



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Austin Caperton, Cabinet Secretary
dep.wv.gov

May 1, 2018

Norm Possiel
Possiel.Norm@epa.gov

Beth Palma
Palma.Elizabeth@epa.gov

Cristina Fernandez
Fernandez.Cristina@epa.gov

Re: March 27, 2018 Memorandum – *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I)*

Dear Mr. Possiel and/or Ms. Palma:

The West Virginia Department of Environmental Protection (WVDEP), Division of Air Quality appreciates the opportunity to provide comments on the U.S. Environmental Protection Agency’s (EPA) March 27, 2018 memorandum from Director Peter Tsirigotis, *Information on the Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I)* [2015 Ozone Transport SIP memo]. The WVDEP supports EPA’s efforts to provide information to assist the states in their development of State Implementation Plans (SIPs) to address the requirements of Clean Air Act (CAA) Section 110(a)(2)(D)(i)(I) (“Good Neighbor” provisions) and appreciates EPA’s willingness to consult with states on this important matter.

WVDEP’s perspective on the potential flexibilities related to the analytical approaches in the March 2018 memorandum for developing a Good Neighbor SIP is provided below. For simplicity purposes, WVDEP’s views are arranged in accordance with the analytics and four-step framework approach outlined in Attachment A of the memorandum. EPA identified potential flexibilities which include: the use of 2023 as the future analytic year, identification of downwind nonattainment and maintenance receptors, the contribution threshold warranting further review,

collective contribution, international emissions, responsibility among states, linkage to maintenance receptors, and the consideration cost of improvements based on a given parameter.

Analytics

Use of 2023 as the Future Analytic Year

As noted in Stephen D. Page's October 27, 2017 memorandum *Supplemental Information on the Interstate Transport State Implementation Plan Submissions for the 2008 Ozone National Ambient Air Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(I)*¹ [2008 Ozone Transport SIP memo]:

In selecting its future analytic year for the air quality modeling, the EPA balanced considerations such as attainment dates in downwind states, including the obligation to attain as expeditiously as practicable, the EPA's obligation to avoid unnecessary over-control of upwind state emissions, the timeframe in which any necessary emission reductions could be feasibly implemented, and the timeframe required for rulemaking to impose any such emissions reductions that might be required.

The U.S. Supreme Court and the D.C. Circuit Court have both held that the EPA may not require emission reductions greater than necessary to achieve attainment and maintenance of the National Ambient Air Quality Standard (NAAQS) in downwind areas.² WVDEP agrees that "...it is appropriate to assume that planning for, installing, and commencing operation of new controls....would take up to 48 months following promulgation of a final rule requiring appropriate emission reductions.....Accordingly, implementation of any of the control strategies considered herein is likely not feasible until during or after the 2022 ozone season. Considering the time to implement the controls with the time to promulgate a final rule, ... such reductions are unlikely to be implemented for a full ozone season until 2023." [83 FR 17128, 28 Apr 2018] WVDEP concurs with EPA's conclusion that 2023 is a reasonable year to assess downwind air quality to evaluate any remaining requirements under the good neighbor provisions for the 2008 ozone NAAQS, in addition 2023 aligns with the anticipated attainment year for Moderate ozone nonattainment areas³ (for 2015 ozone NAAQS), and it would not be reasonable for an earlier future analytic year to be used with respect to the 2015 ozone NAAQS.

Step 1 – Identify downwind air quality problems

Identification of Downwind Nonattainment and Maintenance Receptors

As indicated in Peter Tsirigotis's March 27, 2018 *2015 Ozone Transport SIP memo*, EPA continues to identify receptor sites that are projected to have problems attaining or maintaining the

¹ https://www.epa.gov/sites/production/files/2017-10/documents/final_2008_o3_naaqs_transport_memo_10-27-17b.pdf

² *EPA v. EME Homer City Generation, L.P.*, 134 S. Ct. 1584, 1600-01 (2014); *EME Homer City Generation, L.P. v. EPA*, 795 F.3d 118, 127 (D.C. Cir. 2015).

³ 83 FR 651, 22 Dec 2017

NAAQS in the same manner as in the CSAPR Update rulemaking process [81 FR 74530-74532, 26 Oct 2016]. Only receptors with current design values above the NAAQS should be considered as downwind receptors in the transport analysis. The inclusion of maintenance only monitors (currently monitoring attainment but projected to be nonattainment in 2023) in the transport analysis would require two states, that are not linked to any nonattainment areas, to develop Good Neighbor SIPs for areas that are currently attaining the standard. After May 1, 2018, to account for any changes since 2009-2013, states would have the opportunity to assess the current design values based on the EPA's Office of Air Quality Planning and Standards published, certified 2015-2017 design values, and update the status of the receptors; ultimately, resulting in the addition and/or removal of receptors in Attachment B of the March 27, 2018 memorandum.

Step 2 – Identify upwind states that contribute to those downwind air quality problems to warrant further review and analysis

Contribution Threshold Warranting Further Review

WVDEP is concerned about the application of the one percent threshold to define significant contribution for interstate transport obligations. Although EPA applied the same methodology in the CSAPR⁴ and CSAPR Update⁵, this approach is arbitrary and has never been supported by any scientific analysis. EPA used several alternatives for earlier significance assessments. In the *EME Homer City* decision, the U.S. Supreme Court stated “The Good Neighbor Provision does not dictate a method of apportionment. . . . Under Chevron, Congress’s silence effectively delegates authority to EPA to select from among reasonable options. See *United States v. Mead Corp.*, 533 U. S. 218, 229.”⁶

In their August 2016 draft “*Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting Program*”⁷ EPA recommended a significant impact level (SIL) value of 1.0 parts per billion (ppb). This recommendation was based on the results of a well-established statistical approach, the bootstrapping method, which EPA used to identify levels of change in air quality concentrations considered to be either a “significant impact” or an “insignificant impact” contribution to air quality.⁸ EPA in their “*Technical Basis for the EPA’s Development of Significant Impact Thresholds for PM_{2.5} and Ozone*,” explained in “order to obtain a preconstruction permit under the PSD program, an applicant must demonstrate that the increased emissions from its proposed modification or construction will not “cause or contribute to” a violation of any National Ambient Air Quality Standard (NAAQS) or PSD increment (i.e., the source will not have a significant impact on ambient air quality at any location where an exceedance of the NAAQS or PSD increment is occurring or may be projected to occur).”⁹ In the April 17, 2018 memorandum “*Guidance on Significant Impact Levels for Ozone and Fine Particles in the Prevention of Significant Deterioration Permitting program*” from Director Peter Tsirigotis, EPA continues to recommend a SIL value of 1.0 ppb for 8-hour ozone (70 ppb) standard.

⁴ 76 FR 48208, 08 Aug 2011

⁵ 81 FR 74504, 26 Oct 2016

⁶ *EPA v. EME Homer City Generation, L.P.*, (2014)

⁷ www.epa.gov/sites/production/files/2016-08/documents/pm2_5_sils_and_ozone_draft_guidance.pdf

⁸ www.epa.gov/sites/production/files/2016-08/documents/pm2_5_sils_and_ozone_technical_basis_document.pdf

⁹ *Ibid.*

Setting the threshold for significant contribution at 0.7 ppb, or 1% of the NAAQS, is inconsistent with the results of the statistical analysis EPA completed to set the SIL for PSD purposes. On the basis of the statistical analysis, EPA considers a 1.0 ppb contribution from a **single source** insignificant, yet a 0.7 ppb contribution from an **entire state** is considered significant based on an arbitrary methodology.

WVDEP's ozone monitoring sites are equipped with the Horiba APOA-370¹⁰ ozone monitors. This monitor permits continuous measurement with great stability and high sensitivity (0.1 ppm F.S.) and has a repeatability of +/- 1.0% of F.S. (which is 0.001 ppm or 1.0 ppb). Since field monitors are not capable of distinguishing a change of less than 1.0 ppb, the WVDEP encourages the EPA to consider an alternative approach for determining what constitutes a significant contribution, with a basis in commonly accepted scientific and mathematical theory, accounting for the level of modeling accuracy, and considering complex terrain and long distances.

WVDEP strongly encourages EPA to apply uniformity, and consistency among states that are "linked" to a downwind receptor, regarding what is deemed a significant contribution.

Collective Contribution

As pointed out in Stephen D. Page's October 27, 2017 *2008 Ozone Transport SIP memo*, EPA has an "obligation to avoid unnecessary over-control of upwind state emissions."¹¹

As West Virginia noted in our May 2017 comments on EPA's Response to the 176(A) Petition by a number of northeast states, "While ozone concentrations may be affected by transport, they are also clearly influenced by local emissions. Ozone exceedances appear to strongly correlate to local emission increases. Data show that plants within the OTR with the highest emission rates operate almost exclusively on the worst ozone days."¹² Upwind states should only be responsible for their portion of the exceedance to bring a monitor into attainment, after the downwind state has assessed local emission impacts on high electric demand days from facilities less than 25 MW (i.e. peaking units).

As recognized by the Ozone Transport Commission (OTC) Stationary Source Committee, High Electric Demand Day (HEDD) Workgroup in their *White Paper: Examining the Air Quality Effects of Small EGUs, Behind the Meter Generators, and Peaking Units during High Electric Demand Days*, "Hot summer days can lead to higher demand for electricity relative to other days, and these same hot sunny days can also be the most conducive to ozone formation."¹³ The HEDD

¹⁰ <http://www.horiba.com/us/en/process-environmental/products/ambient/details/apoa-370-ambient-ozone-monitor-276/>

¹¹ https://www.epa.gov/sites/production/files/2017-10/documents/final_2008_o3_naaqs_transport_memo_10-27-17b.pdf

¹² WVDEP, May 15, 2017 Comments on Docket ID No. EPA-HQ-OAR-2016-0596; *Response to December 9, 2013, Clean Air Act Section 176A Petition from Connecticut, Delaware, Maryland, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island and Vermont*

¹³ OTC Stationary and Area Source Committee, HEDD Workgroup. *White Paper: Examining the Air Quality Effects of Small EGUs, Behind the Meter Generators, and Peaking Units during High Electric Demand Days*, Final Draft

Workgroup found that “the temporal profiles assigned to small non-CAMD EGUs by SMOKE tend to “smear” the emissions over 365 days of the year” which “could underestimate the amount of emissions attributable to these types of units on peak electric demand days.”¹⁴ As also noted by the HEDD workgroup, “for the purposes of air quality modeling and understanding the impact of these emissions on ozone formation during high electric demand days, *when* these emissions occur is important.”¹⁵ The HEDD workgroup found that “peaking units can contribute over 30% of total OTR EGU NO_x mass on the episode days that were analyzed, and that NO_x emission reductions of over 20 tons per day could be realized if gas- and oil-fired combustion turbines without installed controls were to meet “moderate RACT” emissions level.”¹⁶

Step 3 – Identify air quality, cost, and emission reduction factors to be evaluated in a multifactor test to identify emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind, if any

International Emissions

“Given the national importance of successful and efficient implementation of air quality standards to promote public health, welfare, and economic growth” the *Presidential Memorandum for the Administrator of the Environmental Protection Agency*, issued on April 12, 2018, “directs the Administrator to take specific actions to ensure efficient and cost-effective implementation of the NAAQS program, including with regard to permitting decisions for new and expanded facilities, and with respect to the Regional Haze Program”. One such action is specified as “Sec. 4. Demonstrations or Petitions Submitted Pursuant to Sections 319 and 179B of the CAA Relating to Emissions Beyond the Control of State and Local Air Agencies”. In regards to international emissions pursuant to CAA Section 179B, the Administrator is to: (a) take final action within 120 days of a complete submissions, as appropriate and consistent with law; (b) ensure EPA continues to take into consideration a State’s ability to meet and attain a NAAQS that may be affected by transport of international emissions; and (c) ensure EPA continues to assess background concentrations and sources of pollution outside of State and local air agencies control that may affect implementation of application of said provisions.

EPA ozone attainment modeling guidance¹⁷ states that “The use of grid resolution finer than 12 km would generally be more appropriate for areas with a combination of complex meteorology, strong gradients in emissions sources, and/or land-water interfaces in or near the nonattainment areas(s).” The 4 km (2011 Base Case) modeling by the Midwest Ozone Group (MOG) to address the land/water interface in Exhibit 2 of the February 21, 2018 “*Midwest Ozone Group Outlook for Future Ozone Transport Program Design*”¹⁸ shows only 1 of 6 non-attainment monitors remain (Harford MD 240251001) which exceeds the 2015 ozone NAAQS by only 0.2 ppb. In the alternative approach used to model emissions affecting coastal sites in the March 27, 2018 memorandum *2015 Ozone Transport SIP memo*, the Harford MD (240251001) monitor has a projected 2023 average and maximum DV of 70.9 ppb and 73.3 ppb, respectively. Total

11/10/16, http://www.otcair.org/upload/Documents/Reports/HEDD_Workgroup_White_Paper_Final_2016-11-10.pdf, p. 5

¹⁴ Id., p. 11

¹⁵ Ibid., p. 11 (emphasis present in original)

¹⁶ Id., p. 4

¹⁷ http://www3.epa.gov/scram001/guidance/guide/Draft_O3-PM-RH_Modeling_Guidance-2014.pdf

¹⁸ <http://www.midwestozonegroup.com/Outlookforfutureozone transport.html>

contributions from states and tribal region account for 48.48 ppb (22.60 ppb of 48.48 ppb from MD); whereas the remaining contribution is attributed to Canada/Mexico (international emissions), offshore, fire, initial/boundary conditions (which also include international emissions), and biogenic emissions.

CAA Section 110(a)(2)(D)(i)(I) prohibits emissions from states that will contribute significantly to nonattainment or interfere with maintenance in any other state with respect to any primary or secondary NAAQS. However, “EPA does not view the obligation under the good neighbor provision as a requirement for upwind states to bear all of the burden for resolving downwind air quality problems.” [81 FR 74536, 26 Oct 2016].

In addition, the February 21, 2018 “*Midwest Ozone Group Outlook for Future Ozone Transport Program Design*”¹⁹ Exhibit 3 shows, “but for” international emissions contributions, no monitor in the U.S. would have an ozone measurement greater than (>) 56.6 ppb.

Regardless of any other provisions of law, under CAA Section 179B(a), EPA shall approve a SIP if it meets all requirements applicable to it under the CAA other than a requirement that demonstrates attainment and maintenance of the relevant NAAQS by the applicable attainment date and the State submits an implementation plan that would be adequate to attain and maintain the relevant NAAQS by the attainment date, “but for” emissions emanating from outside of the United States. CAA Section 179B(b) attainment of ozone levels states:

Notwithstanding any other provision of law, any State that establishes to the satisfaction of the Administrator that, with respect to an ozone nonattainment area in such State, such States would have attained the national ambient air quality standard for ozone by the applicable attainment date, but for emissions emanating from outside of the United States, shall not be subject to the provisions of section 7511(a)(2) or (5) of this title or section 7511d of this title.

Apportioning Responsibility Among States

Though current modeling does not distinguish between anthropogenic and biogenic emissions from Canada and Mexico, there is little doubt that “but for” these emissions the entire northeast would meet the 2015 ozone standard in 2015. As mentioned above under Step 2, to avoid over-controls, upwind state should only be responsible for their portion of the exceedance to bring a monitor into attainment, after the downwind state has assessed local emission impacts on high electric demand days. As noted by the OTC, “For the purposes of air quality modeling and understanding the impact of these emissions on ozone formation during high electric demand days, *when* these emissions occur is important.”²⁰

¹⁹ [Ibid.](#)

²⁰ OTC Stationary and Area Source Committee, HEDD Workgroup. White Paper: Examining the Air Quality Effects of Small EGUs, Behind the Meter Generators, and Peaking Units during High Electric Demand Days, Final Draft 11/10/16, http://www.otcair.org/upload/Documents/Reports/HEDD_Workgroup_White_Paper_Final_2016-11-10.pdf, p. 11 (emphasis present in original)

States Linked to Maintenance Receptors

As indicated in Peter Tsirigotis's March 27, 2018 memorandum *2015 Ozone Transport SIP memo*, EPA continues to identify receptor sites that are projected to have problems attaining or maintaining the NAAQS in the same manner as in the CSAPR Update rulemaking process [81 FR 74530-74532, 26 Oct 2016].

There should be less stringent requirements for an upwind state linked to a maintenance only receptor. A state's primary focus should be on nonattainment area receptors. If a state is currently attaining the NAAQS due to permanent and enforceable emission reductions, it would not be prudent to focus time and resources to improve air quality at a receptor (i.e. maintenance only receptor) with a projected future air quality issue when measurable health and environmental benefits could be achieved in a known, nonattainment areas.

Consideration of Relative Impact \$/ppb vs \$/ton

As mentioned in Step 2, ozone concentrations are clearly influenced by local emissions; sources with the highest emission rates operate almost exclusively on the worst ozone days. Peaker plants generally run only when there is a high demand for electricity. Because of the cost of building an efficient power plant, if a peaker plant is only going to run for a short or highly variable time, it does not make economic sense (to the owner) to make it as efficient as base load plants. As mentioned by the Ozone Transport Commission (OTC) Stationary Source Committee, High Electric Demand Day (HEDD) Workgroup in their *White Paper: Examining the Air Quality Effects of Small EGUs, Behind the Meter Generators, and Peaking Units during High Electric Demand Days*, "peaking units can contribute over 30% of total OTR EGU NO_x mass on the episode days that were analyzed, and that NO_x emission reductions of over 20 tons per day could be realized if gas- and oil-fired combustion turbines without installed controls were to meet "moderate RACT" emissions level."²¹ With this being said, it would be advantageous for EPA to consider the relative impact of improvements based on a \$/ppb improvement vs. \$/ton.

WVDEP would also like to see more guidance from EPA on how a single state should perform Step 3.

Step 4 – Adopt permanent and enforceable measures needed to achieve emissions reductions (translating the control level identified in Step 3 into enforceable emission limits)

WVDEP believes additional guidance is needed from EPA before states can fully comment on Step 4. What level of commitment is expected (ie., consent orders, consent decrees, federal and/or state rules, permit limits in SIPs, shutdowns?) Will states be responsible for their allocated portion of the reduction needed for attainment based on a given threshold?

Conclusion

In conclusion, as indicated in Peter Tsirigotis's March 27, 2018 memorandum *2015 Ozone Transport SIP memo*, "EPA encourages collaboration among states linked to a common receptor

²¹ Id., p. 4

and among linked upwind and downwind states in developing and implementing a regionally consistent approach.” However, this may be an issue if there is not a uniform, consistent plan and individual states implement alternative approaches; resulting in conflicting results and subsequent inconsistent policy decisions.

CAA section 110(a)(2)(D)(i)(I) prohibits emissions from states that will contribute significantly to nonattainment or interfere with maintenance in any other state with respect to any primary or secondary NAAQS. However, “EPA does not view the obligation under the good neighbor provision as a requirement for upwind states to bear all of the burden for resolving downwind air quality problems. Rather, it is an obligation that upwind and downwind states share responsibility for addressing air quality problems. If, after implementation of reasonable emissions reductions by an upwind state, a downwind air quality problem persists, whether due to international emissions or emissions originating within the downwind state, the EPA can relieve the upwind state of the obligation to make additional reductions to address that air quality problem. But the statute does not absolve the upwind state of the obligation to make reasonable reductions in the first instance.” [81 FR 74536, 26 Oct 2016]

Thank you again for the opportunity to provide comments on EPA’s March 27, 2018 *2015 Ozone Transport SIP memo* from Director Peter Tsirigotis.

Sincerely,



William F. Durham,
Director – Division of Air Quality