ORAL ARGUMENT NOT YET SCHEDULED

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 05-1064
(and consolidated cases)

CATAWBA COUNTY, NORTH CAROLINA, et al.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

ON PETITION FOR REVIEW OF FINAL ACTION BY THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BRIEF OF RESPONDENT

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June 11, 2008

CERTIFICATE AS TO PARTIES, RULINGS AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), Respondent United States Environmental Protection Agency ("EPA") provides the following information.

A. Parties, Intervenors and Amici

All parties, intervenors and amici are listed in the Petitioners's Briefs.

B. Rulings Under Review

Petitioners challenge the following actions: "Air Quality Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards," 70 Fed. Reg. 944 (Jan. 5, 2005); "Air Quality Designations for the Fine Particles (PM2.5) National Ambient Air Quality Standards -- Supplemental Amendments," 70 Fed. Reg. 19,844 (Apr. 14, 2005); and "Air Quality Designations for the Fine Particle (PM2.5) National Ambient Air Quality Standards; Notice of Actions Denying Petitions for Reconsideration," 72 Fed. Reg. 62,414 (Nov. 5, 2007).

C. Related Cases

All of the cases related to the above-noted rulings under review have been consolidated with under Case No. 05-1064. These consolidated cases are enumerated in the Petitioners' Briefs.

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GLOSSARY

APA	Administrative Procedure Act
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
C/MSA	Consolidated Metropolitan Statistical Area
Designations Rule	Air Quality Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards, 70 Fed. Reg. 944 (Jan. 5, 2005)
EGU	Electric Generating Unit
EPA	Environmental Protection Agency
FIP	Federal Implementation Plan
FRM	Federal Reference Method
JA	Joint Appendix
MOG	Petitioner Midwest Ozone Group/W. Va. Chamber of Commerce
MPO	Metropolitan Planning Organizations
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standard
NCCSA	North Carolina Clean Smokestacks Act
NEI	National Emissions Inventory
NH4	Ammonium

NO_3	Nitrate
NOx	Nitrogen Oxides
NSR	New Source Review
OMB	Office of Management and Budget
Outer Counties	Nassau, Suffolk, Westchester, Rockland, and Orange Counties, NY
PM2.5	Fine Particles
PM_{10}	Particulate Matter
Pollution Roses	Pollution Roses, OAR-2003-0061-0527
PSD	Prevention of Significant Deterioration
Resp. to MOG	EPA Response to Midwest Ozone Group, et al., Petition for Reconsideration, Cover Letter and Attachment, OAR-2003-0061-0746 and -0746.1
Resps. to Guilford and NC 2005 Pets.	EPA Response to Guilford and North Carolina Petitions for Reconsideration, OAR-2003-0061-0759, -0759.1, -0760
Resp. to Oakland I	EPA Response to First Oakland County Petition for Reconsideration, OAR-2003-0061-0740
Resp. to Oakland II	EPA Response to Second Oakland County Petition for Reconsideration, OAR-2003-0061-0764
RTC	EPA Response to Comments Document, OAR-2003-0061-0620 through -0632
SIP	State Implementation Plan

SO_2	Sulfur Dioxide
SO_4	Sulfate
Supplemental Amendments	Air Quality Designations for the Fine Particles (PM2.5) National Ambient Air Quality Standards—Supplemental Amendments, 70 Fed. Reg. 19,844 (Apr. 14, 2005)
Supplemental TSD	Technical Support Document for PM2.5 – Supplemental Notice (Apr. 5, 2005), OAR-2003-0061-0702
TEA-21	Transportation Equity Act for the 21st Century
Timin Memo	Memorandum from Brian Timin and Richard Damberg to Docket OAR-2003-0061, OAR-2003-0061-0732
TPY	Tons Per Year
TSD	Technical Support Document, OAR-2003-0061-0606 through -0619, -0633
Unifour Letter	Letter from Unifour Air Quality Oversight Committee of the Western Piedmont Council of Governments, OAR-2003-0061-0596
VOCs	Volatile Organic Compounds
VMT	Vehicle Miles Traveled
WES	Weighted Emissions Score
1991 Rule	Final Rule for Ozone Designations, 56 Fed. Reg. 56,694 (Nov. 6, 1991)

1997 Monitor Guidance	Guidance for Network Design and Optimum Site Exposure for PM2.5 and PM10, EPA-454/R-99-022 (Dec. 1997), Counties' Br. Appx. B, Doc. 14.
2003 Guidance	Holmstead Memo, OAR-2003-0061-0002
2004 Guidance	Wegman Memo, OAR-2003-0061-0703
$\mu g/m^3$	Micrograms per cubic meter

JURISDICTION

This Court has jurisdiction to review final actions by EPA under the Clean Air Act ("CAA") pursuant to 42 U.S.C. § 7607(b). The actions entitled "Air Quality Designations and Classifications for the Fine Particles (PM2.5) National Ambient Air Quality Standards" ("Designations Rule"), 70 Fed. Reg. 944 (Jan. 5, 2005); "Air Quality Designations for the Fine Particles (PM2.5) National Ambient Air Quality Standards—Supplemental Amendments" ("Supplemental Amendments"), 70 Fed. Reg. 19,844 (Apr. 14, 2005); and "Air Quality Designations for the Fine Particle (PM2.5) National Ambient Air Quality Standards; Notice of Actions Denying Petitions for Reconsideration," 72 Fed. Reg. 62,414 (Nov. 5, 2007), are final actions by EPA. Petitioners timely filed petitions to review these actions under 42 U.S.C. § 7607(b).

STATUTES AND REGULATIONS

Statutory and regulatory provisions cited herein are provided in a separate addendum.

ISSUES PRESENTED

1. Whether the Designations and Related Guidance are Exempt from APA Notice-and-Comment Procedures.

2. Whether CAA Section 107(d) Authorizes EPA to Deviate from State Recommendations in Making Designations.

3. Whether Section 107(d) Authorizes EPA to Use C/MSA Boundaries as Presumptive Nonattainment Area Boundaries.

4. Whether EPA May Consider Factors Other than "Monitoring Data" When Making Designations.

5. Whether EPA Properly Interpreted Congress's Directive to Include Within a Nonattainment Area "Nearby Areas" that "Contribute" to a Nonattainment Area.

6. Whether EPA May Include Within a Nonattainment Area a Non-Contiguous Portion of a County.

7. Whether EPA Was Required to Consider Potential Reductions in NOx and SO2 Achievable Under Other Regulatory Controls.

8. Whether EPA's Use of Carbon Emissions Data Affected the Outcome of Any Designations.

9. Whether EPA Acted Rationally and Consistently in Applying Nine Factors Relevant to "Contribution."

10. Whether Individual County Designations Are Supported by the Record.

STATEMENT OF THE CASE

I. NATURE OF THE CASE

This case pertains to a fundamental aspect of protecting people from the adverse health consequences of air pollution: EPA's designation of areas that violate or contribute to violations of National Ambient Air Quality Standards ("NAAQS") – the standards that EPA sets for criteria pollutants that are harmful to public health and the environment. EPA's designations of these "nonattainment

areas" trigger subsequent actions that States, EPA, and others must take to achieve the protection that the NAAQS provide. In particular, the geographic boundaries of nonattainment areas define the areas for which States must develop nonattainment area plans to reduce air pollution to levels that achieve the NAAQS "as expeditiously as practicable." 42 U.S.C. § 7502(a)(2)(A).

This case involves EPA's rule establishing designations for the fine particulate matter ("PM2.5") NAAQS and related actions. Exposure to PM2.5 levels that exceed the NAAQS is associated with a range of serious human health consequences, including premature death from heart or lung disease. 70 Fed. Reg. at 945/3. Areas across much of the eastern United States and in Montana and California violate the PM2.5 NAAQS. Id. at 952-1019. Consequently, numerous people nationwide are and will remain at risk from exposure to unhealthy levels of PM2.5 until the areas attain the NAAQS.

Petitioners are a small subset of States, local governments, and industry representatives who are dissatisfied with EPA's decisions in 18 of the 225 individual counties or partial counties EPA designated as nonattainment. Petitioners raise a host of challenges to EPA's reading of the statute, EPA's process for evaluating nonattainment area boundaries, and EPA's technical judgments. At bottom, however, Petitioners simply disagree with EPA's judgment that certain

areas should be designated nonattainment and thus subject to nonattainment area requirements.

Petitioners' arguments lack merit. EPA followed the statutory directive to identify as nonattainment both areas that actually violate the PM2.5 NAAQS and nearby areas that contribute to such violations. In determining nonattainment area boundaries, EPA worked closely with States, and based designations on monitoring data and other appropriate information. Further, EPA carefully considered all relevant information provided during the designations process and after the final rule in numerous administrative petitions for reconsideration. EPA reached reasonable conclusions concerning the designations and boundaries for each area, adhering to the CAA and using reasonable analytical tools. Because EPA's designations are consistent with the CAA and amply supported by the administrative record, this Court should deny the Petitions.

II. CLEAN AIR ACT

The CAA, 42 U.S.C. §§ 7401-7671q, establishes a joint state and federal program to control the Nation's air pollution. 42 U.S.C. § 7401(a)(3)-(4). CAA Title I charges EPA with identifying certain air pollutants that may reasonably be anticipated to endanger public health and welfare, and with formulating NAAQS that specify the maximum permissible concentrations of those pollutants in the

ambient air. Id. §§ 7408-7409. EPA has promulgated NAAQS for several pollutants, including PM2.5. 40 C.F.R. Pt. 50.

After promulgating new or revised NAAQS, Section 107(d)(1) directs EPA to designate areas nationwide as attaining or not attaining the NAAQS through an administrative process with States that is exempt from usual notice-and-comment procedures required by the Administrative Procedure Act ("APA"). 42 U.S.C. § 7407(d)(1), (6). First, Section 107(d)(1) requires each State, within one year of a new or revised NAAQS, to submit to EPA a list identifying the State's initial recommended designations for all areas within the State. Id. § 7407(d)(1)(A). The CAA establishes three designations:

- "nonattainment": areas that do not meet the NAAQS, and areas that contribute to a violation of the NAAQS in a nearby area;
- "attainment": areas that meet the NAAQS; and
- "unclassifiable": areas in which available information is insufficient to determine whether the NAAQS is met.

Id. § 7407(d)(1)(A)(i)-(iii).

Section 107(d)(1)(B) then directs EPA, within two years of new or revised NAAQS, to promulgate designations based on the States' recommended designations. Id. § 7407(d)(1)(B). EPA is authorized to make any modifications

"the Administrator deems necessary" to the State's recommended designations. Id. § 7407(d)(1)(B)(ii).

When EPA modifies a State's recommendations, EPA must provide the State with notice 120 days before promulgating the final designations and an opportunity to demonstrate why any proposed modification is inappropriate. Id. If a State fails to submit a list of recommended designations, in whole or in part, EPA must promulgate designations that EPA deems appropriate. Id. EPA's promulgation of designations for each area is the action that triggers other CAA requirements. See, e.g., id. § 7502(a)(1)(A).

Once EPA promulgates designations, the CAA requires each State to adopt and implement state implementation plans ("SIPs") that will attain, maintain, and enforce the NAAQS, through, *inter alia*, enforceable emissions limitations and other control measures. Id. § 7410. The required SIP contents vary depending upon the type of designations within the State. For nonattainment areas, SIPs must include measures to provide for attainment of the NAAQS "as expeditiously as practicable," including measures to reduce emissions of PM2.5 and PM2.5 precursors for sources within nonattainment area boundaries. Id. § 7502(a)(2); 40 C.F.R. §§ 51.1000-1012. Additionally, certain emissions sources within nonattainment areas must comply with nonattainment New Source Review

("NSR") permitting requirements. 42 U.S.C. § 7503. For attainment/unclassifiable areas must, SIPs must include measures to "prevent significant deterioration of air quality," among other things. Id. § 7471. Emissions sources in attainment/unclassifiable areas must comply with PSD permitting requirements. Id. §§ 7470-7492.

III. THE PM2.5 DESIGNATIONS PROCESS

In 1997, EPA revised the particulate matter NAAQS to add PM2.5 standards. 62 Fed. Reg. 38,652 (July 18, 1997).[1/] After litigation over the NAAQS, American Trucking Ass'ns v. EPA, 283 F.3d 355 (D.C. Cir. 2002), on remand from Whitman v. American Trucking Ass'ns, 531 U.S. 457 (2001), EPA initiated the designations process. Congress later amended the CAA to allow for deployment of a PM2.5 monitoring network and extend the deadlines for designations until after collection of three years of monitoring data. See 42 U.S.C. § 7407(d)(6); Transportation Equity Act for the 21st Century ("TEA-21"), Pub. L. 105-178, §§ 6101-6102, 112 Stat. 107, 463 (1998); Pub. L. 108-199, § 425(b), 118 Stat. 3, 417 (2004). The CAA, as amended, required States to submit initial

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[1/] On October 17, 2006, EPA revised the PM2.5 NAAQS. 71 Fed. Reg. 61,144 (Oct. 17, 2006). The 2006 NAAQS are not relevant here.

recommended designations to EPA by February 15, 2004, and required EPA to promulgate designations by December 31, 2004. 42 U.S.C. § 7407(d)(6).

In April 2003, EPA issued the first guidance document concerning the PM2.5 designations process. Holmstead Memo ("2003 Guidance"), OAR-2003-0061-0002, JAXX-XX. The 2003 Guidance explained EPA's anticipated schedule for the designations and its preliminary views on certain issues, such as identifying appropriate nonattainment area boundaries. In February 2004, EPA issued additional guidance to address revisions to certain Metropolitan Statistical Area boundaries. Wegman Memo ("2004 Guidance"), OAR-2003-0061-0703, JAXX-XX.

Most States submitted recommended designations to EPA by February 15, 2004. EPA evaluated States' recommended designations, along with other information and analytical tools developed to assess which areas violate the NAAQS or contribute to violations in nearby areas. See 70 Fed. Reg. at 946/2-948/1; infra 23-28. EPA also consulted with States to gain a better understanding of their rationales and considered additional information States submitted.

Around June 29, 2004, EPA notified each State of its proposed modifications to the State's recommended designations. 70 Fed. Reg. at 946/2. The letters explained how EPA applied the 2003 Guidance factors and used

analytical tools, such as the weighted emissions score, to assess which areas should be included in nonattainment areas. See, e.g., EPA NY Modification, OAR-2003-0061-0343, JAXX-XX.

EPA requested that States respond to EPA's proposed modifications to their initial recommendations by September 1, 2004. 70 Fed. Reg. at 946/2. EPA Regions again engaged in extensive consultation with States concerning the designations, to insure that EPA's final decisions would be based upon the relevant facts and circumstances. EPA's final designations reflect EPA's consideration of all information the States submitted.

In the final Designations Rule, promulgated December 17, 2004, EPA designated 191 counties and 34 partial counties as nonattainment, 6 counties as unclassifiable, and the remaining counties as attainment/unclassifiable. Id. at 952-1019. Recognizing that some States would soon have 2004 monitoring data, however, EPA invited States to submit 2004 monitoring data, if such data indicated that EPA should revise the designation for the entire area. Id. at 948/3. On April 5, 2005, EPA announced it was revising designations for eight areas from nonattainment to attainment and four areas from unclassifiable to attainment based on 2002-2004 monitoring data. Id. at 19,844. EPA also granted or denied

other specific requests that States had made between December 2004 and April 2005. Id.

After promulgating the designations, EPA received 14 petitions for reconsideration of its designations from States, local governments, and industry, including some of the Petitioners. See 72 Fed. Reg. at 62,414. In March 2006, EPA received two additional petitions. Many of these petitions raised issues not raised during the designation process and some transmitted materials that long post-dated EPA's December 2004 designations, were unrelated to the designation process, or both. Nevertheless, EPA carefully evaluated each petition for reconsideration. Although EPA concluded that none of the petitions provided a basis to reconsider any designations, EPA provided detailed responses that demonstrated the seriousness with which EPA considered the various issues raised. See id.

Petitioners in these consolidated cases filed petitions for judicial review of EPA's action. This Court twice stayed these petitions pending EPA's action on the administrative petitions for reconsideration. Certain Petitioners thereafter filed petitions challenging EPA's decisions on the administrative petitions and the Court consolidated those cases with the initial challenges.

IV. KEY ASPECTS OF THE PM2.5 DESIGNATIONS

A. The Nature of PM2.5[2/]

PM2.5 consists of extremely small airborne particles, roughly the size of one-thirtieth the thickness of a human hair. Due to their small size, they can penetrate deeply into the lungs of people who inhale them, where they can accumulate, react, or be absorbed into the body. Exposure to such particles may cause serious human health effects, including premature death, aggravation of respiratory and cardiovascular disease, lung disease, decreased lung function, asthma attacks, and cardiovascular problems such as heart attacks. Older adults, people with heart and lung disease, and children are particularly sensitive to PM2.5 exposure.

PM2.5 is a complex mixture of liquid or solid particles. It is typically measured by ambient monitors that draw air through small filters for a 24-hour period. The collected mass can be analyzed to determine its composition. The main chemical components or "species" that make up PM2.5 pollution include ammonium sulfate, ammonium nitrate, carbonaceous PM (including organic

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[2/] The following discussion of the nature of PM2.5 summarizes information presented in the notice establishing the 1997 PM2.5 NAAQS (62 Fed. Reg. 38,652) and The Particle Pollution Report, EPA 454-R-04-002 (2004) ("Particle Report"), http://www.epa.gov/air/airtrends/aqtrnd04/pm.html (last visited June 10, 2008).

carbon and elemental carbon), and crustal material. By understanding the relative amount of these chemical components measured in a particular location, the likely types of emission sources contributing to the fine particle mass can be identified.

PM2.5 includes both "primary" particles that sources emit directly into the atmosphere (such as carbonaceous soot from diesel emissions) and "secondary" particles that form in the atmosphere from complex chemical reactions involving a number of chemical precursors that sources emit (such as sulfate and nitrate particles). Chemical precursors to secondary PM2.5 include sulfur dioxide ("SO2"), nitrogen oxides ("NOx"), volatile organic compounds ("VOCs"), and ammonia.

PM2.5 comes from multiple sources. Sulfate usually results from the reaction of SO2 emissions (from power generation and industrial boilers), with ammonia emissions (from sources like animal feeding operations and fertilizer production, and to a lesser extent from mobile sources and power plants). Nitrate, by comparison, usually forms when NOx emissions from mobile sources, power generation, or other industrial sources are combined with ammonia emissions. Crustal particles emanate from a wide range of sources or activities that cause suspension of soil or metals in the atmosphere, such as re-entrained road dust, agriculture, or mining. Carbonaceous particles are emitted directly from diesel

and gasoline powered engines in mobile sources and heavy equipment, wildfires, waste burning, power generation, and other industrial sources. They are also formed through secondary reactions of VOCs in the atmosphere. "Speciated data" data showing the chemical composition of PM2.5 provides information useful for identifying contributing emission sources.

The proportion of primary versus secondary particles, and the relative proportions of different species of particles found in any geographic area can vary widely, depending upon factors such as the mix of sources in the area, the mix of PM2.5 precursors, and meteorology. The sources of PM2.5 and PM2.5 precursors in any area also vary by type, size, and number. Thus, the ambient PM2.5 in an area results from a complex interaction of emissions that, in the aggregate, comprise the total ambient level.

Additionally, PM2.5 and its precursors can transport hundreds or thousands of miles suspended in the atmosphere. The amount and direction of transport are affected by meteorological conditions and winds. Wind direction, speed, and strength all vary over the course of a single day, by season, and over the entire year. Consequently, ambient PM2.5 in an area may be the combination of primary and secondary PM2.5 emissions from sources in that area, nearby areas, and areas much farther away.

Confronted with the complex nature of PM2.5, including its serious adverse heath impacts, multiple precursors, numerous sources, meteorological considerations, and the need to distinguish between impacts of local and non-local sources at any monitor, EPA developed a case-by-case approach to determining whether an area "contributes to" nonattainment in "nearby" areas. See 70 Fed. Reg. at 947/3-48/1.

B. Monitoring Data

This case concerns the annual PM2.5 NAAQS, although the Designations Rule addresses both the 24-hour and annual PM2.5 NAAQS. The annual PM2.5 NAAQS is 15 micrograms per cubic meter ("$\mu g/m^3$") measured as an annual arithmetic mean concentration. The way a particular NAAQS is measured is referred to as the "form of the NAAQS." A "design value" is a statistic that describes the air quality status of an area relative to the NAAQS. The annual PM2.5 design value at each monitor is computed by averaging the daily samples taken from a Federal Reference Method ("FRM") monitor each quarter, averaging these quarterly averages to obtain an annual average, and then averaging the three annual averages. See 40 C.F.R. Pt. 50, Appx. N. Monitors measure ambient PM2.5 on a regular schedule, typically every third day or sixth day year-round. 40 C.F.R. § 58.12(d) (2004).

The sources of PM2.5 and PM2.5 precursors at a particular monitor might vary over time, on a daily, seasonal, or other basis. However, because the form of the annual NAAQS is based on an annual average, every valid monitor reading counts towards the design value for a monitor, even readings on individual days that might be at or below the level of the NAAQS. Thus, even on days measured at a violating monitor that are below the annual PM2.5 standard of 15 $\mu g/m^3$, emissions from a contributing area add to the overall average ambient PM2.5 pollution at that monitor during a year, by adding emissions above background levels. Accordingly, EPA concluded that for purposes of the annual PM2.5 NAAQS, an area can be contributing to violations at a monitor in a nearby area, even on days when monitored levels are not above the level of the annual NAAQS. See, e.g., EPA Response to Comment ("RTC"), OAR-2003-0061-0620 through 0632, at 2-6, JAXX; EPA Resp. to Second Oakland County Pet. for Recons. ("Resp. Oakland II"), OAR-2003-0061-0764, Encl. at 15, JAXX.

FRM monitors used to determine compliance with the NAAQS must meet certain regulatory requirements as to their technical specifications and locations relative to areas of population, emission sources, expected levels of ambient concentration, and potential biasing factors, and should be consistent with applicable EPA guidance. 40 C.F.R. Pt. 50, Appx. N; 40 C.F.R. Pt. 58, Appx. D,

E (2004); Guidance for Network Design and Optimum Site Exposure for PM2.5 and PM10 ("1997 Monitor Guidance"), Counties' Appx. B, Doc. 14. Pursuant to regulations and guidance, States develop and EPA reviews plans that identify the purpose, geographic scale, and location of each monitor. States also submit and EPA reviews annual monitoring network plans, explaining the sampling methods and frequency, monitoring objectives, and providing evidence that each monitor meets applicable regulatory requirements. 40 C.F.R. § 58.20(f) (2004).

C. 2003 Guidance

EPA's 2003 Guidance, among other things, described EPA's recommended approach to drawing nonattainment area boundaries. The 2003 Guidance addressed four key issues germane to Petitioners' challenges.

First, EPA explained that step one in defining nonattainment areas is to identify FRM monitor sites where the air quality exceeds the NAAQS. 2003 Guidance, Attach. 2 at 3, JAXX. Additionally, EPA indicated that data from other types of monitors, such as those that provide speciated data, could be considered for other purposes. Id. at 4, JAXX; see infra at 20. EPA also explained the circumstances under which States might seek to apply the concept of "spatial averaging," using data from two or more qualifying monitors to show that an area

met the NAAQS, notwithstanding apparent monitored violations at one of the monitors. Id.

Second, EPA recommended that the starting point for the geographic boundaries for urban nonattainment areas should be presumed to be the 1999 "Metropolitan Statistical Area" or "Consolidated Metropolitan Statistical Area" (interchangeably "C/MSA") boundary, [3/] unless relevant information indicated the nonattainment boundary should be larger or smaller. Id. at 4-6, JAXX-XX. EPA used C/MSA boundaries as presumptive nonattainment boundaries given the frequent correlation between urban sources and the particles comprising much of the PM2.5 at urban violating monitors. Id. at 4-5, JAXX-XX. Nonetheless, EPA also recognized that there are instances where PM2.5 concentrations may be related to localized conditions and thus the C/MSA may not be an appropriate geographic boundary for every PM2.5 nonattainment area. Id. at 6, JAXX. Therefore, EPA encouraged States to consider each area on a case-by-case basis. Id.

[3/] C/MSAs are established by the Office of Management and Budget ("OMB") for collection of statistical data on recognized population centers and adjacent communities, and their boundaries are based on a complex analysis of economic and census data. 65 Fed. Reg. 82,228 (Dec. 27, 2000).

Third, EPA identified nine factors relevant to evaluating whether areas within or adjacent to a C/MSA where a violating monitor was located could contribute to the nearby violations, including: emissions, air quality, population density and urbanization, traffic and commuting patterns, expected growth, meteorology, geography and topography, jurisdictional boundaries, and emissions controls. Id. at 6-7, JAXX. Not every factor was relevant in each area (e.g., in many eastern locations topography is not an issue), nor was every factor equally important to each area (e.g., what would constitute large mobile source emissions in one C/MSA might be dwarfed compared to stationary source emissions in another). Due to the complex and variable nature of PM2.5, the important factors varied from one area to another based on local circumstances. See 70 Fed. Reg. at 947/3-48/1. Moreover, EPA consciously did not impose any mandatory "bright-line" tests for any of the recommended factors. Id. at 947/3.

Finally, the 2003 Guidance explained that EPA intended to base designations on the most recent three years of data available at the time of the designations, i.e., 2001 through 2003. 2003 Guidance, Attach. 2 at 2, JAXX. However, EPA later invited States to submit data from 2004, if certain conditions were met. 70 Fed. Reg. at 948/2.

D. The Nine Factors EPA Considered in Determining Nonattainment Area Boundaries

1. Emissions in Areas Potentially Included Versus Excluded from the Nonattainment Area

EPA examined emissions data to assess both the magnitude of emissions in an area, and the relative magnitude of emissions between areas. Specifically, EPA considered the estimated direct PM2.5 and PM2.5 precursor emissions for counties in and adjacent to each C/MSA, derived from the National Emissions Inventory ("NEI"). See EPA Technical Support Document ("TSD"), OAR-2003-0061-0606 through -0619, -0633, at 5-1, JAXX. The emissions data indicated which counties in an area contain emissions sources that individually, or in the aggregate, are likely to be contributing more than others – e.g., a large SO2 emission inventory might indicate a large power plant contributing to violations in the area; a large NOx emission inventory might indicate a large amount of mobile source emissions, or stationary source emissions, or both. EPA also developed analytical tools to evaluate the relative impacts of different amounts and types of emissions in counties in and around a C/MSA, including an "urban excess" analysis and "weighted emissions score." See infra at 25-26.

2. Air Quality in Potentially Included Versus Excluded Areas

This factor relates to the design value at all monitors throughout an area. TSD 5-1, JAXX. Areas with a monitor registering a design value exceeding the PM2.5 NAAQS were designated nonattainment. EPA also considered the design value at monitors that met the PM2.5 NAAQS to determine whether an area might otherwise contribute to NAAQS violations in nearby areas. In addition, in considering this factor, EPA reviewed PM2.5 chemical composition ("speciation") monitoring data for specific areas to determine the likely sources contributing to the sulfate, nitrate, carbon and crustal components of PM2.5 in particular locations. See infra at 25-26.

3. Population, Population Density, and Degree of Urbanization

EPA also considered population, population density, and degree of urbanization as surrogate measures of the relative level of contribution between counties under consideration for a nonattainment designation. See TSD 5-2, JAXX. An area with a large and dense population more likely contributes to violations than a rural area with a very low and widely dispersed population. See 2003 Guidance, Attach. 2 at 5, JAXX.

4. Traffic and Commuting Patterns

Mobile source emissions constitute a large portion of the emissions inventory in urban areas. Thus, mobile source use in an area, as reflected in information like the number of drivers and the vehicle miles traveled ("VMT") in an area, is relevant to determining whether an area contributes to violations in nearby areas. See TSD 5-2, JAXX. EPA also considered the number of commuters in a county who drive to another county within the C/MSA, the percent of total commuters in each county who commute to other counties, and their destinations. See id. Information about commuting patterns may indicate where emissions from mobile sources might actually be occurring, and therefore the degree to which drivers based in one area are contributing emissions to another area.

5. Expected Growth

This factor considers population growth within each county in and around a C/MSA from 1990 to 2000. See TSD 5-2, JAXX. The population growth can be a surrogate measure of emissions activities, and a gauge of whether the area is integrated economically into the larger area, both of which indicate a greater degree of contribution to ambient PM2.5.

6. Meteorology

Meteorology impacts the formation and dispersion of PM2.5, and is relevant to assessing an area's potential to contribute to violations in nearby areas. An evaluation of meteorological data, combined with emissions data, may show that PM2.5 concentrations are affected by winds coming from all directions, or by winds coming from a predominant direction. TSD 5-2, JAXX. EPA utilized "pollution roses," described infra at 25, to depict the emissions data from violating monitors, combined with meteorological data, to evaluate contribution.

7. Geography/Topography

Physical features of the land might affect the geographic scope of an area's airshed, and thus the distribution of PM2.5 and PM2.5 precursors throughout the area. TSD 5-2, JAXX. For example, nearby areas may be separated by topographical features, such as a mountain range, that would prevent or limit the transport of PM2.5 and PM2.5 precursors. By the same token, the absence of such features may show there are no such barriers to the flow of ambient PM2.5 from nearby areas, making them more likely to contribute to a nearby violation.

8. Jurisdictional Boundaries

EPA also considered existing jurisdictional boundaries, such as State and county boundaries, and boundaries for existing nonattainment areas, and those for air pollution and planning organizations. TSD 5-3, JAXX. Such boundaries can have practical and legal implications for cohesive NAAQS implementation. See 2003 Guidance, Attach. 2 at 6, JAXX.

9. Level of Control of Emission Sources

EPA considered the level of pollution control in an area, in limited circumstances. For example, evidence that a source was about to install pollution controls that would greatly reduce its emissions in the near term could indicate that the area where the source is located would be less likely to contribute to violations in the future than it did historically. See infra 95-106. However, EPA concluded that emissions reductions that could occur at some distant time or were uncertain to occur at all were irrelevant to current nonattainment area boundaries. Id.

E. Analytical Tools

Given the complex nature of PM2.5, the form of the NAAQS, and the need to distinguish between emissions coming from nearby areas, versus more distant areas, EPA developed analytical tools designed to give insight into which areas

were most likely to be contributing to nonattainment. The primary analytical tools used for all areas are described below.

1. Monitoring Data

Although EPA based its nonattainment designations on data from the FRM monitor network, described above, EPA also considered speciated data when assessing whether areas surrounding violating FRM monitors might be contributing to violations. See, e.g., TSD 5-1, JAXX. Speciated data indicates the specific types and relative amounts of particles comprising the ambient PM2.5. Evaluated with other information, such as emissions data for surrounding counties in the C/MSA, or the locations of nearby large sources, speciated data could indicate contribution, and thus provided a way to differentiate between contributing and non-contributing areas. See 2003 Guidance, Attach. 2 at 3, JAXX.

2. Maps

EPA developed maps that depicted key geographic information. TSD Ch. 7, JAXX-XX. The maps depicted the locations of FRM monitors and their design values, jurisdictional boundaries, major transportation arteries, major emissions sources, and the 8-hour ozone nonattainment boundaries. EPA used maps to

assess the directions and distances between monitors and sources, or monitors and jurisdictional boundaries.

3. Pollution Roses

EPA developed pollution roses that depict 2001-2003 monitoring and meteorological data for each monitor. Pollution Roses, OAR-2003-0061-0527, JAXX-XX. Each dot on the pollution rose represents a 24-hour reading from the relevant monitor - the dot's color reflects the concentration of PM2.5 on that day. The dot's location relative to the center of the diagram indicates the direction from which the wind was traveling. Thus, a dot in the northeast quadrant of the pollution rose demonstrates that the wind was carrying emissions from the northeasterly direction on the date of that particular monitor reading. The dot's distance from the center of the diagram indicates the average wind speed on that day. A dot close to the center indicates a slower average wind speed; a dot further away from the center indicates a higher wind speed.

4. Urban Excess and Weighted Emissions Scores

Because PM2.5 pollution is affected by local and regional emissions, EPA developed a metric to compare overall emissions among counties within a metropolitan area called the "weighted emissions score." TSD Ch. 3, JAXX-XX. To calculate weighted emissions scores, EPA first calculated the "urban excess"

PM2.5 mass. The urban excess is the amount by which the urban PM2.5 concentration (from a speciation monitor) exceeds the PM2.5 concentration in a nearby rural area. The urban excess mass ranged from about 2 to 20 $\mu g/m^3$, with many areas in the 4 to 7 $\mu g/m^3$ range. TSD Ch. 3.2, JAXX-XX. EPA calculated the total PM2.5 urban excess mass for each area and the percentage of the urban excess that was attributed to sulfate, nitrate, direct carbon, and direct crustal PM2.5 in each C/MSA. Id.

EPA also identified the amount of SO2, NOx, directly-emitted carbon, and direct crustal emissions for the counties in and around each metropolitan area. TSD 4-1, JAXX. For each county, EPA first divided the county-level emissions of a pollutant by the metropolitan area total emissions of the pollutant. TSD 4-2, JAXX. EPA then multiplied this factor by the percentage (or "weight") of urban excess mass attributed to the related PM2.5 component (e.g., the carbon emissions factor was multiplied by the urban excess percentage attributed to carbon mass). Id. The weighted emissions of SO2, NOx, carbon, and crustal material were totaled for each county and proportionally adjusted so that the county scores for all counties in a metropolitan area added up to 100. Id.

5. Conceptual Modeling Major Stationary Source Impacts

To investigate whether counties, or portions of counties, containing large emissions sources – such as large electric generating units ("EGUs") – should be designated nonattainment, EPA used a series of air quality modeling runs to assess the estimated impacts of representative EGUs on nearby violating monitors. EPA conducted three model runs: (i) a "base case" run simulating current air quality levels using data from 1999-2003; (ii) a "zero out" run in which the emissions from eight geographically dispersed large EGUs were assumed to be zero to assess the change in ambient levels at violating monitors if the EGU emissions were absent; and (iii) a "zero out" run in which the emissions from 29 geographically dispersed EGUs of various sizes were assumed to be zero to assess the change at violating monitors if the EGU emissions were absent. See Memo from B. Timin and R. Damberg, EPA ("Timin Memo"), OAR-2003-0061-0732, JAXX-XX; Attach. to EPA Resp. to Midwest Ozone Group, et al. Pet. for Recons. ("Attach. to Resp. to MOG"), OAR-2003-0061-0746.1, at 7-10, JAXX-XX.

The conceptual modeling indicated that large amounts of EGU emissions can have significant impacts on PM2.5 concentrations in nearby violating areas. Timin Memo, JAXX-XX. Thus, the modeling supported the qualitative judgment that EGUs can contribute to nonattainment in nearby areas. Id. at 3, JAXX. EPA

considered the conceptual modeling along with area-specific information, including source locations, emissions data, meteorological information, and the relationship of the specific type of emissions to the type of particles measured at the monitors. Id. at 5-19, JAXX-XX.

STANDARD OF REVIEW

EPA's promulgation of the Designations Rule and related actions are subject to judicial review under the APA, which provides that the Court may set aside any action by EPA found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Under this standard, a court will not substitute its judgment for that of the agency, especially where the challenged decision implicates substantial agency expertise. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); Pennsylvania Dep't of Envtl. Protection ("PADEP") v. EPA, 429 F.3d 1125, 1128 (D.C. Cir. 2005). The Court instead must affirm EPA's action if EPA has considered the relevant factors and articulated a "rational connection between the facts found and the choice made." 463 U.S. at 43 (citation omitted). Moreover, where, EPA's decision rests on an evaluation of complex scientific data within its technical expertise, courts are "extremely deferential." New York v. Reilly, 969 F.2d 1147, 1152 (D.C. Cir. 1992); see Baltimore Gas & Elec. Co. v. NRDC, 462

U.S. 87, 103 (1983); Appalachian Power Co. v. EPA, 135 F.3d 791, 801-02 (D.C. Cir. 1998) ("Our analysis is guided by the deference traditionally given to agency expertise, particularly when dealing with a statutory scheme as unwieldy and science-driven as the Clean Air Act.").

The Court must consider whether EPA's decision "'was based on a consideration of the relevant factors and whether there has been a clear error of judgment.'" Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc., 419 U.S. 281, 285 (1974) (citation omitted). EPA's determinations must be upheld if they "conform to 'certain minimal standards of rationality.'" Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 520-21 (D.C. Cir. 1983) (citation omitted); Chemical Mfrs. Ass'n v. EPA, 919 F.2d 158, 167 (D.C. Cir. 1990) (according deference even where "[data] is 'imperfect' or 'preliminary'"). Courts will uphold an agency's conclusions "if they are supported by 'such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.'" Reilly, 969 F.2d at 1150 (citation omitted). As long as EPA's reasoning is discernable, it must be upheld. Huls America Inc. v. Browner, 83 F.3d 445, 454 (D.C. Cir. 1996). See also Bowman Transp., Inc., 419 U.S. at 286.

Questions of statutory interpretation are governed by the familiar two-step test set forth in Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc., 467 U.S. 837, 842-45 (1984). Under step one, the reviewing court must determine "whether Congress has directly spoken to the precise question at issue." Id. at 842. If Congress' intent is clear from the statutory language, the inquiry ends. Id. at 842-43. If, however, the statute is silent or ambiguous, step two requires the Court to decide whether the agency's interpretation is based on a permissible construction of the statute. Id. at 843. The Court grants "'a high degree of deference' to an interpretation that the agency promulgates contemporaneously with its own regulation, affirming it 'unless it is plainly erroneous or inconsistent with the regulation.'" Appalachian Power Co. v. EPA, 249 F.3d 1032, 1048 (D.C. Cir. 2001) (citation omitted). To uphold EPA's interpretation of Section 107(d), the Court need not find that EPA's interpretation is the only permissible construction, or even the reading the Court would have reached, but only that EPA's interpretation is reasonable. Chevron, 467 U.S. at 843 n.11; Chemical Mfrs. Ass'n v. NRDC, 470 U.S. 116, 125 (1985).

ARGUMENT SUMMARY

In the Designations Rule, EPA established boundaries for areas nationwide that violate or contribute to violations of the PM2.5 NAAQS. The designations are based on EPA's reasonable interpretation of Section 107(d) and its thorough and methodical analysis of data and information pertaining to each area. Petitioners challenge EPA's procedures under the APA notice-and-comment provisions, six issues of statutory interpretation, EPA's use of carbon data, EPA's application of nine factors relevant to drawing nonattainment area boundaries, and EPA's nonattainment designations for 18 out of the 244 individual areas designated nonattainment under the Rule. Petitioners' arguments lack merit.

First, Congress explicitly exempted Section 107(d)(1) designations from APA notice-and-comment procedures, instead specifying an alternate process between States and EPA. Likewise, the 2003 Guidance is exempt because it reflects EPA's non-binding views about the designations process, which is clearly exempt from APA requirements, and is not a legislative rule subject to APA requirements. Moreover, EPA made public information pertaining to the Rule, States and other interested parties commented, and EPA considered those comments. Thus, the goals of notice-and-comment were met.

Second, nothing in the CAA's text requires EPA to defer to States' recommended designations. Section 107(d)(1) directs EPA to promulgate designations for new or revised NAAQS using a process that explicitly authorizes EPA to "make such modifications as the Administrator deems necessary to the [States' recommended designations] (including to the boundaries of such areas or portions thereof)." 42 U.S.C. § 7407(d)(1)(B)(ii). Thus, the statute unambiguously provides EPA with ultimate authority to promulgate the designations and to modify States' recommended designations and area boundaries as EPA deems necessary. At a minimum, EPA may modify a State's recommended designations or nonattainment area boundaries when they conflict with Section 107(d)'s definition of "nonattainment," by failing to include areas that "contribute to" PM2.5 violations in a "nearby" area. Id. § 7407(d)(1)(B). Even if Section 107(d) were ambiguous with respect to the role of the States' designations, EPA's interpretation is a "permissible construction of the statute" and should be upheld.

Third, EPA's decision to recommend a rebuttable presumption of C/MSA boundaries as the starting point for evaluating urban nonattainment area boundaries was a reasoned decision based on the pervasive nature of PM2.5 pollution. EPA's choice furthered the statutory objective to designate as

nonattainment nearby areas that contribute to a NAAQS violation. Because C/MSAs were a rational starting point for drawing nonattainment area boundaries, EPA's decision should be upheld.

Fourth, although Section 107(d)(6)(A) provides that designations for the PM2.5 NAAQS are to be "based on air quality monitoring data" the statute does not say "only," "solely," "exclusively," or anything supporting Petitioners' narrow reading. Moreover, this Court has interpreted the phrase "based on" as ambiguous and not limited to "solely." Sierra Club v. EPA, 356 F.3d 296, 305-06 (D.C. Cir. 2004), amended in other part by, No. 03-1084, 2004 WL 877850 (D.C. Cir. Apr. 16, 2004). Additionally, the statute refers to "information," not "data " in other relevant sections, indicating that Congress intended EPA to consider information additional to monitoring data. Thus, EPA's use of analytical tools, such as weighted emissions scores, and a nine-factor analysis was eminently reasonable and should be upheld.

Fifth, Section 107(d)(1)(A)(i) provides that nonattainment areas must include "any area that does not meet (*or that contributes to ambient air quality in a nearby area that does not meet*)" the applicable NAAQS. 42 U.S.C. § 7407(d)(1)(A)(i) (emphasis added). Using its technical expertise, EPA developed an analytical approach to determine whether an area with a monitor

showing no violation, or an area with no monitor, nevertheless "contributes to" the nonattainment of a "nearby" area. By reasonably construing "contribution" to allow a case-by-case approach, EPA was able to analyze the unique facts of each area, rather than applying a rigid "one-size-fits-all" approach advocated by Petitioners.

Sixth, Section 107(d) directs EPA to designate as "nonattainment" both: (1) areas that *violate* the PM2.5 NAAQS, and (2) nearby areas that *contribute* to those violations. Id. EPA's reading of Section 107(d) to prohibit consideration of emission reductions that were uncertain to occur or that would occur far into the future was reasonable and should be upheld.

Seventh, Section 107(d)'s language allows EPA to designate portions of areas, whether such portions are contiguous or not. Id. § 7407(d)(1)(B)(ii). The CAA authorizes EPA to modify "areas or portions thereof" identified in States' recommended designations. Id. Further, the CAA directs EPA to designate nonattainment any area "that contributes to ambient air quality in a nearby area" that does not meet the NAAQS. Id. § 7407(d)(1)(A)(i). Congress did not limit designation of "contributing areas" to those that are adjacent to, contiguous with, or bordering the "nearby" nonattainment areas. Thus, EPA reasonably interprets the statute to permit it to designate non-contiguous areas.

Eighth, EPA's reliance on estimates of carbon emissions from EGUs that were revised, in the course of a subsequent rulemaking, is reasonable. EPA's decision must be judged on the information it had at the time of the rulemaking. Further, EPA revisited analyses that incorporated EGU carbon emissions data and determined that using the updated carbon data would not have affected designation decisions, in any event.

Ninth, EPA consistently considered the same nine factors for each area of the country. Petitioners' arguments that EPA applied the nine factors inconsistently rely on comparisons of dissimilar counties and ignore the rationale for EPA's decisions. That EPA's designations for counties with different characteristics would be different is entirely reasonable.

Finally, each of the 18 individual designations challenged by Petitioners is reasonable and supported by the record. Petitioners challenge EPA's judgments about emissions data, meteorological data, geographic and topographic information, the siting of air quality monitors, and EPA's interpretation of monitoring data. Petitioners' arguments reflect mere disagreements with EPA's technical, scientific, and policy judgments. The record shows that EPA methodically considered the relevant factors for each area and made rational designations, supported by particular facts and circumstances. Thus, under the

"extremely deferential" standard applicable to agency expertise, EPA's designations should be upheld.

ARGUMENT

I. EPA WAS NOT REQUIRED TO FOLLOW APA NOTICE-AND-COMMENT PROCEDURES IN PROMULGATING THE RULE OR ISSUING THE 2003 GUIDANCE

Industry Petitioners' argument that EPA failed to follow APA notice-and-comment procedures in promulgating the Designations Rule and issuing the 2003 Guidance fails for several reasons. First, Congress expressly exempted the promulgation of PM2.5 designations from APA notice-and-comment procedures, providing instead a process between States and EPA, which EPA scrupulously followed. Second, the 2003 Guidance is exempt from APA notice-and-comment requirements because it was issued as part of the Designations Rule and is not a legislative rule subject to APA rulemaking requirements. Third, although EPA did not engage in formal notice-and-comment, it made public the information relating to the designations process, and States and other interested parties, including Petitioners, submitted comments, that EPA incorporated into the administrative record and considered.

A. The Rule Is Exempt from APA Notice-and-Comment Procedures

EPA promulgated the PM2.5 designations under Section 107(d)(1), which establishes a unique process between EPA and States. 42 U.S.C. § 7407(d)(1); 70 Fed. Reg. at 946; see supra 7-10. Pursuant to Section 107(d)(2), "[p]romulgation . . . of a designation under paragraph (1), (4), or (5) [of Section 107(d)] shall not be subject to the provisions of sections 553 through 557 of Title 5 (relating to notice-and-comment)." 42 U.S.C. § 7407(d)(2)(B). Because the PM2.5 designations were "promulgat[ed] . . . under paragraph (1)" of Section 107(d), the text of Section 107(d)(2) unambiguously exempts promulgation of those designations from APA notice-and-comment procedures, and the Court's inquiry may end here. Chevron, 467 U.S. at 842-43.

Industry Petitioners' argument that the designations are subject to notice-and-comment procedures hinges on the erroneous premise that the designations were "promulgated under" Section 107(d)(6), 42 U.S.C. § 7407(d)(6), which is not among the paragraphs expressly exempted from APA notice-and-comment procedures in Section 107(d)(2). Petitioners misread the statute; EPA's authority – indeed, its obligation – to promulgate the PM2.5 designations referenced in Section 107(d)(6) arises from Section 107(d)(1), 42 U.S.C. § 7407(d)(1), which *is* exempt. Section 107(d)(1)(B) requires EPA, upon promulgation or revision of a

NAAQS, to promulgate designations. 42 U.S.C. § 7407(d)(1)(B)(i). In 1997, EPA promulgated the PM2.5 NAAQS, 62 Fed. Reg. at 38,652, thereby triggering EPA's obligation under Section 107(d)(1)(B) to promulgate PM2.5 designations. Thus, no express exemption of Section 107(d)(6) was required.

Even if the Court were to conclude that Section 107(d) is ambiguous, EPA's reasonable interpretation deserves deference. Chevron, 467 U.S. at 843. Section 107(d)(6), the lynchpin of Petitioners' flawed interpretation, merely codifies the *deadlines* for States to recommend PM2.5 designations and for EPA to promulgate the designations *under Section 107(d)(1)*. Section 107(d)(6) states:

> (A) Submission
> Notwithstanding any other provision of law, not later than February 15, 2004, the Governor of each State shall submit *designations referred to in paragraph (1)* for the July 1997 PM2.5 [NAAQS] for each area within the State . . . .
>
> (B) Promulgation
> Notwithstanding any other provision of law, not later than December 31, 2004, the Administrator shall, consistent with paragraph (1), promulgate *the designations referred to in subparagraph (A)* for each area of each State for the July 1997 PM2.5 [NAAQS].

42 U.S.C. § 7407(d)(6) (emphasis added). Petitioners' argument incorrectly focuses on the language "promulgate the designations" and "consistent with paragraph (1)" in Section 107(d)(6)(B). Indus. Br. 13. However, Petitioners ignore the phrase "*referred to in paragraph (1)*" in Section 107(d)(6)(A), which

refers to Section 107(d)(1), making clear that EPA's authority to promulgate PM2.5 designations arises from Section 107(d)(1), not from Section 107(d)(6).

The statutory scheme and legislative history of Section 107(d)(6) further support EPA's reading of that provision as setting forth alternative deadlines for the promulgation of PM2.5 designations under Section 107(d)(1). In TEA-21, Pub. L. 105-178, §§ 6101-6102, 112 Stat. 107, 463-65 (1998), Congress amended Section 107(d)(1) to authorize grants to establish a monitoring network and extend Section 107(d)(1) deadlines for the 1997 PM2.5 NAAQS designations until three years of data from the new monitoring network could be collected. TEA-21 provides that Governors "shall be required to submit *designations referred to in section 107(d)(1) of the [CAA]* . . . within 1 year after receipt of 3 years of air quality monitoring data," and that EPA "shall promulgate *the designations referred to in section 107(d)(1) of the [CAA]* . . . by the earlier of 1 year after the initial designations required under [§ 6102(c)(1)] are required to be submitted or December 31, 2005." Id. § 6102(c)(1), (d), 112 Stat. at 464-65 (emphasis added). The quoted language confirms that Congress intended EPA to promulgate the 1997 PM2.5 designations *under Section 107(d)(1)*, albeit at a later date than that established in that section.

Tellingly, Congress enacted Section 107(d)(6) in 2004, after the designation process was already underway. See Pub. L. 108-199, 118 Stat. 3, 417 (2004). In 2002, EPA began implementing the PM2.5 NAAQS, following resolution of litigation over the standards. 70 Fed. Reg. at 946. In April 2003, EPA requested that States and Tribes submit their recommended designations by February 15, 2004, in accordance with the TEA-21 deadlines. See 2003 Guidance at 1, JAXX. Section 107(d)(6)'s enactment, in January 2004, merely codified those deadlines that became effective under TEA-21 § 6102. Petitioners' view that the PM2.5 designations are promulgated under Section 107(d)(6) is contradicted by legislative history, which demonstrates that the amendments to Section 107(d) reflected in TEA-21 and Section 107(d)(6) address only the *timing* of designations under Section 107(d)(1). Because Section *107(d)(1)* is the source of EPA's authority to promulgate the PM2.5 designations, the promulgation of those designations is exempt from notice-and-comment requirements pursuant to Section 107(d)(2), 42 U.S.C. § 7407(d)(2).

Petitioners' contention that Congress's omission of Section 107(d)(6) from Section 107(d)(2) is meaningful because Congress chose to include other paragraphs of Section 107(d), namely (d)(4) and (d)(5), ignores the differences between Section 107(d)(6) and Sections 107(d)(4) and (d)(5). Specifically,

Sections 107(d)(4)(A) and (d)(5) direct EPA to promulgate designations for the ozone and lead NAAQS that existed before the 1990 amendment of Section 107(d). 42 U.S.C. § 7407(d)(4)(A)(ii), (d)(5). This separate authorization was needed because designations for the pre-1990 ozone and lead NAAQS would not be required under Section 107(d)(1), which was enacted in 1990 and is triggered only upon the "promulgation or revision" of a NAAQS. 42 U.S.C. § 7407(d)(1)(B)(i). Although Sections 107(d)(4)(A) and 107(d)(5), like Section 107(d)(6), cross-reference Section 107(d)(1), the cross-references in paragraphs (d)(4)(A) and (d)(5) serve only to apply Section 107(d)(1)'s "*procedure*" to the promulgation of designations under Sections 107(d)(4) and (d)(5). 42 U.S.C. § 7407(d)(4), (d)(5) (emphasis added). Therefore, Congress had to expressly cross-reference these sections, in addition to Section 107(d)(1), if it wanted Section 107(d)(2)'s notice-and-comment exemption to apply.

In contrast, Section 107(d)(6) is not, in and of itself, a directive to promulgate PM2.5 designations. Rather, Section 107(d)(6) establishes deadlines for PM2.5 "*designations referred to*" in Section 107(d)(1). 42 U.S.C. § 7407(d)(6) (emphasis added). Because PM2.5 designations are "promulgated under" Section 107(d)(1), the exemption in Section 107(d)(2) applies.

Petitioners' also incorrectly attempt to analogize Section 107(d)(6) to Section 107(d)(3), 42 U.S.C. § 7407(d)(3). Indus. Br. 14-15. Section 107(d)(3) governs a specific type of designations – redesignations – not addressed in Section 107(d)(1). While Section 107(d)(3) cross-references Section 107(d)(1), the cross-reference simply applies Section 107(d)(1)'s "*procedure*" to the Section 107(d)(3) redesignation process. Id. § 7407(d)(3) (emphasis added). Because redesignations are promulgated under Section 107(d)(3), which is omitted from Section 107(d)(2), Congress clearly intended EPA to engage in notice-and-comment rulemaking for redesignations. On the other hand, by providing an alternate process for designations under Sections 107(d)(1), (d)(4), and (d)(5), and by including those sections in Section 107(d)(2), Congress expressed its intent to give EPA discretion to forgo notice-and-comment procedures when promulgating designations under those sections.

In sum, the Designations Rule is exempt from notice-and-comment requirements.

B. The 2003 Guidance Is Merely the First Step in the PM2.5 Designations Process and Is Not a Legislative Rule Subject to Notice-and-Comment Requirements

Petitioners also challenge EPA's issuance of the 2003 Guidance without notice-and-comment procedures. Petitioners' back-door attempt to circumvent Congress's plainly expressed intent to exempt the designations from notice-and-comment procedures in favor of an alternative process lacks merit.

First, the 2003 Guidance was merely the first step in promulgation of Section 107(d)(1) designations for the PM2.5 NAAQS and thus is exempt from APA notice-and-comment requirements as well. The 2003 Guidance "provide[d] guidance to State and local air pollution control agencies and Tribes on the process for designating areas for the purpose of implementing the [PM2.5 NAAQS]," which "EPA plan[ned] to issue . . . on December 15, 2004." 2003 Guidance at 1, JAXX. Additionally, the 2003 Guidance outlined a schedule for the designations process, see id. Attach. 1, JAXX, and further described what EPA *intended* to do in issuing final designations, see, e.g., 2003 Guidance at 2, JAXX ("we intend to apply a presumption that the boundaries for urban nonattainment areas should be based on Metropolitan Area boundaries").

Importantly, however, the document "provide[d] EPA's *current views*," and did not reflect EPA's final say on the matter:

> Issues concerning nonattainment area boundaries will be addressed in actions to designate nonattainment and attainment/unclassifiable areas under section 107 and section 301(d) of the [CAA]. *When EPA promulgates designations, that action will be final and binding on States, Tribes, the public, and EPA as a matter of law*.

Id., JAXX (emphasis added). Rather, the Guidance described EPA's tentative plan leading to the promulgation of final PM2.5 NAAQS designations.

The Designations Rule – not the 2003 Guidance – represents EPA's legally binding, final action under Section 107(d). The 2003 Guidance, standing alone, has no legal consequences. Indeed, Petitioners tacitly acknowledged the non-final nature of the 2003 Guidance by failing to challenge it in court until they petitioned for review of the Designations Rule. Because the 2003 Guidance reflects EPA's then-future intentions for a process that culminated in final action to promulgate PM2.5 designations under Section 107(d)(1), any challenges to EPA's procedures for issuing the 2003 Guidance are moot. To require a separate notice-and-comment rulemaking for the 2003 Guidance, which merely announces EPA's future regulatory intent, would not only be pointless, but it would contravene Congress's clear intent to exempt promulgation of Section 107(d)(1) designations from the APA requirements, in favor of an alternative process between EPA and States.

Moreover, the 2003 Guidance does not establish any legally binding requirements and thus amounts to no more than a policy statement exempt from APA notice-and-comment procedures. 5 U.S.C. § 553(b)(A). EPA's non-binding statements of its then-future intentions for issuing final PM2.5 designations constitute a policy statement. Pac. Gas & Elec. Co. v. Fed. Power Comm'n, 506 F.2d 33, 38 (D.C. Cir. 1974) (policy statement "announces the agency's tentative intentions for the future"). At most, the 2003 Guidance discussed EPA's preliminary views of the meaning of terms in Section 107(d)(1) and thus is no more than an interpretive rule. See Syncor Int'l Corp. v. Shalala, 127 F.3d 90, 94 (D.C. Cir. 1997) ("An interpretive rule . . . typically reflects an agency's construction of a statute that it has been entrusted to administer."). Fatal to Petitioners' claim, however, the 2003 Guidance lacks the defining characteristic of a legislative rule: it does not create or modify legally binding rights or obligations. See, e.g., Ctr. for Auto Safety v. Nat'l Hwy. Traffic Safety Admin., 452 F.3d 798, 806 (D.C. Cir. 2006); Gen. Elec. Co. v. EPA, 290 F.3d 377, 382-83 (D.C. Cir. 2002).

1. The 2003 Guidance Merely Explains and Clarifies Existing Duties under the CAA

Petitioners' argument that the 2003 Guidance altered the governing legal norm reflects a misunderstanding of the CAA and the 2003 Guidance. According to Petitioners, the 2003 Guidance changed States' rights and duties under Section 107(d)(1) because it: (1) recognized that States should consider more than monitoring data when assessing whether an area is contributing to nonattainment in a nearby area; and (2) allegedly "dictate[d] exactly how States must assess 'contribution to' neighboring nonattainment areas." Indus. Br. 8. Petitioners are wrong on both counts.

As shown infra at 75-85, nothing in Section 107(d)(1) requires EPA to base designations "primarily on monitoring data," as Petitioners contend. To the contrary, Section 107(d) expressly directs States and EPA to make PM2.5 designations based on both: (1) whether the area meets the NAAQS; *and* (2) whether the area "contributes to ambient air quality in a nearby area that does not meet[]" the NAAQS. 42 U.S.C. § 7407(d)(1)(A)(i). Consistent with Section 107(d)(1), the 2003 Guidance recognized that "a nonattainment area must be defined not only to include the area that is violating the standard, but also to include nearby sources that contribute to the violation." See 2003 Guidance,

Attach. 2 at 4, JAXX. Thus, to the extent the 2003 Guidance suggested that States consider evidence, in addition to monitoring data, to determine whether an area "contributes to" nonattainment in a nearby area, the 2003 Guidance merely reiterated and explained the statutory requirement in Section 107(d)(1) and did not impose any new requirements.

Further, Petitioners' claim that the 2003 Guidance "dictates" how States must evaluate "contribution" to nearby violating areas is not supported by the text. The 2003 Guidance set forth a rebuttable presumption that provided a starting place for determining which areas might contribute to violations within the C/MSA. The 2003 Guidance explained, this "presumption reflects EPA's view that, *in the absence of evidence to the contrary*, violations of the PM2.5 NAAQS in urban areas *may be presumed* attributable at least in part to contributions from sources distributed throughout the Metropolitan Area." 2003 Guidance, Attach. 2 at 5, JAXX (emphasis added). In other words, "the presumption was a rebuttable one, which states could follow or not in making recommendations." EPA Resp. to First Oakland County Pet. for Recons. ("Resp. Oakland I"), OAR-2003-0061-0740, Attach. at 14, JAXX. It is well-settled that rebuttable presumptions preserve the agency's discretion to make individualized determinations and do not establish binding legal requirements. See Panhandle Producers v. Econ. Regulatory

Admin., 822 F.2d 1105, 1110 (D.C. Cir. 1987); Mada-Luna v. Fitzpatrick, 813 F.2d 1006, 1013-14 (9th Cir. 1987).

The 2003 Guidance further recommended nine factors that States and EPA could use to determine nonattainment area boundaries, including: emissions, air quality, population density and urbanization, traffic and commuting patterns, expected growth, meteorology, geography and topography, jurisdictional boundaries, and emissions controls. 2003 Guidance, Attach. 2 at 6-7, JAXX-XX. EPA stated that "[a]nalyses of these factors *may suggest* nonattainment boundaries that are either larger or smaller than the metropolitan area," thus demonstrating that presumptive C/MSA boundaries were just that, *presumptive* boundaries that could be modified based on an evaluation of all of the evidence. Id. at 7, JAXX (emphasis added). Although the 2003 Guidance "encouraged" States to provide an analysis of all nine factors to justify States' recommended boundaries, nothing in the 2003 Guidance compelled States to do so. Id. "[D]ocumentation *should* address how [the nine factors] affect the drawing of boundaries . . . [but,] *must* . . . explain [] how the boundary is consistent with § 107(d)(1) of the Act." Id. at 9, JAXX. Thus, the only requirement the 2003 Guidance specified is that States demonstrate that their nonattainment boundaries mirror the requirements of Section 107(d)(1). See id. at 7, JAXX (for boundaries that are smaller than the

MSA, States "must show both that violations are not occurring in the excluded portions of the metropolitan area and that the excluded portions are not source areas that contribute to observed the violations"). This requirement flows from Section 107(d)(1) itself.

Petitioners wrongly rely on CropLife America v. EPA, 329 F.3d 876 (D.C. Cir. 2003), and General Electric v. EPA, 290 F.3d at 377. The guidance document in CropLife, 329 F.3d at 883, categorically excluded certain types of studies from EPA's decision-making process. The guidance document in General Electric, 290 F.3d at 384, required permit applicants to submit risk assessments that conformed to one of two methods specified in the guidance. Unlike the guidance documents in CropLife and General Electric, the 2003 Guidance merely established a rebuttable presumption – not a categorical requirement or exclusion – to help determine appropriate nonattainment area boundaries. Additionally, the 2003 Guidance encouraged States to submit a wide range of information to ensure that the designations were based on a full and careful analysis of available information and relevant considerations, as applied to the specific facts and circumstances of each area. Also unlike CropLife and General Electric, the 2003 Guidance does not alter or amend the governing legal norm in Section 107(d)(1) that nonattainment

area boundaries must include both areas that violate the NAAQS and nearby areas that contribute to NAAQS violations. Thus, those cases are inapposite here.

Because the 2003 Guidance does not create or add to Section 107(d)(1)'s legal requirements, it is not a legislative rule subject to APA notice-and-comment procedures.

2. The 2003 Guidance Is Non-Binding on its Face, and Was Applied in a Non-Binding Manner

Contrary to Petitioners' argument, Indus. Br. 12, the 2003 Guidance is not facially binding, nor did EPA apply it in a binding manner. The 2003 Guidance plainly stated that it "*is not binding* on States, Tribes, the public, or EPA." 2003 Guidance at 2, JAXX (emphasis added). Although an agency's characterization of its own action is not controlling if it is "self-serving[]," see CropLife, 329 F.3d at 883, that is not the case here.[4/] Not only did the 2003 Guidance disclaim any binding effect, it did not require States to do anything, nor did it bind EPA to a particular course of action. The 2003 Guidance established a rebuttable presumption that States and EPA could decline to follow. This Court and others

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[4/] Petitioners' assertion that the agency's characterization has "no legal significance" is wrong. Indus. Br. 7. An agency's characterization of its own action "while not decisive, is entitled to respect." Nat'l Ass'n of Home Builders v. Norton, 415 F.3d 8, 14 (D.C. Cir. 2005). Petitioners' characterization of the 2003 Guidance as a "Directive," however, is contrary to the document's plain language and EPA's treatment of the guidance.

have rejected the notion that a rebuttable presumption amounts to a binding legislative rule, precisely because rebuttable presumptions leave an agency free to exercise its discretion. Panhandle Producers, 822 F.2d at 1110 ("This court and others have consistently stated that an agency may announce presumptions through policy statements rather than notice-and-comment rulemaking."); Ryder Truck Lines, Inc. v. United States, 716 F.2d 1369, 1377 (11th Cir. 1983) (no binding norm where "agency remains free to consider the individual facts in the various cases that arise").

As further evidence that EPA did not intend to bind itself or States, EPA announced its intention to "consider State, local, and Tribal recommendations of nonattainment area boundaries that deviate from metropolitan area boundaries based on various factors." 2003 Guidance, Attach. 2 at 6, JAXX. Additionally, recognizing that "there are situations where nonattainment of the PM2.5 NAAQS can arise on a very localized basis," the 2003 Guidance invited States to "further investigate the causes of the violation and the geographic extent of the violation" and to submit recommendations that "reflect a case-specific judgment." Id. Thus, far from declaring a binding norm, the 2003 Guidance demonstrated EPA's intent to exercise its discretion on a case-by-case basis.

Petitioners' claim that the 2003 Guidance "facially requires States to adhere to EPA's chosen framework" takes statements out of context and mischaracterizes EPA's intent. Indus. Br. 11. EPA's statement that nonattainment area boundaries that are smaller than the C/MSA "must show both that violations are not occurring in the excluded portions . . . and that the excluded portions are not source areas that contribute to the observed violation" did not create legally binding requirements. See 2003 Guidance, Attach. 2 at 7, JAXX. The quoted statement merely reiterated Section 107(d)(1)(A)(i)'s requirement that nonattainment areas include any area that "does not meet" or "that contributes to ambient air quality in a nearby area that does not meet)" the applicable NAAQS. See 42 U.S.C. § 7407(d)(1)(A)(i). Statements that reiterate a statutory requirement do not create new legal rights or duties. Indep. Equip. Dealers Ass'n v. EPA, 372 F.3d 420, 428 (D.C. Cir. 2004) (letter restating prior interpretation of regulations "cannot be fairly described as implementing, interpreting, or prescribing law or policy").

Further, although the 2003 Guidance "*encouraged*" States to justify their recommendations by addressing all nine factors in the 2003 Guidance, it did not *require* States to do so. See 2003 Guidance, Attach. 2 at 7, JAXX (emphasis added). In fact, some States submitted recommendations that lacked any analysis of the nine factors. See, e.g., WV Recommendation, OAR-2003-0061-0123; VA

Recommendation, OAR-2003-0061-0122. Evidently, States understood they were not required to follow the 2003 Guidance.

Petitioners mistakenly argue that the 2003 Guidance is nonetheless binding in a practical sense because "it led States 'to believe that failure to conform will bring adverse consequences.'" Indus. Br. 11 (quoting General Electric, 290 F.3d at 383). However, Petitioners ignore that unlike the 2003 Guidance, the guidance in General Electric was coercive because it *required* parties to conform their conduct to one of two methods of analysis. See 290 F.3d at 384. Petitioners identify nothing in the 2003 Guidance that required States to conform to EPA's recommended analysis or declared States' recommended designations would be subject to "summary reversal" if they failed to analyze the recommended factors. See Indus. Br. 11. Although the 2003 Guidance urged States to provide adequate justification, it made clear that EPA's designations would be based on the statutory requirement that "a nonattainment area must be defined not only to include the area that is violating the standard, but also to include the nearby source areas that contribute to the violation." 2003 Guidance, Attach. 2 at 4, JAXX; see 42 U.S.C. § 7407(d)(1)(A)(i).[5/] Absent any language compelling States to rely on

[5/] For example, although EPA disagreed with Virginia and West Virginia's recommended designations, which were not accompanied by a nine-factor analysis, EPA did not summarily reject them. EPA explained in detail why it was

MSA boundaries or perform a nine-factor analysis, the 2003 Guidance created no legal obligations; therefore, Petitioners' argument that the 2003 Guidance is binding lacks merit. See Nat'l Ass'n of Home Builders, 415 F.3d at 14.

Petitioners further fail to support their contention that EPA applied the 2003 Guidance in a binding manner. The only evidence Petitioners' rely upon – that EPA "universally applied the presumption and the nine-factor test" – is refuted by the record. Indus. Br. 12. The record shows that EPA applied C/MSA boundaries only where appropriate, after analyzing whether an area violates or contributes to violation of the PM2.5 NAAQS. 70 Fed. Reg. at 948. Only seven of the 39 nonattainment area boundaries were coextensive with the C/MSA boundaries.[6/]

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expanding nonattainment boundaries for those States to include counties that EPA concluded were contributing to violations in nearby areas. See EPA VA Modification, OAR-2003-0061-0253, JAXX-XX; EPA WV Modification, OAR-2003-0061-0339, JAXX-XX.

[6/] See Charleston, WV, TSD 6-111–6-118, JAXX-XX; Lancaster, PA, TSD 6-75, JAXX; Parkersburg, WV-OH, TSD 6-126–6-130, JAXX-XX; Reading, PA, TSD 6-92–6-95, JAXX-XX;Steubenville, OH-WV, TSD 6-130–6-132, JAXX-XX; Wheeling, WV-OH, TSD 6-133–6-136, JAXX-XX; York, PA, TSD 6-95, JAXX.

Further, the record shows that EPA did not apply the recommended factors as a rigid "test."[7/] Indus. Br. 12. As explained in the Designations Rule preamble, the 2003 Guidance:

> does not establish bright lines or cut-points for how a particular factor is applied. For example, [it] does not identify a set amount of a pollutant, or a specific level of commuting between counties, that would automatically require a county to be included in a nonattainment area as a contributing county.

70 Fed. Reg. at 947. Rather, EPA considered the recommended factors as "a list of nine examples of types of relevant information." Resp. Oakland I, Encl. at 14, JAXX. EPA's application of the factors reveals it appropriately exercised its discretion, on a case-by-case basis, to focus on factors it deemed particularly relevant to a particular area and to give less weight to factors that were not relevant. See infra at 126-39.

The 2003 Guidance is not binding, nor was it applied in a binding manner. Therefore, it is not subject to APA notice-and-comment requirements.

[7/] Indeed, Petitioners' claim that EPA applied the factors in a binding manner is undercut by their argument that EPA's application of the nine factors was too flexible. See States' Br. Part II; Indus. Br. Part V. At any rate, both arguments lack merit.

C. Petitioners Had Notice of and an Opportunity to Comment During the Designations Process

States and other interested parties, including Petitioners, had fair notice of the 2003 Guidance, EPA's correspondence with the States, and EPA's modifications to States' recommended designations, as well as any data, analyses, and information supporting the Rule, which were all posted on EPA's website and publicly available on EPA's on-line regulatory docket.[8/] In addition, States and other interested parties, including many Petitioners, submitted comments to EPA, which were considered by EPA and incorporated into the administrative record.[9/] Further, States and others, including Petitioners, commented on the designations in numerous administrative petitions for reconsideration, which EPA considered.[10/] Thus, the underlying goals of the APA were served, even if EPA did not undertake formal notice-and-comment procedures.

[8/] See EPA, Fine Particle (PM2.5) Designations Home, http://www.epa.gov/pmdesignations/regs.htm (last visited May 8, 2008); Regulations.gov, Docket for National PM2.5 Designations, http://www.regulations.gov/fdmspublic/component/main?main=DocketDetail&d=EPA-HQ-OAR-2003-0061 (last visited May 8, 2008).

[9/] See, e.g., Am. Lung Ass'n, et al. Comment, OAR-2003-0061-0383, JAXX-XX; Valley Watch, Inc. Comment, OAR-2003-0061-0377, JAXX-XX; West Virginia Chamber of Commerce, et al. Comment, OAR-2003-0061-0455, JAXX-XX.

[10/] See 72 Fed. Reg. at 62,414-15.

II. SECTION 107 GRANTS EPA ULTIMATE AUTHORITY FOR PM2.5 DESIGNATIONS; NOTHING IN THE TEXT OR PURPOSE OF THE STATUTE REQUIRES EPA TO DEFER TO STATE RECOMMENDATIONS THAT EPA DEEMS INAPPROPRIATE

A. The CAA Unambiguously Provides EPA With Ultimate Authority to Promulgate PM2.5 Designations

Explicit statutory language specifies that EPA bears ultimate authority and responsibility to promulgate the designations. Petitioners argue, however, that EPA violated the statute by not sufficiently deferring to the States.[11/] States' Br. 24-29; Oakland Br. 23. Petitioners' reading of the statute is plainly wrong.

The statute's text makes clear that States' initial designations are essentially recommendations. Section 107(d)(1)(A) directs States to submit a "list" of areas, "designating" them nonattainment, attainment, or unclassifiable, as those terms are defined. 42 U.S.C. § 7407(d)(1)(A). The States' "list" and "designations" are, implicitly, provisional unless and until EPA acts upon them. Unlike the designations that EPA ultimately promulgates, these State recommendations do not trigger subsequent actions under the CAA, such as the deadline for States to submit nonattainment SIPs for areas under Section 172(b). See 42 U.S.C. § 7502(b).

[11/] County Petitioners (Counties' Br. 29) and Industry Petitioners (Indus. Br. 32 n.10) have adopted the States' arguments.

By contrast, after EPA receives the State's "list," it must exercise independent judgment before promulgating the designations that do trigger other actions under the CAA. Section 107(d)(1)(B)(i) directs EPA to promulgate the designations, and provides time for EPA to do so. Section 107(d)(6) revised the timetable, but still provided over ten months for EPA to act upon State recommendations. Were EPA merely to accept State recommendations, and defer to the State in all respects without further ado, the time for EPA to act upon the State's list would be unnecessary.

Moreover, if EPA determines that State recommended designations or boundaries need modification, EPA is explicitly authorized to modify those designations or boundaries. Section 107(d)(1)(B)(ii) provides:

> In making the promulgations required under clause (i), *the Administrator may make such modifications as the Administrator deems necessary* to the designations of the areas (or portions thereof) submitted [by the State] under subparagraph (A) (including to the boundaries of such areas or portions thereof). Whenever the Administrator intends to make a modification, the Administrator shall notify the State and provide such State with an opportunity to demonstrate why any proposed modification is inappropriate.

42 U.S.C. § 7407(d)(1)(B)(ii) (emphasis added). This language plainly shows that Congress intended EPA to modify States' recommendations as necessary.

Examining relevant statutory language in context reinforces this conclusion. Nothing in the CAA plainly requires EPA to defer to States' initial recommendations. That EPA "may" make modifications when "necessary," and that States have an "opportunity" to demonstrate why EPA's modifications are inappropriate, does not diminish EPA's unambiguous statutory authority. To the contrary, Section 107(d)(1)(B)(ii), explicitly authorizes EPA to make modifications "as the Administrator deems necessary." Id.

This Court recently interpreted similar terms in other CAA sections to confer significant authority upon EPA. See e.g., Nat'l Ass'n of Clean Air Agencies v. EPA, 489 F.3d 1221, 1229 (D.C. Cir. 2007) (provision authorizing Administrator to modify regulations "as he deems appropriate" constitutes "extraordinarily broad" delegation of authority). Moreover, that States have the "opportunity" to rebut EPA's modifications contradicts any suggestion that EPA must defer to States regardless of whether State recommendations are inconsistent with Section 107(d). Were EPA required in all instances to "defer" to the State, then Congress would have not only provided an opportunity for States to convince EPA to alter its modifications, it would have required that EPA do as the States directed. Instead, Congress clearly placed the burden upon States to convince EPA that its modifications were inappropriate, not the other way around.

EPA's interpretation of Section 107 does not mean that EPA disregards State recommendations. EPA has acknowledged that "the CAA contemplates cooperation and coordination between the agency and states in the context of initial designations for a new or revised NAAQS." Resp. Oakland I, Encl. at 1, JAXX. Generally, "EPA will defer to the recommendations of the state in which the area is located when the recommendation is consistent with the requirements of the statute, but must make a modification when EPA concludes that the recommendation is inappropriate." Id. at 1-2, JAXX-XX. Indeed, Petitioners concede that nowhere in the statute is EPA directed to *accept* State recommendations. States' Br. 25. See also Cincinnati Gas & Elec. Co. v. Costle, 632 F.2d 14, 19 (6th Cir. 1980) (In construing CAA Section 107(d), "[t]here is no statutory requirement that the USEPA accept state recommendations."). Nevertheless, Petitioners insist that EPA violated Congress's "clear directive" that EPA *must defer* to States. States' Br. 27.

Petitioners point to no statutory language, however, that unambiguously requires EPA to defer to State recommendations. Rather, Petitioners' position seemingly stems from their belief that because Section 107(d)(1)(A) creates a process whereby States "go first" and submit a list of "initial" designations, and because Section 107(d)(1)(B) provides that EPA may "modify" those designations

as "necessary," Congress meant for EPA automatically to defer to States. Oakland Br. 23.

This faulty interpretation is compounded by Petitioners' confusion about the States' role in designations. Petitioners incorrectly assert that "the CAA's plain language give[s] states the primary responsibility for determining how counties should be designated based on monitoring results." States' Br. 24. To support this point, Petitioners cite Section 107(a) which imposes upon States a "primary responsibility," but that responsibility is not to designate areas, but rather to design a SIP that assures that air quality is achieved throughout the State. Section 107(a) provides:

> (a) Responsibility of each State for air quality; submission of implementation plan
>
> *Each State shall have the primary responsibility for assuring air quality* within the entire geographic area comprising such State *by submitting an implementation plan for such State* which will specify the manner in which national primary and secondary ambient air quality standards will be achieved and maintained within each air quality control region in such State.

42 U.S.C. § 7407(a) (emphasis added).

When viewed in context, even though States have a role in the process, the CAA makes clear that Congress provided EPA with ultimate authority and responsibility to promulgate final designations. EPA, not the States, has primary

responsibility to determine area boundaries. Moreover, the statute's purpose, to effect nationwide compliance with the NAAQS, would not be advanced by an interpretation of Section 107(d) that EPA should defer without limitation to State recommendations. Although States play an important role in achieving compliance with NAAQS, EPA is also responsible for ensuring that the nation achieves CAA goals. Thus, the CAA's structure provides EPA with the necessary tools to insure that all areas nationwide attain the NAAQS as expeditiously as practicable. In particular, the designation of nonattainment areas with appropriate boundaries is a necessary step towards development of SIPs that will achieve such attainment. The plain meaning of the statute is apparent, and Petitioners' "contrary reading . . . lacks the textual support necessary to overcome EPA's straightforward construction." NRDC v. Browner, 57 F.3d 1122, 1126 (D.C. Cir. 1995) (upholding EPA's interpretation of CAA under Chevron step one).

Finally, no relevant legislative history contradicts EPA's reading of the statute. Where, as here,"the terms of the statute are unambiguous" and there is no "clearly expressed legislative intent to the contrary," EPA's construction should be upheld without reaching Chevron step two. 57 F.3d at 1127, 1129 (citation omitted).

B. EPA's Statutory Interpretation that EPA Need Not Defer to States Was Reasonable and Should Be Upheld Under Chevron Step Two

Even if CAA Section 107(d)(1) were ambiguous as to the deference EPA should afford States' initial recommendations, EPA's construction should be upheld under Chevron step two, which requires the Court to defer to EPA's interpretation if it "is based on a permissible construction of the statute." 467 U.S. at 843. Under that test, EPA's interpretation of Section 107(d), that States make recommendations that EPA may alter as EPA deems necessary to meet the requirements of Section 107(d)(1)(A)(i) and the goals of the CAA, is rational and should be accorded deference.

Although the CAA directs States to make recommendations in the first instance, EPA's role is not merely to rubber-stamp those recommendations. The CAA provides that EPA "may make such modifications as the Administrator deems necessary" to State recommended designations. 42 U.S.C. § 7407(d)(1)(B)(ii). This delegation of authority from Congress is both "explicit" and "extraordinarily broad." Nat'l Ass'n of Clean Air Agencies, 489 F.3d at 1229. Thus, EPA's broad authority to construe Section 107(d)(1)(B)(ii) is entitled to great deference, as long as EPA's interpretation is not contrary to the CAA. 489

F.3d at 1230. Petitioners make no plausible argument that EPA's construction is inconsistent with the CAA's text or goals.

The statutory language clearly places the burden on the State to show that any modification EPA proposes is inappropriate. See e.g., 42 U.S.C. § 7407(d)(1)(B)(ii). Thus, because the statute provides EPA with ultimate authority to promulgate the designations, EPA reasonably treats State submissions as recommendations it reviews and modifies as necessary. Whatever the outer bounds of EPA's authority to modify State recommendations, at a minimum, EPA may modify recommended designations that are inconsistent with the text of Section 107(d) itself. See, e.g., Resp. Oakland I, Encl. at 2, JAXX.

EPA's role as the final decisionmaker is mirrored in other sections of the statute. For example, subsequent to Section 107(d) designations, States exercise their "primary responsibility for assuring air quality," 42 U.S.C. § 7407(a), by submitting a SIP to EPA "which provides for implementation, maintenance, and enforcement" of the NAAQS for all areas of the State. Id. § 7410(a). However, as with designations, Congress has assigned EPA the role of approving or disapproving SIPs, based upon State compliance with CAA requirements. See 42 U.S.C. §§ 7410(a), 7502(c). If EPA determines that an existing SIP is deficient, EPA can require the State to revise it under Section 110(k)(5). Id. § 7410(k)(5).

Thus, both States and EPA have roles respecting SIPs, and EPA's role is to assure that States comply with the statute. Similarly, States submit their recommended designations to EPA and EPA is explicitly authorized to make modifications it deems necessary. States have an "opportunity" to "demonstrate why any proposed modification is inappropriate," Section 107(d)(1)B)(ii), but that in no way contradicts EPA's authority and responsibility to make the final decision. Id. § 7407(d)(1)(B)(ii).

Petitioners' misplace reliance on PADEP v. EPA, 429 F.3d 1125 (D.C. Cir. 2005), which is distinguishable. States' Br. 25. In PADEP, one State argued that a county in a sister State should be in a nonattainment area inconsistent with recommendations of the home State. Thus, in PADEP the controversy was merely over *which* nonattainment area certain counties should be placed in. There, lacking any compelling evidence to the contrary, and because the recommendation was consistent with EPA's view of the facts in that instance, EPA accorded the home State's recommendations more deference than the recommendations of other States. This Court, "given [its] highly deferential standard of review" [saw] no basis for upsetting EPA's designations." Id. at 1129.

Here, however, Petitioners argue that they should not be included in nonattainment areas *at all*. Petitioners seize on language in PADEP concerning

the "weight" accorded to State recommendations within their own jurisdictions. Id.; States' Br. 25. This "weight" refers to that given the home State recommendations over a sister State's preference. That concept is not at odds with EPA's view that Section 107(d) does not compel EPA to defer to States' recommended designations in all cases. As in PADEP, EPA will defer to a State's preference if the facts warrant it. At the minimum, the State's preference must be consistent with Section 107(d)(1)(A)(i).

Even if Section 107(d) were ambiguous with respect to the precise status or role of State recommendations, the statute is clear that EPA may modify them when necessary, and that States themselves have the burden to demonstrate that EPA's modifications are inappropriate. 42 U.S.C § 7407(d)(1)(B)(ii). Even then, EPA decides whether States have met that burden, and whether any further modifications to area boundaries are warranted.

Under Chevron step two, which provides "considerable weight" to an agency's "construction of a statutory scheme it is entrusted to administer," EPA's reasonable interpretation that it need not defer to State recommendations must be upheld. 467 U.S. at 844.

III. USING C/MSAs AS PRESUMPTIVE BOUNDARIES FOR URBAN NONATTAINMENT AREAS WAS A RATIONAL DECISION WITHIN EPA'S AUTHORITY

Petitioners mistakenly argue that EPA violated the CAA, and usurped the States' role, by recommending that if a monitor in an urban area exceeded the PM2.5 standard, then all counties in the entire C/MSA should presumptively be included in that nonattainment area unless individual facts and circumstances showed otherwise. States' Br. 25-27; see also Counties' Br. 17-19; Oakland Br. 22-23; Indus. Br. 15 (adopting Counties' argument). Specifically, Petitioners contend that because neither Section 107(d)(1) nor Section 107(d)(6)(A) explicitly refers to C/MSAs, unlike Section 107(d)(4)(A), EPA has no authority to recommend C/MSAs as the presumptive boundaries for PM2.5 designations. States' Br. 26-27; Counties' Br. 17-18. Petitioners' conclusion that this difference in language bars EPA from recommending that States begin with the C/MSA presumption to evaluate appropriate PM2.5 nonattainment area boundaries is erroneous.

Section 107(d) requires EPA to designate "nearby" areas contributing to violations as part of the nonattainment area. 42 U.S.C. § 7407(d)(1)(A)(i). Because ambient PM2.5 at every monitor is comprised of particles that come from both nearby and more distant sources, perhaps hundreds of miles away, a key

objective of the designations process is to ascertain those nearby areas that contribute to violations. 2003 Guidance, Attach. 2 at 4, JAXX. Nearby contributing areas must be designated nonattainment to assure evaluation of that area's emissions sources in the development of the State's nonattainment SIP. Id. Emissions from more distant sources are addressed by other mechanisms, e.g., the impacts of interstate transport are addressed by Section 110(a)(2)(D), 42 U.S.C. § 7410(a)(2)(D).

The CAA is ambiguous on its face for this purpose. The CAA does not define the key operative terms "nearby," "contributes," or even "area." It neither prescribes what approach EPA should use to determine nonattainment area boundaries, nor prohibits EPA from recommending a presumption to help identify appropriate boundaries. EPA is therefore authorized to determine how best to ensure that areas contributing to violations in nearby areas are included in nonattainment designations, as required by the definition of "nonattainment" in Section 107(d)(1)(A)(i), 42 U.S.C. § 7407(d)(1)(A)(i).

EPA's decision to recommend the rebuttable presumption of C/MSA boundaries for evaluating urban PM2.5 nonattainment areas was a reasoned decision based on relevant facts, and should be upheld. The C/MSA boundaries set by OMB are an appropriate starting point because they represent OMB's

independent assessment of the geographic area comprised of the urban core and nearby economically integrated communities.[12/] 2003 Guidance, Attach. 2 at 4-5, JAXX-XX. OMB established these boundaries based on a complex analysis of economic and census data, and many of the considerations relevant to this analysis (e.g., population density, commuting patterns, and commercial development) affect the generation of PM2.5 and its precursors. Id. at 5, JAXX.

EPA determined that C/MSA boundaries would provide a suitable starting place for identifying nearby areas that likely contribute to violations in a given urban area and therefore would also encompass sources most likely to require controls to bring the area into attainment expeditiously.[13/] In reaching this conclusion, EPA considered: (1) analysis of the types of particles typically found at violating monitors, (2) the types of sources that typically emit such particles, and (3) the likely geographic distribution of such sources. 2003 Guidance, Attach.

[12/] EPA previously addressed one Petitioners' complaints that OMB's C/MSA boundaries may not be used for this purpose. See Resp. Oakland I, Attach. at 13-15, JAXX-XX.

[13/] EPA utilized the same boundary presumption for designations for the 8-hour ozone NAAQS, by analogy to the presumption that Congress directed by statute for the prior 1-hour ozone NAAQS in Section 107(d)(4)(A)(iv). See 69 Fed. Reg. 23,858 (Apr. 30, 2004) (8-hour ozone nonattainment designations). Although the ozone guidance was not directly challenged, this Court upheld EPA's designation in the only challenge to the 8-hour ozone designations, PADEP v. EPA, 429 F.3d at 1127.

2 at 4-5,[14/] JAXX-XX; TSD Ch. 3, JAXX-XX. First, EPA determined that speciated monitoring data in those areas with FRM monitors registering violations tend to have a higher proportion of particles indicative of urban sources (i.e., carbonaceous and nitrate particles rather than sulfates, the latter of which indicate both nearby and more distant sources of emissions). TSD Ch. 3, JAXX-XX; EPA Resp. to Midwest Ozone Group, et al. Pet. for Recons., ("Resp. to MOG") OAR-2003-0061-0746, at 2, JAXX.

Carbonaceous and nitrate particles are typically related to the "urban excess" in an area and reflect the probable local component of ambient PM2.5 in a given area rather than regional background of ambient PM2.5. TSD Ch. 3, JAXX-XX.

Second, EPA determined that carbonaceous and nitrate particles arise from human activities, such as motor vehicle use, home heating, and industrial activities, and that these activities typically occur most frequently or most densely in urban areas. Id. Third, EPA reasoned that sources producing these types of emissions are typically distributed not just in an urban core, but throughout the surrounding metropolitan area. Id.

[14/] See also id. at 5 n.6. The article, "Chemical Speciation of PM2.5 in Urban and Rural Areas," is at http://www.epa.gov/airtrends/aqtrnd03/pdfs/2_chemspecofpm25.pdf (last visited May 22, 2008).

C/MSA boundaries are also appropriate because of the distances that PM2.5 and its precursors can be transported. Therefore, "nearby areas" for PM2.5 are not only those in the immediate vicinity of a violating monitor. 2003 Guidance, Attach. 2 at 4-6, JAXX-XX. Like ozone, a significant fraction of PM2.5 particles results from secondary formation of particles in the atmosphere due to emissions of different precursor chemicals from a variety of nearby and distant sources. Id. EPA's analysis indicated that the local component of particles at a violating monitor were likely to result from a combination of sources throughout the urban area. TSD Ch. 3, JAXX-XX. Thus, it was logical to recommend C/MSAs as presumptive boundaries to ensure inclusion of these sources in evaluating nonattainment area boundaries. See Resp. Oakland I, Encl. at 13-16, and Resp. Oakland II, Encl. at 7-9, JAXX-XX, XX-XX.

Petitioners emphasize that in Section 107(d)(4)(A), Congress enlarged only the presumptive boundaries for ozone and carbon monoxide nonattainment areas to the C/MSAs. Oakland Br. 22; States' Br. 26-27; Counties' Br. 17-18. When that language was enacted, however, EPA had already designated areas for ozone and carbon monoxide. Section 107(d)(4)(A) explicitly required that those already designated areas be enlarged to full C/MSA boundaries by operation of law. 42 U.S.C. § 7407(d)(4). By making this change, Congress presumably recognized

that artificially small nonattainment areas could exclude sources that should be subject to SIP requirements. See Resp. Oakland II, Encl. at 8, JAXX. While Section 107(d)(4)(A) does not directly apply to PM2.5 designations, it provides a logical basis for EPA to suggest a comparable presumption for PM2.5, which, like ozone, is a pollutant that results from a broad range of urban sources. See id. at 7, JAXX.

If Congress intended to prohibit States or EPA from using C/MSAs as appropriate geographic starting points for evaluating contributions to PM2.5 violations, Congress could have done so. Silence in the CAA on the subject does not prohibit using C/MSAs as presumptive boundaries, but rather leaves to EPA the task of determining how to draw appropriate nonattainment boundaries.

Petitioners also argue that Congress actually rejected any such boundary presumption in 2004 when it amended the statute by adding Section 107(d)(6) and specified that PM2.5 designations be "based on" monitoring data. Oakland Br. 22-23; Counties' Br. 17; States' Br. 27. Even if Section 107(d)(6) precluded EPA from using information other than monitoring data (which it does not),[15/] the CAA still does not explicitly address whether EPA could recommend a rebuttable presumption to help evaluate the most appropriate boundary for the contributing

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[15/] See infra at 75-85.

"area" surrounding the location of a violating monitor. The absence of a specific instruction for EPA to use the same boundary presumptions for PM2.5 as for ozone does not mean that Congress rejected such a presumption. Because EPA had a rational basis for the presumption, this Court should uphold EPA's choice. Nat'l Ass'n of Clean Air Agencies, 489 F.3d at 1230 (silence does not infer preclusion where nothing in language or structure of statute showed Congress intended to preclude consideration of other factors).

Petitioners wrongly rely on Bates v. United States, 522 U.S. 23, 29-30 (1997) and Barnhart v. Sigmon Coal Co., 534 U.S. 438, 440 (2002), for the proposition that the absence of the same language in Section 107(d)(6) as found in Section 107(d)(4) prevents EPA from using C/MSAs as presumptive boundaries. Oakland Br. 23; Counties' Br. 18. In Barnhart, the Court was presented with differing language, enacted simultaneously, as to "entities to whom successor liability attaches," 534 U.S. at 454, and found that the statute was "explicit as to who may be assigned liability" Id. Thus, the Court relied on the plain meaning of each provision. Id. Bates contrasted two statutory provisions as to the elements of felonies in the misapplication of funds under Title IV of the Higher Education Act of 1965. 522 U.S. at 23, 29. The Court examined the statute's text and history, noted that the two provisions had been enacted simultaneously, and concluded that

the absence of the language "intent to defraud" in one of the provisions meant that no intent was necessary for an indictment under that provision. Id. at 30-31.

Here, the provisions in question were not simultaneously enacted by Congress, and instead have grown by accretion over time. Section 107(d) dates, in part, to 1977.[16/] Section 107(d)(4) dates to 1990[17/] and Section 107(d)(6) dates to 2004.[18/] In Section 107(d)(4), by operation of law, Congress enlarged the nonattainment boundaries for ozone and carbon monoxide to the C/MSAs *after* EPA had already promulgated those designations. 42 U.S.C. § 7407(d)(4). Although latest in time, Section 107(d)(6) does not explicitly address the issue of boundaries at all, clearly pertaining only to the timing of designations, and the reference to EPA promulgating designations "based on" monitoring data presumably only relates to the fact that Congress extended the otherwise applicable deadlines of Section 107(d) to allow adequate time for collection of monitoring data from a new network of monitors. This is hardly comparable to the simultaneously adopted provisions upon which Bates and Barnhart turned, and therefore does not necessarily indicate a conscious decision by Congress to

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[16/] Pub. L. 95-95, § 103, 91 Stat. 685, 687 (1977).

[17/] Pub. L. 101-549, § 101(a), 104 Stat. 2399, 2402 (1990).

[18/] Pub. L. 108-199, § 425(a), 118 Stat. 3, 417 (2004).

preclude by silence in one provision what it expressly required in another. Indeed, there would literally be no way for Congress to have revised the boundaries of designated areas by operation of law for PM2.5, as it did for ozone and carbon monoxide designations, because when it enacted Section 107(d)(6) there were no designated areas to expand. The legislative history for Section 107(d)(6) indicates that Congress did *not* intend to restrict EPA's authority to evaluate what areas are contributing to violations, through presumption or otherwise. See TEA-21 § 6102(c)(1), 112 Stat. at 464 ("Nothing in the previous sentence shall be construed as affecting . . . [EPA's] authority to promulgate the designation of an area as nonattainment, under section 107(d)(1) . . . based on its contribution to ambient air quality in a nearby nonattainment area.").

EPA's construction of the statute is permissible and EPA must be accorded great deference for its choice to recommend C/MSAs boundaries. Chevron, 467 U.S. at 843-44. That choice was reasonable and in furtherance of the statutory objective to designate as nonattainment nearby areas that contribute to a violation. Because of the complex nature of PM2.5, EPA was justified in recommending the rebuttable presumption of C/MSA boundaries to insure a more robust analysis of relevant information in the development of the proper designation for each area.

See Resp. Oakland II, Encl. at 7-8, JAXX-XX. Because the C/MSAs were a rational starting point in drawing boundaries, EPA's decision should be upheld.

IV. EPA'S USE OF INFORMATION IN ADDITION TO MONITORING DATA TO DRAW NONATTAINMENT BOUNDARIES WAS PROPER, RATIONAL, AND ADEQUATELY EXPLAINED IN THE RECORD

Petitioners mistakenly claim that by employing information or factors other than monitoring data, EPA exceeded its statutory authority. States' Br. 26-29; Counties' Br. 11-22; Oakland Br. 24-25; Indus. Br. 15. The premise of this argument is Petitioner's erroneous reading of Section 107(d)(6) to mean that EPA can "only" use monitoring data to promulgate designations.

The CAA requires each State to submit designations for the PM2.5 NAAQS "for each area within the State, based on air quality monitoring data collected in accordance with any applicable Federal reference methods ["FRM"]." 42 U.S.C. § 7407(d)(6)(A). Petitioners claim that this language unambiguously requires EPA to base designations on monitoring data and nothing else. Counties' Br. 10-22. However, as Petitioners concede, this Court has previously held that the phrase "based on" in other statutes or elsewhere in the CAA is ambiguous and has reviewed EPA's interpretation of "based on" under

Chevron step two. Counties' Br. 11. See Nuclear Energy Inst. v. EPA, 373 F.3d 1251, 1269 (D.C. Cir. 2004); Sierra Club v. EPA, 356 F.3d at 305-06.

Although Section 107(d)(6)(A) provides that PM2.5 designations be "based on air quality monitoring data" the statute does not say "only," "solely," "exclusively," or anything supporting Petitioners' narrow reading. Thus, the phrase is ambiguous and Chevron step two is the appropriate standard of review. Sierra Club, 356 F.3d at 306. EPA's use of analytical tools such as weighted emissions scores, and information related to the nine factors recommended in the 2003 Guidance, in addition to monitoring data, to determine nonattainment boundaries was eminently reasonable. Without this additional information, EPA could not have fully implemented Congress' intent to designate contributing areas nonattainment, rendering EPA's actions unreasonable.

In construing statutory intent, Section 107(d)(6)(A) cannot be viewed in a vacuum.[19/] Section 107(d)(6)(A) directs States to "submit designations referred to in paragraph (1)." 42 U.S.C. § 7407(d)(6)(A). Section 107(d)(6)(B) also refers to paragraph (1) by directing EPA to promulgate the PM2.5 designations "consistent with paragraph (1)." Id. § 7407(d)(6)(B). Thus, Section 107(d)(6) refers to

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[19/] As discussed, supra 39, Congress added Section 107(d)(6) to revise the deadline for EPA to promulgate PM2.5 designations.

designations promulgated under Section 107(d)(1), and the provisions operate together, not in lieu of one another. Reading these provisions together, clarifies that EPA had to employ methods in addition to monitoring data to meet CAA objectives.

The definition of "nonattainment" in Section 107(d)(1)(A)(i) is "any area that does not meet (or *contributes to* ambient air quality in a *nearby area* that does not meet) the national primary or secondary ambient air quality standard." 42 U.S.C. § 7407(d)(1)(A)(i) (emphasis added). Because the definition of "nonattainment" includes an area that *contributes* to the nonattainment of a nearby area, even if it is not itself violating, it would make no sense to limit EPA to only monitoring data to determine which areas should be included within a designated nonattainment area. The CAA specifically contemplates that areas that *contribute to* violations be designated nonattainment. Id. If the universe of areas that can be designated nonattainment is limited solely to areas with violating monitors, then there could be no areas designated nonattainment only because of their contribution, and the inclusion of areas that "contribute to" "nearby areas" in the definition of nonattainment would be superfluous. See e.g., Duncan v. Walker, 533 U.S. 167, 174 (2001) (in construing statute, court must give effect to all words and not render words insignificant or superfluous).

Moreover, nothing in the statute prohibits EPA from using other relevant forms of information to assess what areas contribute to violations. Indeed, the statute contemplates use of "information," not just monitoring data. Section 107(d)(1)(B)(i) provides that EPA may delay its promulgation of designations for up to one year, "in the event the Administrator has insufficient *information* to promulgate the designations." 42 U.S.C. § 7407(d)(1)(B)(i) (emphasis added). The word "information" is also used in Section 107(d)(1)(A)(iii), which provides that unclassifiable areas are those "that cannot be classified on the basis of available *information*." Id. § 7407(d)(1)(A)(iii) (emphasis added). By using "information" instead of "monitoring data," it is reasonable to assume that Congress meant to provide EPA with the ability to look at facts other than monitoring data in isolation. Similarly, Section 107(d)(3)(A), pertaining to redesignation, provides that EPA may use "air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate." Id. § 7407(d)(3)(A). To be able to use other information for purposes of redesignations, but not for designations, would be illogical. If that were the case, today's designation, based on monitoring data alone, could be changed the next day based on other information.

EPA's decision to recommend the consideration of relevant information in addition to monitoring data to determine what areas contribute to violations, was entirely reasonable and consistent with the CAA's directive to designate contributing areas nonattainment. For the same reasons EPA was not barred from using C/MSAs as starting points for boundaries (see supra 67-76), EPA was not barred from using information analogous to the factors listed in Section 107(d)(4)(A)(v), 42 U.S.C. § 7407(d)(4)(A)(v), in determining whether C/MSA boundaries should be departed from in the final nonattainment area.

That is not to say that monitoring data played a secondary role. Monitoring data was the cornerstone of the designation process and the starting point for analyzing the geographic boundaries of every designated nonattainment area. The first step was to determine, based solely on monitoring data, which counties violated the PM2.5 standard. 2003 Guidance, Attach. 2 at 3, JAXX. The next step was to determine the proper geographic scope of the nonattainment area, including both violating and contributing areas, using monitoring data and other information. Id. at 6-7, JAXX-XX.

Thereafter, States submitted recommended designations, and EPA modified State recommendations as necessary. Section 107(d) requires EPA to designate as nonattainment those nearby areas that contribute to PM2.5 violations. 42 U.S.C.

§ 7407(d). Because there are either no monitors in these "contributing" areas, or the monitors did not register violations, other factors were needed to determine if these nearby areas should nevertheless be included in the nonattainment designation. 2003 Guidance, Attach. 2 at 7, JAXX. Monitoring data was not "effectively supplanted" as Petitioners claim (Counties' Br. 20), but was used to identify which areas had violations. From there, and *based on* the monitoring data at those violating monitors and at other monitors, EPA examined what nearby areas might also contribute to the violation at that monitor, along with additional information and factors EPA recommended in the 2003 Guidance, and included those areas within the nonattainment area if the facts and circumstances indicated that these nearby areas contributed to violations. 2003 Guidance, Attach. 2 at 7, JAXX. Thus, the primary basis for each of EPA's nonattainment area designations was monitoring data.

Moreover, without considering information in addition to monitoring data, EPA could not know the size and boundaries of any nonattainment area. If there is a violating monitor, then some type of analytical framework is necessary to decide how far out from that monitor the nonattainment area should extend to include contributing areas.

This Court considered the phrase "based on" in Sierra Club v. EPA, 356 F.3d at 305-06. There, States had to demonstrate ozone attainment "based on photochemical grid modeling." Id. at 304. Thereafter, EPA adjusted the model to account for certain incongruities. Those adjustments resulted in a demonstration of "attainment" for certain States. Id. at 305. Sierra Club objected, claiming that "the demonstration was not 'based on' [the model] within the meaning of [the statute]." Id. at 305. This Court found that "based on" was ambiguous and did not "necessarily require that the attainment demonstrations rest *solely on* grid modeling." Id. at 305-06 (emphasis in original). The Court then found that photochemical modeling served as the "primary basis for the attainment demonstration" and that the "supplementary analysis" was not statutorily barred because it corrected the model's flaws and ensured that the "model achieved its statutory purpose." Id. at 306.

As in Sierra Club, the "primary basis" for EPA's PM2.5 designations was the monitoring data, while supplemental information and factors in the 2003 Guidance are the "adjunct for assessing" contribution from nearby areas, the assessment of which is statutorily required. 356 F.3d at 306. Using additional factors was necessary to ensure that EPA included in the designations all areas that Congress meant to be included. Because EPA did not "wholly abandon[]"

monitoring data or "effectively supplant[]" the data, the use of additional factors in conjunction with monitoring data is not statutorily barred. Id. As in Sierra Club, EPA articulated a reasonable explanation for the factors considered in conjunction with monitoring data. 356 F.3d at 306-07 (finding rational connection between data and agency's choice); 2003 Guidance, Attach. 2 at 4-7, JAXX-XX. Use of additional factors was not arbitrary, but necessary, to ensure that contributing nearby areas were not left out of the designation process. Id. at 307.

Petitioners mistakenly cite Nuclear Energy Institute v. EPA, 373 F.3d 1251 (D.C. Cir. 2004), in support of their premise that EPA improperly relied upon factors other than monitoring data. States' Br. 24, 27-28. In that case, EPA was directed by Congress to issue standards "based upon and consistent with the findings and recommendations of the National Academy of Sciences." Nuclear Energy Inst., 373 F.3d at 1269. Finding that the "based upon and consistent with" language left EPA with "some flexibility," this Court nevertheless found that EPA had gone too far by issuing a standard inconsistent with the Academy's report. Id. at 1273.

Petitioners' reliance on Nuclear Energy is inapposite because EPA was not directed to promulgate designations consistent with another entity's views, but rather to promulgate designations "based on" monitoring data and "consistent with

paragraph (1)" of the statute. 42 U.S.C. § 7407(d)(6)(A)-(B). As explained above, EPA did exactly that, by identifying nonattainmet areas with monitoring data and then employing a methodology that allowed for a reasoned assessment of which nearby areas contributed to the violation.

Petitioners incorrectly seize upon language in Nuclear Energy that hypothesizes that "had EPA begun with the Academy's recommendation . . . and then made adjustments to accommodate policy considerations not considered by [the Academy]," the Court may have upheld EPA's standard. Nuclear Energy Inst., 373 F.3d at 1273. Petitioners claim that this hypothetical supports their contention that EPA should have given States free reign to make recommendations for designations with no prior guidance from EPA and that instead EPA "turned the process on its head." States' Br. 28. Petitioners further claim that the designations were not "based on" monitoring data because EPA wrongly recommended that States use C/MSAs as a rebuttable presumption for urban nonattainment area boundaries. Id. Petitioners are wrong. EPA did not "turn the process on its head" or promulgate designations that ignored monitoring data. In fact, it is Petitioners who would turn this process around by arguing that States should be free to make recommendations in derogation of the explicit

requirements of Section 107(d), and insisting that EPA must automatically defer to such recommendations.

Tellingly, no Petitioner discusses how EPA should fulfill its statutory duty to identify and include areas that contribute to the PM2.5 violations of nearby areas. Instead, Petitioners simply want to limit nonattainment designations to the smallest possible areas. This ignores the direct statutory command to include nearby contributing areas in nonattainment designations. Under Chevron step two, EPA's interpretation of Section 107(d) is "a permissible construction" and EPA's use of other information in conjunction with monitoring data was rational and should be upheld. Chevron, 467 U.S. at 844 (considerable weight accorded agency's "construction of a statutory scheme it is entrusted to administer").

V. EPA PROPERLY DESIGNATED AS NONATTAINMENT ANY AREA THAT "CONTRIBUTES TO" A "NEARBY" VIOLATING AREA

Section 107(d)(1)(A)(i) provides that nonattainment areas must include "any area that does not meet (*or that contributes to ambient air quality in a nearby area that does not meet*)" the applicable NAAQS. 42 U.S.C. § 7407(d)(1)(A)(i). (emphasis added). Using its technical expertise, EPA developed an analytical approach to determine whether an area without a monitored violation, nevertheless "contributes to" the nonattainment of a "nearby" area. 2003 Guidance, Attach. 2

at 6-7, JAXX-XX. Petitioners argue, however, that the CAA required EPA to apply a materiality requirement or some other bright-line test for what level of contribution warrants inclusion in a nonattainment area. Counties' Br. 22-28; Oakland Br. 26-28.

EPA disagrees that the CAA requires such a bright-line test. Instead, EPA reasonably construed "contribution" to allow a case-by-case approach. Such an approach is particularly reasonable here where each area has unique facts. EPA reasonably decided that analysis of those facts would best be served by a case-by-case method, rather than a "one-size-fits-all" approach. 2003 Guidance, Attach. 2 at 6-7, JAXX-XX.

A. The Phrase "Contributes to" as Used in Section 107(d)(1)(A)(i) Is Ambiguous

Petitioners claim that the CAA itself requires that EPA prove that a nearby area's contribution is "significant" for EPA to designate it nonattainment. Counties' Br. 23. Petitioners' reading of Section 107(d), however, adds a word that does not appear in the text. Petitioners justify adding the word "significant" by relying on a dictionary definition that defines "contribute" as "to play a significant part in bringing about an end or result." Id. at 23-24. A review of other dictionaries finds varying definitions of "contribute." For example, The

New Shorter Oxford English Dictionary 498 (1993) defines "contribute," in relevant part, to "[p]lay a part in the achievement of a result." See also The American Heritage Dictionary 400 (4th ed. 2000) (contribute means "[t]o help bring about a result; act as a factor"); West's Legal Thesaurus/Dictionary 184 (1985) ("to help produce . . . help bring about, have a hand in, influence"). None of these definitions attempts to quantify "contribute," as Petitioners urge. Thus, the meaning of "contribute" is ambiguous and not capable of a Chevron step one analysis.[20/]

Looking at the phrase in its statutory context does not advance Petitioners' argument. Section 107(d)(1)(B)(ii) provides EPA with final authority to modify State recommendations as EPA deems necessary and to promulgate the designations. 42 U.S.C. § 7407(d)(1)(B)(ii). This indicates that Congress meant to leave to EPA's discretion the interpretation of "contributes to." If Congress had meant to provide EPA with more prescriptive direction regarding how to interpret the phrase "contributes to," Congress could have explicitly stated that EPA should include as nonattainment those areas that make a "major contribution," "minor

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[20/] The dictionary definition quoted by Petitioners qualifies "contribute" by adding "significant" to its meaning, but even if this Court were to adopt that definition, the addition of "significant" does little to clarify the standard EPA should apply as it begs the question about how to assess "significant."

contribution," "measurable contribution," or any other similar permutation. By leaving the phrase simply "contributes to," Congress delegated to EPA authority to determine, in its expert judgment, what would warrant sufficient "contribution" to a nearby area to require including that area within the boundaries of a designated nonattainment area.

By contrast, Congress has elsewhere specified that "contribution" from one area to another must be "significant." For example, in Section 110(a)(2)(D), 42 U.S.C. § 7410(a)(2)(D), Congress explicitly required SIPs to prevent emissions that " contribute significantly" to NAAQS' violations in another State. See also 42 U.S.C. § 7426(a)(1)(B); 42 U.S.C. § 7506a(a). A "significant" contribution is presumably larger than what would constitute "contribution." But even that term is ambiguous and leaves room for EPA's discretion. See Michigan v. EPA, 213 F.3d 663, 677-78 (D.C. Cir. 2000) ("significant" ambiguous, thus deference to Agency's interpretation). At bottom, therefore, what "contributes to" means is ambiguous, and EPA must interpret the phrase with respect to the PM2.5 NAAQS.

B. EPA Articulated A Rational Basis for a Case-By-Case Analysis for "Contribution"

The proper standard for review of EPA's interpretation of "contributes to" is under Chevron step two, which accords considerable deference to EPA's

interpretation as long as it is reasonable and consistent with the purpose of the statute. Chevron, 467 U.S. at 845. EPA reasonably developed an analytical approach to evaluate whether emissions in a particular area contribute to violations in another nearby area. 2003 Guidance, Attach. 2 at 6-7, JAXX-XX. This approach was rational considering the inherent nature of PM2.5 nonattainment, the method by which PM2.5 NAAQS are calculated, each area's complex mix of emissions and sources, and other relevant information. See supra 11-16. This approach was particularly rational, given that States and EPA were faced with boundary-drawing decisions nationwide, each with its own specific facts and circumstances. In this situation, with so many variables, a "one-size fits all" bright-line test would have been inappropriate. 2003 Guidance, Attach. 2 at 6-7, JAXX-XX.

Nevertheless, Petitioners argue that EPA's use of presumptions, factors, and other analytical tools was irrational and contravened the statute. Counties' Br. 26. Petitioners maintain that EPA should have developed a bright-line test to assess contribution. Id. at 28. To that end, Petitioners claim that " a 'contribution' must bear a causal relationship to the conditions of concern in the nonattainment areas." Id. at 25. Petitioners suggest that EPA needed to "prove" to their satisfaction that emissions in an area are actually causing the violation in a nearby area. Id.

However, nothing in Section 107(d) supports such a reading. The definition of "nonattainment" specifically includes any area that "contributes to" violations of NAAQS in a nearby area, not only those that literally "cause" such violations. Ambient PM2.5 at every monitor reflects the cumulative impacts of many types of emissions from many sources, near and far, that result in primary and secondary formation of particles. Imposing a "causal relationship" test would therefore frustrate the goal of the statute by narrowing its application. Moreover, it would be very difficult to prove such a connection to the degree of certainty Petitioners suggest is required. See e.g., Resp. Oakland II, Encl. at 5, JAXX.

EPA did not ignore questions of "materiality" and "causation," as petitioners assert. EPA's analytical approach was designed to evaluate these questions in a qualitative way by considering the facts and circumstances of each area. For example, through the comparison of emissions inventories of PM2.5 and PM2.5 precursors in each area and weighted emissions scores, EPA did compare the relative "materiality" of contribution from areas being considered for inclusion. See e.g.,TSD Ch. 3 & 4, JAXX-XX, XX-XX. Similarly, through considering information such as geographic location of the area with respect to violating monitors, meteorology, and speciated data, EPA evaluated the causal link that Petitioners advocate.

C. Petitioners' Argument that EPA Should Have Given More Weight to Potential Control Strategies Lacks Merit

Petitioners also argue that EPA should have made designation decisions premised solely upon what potential control strategies might be appropriate for areas encompassed within the boundaries of a given nonattainment area. Counties' Br. 25. Their theory, evidently, is that EPA should predetermine what controls a State might ultimately develop in its SIP for a given area, then calculate backwards what the boundaries of the nonattaiment area should be. By contrast, EPA's approach was consistent with the structure of the CAA in which States have the primary responsibility for developing SIPs. 42 U.S.C. § 7407(a). EPA explained why this approach was inappropriate. Resp. Oakland II, Encl. at 31, JAXX.

First, the analytical process EPA developed took into account the emissions inventory and likely sources of emissions in each area. Where appropriate, EPA considered near-term emission reductions from significant sources in those areas in evaluating contribution. See infra 96-99. Second, by inclusion of an area within the boundaries of the designated nonattainment area, it is incumbent upon the *State* to establish through the process of developing its nonattainment SIP, which sources throughout the area should be controlled and to what level, in order for the area to attain the NAAQS as expeditiously as practicable. 42 U.S.C.

§ 7502(c). Although it is up to States to determine which sources to regulate and to what extent,[21/] Section 107(d) does not require EPA to exclude contributing areas from designated nonattainment area boundaries in advance.

D. Section 107(d) Does Not Require Bright-Line Tests

Petitioners argue that EPA should have specified an "objective test, such as a numerical level of 'contribution.'" Counties' Br. 28. Significantly, nothing in Section 107(d) requires EPA to define "bright-line" tests for how much contribution justifies designating an area nonattainment. In other rulemaking actions under Section 110(a)(2)(D)(i), 42 U.S.C. § 7410(a)(2)(D)(i), EPA has used screening tools or thresholds for what constitutes "significant" contribution, and has quantified the emissions reductions necessary to eliminate that contribution by various means, such as the application of cost effective controls. See, e.g., "Clean Air Interstate Rule," 70 Fed. Reg. 25,162 (May 12, 2005). However, Section 110(a)(2)(D) explicitly requires that SIPs contain provisions to prevent interstate transport of pollutants "in amounts" that would constitute significant contribution to nonattainment, so quantification was necessary and appropriate in that context. Id. at 25,175. Moreover, Section 110(a)(2)(D) requires EPA to ascertain whether

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[21/] See Virginia v. EPA, 108 F.3d 1397, 1407-08 (D.C. Cir.), modified, 116 F.3d 499 (D.C. Cir. 1997).

emissions activities in whole States, perhaps great distances away, are significantly contributing to a violation in another State. 42 U.S.C. § 7410(a)(2)(D). Section 107(d) includes no directive to determine the precise "amount" of emissions that establish when an area "contributes to" another area.

A bright-line contribution test, whereby any monitor that registered readings below the standard but above an arbitrary number would automatically be deemed "nonattainment," would have been inaccurate for at least two reasons. First, it would not capture areas that contribute but do not have monitors. Second, a bright-line test could over-include and under-include areas without regard to whether emissions in the area contribute to violations in a nearby area. By contrast, EPA's approach utilized a variety of factors and analytical tools to better analyze whether a given area was contributing to a nearby area's nonattainment. For example, analyzing information about emissions in a given area, in light of factors such as wind direction, population density, geographic proximity, and traffic and commuting patterns, provided a more informative picture of the area's relative contribution to the violating monitor in a nearby area than would monitoring data alone. Indeed, many Petitioners implicitly concede this point by cherry-picking information other than monitoring data that serves their purposes. See, e.g., Resp. Oakland I, Encl. at 4-5, JAXX-XX.

EPA determined that the purpose of Section 107(d) would best be served by looking at each area with a violating monitor and surrounding areas on a case-by-case basis to evaluate which areas contribute to that violation. Petitioners' suggestion that EPA included areas that contributed only "one molecule" to a violation, or whose contribution was so minimal as to be insignificant, Oakland Br. 26-27, raises hypotheticals that do not exist. Petitioners may disagree with EPA's technical judgments and conclusions, and may challenge the record support for those determinations. However, with regard to Petitioners' statutory argument, it is simply incorrect that EPA's construction of the CAA allowed areas that made "no" contribution to a violating area be designated nonattainment. Instead, EPA concluded, based on the particular facts and circumstances of each area, that those areas included were contributing to the problem.

This Court recently acknowledged that EPA should be accorded great deference in its approach to designation decisions under Section 107(d). PADEP, 429 F.3d at 1129. Because EPA's interpretation of "contributes to" was both reasonable and consistent with the purpose of the statute, this Court should uphold that interpretation. Chevron, 467 U.S. at 843 n.11.

VI. EPA PROPERLY CONSIDERED EMISSIONS REDUCTIONS FROM FEDERAL PROGRAMS IN THE DESIGNATIONS

Industry Petitioners assert that, in determining which areas contributed to nonattainment in nearby areas, EPA improperly ignored emissions reductions that may result from two federal emissions control programs: (i) the NOx SIP Call; and (ii) the Clear Air Interstate Rule ("CAIR"). Indus. Br. 26-31. Petitioners' arguments lack merit. In evaluating whether areas contribute to nearby violations, EPA considered only near term emissions reductions that were certain to occur. As explained below, EPA reasonably declined to consider potential projected emissions from CAIR because CAIR was not final at the time of EPA's final designations, CAIR's cap-and-trade framework leaves significant uncertainty whether any particular source would choose to reduce emissions, and CAIR's compliance dates were too far in the future. EPA's decision is consistent with the statute and reasonable given the uncertainties of emissions reductions under CAIR. Also, EPA properly assessed NOx emissions reductions under the NOx SIP Call, because the NOx SIP Call does not require reductions of SO2, a key PM2.5 precursor.

A. EPA's Consideration of Emissions Reductions Is Consistent with the CAA

Section 107(d) directs EPA to designate as "nonattainment" both: (1) violating areas; and (2) nearby areas that contribute to those violations. 42 U.S.C. § 7407(d)(1)(A)(i). The statute does not, however, specify which years of data EPA must use in designating either violating or contributing areas. Moreover, Section 107(d) applies generally to any new or revised NAAQS. Thus, the approach for designations could vary depending upon the NAAQS. For example, a NAAQS for a different pollutant might measure violations over a one-hour period, rather than an annual period, or might include larger or smaller contributing areas, depending upon characteristics of the pollutant or sources that emit it. Accordingly, Congress left it to EPA to interpret the provision in the context of the specific NAAQS and the statute's purposes. See Chevron, 467 U.S. at 843-44.

Section 107(d)(1)(A)(i)'s directive to designate as nonattainment areas that "do[] not meet" the NAAQS is in the present tense. Further, in TEA-21 Congress extended the deadline for EPA to promulgate designations "to ensure that 3 years of air quality monitoring data . . . are gathered for use in the determination of area

attainment or nonattainment." TEA-21 § 6101(b)(1), 112 Stat. at 463.[22/] Thus, EPA reasonably determined that areas violating the NAAQS must be identified based on the current monitoring data and not projections of possible future ambient conditions. Specifically, EPA used three years of data from 2001-2003, or from 2002-2004 if a State met EPA's conditions for inclusion of 2004 data. 70 Fed. Reg. at 946-47.

Congress's directive in Section 107(d)(1)(A)(i) to designate areas that "contribute to" NAAQS violations in nearby areas is less clear. To identify which areas contribute to violations in a nearby area, EPA considered monitoring data and other information, including emissions inventories for PM2.5 and its precursors, weighted emissions scores, and the level of emissions controls on sources, among other factors. 70 Fed. Reg. at 947; TSD Ch. 5, JAXX-XX. In considering the level of emissions controls, EPA concluded that it was appropriate to consider only significant, near-term emission reductions from large sources that were certain to occur. Resp. to MOG, Attach. at 13, JAXX; e.g., TSD 6-225, JAXX. EPA's interpretation of Section 107(d)(1)(A)(i) to permit consideration of

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[22/] EPA determines compliance with the annual PM2.5 NAAQS by calculating the annual arithmetic mean of PM2.5 levels *over a three-year* period. 40 C.F.R. § 50.7. Therefore, the annual NAAQS requires three successive years of data to evaluate attainment.

emissions reductions that are in effect or certain to occur in the near future is a permissible construction of the statute.

Further, EPA's interpretation is consistent with the purpose of the designations – timely achievement of the NAAQS. EPA's designations trigger Section 172(a)(2)(A), which requires States to develop nonattainment SIPs that provide for attainment "as expeditiously as practicable, but no later than 5 years from the date" of designation. 42 U.S.C. § 7502(a)(2)(A). Based on the effective date of the Designations Rule, the statutory deadline for attainment is April 2010. Thus, for areas to attain by at least 2010, EPA reasoned that reductions are needed no later than the beginning of the 2009 emissions year. Resp. to MOG, Attach. at 13, JAXX. For EPA to base designations that are not certain to occur in time to impact air quality to ensure timely achievement of the NAAQS, as Petitioners' suggest, would subvert the purposes of the designations.

Based on its interpretation, EPA *did* exclude some areas that might otherwise have been considered contributing areas, because of expected near-term reductions of emissions from significant sources. EPA did so only for sources installing state-of-the-art controls that would significantly reduce emissions of concern, where such reductions were certain to occur prior to the presumptive outermost attainment date for PM2.5, i.e., within five years of the designations.

Resp. to MOG, Attach. at 13, JAXX. EPA's interpretation of Section 107(d) to permit designation of contributing areas, taking into account significant near-term emissions reductions, is a reasonable one that deserves deference under Chevron step two.

B. EPA Properly Considered Emissions Reductions Resulting From the NOx SIP Call

Petitioners' argument that EPA ignored NOx emissions reductions that would result from the NOx SIP Call, or impermissibly treated such reductions differently from the NOx emissions reductions that would result from the North Carolina Clean Smokestacks Act, Indus. Br. 30, is unfounded and ignores the reasons EPA articulated for assessing such impacts in the designation process.

Even those sources that elected to reduce NOx emissions pursuant to the NOx SIP Call, rather than to acquire allowances in lieu of controlling emissions, were under no obligation to reduce SO2 emissions through that program. SO2 is a significant precursor to PM2.5 formation, and the sources in question are often the largest single source of SO2 emissions in any given area. Resp. to MOG, Attach. at 8, JAXX. Thus, as EPA examined whether an area would contribute to violations even after NOx emissions reductions at a source, EPA reasonably concluded that the absence of appropriate SO2 controls on the source justified its inclusion within a nonattainment area. Petitioners discuss examples, Indus. Br.

20-21, that illustrate that EPA considered NOx reductions but in some instances concluded that countervailing considerations, such as a source's remaining SO2 emissions, indicated that an area should be designated nonattainment because it would continue to contribute to violations of the PM2.5 NAAQS. See, e.g., TSD 6-117, JAXX (evaluation of Charleston, WV).

By comparison, EPA concluded that large NOx reductions in conjunction with near-term SO2 reductions could justify excluding a source from the nonattainment area. For example, one such source had dramatically reduced NOx emissions by the end of 2004 and was also certain to reduce SO2 emissions by 90% by the end of 2008 through "state of the art" control measures. TSD 6-225, JAXX. Under such circumstances, and in light of other information concerning the area, EPA decided to exclude the county where the source is located from the nonattainment area. Id.

Petitioners' contention that EPA improperly considered NOx emission controls for a source in Jefferson County, Indiana, Indus. Br. 27, in fact exemplifies the flaw in Petitioners' argument. Petitioners quote selectively from EPA's response to a petition for reconsideration, suggesting that the sum total of EPA's explanation was: "EPA does not believe that such NOx emissions reductions alone are outcome determinative." Id. (quoting Resp. to MOG, Attach.

at 14, JAXX). In fact, EPA acknowledged that the NOx reductions were "relevant, and constitute a good step" toward attainment in the area, but concluded that at the time of the December 2004 designations, this source had not yet installed, or committed to install, appropriate SO2 emissions controls. Resp. to MOG, Attach. at 14, JAXX. Moreover, EPA determined on reconsideration that the source's later commitment to install SO2 controls would not be implemented until 2010, well beyond the presumptive outer statutory attainment date. Id. Petitioners' mere disagreement with EPA's conclusion does not evidence a failure to provide a reasoned basis for EPA's decision.

C. EPA Properly Concluded Potential Emissions Reductions Based on CAIR Were Too Speculative to Influence Designations

Petitioners' argument that EPA should have promulgated PM2.5 designations premised upon future projected NOx and SO2 emission reductions that may occur as a result of CAIR, Indus. Br. 28, is fatally flawed for numerous reasons.

First, at the time of the PM2.5 designations in December 2004, CAIR did not exist. While CAIR had been proposed, it was not finalized until March 10, 2005. 70 Fed. Reg. at 25,317. EPA could not prejudge the outcome of an ongoing rulemaking process, the result of which was uncertain. When CAIR was finalized, numerous changes had been made from the proposal – including ones regarding

significant issues such as the States covered by the rule, the NOx emission budgets, the methodology for allocating NOx allowances, and the NOx compliance date. Ironically, Petitioner MOG was among the parties that strenuously *opposed* CAIR.[23/] To assert that EPA should have assumed CAIR's existence at the time of the PM2.5 designations is both legally and factually erroneous.

Second, Petitioners wrongly assert that "at the time of the designations, EPA had available statutory provisions to ensure CAIR reductions. These provisions included findings of incompleteness and/or failure to submit, sanctions, federal implementation plans, and § 126 findings." Indus. Br. 29. Plainly, since CAIR did not exist at the time, EPA could not ensure CAIR reductions. Even if CAIR had existed at the time of the designations, however, neither CAIR nor the statutory tools for implementing it would have provided adequate assurance of timely reductions at particular EGUs that would have been sufficient for EPA to have properly taken CAIR into account in the PM2.5 designations.

First, CAIR and the tools for implementing it did not establish any requirements for particular sources to achieve particular reductions. CAIR instead required states to submit SIPs "that would eliminate specified amounts of SO2

[23/] See March 30, 2004 Letter from MOG, OAR-2003-0053-1064, JAXX.

and/or NOx emissions. Each State may independently determine which emissions sources to subject to controls, and which control measures to adopt." 70 Fed. Reg. at 25,165. EPA also provided in CAIR that "States may allow their EGUs to participate in an EPA-administered cap and trade program as a way to reduce the cost of compliance, and to provide compliance flexibility." Id. Thus, under CAIR, had it been in existence, there would have been no requirements that particular sources reduce emissions by specified amounts. States were free to choose how to comply with their overall state-wide emission reduction obligations, whether through command-and-control regulations aimed at specific sources or emission trading programs that would have allowed sources to choose whether to reduce emissions or obtain allowances. Consequently, even with a CAIR FIP in place based on a cap-and-trade program, there was no certainty about the reductions that specific sources would achieve. See 71 Fed. Reg. 25,328 (Apr. 28, 2006). Further, the CAIR FIP was not issued until more than a year after the designations. Id. Even had CAIR been promulgated at the time of the designations, Petitioners' argument that sufficient certainty existed to assume particular reductions at particular facilities is fallacious.

Third, even had CAIR existed at the time of the designations and provided certainty regarding emission reductions at specific sources, relying on its expected

impacts would still have been inappropriate because its compliance dates are later than the latest attainment date under the PM2.5 NAAQS. Specifically, the compliance dates in CAIR are December 31, 2010, and December 31, 2015, for SO2 emission reductions. 70 Fed. Reg. at 25,167. Both of these dates are beyond the outermost presumptive attainment dates for the PM2.5 NAAQS, i.e., "no later than 5 years from the date such area was designated nonattainment." 42 U.S.C. § 7502(a)(2)(A). Because the effective date of the PM2.5 designations was April 2005, the presumptive outer attainment date for nonattainment areas is "no later than" April 2010, over eight months before the initial CAIR SO2 compliance date and more than five years before the final SO2 compliance date. Inasmuch as achievement of the 2010 attainment date will be based upon monitoring data from 2007, 2008, and 2009, any 2010 compliance date is to late for EPA to have considered CAIR SO2 controls in the designations. See 72 Fed. Reg. 20,586, 20,600 (Apr. 25, 2007).

Fourth, Industry Petitioners' argument that EPA should have premised the designations upon the modeling done to support the CAIR proposal, Indus. Br. 30-31, is inconsistent with the CAA. Nothing in Section 107(d)(1) requires EPA to engage in or consider modeling to determine whether an area is violating or contributes to violations of the NAAQS. 42 U.S.C. § 7407(d)(1). Indeed,

Congress's 1990 amendments to the CAA eliminated statutory provisions authorizing EPA to designate areas based on whether an area would attain the NAAQS at a future date. 42 U.S.C. § 7407(d)(1)(B), (d)(4) (1988). Since Section 107(d)(1) in its current form does not contemplate designations based on future projected attainment status for any criteria pollutant, Petitioners advance an intepretation that Congress excised. Moreover, Congress added a provision, Section 107(d)(3), which authorizes EPA to redesignate areas if ambient pollution levels change and thus provides a mechanism for EPA to address the future attainment status of an area. 42 U.S.C. § 7407(d)(3).

Furthermore, while Petitioners acknowledge that EPA's modeling indicated that there would still be many areas violating the PM2.5 NAAQS even after full implementation of CAIR, Indus. Br. 30-31, Petitioners omitted that EPA also concluded in the proposed CAIR rule that local nonattainment area controls would be needed in addition to CAIR. See 69 Fed. Reg. 4566, 4596-99 (Jan. 30, 2004)("Clearly, for many areas, attaining the PM2.5 standard will require measures to address both local and regional transport." Id. at 4599.).

Finally, Industry Petitioners wrongly assert that EPA ignored impacts that CAIR might have on ambient PM2.5, and how those impacts might affect nonattainment areas. Indus. Br. 27-29. In responding to petitions for

reconsideration, EPA acknowledged that regional or national programs generally would provide emissions reductions to aid State efforts to attain the PM2.5 NAAQS. E.g., EPA Resp. to Dynegy Pet. for Recons. ("Resp. to Dynegy"), OAR-2003-0061-0739, at 5, JAXX. EPA also stated that if sources control emissions as a result of these programs, then States may take that fact into consideration during the SIP planning process. Id. Moreover, EPA stated that if areas attain the NAAQS more quickly as a result of impacts from potential regional programs, then the redesignations of such areas would be expedited. 70 Fed. Reg. at 948.

Because EPA's approach is both reasonable and consistent with the statute's requirement that areas attain as expeditiously as practicable, it must be upheld.

VII. EPA APPROPRIATELY INCLUDED NON-CONTIGUOUS AREAS THAT CONTRIBUTE TO NEARBY NONATTAINMENT

A. Congress Explicitly Allowed EPA to Designate "Portions" of Areas that Affect Air Quality in "Nearby" Areas

Petitioners' challenge to EPA's designation of non-contiguous townships is without merit. Indus. Br. 61. The CAA expressly authorizes EPA to designate portions of areas, rather than entire areas, whether such portions are contiguous or not. 42 U.S.C. § 7407(d)(1)(B)(ii). EPA's final designations may modify States' recommendations, including by modifying the boundaries of "areas or portions

thereof." Id. EPA can also redesignate an area or a portion of an area. 42 U.S.C. § 7407(d)(1)(B)(iv).

Further, the CAA directs EPA to designate as nonattainment any area "that contributes to ambient air quality in a nearby area" that does not meet the NAAQS. 42 U.S.C. § 7407(d)(1)(A)(i). Congress's use of "nearby" is telling. Congress did not explicitly limit designations to those that are "adjacent to," "contiguous with," or "bordering" nonattainment areas to which the portions contribute. Instead, Congress used "nearby," the common meaning of which may include both adjacent and nonadjacent areas. See Asgrow Seed Co. v. Winterboer, 513 U.S. 179, 187 (1995) ("When terms used in a statute are undefined, we give them their ordinary meaning.")

Because Congress clearly articulated its intent to allow "nearby" and "portion" to be used according to their common meanings, without reading into the CAA restrictions that are not stated in the statute, Chevron step one applies and the Court's inquiry is at an end. Chevron, 467 U.S. at 842-43.

B. EPA's Interpretation of Section 107(d) Is Reasonable

If, however, this Court finds that Congress has not spoken directly to the precise question, EPA's interpretation is a reasonable construction of Section 107(d) and should be accorded deference under Chevron step two. Id. at 483.

In establishing appropriate nonattainment area boundaries, EPA reasonably interpreted "nearby" areas as not limited to those immediately adjacent or contiguous to violating areas. See, e.g., TSD 6-156–6-168, JAXX-XX (discussing determination to include portion of Putnam County in Atlanta C/MSA nonattainment area). Rather, EPA evaluated on a case-by-case basis all counties within or adjacent to the C/MSA in which a violating monitor was found. Id.; see also 70 Fed. Reg. at 947.

While EPA's evaluation included the full C/MSA and adjacent counties, EPA did not apply these boundaries mechanically. If EPA's evaluation of the technical information indicated that only a portion of a county contributed to ambient air levels in a nearby area, EPA designated only such portion as nonattainment. See 42 U.S.C. § 7407(d)(1)(B) (authorizing EPA to promulgate designations for "portions" of areas).

In most instances, EPA designated as nonattainment entire counties that contribute to violations in a nearby area. See, e.g., TSD 6-333–6-335, JAXX-XX (discussing designations of Columbiana, Mahoning, and Trumbull Counties, Ohio). In other instances, however, EPA only designated portions of a county because EPA determined that "it would be inappropriate to include other portions of a county, merely because those portions lay between the large stationary source

and the remainder of the designated nonattainment area." 70 Fed. Reg. at 947. EPA explained that "the explicit wording of the Statute authorizes the Agency to designate either areas or 'portions thereof,' and to designate areas nonattainment when such areas either violate the NAAQS or contribute to such violations in a 'nearby' area" and emphasized that the CAA "does not require EPA to designate only areas that are contiguous." Resp. to West Virginia Dep't of Envtl. Prot. Pet. for Recons. ("Resp. to WV"), OAR-2003-0061-0735, at 2, JAXX.

C. EPA Appropriately Designated Freestanding Areas

Petitioners argue that EPA's designation of non-contiguous areas is arbitrary, because it assumes that emissions from EGUs bypass adjacent areas and create "islands" of nonattainment. Indus. Br. 62. However, the record shows that EPA had reasonable grounds for its decisions.

To illustrate their point, Petitioners include maps of the Columbus and Huntington-Ashland areas showing partial county designations for Coshocton, Adams, and Gallia Counties. Indus. Br. 63. EPA proposed to include all of Coshocton County in the Columbus nonattainment area because, of the eleven counties adjacent to the MSA, only Coshocton had "significant emissions, principally from the Conesville Power Plant located in Franklin Township." TSD 6-311, JAXX. EPA also proposed to include all of Adams and Gallia counties in

the Huntington-Ashland nonattainment area because, of the four adjacent counties, only Adams and Gallia had significant emissions that contribute to nearby violations. TSD 6-318, JAXX.

In response to EPA's proposed redesignations of these and similar areas, some States proposed designating small "freestanding" partial county areas, which would include large emissions sources as part of the nearby nonattainment area, but exclude the rest of the counties. Id. Thus, it would not be necessary to include additional areas whose sole purpose would be as "land connectors" from the sources of high emissions to the nearby nonattainment area. E.g., TSD 6-311, JAXX. EPA considered the States' suggestions and found, for example, that the Conesville Plant in Franklin Township represents about "99% SO2, 90% NOx, 78% Carbon" emissions for Coshocton County. TSD 6-313, JAXX. The sources in Monroe and Sprigg Townships represent "99% of the SO2, 93% of the NOx, 88% of the carbonaceous particles and 94% of the crustal emissions for Adams County." TSD 6-320, JAXX. Similarly, power plants in Cheshire Township represent "99% of the SO2, 97% of the NOx, 93% of the carbonaceous particles" emissions for Gallia County. Id. EPA concurred that the remaining portions of those counties were not contributing to nearby violations. Id.

EPA thus agreed with the States' suggested partial counties provided, for purposes of consistency, that the freestanding portions were based on a pre-existing boundary such as a township or a tax district. Id. Therefore, EPA's actions were not based on an arbitrary "belief," Indus. Br. 62, but on a review of technical information showing that most emissions were from sources in these freestanding areas rather than the remainder of the county. EPA's decision to designate non-contiguous partial counties is consistent with the CAA and the facts.

D. Prior Ozone Designations Do Not Preclude Designating Non-Contiguous Areas for PM2.5

Petitioners claim that EPA's designation of non-contiguous areas is arbitrary because EPA did not designate non-contiguous areas nonattainment for ozone. Indus. Br. 64-65. In support, Petitioners point to language from the 1991 Ozone designations and classifications rule that they contend is inconsistent with the approach EPA took here. 56 Fed. Reg. 56,694 (Nov. 6, 1991) ("the 1991 Rule"). However, this argument is based entirely on language taken out of context from three separate places in the 1991 Rule.

Petitioners' first example relates to portions of a C/MSA being designated as "either (1) separate nonattainment areas with a lower classification, or (2) adjoined to another, contiguous nonattainment area with the same or lower

classification." Indus. Br. 64 (quoting 56 Fed. Reg. at 56,700). The quoted language from the 1991 Rule recites facts where EPA promulgated boundaries smaller than the C/MSA for seven areas, explaining that such areas either became separate nonattainment areas or became adjoined to another nonattainment area. It is merely a factual statement and does not, as Petitioners believe, establish any requirements or policy. That EPA found in the 1991 Rule that specific facts warranted somewhat different treatment of non-contiguous nonattaining areas is irrelevant to the reasonableness of EPA's treatment of non-contiguous areas under the facts here.

Petitioners next cite to EPA's statement that when promulgating smaller boundaries, the designation "must not result in an illogical or excessive discontinuity relative to surrounding areas." Indus. Br. 64-65 (quoting 56 Fed. Reg. at 56,698). That statement is consistent with EPA's designations of non-contiguous areas for PM2.5, because such designations have a logical basis and are not excessively distant from the nonattainment area. For example, the areas Petitioners identify, while not contiguous to nonattainment areas, are in counties adjacent to violating areas. See Indus. Br. 63. Designating non-contiguous areas having a large pollution source captures the bulk of emissions from a county.

Therefore, EPA designated several partial county areas containing large EGUs. TSD 6-319, JAXX.

Petitioners take the final quote from the 1991 Rule out of context and misapply it to the PM2.5 designations. Indus. Br. 65. There, EPA stated that when a county was adjacent to a nonattainment area, the "portion of the county designated nonattainment must be contiguous with the adjoining nonattainment area, include the area surrounding the monitor, and include all adjoining areas with populations of sufficient density such that these areas are likely to contribute to the NAAQS violation." 56 Fed. Reg. at 56,701. That statement appears in the discussion of carbon monoxide, which is a more localized pollutant. Further, the statement refers to a county with a violating monitor, not, as here, a contributing county. The quoted statement from the 1991 Rule applied to a different fact situation and is not applicable here. EPA's prior designations for ozone do not bar EPA from reaching a different conclusion for PM2.5, particularly where different facts are involved.

Petitioners assert that EPA retained the 1991 Rule approach in the 2004 8-hour ozone NAAQS designations. Indus. Br. 65-66. EPA did not, however, preclude designation of non-contiguous areas. That none were appropriate for ozone does not mean that Section 107(d) forbids them.

E. EPA Used Monitoring and Modeling to Evaluate Contribution from Non-Contiguous Areas

Contrary to Petitioners' argument, Indus. Br. 66, EPA used monitoring data in determining which areas should be designated nonattainment. For each area, EPA first considered monitoring data to determine which areas violated the NAAQS. TSD Ch. 6, JAXX-XX. EPA also considered monitoring data when analyzing whether areas contribute to nonattainment in nearby areas. Id.

The CAA does not require modeling for designations, see 42 U.S.C. § 7407(d)(1), and, as evidenced in the TSD, other available information provides a robust analysis. TSD Ch. 6, JAXX-XX. However, EPA recognized that modeling was useful to address the conceptual question whether large sources could contribute to violations of the NAAQS in nearby areas. EPA conducted a series of air quality modeling analyses to evaluate the estimated impacts of representative EGUs on nearby monitors. Timin Memo, JAXX. In one modeling run, eight sources, including the Coshocton plant in the Columbus area, were "zeroed out" (i.e., pollutant emissions were assumed to be zero) to evaluate annual average air quality impacts from these power plants. The eight-source run analysis showed a significant impact ranging from 0.3 to 0.7 μg/m3 to ambient PM2.5 levels, which is notable, especially in an area that may be close to attaining the NAAQS, e.g., within 1 μg/m3 of attainment. See id. at 2, JAXX. EPA did another modeling run

including a larger range of sources of different sizes that showed comparable impacts on nearby monitors. Id. at 3. EPA's modeling analysis thus confirmed that EGU emissions have significant impacts on PM2.5 concentrations in nearby violating areas, in addition to the significant regional impacts at longer distances found in other assessments. Id. While EPA did not conduct a modeling analysis for every source, it had sufficient representative information on EGU emissions and their impacts. Petitioner's statement that EPA acted regardless of monitoring or modeling data is therefore simply inaccurate.

For these reasons, EPA's decision to designate portions of counties that contribute, but are not contiguous, to nearby nonattainment areas should be upheld.

VIII. EPA REASONABLY RELIED ON DATA BEFORE IT IN EVALUATING CARBON EMISSIONS FROM POWER PLANTS

Petitioners argue that EPA's PM2.5 designation process for areas containing EGUs was flawed because EPA relied upon incorrect estimates of carbon emissions from EGUs. Indus. Br. 16. Petitioner MOG raised this concern in an administrative petition for reconsideration filed March 28, 2006 – more than a year after EPA promulgated the designations, and nearly a year after the effective date of those designations. MOG Petition, JAXX-XX. In a detailed response, EPA explained its technical judgment that revised carbon emission estimates for

EGUs would not have affected the December 2004 designations. Resp. to MOG, JAXX-XX.

EGUs emit large amounts of SO2 and NOx, which react in the atmosphere to form PM2.5 particles in the form of sulfate and nitrate, and moderate amounts of elemental and organic carbon. Id., Attach. at 2, JAXX. These types of particles are found at violating monitors across the country. TSD Ch. 3, JAXX-XX. One objective in the PM2.5 designations process, therefore, was to determine whether areas where EGUs are located contribute to nearby NAAQS violations. Resp. to MOG, Attach. at 8-9, JAXX-XX; Timin Memo, JAXX. Using various analytical tools, EPA determined that certain EGUs *were* contributing to local nonattainment in nearby areas. See, e.g., TSD 6-70, JAXX (Johnstown, PA C/MSA); 6-137, JAXX (Birmingham, AL C/MSA); 6-242–6-243, JAXX-XX (Knoxville, TN C/MSA).

After the December 2004 designations, EPA revised the "speciation profiles," which are the basis for EGU emissions estimates, as part of the technical analysis for the December 2005 proposal for the 2006 revision of the PM2.5 NAAQS. Resp. to MOG, Attach. at 3 & Appx. A, JAXX, XX-XX. In this process, EPA determined that EGU carbon emissions estimates should be lower. Id. These carbon emissions are only a small portion of the total emissions from

EGUs. See, e.g., TSD 6-312, JAXX (annual emissions from an Ohio EGU of 99% of 97,412 tons of SO2, 90% of 24,560 tons of NOx, and 73% of only 1,385 tons of carbon from a county). Nonetheless, MOG seized upon this normal improvement and refinement of technical information as an opportunity to argue that EGUs do not contribute to NAAQS violations in nearby areas, and that EPA should revise the 2004 PM2.5 designations accordingly. MOG Petition at 1-2, JAXX-XX.

Petitioners' arguments mischaracterize EPA's previous responses to MOG. EPA's careful evaluation of this technical issue deserves deference. New York v. Reilly, 969 F.2d at 1152.

A. Petitioners Exaggerate the Significance of the Change

Petitioners are correct that carbon emissions were relevant to the designation process, were integral to each area's weighted emissions score, and were important in the urban excess evaluation. Indus. Br. 16; Resp. to MOG, Attach. at 1-4, JAXX-XX. However, Petitioners ignore that SO2 and NOx emissions were also integral to those analyses. TSD Ch. 3 & 4, JAXX-XX. In particular, each county's weighted emissions score included SO2 and NOx emissions; not surprisingly, counties with high SO2 and NOx emissions from EGUs had higher relative scores. The weighting of carbon emissions in a given area did not overcome the fact that a source emitting large amounts of SO2 and

NOx would contribute to nonattainment in a nearby area, even if that source's carbon emissions were zero. Were there any doubt of the impact that high SO2 and NOx emissions made in the original calculations, EPA's recalculation of the scores using the revised carbon emissions at the request of MOG substantiated that point. Resp. to MOG, Attach. at 10-12, JAXX-XX.

Petitioners' attempt to analogize EPA's revision of carbon emission estimates here to a factual mistake in modeling to designate SO2 nonattainment areas in PPG Industries v. Costle, 630 F.2d 462 (6th Cir. 1980), fails. Indus. Br. 18-19. The PPG case is readily distinguishable. First, the "error" in PPG involved a fact that had come to light during the designation process itself, not later. 630 F.2d at 465. Second, EPA acknowledged the error but decided to correct it in a subsequent rulemaking. Id. Because of the latter fact, the PPG court held that it could not rely on a "promised basis for its designation - a basis expected to emerge from a future rulemaking." Id. at 466. Here, the revised carbon emissions for EGUs did not arise during the designation process, and EPA did not conclude that any additional action was necessary to verify that the designations were correct.

B. EPA May Improve Information Without Revisiting Prior Decisions

Petitioners argue that EPA's estimates of EGU carbon emissions were so central to EPA's analysis that subsequent revisions to those estimates necessarily

invalidate the designations. Indus. Br. 16-18. In essence, Petitioners argue that no EPA decision is ever truly final, if later improvements in information suggest that a different outcome might have been appropriate in retrospect.

EPA disagrees that the overestimate of EGU carbon emissions was of such centrality, or of such a magnitude, that it would have altered the designations of areas with EGUs. Resp. to MOG, Attach. at 6-12, JAXX-XX. EPA considered the issue and determined that it would be inappropriate to revisit the designations. Id. at 4-6, JAXX-XX. Subsequent improvements in technical information are necessary and appropriate to support later EPA actions; they are not always an appropriate basis for reversing past decisions. Id. Such an approach would paralyze the administrative process and prevent EPA from fulfilling its statutory obligations, as information may be incomplete or imperfect and subject to later revision or supplementation. Id. Section 110(k)(6) authorizes EPA to correct "errors" in designations, but implicitly gives EPA discretion to make corrections only when a change of fact would warrant it. 42 U.S.C. § 7410(k)(6).

EPA appropriately relied upon the information before it at the time of the designations. EPA's revised EGU emissions estimates arose later, when it updated emissions inventories and analyses to support the *next* review of the PM NAAQS. Resp. to MOG, Attach. at 5, JAXX. An agency must base its decisions upon the

data before it; if agencies are constantly required to revise decisions when new or better data become available, the administrative process would never come to a close. See, e.g., Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 554-55 (1978); ICC v. Jersey City, 322 U.S. 503, 514 (1944); American Iron & Steel Inst. v. EPA, 115 F.3d 979, 1007 (D.C. Cir. 1997) (citing Vermont Yankee and Jersey City) (Agency not obliged to stop administrative process because a new piece of information emerged.).

EPA's review of potential impacts of the revised emissions estimates indicated that they would not have altered the designations. Resp. to MOG, Attach. at 10-12, JAXX-XX. Moreover, EPA concluded that there would be ample opportunity for revised EGU emissions estimates to play a role in the development of nonattainment SIPs, because States will use these revised estimates for developing appropriate control strategies and attainment demonstration modeling. Id. at 6, JAXX.

C. SO2 and NOx Emissions from EGUs Supported EPA's Designations

Petitioners incorrectly argue that, in response to the MOG Petition, EPA "changed" its rationale for including areas with EGUs in designated nonattainment areas. Indus. Br. 22. EPA first recommended considering emissions information for evaluating contribution to nonattainment in nearby areas in its 2003 Guidance.

2003 Guidance, Attach. 2 at 7, JAXX. There, in the designations process, EPA examined emissions data for counties under consideration and evaluated those with particularly high SO2 and NOx emissions to determine if they contributed to nearby violations. See generally TSD Ch. 6, JAXX-XX.

For example, EPA designated a portion of Walker County, Georgia, nonattainment in part because it had "high SOx and NOx emissions from a power plant" (most of 59,256 annual tons of SO2 and 23,982 annual tons of NOx). TSD 6-137–6-138, JAXX-XX. Similarly, EPA designated a portion of Coshocton County, Ohio nonattainment in part because of "significant emissions, principally from the Conesville power plant" (most of 97,412 annual tons of SO2 and 24,560 annual tons of NOx). TSD 6-311–6-312, JAXX-XX. EPA investigated this issue for all of the counties MOG identified, and verified that all but one had EGUs with high SO2 and NOx emissions. Resp. to MOG at 8, n.10, JAXX. The single exception was a county with a smaller source that EPA included for other reasons. Id.

Petitioners assert that separately considering SO2 and NOx emissions would "undermine" the "core purpose" of the weighted emissions scores, and implicitly suggest that EPA should have ignored EGU emissions other than carbon. Indus. Br. 22. Given that SO2 and NOx are significant precursors to PM2.5 formation,

EPA reasonably concluded that these emissions were important for evaluating which areas contribute to nearby violations. Resp. to MOG, Attach. at 7-10, JAXX-XX.

Indeed, as part of the designations process, EPA also conducted modeling to determine whether EGUs could contribute to nearby violations. Using a series of zero-out modeling runs, EPA examined whether eliminating all emissions, including NOx and SO2, from eight very large EGUs, and then from 29 EGUs of various sizes, would result in significant reductions in ambient PM2.5 at violating monitors. Timin Memo, JAXX. The modeling showed that such sources *could* contribute to nearby violations. Resp. to MOG, Attach. at 8-9 & Appx. C, JAXX-XX, XX-XX. Thus, in assessing each area for contribution to nearby violations, EPA carefully considered EGU emissions. Of the many EGUs nationwide, EPA only included that subset of sources that it deemed appropriate.[24/]

Petitioners assert that EPA should have conducted source-by-source modeling to confirm whether each EGU contributed to violations. Indus. Br. 23. Section 107(d) does not require modeling to identify areas that contribute to

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[24/] For example, EPA excluded areas when it determined that EGU emissions were small relative to emissions from other sources in the area. See, e.g., TSD 6-311, JAXX (Pickaway County, Ohio). EPA also excluded areas when it determined that EGU emissions were going to be drastically reduced. See, e.g., TSD 6-224–6-225, JAXX-XX (Stokes County, NC).

violations in nearby areas. 42 U.S.C. § 7407(d); Resp. Oakland II, Encl. at 12, JAXX. In any event, States must submit an attainment demonstration for each PM2.5 nonattainment area, supported by modeling, showing how the area will attain the NAAQS; EGU emissions will be evaluated in that process. 40 C.F.R. § 51.1007(a).

D. Other Factors Supported Including EGUs in Nonattainment Areas

Petitioners assert that other factors EPA recommended considering were not as important as emissions; therefore, revising the estimated carbon emissions overrides all other considerations in the designations. Indus. Br. 19-22. EPA agrees that emissions from EGUs, including SO2, NOx, and carbon, were an important consideration. Resp. to MOG, Attach. at 7, JAXX. However, as EPA explained, emissions were not the only information EPA considered; other factors were also relevant in many of the individual designations. Id. at 6-7, JAXX-XX.

Petitioners also protest that EPA included many areas with EGUs, notwithstanding that some factors – such as low population, population density, or commuting – militated against including the area. Indus. Br. 20-21. Petitioners fail to mention that often, based on these very considerations, EPA designated only portions of those areas in order to include only the location of the EGU that EPA concluded contributes to the nearby violation. See supra 107-08. Petitioners

likewise ignore that EPA did consider geography and topography. TSD 5-2 & Ch. 6, JAXX, XX-XX. EPA often concluded that an EGU was sufficiently near a violating area to require its inclusion due to contribution. See supra 107-08. Petitioners likewise ignore that the eastern United States has few topographical features sufficient to create separate airsheds that would impede the free flow of EGU emissions to a nearby violating monitor. Petitioners' assertions that EPA failed to consider the level of emissions control on EGUs are also incorrect. See supra 95-101. In short, Petitioners fail to support their claim that EPA did not consider factors other than emissions data. EPA considered other information, as appropriate, in making the designations.

E. EPA Recalculated the Weighted Emissions Scores

Petitioners complain that EPA recalculated the weighted emissions scores with data "not available during the designation process" for the initial December 2004 designations. Indus. Br. 25-26. This criticism is unfair. EPA recalculated the scores *at the behest of MOG* and other Industry Petitioners to evaluate whether using revised EGU carbon emissions estimates would have altered the weighted emissions scores and hence the designations. Resp. to MOG, Attach. at 10-12 & Appx. D, JAXX-XX, XX. These recalculated scores indicated that the relative contribution of the counties in question did not change in any material way. Id. at

12, JAXX. Petitioners now quibble with EPA's analysis, but EPA specifically examined what difference the change in estimated EGU carbon emissions would have made, to give careful consideration to the Petitioners' concerns. Petitioners protest that EPA's use of the carbon emissions estimates was not "harmless error," Indus. Br. 19, but EPA's recalculation of the weighted emissions scores indicates that, if it was error at all, it was in fact harmless, as the designations did not change following the recalculation.

IX. EPA REASONABLY AND CONSISTENTLY APPLIED THE SAME FACTORS FOR ALL AREAS, AND APPROPRIATELY CONSIDERED DIFFERENCES AMONG AREAS

State Petitioners argue that EPA acted arbitrarily in promulgating the Designations Rule because it did not treat "similarly situated" counties the same. States' Br. 29-37. Petitioners' argument fails for two reasons. First, EPA consistently applied the same analysis to each area of the country, appropriately considering area-specific facts and circumstances. Second, although Petitioners cast their argument as a broad attack on the Designations Rule as a whole, what they really argue is that EPA did not treat certain *New York* counties the same as other counties. However, Petitioners' argument relies on comparisons of New York counties to other counties that are not similarly situated. That EPA's designations for counties with different characteristics would be different is

entirely reasonable. Each of EPA's designations is supported by the record and should be upheld.

A. EPA Considered the Same Nine Factors for all Areas

In promulgating the Rule, EPA applied the same two-step process for identifying nonattainment area boundaries in all areas. 70 Fed. Reg. at 946/3. First, EPA identified violating monitors and designated those areas nonattainment. Id. at 946/3-47/1. Second, EPA analyzed counties within and adjacent to the C/MSA surrounding the violating monitor, using a series of nine factors and analytical tools, to determine whether those counties contribute to violations. Id. at 947/1-2. The record shows that EPA methodically followed the same two-step process and considered the same nine factors for each area. See generally TSD Ch. 6, JAXX-XX.

Thus, this case is fundamentally different than those cases the States cite that involve an agency applying different standards to similarly situated parties. For example, in Burlington Northern & Santa Fe Railway v. Surface Transportation Board, 403 F.3d 771, 776-77 (D.C. Cir. 2005), the Court invalidated an agency decision applying different standards of proof to similarly situated parties. Under the agency's standard, shippers could obtain vacatur of a prescriptive rate upon request, whereas carriers had to prove a change in factual

circumstances. Id. Unlike the agency in Burlington Northern, EPA did not consider one set of factors in some areas of the country and a different set in other areas. EPA considered the same nine factors consistently throughout the designations process, taking into account the specific facts and circumstances of each area.

The States' argument that EPA applied inconsistent standards is unsupported. Based on a single reference cherry-picked from the thousands of pages in the record, the States contend that EPA Region 1 in Boston used an "80% test" to eliminate certain counties from consideration, and that if EPA Region 2 in New York applied such a test to New York, Rockland County would have been dropped from further analysis based on its emissions score. States' Br. 33. The States' argument suffers from several flaws.

First, the States misread the TSD summary of Region 1's nine-factor analysis, which does not refer to an "80% test." The relevant passage provides:

> EPA developed a national process for assessing emissions based on emissions scores to identify candidate counties for a PM2.5 nonattainment designation. This process flags [C/MSA] and adjacent counties with relatively high cumulative emissions scores. For the NY-NJ-CT-PA [C/MSA], counties with cumulative emissions scores of ≤80% (as well as adjacent counties that have emissions scores that are ≥ the emissions score of the 80% [C/MSA] county) were considered to be counties with relatively high emissions. The 80% CSA cutoff counties are Morris, NJ and Dutchess, NY (cum emissions scores = 81.2 and 83.7 respectively; emissions score = 2.5).

TSD 6-6, JAXX. The above-quoted passage does not describe a nationwide 80% test that was used as a cut-off for analyzing counties for potential contribution. The passage indicates that EPA adopted a nationwide process of flagging counties "*with relatively high cumulative emissions scores*" as candidates for nonattainment designations. Id. (emphasis added). The 80% figure in the next sentence merely represents EPA's professional judgment about which counties in the New England portion of the NY-NJ-CT-PA C/MSA had relatively high emissions, in light of emissions data for those particular counties.

Further, the record is replete with evidence that EPA followed a case-by-case approach to examining emissions data and other information for each county, considering all relevant facts and applying its technical judgment to determine which counties contribute to nearby violations.[25/] Thus, the approach employed for the Region 1 counties is not anomalous or unique. Indeed, the States admit that there is no reference to an 80% test in EPA's analyses of counties in EPA Regions

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[25/] See, e.g., 70 Fed. Reg. at 947/3-48/1 ("individual facts and circumstances of each area must be considered in determining whether to include a county as contributing to a nonattainment problem"); TSD 4-3, JAXX ("Final decisions on attainment and nonattainment areas were based on the collective assessment of all of the nine technical factors."); RTC 3-44, JAXX ("our final set of boundaries of nonattainment areas will reflect an area-specific overall assessment of currently available technical information relating to nine specific factors").

2, 3, and 4. States' Br. 33. Moreover, the States cite no mention of an 80% test in any other portion of the entire record.

The only additional evidence the States cite is a statement with respect to counties in EPA Region 7 that a "*natural break* was observed for Missouri counties with an emission score of 9.1" and therefore counties with an emissions score of 9.1 were dropped from further analysis. TSD 6-343–6-344, JAXX-XX (emphasis added). Again, the quoted language merely refers to EPA's technical judgment as to the level of emissions that are likely to indicate a contribution to violations in nearby areas. The designations for Regions 1 and 7 were made using the same case-by-case approach that EPA applied in Region 2 and all other regions.

B. The States Rely on Comparisons of Counties that Are Not "Similarly Situated"

The States' argument that EPA acted inconsistently is, in their words, based on only a "superficial review" of EPA's designations. States' Br. 31. A closer look at the record, however, reveals that the States rely on comparisons of counties that are not similarly situated. Further, the States' comparisons often focus on a single factor, while ignoring other factors that EPA found to be significant. Given the significant variability in conditions that lead to PM2.5 formation, EPA would have been arbitrary to ignore differences among geographic areas or to employ a

single factor, such as design value, as a bright-line test to determine whether an area contributes to violations.

The States' argument that EPA should have treated all areas with the same design value identically, States' Br. 30-31, ignores other factors that might be relevant to EPA's designation for an area, given the unique facts and circumstances pertaining to that area.[26/] While a high design value is sometimes an indicator of potential contribution, it might also indicate localized PM2.5 pollution that is not likely to be transported and therefore would not contribute to nearby violations. Further, a lower design value does not necessarily demonstrate no contribution. The States' comparison of counties' design values in Table A, States' Br. 31, ignores important factors other than design value that influenced EPA's determination whether an area contributes to violations. The table below shows the factors the States' ignored:

[26/] Design value is described supra at 14.

County	Designation	Design Value ($\mu g/m^3$)	Factors Supporting Designation	TSD citation
Westchester, NY	**nonattainment**	**12.5**	• **high emissions ranking (9,680 tons SO2; 20,815 tons NOx)** • **moderately high population ranking (937,279 people; 2,165 pop/sq mi)** • **large numbers of commuters to areas exceeding NAAQS (107,023 to Manhattan, Bronx, and Union County, NJ)**	**6-26–6-29, JAXX-XX**
Lehigh, PA	attainment	14.6	• within Allentown MSA, which is attainment; not contributing to violations in Reading or Philadelphia C/MSAs • low emissions ranking compared to Reading/Philadelphia counties (6,027 tons SO2; 12,154 tons NOx) • relatively low population ranking (317,533 people; 915 pop/sq mi) • low traffic/commuters ranking (2,738 VMT; 3,266 commuters to Reading MSA; 771 commuters to Philadelphia C/MSA)	6-92–6-94, JAXX-XX; 6-17–6-21, JAXX-XX
Forsyth, NC	attainment	14.6	• low emissions compared to Guilford, NC (5,885 tons SO2; 14,522 tons NOx, 20,679; tons VOCs), and proactive controls for SO2, NOx, and VOCs • relatively small population/density (116,924 people; 517 pop/sq mi) • most commuting within county (28,605 out of 147,838 commute to areas exceeding NAAQS)	6-220–6-225, JAXX-XX
Hardin, KY	attainment	13.6	• outside of MSA • low emissions ranking (1,774 tons SO2; 7,695 tons NOx) • low population ranking (95,724 people; 152 pop/sq mi) • low commuter ranking (5,347 commuters to area exceeding NAAQS)	6-197–6-200, JAXX-XX
Madison, KY	attainment	13.5	• violations in nearby Fayette attributed to localized sources • low emissions ranking compared to Fayette (1,189 tons SO2; 5,512 tons NOx) • no large point sources • relatively small population/low population density for Lexington MSA (73,334 people; 166 pop/sq mi) • few commuters to area with violations (6,870 commuters to Fayette)	6-203–6-209, JAXX-XX

County	Designation	Design Value ($\mu g/m^3$)	Factors Supporting Designation	TSD citation
Cecil, MD	attainment	13.4	• low emissions (948 tons SO2; 5,502 tons NOx); lowest emissions score in C/MSA • low population/density ranking (90,335 people; 260 pop/sq mi) • low traffic/commuter ranking (1,340 VMT; 14,686 commuters to areas exceeding NAAQS)	6-17–6-21, JAXX-XX
Suffolk, NY	**nonattainment**	**12.3**	• **high emissions (45,379 tons SO2; 42,938 tons NOx); highest emissions score in NY metropolitan area** • **high population ranking (1,458,655 people; 1601 pop/sq mi)** • **high traffic/commuter ranking (7,414 VMT; 43,915 commuters to areas exceeding NAAQS)**	**6-26–6-29, JAXX-XX**
Northampton, PA	attainment	14.8	• located within Allentown MSA, which is in attainment; not contributing to nonattainment in Philadelphia or NY C/MSAs • high emissions (55,105 SO2; 24,051 NOx), but EPA concluded modifications at large source will greatly reduce emissions • low population ranking (273,324 people; 731 pop/sq mi) • low traffic/commuter ranking (2,132 VMT; 18,557 commuters to other areas)	6-5–6-8, 6-95, JAXX-XX, XX
Franklin, KY	attainment	14.1	• outside of Louisville MSA • low emissions ranking (601 tons SO2; 3,059 tons NOx)	6-197–198, JAXX-XX
Nassau, NY	**attainment**	**12.4**	• **high emissions ranking (12,587 tons SO2; 30,695 tons NOx); second highest emissions score in NY metropolitan area** • **high population/density ranking (1,344,892 people; 4,686 pop/sq mi)** • **high traffic/commuting ranking(6,875 VMT; 100,946 commuters to areas exceeding NAAQS)**	**6-26–6-29, JAXX-XX**
York, SC	attainment	14	• 9,714 tons SO2; 12,206 NOx • not contributing to nearby violations; within Charlotte MSA (attainment); near Greenville, SC (unclassifiable)	6-233, 7-22, JAXX, XX

The New York counties have more factors indicating contribution to nearby violations than the other counties in the table. The New York counties generally have higher emissions, higher population and population density, higher VMT, and larger numbers of commuters traveling into areas with violations. Notably, the high numbers of commuters indicate significant mobile source emissions, including PM2.5 and PM2.5 precursors like NOx, that contribute to high PM2.5 concentrations in the New York metropolitan area. See RTC 2-12, JAXX; TSD 6-26, JAXX. High levels of nitrate, due to high NOx emissions, are of particular concern in the northeast and upper Midwest regions. Urban Excess Data, OAR-2003-0061-0523, lines 21 & 32, JAXX; Particle Report at 3. However, the contribution from these mobile source emissions to violations in the Bronx and Manhattan could go unaddressed if Westchester, Nassau, and Suffolk counties were designated attainment.

The same combination of factors that indicate contribution to areas in New York is not present in the non-New York counties in the table, making their design values a less significant factor. For example, none of the other counties approach the New York counties' population density and commuting numbers. Further, the other counties generally have much lower emissions that the New York counties. Additionally, EPA concluded that emissions in Northampton, PA would be greatly

reduced as a result of closure of sources at a local EGU. TSD 6-95, JAXX. Thus, these counties differ from the New York counties. When viewed individually, EPA's designations are reasonable.

The States' comparison of weighted emissions scores for New York counties with those of counties in other C/MSAs further demonstrates the flaw in the States' argument that EPA acted inconsistently. States' Br. 33-34. The weighted emissions score is a tool that compares emissions of multiple counties *within a single C/MSA*. See generally, TSD Ch. 4, JAXX-XX; see supra at 25-26. EPA determined weighted emissions scores using calculations to apportion weighted emissions across all counties within the C/MSA such that the total equaled 100, and then used a similar approach to calculate the scores for the adjacent counties. TSD 4-2, JAXX; supra at 25-26. Accordingly, as demonstrated in the table below, the scores for counties in a three-county MSA will generally be larger than those for counties in a 44-county C/MSA:

County	**C/MSA**	**# of Counties in C/MSA**	**Emissions Score**	**TSD citations**
Oconee, GA	Athens	3	28.3	6-173–6-174, JAXX-XX
Sevier, TN	Knoxville	6	9.4	6-242–6-248, JAXX-XX
Jasper, GA	Atlanta	20	6.3	6-158, JAXX

Orange Westchester Rockland	NY-NJ-CT-PA	44	4.5 3.7 1.9	TSD 6-4–6-5, JAXX-XX[27/]

Because the New York counties are situated within a much larger C/MSA than the counties the States cite, the weighted emissions scores cannot meaningfully be compared.

None of the other examples to which the States refer evidence that EPA was unreasonable in its application of the nine factors. For example, the States ignore that EPA revised its characterization of emissions in Woodford County, KY based on additional data the State submitted showing that violations in nearby Fayette County were due to localized sources and not Woodford emissions. TSD 2-208–2-209, JAXX-XX. Consequently, EPA reasonably revised its assessment of the relative emissions level in Woodford. The States also fail to recognize that EPA cited additional factors in support of its decision to designate Woodford as attainment – namely, Woodford's small population (23,403) and relatively few commuters traveling to other counties (5,020). TSD 6-209, JAXX. In contrast, Suffolk, Nassau, and Westchester counties have high emissions, large populations,

[27/] The emissions scores that appear in the Region 2 tables were calculated based on all 44 counties in the CMSA. See TSD at 6-3, JAXX.

and large commuter numbers, demonstrating that those counties are not comparable to Woodford, KY.

The States similarly ignore information supporting EPA's decision to revise the designations of Jasper County, GA and Clearfield County, PA from nonattainment to attainment. States' Br. 35. Although EPA initially identified Jasper and Clearfield as nonattainment based on contribution from large emissions sources within these counties to nearby violating areas, EPA revised its decision based on data submitted by the States showing that the emissions from these areas were not contributing to violations. With regard to Clearfield, Pennsylvania submitted information demonstrating that mountainous terrain effectively isolated Johnstown from inter-urban transport of emissions from counties adjacent to the C/MSA, including Clearfield. TSD 6-70, JAXX. Similarly, Georgia submitted data showing that emissions from a source in Jasper were not as high as EPA initially thought. GA Additional Information at 5, OAR-2003-0061-0518, JAXX. EPA's decision to change a designation based on new data is reasonable.

Furthermore, neither Jasper, GA, nor Clearfield, PA is similarly situated to Orange County, NY. Both Jasper and Clearfield are relatively rural communities with low population and population density as compared to Orange. Jasper has 12,283 people at a density of only 33 people/square mile. TSD 6-167, JAXX.

Further, only 667 of Jasper's commuters travel into the Atlanta MSA. Id. Although Clearfield's population (83,203) is larger than Jasper's, Clearfield is rural with only 73 people/square mile, and a small number of commuters to nearby metropolitan areas (519). TSD 6-72–6-73, JAXX-XX. Orange County's population (356,773), TSD 6-28, JAXX, is 29 times Jasper's population and over four times Clearfield's. Additionally, Orange County's population density (437 people/square mile), id., dwarfs that of both Jasper and Clearfield. Orange also has many more commuters traveling to counties with violating monitors (12,171). TSD 6-29, JAXX. Thus, while the States note that Orange County's power plants may be a similar distance from violating monitors as are sources in Jasper and Clearfield, States' Br. 35, this similarity is irrelevant given other factors EPA found to be determinative of whether these counties contributed to violations in nearby areas.

Also unavailing is the States' argument that EPA's application of multiple factors was "unpredictable." States' Br. 36-37. Once again, the States base their argument on an ill-suited comparison of Orange, with several dissimilar counties. As demonstrated by the following table, the Orange emissions, population, and commuters dwarf the same numbers for the attaining counties cited in the States' Brief:

County	direct PM2.5 (tons)	SO2 (tons)	NOx (tons)	Commuters to nonattainment areas	Population	TSD citation
Orange, NY	4,410	30,875	22,978	12,171	356,773	6-26–6-29, JAXX-XX
Lee, AL	1,043	1,425	5,125	2,682	49,415	6-184–6-186, JAXX-XX
Russell, AL	1,344	2,550	5,718	7,051	118,123	6-184–6-186, JAXX-XX
Sevier, GA	711	433	2838	5,522	74,456	6-244–6-247, JAXX-XX
Fulton, OH	not available	878	5,105	5,825	42,573	6-328–6-329, JAXX-XX

Thus, the States' example fails to show any inconsistency in EPA's decision making.

In sum, EPA reasonably and consistently applied the nine factors to each geographic area.

X. EPA'S COUNTY-SPECIFIC DESIGNATIONS ARE RATIONAL AND SUPPORTED BY THE RECORD

The Court must uphold the designations if the Court can discern a rational connection between the facts found and choices made. "[S]o long as EPA 'acted within its delegated statutory authority, considered all of the relevant factors, and demonstrated a reasonable connection between the facts on the record and its decision,' [the Court] will not interfere with its conclusion." Appalachian Power, 135 F.3d at 802 (citation omitted). Although Petitioners may disagree with EPA's

ultimate conclusions, they fail to show that EPA's decision lacks a rational basis or statutory authority, or that EPA failed to explain its decision. Therefore, EPA's designations must be upheld.

A. New York Counties

New York argues that EPA improperly designated nonattainment Nassau, Suffolk, Westchester, Rockland, and Orange counties (collectively the "Outer Counties"). States' Br. 37-42. New York's argument lacks merit. As explained below, EPA: (1) adequately explained the Outer Counties' designations and responded to New York's comments; (2) reasonably revised the basis for the designations based on evidence received during the designations process; (3) properly relied on the large number of commuters in the five Outer Counties in finding those counties contributed to nonattainment in the NY-NJ-CT-PA C/MSA; and (4) consistently applied its nine-factor analysis to the Outer Counties, while considering the unique facts and circumstances in those counties.

1. EPA Adequately Explained the Basis for the Designations and Responded to New York's Comments

EPA modified New York's recommended designations, which included New York (Manhattan), Bronx, Queens, Kings, and Richmond counties, to also include the Outer Counties based on their contribution to NAAQS violations in

nearby areas. See TSD 6-24, 6-35, JAXX, XX. Manhattan, the Bronx, and New Haven, Connecticut have violating monitors. TSD 6-25, JAXX.

EPA's decision is fully explained in the record. EPA analyzed the counties within and surrounding the NY portion of the NY-NJ-CT-PA C/MSA to determine whether counties meeting the NAAQS or without monitors nonetheless contributed to violations elsewhere in the C/MSA. TSD 6-24–6-36, JAXX-XX. Specifically, EPA analyzed the nine factors and used the analytical tools EPA developed for assessing an area's contribution to nearby violations. Id.

The decisive considerations for the Outer Counties were emissions, population, traffic and commuting patterns, geography, and the presence of several large power plants. TSD 6-24, 6-35, JAXX, XX. Suffolk, Nassau, Orange, and Westchester were described as having "elevated emissions relative to the remainder of the C/MSA." Id. at 6-26, JAXX. Suffolk, Nassau, and Westchester scored "moderately high" for population. Id. at 6-29, JAXX. Nassau, Westchester, Suffolk, and Rockland have significant numbers of commuters. Id. at 6-30–6-31, 6-35, JAXX-XX, XX. Further, Orange has moderate population growth, id. at 6-32, JAXX, and Orange and Rockland both have large power plants, id. at 6-35, JAXX. Finally, Rockland is contiguous to Orange and Westchester and therefore surrounded by contributing counties. Id. at 6-24,

JAXX. Based on evaluation of data and information in relation to other counties within the C/MSA, EPA reasonably concluded that the Outer Counties contribute to violations in the New York metropolitan area and thus should be designated nonattainment. Id. at 6-24, 6-35, JAXX, XX.

New York's contention that EPA did not respond meaningfully to its comments is incorrect. EPA made point-by-point responses to New York's objections in the RTC. See generally, RTC 2-9–2-13, JAXX-XX. For example, in response to New York's comments that PM2.5 and precursor emissions from the Outer Counties had no impact in the violating counties, EPA stated that "the data presented by New York *does not rule out significant contributions to violating monitors in the Bronx and New York from local emission sources in Suffolk, Nassau, Orange and Rockland, and Westchester Counties*." RTC 2-11–2-12, JAXX-XX (emphasis added). EPA further explained:

> Large populations, large number of commuters to New York City, and limited transportation routes (especially Long Island) for goods and service delivery, and the presence of violating monitors near those major transportation routes are indicative of a significant mobile source contribution.

Id. at 2-12, JAXX-XX.

New York also commented that its meteorological analysis showed that the Outer Counties do not contribute to violations in the New York metropolitan area.

See RTC 2-10, ¶ 3, JAXX; see also NY Rebuttal, OAR-2003-0061-0470, Encl. at 4-5, JAXX. EPA responded that its own review of meteorological data "shows that annual average PM2.5 concentrations in the New York City area are influenced by emissions in any direction at various times, but are less likely to be influenced by emissions from Westchester, Suffolk, Nassau, Orange, and Rockland Counties." RTC 2-12, ¶ 3, JAXX. New York claims that this explanation contradicts EPA's designation of the Outer Counties based on contributions to Manhattan and the Bronx. States' Br. 41. However, that emissions from the Outer Counties are "less likely" to influence PM2.5 contributions in the New York City area does not mean that those contributions were "minimal" or that "Bronx and Manhattan in fact were not likely to be influenced by emissions from the Outer Counties," as New York contends. Id.

New York ignores the part of EPA's statement that PM2.5 concentrations in New York City area "*are influenced by emissions in any direction at various times*." RTC 2-12, ¶ 3, JAXX (emphasis added). As demonstrated by the pollution roses, which show wind direction, wind speed, and PM2.5 concentrations at different locations over time, PM2.5 concentrations at violating monitors in the NY metropolitan area were affected by emissions coming from the direction of the Outer Counties throughout the year at various times. Pollution

Roses at 227, 246, 250, 261, JAXX, XX, XX, XX; see supra 25. The pollution roses for violating monitors in Manhattan and the Bronx all show that on certain days pollutants were coming from the direction of Nassau and Suffolk (to the east of Manhattan/ Bronx), Rockland and Westchester (to the north, northeast of Manhattan/Bronx), and Orange (to the north, northwest of Manhattan/Bronx). Id. at 227, 246, 250, 261, JAXX, XX, XX, XX; TSD 7-38, JAXX. Because the design value for an area is calculated using *all* of the 24-hour PM2.5 concentrations recorded at that monitor to derive a 3-year annual average, all concentrations at the monitor, i.e., all of the dots on the pollution rose – even those 24-hour readings that are below the 15 $\mu g/m^3$ annual standard – contribute to the design value for the monitoring site. See supra 14-15.

Further, even if EPA's statement regarding PM2.5 concentrations in the New York metropolitan area is deemed unclear, the Agency's explanation as a whole is sufficiently clear to meet the minimal rationality standard applicable to agency action. As the Supreme Court has observed, "when an agency explains its decision with less than ideal clarity, a reviewing court will not upset the decision on that account if the agency's path may reasonably be discerned." Alaska Dep't of Envtl. Conservation v. EPA, 540 U.S. 461, 497 (2004) (internal quotation marks

and citation omitted). The basis for the Outer Counties designation are clearly discernible from EPA's statements in the RTC and elsewhere in the record.

Moreover, emissions data from the Outer Counties was only one of several factors that led EPA to include them within the NY-NJ-CT-PA nonattainment area. For example, EPA considered the large numbers of commuters who travel from the Outer Counties to the New York City area and the resulting mobile source emissions. RTC 2-12, JAXX. These emissions of PM2.5 and PM2.5 precursors contribute to violations in the New York area. EPA viewed the number of commuters as a separate factor to ensure that commuters who travel to nearby violating areas are included within the nonattainment area boundaries and ultimately subject to potential emission control strategies included in the State nonattainment SIP. See TSD 5-2, JAXX. If EPA ignored contribution from these mobile source emissions to the New York City area, it could interfere with timely achievement of the NAAQS.

New York's contention that "EPA *never* explained what *any* state had to show," States' Br. 41 (first emphasis added), to demonstrate that a county was not contributing to violations in nearby areas is disingenuous. The States' brief dedicates an entire section of the Statement of the Case and Facts to describing "EPA's Methodology for Designation." States' Br. 6-8. There, the States detail

EPA's 2003 Guidance, which explained that EPA intended to make designations by evaluating all areas within and adjacent to the C/MSA surrounding a violating monitor in light of information relating to the nine factors EPA considered relevant to evaluating contribution to nearby violations. 2003 Guidance, Attach. 2 at 6-7, JAXX-XX. Additionally, EPA's letter notifying New York of EPA's modifications further explained how EPA used the nine factors and analytical tools to assess areas for inclusion or exclusion. EPA NY Modification, OAR-2003-0061-0343, JAXX-XX. Thus, New York cannot seriously contend that EPA never explained how it would determine designations.

New York's real complaint is that EPA used a combination of factors and analytical tools and not a bright-line test to determine nonattainment area boundaries. However, nothing in the CAA requires EPA to use a bright-line test, nor did EPA conclude that a bright-line was appropriate, for making designations. EPA reasonably applied a case-by-case approach that evaluated a variety of factors and information to determine contribution given the variability in PM2.5 sources and the meteorological, topographical, and other conditions that contribute to PM2.5 formation. See supra at 88-90; RTC 2-11, JAXX.

New York's reliance on City of Vernon v. FERC, 845 F.2d 1042, 1048 (D.C. Cir. 1988), is misplaced. In that case, FERC rejected the City's claim that a

power company's behavior was anti-competitive or unduly discriminatory on the grounds that the City had not made a prima facie case that it was "similarly situated" to customers who currently enjoy the "same service." See id. at 1046. The D.C. Circuit remanded the decision because FERC provided *no* explanation of what would make a prima facie case. Id. at 1048. Unlike the situation in Vernon, here there is ample evidence explaining the factors and information EPA deemed relevant to determine "contribution." E.g., 2003 Guidance, Attach. 2 at 6-8, JAXX-XX; EPA NY Modification, JAXX-XX; TSD Ch. 5, JAXX-XX. Thus, Vernon is distinguishable.

2. EPA Reasonably Revised the Basis for the Outer Counties' Designation

The alleged "sudden" and "unexplained" change in the basis for EPA's nonattainment designation for the Outer Counties, States' Br. 38, in fact, was nothing more than a routine adjustment to EPA's findings based on the information exchange with States that CAA Section 107(d)(1) contemplates. EPA's letter notifying New York of EPA's proposed modifications to the State's recommendations, gave multiple reasons for the Outer Counties' nonattainment designation, including: emissions, population, traffic and commuting patterns, large point sources in Orange, and an analysis of pollution roses and back

trajectories showing contribution from the Outer Counties to a New Haven monitor. EPA NY Modification, JAXX-XX; TSD 6-24, JAXX.

Pursuant to Section 107(d)(1), EPA provided New York and other States an opportunity to respond to EPA's modifications. 70 Fed. Reg. at 946. During this process, Connecticut provided EPA with information showing that the New Haven monitor was a "microscale" site, i.e., the monitor is representative of an area that is no more than 100 meters away. RTC 2-12, JAXX; Connecticut TSD, OAR-2003-0061-0382, JAXX-XX. After its review of Connecticut's submittal, EPA "determined that the violating monitor in New Haven County is not representative of community exposure," and thus properly revised the basis for its New York designation determination. TSD 6-35, JAXX.

Although EPA revised its findings regarding the New Haven monitor, EPA concluded that this change did not affect EPA's initial nonattainment designation for the Outer Counties. Id. Contrary to New York's assertions, EPA did not simply substitute another theory for designating these counties. States' Br. 38. The contribution from the Outer Counties to the New Haven monitor was *only one* of multiple factors EPA relied upon in designating these counties nonattainment. EPA determined that the *other* factors it relied upon to support its June 2004 modification to New York's designations – namely, high emissions, large numbers

of commuters, and large point sources – demonstrated contribution to violating monitors in the New York metropolitan area. See TSD 6-35, 6-24, JAXX, XX. Additionally, EPA found that high emissions in Orange and large numbers of commuters in Rockland, and large power plants in both counties, also warranted a nonattainment designation. TSD 6-35, JAXX. In short, EPA concluded that the other factors it relied upon remained unchanged and the revised findings regarding the New Haven monitor did not affect the Outer Counties' designation. Id.; see also RTC 2-12, JAXX.

That EPA revised its proposed modification to New York's recommended designations based on additional data received from States is exactly what Section 107(d)(1) contemplates. The CAA does not require EPA to give a State multiple opportunities to comment anytime EPA alters a rationale for modification of designation based on information received from States. Moreover, New York had the opportunity to comment on the reasons EPA provided for designating the Outer Counties nonattainment.[28/] EPA made clear that contribution to the New Haven monitor was only one among several factors supporting the Outer Counties' nonattainment designation. EPA NY Modification, Encl. at 1-2, JAXX-XX. New

[28/] New York also was free to file an administrative petition for reconsideration, like many other Petitioners in this case, but elected not to do so.

York's belief that these other reasons, namely emissions data, population, traffic and commuting, related solely to contribution to violations at the New Haven monitor, and not to other violating monitors in the New York area, is simply incorrect. Further, New York cannot argue it was surprised by EPA's revised conclusions regarding New Haven, since New York had conferred with Connecticut and even shared in Connecticut's view that the New Haven monitor was a "microscale monitor." See NY Recommended Designations, OAR-2003-0061-0092, at 2, JAXX (New York consulted with Connecticut and believes the States' nonattainment recommendations are consistent); NY Rebuttal, Encl. at 1, JAXX (arguing that Stiles Street monitor is "microscale").

EPA did not "ignore" New York's objections to EPA's proposed modifications. See States' Br. 38. EPA considered the objections, but concluded that it disagreed with them. RTC 2-11–2-13, JAXX-XX. The Court's role is not to second-guess EPA's resolution of conflicting technical data. NRDC v. EPA, 824 F.2d 1211, 1216 (D.C. Cir. 1987) ("it is not for the judicial branch to undertake comparative evaluations of conflicting scientific evidence"). As discussed above, EPA's designations for the Outer Counties are reasonable and fully explained in the record. Therefore, EPA's designations are entitled to

substantial deference. Hüls Am., Inc. v. Browner, 83 F.3d at 452 (citation omitted).

3. EPA's Reliance on Commuting Data Is Supported by the Record

New York's argument that EPA incorrectly relied on commuting data in designating the Outer Counties similarly relies on disagreements regarding the interpretation of technical data and inaccurate characterizations of the record. New York challenges EPA's determination that Westchester, Nassau, and Suffolk ranked "high" for commuting when only 13% of Outer County commuters drove to Manhattan. States' Br. 38. However, EPA based its conclusion not on the *percentage* of Outer County commuters driving to Manhattan, but rather on the large *number* of commuters to Manhattan and other locations within the New York metropolitan area. Specifically, EPA considered 100,919 commuters from Nassau, 107,023 commuters from Westchester, 43,915 commuters from Suffolk, and 23,620 commuters from Rockland, all commuting to Manhattan, the Bronx, and Union County, NJ, TSD 6-29–6-30 (table), JAXX-XX, to be an indicator of "significant mobile source contribution" from these counties in the New York metropolitan area. RTC 2-12, JAXX. New York's emphasis on the percentage is merely another way of interpreting relevant technical data. However, New York

cannot dispute EPA's finding that large numbers of commuters traveled from Nassau, Westchester, and Suffolk to the New York metropolitan area.

New York further argues, incorrectly, that Rockland should have been designated attainment because EPA stated that its commuter numbers were "low." States' Br. 39. While EPA initially characterized the number of commuters from Rockland into Manhattan as low, TSD 6-31, JAXX, EPA later revised its conclusion, finding that Rockland's 17,025 commuters into Manhattan were "significant," id. at 6-35, JAXX. EPA's revised judgment regarding Rockland's commuters is consistent with EPA's treatment of other counties within the New York C/MSA. See e.g., TSD 6-30 (table), JAXX & 6-31, JAXX (16,035 commuters from Union County, NJ to Manhattan is "significant"). It is entirely reasonable for EPA to revise its findings after reviewing the data between its preliminary notice of modifications to State designations and EPA's final decision.

Additional information New York submitted further supports EPA's conclusion that the 232,000 commuters traveling from the Outer Counties to Manhattan contribute to violations in the New York metropolitan area. The State submitted data showing that 4.3 million VMT in Manhattan originate from Nassau, Suffolk, and Westchester. NY Rebuttal, Encl. at 8 (table 3), JAXX. Additional data showed that a large majority of those commuting to New York

City from areas outside of New York City are commuting by car. See Supp. NY Maps, Charts, & Tables, OAR-2003-0061-0183 (Fig. 14), JAXX (72.3% drive alone, 9.6% carpool). This data further demonstrate a mobile source contribution from commuters in the C/MSA who reside in counties outside of Manhattan. Thus, EPA's conclusion that mobile source emissions from 230,000 commuters from the Outer Counties to Manhattan contribute to violations in the New York area is reasonable and supported by the record.

Finally, New York's contention that EPA treated Orange the same as the other Outer Counties, even though it had fewer commuters, ignores that EPA did not base Orange County's designation on commuting. EPA designated Orange nonattainment because it has significant emissions. TSD 6-35, JAXX. In fact, with the exception of NOx in Kings County, the Orange emissions are higher than emissions from Kings and Richmond, two counties New York recommended nonattainment based on their contribution to violations in the New York metropolitan area. TSD 6-25–6-26, JAXX-XX. In addition, Orange County's emissions score, 4.5, was the fifth highest out of over 30 counties. TSD 6-26, JAXX. Thus, EPA did not "group[] all five outer counties together and treat[] them as one despite their differences." States' Br. 39. The record shows EPA

considered the facts and circumstances of each county, individually, and relative to the other counties in the C/MSA. See e.g., TSD 6-24, 6-35, JAXX, XX.

4. EPA's Treatment of the Outer Counties Is Consistent with Other Counties

New York's attempt to compare the Outer Counties to Ocean County, NJ and Dutchess County, NY is also unavailing. New York's comparison ignores information showing that Ocean and Dutchess differ from the Outer Counties in ways that EPA considered significant.

New York compares Rockland's design value, emission score, VMT, commuting data and population growth to the same information for Dutchess and Ocean. States' Br. 40 (table). Of the factors in New York's comparison, however, only commuting was determined to be a significant factor in Rockland's designation. See TSD 6-35, JAXX. Notably, the number of commuters from Rockland to counties with violating monitors is over *three times* higher than the same statistic for Dutchess and Ocean. States' Br. 40 (table). New York also ignores the differences in other factors cited by EPA to support its nonattainment designations. For example, while Rockland has large power plants, TSD 6-35, JAXX, Ocean has none, TSD 6-34, JAXX.

Further, given high emissions, large numbers of commuters, and large emissions sources, EPA concluded Nassau, Suffolk, Orange, and Rockland should be included within the NY-NJ-CT-PA nonattainment area, even though those counties were not adjacent to a county with a violating monitor. Contrary to New York's view, it was not "rare" for EPA to include counties within the MSA but not adjacent to a violating monitor. E.g., Passaic and Monmouth, NJ, TSD 6-25, 7-38, JAXX, XX; Frederick, MD, TSD 6-62, 7-46, JAXX, XX; Newton, GA, TSD 6-168, 7-3, JAXX, XX.

For these reasons, the Outer Counties' designation is reasonable and supported by the record, and should be upheld.

B. Oakland County, Michigan

1. EPA Properly Designated Oakland Nonattainment Based on Contribution

EPA properly designated Oakland County ("Oakland") nonattainment. Oakland contributes to violations in Wayne County ("Wayne"), based on facts that Petitioner does not dispute. Sources in Oakland emitted significant amounts of PM2.5 and PM2.5 precursors: annual estimated emissions of more than 44,000 tons of NOx, 8,000 tons of SO2, 4,000 tons of primary PM2.5, 58,000 tons of VOCs, and 1,000 tons of ammonia. TSD at 6-295, JAXX. EPA's weighted

emissions score placed Oakland above all other counties in the C/MSA except for Monroe (with a very large EGU) and Wayne. Id. Oakland's population exceeded 1.2 million people, more than any county in the C/MSA other than Wayne. TSD at 6-296, JAXX. Oakland had nearly 11,000,000 annual VMT, of which 28% reflected commuting to Wayne, and much of the rest to other adjacent areas that also contribute to violations in Wayne. Id. Thus, Oakland was at or near the top of the list of counties in the Detroit C/MSA for most of the types of information that EPA considered.

Oakland is "nearby" Wayne, by any reasonable standard for PM2.5. Oakland is immediately adjacent to Wayne. Oakland Br. 4. The southeast corner of Oakland is approximately 4.3 miles from downtown Detroit and approximately 10.2 miles from a violating monitor in Wayne. Resp. Oakland II, Encl. at 4, JAXX. The farthest corner of Oakland is only 47 miles from the same violating monitor. Id. Because PM2.5 and PM2.5 precursors can transport hundreds of miles, all of Oakland is within a distance that can contribute to violations in Wayne. Id. There is no topographical feature along the Oakland county border that would impede transport. EPA examined monitoring and meteorological data for the area, including pollution roses for each monitor, and confirmed that winds from the direction of Oakland towards Wayne occur regularly, even if winds

emanate from the southwest more frequently. Pollution Roses at 111-124, JAXX-XX; Resp. Oakland II, Encl. at 27-29, JAXX-XX. Considering this information, EPA reasonably determined that Oakland was contributing to NAAQS violations in Wayne.

Confronted with these facts, Oakland campaigned to overturn the PM2.5 designations by other means. First, Oakland filed a voluminous petition for reconsideration challenging various aspects of EPA's designation, from the interpretation of Section 107(d) to arcane technical facts (the "First Petition"). Oakland I Pet. for Recons., OAR-2003-0061-0636, JAXX-XX. Although the First Petition contained arguments the State had never raised and was accompanied by technical analysis the State had never submitted, EPA gave the First Petition careful consideration and responded in detail. Resp. Oakland I, JAXX-XX. Oakland then filed a second petition for reconsideration to revise its prior arguments, raise new arguments, and inject documents into the record that were unrelated to, and postdated, EPA's designation process ("Oakland Petition II"). Oakland II Pet. for Recons., OAR-2003-0061-0747, - 0747.1, JAXX-XX. Again, EPA gave each issue careful consideration and responded in detail. Resp. Oakland II, JAXX-XX.

Oakland seeks to supplant EPA's technical judgments with its own, but here the proper test is whether EPA has reasonably exercised its technical expertise and

has a rational basis for its decision. Appalachian Power Co. v. EPA, 135 F.3d 791, 802 (D.C. Cir. 1998).

2. Oakland Ignores the Form of the NAAQS and Wind Data

Oakland asserts that EPA ignored Oakland's technical studies establishing that winds in the Detroit area are predominantly from the southwest, that wind blows from Oakland towards Wayne only a small percentage of the time, and that certain monitors in Oakland and Wayne were not showing NAAQS violations. Oakland Br. 28. The record reflects that EPA did not ignore wind data, monitor data, or Oakland's incorrect theories. EPA examined wind data and considered its impact on transport of PM2.5 and PM2.5 precursors both throughout the Detroit area and respecting Oakland's contribution in particular. EPA considered wind direction in its June 2004 modification letter to the State, in the TSD supporting the December 2004 decisions, and in responses to Oakland. EPA IL Modification, OAR-2003-0061-0274, JAXX-XX; TSD at 6-294, JAXX; Resp. Oakland I, Encl. at 7-13, JAXX-XX; Resp. Oakland II, Encl. at 19-23, JAXX-XX.

Similarly, EPA addressed Oakland's erroneous theory that the presence of a non-violating monitor in Oakland establishes per se an absence of contribution. Resp. Oakland I, Encl. at 5-7, JAXX-XX; Resp. Oakland II, Encl. at 13-15, JAXX-XX. The presence of nonviolating monitors at other locations in the area,

such as Livonia and East Seven Mile, likewise does not prove that emissions from Oakland do not contribute to violations in Wayne.

By contrast, Petitioner ignores that the form of the annual PM2.5 NAAQS requires that every monitor reading throughout the three-year period count towards the calculation of compliance, reflecting impacts from winds that emanate from all directions during that three year period. 40 C.F.R. Pt. 50, Appx. N, § 3.0. Using monitoring and wind data reflected in pollution roses, EPA evaluated contribution throughout the Detroit area over the relevant period and concluded that wind blows from the direction of Oakland towards Wayne some of the time, even if it frequently blows from other directions. Pollution Roses at 123, JAXX; Resp. Oakland I, Encl. at 7-13, JAXX-XX; Resp. Oakland II, Encl. at 16-23, 27-29, JAXX-XX, XX-XX. EPA reasoned that when wind blows from Oakland towards Wayne, Oakland emissions contribute to violations in immediately adjacent Wayne. Indeed, Petitioner concedes this fact, although it seeks to minimize both the amount of time wind does blow from Oakland toward Wayne and the amount of resulting contribution. Oakland Br. 28. Petitioner simply disagrees with EPA's technical judgment that meteorological information supported including Oakland in the Detroit nonattainment area.

3. EPA's Correction of Oakland's Erroneous Analysis Is Not Adoption of It

Oakland asserts that EPA conducted an "incremental contribution analysis" in response to the First Petition, and that Oakland's own version of that analysis proves that Oakland contributes a "negligible" amount to violations in Wayne. Oakland Br. 29. After EPA designated Oakland nonattainment, Oakland propounded the novel theory that ambient PM2.5 levels in Oakland are "below background" – therefore, Oakland reduces PM2.5 levels in Wayne, rather than contributing to violations there. Oakland Pet. I, OAR-2003-0061-0636, at 17-19, JAXX-XX. Oakland supported its theory with new technical analysis comparing data from a "background" monitor in Illinois, a monitor in Oakland, and a monitor in Wayne. Oakland argued that when PM2.5 levels in Oakland were lower than at the Illinois monitor, Oakland was cleaner than background; therefore, wind blowing from the north (i.e., from Oakland's direction) actually improved ambient concentrations in Wayne. Oakland Pet. II, OAR-2003-0061-0747.1 at 27-28, JAXX-XX.

To test Oakland's theory, EPA examined data from a series of monitors stretching from Wayne, Oakland, and points farther to the northwest in Michigan, and used wind data more relevant to that specific compass direction than Oakland had used. Resp. Oakland I, Encl. at 7-13, JAXX-XX. Using Oakland's theory

with more appropriate data, EPA concluded that Oakland was not "below background" and that emissions in Oakland added to the pollution transported to Wayne when the winds blew from that direction. Id. at 12, JAXX. Although Oakland's theory was "thought provoking," EPA determined that "the method of analysis suggested by the Petitioner, applied correctly, serves to confirm EPA's prior conclusion" to designate Oakland nonattainment. Id.

EPA never subscribed to Oakland's theory; EPA merely evaluated it using more appropriate information. EPA clearly stated: "the Petitioner's analysis does not refute any elements of EPA's view, nor does the Petitioner provide any countervailing theory that would explain how emissions in Oakland County might have no effect on Wayne County, let alone a cleansing effect on air entering Wayne County." Id. Oakland disregarded EPA's statements that Oakland's theory was illegitimate, slicing the data thinner and pursuing it again in the Second Petition. EPA rejected Oakland's theory again. Resp. Oakland II, Encl. at 16-23, JAXX-XX. EPA did not disavow its own theory.

Now Oakland attributes its own theory to EPA, adjusts the data to minimize the amount of time wind blows from the direction of Oakland towards Wayne, and asserts that this proves that Oakland's contribution to Wayne is "minimal." Oakland Br. 29-31. This argument is absurd: EPA did not base Oakland's

nonattainment designation on this "incremental contribution analysis," Oakland Br. 29, and EPA has clearly explained why it considered Oakland's theory flawed and unreliable. Resp. Oakland II, Encl. at 16-19, JAXX-XX.

Finally, Oakland asserts that applying its own erroneous analysis proves that the contribution of Genesee County to Wayne was "four times greater" than that of Oakland, and therefore mistakenly infers that EPA was arbitrary to exclude Genesee but include Oakland. Oakland Br. 30. EPA did not use Oakland's analysis to include or exclude any county; EPA excluded Genesee for reasons articulated in the record, including that Genesee had lower emissions, lower VMT, lower population, and was farther away from the violating monitor in Wayne. EPA IL Modification, OAR-2003-0061-0274 at 3, JAXX; Resp. Oakland II, Encl. at 32, JAXX.

4. Oakland Mischaracterizes and Misreads EPA Documents

Relying on a document that was unrelated to, and post-dated, the December 2004 Designations Rule – the "Rizzo Report," Oakland erroneously argues that EPA agrees that Oakland does not contribute to violations in Wayne. Oakland Br. 32. EPA previously explained, in detail, that the Rizzo Report was not an appropriate type of analysis to evaluate contribution under Section 107(d), and that, even if it were, the document still confirmed that Oakland contributes to

PM2.5 NAAQS violations in Wayne. Resp. Oakland II, Encl. at 29-31, JAXX-XX. Oakland argues that if some, or even most, ambient PM2.5 at a specific monitor could be attributed to sources within a very short radius of the monitor, or to sources hundreds of miles away, that this proves that no other areas also contribute to violations at that monitor. Oakland Br. 32-33. This theory ignores many key considerations, including the annual form of the NAAQS, the spectrum of sources that contribute to the formation and transport of PM2.5 and precursors, and the potential need to obtain emissions reductions from a broad range of sources throughout the area to attain the NAAQS.

Oakland sets up strawman arguments that NAAQS violations in Wayne are influenced by the industrial location of the monitor, by emissions from sources in directions other than that of Oakland, and by regional impacts from emissions sources in other states. Oakland Br. 31-35. EPA explained in the Second Response that these points are not in dispute, but none of these points resolves whether sources in Oakland also contribute to violations in Wayne. Resp. Oakland II, Encl. at 29-31, JAXX-XX. The Rizzo Report was a "source apportionment" study conducted to evaluate the types of sources impacting the monitor and the degree of impact from those types of sources, not an analysis of all of the sources in all geographic areas that are contributing to the violation, as

contemplated by Section 107(d) for designations. Id. at 30-31, JAXX-XX. Further, the Rizzo Report confirmed that a significant portion of the ambient PM2.5 at the monitor could be attributed to source categories amply represented in Oakland. Id. at 30, JAXX.

Oakland also ignores EPA's judgment that certain stationary sources close to the Wayne monitor contribute less than Oakland claims and that a far larger proportion of the ambient PM2.5 at that monitor is attributable to other urban area source categories. Oakland Br. 33; Resp. to Oakland II, Encl. at 28-31, JAXX-XX. Even the Rizzo Report addressed the likely impact of source categories within a 50-mile radius of the monitor, which would include virtually all of Oakland. Resp. Oakland II, Encl. at 30, 33-36, JAXX, XX-XX. Most importantly, Oakland ignores a crucial aspect of the CAA: to develop the nonattainment SIP for the area, detailed analysis and attainment demonstration modeling will be conducted to identify which sources in the area will need to be controlled, and how much, for the area to attain the PM2.5 NAAQS. Id. at 24, JAXX. Oakland may pursue its erroneous theories there also, but the State and EPA will develop a nonattainment SIP that meets the requirements of the CAA, including appropriate control of sources in Oakland.

Finally, Oakland implies that the prior designated boundaries for the PM10 NAAQS in the Detroit area are controlling. Oakland Br. 31. Petitioner ignores that PM2.5: (i) is a different NAAQS addressing a different particle size; (ii) results from emissions from different sources; (iii) consists of a higher fraction of secondarily formed particles; and (iv) transports across longer distances. The prior nonattainment area boundaries for PM10 have minimal, if any, relevance to PM2.5.

5. Oakland Misuses Speciated Data

Oakland asserts that speciated data from several monitors in the Detroit C/MSA show differing amounts of certain types of PM2.5 particles, and that these data "establish that the elevated PM2.5 levels in Dearborn are driven in large part by local sources." Oakland Br. 34. Again, Oakland presents selected facts, ignores EPA's prior analysis of these facts, and at most proves what was never in dispute.

Oakland submitted its analysis of speciated monitor data to EPA for the first time in the Second Petition and argued that the data from the Dearborn monitor reflected such atypical levels of organic carbon and crustal particles that they proved that the monitor is "primarily affected" by "local" sources in the vicinity of that monitor. Oakland Pet. II, Exh. 1, 17-18 & Fig. 10, JAXX-XX, XX. EPA

evaluated this information and concluded that the data were not conclusive, particularly as the data from the Dearborn monitor, as well as the other monitors, indicated impacts from a combination of sources, including both long-range transport and other typical urban area emissions, in addition to the likely contribution from nearby sources. Resp. Oakland II, Encl. at 23-24, JAXX-XX.

Also, EPA concluded that nonattainment in the area is caused by the sum of particles at the violating monitor, not only specific types of particles that may result from stationary sources close to the monitor. EPA reasoned that the speciated data from all of the monitors indicate that there is a substantial impact from area-wide emissions from stationary, area, and mobile sources, and that emission reductions from all of these source types may be necessary for the area to attain the NAAQS "expeditiously," as required by Section 172(a)(2), 42 U.S.C. § 7502(a)(2). Resp. Oakland II, Encl. at 23, JAXX. EPA also reasoned that speciated data at all of the area monitors showed impacts of urban area sources and emissions, and that sources in Oakland emit substantial amounts of those pollutants. Id. at 24, JAXX. Oakland's erroneous assumption that only organic carbon and crustal particles are relevant to PM2.5 nonattainment in the area, and that only sources of such emissions need to be controlled, Oakland Br. 34, is inconsistent with both the science of PM2.5 formation and the law governing

NAAQS. Oakland also ignores EPA's judgment that the speciated monitor data reflect broad urban area-wide contribution to the violations in Wayne, from source categories located throughout the area, including Oakland.

For these reasons, the nonattainment designation for Oakland should be upheld.

C. Guilford County, North Carolina

1. Guilford Was Designated Nonattainment Based on its Contribution to Davidson

EPA included Guilford in the Greensboro C/MSA nonattainment area because Guilford contributed to violations in nearby Davidson. EPA NC Modification, OAR-2003-0061-0591, JAXX-XX. Guilford argues that because its monitor met the NAAQS, EPA's designation of Guilford nonattainment based solely on contribution to Davidson was irrational. Counties' Br. 51. A non-violating monitor alone, however, does not mean that EPA should designate an area attainment because under Section 107(d), EPA must designate both contributing and violating areas. 42 U.S.C. § 7407(d)(1)(A).

In responses to petitions for reconsideration, EPA carefully reviewed arguments made by Guilford and the State and specifically described why EPA determined that Guilford contributes to Davidson. Responses to Guilford and NC 2005 Pets., OAR-2003-0061-0759, 0759.1, 0760, JAXX, XX, XX; see also TSD

6-219–6-226, 6-232–6-236, JAXX-XX, XX-XX. In particular, EPA noted that Guilford had the largest population in the area, significant population growth, and the highest VMT. Responses to 2005 Pets., JAXX, XX, XX. These factors indicate an area has emissions that can adversely impact another area, even though no monitor in that area is in violation. See supra at 20-21. Moreover, the emissions inventory for Guilford reflected significant sources of direct emissions of PM2.5 and PM2.5 precursors. Responses to 2005 Pets., JAXX, XX, XX. These facts led EPA to include Guilford in the area for which controls will apply. Otherwise, Davidson's ability to meet the PM2.5 NAAQS expeditiously would be hampered.

Inclusion of 2004 monitoring data did not negate Guilford's contribution to Davidson. Responses to 2005 Pets., JAXX, XX, XX. Even with 2004 data, Davidson's monitor continued to violate, and because Guilford's nonattainment status was based on contribution to Davidson, there was no basis to change Guilford's designation. Id.

2. Evidence that "Material" Amounts of Emissions from Guilford "Caused" Violations in Davidson Was Not Necessary

Guilford argues that because EPA did not "prove" that a material amount of emissions traveled from Guilford to Davidson, or that any Guilford emissions are

"causally connected to nonattainment in Davidson," EPA's designation was erroneous. Counties' Br. 51. Guilford discounts its large population, population density and growth, and emissions as determinative factors in its designation, claiming these factors are meaningless unless "there is evidence that air or sources in Guilford" actually impacted Davidson's air quality in a material manner. Id. at 52.

First, EPA was not required to draw bright-lines concerning what constitutes "contribution." See supra at 92-94. Nor was EPA required to "prove" that one area's emissions "caused" the violation in another area. Id. Moreover, EPA's process implicitly considered "materiality" and "causation" by virtue of factors EPA relied upon. "Materiality" is reflected in weighted emissions scores, population, population growth, number of commuters, and VMT, all factors that indicate the degree of emissions in an area. "Causation" is reflected in wind direction, pollution roses, and geographic location. Id.

Guilford's population, population density and growth, and higher emissions than other counties in the Greensboro C/MSA indicate significant emissions and thus contribution. The amount of pollution and the direction from which the pollution originated, shown in the pollution rose for Davidson, indicated that a significant amount of pollution in Davidson originated from the direction of

Guilford. Pollution Roses at 134, JAXX. EPA reasonably concluded that information such as high emissions and wind direction confirmed Guilford's contribution to Davidson.

3. Nine Factors Evaluation

Guilford wrongly argues that assuming "EPA's multi-factor analysis is not improper as a matter of law," its application resulted in arbitrary designations. Counties' Br. 52. Guilford claims that because its monitoring data shows compliance with the NAAQS and is improving, it was irrational for EPA to designate Guilford as nonattainment. Id. Attaining areas can, however, contribute to nonattainment in nearby areas. As discussed supra at 96-99, except in limited circumstances, EPA based designations on air quality as of 2001-2003, thus future projected improvement in Guilford's air quality is not relevant to its designation.

Moreover, facts belie Guildford's claim. Sources in Guilford emit significant amounts of NOx, VOC, and SO2 -- PM2.5 precursors. TSD 6-220, JAXX. In fact, Guilford emits more of those precursors than Davidson and also has more direct PM2.5 emissions than Davidson. Id. Guilford's weighted emissions score was higher than Davidson's. Id. Guilford is the largest county in the Greensboro C/MSA, with more than 430,000 in population, its population grew 21% from 1990 to 2000, and it had the highest number of commuters. Id. Finally,

Guilford is adjacent to Davidson and generally upwind as reflected in the pollution rose for this area. See TSD 7-20–7-21, JAXX; Pollution Roses at 134, JAXX. See also TSD 6-220–6-221, 6-223, JAXX-XX, XX. Thus, numerous facts justified EPA's conclusion that Guilford contributed to violations in Davidson.

4. Davidson's Pollution Rose Demonstrates that Significant Pollution Reached Davidson from the Direction of Guilford

Guilford misinterprets the State's reference to "local" sources, and despite no evidence in the record, argues Davidson's PM2.5 solely results from "local" Davidson sources. Counties' Br. 53. Therefore, Guilford argues, emissions from Guilford do not impact Davidson. Id. Guilford misunderstands the difference between "regional" and "local" sources. TSD Ch. 3.1, JAXX-XX; 2003 Guidance, Attach 2 at 4. PM2.5 violations are caused by a contribution of *both* local and regional emissions. Regional, or multi-state, components will be addressed by other means, such as reductions of interstate transport through CAIR. "Local" sources are those sources within a state or C/MSA that the State will address in its respective nonattainment SIP. Thus, the purpose of PM2.5 designations is to identify those areas that contain the "local" sources of emissions, where the State must evaluate what actions to take in order to insure attainment. Guilford is a nearby area where "local" sources of emissions contribute to violations in Davidson.

Guilford also argues that in summertime, which is when Guilford alleges PM2.5 ambient levels are at their peak, the predominant wind direction in Guilford is away from Davidson. Counties' Br. 53-54. However, times other than summer are relevant. Because Davidson violates the annual PM2.5 NAAQS (a 3-year average of annual mean PM2.5 concentrations), contributions to violating monitors occur throughout the year. Even days below the level of the NAAQS contribute to monitored PM2.5, which collectively over the course of three years, contributes to a violation. The pollution rose for Davidson, depicting three years of combined monitor and meteorlogical data, indicates that there are individual days when winds come from different directions, including a significant number of days when contributions to Davidson came from the northeast, the direction of Guilford. See Pollution Roses at 134, JAXX.

5. Guilford's Mobile Sources Contributed to Davidson's Nonattainment

Guilford asserts that because it has no power plants, the only sources of its emissions are mobile which allegedly do not affect Davidson's air quality. Counties' Br. 53. Because 90% of Guilford commuters stay within Guilford, Guildford also claims that, despite its high number of commuters, these sources do not contribute to Davidson's air quality. Guilford alleges that vehicle emissions are "low level emissions" (i.e., low to the ground), and could not affect a monitor

in another county. Id. at 53-54. EPA disagrees with all of these assumptions. Although the percentage of commuters from Guilford to Davidson is not high, Guilford has the highest number of commuters overall and the highest VMT for the entire area. See TSD 6-221–6-223, JAXX-XX. It is well established that PM2.5 and PM2.5 precursors can transport across long distances. Thus, it was reasonable for EPA to conclude that with the high number of vehicles on the road and high VMT, emissions of PM2.5 and precursors from these mobile sources in Guilford contribute to violations in Davidson, which is immediately adjacent to and downwind of Guilford.

6. Emission Controls Do Not Change Guilford's Contribution to Violations in Davidson

Guilford also mistakenly argues that because Guilford and the State have imposed or plan to impose certain emissions controls, EPA is not justified to "impose even more regulatory controls" on Guilford by designating it nonattainment. Counties' Br. 54-55. However, the existence of controls on some emission sources does not negate Guilford's contribution to Davidson's violations. The proper context for determining whether existing controls are adequate to alleviate this contribution will be the SIP in which the State will determine which sources and what controls are necessary to assure that the Greensboro area attains the NAAQs expeditiously. Moreover, planned future controls and any emissions

decrease in 2004 do not change that Guilford's emissions of NOx, VOC, and SO2 were significant in the area, and that Davidson violated the NAAQS even considering 2004 data. See Responses to 2005 Pets. (0760) at 3, JAXX. As discussed supra at 96-99, EPA considered the impacts of only significant near-term emissions controls that were certain to occur.

7. EPA's Inclusion of Guilford Was Not Arbitrary

Finally, Guilford argues that it was not treated the same as similarly situated counties. Counties' Br. 55-57. Guilford specifically objects to EPA's exclusion of Forsyth County, citing Forsyth's higher monitored PM2.5 concentrations and percentage of commuter traffic into Davidson. Id. at 56. Guilford argues, without support, that these two factors are the "most important." Id. "Importance" of factors, however, is dependent on the facts of each area.

Significantly, Guilford had a much higher weighted emission score (17.6) than Forsyth (11.7) indicating more emissions of concern in Guilford than Forsyth. TSD 6-220, JAXX. See also weighted emissions score discussion supra at 25-26. Guilford also had higher total population, significant population growth, and more VMT compared to Forsyth. TSD 6-221–6-223, JAXX-XX. In addition, wind direction data reflected in the pollution rose for the area indicated that Guilford

contributed more frequently to Davidson than Forsyth. Responses to 2005 Pets. (0760) at 3 and Attach. 1, JAXX, XX. Thus, Guilford is not similar to Forsyth.

Moreover, what Guilford characterizes as "arbitrary" in fact reflects the operation of the Section 107(d) process. North Carolina made its initial recommendations and EPA decided to modify those recommendations. EPA ultimately agreed with the State as to Forsyth, but retained Guilford in the nonattainment area. TSD 6-224–6-226, JAXX-XX.

In conclusion, EPA throughly considered facts relevant to Guilford and rationally concluded that Guilford contributes to violations in Davidson. Therefore, Guilford's nonattainment designation should be upheld.

D. Catawba County, North Carolina

1. The Record Supports Catawba's Nonattainment Designation

Catawba, located in the Hickory C/MSA, has a violating monitor. Catawba claims that EPA's designation was flawed because the monitor is improperly sited. Counties' Br. 61-62. This argument is without merit. The monitor is properly placed and the data is valid.

In October 2004, after the deadline for *States* to provide responses to EPA's modifications of State recommendations, EPA received a 2-page letter and 20-page enclosure (with attached Trigon Report) from the Unifour Air Quality Oversight

Committee of the Western Piedmont Council of Governments ("Unifour")[29/] supporting the State's recommendation that the Hickory C/MSA be designated "unclassifiable"or, alternatively, that Catawba's nonattainment area be limited. Unifour Letter, OAR-2003-0061-0596 at 1-2, JAXX-XX. One paragraph in the 20-page enclosure mentioned that there were "questions" about the monitor location and referred to an attached report by Trigon Engineering Consultants. Id., Encl. at 13, JAXX. Although the Trigon report mentioned two "issues" with the siting of the Catawba monitor, the report focused on other reasons why Trigon believed the monitoring data was unrepresentative, while simultaneously predicting that the monitor would likely show attainment shortly. Id., Trigon at 1-2, JAXX-XX.

The thrust of Unifour's argument for an unclassifiable designation, however, was the "downward trend" the data showed. Id., Encl. at 10, 13, JAXX, XX. Unifour asserted that if EPA later considered 2004 data, "there is a significant probability that the Hickory [i.e. Catawba] monitor will attain the standard." Id. at 19, JAXX. Thus, Unifour based its argument on data from a monitor that Catawba now claims is improperly placed.

[29/] The letter and its enclosures were submitted on behalf of Catawba and other local governments. Counties' Br. 59.

The State had earlier made a similar argument that the entire Hickory C/MSA be designated "unclassifiable" based on the belief that Catawba's monitor would attain the NAAQS based on anticipated 2004 data. NC Rebuttal, OAR-0061-0414 at 3, JAXX. However, in February 2005, when the State submitted 2004 data, NC Data Submittal, OAR-2003-0061-0678, JAXX, it did not request a change in Catawba's nonattainment designation because, even considering 2004 data, the Catawba monitor still exceeded the standard. NC Letter, OAR-2003-0061-0676 n.1, JAXX. To date, EPA has received no request for Catawba's redesignation based on any subsequent monitoring data.

Clearly, having failed to produce monitoring data needed to change Catawba's designation, the County has now seized upon alternative arguments and wrongly alleges that Catawba's designation is flawed because the monitor was improperly sited, monitor data is unrepresentative, spatial averaging should have been used, and emissions reductions from future controls should have been taken into account. Counties' Br. 60-65. There is no basis for these allegations.

2. The Monitor Was Correctly Sited

Catawba never directly raised the issue of the monitor's siting during the designations process. The only comment EPA received that even alluded to a "question" about the monitor siting, was the late letter from Unifour. Unifour

Letter, Encl. at 13, JAXX. EPA did not respond specifically to Unifour, inasmuch as Unifour asked for the same relief as the State. Moreover, the Section 107(d) designation process does not require EPA to respond to comments from parties other than States. EPA considered comments from other parties, but parties such as Unifour were not entitled to a response, as in notice-and-comment rulemaking.

Significantly, the State has not challenged the monitor's placement. In fact, during the designation process, both the State and Unifour relied on the monitoring data in requesting that EPA designate Catawba unclassifiable, based on the perceived "downward trend" in the monitoring data. NC Rebuttal at 3, JAXX; Unifour Letter, Encl. at 19, JAXX. Moreover, the State has consistently treated the monitor as properly placed and in compliance with all regulatory requirements in the annual monitoring plans it submits to EPA. These reports reflect that North Carolina considers the monitor to meet applicable regulatory requirements. [30/]

Catawba specifically alleges that siting requirements are not met because the monitor is only 10 meters from the tree drip line, while 40 C.F.R. Part 58,

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[30/] North Carolina's annual monitoring plans for 2000-2005 are attached for the Court's convenience to the Declaration of Van Xavier Shrieves, Chief, Monitoring and Technical Support Section, Air Toxics and Monitoring Branch, EPA Region 4. EPA Supp. Appx. 1, Ex. A. EPA respectfully requests that the Court take judicial notice of these reports. City of Sausalito v. O'Neil, 356 F.3d 1186, 1223 n.2 (9th Cir. 2004) (court may take judicial notice of state agency record "not subject to reasonable dispute").

Appendix E, section 2.4 (2004), requires a minimum of 20 meters. Counties' Br. 61. However, Catawba misreads the regulations. Section 2.4 was not applicable to PM2.5; instead, it applied to SO2, O3, and NO2. For PM2.5, applicable regulations in Appendix E, section 8.2, required that the monitor be at least 10 meters from the drip line if trees are an obstruction. 40 C.F.R. Pt. 58, Appx. E, § 8.2 (2004). Trigon found that the monitor is 10 meters away from the drip line. Unifour Letter, Trigon at 1, JAXX. Thus, Catawba's own audit shows the monitor meets the requirement in section 8.2.

Second, Catawba alleges that the monitor's position vis-a-vis a nearby water tower is contrary to requirements to avoid aerodynamic influences from obstructions. Counties' Br. 61. The relevant regulation stated that "[t]he sampler must also be located away from obstacles such as buildings, so that the distance between obstacles and the sampler is at least twice the height that the obstacle protrudes above the sampler." 40 C.F.R. Pt. 58, Appx. E, § 8.2 (2004). The water tower, however, does not meet the traditional concept of an obstacle because it is elevated on legs with open spans of several meters between them, and is not a solid, monolithic block interfering with airflow.

Catawba adds that the monitor should have been part of a "network" of properly sited monitoring stations that meet certain reporting and quality control

standards. Counties' Br. 61. The State has such an EPA-approved network, including this monitor. In addition, the State annually submits quality assured, certified data from the monitor to EPA. Thus, EPA appropriately considered data from the monitor.

Catawba also claims that the monitor is located in a "near worst case scenario," listing the various businesses and streets, the tree, and the water tower nearby. Counties' Br. 62. The State selected the location in 1999 as representative for the area and appropriate for a neighborhood scale monitor, and EPA approved the location. Neighborhood scale data represents conditions in areas where people commonly live and work, and may include industrial and commercial neighborhoods especially in areas of diverse land uses interspersed with residences. 40 C.F.R. Pt. 58, Appx. D, § 2.8.0.5 (2004). The monitor site represents such a neighborhood site in a mixed commercial and residential area of downtown Hickory. See, e.g., Unifour Letter, Encl. at 9, JAXX. Moreover, the State has continued to identify this monitor as a neighborhood scale monitor in its annual reports, and EPA has no reason to doubt that.

Catawba uses the Trigon report to allege that the monitor's location is "unrepresentative." Counties' Br. 62; Unifour Letter, Trigon at 2, JAXX. Trigon cites another monitor ten miles away that recorded lower levels of PM2.5. Unifour

Letter, Trigon at 2, JAXX. Recorded levels of PM2.5 from a monitor 10 miles away are immaterial in determining whether the Catawba monitor is appropriately sited and represents an "urban subregion with dimensions of a few kilometers," as set forth in the regulations. 40 C.F.R. Pt. 58, Appx. D, § 2.8.0.5 (2004).

3. The State Did Not Request Spatial Averaging and Catawba's Monitor Did Not Qualify

Catawba claims that EPA erred by not using spatial averaging in this area, as it "would have ameliorated the effects of the unrepresentative data recorded at the Catawba Monitor."[31/] Counties' Br. 63. First, that speciated data from monitors across the State are similar does not establish that data from the Catawba monitor is unrepresentative. Catawba's argument that speciated data from other monitors in North Carolina show that the composition of the data is similar to the Catawba monitor, in fact, contradicts Catawba's contention that the monitor is unrepresentative. Id. Second, the State must request the use of spatial averaging, have designed its monitor network for this purpose, and have provided an opportunity for public comment on its use in accordance with C.F.R. sections 58.20(f) and 58.26(e), none of which the State did. See 2003 Guidance, Attach. 2

[31/] "Spatial averaging" uses data from two or more qualifying monitors to show that an area met the PM2.5 NAAQS, notwithstanding apparent monitored violations at one of the monitors. See 2003 Guidance, Attach. 2 at 3, JAXX.

at 4, JAXX. Thus, EPA was not required to use spatial averaging, and this monitor site would not have qualified in any case.

4. EPA Determined Violations Based on Current Conditions, not Possible Future Emissions Reductions

Catawba alleges that EPA erred by not considering the effects of future regulatory programs that Catawba claims will "almost certainly further reduce the PM2.5 levels recorded by the Catawba monitor." Counties' Br. 64. However, EPA interprets Section 107(d)(1)(A) to require designations of violating areas based on whether an area "meets" or "does not meet" the NAAQS. As discussed supra at 96-97, EPA designated violating areas based upon monitored nonattainment. The monitor in Catawba violated the NAAQS; thus, the nonattainment designation was appropriate.

Catawba also suggests that EPA should have ignored current violations of PM2.5 NAAQS premised upon an "Early Action Compact" in the area for ozone. Counties' Br. 65. EPA explained why this was not a legitimate consideration. See, e.g., Resp. to Georgia Pet., OAR-2003-0061-0738 at 4, JAXX. Ozone and PM2.5 will require different attainment strategies, and PM2.5 has different precursors which require different controls. Id.

In conclusion, there is no merit to Catawba's argument that the monitor is improperly sited and its data invalid. Therefore, Catawba's designation must be upheld.

E. Catoosa County, Georgia

1. Catoosa's Nonattainment Is Supported by the Record

Facts belie Catoosa's claim that its designation as contributing to both Walker County, GA and Hamilton County, TN was "generated by EPA's standardless application of the nine [factors]." Counties' Br. 45. A number of factors, including Catoosa's weighted emission scores, its population density, and the large percentage (46%) of workers commuting to Hamilton, all indicated that Catoosa contributes to nonattainment in Walker and Hamilton. EPA GA Modification, OAR-2003-0061-0264 at 29-34, JAXX-XX. Moreover, although Catoosa did not have a violating monitor, it sits between two counties with violating monitors. Id. at 31, JAXX. EPA also considered Catoosa's 25% population growth as significant and indicating contribution to air quality in the Chattanooga MSA. Id. at 34, JAXX. EPA found no reason to change Catoosa's designation. TSD 6-178–6-183, JAXX-XX. Catoosa's nonattainment designation was based on a totality of factors as explained in the record, was reasonable, and should be upheld.

Catoosa also erroneously claims that EPA's consideration of various factors produced "inexplicable and inconsistent" results. Counties' Br. 45. First, Catoosa argues that EPA improperly "relied heavily" on Catoosa's weighted emission score. Id. This claim is without merit. EPA considered a number of relevant factors in its analysis and did not indicate it "relied heavily" on any one factor. EPA GA Modification at 29-34, JAXX-XX. In the Supplemental Amendments, EPA stood by its designation of Catoosa as nonattainment "based upon evaluation of the factors applied by EPA in the initial designation decision (particularly population, commuting, and emissions)." 70 Fed. Reg. at 19,846-47. Thus, although three factors stood out, EPA considered all factors in its decision, and no one factor tipped the balance.

Catoosa also wrongly complains that EPA used an unexplained, arbitrary weighted emissions threshold which resulted in the wrongful inclusion of both Dade and Catoosa. Counties' Br. 45. EPA used no "cumulative weighted emissions threshold," and based designation decisions on a totality of factors. See supra at 127-130.

Catoosa also alleges that any "contribution" from Interstate I-75, that runs through Catoosa, cannot reasonably be attributed to Catoosa, and moreover, that local control measures would not reduce those emissions. Counties' Br. 45-46.

Catoosa misses the point. EPA did not base its designation of Catoosa on the existence of the interstate, but rather looked generally at traffic, VMT, and commuting pattens as indicators of PM2.5 and PM2.5 precursor emissions in that area. EPA GA Modification at 32-33, JAXX-XX. Moreover, local controls and programs are available to reduce emissions from trucks and commuters, including from those using I-75, such as electrification of truck stops, diesel retrofits, and given the number of commuters in Catoosa, use of Best Workplaces for Commuters policies.

2. EPA Found No Basis to Modify Catoosa's Nonattainment Designation Based on "Exceptional Events"

Both Hamilton and Walker had violating monitors, and Catoosa lies directly northeast of Walker and southeast of Hamilton. TSD 7-7, JAXX. EPA determined that Catoosa contributed to the nonattainment of both counties. TSD 6-178–6-183, JAXX-XX. However, if Walker and Hamilton counties were attaining the NAAQS or were "unclassifiable," Catoosa would not be contributing to violations. Therefore, Catoosa sought to have data excluded from monitors in both counties based on alleged "exceptional events."

Catoosa argued that 25 days be flagged as "exceptional events" and that EPA disregard the monitoring data for those days. GA June 2005 Reconsid. Pet., Encl. at 1-2, JAXX-XX. If EPA excluded that data, Catoosa claimed the entire

Chattanooga C/MSA would be unclassifiable because there would be less than 3 years of complete data. Id. Catoosa wrongly claims that EPA failed to "rationally explain its rejection of [Georgia's exceptional events] evidence." Counties' Br. 46. EPA twice undertook exhaustive reviews of the days in question.

First, in the Supplemental Amendments, EPA throughly explained its basis for not modifying the nonattainment status of Hamilton, Walker and Catoosa. 70 Fed. Reg. at 19,846-47. As EPA explained:

> We have reviewed the data for the 25 days in question. . . . Previously, EPA disapproved the request to invalidate 10 days in 2002. For the 15 days in 2003 and 2004 . . . EPA has determined that there is insufficient evidence to show impacts from the fire events for at least 7 of these days, and is disapproving the requests to invalidate air quality data for those days . . . based on EPA's review of the supporting information provided to EPA, as well as additional analyses conducted by EPA [including] back trajectories and a review of chemical composition data for the areas.

Id. See also . Supplemental TSD, OAR-2003-0061-0702 at 20-70, JAXX-XX. EPA conducted analyses of wind direction and found Catoosa's contention that data were affected by fires was not supported for at least seven of the fifteen days. Supplemental TSD 20-21, 34-44, JAXX-XX, XX-XX.

To determine impacts from an exceptional event such as a wildfire, EPA also examined available speciation data regarding the composition of particles and found that organic carbon (a marker for wildfires) ranges were not unusual for

those days. Supplemental TSD 20, JAXX. Because EPA found insufficient evidence to exclude the data for at least 7 of the 15 days, EPA did not need to address the remaining 8 days because, even if those days were invalidated, the Hamilton monitor would still be violating. 70 Fed. Reg. at 19,847. Because Catoosa was designated nonattainment for contributing to both Walker and Hamilton, Catoosa's designation would remain unchanged even if Walker attained.[32/]

Second, in its January 2006 response to Georgia's petition for reconsideration, EPA again reviewed each of the 15 days that Georgia flagged as exceptional events. Response to Georgia Pet. at 6-14 and attachments, JAXX-XX, XX-XX. EPA found no reason to change the designations. Id. at 5, JAXX.

In addition to EPA's own evaluation, EPA hired an independent party "experienced in evaluation and research on atmospheric transport of air pollutants to provide an independent analysis of the voluminous data submitted by Georgia as well as other available information." Id. at 2, JAXX. This independent analysis confirmed EPA's previous conclusion that fires on the 7 days previously examined

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[32/] EPA also determined that even if Walker attained the NAAQS, it would still be nonattainment based on its contribution to Hamilton. 70 Fed. Reg. at 19,847.

by EPA "did not cause or significantly contribute" to PM2.5 violations in the Chattanooga area on those days. Id.

EPA then reviewed the data and the contractor's analysis for the remaining 8 days for which EPA had not previously reached a conclusion, and found that for 7 of the 8 days, fires did not cause or significantly influence PM2.5 levels in Chattanooga on those days. Id. at 2-3, JAXX-XX. EPA concluded that smoke from a fire in Kansas might have contributed to elevated PM2.5 in Chattanooga on one day, but that the impact, if any, was "relatively small." Id. However, EPA concluded that even if data from that day was discarded, the nonattainment designation would remain unchanged. Id. These conclusions were supported by EPA's January 2006 evaluation of all 15 days, id. at 6-14, JAXX-XX, and EPA's previous studies, id. at 15-70, JAXX-XX.

Catoosa's allegation that EPA did not sufficiently explain its rejection of data flagged by Catoosa lacks merit. EPA conducted a thorough day-by-day analysis of the data. EPA's decision rests on an evaluation of complex scientific data within its technical expertise, entitled it to extreme deference. New York v. Reilly, 969 F.2d at 1152. Thus, EPA's decision should be upheld.

F. Anderson, Greenville, and Spartanburg Counties, South Carolina

1. South Carolina Counties Lack Standing

Unless standing is self-evident, a petitioner must, in its opening brief, show a "substantial probability" that "it has been injured, that the defendant caused its injury, and that the court could redress that injury." Sierra Club v. EPA, 292 F.3d 895, 899 (D.C. Cir. 2002) (citation omitted); see also Circuit Rule 28(a)(7). South Carolina ("SC") County Petitioners' standing is not self-evident and they fail to establish standing in their opening brief.[33/]

SC Counties' standing is not self-evident because the injuries alleged in the Counties' brief all flow from the consequences of being designated "*nonattainment*."[34/] However, SC Counties are designated "*unclassifiable*," which has the same practical and legal consequences as being designated "attainment." To be sure, nonattainment areas have different requirements than attainment areas.

[33/] While courts may decline to examine the standing of every plaintiff, once they have established that at least one plaintiff has standing, see, e.g., Mass. v. EPA, 127 S. Ct. 1441, 1453-55 (2007), Article III requires a party with standing for each particular claim. Donohue v. Boston, 304 F.3d 110, 115-16 (1st Cir. 2002) (citing Adarand Constructors, Inc. v. Pena, 515 U.S. 200, 210-11 (1995)).

[34/] See e.g., Counties' Br. 6 ("nonattainment designations impose a competitive disadvantage"); id. at 7 ("nonattainment designation makes it more difficult . . . to obtain federal funding for transportation projects"); id. ("Counties designated nonattainment . . . are immediately stigmatized").

See, e.g., supra at 6-7; States' Br. 3-4; 40 C.F.R. § 51.1002(a) (requiring PM2.5 nonattainment SIPs for nonattainment areas only). But unclassifiable areas are subject to the same, less stringent requirements as attainment areas. See 42 U.S.C. § 7471.[35/] Thus, the SC Counties will not suffer any of the alleged injuries unique to nonattainment areas. Further, South Carolina Counties cannot argue that an unclassifiable designation means they are more likely to be redesignated nonattainment because both attainment and unclassifiable areas may be redesignated nonattainment. See id. § 7407(d)(3); 40 C.F.R. § 51.1006.

Because SC Counties' unclassifiable designation is the functional equivalent of the attainment designation they seek, they cannot show any injury that could be redressed by an order remanding their designation. Even if, on remand, EPA changed the SC Counties' designation to attainment, their legal status would not change; they would still be subject to the same less stringent requirements. Thus, SC Counties cannot establish standing for their particular claims and the Court should not reach the merits of those claims.

[35/] Further, the PM2.5 Implementation Rule explicitly imposes obligations only on nonattainment areas. 40 C.F.R. § 51.1002(a).

2. EPA Properly Designated Anderson, Greenville, and Spartanburg Counties "Unclassifiable"

EPA based PM2.5 designations on three years of monitoring data. 70 Fed. Reg. at 946-47. This generally meant data from 2001-2003, unless a State elected to submit data from 2004 on an expedited basis, meeting certain conditions. The State started the Greenville monitor later than other monitors in the area, and as a result EPA had only two and one-half years of data for this monitor. Nevertheless, for this shorter period, data from the Greenville monitor showed a design value above the NAAQS. EPA SC Modification, OAR-2003-0061-0268 at 3, 5, JAXX, XX.

Section 107(d)(1)(A)(iii) defines "unclassifiable" as any area that cannot be designated "on the basis of available information as meeting or not meeting" the NAAQS. 42 U.S.C. § 7407(d)(1)(A)(iii). EPA reasonably concluded that having data for only two and one-half years of the relevant three year period was, *per se*, insufficient information to reach a definitive conclusion regarding the attainment status of this area. EPA SC Modification at 3, JAXX.

Significantly, although the State expressed concerns that data from the monitor might be atypical, it did not question the placement of the monitor. SC Rebuttal, OAR-2003-0061-0421 at 2-3, JAXX-XX. In fact, the State simultaneously requested spatial averaging for this area, relying on the monitor as

part of a spatial averaging plan. Id. at 1-2, JAXX-XX. Thus, the State has implicitly treated the monitor as properly placed and suitable for judging NAAQS compliance. Now, post-designation, SC County Petitioners attack the placement of the Greenville monitor and raise challenges not made during the designations process. Counties' Br. 33-34.

To support their argument, SC County Petitioners include documents that postdate EPA's December 2004 designations decision, including their own August 2005 audit report. Counties' Br. 33-34, & Appx. C. Although the Court should not consider post-decisional extra-record material, should the Court do so, EPA has provided additional material to ensure a more complete treatment of these issues. These materials are attached to the Declaration of Van Xavier Shrieves, the Chief of the Monitoring and Technical Support Section, Air Toxics and Monitoring Branch, EPA Region 4. See EPA Supp. Appx. 2, Exs. B-F.

a. The 1997 Monitor Guidance is Non-Binding

SC Counties claim that EPA must follow monitor placement criteria in Guidance for Network Design and Optimum Site Exposure Criteria for PM2.5 and PM10 ("1997 Monitor Guidance"), Counties' Appx. B, Doc. 14, and that because EPA allegedly did not follow that guidance, monitoring data from the Greenville monitor cannot be used for designations. Counties' Br. 34-41. This argument fails.

First, the 1997 Monitor Guidance is merely guidance and does not impose binding requirements on EPA, States, or others. As stated in the Disclaimer:

> This guidance represents EPA's current views on these issues and do[es] not bind the States and public as a matter of law. This document has not been subject to the Agency's peer and administrative review, and does not necessarily represent Agency policy.

1997 Monitor Guidance at i, Counties' Appx. B, Doc. 14. As discussed below, the specific "criteria" that Petitioners extract from the 1997 Monitor Guidance are recommendations, not requirements, and are distinct from actual regulatory requirements found at 40 C.F.R. Pt. 58, Appx. D & E (2004).

Second, SC Counties' argument that the 1997 Monitor Guidance was "incorporated by reference" into the applicable regulations and therefore transmogrified into regulatory requirements is specious. Counties' Br. 35. The monitoring regulations in effect during the relevant time were promulgated in 1997. 62 Fed. Reg. 38,764 (July 18, 1997). Those regulations only refer to the 1997 Monitor Guidance as a "reference" at the end of Appendix D. Id. at 38,854. This citation does not mean that EPA intended the contents of a guidance document to become mandatory requirements.

Moreover, Petitioners confuse two distinct guidance documents and have erroneously merged them into one document. The 1987 guidance, Optimum

Network Design and Site Exposure Criteria for Particulate Matter, is distinct from the 1997 Monitor Guidance upon which Petitioners premise their argument that EPA failed to comply with applicable guidance. See 40 C.F.R. Pt. 58, Appx. D, § 6, Refs. 17 & 18 (2004). Petitioners incorrectly conflate these two documents, to support an argument that the explicit reference to the 1987 document in 40 C.F.R. Pt. 58, Appx. E, § 8.4, is also a reference to the 1997 Monitor Guidance.

In any event, neither guidance document is "part of the substantive rule" as SC Counties claim. Counties' Br. 35. That EPA took comment on the 1987 Guidance does not make it part of any rule. It is still a guidance document and is listed only as a reference. Similarly, the 1997 Monitor Guidance, by its terms and as applied by EPA, is distinct from mandatory regulatory requirements that appear in 40 C.F.R. Pt. 58. Petitioners are also wrong as a matter of law to assert that the 1997 Monitor Guidance is "incorporated by reference" into EPA's regulations. Counties' Br. 35. The Code of Federal Regulations defines "incorporation by reference" in its Explanation section as follows:

> Incorporation by reference was established by statute and allows Federal agencies to meet the requirement to publish regulations in the Federal Register by referring to materials already published elsewhere. For an incorporation to be valid, the Director of the Federal Register must approve it. . . . Properly approved incorporations by reference in this volume are listed in the Finding Aids at the end of this volume.

40 C.F.R. Pt. 58, Explanation at vi (2004). Neither of the guidance documents is listed in the Finding Aids of 40 C.F.R.; therefore, they are not "incorporated by reference."

EPA has concluded that the monitor placement is consistent with the recommendations in the 1997 Monitor Guidance. Moreover, SC Counties have consistently misinterpreted the 1997 Monitor Guidance and EPA disagrees with erroneous facts and conclusions in SC Counties' audit.

b. The Placement of Greenville's Monitor Was Correct

SC Counties' argument that the monitor was incorrectly placed, thereby invalidating the data, lacks merit. Counties' Br. 34-41. First, States submit annual monitoring network reviews to EPA documenting that each monitor meets applicable regulatory requirements. The State has submitted such plans to EPA since 2000, and they confirm that the Greenville monitor meets the requirements.[36/] Second, EPA performed its own post-designation audit on March 30-31, 2005, that confirmed that the site met all siting criteria of 40 C.F.R. Part 58, Appx. E. EPA

[36/] South Carolina's annual monitoring plans for 2000-2005 are attached for the Court's convenience to the Declaration of Van Xavier Shrieves, Chief, Monitoring and Technical Support Section, Air Toxics and Monitoring Branch, EPA Region 4. Annual Network Reviews, EPA Supp. Appx. 2, Ex. A. EPA respectfully requests that the Court take judicial notice of these reports. City of Sausalito, 356 F.3d at 1223 n.2.

Audit at 4, EPA Supp. Appx. 2, Ex. D. Third, EPA conducted a network review of the Greenville C/MSA PM2.5 monitoring network that concluded that the monitor met the requirements in 40 C.F.R. Part 58, Appx. D & E. Greenville Network Review at 5, B, Ex. C. Both the Audit and Network Review were sent to the State on May 19, 2005. Letter, EPA Supp. Appx. 2, Ex. B.

c. SC Counties' Objections to the Monitor Placement Are Without Merit.

SC Counties allege that the monitor site is inconsistent with specific regulatory and guidance "criteria." Counties' Br. 34-43. These assertions are incorrect for many reasons, including the following.

i. The Site Reflects Area-Wide Average Air Quality

SC Counties assert that the monitor's location is inconsistent with Section 5.5.3 of the 1997 Guidance. Counties' Br. 35; 1997 Monitor Guidance at 5-5, Counties Appx. B, Doc. 14. This assertion is simply wrong because that section of the guidance *only* pertains to monitors that are part of a spatial averaging plan, and the monitor at issue is not. EPA disapproved the State's request for spatial averaging. EPA Response to SC, OAR-2003-0061-0521 at 1, JAXX.

SC Counties also argue that "visual observation, filter data, and monitoring data" establish that the monitor is unrepresentative because it is "strongly

influenced" by nearby sources. Counties' Br. 36. EPA disagrees. The monitor is properly placed and thus accurately reflects PM2.5 exposure to the area's population, including exposure to PM2.5 resulting from residential burning of wood, coal, and fuel oil, as confirmed by EPA's on-site audit. EPA Audit at 3, EPA Supp. Appx. 2, Ex. D. In short, the monitor reflects this impact upon the population in the area and therefore the monitor is functioning as intended.

SC Counties claim that the monitoring data are not representative of the area as a whole. Counties' Br. 36. However, additional data from "winter saturation studies" in the area also demonstrate that the monitor site is representative. In each of these studies, the State set up additional monitors at other locations throughout the area to determine if other monitors would register comparable ambient levels of PM2.5. In the first study in early 2005, the eight monitors involved each registered ambient levels as high or higher than the monitor in question. EPA Supp. Appx. 2, Ex. E. In the second study in the winter of 2005-2006, the six monitors registered comparable levels. EPA Supp. Appx. 2, Ex. F. EPA concludes that these studies indicated that the challenged monitor is representative of the area as a whole.

Finally, SC Counties argue that because the monitor site was originally selected to monitor another NAAQS, it necessarily follows that the site was not appropriate for PM2.5 monitoring. Counties' Br. 36. This ignores that both the

State and EPA selected the site for the PM2.5 monitor, and have repeatedly concluded that the site is appropriate for this purpose, as reflected in the annual monitoring network reviews filed with EPA by South Carolina each year since 2000. Annual Network Reviews, EPA Supp. Appx. 2, Ex. A.

ii. External Siting Criteria Were Met

SC Counties emphasize that the 1997 Guidance recommends that monitors "should" not be located within 100 meters of "residential wood burning appliances," and that there are such sources within various distances "well within 100 meters" of the monitor. Counties' Br. 37. However, the recommended distance to residential wood burning was not a regulatory requirement of 40 C.F.R. Part 58, Appendix D or E; it was only a recommendation that could be overridden by other considerations. Even the 1997 Guidance explicitly phrases the distance from such sources as "should," not "must." 1997 Monitor Guidance at 5-2, Counties' Appx. B, Doc. 14.

In this instance, EPA concluded that the Greenville monitor site is representative of the area as a whole, or of sub-areas throughout the area, precisely because wood, coal, and fuel oil heating are common throughout the area. EPA Audit at 3, EPA Supp. Appx. 2, Ex. D. Thus, the monitor location is representative of population exposures throughout the area, notwithstanding the proximity of

residential emissions sources to the monitor. Indeed, regulatory requirements for "neighborhood" scale monitors explicitly contemplate that they will be representative of areas from 500 meters up to 4 kilometers from the monitor, and that such monitors are intended to measure impacts from sources typical of neighborhoods, including residential heating. 1997 Monitor Guidance at 2-12, Counties' Appx. B, Doc. 14. The State's annual reports reflect that the monitor meets all applicable siting requirements, including its representativeness of the area, and EPA's audit confirmed this fact. Annual Network Reviews and EPA Audit at 4, EPA Supp. Appx. 2, Exs. A & D.

iii. The Height of the Monitor Comports With the Regulations

SC Counties next claim that the monitor fails to meet a regulatory requirement, because the monitor is located near the slope of a hill. Counties' Br. 38. For PM2.5, EPA regulations require that monitors be located between 2 and 15 meters from ground level for middle or larger scale monitors like the one at issue. 40 C.F.R. Pt. 58, Appx. E, § 8.1 (2004). This height is intended to reflect the level at which people would be exposed to ambient PM2.5, with "compromises" made on the height to insure that monitors are safe from vandalism and other interference. Id.

SC Counties instead argue that height is meant to insure that the monitor is not at a similar height to sources, and assert that the presence of a slope to the south of the monitor site renders the site unrepresentative. Counties' Br. 38-39. First, this argument ignores the actual reason for the regulatory height requirement for the monitors, i.e., to insure that they are at a level representative of ambient levels to which people are exposed. 40 C.F.R. Pt. 58, Appx. E, § 8.1 (2004). Second, no regulatory requirement, or guidance recommendation, makes any reference to the presence or absence of slopes in relation to a monitoring location, because this is not the reason for EPA's concern respecting monitor heights. Third, the practical effect of SC Counties' theory would limit monitors to flat places, unlike many areas where people are exposed to PM2.5, including Greenville.

SC Counties misunderstand the actual reason for the monitor height requirement, and ignore that the State and EPA consider this location representative of the area as a whole, as reflected in the annual network reports submitted by the State to EPA, as confirmed by EPA's Audit, and the Greenville Network Review, and as further confirmed by the results of the two winter saturation studies, notwithstanding the terrain contour. See EPA Supp. Appx. 2, Exs. A-F.

iv. The Monitor Reflects Community Exposure

SC Counties also misunderstand the meaning of the recommendation at section 2.2.3 in the 1997 Guidance. Counties' Br. 40; 1997 Monitor Guidance at 2-13, Counties' Appx. B, Doc. 14. The recommendation that monitors not be located at the "fence line of an emissions source" is a reference to monitors near large stationary sources, which are typically surrounded by a fence. In such instances, EPA recommends that monitors not be physically located at the fence, but instead be located in the middle of an adjacent community in order to reflect the exposure of the community. A few houses with chimneys are not the type of source addressed by this recommendation. The monitor in question is not a "fence line" monitor at such a source; it is a neighborhood scale monitor that the State and EPA have concluded adequately reflects ambient PM2.5 in this area.

v. Data From the Monitor Were Representative of the Area

SC Counties further claim that data from the monitor are not representative because they are "significantly impacted by smoke emitted from one or more nearby houses" rendering atypical results in winter. Counties' Br. 41-42. Petitioners' theory reflects a misunderstanding of the form of the annual PM2.5 NAAQS. See supra 14-15. Because it is an annual average standard, high ambient levels at all times of the year count towards the NAAQS violation. The fact that

especially high values occur in a particular season is irrelevant. The annual PM2.5 NAAQS is intended to protect against exposure year-round.

SC Counties also argue that data from the Greenville monitor are "atypical" merely because they reflect impacts from sources including residential heating. EPA's technical judgment was that this does not render the data unreliable, because these impacts are indicative of population exposure in the area. EPA confirmed this in its audit, in which EPA investigated the types of sources throughout the area and determined that the location of the Greenville monitor is representative of the area as a whole. EPA Audit at 3, EPA Supp. Appx. 2, Ex. D. See also Greenville Network Review, id. Ex. C. The monitor is not "atypical;" it correctly reflects the level of exposure to ambient PM2.5 in this area, from residential heating and other sources.

vi. Whether the Greenville Monitor Was a "Core" Monitor is Irrelevant

SC Counties allege that the Greenville monitor must be a "core" monitor to be used to measure compliance with the NAAQS. Counties' Br. 42. Petitioners allege that certain State documents fail to label the Greenville monitor as a "core" monitor and thus its data cannot be used. Id. The Greenville monitor is an FRM SLAMS monitor. EPA Audit at 2, EPA Supp. Appx. 2, Ex. D. EPA uses all FRM monitors to monitor compliance with the NAAQS. 40 C.F.R. Pt. 50, Appx. N,

§ 3.0. South Carolina may have occasionally described the monitor with different terminology, but that does not alter the validity of the data. The Greenville monitor is an FRM monitor, it meets the regulatory siting requirements (EPA Audit at 4, EPA Supp. Appx. 2, Ex. D), and at the time of the designations it had been operating for over two years. SC Rebuttal, at 1, JAXX. Therefore, EPA must use its data for evaluation of compliance with the NAAQS.

In conclusion, the Greenville monitor was properly sited and its data is valid. EPA reasonably concluded that the lack of three full years of data from the monitor, however, meant there was insufficient information to reach a definitive conclusion regarding the area's attainment status. Thus, the designation of "unclassifiable" for Anderson, Greenville and Spartanburg counties should be upheld.

G. Counties Challenged by Industry Petitioners

Industry Petitioners challenge EPA's conclusions respecting six areas designated nonattainment: Baldwin Township, Randolph County, Illinois; Franklin, Cheshire, Monroe and Sprigg Townships, Ohio; and Porter County, Indiana. Indus. Br. 31-61. Some Petitioners own or operate EGUs in these areas and seek to avoid pollution controls required for nonattainment areas. Petitioners attempt to argue that EPA ignored relevant factors and inconsistently applied other

factors. At bottom, however, Petitioners simply disagree with EPA's conclusion that the massive emissions from these areas having large EGUs contribute to air quality that exceeds the PM2.5 NAAQS in nearby areas. Contrary to Petitioners' arguments, EPA methodically considered each of the nine factors for each area and made rational designations, supported by each area's particular facts and circumstances.

1. Baldwin Township, Randolph County, Illinois

EPA designated a portion of Randolph County, Illinois – Baldwin Township – nonattainment, based on EPA's determination that emissions in Baldwin Township contribute to violations in the St. Louis area. TSD 6-256–6-257, JAXX-XX.[37] An EGU in Baldwin emits substantial amounts of PM2.5 and PM2.5 precursors, including 96% of Randolph's annual 24,000 tons of SO2 and 86% of Randolph's annual 33,000 tons of NOx. TSD 6-258, JAXX. Baldwin is adjacent to the St. Louis C/MSA, and EPA determined that winds blowing from Baldwin toward St. Louis transport pollutants. TSD 6-260, JAXX. Thus, EPA concluded

[37] Petitioners inaccurately protest the nonattainment designation of "Randolph County." Indus. Br. 32-41. However, after reviewing additional data submitted by Illinois, EPA determined that only Baldwin Township contributed to nearby NAAQS violations and thus designated only that portion of Randolph County as nonattainment. TSD 6-257, JAXX. Thus, Petitioners' allegation that EPA "ignored the reasoned judgment of the States," Indus. Br. 32 n.10, is wrong. See also supra at 57-66.

that the Baldwin emissions contribute to violations in the St. Louis C/MSA. TSD 6-256–6-261, JAXX-XX.

a. Petitioners Mischaracterize EPA's Use of Three Factors

Petitioners assert that EPA incorrectly considered three forms of information: (1) emissions data; (2) meteorological data; and (3) "level of control."

First, Petitioners mistakenly argue that EPA based the Baldwin designation on incorrect data, due to later changes in EGU carbon emissions estimates. Indus. Br. 32-33. As discussed supra at 125-26, EPA concluded that these changes would not have affected designations. EPA specifically examined the impact upon Baldwin, saw no change in Randolph's rank among area counties, and thus found no material effect on the designation. Resp. to MOG, Attach. at 10-12 & Appx. E at 35, JAXX-XX, XX. Petitioners wrongly assume that sulfates and nitrates play no role in area violations, because the "majority" of the area's urban excess is carbonaceous. Indus. Br. 33, n.11. St. Louis speciated monitor data indicate that sulfates and nitrates comprise a substantial fraction of ambient PM2.5, i.e., the types of particles that the Baldwin EGU emits contribute to area violations. Urban Excess Data, OAR-2003-0061-0523, line 37, JAXX. Reductions in such particles would aid attainment as much as reductions in carbonaceous particles. The

Baldwin EGU's significant SO2, NOx, and direct PM2.5 emissions thus justified including Baldwin Township.

Petitioners' claims that EPA treated Baldwin differently from other areas with similar weighted emissions scores, and excluded other similarly situated areas that border C/MSAs, also must fail. Indus. Br. 33-34. As explained previously, weighted emissions scores are derived from data specific to the C/MSA and cannot be compared with scores from other C/MSAs. See supra at 135. Thus, the table at page 34 of Industry Petitioners' Brief is not a meaningful comparison. What is relevant is that Randolph's weighted emissions score, 8.9, is the sixth-highest among the 36 counties EPA evaluated for the St. Louis MSA. TSD 6-257–6-258, JAXX-XX. While the weighted emissions score of Sangamon County (8.7), in the St. Louis C/MSA, is the next-highest relative to Randolph, Sangamon's emissions are lower than Randoloph's, and Sangamon is located two counties away from any violating monitor. TSD 6-258, 7-43, JAXX, XX.

Each example Petitioners cite is distinguishable, due to significant differences between Baldwin and the other counties. For example, Pulaski County, Kentucky is further removed from the Lexington C/MSA, whereas Baldwin borders the St. Louis C/MSA. TSD 7-30, 7-43, JAXX, XX. This distance, along with low population, population growth, and VMT, relative to counties in the Lexington

area, supported excluding Pulaski. TSD 6-203, JAXX. Petitioners' argument that Pulaski's weighted emissions score was "six times higher" is misleading because this score reflects emissions relative only to the Lexington area. See supra at 135. Pulaski in fact had emissions significantly *lower* than those of Baldwin. TSD 6-258, 6-204, JAXX, XX. Sangamon, Illinois is not adjacent to the C/MSA and has lower emissions than Baldwin. TSD 7-43, 6-258, JAXX, XX. Daviess, Kentucky has far lower emissions. TSD 6-276, JAXX. Preston, West Virginia is not next to violating areas. TSD 7-35, JAXX. EPA designated Etowah, Alabama "unclassifiable" because of incomplete monitor data. TSD 6-156, JAXX. Carroll, Kentucky had low population, VMT, and commuting, and was not adjacent to violating areas. TSD 6-190, 7-10, JAXX, XX. Cleveland, North Carolina had low emissions, population, and commuters, and was not as near the violating area. TSD 6-226, 7-24, JAXX, XX. Rutherford, North Carolina is farther from the violating area. Id. Henderson, Kentucky had much lower emissions and low population. TSD 6-276, 6-278, JAXX, XX. Thus, none of these counties would be comparable to Baldwin, even if comparisons across C/MSAs were appropriate.

Second, Petitioners argue that because winds blow from various quadrants for different percentages of time, this negates contribution from Baldwin. Indus. Br. 34-35. Compliance calculations for the annual PM2.5 NAAQS include every

monitor reading throughout the three-year period, thus reflecting impacts from winds from all directions during that period. See supra at 14-15, 25.

EPA evaluated contribution over the relevant period using wind data and pollution roses. Wind blows from Baldwin towards St. Louis a significant portion of the time (29% from the southeast). TSD 6-260, JAXX. The pollution rose for the violating St. Louis monitor confirmed impacts from Baldwin. Pollution Roses at 345, JAXX. Thus, EPA reasonably concluded that Baldwin's emissions contributed to violations when winds blow from Baldwin. TSD 6-256–6-257, JAXX-XX; Resp. to Dynegy at 5, JAXX. The absence of a "prevailing wind" direction does not preclude contribution from different directions. See supra at 14-15, 25.

Finally, Petitioners incorrectly assert that EPA "disregarded" the level of emissions control. Indus. Br. 35-36. However, Petitioners conflate emission reductions made at different times. Indus. Br. 36. EPA considered recent emission reductions at the Baldwin EGU, but concluded that SO2 controls planned for the EGU were too late to justify excluding the EGU from the nonattainment area, and that further evaluation should occur as part of the nonattainment SIP process. TSD 6-257, JAXX. EPA did not consider control measures required under the consent decree between Dynegy and the United States because they are not required to

begin operation until 2010. Resp. to Dynegy at 2, JAXX. EPA reasonably determined that relying on 2010, or later, emission reductions in making area designations in 2004 would conflict with the CAA. See supra at 95-106.

b. EPA Appropriately Considered Other Information

Petitioners wrongly claim that EPA ignored other information for Randolph, such as low population, urban density, VMT, and economic growth. Indus. Br. 36-41. These are among the very reasons that EPA included only Baldwin, rather than all of Randolph. EPA IL Modification, OAR-2003-0061-0274, Encl. at 8-9, JAXX-XX; Resp. to Dynegy at 7, JAXX; TSD 6-256–6-258, JAXX-XX.

Petitioners suggest that EPA ignored Randolph's monitored attainment and its design value. Indus. Br. 37. EPA specifically concluded that Baldwin emissions contributed to nearby violations, notwithstanding monitored Randolph's PM2.5 levels. Resp. to Dynegy at 6-7, JAXX-XX. That other area counties have higher monitored ambient PM2.5 does not establish that such areas contribute to violations elsewhere. Petitioners cite St. Genevieve and Sangamon counties as examples, but the former has far lower emissions than Baldwin, and the latter has lower emissions and is farther from the violating area. TSD 6-257–6-258, JAXX-XX.

Petitioners erroneously contend that the existence of a non-violating monitor at Swansea County, between Baldwin and the violating monitors in St. Louis, disproves Baldwin's contributions to St. Louis. Indus. Br. 38-39. This assumption is incorrect. St. Louis violations are the cumulative result of transported and local emissions, and Baldwin emissions likely are mixing with less ambient PM2.5 from other areas and sources at Swansea. St. Clair, the location of both the attaining Swansea monitor and a violating monitor, is designated nonattainment. Thus, Petitioners will be able to explore their theory more definitively during development of the nonattainment SIP, which must include a modeled attainment demonstration. 40 C.F.R. § 51.1007(a).

Petitioners' comparisons to North Carolina and Wisconsin counties on this point ignore other considerations that justified excluding those counties. In North Carolina, the excluded counties are also "one or more counties away from" the violating county; Baldwin is adjacent to one. TSD 6-223–6-224, JAXX-XX. In Wisconsin, Kenosha is a county away from the violating county, but EPA also considered timely installation of both NOx and SO2 controls by the major Kenosha source no later than 2008. TSD 6-338, 6-341, JAXX, XX.

Finally, Petitioners' argument that Baldwin should be designated attainment merely because it is adjacent to, not within, the C/MSA is specious. Indus. Br. 40.

EPA recommended the C/MSA as a rebuttable presumption and indicated that facts and circumstances could justify smaller or larger areas. 2003 Guidance, Attach. 2 at 5-6, JAXX-XX; Resp. to Dynegy at 8, JAXX. Petitioners' argument that Baldwin's exclusion from the St. Louis ozone nonattainment area proves the arbitrariness of Baldwin's inclusion in the PM2.5 nonattainment area, Indus. Br. 40, ignores differences between ozone and PM2.5, such as precursors, control strategies, and the irrelevance for ozone of SO2 and PM2.5 emissions. Resp. to Dynegy at 8, JAXX. Baldwin's designation must be upheld.

2. Coshocton, Adams, and Gallia Counties, Ohio

EPA designated Franklin Township in Coshocton nonattainment because of contribution to violations in the Columbus area. TSD 6-311, JAXX. EPA designated Monroe and Sprigg Townships, in Adams, and Cheshire Township, in Gallia, nonattainment because of contribution to violations in the Huntington-Ashland area. TSD 6-318, JAXX. Large EGUs, owned by some of the Petitioners, that emit substantial amounts of PM2.5 and precursors are located in these townships. TSD 6-311, 6-318, JAXX, XX. Petitioners challenge EPA's technical judgments, but the record shows that EPA reasonably relied upon emissions from the sources, in conjunction with wind data and other relevant considerations, to

designate these townships nonattainment because of contribution to nearby violations.

a. Petitioners Mischaracterize EPA's Use of Monitoring Data

Petitioners erroneously assert that EPA erred because: (1) PM2.5 is not pervasive like ozone; (2) PM2.5 nonattainment is unrelated to SO2 emissions; and (3) PM2.5 designations should reflect future emissions reductions.

First, Petitioners wrongly argue that EPA should have acquiesced to Ohio's recommendation to designate only violating counties nonattainment, based upon Ohio's "belief" that PM2.5 is not pervasive like ozone. Indus. Br. 42. As discussed supra at 85-90, Section 107(d) requires EPA to designate contributing areas as well as violating areas, and Section 107(d)(6) does not preclude EPA from using information other than monitoring data. EPA properly reasoned that PM2.5 is a more pervasive pollutant than ozone, requiring larger nonattainment areas and including contributing areas. 2003 Guidance, Attach. 2 at 4-6, JAXX-XX.

Petitioners also erroneously assert that PM2.5 violations in Columbus and Huntington-Ashland do not reflect EGU contribution. Indus. Br. 43. Although Ohio stated that "a significant component" of violating levels of PM2.5 in Columbus was attributable to sources of organic carbon particles, id., Ohio did not claim that nitrates and sulfates attributable to EGU emissions are not also partially

responsible for those violations, nor could it. Speciated monitor data for this area indicate that sulfates and nitrates comprise 65% of the ambient PM2.5 in Columbus. Urban Excess Data, line 20, JAXX. Speciated monitor data for Huntington-Ashland indicate that sulfates and nitrates comprise 62% of ambient PM2.5 there. Id. line 14, JAXX.

Petitioners rely on EPA's response to a comment to assert that EPA agrees that sulfate and nitrate particles are not a problem in Columbus, and that SO2 sources play no role in Columbus violations. Indus. Br. 43. EPA's comment response addresses why a very small EGU (annual SO2 emissions under 10,000 tons) did not compel including Pickaway County in the Columbus area, compared to other counties. RTC 5-48–5-49, JAXX-XX. The statement that the Columbus urban excess is composed of nitrates and carbon merely reflects the large component of sulfates monitored in both rural and urban areas in Ohio, that cancel out in the calculation of the urban excess in Columbus. Urban Excess Data, line 20, JAXX. The statement that "SO2 emissions should not be an important factor" in defining the Columbus nonattainment area was simply in error, as EPA demonstrated by including Franklin in the nonattainment area, in part because of its high SO2 emissions. TSD 6-311–6-313, JAXX-XX.

Finally, Petitioners wrongly argue that EPA should have based designations on future attainment predicted to result from regional control programs such as CAIR. This argument is addressed supra at 96-106.

b. Petitioners Misunderstand Wind Data

Petitioners erroneously argue that EPA erred because: (1) the EGUs are "downwind" of violations; (2) the EGUs are too distant from violations; and (3) monitors situated between the EGUs and violating areas did not violate the PM2.5 NAAQS. Indus. Br. 45-49.

Petitioners' arguments rest upon the incorrect assumption that the basis for the designations is "regional transportation." Indus. Br. 44. Thus, they cite EPA actions and related caselaw that pertain only to CAA sections related to interstate transport of pollutants. 42 U.S.C. §§ 7410(a)(2)(D)(i), 7426. Section 107(d) governs PM2.5 designations; therefore, the specific statutory requirements and analytical approaches used by EPA for interstate transport are not controlling for designations. Section 107(d) requires EPA to identify those areas that violate and contribute to nearby violations, so that the State will evaluate sources in those areas in the nonattainment SIP. This could result in emissions controls beyond those required by regional programs such as CAIR.

Petitioners also mischaracterize what constitutes "upwind" or "downwind" for the PM2.5 NAAQS. They argue that Franklin is downwind of Columbus, and that Cheshire, Monroe, and Sprigg are downwind of Huntington-Ashland, because of "prevailing winds." Indus. Br. 46-47. In each area, Petitioners ignore the significant amount of time that wind blows from the direction of EGUs towards areas with violations. The form of the annual PM2.5 NAAQS requires that compliance calculations include every monitor reading throughout the three-year period, thus reflecting impacts from winds from all directions during that period. 40 C.F.R. Part 50, Appx. N, § 3.0. Moreover, the form of the 8-hour ozone NAAQS differs from the annual PM2.5 NAAQS, so that a smaller range of wind directions and seasonal contributions that are irrelevant for PM2.5 can be relevant to ozone designations. 40 C.F.R. Pt. 50, Appx. I.

EPA evaluated PM2.5 contribution throughout Columbus and Huntington-Ashland over the relevant period using wind data and pollution roses. Wind blows from the direction of Franklin toward Columbus a significant portion of the time (18% from the southeast, 16% from the northeast). TSD 6-314, JAXX. The pollution rose for the Columbus monitor confirmed impacts from the direction of Franklin. Pollution Roses at 103, JAXX. During that time, EPA reasoned that Franklin's substantial emissions contributed to Columbus-area violations. Wind

blows from the direction of Adams (22% from the northwest, and 39% from the southwest) and from the direction of Gallia (20% from the southeast, 20% from the northeast) towards Huntington-Ashland a significant portion of the time. TSD 6-322, JAXX. The Huntington-Ashland pollution rose reflected impacts from the directions of both Adams and Gallia. Pollution Roses at 153, JAXX. Even were there a "prevailing wind" direction in either violating area, available data show that winds also blow in other directions, demonstrating contribution to violations.

Petitioners also emphasize the distance of the EGUs from violating monitors. Indus. Br. 46-47. The 50-, 60-, and 80-mile distances Petitioners cite are misleading. Franklin is in a county adjacent to the Columbus nonattainment area, and Cheshire, Monroe, and Sprigg likewise are in counties adjacent to the designated Huntington-Ashland nonattainment area. TSD 7-13, 7-25, JAXX, XX. Moreover, because PM2.5 and PM2.5 precursors transport hundreds of miles, EPA reasonably concluded that these EGUs were nearby for purposes of contributing to violations.

The existence of attaining monitors between the EGUs and violating monitors also is not dispositive of contribution. The monitored Columbus violations likely result from combined impacts of transported and local emissions. Available information indicates that for a substantial percentage of time, pollutants

emanate from the direction of Franklin, and that Franklin has substantial PM2.5 and PM2.5 precursor emissions that contribute to those impacts. See supra at 210; Pollution Roses at 103-05, JAXX-XX. Similarly, available information reasonably supports including Cheshire, Monroe, and Sprigg because of contribution to nearby Huntington-Ashland. Id. at 149-153, JAXX-XX. Thus, emissions from the EGUs did not "bypass" the intervening monitors; it is more probable that impacts from the EGUs did not combine with as much ambient PM2.5 from other sources in those intervening locations. See supra at 210. Petitioners will have the opportunity to explore this more definitively during development of Ohio's nonattainment SIP, which must include a modeled attainment demonstration. 40 C.F.R. § 51.1007(a).

c. EPA Is Not Required to Use Modeling in Making Designations

Petitioners erroneously argue that designations require modeling because EPA used modeling in: (1) other SIP contexts; (2) the NOx SIP Call; and (3) CAIR.

First, Petitioners' reliance on EPA's 1996 disapproval of a redesignation request and a maintenance SIP for Pittsburgh is erroneous. Indus. Br. 45. In the cited document, EPA indicated that where the state attempted to rely on regional transport, it would need a modeling demonstration for support. In contrast,

designations are based on local and nearby contribution, not regional transport. 61 Fed. Reg. 19,193, 19,194 (May 1, 1996).

Second, Petitioners' analogy to the NOx SIP Call is inappropriate. Indus. Br. 48. Petitioners rely on a quote from Michigan v. EPA, 213 F.3d at 684, indicating that EPA must establish a "measurable contribution" to find "significant contribution" to downwind nonattainment. Indus. Br. 48-49. That case involved EPA action under Section 110(a)(2)(D)(i), not Section 107(d). As discussed in supra at 85-94, EPA does not interpret Section 107(d) to require "quantification" of contribution, the identical analytical approach, or the modeling, appropriate for Section 110(a)(2)(D)(i). Further, EPA conducted modeling to consider whether EGUs generally could contribute to nearby violations.[38/] This modeling confirmed that EGUs could contribute, and EPA considered this along with other information, such as meteorological and geographical information, to evaluate individual EGUs. See supra at 27. Thus, EPA did not automatically include all EGUs "east of the Rocky Mountains," Indus. Br. 49, in nonattainment areas without distinction based on a "prevailing westerlies" theory; EPA examined the contribution of such sources individually, based on the facts of each situation.

[38/] EPA's modeling included each EGU at issue and indicated that emissions from such sources were contributing to nearby violations. Timin Memo, JAXX-XX.

Finally, Petitioners argue that because EPA modeling for CAIR predicted that some violating areas could attain in the future, EPA "chose to ignore this" in PM2.5 designations. Indus. Br. 49. As discussed supra at 101-06, EPA reasonably did not base PM2.5 designations upon projected emissions reductions from CAIR.

d. EPA Appropriately Considered Other Information

Petitioners disingenuously claim that EPA ignored information other than emissions for Coshocton, Adams, and Gallia, such as low population, population growth, and VMT. Indus. Br. 49-52. These are among the very reasons that EPA included only the townships with EGUs, rather than the entire counties.

Contrary to Petitioners' claims, EPA's exclusion of Coshocton, Adams, and Gallia from ozone nonattainment areas is not controlling for PM2.5 designations, as those designations did not consider factors relevant to PM2.5, including SO2 and direct PM2.5 emissions from EGUs in those locations. Indus. Br. 51. Thus, different boundaries for ozone and PM2.5 are not "dichotomous" or "perplexing." Id. Ozone and PM2.5 have important differences, such as precursors.

Petitioners complain that the designations place them at "an unfair disadvantage." Indus. Br. 51-52. Section 107(d) does not direct EPA to exclude contributing areas because sources there wish to avoid CAA requirements for competitive advantage. EPA did not ignore recent installation of controls at the

EGUs; EPA concluded that Ohio did not provide minimum information necessary to justify considering NOx controls, and provided no evidence that SO2 controls would timely be in place. TSD 6-323, JAXX; see also supra at 99-106.

Therefore, the Ohio designations must be upheld.

3. Porter County, Indiana

EPA designated Porter County, Indiana nonattainment because it contributed to violations in both Lake County, Indiana and Cook County, Illinois. TSD 6-263, 6-251, JAXX, XX. Sources in Porter emitted significant amounts of PM2.5 and PM2.5 precursors: annual emissions of approximately 21,000 tons of SO2; 41,000 tons of NOx; 2,700 tons of carbon; and 5,500 tons of crustal particles. TSD 6-252, JAXX. The weighted emissions score, used to evaluate the relative impact of emissions throughout the C/MSA, ranked Porter fourth among 13 counties. TSD 6-264, JAXX. EPA also reasoned that Porter had a "sizable" population and a significant amount of commuters to adjacent Lake, both indicating emissions that contribute to nearby violations. TSD 6-263, JAXX.

Porter's emissions occurred in an area that is geographically "nearby" Lake and Cook. Porter is adjacent to and immediately east of Lake, and Lake is adjacent to Cook. TSD 7-9, JAXX. Because PM2.5 and PM2.5 precursors can transport hundreds of miles, emissions in Porter can easily contribute to violations in Lake

and Cook. See TSD 6-263, JAXX. To evaluate contribution, EPA considered monitoring and meteorological data and determined that winds blow from Porter towards Lake and Cook a substantial portion of the time, even if there is not a "dominant" wind direction in the area. TSD 2-263, 2-268, JAXX, XX.

Petitioners' challenges to EPA's technical judgments regarding designations lack merit; EPA reasonably concluded that Porter contributed to violations in nearby areas.

a. Petitioner Mischaracterizes Information EPA Relied Upon

Petitioners wrongly assert that Porter's designation is "fatally flawed" because: (1) EPA did not explain how Porter emissions constitute more than "potential" contribution; (2) EPA "overestimated" emissions in Porter; and (3) EPA "misunderstood" the meteorology and geography of the area. Indus. Br. 54.

First, Petitioners' contention that emissions information from Porter only indicates "potential" contribution, not proof that those emissions reach any violating monitor in a "quantity" sufficient to constitute contribution, is inconsistent with Section 107(d)(1) and the facts. Indus. Br. 53-54. Section 107(d) imposes neither a "materiality" or a "causation" test and does not require a bright-line "quantification" of contribution. Supra at 92-94. Nevertheless, EPA evaluated the magnitude of contribution through emissions inventories and weighted

emissions scores for each county, and evaluated causation by considering geography, wind data, and pollution roses. Even if emissions data alone indicated a "potential" for contribution, EPA reasonably considered emissions along with other information to ascertain whether Porter contributed to nearby violations. TSD 6-263–6-268, JAXX-XX. Petitioners' disagreement with EPA's methodology does not mean that EPA had no rational basis for its conclusions. See New York v. Reilly, 969 F.2d at 1150-51.

Petitioners also erroneously assert that EPA's post-designations revision of carbon emission estimates for EGUs indicates that there was a "fundamental error" in Porter's designation. Indus. Br. 54. As discussed in Part VIII, EPA examined whether the revised estimates would have affected the designations. EPA evaluated the impact on Porter and determined that it would have had no effect on Porter's ranking in the Chicago C/MSA, and thus no material effect on the designation. Resp. to MOG, Appx. E at 1, JAXX. A Petitioner's steel mill was unaffected by the revised carbon emissions estimates for EGUs either directly, or indirectly through the weighted emissions score. Id. EPA's recalculation of Porter's emissions showed little change in carbon or crustal emissions, even with revised EGU emissions estimates, and showed continued high carbon and crustal emissions, both of which result in part from the Petitioner's steel mill. Id. EPA

specifically noted significant steel mill emissions as part of the basis for Porter's designation. TSD 6-263, JAXX.

Finally, Petitioners argue that Porter's location southeast of most of the C/MSA and the area's violating monitors is dispositive of whether Porter contributes to nearby violations. Indus. Br. 54-57. Petitioner argues that Porter could only contribute to violations when wind blows "from the east" and characterizes this as "a rare occurrence" because wind blows from other directions "at least 82% of the time." Indus. Br. 56. EPA did not consider winds blowing from the direction of Porter to be "rare." See TSD 6-268, JAXX. EPA's information indicated that winds blow from the southeast 18% of the time, and, combined with winds blowing from the northeast 19% of the time, winds blow from Porter toward other portions of the nonattainment area 37% of the time. Id. EPA's statement that there was "no dominant wind direction" was correct and did not mean that winds never blow from Porter toward violating areas. Id.

Petitioners ignore the significance of the time that wind blows from Porter toward areas with violations. The form of the annual PM2.5 NAAQS requires that compliance calculations include every monitor reading throughout the three-year period, thus reflecting impacts from winds from all directions during that period. 40 C.F.R. Pt. 50, Appx. N, § 3.0. EPA evaluated contribution throughout the

Chicago area over the relevant period using wind data and pollution roses and concluded that wind blows from the direction of Porter toward Lake and Cook a significant portion of the time. Pollution Roses at 40-69, JAXX-XX. EPA concluded that Porter emissions contribute to violations in nearby Lake and Cook. Petitioners simply disagree with EPA's technical judgment that meteorological information supported designating Porter nonattainment.

For the same reason, Petitioner's argument that PM2.5 "plainly flows the other direction," from west to east, based on the ambient PM2.5 levels at monitors located from Cook to Porter, is incorrect. The monitored PM2.5 levels in Cook and Lake likely result from combined impacts of transported and local emissions. Available meteorological information indicates that for a substantial percentage of the time, those impacts emanate from the direction of Porter, and available information indicates that Porter has substantial PM2.5 and precursor emissions that contribute to those impacts. Id.

Similarly, Petitioner erroneously concludes that Porter could not contribute to Lake and Cook because La Porte County, further to the east, does not have a violating monitor. Indus. Br. 57. EPA considered whether to designate La Porte nonattainment and concluded that it should not, based upon considerations such as lower emissions, commuting, population, and VMT. TSD 6-263, JAXX. Thus, the

presence of a nonviolating monitor in Porter, between Porter and violating Lake and Cook monitors, or beyond Porter in La Porte, does not negate that Porter contributes to nearby violating areas.

b. Porter County Is Not Comparable to Counties in Other Areas

Petitioners erroneously argue that EPA's designation of Porter is arbitrary because: (1) EPA used a different approach in the Indianapolis area; (2) EPA treated a county in Pennsylvania differently; and (3) EPA inconsistently applied factors to five other counties located in other areas. Indus. Br. 57-60.

Petitioners mischaracterize EPA's evaluation of Indianapolis area counties as "totally different." Indus. Br. 58. As EPA explained, the Indianapolis area was unique: the county with violations was surrounded on all sides by eight counties of roughly equal sizes and distances from the violating monitor. TSD 6-280–6-281, JAXX-XX. Therefore, EPA evaluated weighted emissions scores for the Indianapolis C/MSA with an additional step to evaluate the emissions segregated by wind direction. EPA considered the resulting "wind weighted emissions score" along with other factors and types of information used in all other designations. TSD 6-280–6-286, JAXX-XX. In essence, EPA used the same conceptual approach to evaluate the relative contribution of counties using emissions and meteorological data as in other areas, but Indianapolis's unique factual

circumstances allowed EPA to take the same analysis one step further. Contrary to Petitioners' assertions, EPA could not have used this approach in designating Porter, because the geography and meteorology of the Chicago C/MSA differ from the Indianapolis C/MSA. Compare TSD 7-9, JAXX, with TSD 7-26, JAXX.

Petitioners mistakenly rely on Independent Petroleum Association of America v. Babbit, 92 F.3d 1248 (D.C. Cir. 1996), to support the assertion that EPA acted arbitrarily. In that case, an agency treated two similar forms of payments differently, and this Court held that the agency erred because it had not provided a "sufficient nonarbitrary reason for treating the two types of payments differently." Id. at 1258. Here, EPA's designations must be based on the facts and circumstances of each area, due to the nature of PM2.5 formation, the range of sources of PM2.5 and PM2.5 precursors, the effects of local meteorology, and other rational reasons that must be considered in determining appropriate boundaries for each nonattainment area. All areas are not similar, and EPA had to evaluate each on its facts and promulgate the designations appropriate for that specific area. EPA explained the reasons for its designations in each area, but those designations are not identical because the underlying facts in each area are not identical.

For example, Petitioners erroneously compare Porter to Northampton County, Pennsylvania. By Petitioners' lights, Northampton exceeds Porter in

weighted emissions score, population, and VMT, and EPA's designation of Northampton as attainment proves the injustice of Porter's nonattainment designation. Indus. Br. 59. Petitioners ignore distinctions that EPA considered in designating Northampton attainment. Northampton is not located in the Philadelphia C/MSA. TSD 6-38–6-39, JAXX-XX. The facts Petitioners cite come from information regarding the New York C/MSA, Indus. Br. 59, but Northampton is not located within that C/MSA either. TSD 6-17, JAXX. Indeed, the fact that Northampton is not located in either C/MSA indicates that it is not sufficiently close to either urban area to be presumed part of either nonattainment area, unlike Porter is with respect to Chicago. Thus, EPA did not consider including Northampton in either the Philadelphia or New York areas.

EPA considered including Northampton in the Reading area based on emissions and proximity to that violating area, but concluded that the largest EGU located there was under State order to shut down units by 2007, which would "greatly reduce the emissions from Northampton." TSD 6-95, JAXX. Indiana provided no similar information to EPA that it had ordered the imminent elimination of emissions from major sources in Porter. TSD 6-268, JAXX. Thus, Northampton and Porter are not comparable.

Petitioners' other examples of EPA's "inconsistent application" of factors are similarly meritless. EPA excluded Genesee from the Detroit area because, relative to other counties in that area, it had lower emissions, VMT, and population, and was much farther from the violations. TSD 6-293–6-297, JAXX-XX. EPA did not include Forsyth in the Greensboro area because it had lower population and VMT, and meteorological information indicated it contributed less than other counties included in that area. TSD 6-219–6-226, JAXX-XX. EPA excluded Ventura from the Los Angeles area for various reasons, particularly because it is in an airshed separated from the rest of the area by mountains. TSD 6-366–6-378, JAXX-XX. EPA did not include Ocean in the New York area largely because pollution roses and meteorological data indicated that it made "negligible" contribution to area violations, relative to other counties. TSD 6-33–6-34, JAXX-XX. EPA excluded Hartford from the New York area, in part because it is outside of the C/MSA and is "further removed geographically and meteorologically from the NYC area." TSD 6-13, JAXX. Porter is not the same as any of these counties. For all of these reasons, Porter's designation must be upheld.

CONCLUSION

For the foregoing reasons, the Court should deny all Petitions and should uphold the Designations Rule and related actions.

Respectfully submitted,

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Dated: June 11, 2008

CERTIFICATE OF COMPLIANCE WITH WORD LIMITATIONS

Pursuant to Fed. R. App. P. 32(a)(7)(C), and exclusive of the components of the brief excluded from the word limit pursuant to Fed. R. App. P. 32(a)(7)(B)(iii), I hereby certify that the foregoing brief contains 47,891 words, in 14 point Times New Roman typeface as counted by the word count feature of Corel WordPerfect 12, which is under the combined number of words permitted for Respondent in response to Petitioners' briefs under the Court's December 27, 2007 Order.

Dated: June 11, 2008

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CERTIFICATE OF SERVICE

I certify that on this 11th day of June, 2008, true and correct copies of BRIEF OF RESPONDENT were served by electronic mail and U.S. mail, on each of the following:

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