Revised Cross-State Air Pollution Update Rule/Ozone: Federal Appellate Court Addresses Challenge to Analytical Technique Utilized by U.S. Environmental Protection Agency

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The United States Court of Appeals for the D.C. Circuit ("Court') addressed in a March 3rd Opinion a Petition challenging the United States Environmental Protection Agency's ("EPA") revised Cross-State Air Pollution Update Rule ("Revised Rule"). See 86 Fed. Reg. 223054 (Apr. 30, 2021).

The challenge focused on the analytical techniques utilized by EPA in crafting the Revised Rule.

The Clean Air Act contains a program titled "The Good Neighbor Provision" ("GNP"). See 42 U.S.C. § 7410(a)(2)(B)(i).

This provision requires upwind states to prohibit their air pollution emissions from contributing significantly to nonattainment in any other downwind state.

EPA in 2016 promulgated the Cross-State Air Pollution Rule Update ("CSAPR Update") for the 2008 Ozone National Ambient Air Quality Standards ("NAAQS). See 81 Fed. Reg. 74,504 (Oct. 26, 2016). The CSAPR Update was subsequently challenged, and the Court remanded it because it was held to improperly allow upwind states to:

. . . continue polluting beyond statutory deadlines which were still applicable to downwind states.

See *Wisconsin v. EPA*, 958 F.3d 1185, 1188, D.C. Cir. 2020.

The Revised Rule was promulgated by EPA in response to the Court's remand.

The Midwest Ozone Group ("MOG") challenged the Revised Rule arguing that it was arbitrary and capricious because EPA failed to:

. . . conduct a legally and technically appropriate assessment as required by The Good Neighbor Provision of the Clean Air Act.

The Clean Air Act's GNP requires that EPA and the states address interstate transport of air pollution that affects the downwind states' ability to attain and maintain NAAQS. The provision requires that each state in its State Implementation Plan ("SIP") prohibit emissions that will:

- Significantly contribute to nonattainment of a NAAQS.
- Interfere with maintenance of NAAQS at a downwind state.

If EPA determines that an SIP is inadequate it can require that the state revise the SIP.

The MOG filed a Petition with the Court arguing that EPA's haste to meet the court-imposed deadline was accomplished using improper analytical techniques. As a result, the organization argued that the Revised Rule was arbitrary and capricious.

MOG's Petition focused on three of the four steps that EPA utilized as its GNP evaluation method in crafting the Revised Rule.

The four steps described by the Court roughly included:

Step 1. Air quality modeling utilizing ambient measurements in an interpolation technique to project ozone concentrations at air quality monitoring sites in 2021. (The Court describes linear interpolation as a mathematical method of using the equation of a line to find a new data point based on an existing set of data points.)

Step 2. Utilization of an air quality modeling-based technique to quantify the contributions of 2021 from upwind states to ozone concentrations at individual monitoring sites. (Screening threshold was then utilized of one percent of the NAAQS for those monitoring sites identified as nonattainment and/or maintenance receptors in Step 1.)

Step 3. Application of a multifactor test evaluating cost, available emission reductions, and downwind air quality impacts to determine the amount of linked upwind states' emissions that significantly contribute to downwind nonattainment or maintenance receptors. (Applied to both electricity generating units and non-electricity generating source categories/potential emission reductions assessed in all years for which there was a potential remaining interstate ozone transport problem.)

Step 4. Specification of enforceable measures in the Federal Implementation Plans for listed states.

MOG argued that EPA did not utilize what it described as "state of the science" photochemical air quality modeling for the analytical year 2021. In other words, EPA deviated from its past practice of utilizing this technique. Photochemical modeling is defined as:

. . . the central element of the air quality monitoring process and is used to simulate and predict pollutant concentrations.

Instead, EPA was noted to have used a linear interpolation technique to predict air quality concentrations at monitors in 2021 in the first step of the four-step process.

MOG asserted that linear interpolation methodology:

- Resulted in a significantly higher estimate of 2021 ozone design values than was appropriate
- Was used even though the judicial decisions have upheld non-linear modeling in connection with prior GNP rules
- Should not have been used as a mathematical and analytical shortcut to determine mandatory state obligations
- Assumptions/methodology used were inconsistent with prior modeling upheld by the Court
- Did not include legal emission reduction requirements in effect for downwind sources/failed to consider the impact of exceptional events on the impacted monitors
- Utilized existing modeling data as opposed to conducting new modeling
- Shortened notice and/or comment periods were imposed

EPA responded that it adjusted its traditional Step 1 methodology to meet the Court imposed deadline. Nevertheless, it argued that:

- Linear interpolation methodology was used to determine how much of the ozone improvement between the 2016 base year and 2023 projected year could be expected to occur by 2021.

- The referenced 2021 air quality values were derived from a full set of air quality modeling emission inventories for 2023.
- Additional testing was conducted, and such outcomes indicated that MOG's preferred approach would not have led to a different regulatory result.

In addressing these arguments, the Court stated that its review was narrow because:

. . . if an action is not contrary to law, agency action simply must be reasonable and reasonably explained.

Equally important, agency determinations based on highly complex and technical matters were deemed "entitled to great deference."

The Court cited a quote from case law, stating:

. . . we will give an extreme degree to deference to the agency when it is evaluating scientific data within its technical expertise. . .

Statistical analysis and computer models were identified by the Court as having a scientific nature that:

. . . does not usually lend itself to judicial review.

Utilizing this deferential standard, the Court held that EPA:

- Has never been required to use a particular modeling method or adhere to past practice.
- Must simply consider all the relevant factors and demonstrate a reasonable connection between the facts on the record and its decision.
- Has chosen analytical techniques rationally related to the Revised Rule
- Appropriately explained its use of the linear interpolation/subsequent methods for establishing the Revised Rule
- Utilized photochemical modeling as a foundation for projections but "merely layered an additional mathematical function, linear interpolation of the original projected data."
- Performed further data analysis by checking the 2021 interpolated projections against a sensitivity analysis/engineering analytics approach.

As a result, utilizing this deferential standard, the Court held that the analytical techniques used by EPA produced consistent results and that MOG did not prove that the states would have been regulated differently under any other method. Also noted was the fact that EPA was driven by a statutory and judicial directive that provided EPA a limited amount of time.

A copy of the Decision can be downloaded here.