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Bobby Janecka, *Commissioner*
Toby Baker, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 25, 2022

United States Environmental Protection Agency
Docket ID No. EPA-R06-OAR-2021-0801
[Submitted electronically through www.regulations.gov]

Re: Comments on the United States Environmental Protection Agency's (EPA's) Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport of Air Pollution for the 2015 Eight-Hour Ozone National Ambient Air Quality Standards (NAAQS), Docket ID No. EPA-R06-OAR-2021-0801

Dear Ms. Fuerst:

The Texas Commission on Environmental Quality (TCEQ) appreciates the opportunity to comment on the EPA's Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport of Air Pollution for the 2015 Eight-Hour Ozone NAAQS. Detailed comments on the guidance are enclosed. If there are any questions concerning the TCEQ's comments, please contact Donna Huff, Deputy Director, Air Quality Division, at 512-239-6628 or donna.huff@tceq.texas.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Baker", written over a horizontal line.

Toby Baker
Executive Director

Enclosure

**COMMENTS BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
REGARDING AIR PLAN DISAPPROVAL; ARKANSAS, LOUISIANA, OKLAHOMA, AND
TEXAS; INTERSTATE TRANSPORT OF AIR POLLUTION FOR THE 2015 EIGHT-HOUR
OZONE NATIONAL AMBIENT AIR QUALITY STANDARDS**

I. SUMMARY OF NOTICE

On February 22, 2022, the United States Environmental Protection Agency (EPA) released for comment its proposal to disapprove State Implementation Plan (SIP) submittals from Arkansas, Louisiana, Oklahoma, and Texas regarding interstate transport for the 2015 eight-hour ozone national ambient air quality standard (NAAQS). On March 11, 2022 the EPA issued the Agency's proposed Federal Implementation Plan (FIP)¹ to address 26 states' obligations to eliminate significant contribution to nonattainment, or interference with maintenance, of the 2015 ozone NAAQS in other states.

The Texas Commission on Environmental Quality (TCEQ) is providing the following comments on the proposed action.

II. COMMENTS

A. General

The TCEQ opposes the proposed partial disapproval of Texas' transport SIP revision for the 2015 eight-hour ozone NAAQS pertaining to the federal Clean Air Act (FCAA), §110(a)(2)(D)(i)(I) requirement to address interstate transport.

The EPA proposes to disapprove the portion of Texas' 2015 Ozone NAAQS Transport SIP Revision, submitted to the EPA on August 17, 2018, pertaining to the FCAA, §110(a)(2)(D)(i)(I) requirement to address the interstate transport of air pollution that will significantly contribute to nonattainment or interfere with maintenance of the 2015 eight-hour ozone NAAQS in other states. The transport analysis provided by the TCEQ in its August 17, 2018, submittal fully addressed the transport requirements of FCAA, §110(a)(2)(D)(i)(I) and for this reason, and as discussed in the TCEQ's other comments below, the TCEQ opposes any disapproval of its 2015 Ozone NAAQS Transport SIP Revision.

The EPA failed to issue guidance in a timely manner for states to use in developing transport SIP revisions for the 2015 eight-hour ozone NAAQS. It is unreasonable and arbitrary for the EPA to require state SIP revisions to include recommendations from memoranda and/or guidance issued after states have submitted their revisions.

Developing a SIP revision is a years long process that requires complex technical analysis and compliance with lengthy procedural requirements. Texas timely submitted its 2015 Ozone NAAQS Transport SIP Revision on August 17, 2018, to meet the October 1, 2018, statutory deadline for states to submit infrastructure and transport SIP revisions for the 2015 eight-hour ozone NAAQS. Thirty-one days before

¹ <https://www.epa.gov/csapr/good-neighbor-plan-2015-ozone-naaqs>

the SIP revisions were statutorily required to be submitted, the EPA issued its Analysis of Contribution Thresholds Memo on August 31, 2018. Eighteen days after this statutory deadline, the EPA further issued its Considerations for Identifying Maintenance Receptors Memo² (Maintenance Receptor Guidance) on October 18, 2018. It is unreasonable and arbitrary for the EPA to expect, much less require, that states comply with the recommendations in these guidance documents that were issued either mere days before the deadline or after the deadline considering that SIP revisions are complex and time consuming endeavors.

Texas' transport SIP revision was developed prior to these late issued EPA memos. Texas reasonably relied on EPA's September 13, 2013, guidance on development and submission of infrastructure SIPs since that was the only formal guidance available at the time to assist Texas in development of its SIP revision in order to meet the statutory deadline for submittal.

In order to meet statutory deadlines, states do not have the option of waiting for the EPA to provide updated guidance before proceeding with SIP development, review, and submittal; states must proceed to develop submittals based on information available at the time. It is unreasonable to expect states to review and/or incorporate recommendations after a SIP revision has been submitted. As a result of the EPA's lack of timely updated transport guidance for the 2015 eight-hour ozone standard, Texas was forced to expend effort and resources to develop its SIP revision without fully knowing how the EPA would evaluate Texas' transport obligation.

The EPA has previously taken the position that failure to timely submit a SIP revision is sufficient reason for the EPA to issue a FIP. Therefore, states must diligently develop SIP revisions to meet those statutory deadlines. The EPA's failure to update its guidance in a timely manner for the development of transport SIP revisions was arbitrary and unreasonable because states cannot delay and must develop these revisions with guidance currently available. The EPA's actions put states in the untenable position of developing SIP revisions without knowing what the EPA might expect, or simply accepting that EPA will impose its own requirements in a potential FIP. This is an absurd result of the EPA's failure to issue timely guidance.

Finally, guidance documents are non-binding recommendations that have not gone through formal rulemaking. The EPA has consistently failed to promulgate a rule that would instruct states in how, exactly, they should evaluate and meet potential transport actions, much less provide such a rule in a timely fashion that would allow states to meet the statutory requirement to demonstrate they have met their transport obligations within three years of promulgation of a new standard. For example, the EPA could have included criteria for evaluating transport obligations in the promulgation of the 2015 ozone NAAQS itself, and yet made no mention of how states should consider or meet transport obligations. In the absence of either such a rule, or even timely guidance, states such as Texas have tried to meet a target that the EPA has not defined. Furthermore, if the EPA had proposed and finalized a rule that specified requirements for transport at the same time that it proposed or even when it finalized the 2015 ozone NAAQS, states would have been able to evaluate such requirements

² https://www.epa.gov/sites/default/files/2018-10/documents/maintenance_receptors_flexibility_memo.pdf

and provide appropriate feedback to the EPA on any such rule. That is the purpose of the rulemaking process. The EPA's failure to provide states this opportunity through the rulemaking process without the threat of an already proposed FIP continues to circumvent the cooperative federalism structure that Congress developed in the FCAA.

The EPA prematurely prepared a proposed FIP before finalizing action on Texas' timely submitted SIP revision to address 2015 eight-hour ozone standard interstate transport requirements.

Texas submitted its 2015 Ozone NAAQS Transport SIP Revision to the EPA on August 17, 2018. The EPA had over three years to review the SIP revision prior to proposing the February 22, 2022, disapproval of the FCAA, §110(a)(2)(D)(i)(I) interstate transport elements. Further, the EPA has developed a proposed FIP before the proposed disapproval is final. Under FCAA §110(c)(1), the Administrator shall promulgate a FIP at any time within two years *after* the Administrator "disapproves a State Implementation Plan in whole or in part, unless the State corrects the deficiency, and the Administrator approves the plan or plan revisions, before the Administrator promulgates such a Federal Implementation Plan." EPA has not yet disapproved the Texas transport SIP, and yet has clearly signaled that it intends to include Texas in such a FIP directly upon finalizing the disapproval action. Although the Supreme Court has recognized that "disapproval of a SIP, without more, triggers EPA's obligation to issue a FIP" and this action can occur "at any time" within those two years (*EPA v. EME Homer City Generation LP, et. al.*, 572 US 489, 490 (2014)), in this instance EPA has not disapproved Texas' SIP. And unlike the fact pattern in *EME Homer*, Texas has not had an opportunity to challenge the EPA's disapproval of that SIP. Although EPA is under no obligation to wait two years to issue a FIP, it does have to comply with the congressional scheme. The disapproval of the SIP triggers EPA's authority to issue the FIP. In this case, EPA is indeed "altering Congress' SIP and FIP schedule." *Id.* at 491.

The EPA has conducted extensive work to include Texas in a proposed FIP to address interstate transport for Texas under the 2015 eight-hour ozone standard before disapproval of Texas SIP. Although the EPA proposed disapproving the Texas SIP submittal one month prior to the proposed FIP, there has been no final action on that proposal. Additionally, there was no indication from EPA during the years of work that went into the development of this FIP that the Texas SIP was inadequate, nor was Texas afforded any opportunity to correct the deficiencies that EPA believes are present in the SIP. Had the EPA reviewed the 2015 Ozone NAAQS Transport SIP Revision before developing a proposed FIP, the purpose of which is to correct deficiencies in such a SIP, Texas would have had the opportunity contemplated by the FCAA to correct any problems with its SIP in a timely fashion and avoid the imposition of the FIP.

This is clearly distinguishable from the argument in *EME Homer City* that was dismissed by the Supreme Court. The Court said that EPA did not have to give states an opportunity to correct a SIP before issuing the FIP. Instead, in the present case EPA is stating that they not only can, but "must necessarily be able to" propose a FIP before taking final action to disapprove a SIP. That was not the holding in *EME Homer City* and is inconsistent with the Congress' SIP and FIP schedule in the FCAA.

The EPA failed to provide Texas with formal comments on the adequacy of its analysis during the public comment period for the SIP revision.

The EPA did not comment on the adequacy of the TCEQ's analysis during the public comment period for the 2015 Ozone Transport SIP Revision. The TCEQ and EPA Region 6 participated in discussions regarding the proposed SIP revision, and the TCEQ answered questions from the EPA on the planned SIP submittal and provided additional data to the EPA. The EPA did not indicate that the information provided failed to address its concerns. The lack of EPA comment did not allow the TCEQ to address the issues outlined in the EPA's proposed disapproval in the adopted 2015 Ozone Transport SIP revision.

B. Technical

The TCEQ has provided a sufficient technical basis for its use of an alternative methodology to identify maintenance monitors.

The EPA claims that the TCEQ did not provide sufficient technical justification for its approach and that the TCEQ's use of the latest monitored design value did not account for inter-annual variability in ozone conducive conditions. The EPA observes that the TCEQ's maintenance monitor identification methodology accounts for variations in meteorological conditions only over a three-year period compared to the five-year period accounted for in the EPA's method. The EPA does not provide sufficient justification for why five years of meteorological conditions adequately capture inter-annual variability while three years cannot. The latest three years best describe the ozone conditions closest to the future year. The EPA also does not address the fact that the modeled future design values are based on a single base year that is explicitly modeled and are therefore most impacted by the meteorological conditions in that single base year. It should be noted that both the TCEQ's method and the EPA's method use a single base year. The TCEQ's method used the latest three-year design value to reflect the most recent atmospheric conditions of each area, considering meteorology and emissions information.

The EPA states that since the EPA method identifies more monitors as maintenance monitors it is the more rigorous method. However, the "Good Neighbor" provision is not intended to be an exercise to find the greatest number of monitors likely to have air quality issues but to find the monitors mostly likely to have air quality issues due to significant contribution from upwind states.

The EPA further analyzed 21 monitors that had contributions greater than 0.7 ppb in either TCEQ or EPA modeling. The EPA claims that the TCEQ's methodology was flawed because the future year nonattainment design value (determined based on the use of average of three monitored design values as base design value, DVB) is less than the future year maintenance design value (determined based on the use of the latest of three monitored design values as DVB). The EPA discusses in detail how the difference between the nonattainment and maintenance design value in TCEQ's methodology is smaller than the difference in EPA's methodology. However, the EPA fails to discuss that of the 21 monitors, 15 monitors that were identified as maintenance monitors by the EPA's methodology were also identified as maintenance monitors by TCEQ's methodology. In addition, the EPA fails to provide justification on why maintenance design values being lower than nonattainment design values is troubling. For a monitor

to have maintenance issues, the future year design value only needs to exceed the standard of 70 ppb not the nonattainment design value.

The EPA further states that the TCEQ's methodology identified a monitor that would be nonattainment but not maintenance as proof that the TCEQ methodology is flawed. However, the EPA does not provide any justification for why every monitor that is modeled nonattainment should also be a maintenance monitor. If, as the EPA contends, monitors face maintenance issues solely due to inter-annual variability of meteorological conditions, it is also possible that the monitors could attain the standard due to favorable meteorology. In practice, a maintenance monitor should only have a transport linkage if it is in an area redesignated as attainment and a subsequent exceedance was shown to be caused by a transport issue, despite local controls and contingency measures. Otherwise, any reductions that might be required from upwind states to help that particular monitor maintain the standard would be overcontrol on the part of EPA.

Overall, the EPA fails to adequately justify its claim that the TCEQ did not provide sufficient technical basis for its use of an alternative methodology.

The EPA should not disapprove the TCEQ's Transport SIP Revision based on the TCEQ's use of an alternative methodology for identifying maintenance monitors. The TCEQ's method for identifying maintenance monitors aligns with criteria regarding monitored design value trends specified in the *EPA's Maintenance Receptor Guidance* for the use of an alternative maintenance monitor selection method and is scientifically defensible.

Despite the EPA issuing the Maintenance Receptor Guidance until after the statutory SIP revision submission deadline has passed and thus, depriving the TCEQ of this information during the preparation of Texas' SIP revision, the TCEQ did show that ozone concentrations have been trending downward since 2011 at monitoring sites for which the TCEQ modeling showed linkages. Such a trend is a condition in the Maintenance Receptor Guidance for states to choose an alternative maintenance monitor selection method. The EPA's disapproval conflates instances in which a design value is greater than the previous year with lack of a downward trend. The TCEQ contends that a downward trend of design values since 2011 can have individual design values that are higher than design values in the previous year and still comprise a downward trend over a longer period. The EPA appears to have misunderstood the TCEQ's reasons for choosing the 2014 regulatory design value as the DVB when estimating modeled future year maintenance design values. The TCEQ chose the 2014 regulatory design value because it was the latest design value and best represented current conditions and not because it is the lowest.

Further, for the monitors the EPA linked to Texas based on its 2016v2 modeling, only five of the seven monitors have valid design values in 2014. Out of those five, three had their highest design values in 2014. Emissions trends from the EPA's National Emissions Inventory (NEI) in Illinois and Wisconsin, where the seven monitors are located, show consistent decreases from 2010 through 2020. The EPA's meteorologically-adjusted ozone trends show that ozone values in the Central and East North Central United States, where the linked monitors are located, are much higher in 2012 due to meteorology, which was represented explicitly in the TCEQ's modeling. However, there hasn't been a consecutive three-year period from 2000 through 2020 that has had ozone conducive conditions similar to 2012. Therefore, if TCEQ had

followed the EPA’s methodology, TCEQ would have used the 2012 monitored regulatory design value as the DVB, which would have ignored the downward trend in design values and resulted in the misidentification of monitors as maintenance monitors.

The TCEQ disagrees with the EPA’s use of updated 2016 base year modeling to evaluate TCEQ’s Transport SIP submittal since the modeling data was unavailable at the time TCEQ developed its SIP revision.

The EPA’s use of modeling platform and monitoring data that was unavailable at the time TCEQ developed its Transport SIP revision is arbitrary and unreasonable. The TCEQ submitted its 2015 Ozone NAAQS Transport SIP Revision to the EPA on August 17, 2018. EPA did not issue the modeling platform it uses in this proposed disapproval until September 2021 (which included the 2016 base year), nearly three years after the statutory deadline for SIP revisions submissions. Obviously, TCEQ did not have access to this modeling platform and data when it developed its SIP revision. However, the TCEQ did use the latest modeling data it had available and made significant improvements on EPA’s method. Additionally, the EPA has issued no rules regarding the use of EPA’s modeling and monitoring data in the development of Transport SIP revisions.

The only other modeling data available at the time the TCEQ started developing its Transport SIP revision was the EPA’s 2011-base year modeling. For monitors identified by EPA as nonattainment or maintenance and linked to Texas in 2023, the TCEQ modeled 2023 design values are similar to the preliminary modeling EPA conducted for the 2015 Ozone NAAQS Preliminary Interstate Transport Assessment, as seen in Table 1, *EPA and TCEQ Modeled Design Values in 2023 from EPA 2016, EPA 2011, and TCEQ 2012 Modeling*. This 2011-base modeling by the EPA is similar to the TCEQ’s modeling and also shows attainment with the 2015 NAAQS for the monitors EPA identifies as maintenance or nonattainment linkages in its 2016v2 modeling. In fact, for four of the five monitors for which comparable 2010-2012 monitoring data exist, the TCEQ modeled 2023 design values are higher than the EPA 2011-base modeled design values. The TCEQ contends that the difference in base year and increased projection time may explain the lower TCEQ 2023 design values compared with EPA 2023 design values based on 2016 base year modeling. In Table 1 below, the EPA nonattainment design value is based on the average of the three design values in the five-year base year period and the maintenance design value is based on the maximum of these three design values. If the EPA had acted on the TCEQ’s SIP submission in a timely manner, the only available data would have been the EPA’s 2011-base modeling. Therefore, it is arbitrary and unreasonable for the EPA to evaluate the TCEQ’s submission based upon data that was unavailable to the TCEQ during the development and submittal of its SIP revision.

Table 1: EPA and TCEQ Modeled Design Values in 2023 from EPA 2016, EPA 2011, and TCEQ 2012 Modeling

Receptor (Site ID, County, State)	Nonattainment / Maintenance (EPA 2016v2 2023)	EPA 2016v2: 2023 Nonattainment/ Maintenance Design Value (ppb)	EPA 2011v6.3: 2023³ Nonattainment/ Maintenance Design Value (ppb)	TCEQ 2012: 2023 Nonattainment/ Maintenance Design Value (ppb)
170310001, Cook County, IL	Maintenance	69.6/73.4	63.3/65.1	60/58
170310032, Cook County, IL	Maintenance	69.6/73.4	57.6/60.0	68/66
170314201, Cook County, IL	Maintenance	69.9/73.4	56.6/58.4	64/62
170317002, Cook County, IL	Maintenance	70.1/73.0	54.1/57.0	66/65
550590019, Kenosha County, WI	Nonattainment	72.8/73.7	59.7/61.9	67/66
550590025, Kenosha County, WI	Maintenance	69.2/72.3	No 2010-2012 monitoring data	No 2010-2012 monitoring data
551010020, Racine County, WI	Nonattainment	71.3/73.2	No 2010-2012 monitoring data	No 2010-2012 monitoring data

Based on this information, if the EPA had relied on modeling conducted for 2023 using emission information available when the TCEQ was required to submit its SIP revision, such as the 2011v6.3 platform, it would not have identified the monitors listed above as nonattainment or maintenance monitors because modeled 2023 design values were below 71 ppb.

Analysis of the EPA and TCEQ modeling also shows greater difference between the predicted 2023 design values and the observed 2020 design values as the prediction time lengthens. Figure 2, Difference in Design Value Predicted in 2023 versus Observed in 2020. Predictions are from the EPA 2011 modeling (upper left), TCEQ 2012 modeling (upper right), and EPA 2016 modeling (lower) shows that the mean difference across common monitors decreases from -6.20 ppb for a 12-year prediction time, to -6.08 for an 11-year prediction, to -4.34 for a seven-year prediction time. The shaded interquartile range of the distribution also tightens with decreasing prediction time, indicating uniformly better prediction. Note that the TCEQ 2012 modeling shows a similar design value difference to the EPA 2011 modeling indicating similar performance. The difference in design values is largely explained by the shorter prediction time, as seen in Figure 2, Difference in Design Value Predicted in 2023 versus Observed in 2020 versus Length of Prediction, where the TCEQ 2012 modeling

³ EPA 2011v6.3 data are from https://www.epa.gov/sites/default/files/2016-12/2015_o3_naaqs_preliminary_transport_assessment_design_values_contributions.xlsx

is shown as the eleven-year prediction length roughly on the linear trend of the three models.

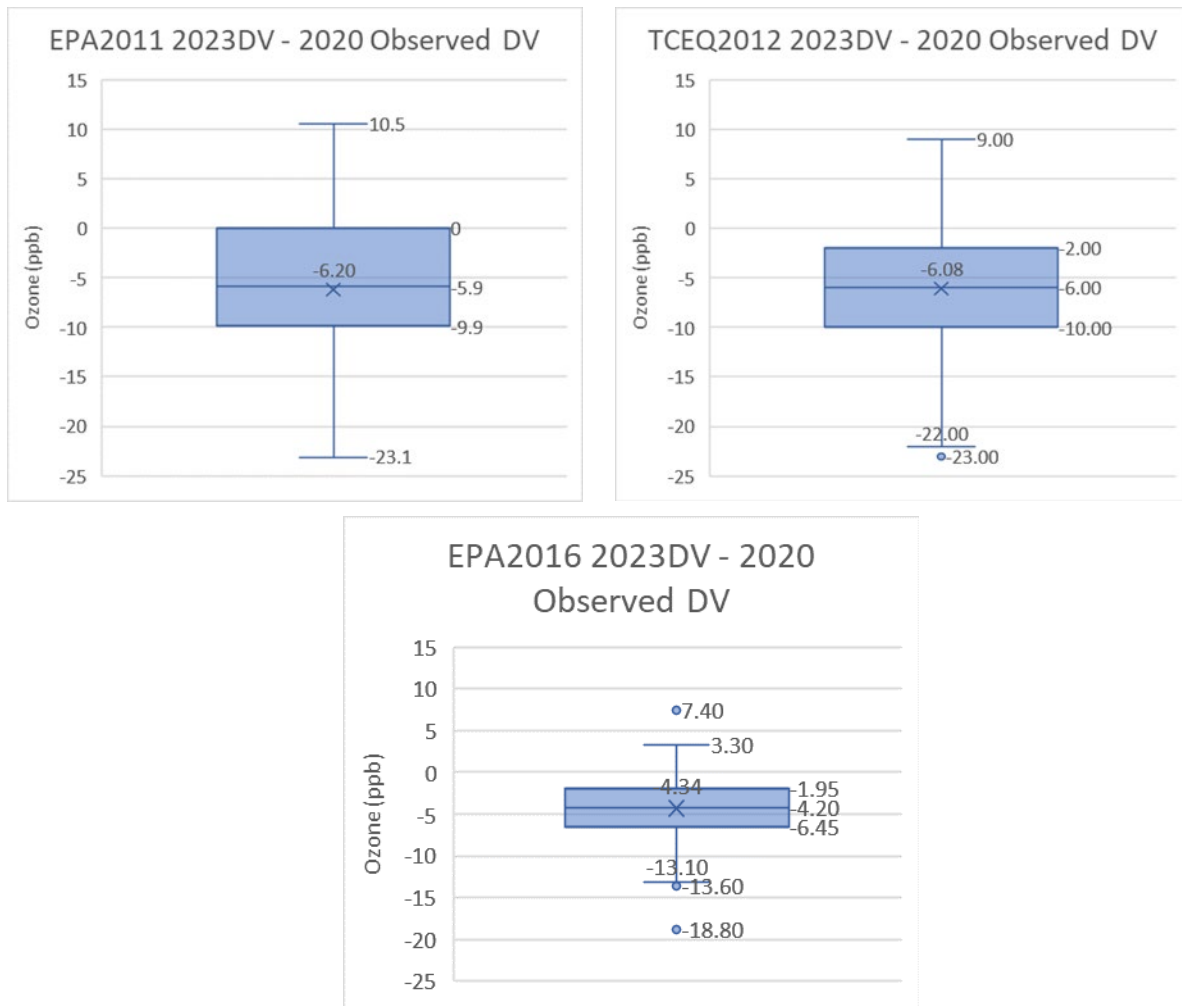


Figure 1. Difference in Design Value Predicted in 2023 versus Observed in 2020. Predictions are from the EPA 2011 modeling (upper left), TCEQ 2012 modeling (upper right), and EPA 2016 modeling (lower)

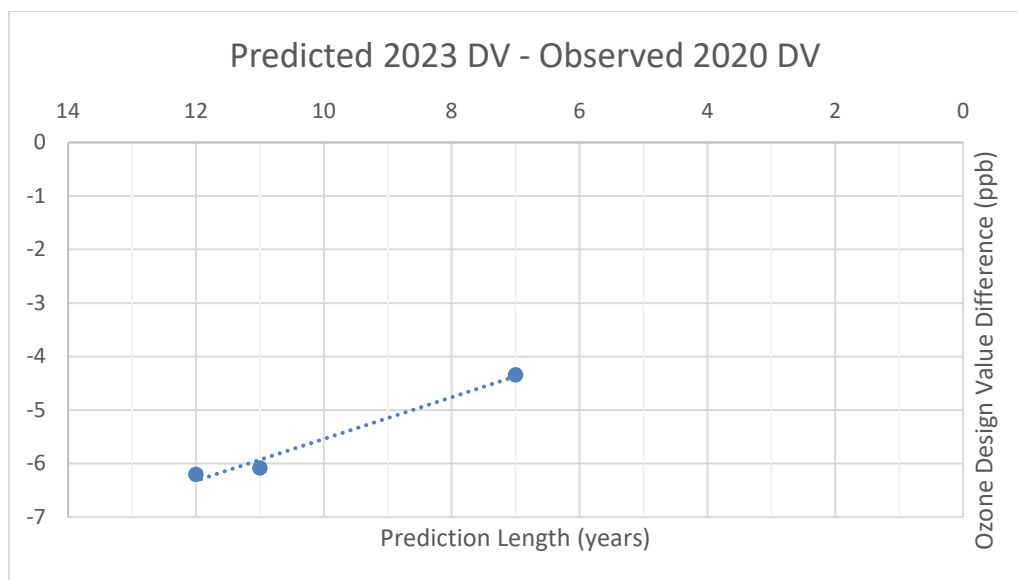


Figure 2. Difference in Design Value Predicted in 2023 versus Observed in 2020 versus Length of Prediction

The TCEQ chose to use a 2012 base year since it was the most comprehensive, non-anomalous, and best modeling platform available when the modeling needed to commence to meet the SIP development and submittal deadlines.

The TCEQ disagrees with EPA's claim that it does not use the 0.7 ppb contribution threshold as the 'sole' determinant of significant contribution from upwind states because the EPA evaluated potential emission reductions in upwind states to determine whether potential emissions reductions are significant to downwind monitors.

The EPA claims that by evaluating if a state has sufficient emission reductions to remove the 0.7 ppb contribution to a downwind nonattainment or maintenance monitor, the EPA's 4-step methodology does not use the 0.7 ppb as the 'sole' determinant of significant contribution and that EPA's methodology is similar to the TCEQ's weight of evidence methodology. However, the EPA is conflating the ability to mitigate contributions with whether the contribution itself is significant in its approach. The potential for emissions reductions should not be used as justification for significant contribution. Significant contribution should be established prior to determining if emissions reductions are needed as the TCEQ did in its transport analysis. Further, the TCEQ's use of a weight of evidence approach to determine significant contribution is consistent with the EPA's modeling guidance, "*Modeling Guidance for Demonstrating Air Quality Goals for Ozone, PM_{2.5}, and Regional Haze*" (EPA Modeling Guidance) and the approach laid out in "*Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions*," (179B Guidance) where a determination of significant contribution is made if sources outside of a nonattainment area impact a nonattainment area in the context of a 179B demonstration. When air quality modeling is used in the context of attainment and 179B demonstrations, the EPA requires states to provide supplemental analysis to support the modeling results, such as local factors

and emission trends. However, in the context of the “Good Neighbor” provision, the EPA dismisses the additional analyses provided by the TCEQ as qualitative assessments that, while informative, do not provide quantitative assessments. The EPA’s reliance on chemical transport models as the sole arbiter of significant contribution contradicts its own modeling guidance, which states that “...supplemental analyses may provide information which may provide further support for the outcome of the modeled test or *may indicate a different outcome than the modeled test.*”⁴ (Emphasis added.) It should be noted that the 179B Guidance is prescriptive and lays out a weight of evidence approach that relies on more than source apportionment modeling results to determine impacts from international sources. The EPA’s heavy reliance on source apportionment modeling and disregard of additional evidence in the context of interstate transport is arbitrary and inconsistent with its guidance on international transport.

The TCEQ’s methodology for determining future contributions is consistent with EPA guidance.

The EPA Modeling Guidance provides details on the model values and the grid cells to use when estimating the future year design value as part of the modeled attainment test. The TCEQ’s methodology to determine a state’s contribution to the future aligns with the method used to estimate future year design values. The TCEQ’s methodology is internally consistent as the grid cell and top ten days used in the design value calculation are the same as those used to estimate the source (state) contribution. The TCEQ’s methodology follows the EPA modeling guidance while the EPA’s methodology does not. The TCEQ has repeatedly raised concerns about the EPA’s method to determine future year contributions since the EPA approach does not align with the calculation of the future year nonattainment and maintenance design values with respect to the model grid cell and top ten days used.

The TCEQ reiterates that the EPA should only use contributions from days in the calculation of the relative response factor when calculating an upwind state’s contributions to future design values. Using one set of days to calculate the future year design value that is the basis for a monitor’s future attainment status (attainment/maintenance/nonattainment) and a different set to determine the states’ contribution to that design value is inconsistent and arbitrary.

Further, the EPA uses concentrations from the grid cell containing the monitor to determine state contributions while using concentrations at the grid cell with the maximum modeled concentration in a “3x3” array centered on the monitor when calculating design values. The EPA’s approach could result in the use of modeled concentrations from different grid cell locations potentially disconnecting the future year contributions from the future year design values.

The TCEQ’s approach uses modeled concentrations from the grid cell on the days that were used in the design value calculation to determine future year contributions. The TCEQ’s method is consistent, and the EPA failed to provide a rational justification for its concerns with regards to the TCEQ’s approach.

⁴ Page 170 of the EPA Modeling Guidance, https://www.epa.gov/sites/production/files/2020-10/documents/o3-pm-rh-modeling_guidance-2018.pdf

The EPA did not consider all of the information provided to it by the TCEQ. The TCEQ disagrees with the potential concerns that the EPA raises with regards to the TCEQ's modeling of electric generating units and boundary conditions.

The EPA in the “*EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal Technical Support Document*” discusses potential concerns about the electric generating unit (EGU) emissions and boundary conditions in TCEQ's modeling. The EPA fails to acknowledge the additional analysis provided to the EPA via email on June 6, 2016, detailing the differences in 2023 EGU emissions by state in the TCEQ modeling with the various EGU emissions projections available at the time TCEQ's SIP was developed. The comparison showed that the EGU emissions included in TCEQ's modeling were comparable to emissions in EPA's Engineering Analysis and the latest emissions available in the Air Market's Program Database. The EPA also fails to acknowledge that the TCEQ provided additional information summarizing the change in modeled ozone contribution at monitors attributable to boundary conditions when boundary conditions accounted for changes in future year emissions. The EPA did not request additional analyses or express concerns with TCEQ's modeling after the additional information was provided in June 2018.

The EPA mischaracterizes the purpose and analytic details in the TCEQ's weight of evidence, invalidating the EPA's conclusions regarding the impact of Texas emissions.

In the “*EPA Region 6 2015 8-Hour Ozone Transport SIP Proposal Technical Support Document*” the EPA states that the TCEQ used its weight of evidence to counter the modeling results. This is a misinterpretation of the purpose of the weight of evidence. The TCEQ used the weight of evidence not to determine if Texas contributed *at all* to linked monitors but rather to determine if Texas contributes to those monitors *significantly and persistently*.

In addition, the following errors in the EPA's Technical Support Document (TSD) make its SIP disapproval invalid.

- On pages 81-86 of the TSD, the EPA states concerns with the trajectory parameters used by the TCEQ. The TCEQ's trajectory parameters were set at ranges typically used for analyses of this kind. This is not a legitimate basis for disapproval since the EPA did not provide specific guidance on acceptable parameters for this application. In other applications (for example the Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions), the EPA has provided specific trajectory parameters required for approval.
- The EPA incorrectly describes the start time of the TCEQ's trajectories. The EPA states “TCEQ used the 1st hour of the 8-hour exceedance as the start time” (page 82). The Texas SIP clearly states on page 3-53 that “The time of daily maximum one-hour ozone on the elevated eight-hour ozone day was used as the starting hour for each trajectory.” The EPA's concerns regarding the start time of trajectories are based on an erroneous reading of the document and thus should not be considered in evaluating the Texas SIP revision.
- On page 82, the EPA states that the TCEQ should have also used an additional 100 meters above ground level (m AGL) start height for the trajectories; however, trajectories with too low of a start height may hit the ground. Once a

trajectory hits the ground it loses accuracy and may no longer provide useful data, especially when considering the distance between the source and receptor in the TCEQ's analysis. The National Oceanic and Atmospheric Administration (NOAA) recommends start heights that are located in the middle of the planetary boundary layer. Start heights at 500 m AGL are well within these standard parameters; therefore, disagreement regarding trajectory start height is not a legitimate reason to discount the TCEQ analysis or disapprove this Texas SIP revision.

- The TCEQ used scientifically appropriate filtering criteria on its trajectories. As stated above, NOAA recommends start heights located in the middle of the mixing layer. Trajectories that hit the ground may be inaccurate and removing them to analyze more significant trajectories was appropriate in the context of the weight of evidence analysis. All trajectory endpoints that met these two criteria were presented regardless of whether they were in the mixing layer over Texas. The analysis only filtered endpoints within the mixing layer over Texas as an additional analysis to describe trajectories that show more meaningful transport patterns. The EPA has no scientific basis for concluding that the TCEQ inappropriately filtered trajectories.