concern about TCEQ’s modeling of the selected ozone year 2019 is that 2019 was significantly lower in exceedances than 2018 for both the HGB and DFW nonattainment areas, and 2019 was seriously lower in exceedances than three more recent years 2021-23.

For example, HGB had 128 exceedances in 2018 v. 76 exceedances in 2019, whereas, DFW had 66 exceedances in 2018 v. 19 exceedances in 2019.

Even Bexar County had 17 exceedances in 2018 v. 4 exceedances in 2019, and both attainment BPA and ELP areas had more exceedances in 2018 v. 2019.

In fact, HGB and DFW alone total 194 exceedances in 2018 v. 95 exceedances in 2019, or a difference of 2X between years 2018 v. 2019.

Selecting a lower exceedance year in the modeling scenario may tend to introduce bias in the photochemical outputs and suggest that lower ozone precursor reductions are sufficient when the opposite is more likely.

After all, both the HGB and DFW areas are extraordinarily large in counties with HGB having eight and DFW having ten counties, so they are very far from being small nonattainment areas.

Comparing the TCEQ’s “base calendar year” 2019 exceedances to exceedances in 2023, 2022, and 2021:

Moreover, both 2018 (194) and 2019 (95) pale in comparison to the exceedances in 2023 with HGB having 500+ (worst ever!) and DFW having 200+ (worst ever!), making two bad ozone seasons worse than 2019.

However, the difference between 2018 v. 2019 is 2X, the difference is far greater between 2023 v. 2019 is 700 v. 95 or a difference of ~7.5X between them.

In addition, even the ozone data for 2022 reveals greater exceedance days v. 2019 with both HGB and DFW at ~128-129 days.

Finally, the ozone data for 2021 reveals greater exceedance days v. 2019 with both HGB and DFW at 185 and 88 days respectively. TCEQ selected a year 2019 for the photochemical modeling that ranks #5 v. 2018, 2021, 2022, and 2023 in calendar ozone exceedances.

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The 2023 ozone season as the worst in more than a decade in Texas

HGB's ozone violations 2014-2023: 2023 as the worst year exceeding 75 parts per billion in the 4th highest 3-year average

HGB's nonattainment status of the 2008 NAAQS for the last ten years 2014-2023 highlights the recent three-year NAAQS period of 2021-23 as the worst. 2023 had 7 of 21 monitors violating the 2008 NAAQS with a peak of 90 ppb in the three-year period.

The number of exceedance monitors is high along with the violating monitors. The challenge for TCEQ is the 2023 HGB ozone data and overall in the 2021-23 time frame does not support a sign of progress toward attainment of the 2008 NAAQS.

Extreme summer heat played a role in promoting more ozone formation.

2021-23 (7 of 21 monitors in violation - peak at 90 ppb),
2020-22 (1 of 21 monitors in violation - peak at 84 ppb),
2019-21 (1 of 20 monitors in violation - peak at 81 ppb),
2018-20 (2 of 20 monitors in violation - peak at 88 ppb),
2017-19 (4 of 20 monitors in violation - peak at 88 ppb),
2016-18 (1 of 20 monitors in violation - peak at 88 ppb),
2015-17 (5 of 20 monitors in violation - peak at 95 ppb), and
2014-16 (1 of 20 monitors in violation - peak at 95 ppb).

DFW's Ozone Violations 2014-2023: 2023 as the worst year exceeding 75 parts per billion in the 4th highest 3-year average

DFW's nonattainment status of the 2008 NAAQS for the last ten years 2014-2023 highlights the recent three-year NAAQS period of 2021-23 as the worst. 2023 had 7 of 20 monitors violating the 2008 NAAQS with a peak of 85 ppb in the three-year period.

The number of exceedance monitors is high along with the violating monitors. The challenge for TCEQ is the 2023 DFW ozone data and overall in the 2021-23 time frame does not support a sign of progress toward attainment of the 2008 NAAQS.

2021-23 (7 of 20 monitors in violation - peak at 85 ppb),
2020-22 (5 of 20 monitors in violation - peak at 85 ppb),
2019-21 (1 of 20 monitors in violation - peak at 85 ppb),
2018-20 (1 of 20 monitors in violation - peak at 82 ppb),
2017-19 (3 of 20 monitors in violation - peak at 82 ppb),
2016-18 (2 of 20 monitors in violation - peak at 82 ppb),
2015-17 (1 of 20 monitors in violation - peak at 79 ppb), and
2014-16 (1 of 20 monitors in violation - peak at 88 ppb).

2014-2023 DFW Ozone data — TCEQ webpage: https://www.tceq.texas.gov/cgi-bin/compliance/monops/8hr_4highest.pl

The 2023 ozone season was one of the worst in nearly two decades in the HGB-eight county region and DFW-ten county region where hundreds of exceedances and violations were measured of the 2008 ozone NAAQS.

HGB's and DFW's 2023 ozone exceedance and violation data reveals the widespread observation of high ozone throughout the HGB region and the DFW metroplex, and 2021-23 three year data confirms that the HGB and the DFW area violated the 2008 NAAQS of 75 ppb at monitors with 4th highest three-year averages of 76 ppb or higher.

17 of 19 DFW ozone stations had 8-hr exceedances in 2023 and 15 monitors measured violations with four or more exceedances:

1. Frisco C31 in Collin Co., 2. Dallas N. C63 in Dallas Co, 3. Dallas Hinton C401 in Dallas Co., 4. Dallas Exec. Airport C402 in Dallas Co., 5. Denton airport C56 in Denton Co., 6. Pilot Point C1032 in Denton Co., 7. Arlington Airport C61 in Tarrant Co., 8. Fort Worth NW C13 in Tarrant Co., 9. Keller C17 in Tarrant Co., 10. Eagle Mt Lake C75 in Tarrant Co., 11. Grapevine Fairway C70 in Tarrant Co., 12. Kaufman C71 in Kaufman Co., 13. Granbury C73 in Hood Co., 14. Parker County C76, 15. Greenville C1006 in Hunt Co., 16. Italy C1044 in Ellis Co., and 17. Cleburne airport C77/C682 in Johnson Co.

Tarrant Co. - five monitors measuring high ozone;
Dallas Co. - three monitors measuring high ozone;
Denton Co. - three monitors measuring high ozone;
Collin Co. - one monitor measuring high ozone;
Ellis Co. - one monitor measuring high ozone;
Hunt Co. - one monitor measuring high ozone;
Hood Co. - one monitor measuring high ozone (* is not in DFW nonattainment area)
Parker Co. - one monitor measuring high ozone;
Kaufman Co. - one monitor measuring high ozone;
Johnson Co. - one monitor measuring high ozone;

Significant Fraud and Potential Emissions Errors in TCEQ's Vehicle I/M inspection program:
DFW, HGB, and other high ozone areas

A new serious concern has developed in regarding to TCEQ's Vehicle I/M inspection program that allows massive tailpipe testing fraud up to 89,000 fake inspections at one station and another had 265,000 fake inspections, and means that the I/M vehicle emissions reductions claimed by the TCEQ's vehicle I/M program are not likely being achieved.

TV reports by NBC News affiliate in Dallas reporter Scott Friedman

Media reports appeared in 2023 that fraudulent inspectors can use a simulator device similar to a flash drive that plugs into the emissions analyzer instead of the car. The device simulates a car's onboard diagnostic system and can be programmed to guarantee a passing result, as NBC News Dallas reported on March 22, 2023.

The Texas Department of Public Safety: "The TCEQ-owned database captures data that must be manually analyzed. There are no automatic triggers, red flags, or thresholds built into the TCEQ-

owned database.” The TCEQ has admitted: “The TCEQ does not have a trigger that flags stations producing a large volume of inspections.”

Texas investigators believe millions of cars on Texas roads never passed state-required safety or emissions tests. Yet, those cars were able to get temporary paper license plates, or even regular metal plates, by paying an inspection station to fraudulently pass the car. Even more concerning is the fact that these reports found the state's inspection computer system is not programmed to catch large numbers of fake inspections and immediately stop them. TCEQ needs to work more closely with local law enforcement agencies and the Texas Department of Public Safety to stop fraudulent tail pipe inspections.

Scott Friedman at NBC Universal news reporting has shown there are concerns in the law enforcement community about whether millions of vehicles on Texas roads are bypassing both emissions and safety inspections each year, with the help of inspection stations willing to pass vehicles falsely in exchange for cash.

March 22, 2023 - An estimate of 4-5 million cars may have been fraudulently inspected:

<https://www.nbcdfw.com/investigations/fake-inspections-real-license-plates-investigators-believe-millions-of-texas-cars-were-never-checked-for-safety-emissions/3220698/>

<https://www.nbcdfw.com/investigations/texas-lawmakers-push-for-action-after-nbc-5-investigation-details-claims-of-widespread-vehicle-inspection-fraud/3221864/>

<https://www.nbcdfw.com/investigations/texas-dps-director-pledges-to-help-fix-fake-vehicle-inspection-security-gap/3226038/>

Respectfully yours,

Neil Carman PhD
Clean air program director
Lone Star Chapter Sierra Club