ORAL ARGUMENT NOT YET SCHEDULED

No. 13-1069 (consolidated with No. 13-1071)

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

NATIONAL ASSOCIATION OF MANUFACTURERS, *et al.*,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents.

On Petitions for Review of Final Agency Action of the United States Environmental Protection Agency

JOINT OPENING BRIEF OF PETITIONERS

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), Petitioners state at follows:

A. Parties, Intervenors, and Amici

Because these consolidated cases involve direct review of final agency action, the requirement to furnish a list of parties, intervenors, and *amici* that appeared below is inapplicable. These cases involve the following parties:

Petitioners:

Case No. 13-1069: National Association of Manufacturers.

Case No. 13-1071: Utility Air Regulatory Group, PM NAAQS Coalition, and Chamber of Commerce of the United States of America.

Respondents:

Respondents are the United States Environmental Protection Agency (in Case Nos. 13-1069 and 13-1071) and Gina McCarthy, Administrator of the United States Environmental Protection Agency (in Case No. 13-1069).

Intervenors and *Amici*

American Lung Association, Environmental Defense Fund, Natural Resources Defense Council, and Sierra Club are Intervenor-Respondents. There are no *amici* in these consolidated cases.

B. Rulings Under Review

These consolidated cases involve final agency action of the United States Environmental Protection Agency entitled "National Ambient Air Quality Standards for Particulate Matter," published on January 15, 2013, at 78 Fed. Reg. 3086.

C. Related Cases

These consolidated cases have not previously been before this Court or any other court.

DISCLOSURE STATEMENTS

Pursuant to Federal Rule of Appellate Procedure 26.1 and D.C. Circuit Rule 26.1, Petitioners provide the following disclosures:

***Chamber of Commerce of the United States of America*—**The Chamber of Commerce of the United States of America ("U.S. Chamber") is a non-profit organization under the laws of the District of Columbia. The U.S. Chamber is the world's largest business federation, representing 300,000 direct members and indirectly representing the interests of more than 3,000,000 businesses and professional organizations of every size and in every economic sector and geographic region of the country. A central function of the U.S. Chamber is to advocate for the interests of its members in important matters before courts, Congress, and the Executive Branch. The U.S. Chamber has no outstanding shares or debt securities in the hands of the public and has no parent company. No publicly held company has a 10% or greater ownership interest in the U.S. Chamber.

***National Association of Manufacturers*—**The National Association of Manufacturers ("NAM") is the nation's largest industrial trade association, representing small and large manufacturers in every industrial sector and in all 50 states. The NAM's mission is to enhance the competitiveness of manufacturers by shaping a legislative and regulatory environment conducive to U.S. economic

growth and to increase understanding among policymakers, the media, and the general public about the vital role of manufacturing to America's economic future and living standards. The NAM has no parent company, and no publicly held company has a 10% or greater ownership in the NAM.

PM NAAQS Coalition—The PM NAAQS Coalition ("Coalition") is a coalition of not-for-profit trade associations whose member companies represent a broad cross-section of American industry. The Coalition's purpose is to advance the interests of the companies represented by its member associations in the regulatory and judicial arenas. The Coalition has no outstanding shares or debt securities in the hands of the public and has no parent company. No publicly held company has a 10% or greater ownership interest in the Coalition.

Utility Air Regulatory Group—The Utility Air Regulatory Group ("UARG") is a not-for-profit association of individual electric generating companies and national trade associations that participates on behalf of its members collectively in administrative proceedings under the Clean Air Act, and in litigation arising from those proceedings, that affect electric generators. UARG has no outstanding shares or debt securities in the hands of the public and has no parent company. No publicly held company has a 10% or greater ownership interest in UARG.

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MISCELLANEOUS

GLOSSARY OF TERMS

Act	Clean Air Act
Agency	U.S. Environmental Protection Agency
CAA	Clean Air Act
CASAC	Clean Air Scientific Advisory Committee
EPA	U.S. Environmental Protection Agency
Final Rule	EPA, National Ambient Air Quality Standards for Particulate Matter; Final Rule, 78 Fed. Reg. 3086 (Jan. 15, 2013)
FIP	Federal Implementation Plan
I/M	Inspection and Maintenance
ISA	Integrated Science Assessment
JA	Joint Appendix
NAAQS	National Ambient Air Quality Standard
NO_2	Nitrogen Dioxide
OAQPS	U.S. Environmental Protection Agency Office of Air Quality Planning and Standards
PM	Particulate Matter
$PM_{2.5}$	Fine Particulate Matter/Particulate Matter With a Diameter of 2.5 Microns or Less
PM_{10}	Particulate Matter With a Diameter of 10 Microns or Less

Proposal	EPA, National Ambient Air Quality Standards for Particulate Matter; Proposed Rule, 77 Fed. Reg. 38890 (June 29, 2012)
PSD	Prevention of Significant Deterioration
RTC	Response to Significant Comments
SIP	State Implementation Plan
Standard	National Ambient Air Quality Standard
Subpart 4	Clean Air Act Title I, Part D, Subpart 4, CAA §§ 188-190, 42 U.S.C. §§ 7513-7513b
$\mu g/m^3$	Micrograms Per Cubic Meter

JURISDICTIONAL STATEMENT

Petitioners seek review of a rule of the U.S. Environmental Protection Agency ("EPA" or "Agency") entitled "National Ambient Air Quality Standards for Particulate Matter." 78 Fed. Reg. 3086 (Jan. 15, 2013) ("Final Rule"), Joint Appendix ("JA") __-__. Petitions for review of this rule were filed within the 60-day period prescribed by section 307(b)(1) of the Clean Air Act ("CAA" or "Act").[1] This Court has jurisdiction under that provision.

STATEMENT OF ISSUES

1. Whether EPA unlawfully prejudged the annual primary national ambient air quality standard ("NAAQS" or "standard") for fine particulate matter ("$PM_{2.5}$") and failed to solicit comments on the threshold issue of whether to revise the NAAQS;

2. Whether EPA violated the CAA by failing to consider and respond to compelling data submitted during the comment period in violation of CAA § 307(d)(6)(B) and by selectively focusing on data that supported revision of the primary annual $PM_{2.5}$ NAAQS while ignoring data that supported retention of the existing NAAQS;

[1] All citations are to the CAA; the Table of Authorities provides parallel citations to the U.S. Code.

3. Whether EPA's addition of near-road monitoring requirements and elimination of spatial averaging of ambient air monitoring results were arbitrary and capricious, an abuse of discretion, or otherwise unlawful; and

4. Whether it was arbitrary, capricious, an abuse of discretion, or otherwise unlawful for EPA to promulgate the revised $PM_{2.5}$ NAAQS without providing the necessary rules for implementing it.

STATUTES AND REGULATIONS

Pertinent statutes and regulations are reproduced in the Statutory and Regulatory Addendum.

STATEMENT OF THE CASE AND FACTS

I. THE NAAQS PROGRAM

The establishment and implementation of NAAQS are at the heart of the CAA. *Union Elec. Co. v. EPA*, 427 U.S. 246, 249 (1976). Although EPA is responsible for setting NAAQS, states have the primary responsibility for implementing them, with guidance and oversight by EPA. *See Train v. NRDC*, 421 U.S. 60, 64-65 (1975).

A. Setting and Revising NAAQS

EPA sets primary NAAQS at the ambient concentration that is "requisite to protect the public health" with "an adequate margin of safety." CAA § 109(b)(1). EPA must base these standards "on [air quality] criteria" that "accurately reflect

the latest scientific knowledge," *id.* §§ 108(a)(2), 109(b)(1), but EPA must set the standards at the level "not lower or higher than is necessary." *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 476 (2001). The CAA "does not compel the elimination of *all* risk," to public health; rather, the NAAQS should "promote[] safety overall" in light of comparative health risks. *Id.* at 494, 495 (Breyer, J. concurring) (emphasis in original); *see also* 78 Fed. Reg. at 3090, JA__ (the Act requires neither "a zero-risk" standard nor one at background concentrations). EPA must review NAAQS and related air quality criteria at five-year intervals and make revisions "as may be appropriate." CAA § 109(d)(1).

An independent scientific review committee appointed by the EPA Administrator—the Clean Air Scientific Advisory Committee ("CASAC")—advises EPA concerning the criteria and the NAAQS. *Id.* § 109(d)(2). EPA must explain any significant divergence from CASAC recommendations. *Id.* § 307(d)(3).

Setting NAAQS involves more than simply specifying an allowable level of a pollutant in ambient air. It also requires establishment of an averaging time (e.g., hourly or annual), a form (e.g., peak or mean value), and an indicator where the pollutant is not a single substance (e.g., particulate matter less than 2.5 microns in diameter—$PM_{2.5}$). EPA, EPA 452/R-11-003, Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards, at 2-104 (Apr.

2011), EPA-HQ-OAR-2007-0492-0339 ("Policy Assessment"), JA__. EPA also specifies the monitoring requirements that will be needed for the new NAAQS, 78 Fed. Reg. at 3086, JA__, and other implementation procedures that are necessary to apply the NAAQS in practice. Altering any of these elements changes the standard's stringency.

EPA must conduct notice-and-comment rulemaking when revising any NAAQS. CAA § 307(d)(1)(A), (d)(3). It must publish a proposal that both describes the Agency's planned action and summarizes the factual data on which the proposal is based, the methodology used to obtain and analyze those data, CASAC's findings and recommendations and reasons for any deviation from them, and the major legal and policy considerations. *Id.* § 307(d)(3). In addition, EPA's final action must include "an explanation of the reasons for any major changes in the promulgated rule from the propos[al]," *id.* § 307(d)(6)(A), and must respond to "each of the significant comments, criticisms, and new data submitted … during the comment period." *Id.* § 307(d)(6)(B). EPA must place information on which its bases its final action in a public docket. *Id.* § 307(d)(6)(C).

B. NAAQS Implementation

Some aspects of NAAQS implementation begin when a new or revised standard becomes effective. Others occur by statutory deadlines triggered by the

new or revised NAAQS' promulgation. These implementation requirements affect regulated entities and are relevant to the questions presented here.

1. Designations

Within a year after NAAQS promulgation or revision, each state must provide EPA with designations of areas within the state's boundaries, describing each area's status as attainment (meets NAAQS), nonattainment (exceeds NAAQS or contributes to air quality in a nearby area that exceeds NAAQS), or unclassifiable (lacking adequate information to make a designation). *Id.* § 107(d)(1)(A). EPA may modify these designations but must provide the state an opportunity to comment. *Id.* § 107(d)(1)(B)(ii). EPA promulgates designations no later than two years after promulgation of a NAAQS, but may take an additional year. *Id.* § 107(d)(1)(B)(i). If a state fails to submit designations, EPA makes the designations. *Id.* § 107(d)(1)(B)(ii). It is important for the designations to be correct because designating an area as nonattainment has substantial consequences for new and existing sources within that area.

2. State Implementation Plans

Revision of a NAAQS triggers requirements for each state to prepare, adopt, and submit to EPA an "infrastructure" state implementation plan ("SIP") within three years. *Id.* § 110(a)(1). The Infrastructure SIP must include ambient air quality monitoring and data systems, programs for enforcement of control

measures, and adequate authority and resources to implement the plan. EPA, Infrastructure SIP Element Reports ("Element Reports"), http://www.epa.gov/airquality/urbanair/sipstatus/infrastructure.html (last visited Aug. 19, 2013).

States with $PM_{2.5}$ nonattainment areas must also submit an "Attainment SIP" within eighteen months of the nonattainment designation pursuant to CAA Title I, Part D, Subpart 4 (CAA §§ 188-190) ("Subpart 4"). CAA §§ 110(*l*), 189(a)(2). Although Subpart 4 specifically addresses PM_{10}, (particulate matter with a diameter of 10 microns or less), this Court recently held that it applies equally to the $PM_{2.5}$ NAAQS. *NRDC v. EPA*, 706 F.3d 428 (D.C. Cir. 2013). The Attainment SIP must specify control measures to bring the area into attainment "as expeditiously as practicable but no later than" six years after the area's nonattainment designation. *Id.* § 188(c)(1). The Attainment SIP must apply control requirements for major stationary sources of $PM_{2.5}$ precursors, "except where [EPA] determines that such sources do not contribute significantly to [$PM_{2.5}$] levels which exceed the standard in the area." *Id.* § 189(e). EPA must adopt a federal implementation plan ("FIP") for a state if EPA finds the state's Attainment SIP "substantially inadequate" and the state fails to correct it. *Id.* §§ 110(c)(1), 110(k)(3), (5).

3. New Source Permitting

Construction or modification of a "major" source (a source with emissions greater than a specified threshold) in any area that has not been designated "nonattainment" requires a prevention of significant deterioration ("PSD") permit. *Id.* § 165(a). To obtain a PSD permit, the owner or operator of the source must demonstrate *inter alia* that emissions from the source "will not cause, or contribute to, air pollution in excess of" any NAAQS. *Id.* § 165(a)(3). EPA interprets the Act as requiring applicants to make this demonstration for a new or revised NAAQS as soon as the NAAQS becomes effective. Mem. from Stephen D. Page, Dir., EPA OAQPS, to Air Div. Dirs. & Deputies, Regions I-X at 3 (Apr. 1, 2010), EPA-HQ-OAR-2007-0492-0410 ("Page Memorandum"), JA__.

II. HISTORY OF PM NAAQS

EPA promulgated the first NAAQS for PM (then called "total suspended particulate") in 1971. 36 Fed. Reg. 8186 (Apr. 30, 1971). EPA has since reviewed these NAAQS several times. In 1987, EPA changed the indicator to PM_{10}. 52 Fed. Reg. 24634 (July 1, 1987).

EPA's 1997 PM NAAQS revision added a standard for $PM_{2.5}$ for the first time. 62 Fed. Reg. 38652, 38668 (July 18, 1997). EPA adopted annual and 24-hour averaging times for the new primary $PM_{2.5}$ NAAQS, *id*. at 38669, setting the annual standard at 15 micrograms per cubic meter ("$\mu g/m^3$") and the 24-hour

standard at 65 μg/m^3, *id*. at 38677. The annual standard took the form of "an annual arithmetic mean, averaged over 3 years, from single or multiple community-oriented monitors." *Id*. at 38672. This ability to average data from multiple monitors when making attainment determinations is referred to as "spatial averaging." *See, e.g.*, *id.* at 38671. EPA relied on staff and CASAC recommendations in allowing spatial averaging. 62 Fed. Reg. at 38671-72. EPA explained that many of the epidemiological studies it relied on to set the NAAQS used spatial averaging, and spatial averaging was consistent with EPA's policy of reducing aggregate population risk. *Id.* at 38671. EPA dismissed concerns that "spatial averaging would fail to provide adequate health protection because 'clean areas' and 'dirty areas' would be averaged together," by imposing several "criteria and constraints" that were "intended to ensure that spatial averaging would not result in inequities in the level of protection provided by the PM standards." *Id.* at 38671-72.

EPA completed its next review of the PM NAAQS in 2006, maintaining the level of the annual $PM_{2.5}$ NAAQS, but lowering the 24-hour NAAQS to 35 μg/m^3. 71 Fed. Reg. 61144, 61171, 61176 (Oct. 17, 2006). EPA also maintained the use of spatial averaging. *Id*. at 61167. The Agency imposed additional constraints on the use of spatial averaging "so as to address possible disproportionate impacts on

potentially vulnerable populations and more generally to avoid inequities across all population groups." *Id*.

In challenges to aspects of the 2006 NAAQS, this Court remanded EPA's decision to retain the 15 $\mu g/m^3$ level for the annual $PM_{2.5}$ NAAQS. *Am. Farm Bureau Fed'n v. EPA,* 559 F.3d 512, 528 (D.C. Cir. 2009). This Court, however, did not order EPA to promulgate a more stringent standard. Rather, it directed EPA to provide a more adequate explanation of why retaining the standard would protect public health. *Id*.

III. THE PRESENT RULEMAKING

EPA began this PM NAAQS review in June 2007, 72 Fed. Reg. 35462 (June 28, 2007), and subsequently included the *American Farm Bureau* remand in this review, Policy Assessment at 1-10, JA__.

EPA issued updated air quality criteria in December 2009. EPA, EPA/600/R-08/139F, Integrated Science Assessment for Particulate Matter (Dec. 2009) ("ISA"), EPA-HQ-OAR-2007-0492-0079, JA__-__. In concert with the ISA, EPA staff prepared an assessment of the health risks posed by $PM_{2.5}$ in ambient air. EPA, EPA-452/R-10-005, Quantitative Health Risk Assessment for Particulate Matter (June 2010), EPA-HQ-OAR-2007-0492-0118 ("Risk Assessment"), JA__-__. Taking both the ISA and the Risk Assessment into account, the Policy Assessment was prepared to "present[] staff conclusions

regarding the adequacy of the current suite of PM standards as well as potential alternative standards for consideration in [the] review." Policy Assessment at ES-1, JA__. The staff recommended revising the annual $PM_{2.5}$ NAAQS to a level between 11 $\mu g/m^3$ and 13 $\mu g/m^3$.

Comments submitted to EPA remarked that the analysis supporting the need to revise the annual NAAQS was flawed and recommended retention of the existing standard. *See, e.g.*, API Comments on the Second External Review Draft Policy Assessment at 3, Attachment at ES-1 (Aug. 16, 2010), EPA-HQ-OAR-2007-0492-0193, JA__, __. Commenters noted EPA omitted from its analysis findings from peer-reviewed studies that exposure to $PM_{2.5}$ in ambient air was not associated with adverse health effects at all. *Id.*, Attachment at 9, JA__.

EPA proposed revising the PM NAAQS to change both the level and form of the annual standard. 77 Fed. Reg. 38890, 38925, 38942 (June 29, 2012) ("Proposal"), JA__, __, __. Although EPA recognized "uncertainties and limitations still remain in the available health effects evidence," *id.* at 38910, JA__, it nevertheless "provisionally conclude[d]" revision was necessary, *id*. at 38920, JA__. EPA did not seek comments on its provisional conclusion or on retaining the existing annual standard, instead proposing to revise the annual standard to within the range of 12 to 13 $\mu g/m^3$ and also soliciting comments on 11 $\mu g/m^3$. *Id*. at 38942, JA__. EPA also proposed "eliminat[ing] the use of spatial averaging."

Id. at 38925, JA__. EPA said this change would not "change[] the requirements in the $PM_{2.5}$ network design criteria" and would "continu[e] to represent locations with population exposure." *Id*. at 39008, JA__.

The Proposal discussed aspects of implementing a revised annual $PM_{2.5}$ NAAQS, including changes to the monitoring network and the method of calculating monitoring results. EPA also proposed "to add a near-road component to the $PM_{2.5}$ [monitoring] network" not for attainment purposes per se, but to help "[t]o better understand the potential health impacts" of exposures near "heavily travelled roads, particularly those with significant heavy-duty diesel activity," and to support "key monitoring objectives," including supporting multi-pollutant research efforts, understanding better pollution concentrations near roadways, and validating model performance. *Id*. at 39008, 39009, JA__, __.

The Proposal acknowledged revising the NAAQS would trigger numerous CAA obligations, including designations and SIPs. *Id*. at 39016, JA__. Accordingly, in a more than thirteen-page discussion, EPA solicited comment on implementation issues including designations, permitting, and Infrastructure and Attainment SIPs. *Id*. at 39016-30, JA__-__.

EPA received numerous comments on the Proposal. Commenters questioned the basis for revising the annual $PM_{2.5}$ NAAQS. *See, e.g.*, Comments of the National Association of Manufacturers *et al.* at 23 (Aug. 31, 2012), EPA-

HQ-OAR-2007-0492-9425, JA___ ("NAM Comments"). They identified studies suggesting that, contrary to EPA's assumption, there is a threshold $PM_{2.5}$ level above 15 $\mu g/m^3$ below which no evidence exists that $PM_{2.5}$ causes adverse health effects, *see, e.g.*, *id.* at 24; Comments of the American Petroleum Institute, Attachment 1, at 21-24 (Aug. 31, 2012), EPA-HQ-OAR-2007-0492-9530, JA___ ("API Comments"), and questioned studies on which EPA relied in limiting the proposed range for the NAAQS to between 11 and 13 μ/m^3, *see, e.g.*, Comments of the Utility Air Regulatory Group, Attachment 1, at 17-23 (Aug. 31, 2012), EPA-HQ-OAR-2007-0492-9483, JA__-__ ("UARG Comments"); API Comments at 9-14, JA__-__. Commenters also questioned the elimination of spatial averaging, *see* NAM Comments at 19-20, JA__-__; API Comments at 24-25, JA__-__, and the basis for the proposed near-road monitoring requirement, NAM Comments at 18-19, JA__-__, API Comments at 58, JA__.

Commenters stressed the need for timely implementation rules. *See, e.g.,* UARG Comments at 43-47, JA__-__; NAM Comments at 29, JA__; Comments of the American Forest & Paper Association and American Wood Council at 19-23 (Aug. 31, 2012), EPA-HQ-OAR-2007-0492-9490, JA__-__.

In the Final Rule, EPA reduced the annual $PM_{2.5}$ standard from 15 $\mu g/m^3$ to 12 $\mu g/m^3$. 78 Fed. Reg. at 3164, JA__. It also increased the stringency of the standard by (1) eliminating the option for spatial averaging, *id.* at 3127, JA__; and

(2) adopting a near-road monitoring requirement for assessing $PM_{2.5}$ attainment, *id*. at 3241, JA__. Although acknowledging that states and industry groups had commented on the need for an implementation rule, EPA indicated that it was "not able to propose an implementation rule or finalize any aspect of the implementation program" other than grandfathering certain PSD permit applications. *Id*. at 3251, JA__.

SUMMARY OF ARGUMENT

First, EPA committed multiple procedural errors in promulgating the Final Rule. Fundamentally, it prejudged both the necessity of revising the primary annual $PM_{2.5}$ NAAQS and the range of possible outcomes. Nothing in the CAA or any decision of this Court compelled EPA to revise the standard. EPA then exacerbated its mistakes by arbitrarily failing to consider and respond to countervailing evidence supporting retaining the primary annual $PM_{2.5}$ NAAQS—a plain CAA violation—and by capriciously giving greater weight to data that supported its position than to equally valid contrary data, which it largely ignored. Had EPA complied with the Act, it would have reached a different standard in the Final Rule.

Second, EPA unlawfully rendered the annual $PM_{2.5}$ NAAQS more stringent than necessary to protect public health by requiring and specifying a monitoring system that will significantly overstate area-wide concentrations of $PM_{2.5}$.

Monitoring data are used to determine "attainment" or "nonattainment" with the NAAQS—a pivotal step triggering various consequences under the Act. Thus, it is critical that ambient air quality data be representative of the area quality control region being monitored.

In the Final Rule, however, EPA mandated the use of near-road monitors that will reflect exaggerated results from traffic, and it eliminated the ability of states to average results for more than one monitor in a given region. It required near-road monitoring without any record support that doing so would increase the representativeness of the results. EPA also disconnected the monitoring method from the science it used to support the new annual $PM_{2.5}$ NAAQS: the science is primarily based on total population exposure, while the new monitoring will reflect near-road conditions only. EPA eliminated spatial averaging without citing to any changes in empirical data that warranted reversal of its prior policy and regulations. EPA also failed to demonstrate how the prior restrictions on spatial averaging were insufficient to protect at-risk populations.

Finally, EPA knew the promulgation of the revised NAAQS would trigger immediate implementation obligations and start the clock on numerous others. EPA knew that the rules and methodologies needed to meet the legal obligations that flowed from the NAAQS' promulgation were deficient or missing, yet it failed to provide them. Therefore, the Final Rule is invalid because it was arbitrary and

capricious for EPA to issue the revised NAAQS without providing these necessary rules.

STANDARD OF REVIEW

The Court must set aside final EPA action if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or "without observance of procedure required by law." CAA § 307(d)(9); 5 U.S.C. § 706(2).

STANDING

Petitioners have standing because they have suffered an injury-in-fact caused by the Final Rule that is redressable by the relief they seek. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). Petitioners furthermore have standing on behalf of their members because (1) at least one member would have standing in its own right; (2) the interests Petitioners "seek[] to protect are germane to [their] purpose[s]"; and (3) participation by an individual member is not necessary. *Sierra Club v. EPA*, 292 F.3d 895, 898 (D.C. Cir. 2002) (citation omitted).

The Final Rule injures Petitioners and their members in several ways. First, EPA failed to follow all procedures required by the Act. *Massachusetts v. EPA*, 549 U.S. 497, 517-18 (2007) (litigant vested "with a procedural right … has standing if there is some possibility that the requested relief will prompt the injury-causing party to reconsider the decision that allegedly harmed the litigant"). Petitioners' members emit $PM_{2.5}$ and are subject to extensive and costly CAA

requirements as a result of the $PM_{2.5}$ NAAQS. Here, EPA deprived Petitioners and their members of critical procedural rights, including the right to adequate notice and the opportunity to comment *before* EPA decides an issue. *See infra* Sections I, II.C.

Second, Petitioners' members are required to obtain PSD permits before constructing new major facilities or undergoing major modifications at existing facilities. As part of the PSD permit application process, Petitioners' members must demonstrate that emissions from the project "will not cause, or contribute to, air pollution in excess of … [a] national ambient air quality standard…." CAA § 165(a)(3). EPA takes the position that this requirement applies immediately after a NAAQS becomes effective. *See* Page Memorandum at 3, JA__. Thus, Petitioners' members are directly subject to the new, more stringent annual $PM_{2.5}$ NAAQS. *See* Declaration of Traylor Champion, Exhibit 1; *Lujan*, 504 U.S. at 561-62 (when petitioner is "an object of the [agency] action ... there is ordinarily little question that the action or inaction has caused him injury, and that a judgment preventing or requiring the action will redress it"); *see also infra* Section III.A.

Third, promulgation of the $PM_{2.5}$ NAAQS triggers requirements for states to adopt the new NAAQS and to develop new SIP requirements. *See infra* Section III.B. States do not have discretion to adopt standards that are less stringent than the NAAQS promulgated by EPA. Petitioners' members operate facilities that

emit $PM_{2.5}$ in jurisdictions that are required to adopt the new annual $PM_{2.5}$ NAAQS and related SIPs, and they are injured as a result thereof. *See S. Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882, 895 (D.C. Cir. 2006) (standing to challenge NAAQS implementation rule based on allegation that "it is inevitable that [association's] members will be affected by the 2004 Rule and will be required to install controls either not previously required or at an earlier date than previously anticipated").

Fourth, EPA must designate areas as either attainment, nonattainment, or unclassifiable for the revised annual $PM_{2.5}$ NAAQS. CAA § 107(d)(1)(B)(i). EPA projects that 18 counties that met the prior annual $PM_{2.5}$ NAAQS will be reclassified as nonattainment areas under the new NAAQS. EPA, Fine Particle Concentrations Based on Monitored Air Quality from 2009 – 2011, *available at* http://www.epa.gov/pm/2012/20092011table.pdf (last visited Aug. 19, 2013). Petitioners have members in these counties that will be adversely affected by these nonattainment determinations. Nonattainment determinations automatically trigger applicability of the stringent nonattainment new source review provisions of CAA Title I, Part D, to Petitioners' members, *S. Coast*, 472 F.3d at 895, and the requirement that existing sources employ reasonably available control measures, CAA § 189(a)(1)(C).

These injuries and others are caused by the Final Rule and would be redressed by its vacatur or the alternative remedies Petitioners seek. Thus, Petitioners' members would have standing to challenge the Rule in their own right. Furthermore, the interests that the Petitioners seek to protect are germane to their purposes. *See* Disclosure Statements, *supra*, at iii-iv. Finally, given the nature of the claims asserted and the relief requested, no reason exists to require individual participation by any of Petitioners' members.

ARGUMENT

I. EPA UNLAWFULLY REVISED THE PRIMARY ANNUAL $PM_{2.5}$ NAAQS.

A. EPA Prejudged the Outcome of the Rulemaking Process.

EPA's decision to revise the primary annual $PM_{2.5}$ NAAQS from 15 $\mu g/m^3$ to 12 $\mu g/m^3$ is unlawful because EPA, without legal basis, prejudged the threshold question of whether the existing standard should be revised, without soliciting public comment. In short, EPA decided before the notice-and-comment period that the primary annual $PM_{2.5}$ NAAQS should be revised, and it narrowed its request for comments accordingly. 77 Fed. Reg. at 38,943, JA__.

Nothing in the CAA sanctions EPA's approach. Although EPA must "complete a thorough review" of the NAAQS every five years, EPA is not *compelled* to revise the NAAQS and need only "make such revisions … as may be appropriate." CAA § 109(d)(1). Thus, in a NAAQS review, EPA must first

answer the question whether the NAAQS needs to be revised (i.e., whether the current NAAQS remains "requisite to protect the public health" with "an adequate margin of safety"). *Id.* § 109(b)(1). If EPA determines the NAAQS must be revised, it then determines how best to do so. Here, EPA skipped directly to the second question, prejudging the answer to the first without seeking public input on it.[2]

Likewise, nothing in *American Farm Bureau* compelled EPA to revise the primary annual $PM_{2.5}$ NAAQS or alleviated the requirement for EPA to take comment on the issue. In *American Farm Bureau*, this Court remanded to EPA the Agency's 2006 $PM_{2.5}$ NAAQS after finding *inter alia* that the Agency failed to support its decision to maintain the existing primary annual $PM_{2.5}$ standard at 15 $\mu g/m^3$. 559 F.3d at 524. The Court was clear this error was "in principle a curable defect," *id.* at 528, and EPA had the opportunity on remand "to explain why … its annual standard is *sufficient* 'to protect the public health [with] an adequate margin of safety,'" *id.* at 520 (emphasis added). Thus, the Court did not require EPA to establish a more stringent $PM_{2.5}$ standard; it required EPA only to explain better why the 15 $\mu g/m^3$ standard is sufficiently protective.

[2] CASAC's recommendation that the standard be revised did not absolve EPA of the need for notice-and-comment on the threshold question of whether to revise the NAAQS. EPA may deviate from CASAC's recommendations provided it gives "an explanation of the reasons for such differences." CAA § 307(d)(3).

EPA's failure to seek public comment on the threshold question of whether to revise the NAAQS is fatal. The public comment process is important to the rulemaking process generally and under the CAA. The purpose of notice-and-comment rulemaking is to allow an "opportunity for interested parties to offer comments that could persuade the agency to modify its rule." *Am. Water Works Ass'n v. EPA*, 40 F.3d 1266, 1274 (D.C. Cir. 1994); *see also Nat'l Tour Brokers Ass'n v. United States*, 591 F.2d 896, 902 (D.C. Cir. 1978) (agency must maintain "a flexible and open-minded attitude towards its own rules" during the comment period). That purpose is thwarted when EPA prejudges the outcome of a rulemaking and refuses to make changes in response to public comments.

Here, EPA proposed to revise the NAAQS to between 12 and 13 $\mu g/m^3$ and narrowed its request for comments accordingly, "solicit[ing] public comment on [that] range." 77 Fed. Reg. at 38,943, JA__. EPA "also solicit[ed] public comment on alternative annual standard levels down to 11 $\mu g/m^3$." *Id.* At no point, however, did EPA solicit comments on *whether* the existing annual standard remained requisite to protect the public health with an adequate margin of safety and therefore should be retained, notwithstanding the substantial body of evidence,

discussed *infra*, supporting the preexisting standard.[3] *See Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 549 (D.C. Cir. 1983) ("notice will not lead to better-informed agency decisionmaking" if "interested parties [do] not know what to comment on").

Thus, it was clear in the Proposal that EPA prejudged this threshold issue and was unreceptive to comments in support of maintaining the existing standard. In doing so, EPA failed to keep a "flexible and open-minded attitude" toward the rulemaking, *Nat'l Tour Brokers*, 591 F.2d at 902, and discouraged participation from commenters who may have otherwise urged EPA to maintain the existing standard. EPA also failed to give Petitioners and others with similar views a full and fair opportunity to "persuade the agency to modify its [proposed] rule" and maintain the existing standard, *see Am. Water Works*, 40 F.3d at 1274, and thus prejudiced the Final Rule in favor of its predetermined outcome. Although EPA undoubtedly retains discretion regarding the setting of the standard based on a fair and reasonable review of the scientific record and the comments submitted, it acted arbitrarily and capriciously here by manipulating the notice-and-comment process

[3] Although EPA sought to characterize its decision to revise the NAAQS as "provisional[]," 77 Fed. Reg. at 38920, JA__, it did not ask for comment on this characterization and solicited comments only on the 11 to 13 $\mu g/m^3$ range.

to foreclose comments on the substantive threshold issue EPA had to address in the first instance.

B. EPA Unlawfully Failed To Consider or Respond Fully to Comments and Studies That Supported Retaining the Existing Annual Standard.

The deference accorded EPA on scientific matters does not authorize it to cherry pick the data on which it relies. *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 237 (D.C. Cir. 2008) ("[T]here is no [Administrative Procedure Act] precedent allowing an agency to cherry-pick a study on which it has chosen to rely in part."). EPA must provide "a rational explanation of how it treated the evidence before it." *Mississippi v. EPA*, No. 08-1200, slip op. at 27 (D.C. Cir. July 23, 2013) (per curiam). Furthermore, EPA must meet its procedural mandate to consider and respond to all significant comments. CAA § 307(d)(6)(B). It did not do so here.

1. EPA Failed To Consider or Respond to Studies Cited in Comments That Support Maintaining the Existing Primary Annual $PM_{2.5}$ NAAQS.

Even though EPA failed to seek comment on its predetermination to revise the NAAQS, commenters brought to EPA's attention several older and newer studies calling into question the need for revision and supporting retention of the existing standard. EPA entirely failed to respond to comments on these studies. The CAA requires EPA to include with any final rule "a response to each of the

significant comments, criticisms, and new data submitted … during the comment period." CAA § 307(d)(6)(B). Strict compliance with this requirement is necessary because "the opportunity to comment is meaningless unless the agency responds to significant points raised by the public." *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977) (per curiam); *see also North Carolina v. EPA*, 531 F.3d 896, 928 (D.C. Cir. 2008) (per curiam) (remanding EPA rule for failure to respond to comments).

In NAAQS rulemakings, where EPA must weigh the relative value of competing bodies of scientific literature, it is especially important that EPA acknowledge, address, and respond to comments on significant studies that are contrary to the Agency's proposed course of action. Here, neither the preamble to the Final Rule nor EPA's response to comments[4] considers or responds to key studies cited by commenters to demonstrate the existence of a $PM_{2.5}$ exposure level below which no adverse health effects are observed. *See, e.g.*, API Comments at 19-20, JA__-__ (citing Gamble (1998), Gamble and Lewis (1996), Moolgavkar (2005), Green *et al.* (2002), Koop and Tole (2004), Roberts and Martin (2004), Cox (2012), Fraas (2011), and Fraas and Lutter (2011)). Likewise, EPA neither

[4] EPA, Responses to Significant Comments on the 2012 Proposed Rule on the National Ambient Air Quality Standards for Particulate Matter (June 29, 2012; 77 FR 28890) (Dec. 2012), EPA-HQ-OAR-2007-0492-10095 ("RTC"), JA__-__.

considered nor responded to several studies contradicting EPA's conclusions and showing no association between $PM_{2.5}$ exposure and mortality. *Id.* at 18-19, JA__-__ (citing Lipfert *et al.* (2008), Wittmaack (2007), Clyde *et al.* (2000), and Moolgavkar *et al.* (2000)).

Not only did EPA fail to address these studies in the RTC or Final Rule, it also failed to reference them in its ISA, Policy Assessment, and Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure.[5] Petitioners do not dispute EPA's authority to rely on studies that support its chosen position; however, nothing excuses EPA from the requirement that it address and respond to all relevant studies and information submitted into the record. By failing to respond to comments citing significant studies calling into question the Final Rule, EPA violated section 307(d)(6)(B) of the Act and evidenced that it selectively picked data to support its predetermined position to revise the primary annual $PM_{2.5}$ NAAQS. *See Bus. Roundtable v. SEC*, 647 F.3d 1144, 1151 (D.C. Cir. 2011).

[5] EPA, EPA/600/R-12/056F, Provisional Assessment of Recent Studies on Health Effects of Particulate Matter Exposure (Dec. 2012), EPA-HQ-OAR-2007-0492-10067 ("Provisional Assessment"), JA__-__.

2. EPA Arbitrarily Excluded Studies Supporting Retention of the Primary Annual $PM_{2.5}$ NAAQS.

EPA also arbitrarily gave preferential treatment to studies supporting its predetermined position by applying unequal peer-review requirements to different studies depending on the conclusions those studies reached. The arbitrariness and capriciousness of EPA's actions are evidenced by EPA's failure to apply the same requirements to studies supporting its conclusion that the NAAQS needed to be revised as it did to studies questioning that conclusion. *See Catawba Cnty. v. EPA*, 571 F.3d 20, 52 (D.C. Cir. 2009) (per curiam) (remanding nonattainment designations because EPA applied inconsistent standards).

Commenters cited several published and peer-reviewed studies demonstrating the preexisting NAAQS remains requisite to protect public health with an adequate margin of safety. *See, e.g.*, NAM Comments at 9, 23-25, JA___, ___-___; UARG Comments at 10-11, JA___-___; API Comments at 13-14, 20, JA__-__, ___. These studies provide the most recent, and potentially most probative, data regarding the health impacts of $PM_{2.5}$ exposure. For example, commenters cited updated studies showing further support for a threshold level of $PM_{2.5}$ exposure below which there is no evidence that $PM_{2.5}$ causes adverse health effects. API Comments at 20, JA__ (citing Cox (2012), Fraas (2011), and Fraas and Lutter (2011)). Likewise, commenters cited studies concluding that purported associations between $PM_{2.5}$ exposure and adverse health effects observed in

national studies were highly likely to be confounded due to inadequate control for local variables such as other environmental pollutants and history of smoking. NAM Comments at 24, JA__ (citing Greven *et al.* (2011)); API Comments, at 13-14, JA__-__ (same).

EPA, however, largely dismissed these new studies. EPA explained it was "basing the final decisions in this review on the studies and related information included in the [ISA] that have undergone CASAC and public review, and will consider newly published studies for purposes of decisionmaking in the next PM NAAQS review." 78 Fed. Reg. at 3120, JA__. This meant that for studies published after the ISA in December 2009—*three years* before the Final Rule was signed—EPA at most "conduct[ed] a provisional review and assessment." *Id.* at 3095, JA__. Many of the studies cited by commenters, such as Cox (2012), Fraas (2011), and Fraas and Lutter (2011), did not receive *any* treatment by EPA (provisional or otherwise) in the Final Rule, RTC, or Provisional Assessment.

At a minimum, given EPA's mandate to regulate based on "the latest scientific knowledge," CAA § 108(a)(2), it is arbitrary, capricious, and not in accordance with law for EPA to dismiss more than *three years* of data simply because they were not included in EPA's ISA. *See Bus. Roundtable*, 647 F.3d at 1150-51 (vacating rule when agency relied on two unpersuasive studies and

"discounted" "numerous studies submitted by commenters that reached the opposite result").

Further, exacerbating EPA's procedural fouls, EPA applied a different standard to new analyses supporting its determination than it did to new studies offering contrary views. EPA candidly acknowledges it relied heavily on its own "analysis of distributions of underlying population-level data" that CASAC did not formally review and was not published in a peer-reviewed publication. 78 Fed. Reg. at 3149, JA__. EPA asserts its reliance on new data is justified here because CASAC suggested EPA obtain and evaluate the data. *Id.* But CASAC's recommendation to collect data is not the equivalent of CASAC's peer review of those data, EPA's analysis, or EPA's conclusions drawn therefrom. Nor does it excuse EPA's inconsistent treatment of studies that post-date CASAC's review. Such a disparate treatment of data is the essence of arbitrary and capricious rulemaking.

Petitioners do not dispute the CAA allows EPA to rely on new data that were not subject to CASAC peer review. *See Am. Petroleum Inst. v. EPA*, 684 F.3d 1342, 1348-49 (D.C. Cir. 2012) ("*API*"), *cert. denied*, 133 S. Ct. 1724 (2013). Nor do they seek to require EPA to reopen the CASAC review process for new data. What the CAA compels—and what Petitioners demand—is even-handed

consideration of newer data that post-date CASAC's review.[6] To ignore and dismiss relevant and timely data simply because they do not support EPA's position—while simultaneously relying on other non-CASAC reviewed data that support EPA's position—demonstrates an arbitrary and capricious rulemaking process and reinforces EPA's prejudgment of the revised primary annual $PM_{2.5}$ NAAQS.

3. EPA Arbitrarily Weighted Similar Studies Differently Based Solely on the Outcome of Such Studies.

In deciding to revise the primary annual $PM_{2.5}$ NAAQS, EPA arbitrarily placed undue weight on a handful of studies that produced statistically significant positive results with respect to health impacts occurring at levels below the existing NAAQS. Despite asserting it conducted a "broad[] evaluation" of all relevant evidence, EPA acknowledges it "placed greater emphasis on studies reporting statistically significant results" than studies that did not demonstrate an association between $PM_{2.5}$ exposure and adverse health impacts at levels below the existing standard. 78 Fed. Reg. at 3112, JA__. EPA further explained that, in the Policy Assessment, it "placed greatest weight on those long- and short-term

[6] This Court's decision in *API* confirms the importance of the peer-review process (either by CASAC or otherwise) in confirming the findings of health-based studies. While EPA has some discretion in determining what peer-review requirements to apply, nothing in *API* suggests EPA may apply relaxed standards solely for data that support its preferred policy outcome.

exposure studies that reported statistically significant associations with mortality and morbidity effects." *Id.* at 3101, JA__.

By definition, if exposure to a particular concentration of a pollutant such as $PM_{2.5}$ does *not* cause a health effect, then a valid analysis looking for an association between the exposure and the health effect of interest will not produce results that are statistically significant. Thus, when two analyses assess associations between $PM_{2.5}$ exposure and the same health effect and only one reports a statistically significant association between $PM_{2.5}$ exposure and the effect, that result does not, standing alone, provide a rational basis for assigning a greater weight to the statistically significant finding than to an equally credible and valid analysis finding no association. EPA's approach, however, discounts equally probative and credible analyses not showing a statistically significant association between lower ambient $PM_{2.5}$ concentrations and adverse health effects—and therefore suggesting no more stringent standard is appropriate—in favor of studies reporting statistically significant associations, just because they support EPA's predetermined policy decision. EPA cannot arbitrarily dismiss studies simply because they "prove the negative."

For example, EPA cites Zeger *et al.* (2008), EPA-HQ-OAR-2007-0492-0321 ("Zeger"), JA__-__, in support of its decision to revise the primary annual $PM_{2.5}$ NAAQS. 78 Fed. Reg. at 3107, JA__. Zeger analyzed data from the

Medicare Cohort Air Pollution Study and reported statistically significant associations between long-term $PM_{2.5}$ exposure and mortality for the eastern—but not the western—region of the United States. *Id.* In contrast, Greven analyzed the same data and, after accounting for confounding factors, concluded there was "no significant association" between $PM_{2.5}$ exposure and mortality in the United States as a whole or for the eastern or western regions analyzed by Zeger. *See* Greven *et al.* (2011), EPA-HQ-OAR-2007-0492-10054 ("Greven"), JA__. Under EPA's approach, Zeger's conclusion with respect to the eastern region of the United States would be assigned more weight than the study's conclusion with respect to the western region and more weight than Greven, merely because it reported a statistically significant association.[7] Figure 4 in the Final Rule makes it clear EPA has in fact assigned Zeger's (and others') findings of associations more weight: it relies on Zeger's finding for the eastern region to translate the epidemiological evidence into a level for an annual NAAQS. 78 Fed. Reg. at 3135, JA__. Indeed, this critical figure, reproduced from the Policy Assessment, explicitly includes only "studies that provide evidence of positive and statistically significant associations with health effects…," Policy Assessment at 2-79, JA__, and contains

[7] EPA attempts to dismiss Greven in part due to its reliance on monthly exposure values, 78 Fed. Reg. at 3116-17, JA_-__, but EPA's undue reliance on studies reporting statistically significant results suggests the Agency was predisposed to favor the methodology relied upon in Zeger.

none of the studies that demonstrate the lack of an association between exposure and health effects. Although EPA is entitled to rely on studies supporting its conclusion in the Final Rule, it is not entitled to cherry pick the studies that support a certain outcome and necessarily assign those studies greater weight over other credible studies reaching a different conclusion.

EPA's actions here differ from those in *Mississippi* where the Court deferred to EPA's reliance on statistical significance in a factually distinct context. *See Mississippi*, slip op. at 27. There, environmental groups challenged EPA's refusal to use statistically *insignificant* associations to set more stringent ozone NAAQS. *Id.* In contrast, EPA here gave less weight to studies that supported a conclusion different from its predetermined outcome, thus engaging in the type of cherry picking courts have rejected. *Am. Radio Relay League*, 524 F.3d at 237. *Mississippi* does not support EPA's decision to ignore uncertainty surrounding the health impacts associated with $PM_{2.5}$ exposure at higher concentrations and arbitrarily place greater emphasis on certain findings of statistically significant associations below the existing standard. EPA must weigh those competing studies on equal footing, rather than placing a thumb on the scale of studies that support a lower standard.

C. EPA's Errors Materially Impacted the Rule's Outcome.

EPA's arbitrary and capricious treatment of the data and its failures to comply with CAA procedures were not harmless errors. Petitioners presented EPA with (1) a substantial body of credible scientific analysis demonstrating the existing NAAQS remained requisite to protect public health with an adequate margin of safety and (2) evidence of substantial questions surrounding EPA's preferred findings. Had EPA properly received and considered this evidence, it would have proved compelling and could have changed the Final Rule's outcome.

With respect to whether the NAAQS needed to be revised, commenters demonstrated a substantial decrease in relative risk associated with long-term $PM_{2.5}$ exposure since EPA's last review in 2006, indicating the standard was and remains effective in protecting public health. NAM Comments at 9, JA__; UARG Comments at 16-17, JA__-__. Commenters also provided information showing EPA's proposed standard is unnecessary. For example, commenters cited several studies showing no correlation between $PM_{2.5}$ exposure below 15 $\mu g/m^3$ and mortality when confounding factors such as environmental co-pollutants are taken into account. NAM Comments at 24, JA__; UARG Comments at 11, JA__; API Comments at 13, JA__. In addition, commenters cited to studies demonstrating a "threshold effect" below which adverse health effects associated with $PM_{2.5}$ exposure were not observed. NAM Comments at 24, JA__. These comments and

the studies on which they are based provided an ample basis for maintaining the existing standard of 15 $\mu g/m^3$ and demonstrate EPA's failure to consider these comments fully was not harmless.

With regard to the studies on which EPA primarily relied in making its determination, Petitioners provided detailed critiques of those studies, questioning the scientific justification for the revised standard. For example, commenters explained that the four primary studies[8] on which EPA relied failed to account for confounding factors, such as environmental co-pollutants and tobacco use, that called into question the supposed association between $PM_{2.5}$ exposure and adverse health impacts. NAM Comments at 23, JA__; API Comments at 13, JA__. Likewise, commenters explained the studies showed stronger associations with other pollutants, such as nitrogen dioxide ("NO_2") and acidity, than with $PM_{2.5}$. UARG Comments at 12, JA__. Finally, commenters explained the studies on which EPA relied failed to account for the much higher chronic exposure many test subjects experienced *before* the $PM_{2.5}$ standards were put in place. *Id.* at 13-14, JA__-__.

[8] Those four studies are the Harvard Six Cities Study, the American Cancer Society Cancer Prevention Study, the Women's Health Initiative, and the Medicare Cohort Air Pollution Study.

In their comments, Petitioners established that EPA's proposed revisions went beyond what is requisite to protect public health with an adequate margin of safety and, therefore, were inconsistent with the Act. *See Whitman*, 531 U.S. at 473 (standard must be "'sufficient, but not more than necessary'" to protect public health). In light of the compelling evidence marshaled by commenters in support of the preexisting standard, EPA's decision in the Final Rule may well have been different had EPA received and considered all of the evidence on an equal footing, rather than selecting the data that supported its predetermination that revision of the primary $PM_{2.5}$ NAAQS was necessary.

II. EPA'S $PM_{2.5}$ MONITORING REQUIREMENT REVISIONS UNLAWFULLY BIAS RESULTS TOWARD NONATTAINMENT AND RENDER THE NAAQS MORE STRINGENT.

In the Final Rule, EPA changed the $PM_{2.5}$ monitoring requirements by requiring the co-location of $PM_{2.5}$ monitors at near-road sites with monitors used to measure NO_2. EPA also eliminated its long-standing policy and regulations allowing states, in certain circumstances, to base NAAQS attainment determinations on average ambient $PM_{2.5}$ concentrations when an area has more than one community-oriented monitoring site. These two changes to the monitoring requirements have the effect of making the revised annual $PM_{2.5}$ NAAQS more stringent than necessary and increase the likelihood that areas will be designated nonattainment. *See* API Comments at 58, JA__; *Whitman*, 531

U.S.at 473. For the reasons stated below, these changes to the monitoring requirements are unlawful and should be vacated.

A. EPA's Requirement for Near-Road Monitoring Is Unlawful.

The Final Rule required states to locate $PM_{2.5}$ monitors at near-road locations in areas with populations in excess of one million. 78 Fed. Reg. at 3241, JA__. The Final Rule specified that these monitors must be co-located with the NO_2 near-road monitors EPA requires for determining attainment of the 1-hour NAAQS for NO_2. *Id.*; *see also* 75 Fed. Reg. 6474, 6505 (Feb. 9, 2010) (final NO_2 NAAQS). Co-locating $PM_{2.5}$ monitors with the NO_2 monitors for the purpose of determining attainment is arbitrary and capricious.

1. Near-Road Monitoring Makes the NAAQS More Stringent Than Necessary and Does Not Represent $PM_{2.5}$ Concentrations in the Ambient Air.

$PM_{2.5}$ monitors must be "sited to represent area-wide air quality," 40 C.F.R. pt. 58, App. D, § 4.7.1(b), and should be "representative of population exposures," 78 Fed. Reg. at 3235, JA__. The NO_2 monitoring locations meet neither requirement for $PM_{2.5}$; to the contrary, they will skew the data away from the core requirements for representativeness. The primary consideration in locating near-road NO_2 monitors is placement of the monitor on road segments with the greatest traffic, 40 C.F.R. pt. 58, App. D, § 4.3.2(a)(1). Rather than being the areas "representative of population exposure" called for with $PM_{2.5}$, these road segments

are likely to be interstate highways. *See* EPA, EPA-454/B-12-002, Near-road NO_2 Monitoring Technical Assistance Document at 24, tbl. 6-1 (June 2012) ("NO_2 TAD"), *available at* http://www.epa.gov/ttnamti1/files/nearroad/NearRoad TAD.pdf. Further, NO_2 monitors must be located "as near as practicable to the outside nearest edge of the traffic lanes" of those interstate highways at a distance no greater than 50 meters. 40 C.F.R. pt. 58, App. E, § 6.4(a); *see also* NO_2 TAD at 45 ("strongly encourag[ing]" NO_2 monitors to be no further than 20 meters from the edge of the closest traffic lane).

Unlike the NO_2 NAAQS, which has a 1-hour averaging time, the $PM_{2.5}$ standards have averaging times of *one year* and *24-hours*. Although it is plausible that placing monitors near roads to measure NO_2 concentrations may be representative of population exposures over a single hour for the 1-hour NO_2 NAAQS, people are not at NO_2 near-road monitoring sites (outside in the ambient air[9] within 50 meters or less of the edge of an interstate highway) for 24-hours at a time, let alone for a full year. Placing $PM_{2.5}$ monitors at these sites for compliance purposes (as opposed to supporting co-pollutant research efforts) makes no sense. In fact, EPA has previously concluded that a violating monitor in New Haven,

[9] Ambient air "is the statute's term for the outdoor air used by the general public." *Train*, 421 U.S. at 65; *see also* 40 C.F.R. § 50.1(e).

Connecticut, located near an interstate highway[10] "was 'not representative of community exposure' and thus should not be the basis of [$PM_{2.5}$] designations." *Catawba Cnty.*, 571 F.3d at 50-51.

Moreover, research funded by EPA has reported that traffic is a strong predictor of $PM_{2.5}$ at existing compliance monitors, meaning the current $PM_{2.5}$ monitoring network captures $PM_{2.5}$ motor vehicle emissions. *See* Zev Ross *et al.*, *A land use regression for predicting fine particulate matter concentrations in the New York City region*, 41 Atmospheric Env't 2255, 2260-61 (2007), EPA-HQ-OAR-2007-0492-0357, JA__, __-__. Thus, the studies supporting the $PM_{2.5}$ NAAQS, which rely on data from the current monitoring network, reflect the exposure of the population as a whole to $PM_{2.5}$, including those members of the population who spend a greater than average time in the ambient air near roads.

Finally, locating the $PM_{2.5}$ monitors at the near-road NO_2 monitoring sites is not representative of "area-wide air quality." $PM_{2.5}$ levels drop rapidly moving away from the immediate side of a road. *See* Leonard M. Zwack *et al.*, *Characterizing local traffic contributions to particulate air pollution in street*

[10] *See* Connecticut Dep't of Envtl. Protection, Connecticut's Response to the EPA 9-Factor Analysis for PM2.5 Designations at 4 (Aug. 26, 2004), *available at* http://www.epa.gov/airquality/particlepollution/designations/1997standards/rec/letters/1/s/Connecticut_JA1.pdf.

canyons using mobile monitoring techniques, 45 Atmospheric Env't 2507, 2512 & fig. 3 (2011), EPA-HQ-OAR-2007-0492-0358, JA__-__. This means $PM_{2.5}$ concentrations measured at NO_2 monitors' locations will not be representative of area-wide ambient air, leading to attainment decisions based on data that unfairly reflect the air quality in the areas at issue.

Even CASAC indicated $PM_{2.5}$ should be given relatively low priority as a candidate for near-road monitoring, and EPA did not explain in the Final Rule its reasons for deviating from this CASAC recommendation. Letter from Armistead (Ted) Russell, Chair, CASAC, Ambient Air Monitoring & Methods Comm., & Jonathan M. Samet, Chair, CASAC, to the Hon. Lisa P. Jackson, Adm'r, EPA, EPA-CASAC-11-001, at xi-xii (Nov. 24, 2010), EPA-HQ-OAR-2007-0492-0391 ("Russell Letter"), JA__-__ (placing $PM_{2.5}$ as seventh priority for near-road monitoring among thirteen pollutant types about which EPA had asked); *see also* CAA § 307(d)(3)(C); *Am. Farm Bureau*, 559 F.3d at 521. CASAC cautioned EPA against emphasizing near-road monitoring for $PM_{2.5}$ because it might not reflect the concentrations (and exposures) of greatest concern. Russell Letter at xix (noting CASAC's "general[] … agreement … the $PM_{2.5}$ [Federal Reference Method for monitoring $PM_{2.5}$] *is not appropriate for use at the near road NO_2 sites*") (emphasis added).

Changing the monitoring network to mandate near-road monitors, as EPA did, was arbitrary and capricious. Near-road monitoring is not warranted to reflect the $PM_{2.5}$ concentrations to which people will be exposed for the averaging times of the $PM_{2.5}$ standards. For this reason, the $PM_{2.5}$ NAAQS should be vacated. Alternatively, the near-road monitoring requirements should be vacated.

2. EPA Did Not Provide an Adequate Opportunity for Notice-and-Comment on Key Conclusions It Used To Justify Near-Road Monitoring Requirements.

EPA indicated in the Final Rule that it would use near-road monitors in determining whether areas attain the $PM_{2.5}$ NAAQS and in developing strategies to bring nonattainment areas into attainment. 78 Fed. Reg. at 3238, JA__. In the Proposal, EPA emphasized the helpfulness of such monitors for research, particularly multi-pollutant research. *See, e.g.*, 77 Fed. Reg. at 39009, JA__. Although the Proposal did mention in passing that near-road monitors would collect "NAAQS comparable data," *id.*, this clearly was not EPA's main focus or purpose in proposing the new monitors. Placement of $PM_{2.5}$ monitors near roads for the research purposes is different than using them for determining attainment.

The Final Rule's near-road monitoring requirement is unlawful because EPA's determination that the $PM_{2.5}$ near-road monitors should be used for assessing attainment (as opposed to research and other purposes) depended on a Census Bureau report EPA cited for the first time in the Final Rule. 78 Fed. Reg.

at 3239-40 n.228, JA__-__ (citing U.S. Census Bureau, Current Housing Reports, Series H150/09, *American Housing Survey for the United States: 2009* (2011), *available at* http://www.census.gov/prod/2011pubs/h150-09.pdf ("Census Report")). Moreover, EPA's reliance on the Census Report, which is not in the docket, violates CAA § 307(d)(6)(C).

EPA relied on the Census Report to reach the conclusion (also not presented in the Proposal) that near-road monitors were necessary because "the near-road environment is an area where significant public exposure can occur…." 78 Fed. Reg. at 3241, JA__. The public could not comment on EPA's conclusion or the Census Report because neither was included in the Proposal.

Had Petitioners been given the opportunity, they would have noted EPA's conclusion that significant public exposure can occur near roads is not justified.[11] The Census Report looks at more than the types of highways where NO_2 monitors are located and "include[s] divided or undivided highways of at least four lanes, railroad or streetcar tracks, public, private, or military airfields." Census Report, App. A. at A-5. It is unclear in the Final Rule what percentage of the people in the

[11] Several Petitioners filed a petition for reconsideration raising this issue. UARG *et al.*, Petition for Reconsideration and Request for an Administrative Stay at 11-12 (Mar. 18, 2013), EPA-HQ-OAR-2007-0492-10116, JA__-__. EPA has never acted on the Petition.

Census Report live near the roads where EPA proposes to place monitors (as opposed to the other types of areas in the Report).

EPA's conclusion that near-road areas are areas where significant public exposure can occur represents a deviation from the Proposal that deprived Petitioners of the ability to comment on the Proposal. *See Small Refiner Lead Phase-Down Task Force*, 705 F.2d at 547 (Although an agency can make changes between issuance of the proposed and the final rule, "if the final rule deviates too sharply from the proposal, affected parties will be deprived of notice and an opportunity to respond to the proposal."). That EPA received comments advancing this new rationale and conclusion, *see, e.g.*, 78 Fed. Reg. at 3239, JA__, does not remedy this defect. EPA "cannot bootstrap notice [of its conclusion] from a comment" on the Proposal. *Fertilizer Inst. v. EPA*, 935 F.2d 1303, 1312 (D.C. Cir. 1991) (internal quotation and citation omitted). EPA's failure to provide an opportunity for public comment on the Census Report and the conclusions reached from it is a fatal flaw in the NAAQS requiring the NAAQS to be vacated or remanded to EPA.

B. EPA's Elimination of Spatial Averaging Is Arbitrary and Capricious and Will Produce Results Biased Toward Nonattainment.

In the Final Rule, EPA, without any basis in fact or adequate support in the record, reversed its long-standing policy that permitted states, in specified

circumstances, to use spatial averaging for making attainment determinations for $PM_{2.5}$. This reversal was arbitrary and capricious because EPA failed to cite to any changes in empirical data that warranted a change from EPA's past policy and because EPA failed to demonstrate that the existing restrictions on spatial averaging are no longer sufficient to protect at-risk populations. By eliminating spatial averaging and requiring that attainment determinations be based solely on the results from the monitor reporting the highest values—and especially in light of the near-road monitoring requirements discussed above—monitoring data will not represent ambient $PM_{2.5}$ concentrations throughout the reporting area, but will instead be biased toward nonattainment.

When an agency promulgates regulations, it must "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choices made." *Motor Vehicle Mfrs. Ass'n v State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (quotation omitted). This standard applies equally when an agency seeks to revise or revoke entirely an existing regulation or policy. *Jicarilla Apache Nation v. Dep't of the Interior*, 613 F.3d 1112, 1119 (D.C. Cir. 2010) ("One of the core tenets of reasoned decisionmaking announced in *State Farm* is that 'an agency changing its course … is obligated to supply a reasoned analysis for the change.'" (alteration in original) (citations omitted)); *Dillmon v. Nat'l Transp. Safety Bd.*, 588 F.3d 1085,

1089-90 (D.C. Cir. 2009); *Indep. Petroleum Ass'n v. Babbitt*, 92 F.3d 1248, 1258 (D.C. Cir. 1996). Further, when a "new policy rests upon factual findings that contradict those which underlay its prior policy" an agency must "provide a more detailed justification than what would suffice for a new policy created on a blank slate." *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009). Here, EPA fails to offer a reasonable and detailed justification of its decision to eliminate spatial averaging after endorsing spatial averaging in prior rulemakings that involved indistinguishable factual circumstances.

In the 1997 $PM_{2.5}$ rule, EPA allowed the use of spatial averaging because it was used by many of the epidemiological studies that supported the NAAQS and because it was consistent with EPA's policy of reducing aggregate population risk. 62 Fed. Reg. at 38671. "In those studies that used only one monitoring location, the selected site was chosen to represent community-wide exposures, not the highest value likely to be experienced within the community." *Id.*; *see also* 40 C.F.R. pt. 58, App. D, § 4.7.1(b) (each monitoring station must be "sited to represent area-wide air quality"). EPA dismissed concerns that spatial averaging would fail to provide adequate health protection and imposed constraints on spatial averaging's use to avoid "inequities in the level of protection provided by the PM standards." 62 Fed. Reg. at 38671, 38672.

In 2006, EPA reviewed the $PM_{2.5}$ NAAQS and reconsidered whether spatial averaging was appropriate for the primary annual standard. EPA noted that recent $PM_{2.5}$ air quality data "raised questions as to whether an annual standard that allows for spatial averaging … would provide appropriate public health protection." 71 Fed. Reg. at 61166. Specifically, EPA noted that potentially vulnerable subpopulations may face disproportionate impacts because "the highest concentrations in an area tend to be measured at monitors located in areas where the surrounding population is more likely to have lower education and income levels, and higher percentages of minority populations." *Id.* Significantly, the study on which EPA relied incorporated the 1997 constraints and thereby limited its analysis to areas that were eligible for spatial averaging. Memorandum from Mark Schmidt *et al.*, EPA OAQPS, to File (June 30, 2005), EPA-HQ-OAR-2001-0017-0396 ("Schmidt (2005)") (incorporated by reference into this record by EPA-HQ-OAR-2007-0492-0053), JA__. In response, EPA considered two options: (1) adopting more stringent constraints on spatial monitoring; or (2) eliminating spatial averaging entirely. Ultimately, EPA adopted more stringent constraints, concluding, after considering public comments, that "the proposed narrowing of the spatial averaging criteria will adequately address the concerns about disproportionate impact … by substantially reducing the amount of spatial

variation … that will be allowed to be averaged together in determining compliance with the standard." 71 Fed. Reg. at 61167.

In the Final Rule, EPA pointed to the availability of "more years of $PM_{2.5}$ air quality data" that "raised questions as to whether an annual standard that allows for spatial averaging … would provide appropriate public health protection." 78 Fed. Reg. at 3125, JA__. As it had before, EPA stated that "the highest concentrations in an area tend to be measured at monitors located in areas where the surrounding populations are more likely to live below the poverty line and to have higher percentage[s] of minorities." *Id.* In deciding whether to continue to allow the use of spatial averaging, however, EPA did not take into account the constraints it had put in place in 2006 to make the use of spatial averaging more stringent (and more protective of vulnerable populations). Instead, EPA included every monitoring area with more than one monitor, *id.*, regardless of whether it satisfied the 2006 spatial averaging criteria.

Because the agency was not regulating on a "blank slate," it was required to "provide a … detailed justification" for reversing its prior policy and eliminating spatial averaging. *Fox Television Stations*, 556 U.S. at 515. EPA offers nothing that undermines or even addresses the scientific validity of the 2006 approach to spatial averaging. EPA's reversal requires "a reasoned analysis for the change." *Jicarilla Apache Nation*, 613 F.3d at 1119. But rather than offering a reasoned

factual basis that would justify abandoning the 2006 criteria for spatial averaging, EPA merely speculates that "the existing constraints on spatial averaging, as modified in 2006, *may be inadequate*…." 78 Fed. Reg. at 3125, JA__ (emphasis added). Although EPA purports to rely on the existence of more health data and more years of $PM_{2.5}$ air quality data, *id.*, the Agency fails for two reasons to offer a reasonable or detailed justification explaining why these data justify departing from EPA's prior policy of permitting spatial averaging.

First, EPA failed to provide any basis for distinguishing between the health and air quality data used to support the 2006 and 2013 rules. Even if the data EPA cites in support of the 2013 rule "reflect the latest scientific knowledge," CAA § 108(a)(2), they cannot support the elimination of spatial averaging because they simply confirm scientific knowledge that EPA relied upon in 2006 when it affirmed the use of spatial averaging. As in the 2006 rulemaking, EPA identified studies showing that the highest $PM_{2.5}$ concentrations were measured at monitors near lower income and higher minority populations. 78 Fed. Reg. at 3125, JA__; 71 Fed. Reg. at 61166.[12] Thus, the question before the Agency was not whether

[12] In 2013, EPA did not provide any data suggesting that differences in $PM_{2.5}$ concentrations between the highest and lowest reporting monitors had increased since 2006. 78 Fed. Reg. at 3125, JA__. Nor did it offer any data suggesting that a larger percentage of at-risk populations were located near monitors with higher measurements than was the case in 2006. *Id.*

the data showed higher levels of $PM_{2.5}$ in the vicinity of at-risk populations—because such data were considered by EPA in 2006—but rather whether the scientific justification for spatial averaging had changed.

Second, EPA failed to consider whether the 2006 constraints on spatial averaging remained sufficient to protect at-risk populations within a reporting area. As EPA acknowledges, the Policy Assessment, and the two studies on which it relied, considered every monitoring area with multiple monitors, without addressing whether they would meet the 2006 spatial averaging criteria. 78 Fed. Reg. at 3125, JA__ (Policy Assessment "looked beyond areas that would meet the current spatial averaging criteria and considered all urban areas … with at least two valid annual design value monitors"); *see also* Memorandum from Mark Schmidt, EPA OAQPS, to PM NAAQS Review Docket, at 2 (Apr. 15, 2011), EPA-HQ-OAR-2007-0492-0340, JA__ ("The current form of the annual $PM_{2.5}$ standard includes provisions for spatial averaging if certain criteria are met…; those criteria were not checked in the analysis described here."); Memorandum from Mark Schmidt *et al.*, EPA OAQPS, to PM NAAQS Review Docket, at 3 (July 22, 2010), EPA-HQ-OAR-2007-0492-0131, JA__ ("This analysis looked beyond areas that would meet the spatial averaging criteria and considered all urban areas with at

least two valid annual [design value] monitors.").[13] In the absence of an analysis that applied the 2006 spatial averaging constraints, EPA had no factual basis for speculating that "the existing constraints on spatial averaging, as modified in 2006, may be inadequate." 78 Fed. Reg. at 3125, JA__; *see Leather Indus. v. EPA*, 40 F.3d 392, 408 (D.C. Cir. 1994) (EPA "may not engage in sheer guesswork.") (quotation omitted). Thus, because the Agency failed to consider the sufficiency of the 2006 spatial averaging criteria in protecting at-risk populations, EPA's decision to eliminate spatial averaging entirely was arbitrary and capricious and must be vacated because the Agency failed to provide a rational basis for reversing the policy that it adopted in 1997 and modified in 2006. *Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 42.

III. THE FINAL RULE IS INVALID BECAUSE EPA ISSUED IT WITHOUT PROVIDING THE NECESSARY RULES TO DEAL WITH THE LEGAL CONSEQUENCES TRIGGERED BY THE RULE'S PROMULGATION.

EPA's promulgation of the Final Rule resulted in immediate legal obligations and started the clock for others. For example, since 2010, EPA has interpreted the Act to require PSD applicants to demonstrate compliance with a new or revised NAAQS immediately upon the effective date of the NAAQS. Page

[13] In contrast, in the 2006 rulemaking, EPA evaluated the existing constraints on spatial averaging before deciding to increase their stringency. 71 Fed. Reg. at 61166 (citing Schmidt (2005)).

Memorandum at 2, JA__. EPA reiterated this position in the Final Rule. 78 Fed. Reg. at 3252, JA__ (PSD permitting requirements applied on March 18, 2013, the Final Rule's effective date); *see also id.* at 3259, JA__. Additionally, the CAA requires submission of initial designations within one year after promulgation of the NAAQS and submission of Infrastructure SIPs within three years after promulgation. CAA §§ 107(d)(1)(A), 110(a)(2). States with areas designated nonattainment for the revised NAAQS also must develop and adopt Attainment SIPs within eighteen months of the nonattainment designation. *Id.* § 189(a)(2)(B).

Although these legal obligations flow from the Final Rule, EPA has not provided the rules necessary to meet them, a fact it has acknowledged. *See, e.g.*, 78 Fed. Reg. at 3251, JA__ (recognizing "need for timely guidance on how to implement the revised NAAQS," but noting EPA was "not able to propose an implementation rule or finalize any aspect of the implementation program beyond [a limited] PSD grandfathering provision…."), 3259, JA__ (acknowledging deficiencies in PSD modeling tools).

The Final Rule is arbitrary and capricious because EPA issued a NAAQS without providing the rules needed to address the legal consequences that flow from it. *See EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7, 32-33 (D.C. Cir. 2012), *cert. granted*, 133 S. Ct. 2857 (2013) (EPA must tell states what their

implementation responsibilities are and give them a reasonable time to fulfill them.).

The Final Rule is also arbitrary and capricious because EPA had ample authority to avoid these consequences but did not. For example, CAA § 109(d)(1) requires existing NAAQS to be revised "as may be appropriate." It is not "appropriate" to revise a NAAQS until needed implementation rules are in place. Alternatively, EPA could have promulgated the revised NAAQS, but stayed it or deferred the effective date until such time as the implementing rules were in place.[14]

A. EPA Failed To Provide Implementation Rules in Five Key Areas.

EPA's unlawful failure to provide the necessary implementation rules for regulated entities and states to address the legal consequences that flowed from the revised $PM_{2.5}$ NAAQS is most apparent in five particular areas addressed below.

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[14] In the past, EPA has issued implementation tools in various forms, including rules, guidance, and memoranda. Petitioners note that EPA's issuance of these items (regardless of their label) requires notice-and-comment rulemaking if they "den[y] the decisionmaker discretion in the area of [their] coverage, so that he, she or they will automatically decline to entertain challenges to the statement's position." *McLouth Steel Prods. Corp. v. Thomas*, 838 F.2d 1317, 1320 (D.C. Cir. 1988); *see also Am. Hosp. Ass'n v. Bowen*, 834 F.2d 1037, 1044 (D.C. Cir. 1987) (exemptions from the requirement for notice-and-comment rulemaking must be construed narrowly). Petitioners' use of the term "guidance" or "tools" herein should not be construed as an admission that notice-and-comment rulemaking is not needed for the promulgation of the rules, guidance, or tools needed to implement the revised $PM_{2.5}$ NAAQS.

Capable, EPA-Approved, Air Dispersion Model: To obtain a PSD permit, applicants must perform an air quality analysis to demonstrate that $PM_{2.5}$ emissions will not cause or contribute to a violation of the NAAQS. CAA § 165(e)(3)(B); 40 C.F.R. § 52.21(k)(1)(i). For $PM_{2.5}$, this means demonstrating that direct $PM_{2.5}$ emissions and precursor emissions (sulfur dioxide and nitrogen oxide) from the source being permitted, in conjunction with such emissions from other nearby sources, do not cause or contribute to a $PM_{2.5}$ NAAQS violation. 40 C.F.R. § 52.21(b)(50)(i)(a), (i)(b)(2), (i)(b)(3); *id.* pt. 51, App. W, § 8.2.

Typically, PSD permit applicants demonstrate compliance with the NAAQS using computer models approved by EPA. *Id.* § 52.21(*l*)(1) (requiring use of models, etc. specified in 40 C.F.R. Part 51, Appendix W). For $PM_{2.5}$, however, EPA has not approved a computer model for use in PSD permitting. Moreover, EPA does not address $PM_{2.5}$ in the Appendix W modeling guidance specific for PSD applicants. *See id.* § 10.2.3.2 ("NAAQS Analyses for New or Modified Sources"). This is because, unlike for other pollutants, ambient air impacts from $PM_{2.5}$ result from both direct emissions of $PM_{2.5}$ and from the formation of $PM_{2.5}$ from precursors. The precursors are emitted as gases, which—through chemical reactions in the atmosphere—become $PM_{2.5}$. The current EPA-approved model for making NAAQS demonstrations for PSD permitting, AERMOD, is not equipped

to handle the chemistry of $PM_{2.5}$ precursors.[15] Yet, to obtain a PSD permit, EPA requires an applicant to analyze such precursors. *See* 78 Fed. Reg. at 3259, JA__ (discussing precursors and indicating further guidance forthcoming).

AERMOD also does not take into account the chemistry of condensable $PM_{2.5}$, which is PM that is emitted as a gas but then becomes a particle upon cooling in the atmosphere. 40 C.F.R. § 52.21(b)(50)(i)(a). Condensable $PM_{2.5}$ can change in size and composition as it gets further away from the source. PSD permit applicants are required to factor in condensable $PM_{2.5}$. *Id*. With these limitations of AERMOD and EPA's failure to approve an alternative model appropriate for individual source analysis, applicants have no approved means to demonstrate that the source will not cause or contribute to a violation of the $PM_{2.5}$ NAAQS—a necessary requirement to obtain a PSD permit. In the Final Rule, EPA says it does not plan on even *proposing* a model until the end of 2014 or early 2015. 78 Fed. Reg. at 3259, JA__.

EPA has yet to promulgate the rules necessary for a PSD permit applicant to make the required demonstration for $PM_{2.5}$, particularly an air dispersion model capable of assessing the impacts of precursor emissions from an individual source.

[15] Another EPA-approved model, CALPUFF, may sometimes be used for permitting; however, the approved version of CALPUFF also cannot assess impacts from $PM_{2.5}$ precursors.

See id. (acknowledging current approved models are inadequate for $PM_{2.5}$ demonstrations). Although EPA said in the Final Rule that it "intend[ed] to issue final guidance by the end of calendar year 2012, prior to the effective date of" the revised NAAQS that would "recommend appropriate technical approaches for conducting a $PM_{2.5}$ NAAQS compliance demonstration," *id.*, no final guidance has been issued.

Methods To Estimate Direct $PM_{2.5}$ Emissions: In addition to the lack of an approved air dispersion model, assessing the impact of $PM_{2.5}$ emissions is hampered by inaccurate estimates of direct $PM_{2.5}$ emissions from the source being permitted and from nearby sources that have to be included in the demonstration. Direct $PM_{2.5}$ emissions consist of filterable and condensable PM. EPA has promulgated two test methods for direct $PM_{2.5}$ — Method 201A used to measure filterable $PM_{2.5}$ and Method 202 used to measure condensable $PM_{2.5}$. There are technical issues with both methods that affect an applicant's ability to determine the impact of direct $PM_{2.5}$ emissions.

Method 201A is not approved for testing a wet emission stream (e.g., flue gas from a boiler that controls sulfur dioxide emissions with a wet scrubber). 40 C.F.R. pt. 51, App. M, Method 201A § 1.5. For such streams, sources are required to use Method 5, which does not distinguish PM based on particle size. *Id*. Thus, the $PM_{2.5}$ emissions will necessarily be overestimated, resulting in the impacts

being overestimated, too. *See* RTC at VI-25 to VI-26, JA__-__. EPA has even cautioned against assuming that Method 5 data provide a reasonable estimate for PM_{10}, and that caution would seem even more appropriate for $PM_{2.5}$ as a subset of PM_{10}. 74 Fed. Reg. 12970, 12976 (Mar. 25, 2009) (cautioning against use of Method 5 for emission inventories, which are the primary source of emissions from nearby sources).

Method 202 also is known to overestimate condensable $PM_{2.5}$ emissions by creating apparent condensable PM in the sampling train. 75 Fed. Reg. 80118, 80121-22 (Dec. 21, 2010). These issues with the test methods affect not only the estimate of emissions from the source being permitted, but also the emission estimates of other nearby sources that must be modeled. *See* 40 C.F.R. pt. 51, App. W, § 8.2.3(c). Because the new annual $PM_{2.5}$ NAAQS is more stringent, these overestimates of emissions become more important and impact the ability of sources to make the required demonstration, even assuming an approved model existed. EPA recognizes the limitations of the current methods, but has indicated that development of reliable methods is several years away. *See* RTC at VI-26, JA__ (recognizing overestimation of $PM_{2.5}$ emissions).

Initial Designations: Pursuant to CAA § 107(d)(1)(A), EPA gave states until December 13, 2013, to submit initial designations for the new $PM_{2.5}$ annual NAAQS. Such designations are based on existing ambient air monitoring data. If

a monitor indicates a violation of the NAAQS, the area is designated as nonattainment, and the state must determine the appropriate boundary of the area. Determining the boundary of a nonattainment area is a complicated process. The nonattainment area includes not only the area where the violating monitor is located but nearby areas that contribute to the ambient air quality in the violating area. *Id.* § 107(d)(1)(A)(i). Recognizing the complexity of the process, EPA promised to provide states with guidance on making the designations. 78 Fed. Reg. at 3251, JA__. EPA provided some of the guidance in April with some supportive information "anticipated" to be provided as late as August but not yet released. *See* EPA, Area Designations for the 2012 Annual Fine Particle ($PM_{2.5}$) Standard; Designations Guidance and Data, http://www.epa.gov/airquality/particlepollution/designations/2012standards/techinfo.htm (last visited Aug. 19, 2013). Nevertheless, this delay cuts short the one-year period of time that CAA affords states to make these decisions and impacts states' ability to make reasoned nonattainment boundary determinations in the time remaining. This is of concern because improperly designating an area nonattainment has substantial consequences for new and existing sources (e.g., offset requirements, additional emission controls).

Infrastructure SIPs: When EPA issues new or revised NAAQS, states have three years from promulgation of the NAAQS to submit to EPA an Infrastructure

SIP for the new NAAQS. CAA § 110(a). These SIPs must include provisions that directly affect industry (e.g., stationary source monitoring and permit fees). *See* Element Reports. As with the initial designations, EPA acknowledged the need to provide states with guidance on preparing the Infrastructure SIP and indicated that new guidance applicable to all pollutants, including $PM_{2.5}$, and possible $PM_{2.5}$-specific guidance will be forthcoming. *See* 78 Fed. Reg. at 3251, JA__. The fact that EPA did not include this guidance in the Final Rule creates uncertainty and discourages states from early action on SIP development. The later EPA issues the guidance that states must follow, the less time each state will have to develop its SIP, timely issue the statutorily required notice of the SIP, and hold the required hearing. This delay is of concern because it affords the states less opportunity to consider carefully the elements of their SIPs and for states to work with industry and the public to ensure that their SIPs contain reasonable provisions that best meet the needs of the states' citizens.

Attainment SIPs: Once areas are designated nonattainment, states have eighteen months to develop SIPs to bring those areas back into attainment. CAA § 189(b). These Attainment SIPs necessarily impact industry as they must impose control requirements on sources located within nonattainment areas. Industry commonly works with states to develop effective and reasonable Attainment SIPs because industry has unique information on the sources within the nonattainment

areas, including what controls are feasible and the cost of those controls. To assist states in developing their Attainment SIPs, EPA is developing implementation rules for the $PM_{2.5}$ NAAQS to address such issues as monitoring requirements, treatment of precursors, and reasonably available control measures. EPA has said that the final implementation rule will be issued around the time it makes the area designations, December 2014, but so far no proposal has been provided. 78 Fed. Reg. at 3251, JA__. The 18-month period the CAA gives states to promulgate the attainment SIP is already tight considering public hearing on the SIP must be conducted during that time and that no state has previously been required to develop a SIP under Subpart 4. *See NRDC v. EPA*, 706 F.3d at 429 (invalidating the implementation of the $PM_{2.5}$ NAAQS under CAA Title I, Part D, Subpart 1 and requiring for the first time implementation of $PM_{2.5}$ NAAQS under the more rigorous requirements of Subpart 4). Delays in EPA's promulgating the implementation rules means states will have even less time to develop SIPs effectuating them. This in turn will mean less time for each affected state to work with interested parties within its jurisdiction to ensure the SIP is effective and reasonable.

B. EPA's Failure To Produce Needed Implementation Rules Renders the Final Rule Invalid.

EPA's five failures are significant, and they render the Final Rule unlawful. First, with regard to PSD permitting, these failures can mean the difference

between being able or unable to demonstrate compliance with the $PM_{2.5}$ NAAQS (i.e., obtaining the permit or not), a problem that is more acute with the newly revised, more stringent standard. After acknowledging the deficiencies in the existing implementation tools and agreeing revisions were needed, it was arbitrary and capricious for EPA not to consider available mechanisms for avoiding these deficiencies and implementing one or more of the available options.[16] For example, EPA failed to consider the possibility of deferring a revision of the NAAQS on the grounds that it would not be "appropriate" to revise the NAAQS until needed implementation rules were in place. CAA § 109(d)(1). Similarly, EPA failed to consider the possibility of staying the effectiveness of the NAAQS revisions or deferring the effective date until the needed implementation rules were in place. EPA also failed to consider the possibility of adopting a "transition rule" that would allow PSD permitting to proceed without major hurdles.

EPA previously recognized the difficulties that $PM_{2.5}$ posed for PSD permitting and adopted a transition policy that allowed permit applicants to demonstrate compliance with the PM_{10} NAAQS (for which better tools exist) as a

[16] EPA did include a narrow grandfathering provision in the Final Rule for pending permit applications that were deemed complete as of December 14, 2012, or for which the permitting authority published a public notice of a preliminary determination for the permit application by March 18, 2013. 78 Fed. Reg. at 3281, JA__ (to be codified at 40 C.F.R. § 52.21(i)(11)). This provision fails to resolve the problems of many PSD permit applicants.

surrogate for $PM_{2.5}$. Memorandum from John Seitz, Dir., EPA OAQPS, to Dir. Office of Ecosystem Protection, Region I *et al.*, Interim Implementation of New Source Review Requirements for PM2.5 (Oct. 23, 1997), *available at* http://www.epa.gov/region07/air/nsr/nsrmemos/pm25.pdf. EPA no longer allows the use of this transition policy, 73 Fed. Reg. 28321, 28340-41 (May 16, 2008), even though the implementation challenges have become more severe.

Second, EPA's failure to promulgate the necessary implementation rules has effectively usurped the states' discretion by unlawfully shortening the statutorily prescribed amounts of time Congress provided to states in the Act. *See, e.g.*, CAA §§ 107(d)(1)(B)(ii) (EPA-initiated designations), 110(c)(1) (FIPs); *NRDC v. EPA*, 22 F.3d 1125 (D.C. Cir. 1994) (per curiam); *NRDC v Thomas*, 805 F.2d 410 (D.C. Cir. 1986). It also denies states their right to be the first implementer of a NAAQS within their borders, including deciding which sources to control and the control requirements for each source. *Union Electric Co.*, 427 U.S. at 269 ("Congress plainly left with the States, so long as the national standards were met, the power to determine which sources would be burdened by regulation and to what extent."); *see also Train*, 421 U.S. at 63-67; *Virginia v. EPA*, 108 F.3d 1397, 1406-10 (D.C. Cir. 1997).

In *EME Homer City*, this Court held that EPA deprived states of their authority to implement a NAAQS within their borders by issuing FIPs without first

telling states what their implementation responsibilities were and giving them a reasonable time to fulfill them. 696 F.3d at 32-33. Here, EPA similarly failed to provide states the rules they need to implement the legal requirements that resulted from the revised $PM_{2.5}$ NAAQS, even though some of those requirements have already taken effect and even though the time has begun to run on others. If the states miss their deadlines due to the lack of rules and EPA issues FIPs (which the CAA requires), the states will be unlawfully denied their right under the CAA to be the primary implementer of NAAQS requirements within their borders. *Cf. id.* at 32 ("By the time EPA makes the target clear, it's already too late for the States to comply."). By the same token, if sources cannot obtain PSD permits because the tools needed to make the required demonstrations are not available, Congress's intention that the PSD program protect ambient air "while assuring economic growth consistent with such protection" will be thwarted. *Sierra Club v. EPA*, 705 F.3d 458, 460 (D.C. Cir. 2013) (quotation and citation omitted).

This Court has previously ensured that states and regulated entities receive the full period of time given by Congress to meet obligations under the CAA. In *NRDC v. EPA*, EPA was almost a year late in issuing guidance that was needed for states to be able to prepare SIPs putting in place enhanced inspection and maintenance ("I/M") requirements for motor vehicles. 22 F.3d at 1131-32. This Court said that EPA's failure "made it impossible for states both to have the

benefit of this lead time and to meet their … enhanced I/M submission deadline." *Id.* at 1135. This Court noted that:

> Congress's carefully crafted statutory scheme provided the states a full year after the EPA guidance to develop and submit their enhanced I/M SIPs. Because the fundamental statutory requirement for those SIPs is that they 'comply in all respects' with the EPA guidance, … we can only infer that Congress believed a full year was necessary to complete complying SIPs.

Id. Thus, the Court concluded that EPA's extension of the enhanced I/M SIP submission deadline was proper. *Id.* at 1136.

Similarly, in *NRDC v. Thomas*, this Court required EPA to postpone for one year the statutory deadline for automobile manufacturers to comply with emission standards for nitrogen oxides because Congress had given the manufacturers four years to implement the standards and EPA's late issuance of the standards gave the manufacturers only three years. 805 F.2d at 435-37. The Court stated that "we have no alternative but to enforce [Congress's four-year leadtime requirement] unless or until Congress decrees otherwise." *Id.* at 435.

For the same reasons, the Court here should ensure that the statutorily mandated time periods in the CAA are not shortened by EPA's tardy issuance of the rules needed to make designations and prepare SIPs. If the Court does not vacate the NAAQS, it should, at a minimum, order EPA to provide the full amount of time contemplated by the CAA. For example, states should be given one full year to make their initial designations after the needed rules are completed to assist

the states with those designations. That one-year deadline should not run, as EPA now asserts, from December 13, 2012.

By failing to provide the necessary implementation rules that states need to fulfill their legal obligations under the CAA, the revised $PM_{2.5}$ NAAQS are arbitrary and capricious, and the Court should vacate the Final Rule.

Alternatively, if the Final Rule is not vacated, the Court should stay the effectiveness of the Final Rule until all necessary implementation tools are available. In particular, the Court should stay the Rule's effectiveness with regard to PSD permitting until EPA has provided the necessary implementation tools for the PSD program, or the Court should order EPA to develop immediately an interim transition policy that would facilitate the ability of *all* appropriately controlled sources to obtain PSD permits (not just the few sources that were fortunate enough to fall within the grandfathering provision). As to designations and SIPs, the Court should provide additional time after the necessary rules, guidance, and tools are issued to ensure that the full amount of time Congress provided under the CAA for deadlines triggered by the Final Rule is available. *See, e.g.*, *NRDC v. EPA*, 22 F.3d at 1135-37; *NRDC v. Thomas*, 805 F.2d at 435.

CONCLUSION

For the foregoing reasons, the Final Rule is arbitrary, capricious, and otherwise unlawful.

Respectfully submitted,

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Dated: August 19, 2013

CERTIFICATE OF COMPLIANCE

Pursuant to Rule 32(a)(7)(C) of the Federal Rules of Appellate Procedure and Circuit Rules 32(a)(1) and 32(a)(2)(C), I hereby certify that the foregoing Joint Opening Brief of Petitioners contains 13,879 words, as counted by a word processing system that includes headings, footnotes, quotations, and citations in the count, and therefore is within the word limit set by the Court.

/s/ Allison D. Wood

Dated: August 19, 2013

CERTIFICATE OF SERVICE

Pursuant to Rule 25 of the Federal Rules of Appellate Procedure and Circuit Rule 25(c), I hereby certify that I have this 19th day of August, 2013, served a copy of the foregoing Joint Opening Brief of Petitioners electronically through the Court's CM/ECF system.

/s/ Allison D. Wood

Statutory and Regulatory Addendum

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1. 5 U.S.C. 706

§ 706 – Scope of Review

* * *

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
(B) contrary to constitutional right, power, privilege, or immunity;
(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;
(D) without observance of procedure required by law;
(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title or otherwise reviewed on the record of an agency hearing provided by statute; or
(F) unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

2. Clean Air Act § 107, 42 U.S.C. § 7407

§7407. Air quality control regions

(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.

(b) Designated regions

For purposes of developing and carrying out implementation plans under section 7410 of this title—

(1) an air quality control region designated under this section before December 31, 1970, or a region designated after such date under subsection (c) of this section, shall be an air quality control region; and

(2) the portion of such State which is not part of any such designated region shall be an air quality control region, but such portion may be subdivided by the State into two or more air quality control regions with the approval of the Administrator.

(c) Authority of Administrator to designate regions; notification of Governors of affected States

The Administrator shall, within 90 days after December 31, 1970, after consultation with appropriate State and local authorities, designate as an air quality control region any interstate area or major intrastate area which he deems necessary or appropriate for the attainment and maintenance of ambient air quality standards. The Administrator shall immediately notify the Governors of the affected States of any designation made under this subsection.

(d) Designations

(1) Designations generally

(A) Submission by Governors of initial designations following promulgation of new or revised standards

By such date as the Administrator may reasonably require, but not later than 1 year after promulgation of a new or revised national ambient air quality standard for any pollutant under section 7409 of this title, the Governor of each State shall (and at any other time the Governor of a State deems appropriate the Governor may) submit to the Administrator a list of all areas (or portions thereof) in the State, designating as—

(i) nonattainment, any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant,

(ii) attainment, any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant, or

(iii) unclassifiable, any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

The Administrator may not require the Governor to submit the required list sooner than 120 days after promulgating a new or revised national ambient air quality standard.

(B) Promulgation by EPA of designations

(i) Upon promulgation or revision of a national ambient air quality standard, the Administrator shall promulgate the designations of all areas (or portions thereof) submitted under subparagraph (A) as expeditiously as practicable, but in no case later than 2 years from the date of promulgation of the new or revised national ambient air quality standard. Such period may be extended for up to one year in the event the Administrator has insufficient information to promulgate the designations.

(ii) 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 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. The Administrator shall give such notification no later than 120 days before the date the Administrator promulgates the designation, including any modification thereto. If the Governor fails to submit the list in whole or in part, as required under subparagraph (A), the Administrator shall promulgate the designation that the

Administrator deems appropriate for any area (or portion thereof) not designated by the State.

(iii) If the Governor of any State, on the Governor's own motion, under subparagraph (A), submits a list of areas (or portions thereof) in the State designated as nonattainment, attainment, or unclassifiable, the Administrator shall act on such designations in accordance with the procedures under paragraph (3) (relating to redesignation).

(iv) A designation for an area (or portion thereof) made pursuant to this subsection shall remain in effect until the area (or portion thereof) is redesignated pursuant to paragraph (3) or (4).

(C) Designations by operation of law

(i) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(A), (B), or (C) of this subsection (as in effect immediately before November 15, 1990) is designated, by operation of law, as a nonattainment area for such pollutant within the meaning of subparagraph (A)(i).

(ii) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(E) (as in effect immediately before November 15, 1990) is designated by operation of law, as an attainment area for such pollutant within the meaning of subparagraph (A)(ii).

(iii) Any area designated with respect to any air pollutant under the provisions of paragraph (1)(D) (as in effect immediately before November 15, 1990) is designated, by operation of law, as an unclassifiable area for such pollutant within the meaning of subparagraph (A)(iii).

(2) Publication of designations and redesignations

(A) The Administrator shall publish a notice in the Federal Register promulgating any designation under paragraph (1) or (5), or announcing any designation under paragraph (4), or promulgating any redesignation under paragraph (3).

(B) Promulgation or announcement of a designation under paragraph (1), (4) or (5) shall not be subject to the provisions of sections 553 through 557 of title 5 (relating to notice and comment), except nothing herein shall be construed as precluding such public notice and comment whenever possible.

(3) Redesignation

(A) Subject to the requirements of subparagraph (E), and on the basis of air quality data, planning and control considerations, or any other air quality-related considerations the Administrator deems appropriate, the Administrator may at

any time notify the Governor of any State that available information indicates that the designation of any area or portion of an area within the State or interstate area should be revised. In issuing such notification, which shall be public, to the Governor, the Administrator shall provide such information as the Administrator may have available explaining the basis for the notice.

(B) No later than 120 days after receiving a notification under subparagraph (A), the Governor shall submit to the Administrator such redesignation, if any, of the appropriate area (or areas) or portion thereof within the State or interstate area, as the Governor considers appropriate.

(C) No later than 120 days after the date described in subparagraph (B) (or paragraph (1)(B)(iii)), the Administrator shall promulgate the redesignation, if any, of the area or portion thereof, submitted by the Governor in accordance with subparagraph (B), making such modifications as the Administrator may deem necessary, in the same manner and under the same procedure as is applicable under clause (ii) of paragraph (1)(B), except that the phrase "60 days" shall be substituted for the phrase "120 days" in that clause. If the Governor does not submit, in accordance with subparagraph (B), a redesignation for an area (or portion thereof) identified by the Administrator under subparagraph (A), the Administrator shall promulgate such redesignation, if any, that the Administrator deems appropriate.

(D) The Governor of any State may, on the Governor's own motion, submit to the Administrator a revised designation of any area or portion thereof within the State. Within 18 months of receipt of a complete State redesignation submittal, the Administrator shall approve or deny such redesignation. The submission of a redesignation by a Governor shall not affect the effectiveness or enforceability of the applicable implementation plan for the State.

(E) The Administrator may not promulgate a redesignation of a nonattainment area (or portion thereof) to attainment unless—

(i) the Administrator determines that the area has attained the national ambient air quality standard;

(ii) the Administrator has fully approved the applicable implementation plan for the area under section 7410(k) of this title;

(iii) the Administrator determines that the improvement in air quality is due to permanent and enforceable reductions in emissions resulting from implementation of the applicable implementation plan and applicable Federal air pollutant control regulations and other permanent and enforceable reductions;

(iv) the Administrator has fully approved a maintenance plan for the area as meeting the requirements of section 7505a of this title; and

(v) the State containing such area has met all requirements applicable to the area under section 7410 of this title and part D of this subchapter.

(F) The Administrator shall not promulgate any redesignation of any area (or portion thereof) from nonattainment to unclassifiable.

(4) Nonattainment designations for ozone, carbon monoxide and particulate matter (PM–10)

(A) Ozone and carbon monoxide

(i) Within 120 days after November 15, 1990, each Governor of each State shall submit to the Administrator a list that designates, affirms or reaffirms the designation of, or redesignates (as the case may be), all areas (or portions thereof) of the Governor's State as attainment, nonattainment, or unclassifiable with respect to the national ambient air quality standards for ozone and carbon monoxide.

(ii) No later than 120 days after the date the Governor is required to submit the list of areas (or portions thereof) required under clause (i) of this subparagraph, the Administrator shall promulgate such designations, making such modifications as the Administrator may deem necessary, in the same manner, and under the same procedure, as is applicable under clause (ii) of paragraph (1)(B), except that the phrase "60 days" shall be substituted for the phrase "120 days" in that clause. If the Governor does not submit, in accordance with clause (i) of this subparagraph, a designation for an area (or portion thereof), the Administrator shall promulgate the designation that the Administrator deems appropriate.

(iii) No nonattainment area may be redesignated as an attainment area under this subparagraph.

(iv) Notwithstanding paragraph (1)(C)(ii) of this subsection, if an ozone or carbon monoxide nonattainment area located within a metropolitan statistical area or consolidated metropolitan statistical area (as established by the Bureau of the Census) is classified under part D of this subchapter as a Serious, Severe, or Extreme Area, the boundaries of such area are hereby revised (on the date 45 days after such classification) by operation of law to include the entire metropolitan statistical area or consolidated metropolitan statistical area, as the case may be, unless within such 45-day period the Governor (in consultation with State and local air pollution control agencies) notifies the Administrator that additional time is necessary to evaluate the application of clause (v). Whenever a Governor has submitted such a notice to the Administrator, such boundary revision shall occur on the later of the date 8 months after such classification or 14 months after November 15, 1990, unless

the Governor makes the finding referred to in clause (v), and the Administrator concurs in such finding, within such period. Except as otherwise provided in this paragraph, a boundary revision under this clause or clause (v) shall apply for purposes of any State implementation plan revision required to be submitted after November 15, 1990.

(v) Whenever the Governor of a State has submitted a notice under clause (iv), the Governor, in consultation with State and local air pollution control agencies, shall undertake a study to evaluate whether the entire metropolitan statistical area or consolidated metropolitan statistical area should be included within the nonattainment area. Whenever a Governor finds and demonstrates to the satisfaction of the Administrator, and the Administrator concurs in such finding, that with respect to a portion of a metropolitan statistical area or consolidated metropolitan statistical area, sources in the portion do not contribute significantly to violation of the national ambient air quality standard, the Administrator shall approve the Governor's request to exclude such portion from the nonattainment area. In making such finding, the Governor and the Administrator shall consider factors such as population density, traffic congestion, commercial development, industrial development, meteorological conditions, and pollution transport.

(B) PM–10 designations

By operation of law, until redesignation by the Administrator pursuant to paragraph (3)—

(i) each area identified in 52 Federal Register 29383 (Aug. 7, 1987) as a Group I area (except to the extent that such identification was modified by the Administrator before November 15, 1990) is designated nonattainment for PM–10;

(ii) any area containing a site for which air quality monitoring data show a violation of the national ambient air quality standard for PM–10 before January 1, 1989 (as determined under part 50, appendix K of title 40 of the Code of Federal Regulations) is hereby designated nonattainment for PM–10; and

(iii) each area not described in clause (i) or (ii) is hereby designated unclassifiable for PM–10.

Any designation for particulate matter (measured in terms of total suspended particulates) that the Administrator promulgated pursuant to this subsection (as in effect immediately before November 15, 1990) shall remain in effect for purposes of implementing the maximum allowable increases in concentrations of particulate matter (measured in terms of total suspended particulates) pursuant to section

7473(b) of this title, until the Administrator determines that such designation is no longer necessary for that purpose.

(5) Designations for lead

The Administrator may, in the Administrator's discretion at any time the Administrator deems appropriate, require a State to designate areas (or portions thereof) with respect to the national ambient air quality standard for lead in effect as of November 15, 1990, in accordance with the procedures under subparagraphs (A) and (B) of paragraph (1), except that in applying subparagraph (B)(i) of paragraph (1) the phrase "2 years from the date of promulgation of the new or revised national ambient air quality standard" shall be replaced by the phrase "1 year from the date the Administrator notifies the State of the requirement to designate areas with respect to the standard for lead".

(6) Designations

(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 $PM_{2.5}$ national ambient air quality standards for each area within the State, based on air quality monitoring data collected in accordance with any applicable Federal reference methods for the relevant areas.

(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 $PM_{2.5}$ national ambient air quality standards.

(7) Implementation plan for regional haze

(A) In general

Notwithstanding any other provision of law, not later than 3 years after the date on which the Administrator promulgates the designations referred to in paragraph (6)(B) for a State, the State shall submit, for the entire State, the State implementation plan revisions to meet the requirements promulgated by the Administrator under section 7492(e)(1) of this title (referred to in this paragraph as "regional haze requirements").

(B) No preclusion of other provisions

Nothing in this paragraph precludes the implementation of the agreements and recommendations stemming from the Grand Canyon Visibility Transport Commission Report dated June 1996, including the submission of State implementation plan revisions by the States of Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, or Wyoming by December 31, 2003, for implementation of regional haze requirements applicable to those States.

(e) Redesignation of air quality control regions

(1) Except as otherwise provided in paragraph (2), the Governor of each State is authorized, with the approval of the Administrator, to redesignate from time to time the air quality control regions within such State for purposes of efficient and effective air quality management. Upon such redesignation, the list under subsection (d) of this section shall be modified accordingly.

(2) In the case of an air quality control region in a State, or part of such region, which the Administrator finds may significantly affect air pollution concentrations in another State, the Governor of the State in which such region, or part of a region, is located may redesignate from time to time the boundaries of so much of such air quality control region as is located within such State only with the approval of the Administrator and with the consent of all Governors of all States which the Administrator determines may be significantly affected.

(3) No compliance date extension granted under section 7413(d)(5) [1] of this title (relating to coal conversion) shall cease to be effective by reason of the regional limitation provided in section 7413(d)(5) [1] of this title if the violation of such limitation is due solely to a redesignation of a region under this subsection.

3. Clean Air Act § 108, 42 U.S.C. § 7408

§7408. Air quality criteria and control techniques

(a) Air pollutant list; publication and revision by Administrator; issuance of air quality criteria for air pollutants

(1) For the purpose of establishing national primary and secondary ambient air quality standards, the Administrator shall within 30 days after December 31, 1970, publish, and shall from time to time thereafter revise, a list which includes each air pollutant—

(A) emissions of which, in his judgment, cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare;

(B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and

(C) for which air quality criteria had not been issued before December 31, 1970 but for which he plans to issue air quality criteria under this section.

(2) The Administrator shall issue air quality criteria for an air pollutant within 12 months after he has included such pollutant in a list under paragraph (1). Air quality criteria for an air pollutant shall accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of such pollutant in the ambient air, in varying quantities. The criteria for an air pollutant, to the extent practicable, shall include information on—

(A) those variable factors (including atmospheric conditions) which of themselves or in combination with other factors may alter the effects on public health or welfare of such air pollutant;

(B) the types of air pollutants which, when present in the atmosphere, may interact with such pollutant to produce an adverse effect on public health or welfare; and

(C) any known or anticipated adverse effects on welfare.

(b) Issuance by Administrator of information on air pollution control techniques; standing consulting committees for air pollutants; establishment; membership

(1) Simultaneously with the issuance of criteria under subsection (a) of this section, the Administrator shall, after consultation with appropriate advisory committees and Federal departments and agencies, issue to the States and

appropriate air pollution control agencies information on air pollution control techniques, which information shall include data relating to the cost of installation and operation, energy requirements, emission reduction benefits, and environmental impact of the emission control technology. Such information shall include such data as are available on available technology and alternative methods of prevention and control of air pollution. Such information shall also include data on alternative fuels, processes, and operating methods which will result in elimination or significant reduction of emissions.

(2) In order to assist in the development of information on pollution control techniques, the Administrator may establish a standing consulting committee for each air pollutant included in a list published pursuant to subsection (a)(1) of this section, which shall be comprised of technically qualified individuals representative of State and local governments, industry, and the academic community. Each such committee shall submit, as appropriate, to the Administrator information related to that required by paragraph (1).

(c) Review, modification, and reissuance of criteria or information

The Administrator shall from time to time review, and, as appropriate, modify, and reissue any criteria or information on control techniques issued pursuant to this section. Not later than six months after August 7, 1977, the Administrator shall revise and reissue criteria relating to concentrations of NO**2** over such period (not more than three hours) as he deems appropriate. Such criteria shall include a discussion of nitric and nitrous acids, nitrites, nitrates, nitrosamines, and other carcinogenic and potentially carcinogenic derivatives of oxides of nitrogen.

(d) Publication in Federal Register; availability of copies for general public

The issuance of air quality criteria and information on air pollution control techniques shall be announced in the Federal Register and copies shall be made available to the general public.

(e) Transportation planning and guidelines

The Administrator shall, after consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, and with State and local officials, within nine months after November 15, 1990, and periodically thereafter as necessary to maintain a continuous transportation-air quality planning process, update the June 1978 Transportation-Air Quality Planning Guidelines and publish guidance on the development and implementation of transportation and other measures necessary to demonstrate and maintain attainment of national ambient air quality standards. Such guidelines shall include information on—

(1) methods to identify and evaluate alternative planning and control activities;

(2) methods of reviewing plans on a regular basis as conditions change or new information is presented;

(3) identification of funds and other resources necessary to implement the plan, including interagency agreements on providing such funds and resources;

(4) methods to assure participation by the public in all phases of the planning process; and

(5) such other methods as the Administrator determines necessary to carry out a continuous planning process.

(f) Information regarding processes, procedures, and methods to reduce or control pollutants in transportation; reduction of mobile source related pollutants; reduction of impact on public health

(1) The Administrator shall publish and make available to appropriate Federal, State, and local environmental and transportation agencies not later than one year after November 15, 1990, and from time to time thereafter—

(A) information prepared, as appropriate, in consultation with the Secretary of Transportation, and after providing public notice and opportunity for comment, regarding the formulation and emission reduction potential of transportation control measures related to criteria pollutants and their precursors, including, but not limited to—

(i) programs for improved public transit;

(ii) restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or high occupancy vehicles;

(iii) employer-based transportation management plans, including incentives;

(iv) trip-reduction ordinances;

(v) traffic flow improvement programs that achieve emission reductions;

(vi) fringe and transportation corridor parking facilities serving multiple occupancy vehicle programs or transit service;

(vii) programs to limit or restrict vehicle use in downtown areas or other areas of emission concentration particularly during periods of peak use;

(viii) programs for the provision of all forms of high-occupancy, shared-ride services;

(ix) programs to limit portions of road surfaces or certain sections of the metropolitan area to the use of non-motorized vehicles or pedestrian use, both as to time and place;

(x) programs for secure bicycle storage facilities and other facilities, including bicycle lanes, for the convenience and protection of bicyclists, in both public and private areas;

(xi) programs to control extended idling of vehicles;

(xii) programs to reduce motor vehicle emissions, consistent with subchapter II of this chapter, which are caused by extreme cold start conditions;

(xiii) employer-sponsored programs to permit flexible work schedules;

(xiv) programs and ordinances to facilitate non-automobile travel, provision and utilization of mass transit, and to generally reduce the need for single-occupant vehicle travel, as part of transportation planning and development efforts of a locality, including programs and ordinances applicable to new shopping centers, special events, and other centers of vehicle activity;

(xv) programs for new construction and major reconstructions of paths, tracks or areas solely for the use by pedestrian or other non-motorized means of transportation when economically feasible and in the public interest. For purposes of this clause, the Administrator shall also consult with the Secretary of the Interior; and

(xvi) program to encourage the voluntary removal from use and the marketplace of pre-1980 model year light duty vehicles and pre-1980 model light duty trucks.

(B) information on additional methods or strategies that will contribute to the reduction of mobile source related pollutants during periods in which any primary ambient air quality standard will be exceeded and during episodes for which an air pollution alert, warning, or emergency has been declared;

(C) information on other measures which may be employed to reduce the impact on public health or protect the health of sensitive or susceptible individuals or groups; and

(D) information on the extent to which any process, procedure, or method to reduce or control such air pollutant may cause an increase in the emissions or formation of any other pollutant.

(2) In publishing such information the Administrator shall also include an assessment of—

(A) the relative effectiveness of such processes, procedures, and methods;

(B) the potential effect of such processes, procedures, and methods on transportation systems and the provision of transportation services; and

(C) the environmental, energy, and economic impact of such processes, procedures, and methods.

(g) Assessment of risks to ecosystems

The Administrator may assess the risks to ecosystems from exposure to criteria air pollutants (as identified by the Administrator in the Administrator's sole discretion).

(h) RACT/BACT/LAER clearinghouse

The Administrator shall make information regarding emission control technology available to the States and to the general public through a central database. Such information shall include all control technology information received pursuant to State plan provisions requiring permits for sources, including operating permits for existing sources.

4. Clean Air Act § 109, 42 U.S.C. § 7409

§7409. National primary and secondary ambient air quality standards

(a) Promulgation

(1) The Administrator—

(A) within 30 days after December 31, 1970, shall publish proposed regulations prescribing a national primary ambient air quality standard and a national secondary ambient air quality standard for each air pollutant for which air quality criteria have been issued prior to such date; and

(B) after a reasonable time for interested persons to submit written comments thereon (but no later than 90 days after the initial publication of such proposed standards) shall by regulation promulgate such proposed national primary and secondary ambient air quality standards with such modifications as he deems appropriate.

(2) With respect to any air pollutant for which air quality criteria are issued after December 31, 1970, the Administrator shall publish, simultaneously with the issuance of such criteria and information, proposed national primary and secondary ambient air quality standards for any such pollutant. The procedure provided for in paragraph (1)(B) of this subsection shall apply to the promulgation of such standards.

(b) Protection of public health and welfare

(1) National primary ambient air quality standards, prescribed under subsection (a) of this section shall be ambient air quality standards the attainment and maintenance of which in the judgment of the Administrator, based on such criteria and allowing an adequate margin of safety, are requisite to protect the public health. Such primary standards may be revised in the same manner as promulgated.

(2) Any national secondary ambient air quality standard prescribed under subsection (a) of this section shall specify a level of air quality the attainment and maintenance of which in the judgment of the Administrator, based on such criteria, is requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air. Such secondary standards may be revised in the same manner as promulgated.

(c) National primary ambient air quality standard for nitrogen dioxide

The Administrator shall, not later than one year after August 7, 1977, promulgate a national primary ambient air quality standard for NO**2** concentrations over a

period of not more than 3 hours unless, based on the criteria issued under section 7408(c) of this title, he finds that there is no significant evidence that such a standard for such a period is requisite to protect public health.

(d) Review and revision of criteria and standards; independent scientific review committee; appointment; advisory functions

(1) Not later than December 31, 1980, and at five-year intervals thereafter, the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

(2)(A) The Administrator shall appoint an independent scientific review committee composed of seven members including at least one member of the National Academy of Sciences, one physician, and one person representing State air pollution control agencies.

(B) Not later than January 1, 1980, and at five-year intervals thereafter, the committee referred to in subparagraph (A) shall complete a review of the criteria published under section 7408 of this title and the national primary and secondary ambient air quality standards promulgated under this section and shall recommend to the Administrator any new national ambient air quality standards and revisions of existing criteria and standards as may be appropriate under section 7408 of this title and subsection (b) of this section.

(C) Such committee shall also (i) advise the Administrator of areas in which additional knowledge is required to appraise the adequacy and basis of existing, new, or revised national ambient air quality standards, (ii) describe the research efforts necessary to provide the required information, (iii) advise the Administrator on the relative contribution to air pollution concentrations of natural as well as anthropogenic activity, and (iv) advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such national ambient air quality standards.

5. Clean Air Act § 110(a)(1), (a)(2), (c)(1), (k)(3), (k)(5) and (*l*), 42 U.S.C. § 7410(a)(1), (a)(2), (c)(1), (k)(3), (k)(5) and (*l*)

§7410. State implementation plans for national primary and secondary ambient air quality standards

(a) Adoption of plan by State; submission to Administrator; content of plan; revision; new sources; indirect source review program; supplemental or intermittent control systems

(1) Each State shall, after reasonable notice and public hearings, adopt and submit to the Administrator, within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national primary ambient air quality standard (or any revision thereof) under section 7409 of this title for any air pollutant, a plan which provides for implementation, maintenance, and enforcement of such primary standard in each air quality control region (or portion thereof) within such State. In addition, such State shall adopt and submit to the Administrator (either as a part of a plan submitted under the preceding sentence or separately) within 3 years (or such shorter period as the Administrator may prescribe) after the promulgation of a national ambient air quality secondary standard (or revision thereof), a plan which provides for implementation, maintenance, and enforcement of such secondary standard in each air quality control region (or portion thereof) within such State. Unless a separate public hearing is provided, each State shall consider its plan implementing such secondary standard at the hearing required by the first sentence of this paragraph.

(2) Each implementation plan submitted by a State under this chapter shall be adopted by the State after reasonable notice and public hearing. Each such plan shall—

(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this chapter;

(B) provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to—

(i) monitor, compile, and analyze data on ambient air quality, and

(ii) upon request, make such data available to the Administrator;

(C) include a program to provide for the enforcement of the measures described in subparagraph (A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D of this subchapter;

(D) contain adequate provisions—

(i) prohibiting, consistent with the provisions of this subchapter, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will—

(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard, or

(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C of this subchapter to prevent significant deterioration of air quality or to protect visibility,

(ii) insuring compliance with the applicable requirements of sections 7426 and 7415 of this title (relating to interstate and international pollution abatement);

(E) provide (i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof), (ii) requirements that the State comply with the requirements respecting State boards under section 7428 of this title, and (iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision;

(F) require, as may be prescribed by the Administrator—

(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources,

(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and

(iii) correlation of such reports by the State agency with any emission limitations or standards established pursuant to this chapter, which reports shall be available at reasonable times for public inspection;

(G) provide for authority comparable to that in section 7603 of this title and adequate contingency plans to implement such authority;

(H) provide for revision of such plan—

(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of attaining such standard, and

(ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard which it implements or to otherwise comply with any additional requirements established under this chapter;

(I) in the case of a plan or plan revision for an area designated as a nonattainment area, meet the applicable requirements of part D of this subchapter (relating to nonattainment areas);

(J) meet the applicable requirements of section 7421 of this title (relating to consultation), section 7427 of this title (relating to public notification), and part C of this subchapter (relating to prevention of significant deterioration of air quality and visibility protection);

(K) provide for—

(i) the performance of such air quality modeling as the Administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of any air pollutant for which the Administrator has established a national ambient air quality standard, and

(ii) the submission, upon request, of data related to such air quality modeling to the Administrator;

(L) require the owner or operator of each major stationary source to pay to the permitting authority, as a condition of any permit required under this chapter, a fee sufficient to cover—

(i) the reasonable costs of reviewing and acting upon any application for such a permit, and

(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action),

until such fee requirement is superseded with respect to such sources by the Administrator's approval of a fee program under subchapter V of this chapter; and

(M) provide for consultation and participation by local political subdivisions affected by the plan.

(3)(A) Repealed. Pub. L. 101–549, title I, §101(d)(1), Nov. 15, 1990, 104 Stat. 2409.

(B) As soon as practicable, the Administrator shall, consistent with the purposes of this chapter and the Energy Supply and Environmental Coordination Act of 1974 [15 U.S.C. 791 et seq.], review each State's applicable implementation plans and report to the State on whether such plans can be revised in relation to fuel burning stationary sources (or persons supplying fuel to such sources) without interfering with the attainment and maintenance of any national ambient air quality standard within the period permitted in this section. If the Administrator determines that any such plan can be revised, he shall notify the State that a plan revision may be submitted by the State. Any plan revision which is submitted by the State shall, after public notice and opportunity for public hearing, be approved by the Administrator if the revision relates only to fuel burning stationary sources (or persons supplying fuel to such sources), and the plan as revised complies with paragraph (2) of this subsection. The Administrator shall approve or disapprove any revision no later than three months after its submission.

(C) Neither the State, in the case of a plan (or portion thereof) approved under this subsection, nor the Administrator, in the case of a plan (or portion thereof) promulgated under subsection (c) of this section, shall be required to revise an applicable implementation plan because one or more exemptions under section 7418 of this title (relating to Federal facilities), enforcement orders under section 7413(d) of this title, suspensions under subsection (f) or (g) of this section (relating to temporary energy or economic authority), orders under section 7419 of this title (relating to primary nonferrous smelters), or extensions of compliance in decrees entered under section 7413(e) of this title (relating to iron- and steel-producing operations) have been granted, if such plan would have met the requirements of this section if no such exemptions, orders, or extensions had been granted.

(4) Repealed. Pub. L. 101–549, title I, §101(d)(2), Nov. 15, 1990, 104 Stat. 2409.

(5)(A)(i) Any State may include in a State implementation plan, but the Administrator may not require as a condition of approval of such plan under this section, any indirect source review program. The Administrator may approve and enforce, as part of an applicable implementation plan, an indirect source review program which the State chooses to adopt and submit as part of its plan.

(ii) Except as provided in subparagraph (B), no plan promulgated by the Administrator shall include any indirect source review program for any air quality control region, or portion thereof.

(iii) Any State may revise an applicable implementation plan approved under this subsection to suspend or revoke any such program included in such plan, provided that such plan meets the requirements of this section.

(B) The Administrator shall have the authority to promulgate, implement and enforce regulations under subsection (c) of this section respecting indirect source review programs which apply only to federally assisted highways, airports, and other major federally assisted indirect sources and federally owned or operated indirect sources.

(C) For purposes of this paragraph, the term "indirect source" means a facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution. Such term includes parking lots, parking garages, and other facilities subject to any measure for management of parking supply (within the meaning of subsection (c)(2)(D)(ii) of this section), including regulation of existing off-street parking but such term does not include new or existing on-street parking. Direct emissions sources or facilities at, within, or associated with, any indirect source shall not be deemed indirect sources for the purpose of this paragraph.

(D) For purposes of this paragraph the term "indirect source review program" means the facility-by-facility review of indirect sources of air pollution, including such measures as are necessary to assure, or assist in assuring, that a new or modified indirect source will not attract mobile sources of air pollution, the emissions from which would cause or contribute to air pollution concentrations—

(i) exceeding any national primary ambient air quality standard for a mobile source-related air pollutant after the primary standard attainment date, or

(ii) preventing maintenance of any such standard after such date.

(E) For purposes of this paragraph and paragraph (2)(B), the term "transportation control measure" does not include any measure which is an "indirect source review program".

(6) No State plan shall be treated as meeting the requirements of this section unless such plan provides that in the case of any source which uses a supplemental, or intermittent control system for purposes of meeting the requirements of an order under section 7413(d) of this title or section 7419 of this title (relating to primary nonferrous smelter orders), the owner or operator of such source may not temporarily reduce the pay of any employee by reason of the use of such supplemental or intermittent or other dispersion dependent control system.

* * *

(c) Preparation and publication by Administrator of proposed regulations setting forth implementation plan; transportation regulations study and report; parking surcharge; suspension authority; plan implementation

(1) The Administrator shall promulgate a Federal implementation plan at any time within 2 years after the Administrator—

(A)finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria established under subsection (k)(1)(A) of this section, or

(B)disapproves a State implementation plan submission in whole or in part, unless the State corrects the deficiency, and the Administrator approves the plan or plan revision, before the Administrator promulgates such Federal implementation plan.

* * *

(k) Environmental Protection Agency action on plan submissions

* * *

(3) Full and partial approval and disapproval

In the case of any submittal on which the Administrator is required to act under paragraph (2), the Administrator shall approve such submittal as a whole if it meets all of the applicable requirements of this chapter. If a portion of the plan revision meets all the applicable requirements of this chapter, the Administrator may approve the plan revision in part and disapprove the plan revision in part. The plan revision shall not be treated as meeting the requirements of this chapter until the Administrator approves the entire plan revision as complying with the applicable requirements of this chapter.

* * *

(5) Calls for plan revisions

Whenever the Administrator finds that the applicable implementation plan for any area is substantially inadequate to attain or maintain the relevant national ambient air quality standard, to mitigate adequately the interstate pollutant transport described in section 7506a of this title or section 7511c of this title, or to otherwise comply with any requirement of this chapter, the Administrator shall require the State to revise the plan as necessary to correct such inadequacies. The Administrator shall notify the State of the inadequacies, and may establish reasonable deadlines (not to exceed 18 months after the date of such notice) for the submission of such plan revisions. Such findings and notice shall be public. Any finding under this paragraph shall, to the extent the Administrator deems

appropriate, subject the State to the requirements of this chapter to which the State was subject when it developed and submitted the plan for which such finding was made, except that the Administrator may adjust any dates applicable under such requirements as appropriate (except that the Administrator may not adjust any attainment date prescribed under part D of this subchapter, unless such date has elapsed).

* * *

(*l*) Plan revisions

Each revision to an implementation plan submitted by a State under this chapter shall be adopted by such State after reasonable notice and public hearing. The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 7501 of this title), or any other applicable requirement of this chapter.

6. Clean Air Act § 165(a), (e)(3)(B), 42 U.S.C. § 7475(a), (e)(3)(B)

§ 7475 – Preconstruction requirements

(a) Major emitting facilities on which construction is commenced
No major emitting facility on which construction is commenced after August 7, 1977, may be constructed in any area to which this part applies unless—
(1)a permit has been issued for such proposed facility in accordance with this part setting forth emission limitations for such facility which conform to the requirements of this part;
(2)the proposed permit has been subject to a review in accordance with this section, the required analysis has been conducted in accordance with regulations promulgated by the Administrator, and a public hearing has been held with opportunity for interested persons including representatives of the Administrator to appear and submit written or oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations;
(3)the owner or operator of such facility demonstrates, as required pursuant to section 7410(j) of this title, that emissions from construction or operation of such facility will not cause, or contribute to, air pollution in excess of any
(A) maximum allowable increase or maximum allowable concentration for any pollutant in any area to which this part applies more than one time per year,
(B) national ambient air quality standard in any air quality control region, or
(C) any other applicable emission standard or standard of performance under this chapter;
(4)the proposed facility is subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility;
(5)the provisions of subsection (d) of this section with respect to protection of class I areas have been complied with for such facility;
(6)there has been an analysis of any air quality impacts projected for the area as a result of growth associated with such facility;
(7)the person who owns or operates, or proposes to own or operate, a major emitting facility for which a permit is required under this part agrees to conduct such monitoring as may be necessary to determine the effect which emissions from any such facility may have, or is having, on air quality in any area which may be affected by emissions from such source; and
(8)in the case of a source which proposes to construct in a class III area, emissions from which would cause or contribute to exceeding the maximum allowable increments applicable in a class II area and where no standard under section 7411

of this title has been promulgated subsequent to August 7, 1977, for such source category, the Administrator has approved the determination of best available technology as set forth in the permit.

* * *

(e) Analysis; continuous air quality monitoring data; regulations; model adjustments

* * *

(3) The Administrator shall within six months after August 7, 1977, promulgate regulations respecting the analysis required under this subsection which regulations—

* * *

(B)shall require an analysis of the ambient air quality, climate and meteorology, terrain, soils and vegetation, and visibility at the site of the proposed major emitting facility and in the area potentially affected by the emissions from such facility for each pollutant regulated under this chapter which will be emitted from, or which results from the construction or operation of, such facility, the size and nature of the proposed facility, the degree of continuous emission reduction which could be achieved by such facility, and such other factors as may be relevant in determining the effect of emissions from a proposed facility on any air quality control region[.]

7. Clean Air Act §§ 188-190, 42 U.S.C. § 7513-7513b

§ 7513 - Classifications And Attainment Dates

(a) Initial classifications

Every area designated nonattainment for PM–10 pursuant to section 7407(d) of this title shall be classified at the time of such designation, by operation of law, as a moderate PM–10 nonattainment area (also referred to in this subpart as a "Moderate Area") at the time of such designation. At the time of publication of the notice under section 7407(d)(4) of this title (relating to area designations) for each PM–10 nonattainment area, the Administrator shall publish a notice announcing the classification of such area. The provisions of section 7502(a)(1)(B) of this title (relating to lack of notice-and-comment and judicial review) shall apply with respect to such classification.

(b) Reclassification as Serious

(1) Reclassification before attainment date

The Administrator may reclassify as a Serious PM–10 nonattainment area (identified in this subpart also as a "Serious Area") any area that the Administrator determines cannot practicably attain the national ambient air quality standard for PM–10 by the attainment date (as prescribed in subsection (c) of this section) for Moderate Areas. The Administrator shall reclassify appropriate areas as Serious by the following dates:

(A) For areas designated nonattainment for PM–10 under section 7407(d)(4) of this title, the Administrator shall propose to reclassify appropriate areas by June 30, 1991, and take final action by December 31, 1991.

(B) For areas subsequently designated nonattainment, the Administrator shall reclassify appropriate areas within 18 months after the required date for the State's submission of a SIP for the Moderate Area.

(2) Reclassification upon failure to attain

Within 6 months following the applicable attainment date for a PM–10 nonattainment area, the Administrator shall determine whether the area attained the standard by that date. If the Administrator finds that any Moderate Area is not in attainment after the applicable attainment date—

(A)the area shall be reclassified by operation of law as a Serious Area; and

(B)the Administrator shall publish a notice in the Federal Register no later than 6 months following the attainment date, identifying the area as having failed to attain and identifying the reclassification described under subparagraph (A).

(c) Attainment dates

Except as provided under subsection (d) of this section, the attainment dates for PM–10 nonattainment areas shall be as follows:

(1) Moderate Areas
For a Moderate Area, the attainment date shall be as expeditiously as practicable but no later than the end of the sixth calendar year after the area's designation as nonattainment, except that, for areas designated nonattainment for PM–10 under section 7407(d)(4) of this title, the attainment date shall not extend beyond December 31, 1994.
(2) Serious Areas
For a Serious Area, the attainment date shall be as expeditiously as practicable but no later than the end of the tenth calendar year beginning after the area's designation as nonattainment, except that, for areas designated nonattainment for PM–10 under section 7407(d)(4) of this title, the date shall not extend beyond December 31, 2001.
(d) Extension of attainment date for Moderate Areas
Upon application by any State, the Administrator may extend for 1 additional year (hereinafter referred to as the "Extension Year") the date specified in paragraph (c)(1) if—
(1)the State has complied with all requirements and commitments pertaining to the area in the applicable implementation plan; and
(2)no more than one exceedance of the 24-hour national ambient air quality standard level for PM–10 has occurred in the area in the year preceding the Extension Year, and the annual mean concentration of PM–10 in the area for such year is less than or equal to the standard level.
No more than 2 one-year extensions may be issued under the subsection for a single nonattainment area.
(e) Extension of attainment date for Serious Areas
Upon application by any State, the Administrator may extend the attainment date for a Serious Area beyond the date specified under subsection (c) of this section, if attainment by the date established under subsection (c) of this section would be impracticable, the State has complied with all requirements and commitments pertaining to that area in the implementation plan, and the State demonstrates to the satisfaction of the Administrator that the plan for that area includes the most stringent measures that are included in the implementation plan of any State or are achieved in practice in any State, and can feasibly be implemented in the area. At the time of such application, the State must submit a revision to the implementation plan that includes a demonstration of attainment by the most expeditious alternative date practicable. In determining whether to grant an extension, and the appropriate length of time for any such extension, the Administrator may consider the nature and extent of nonattainment, the types and numbers of sources or other emitting activities in the area (including the influence of uncontrollable natural sources and transboundary emissions from foreign

countries), the population exposed to concentrations in excess of the standard, the presence and concentration of potentially toxic substances in the mix of particulate emissions in the area, and the technological and economic feasibility of various control measures. The Administrator may not approve an extension until the State submits an attainment demonstration for the area. The Administrator may grant at most one such extension for an area, of no more than 5 years.

(f) Waivers for certain areas

The Administrator may, on a case-by-case basis, waive any requirement applicable to any Serious Area under this subpart where the Administrator determines that anthropogenic sources of PM–10 do not contribute significantly to the violation of the PM–10 standard in the area. The Administrator may also waive a specific date for attainment of the standard where the Administrator determines that nonanthropogenic sources of PM–10 contribute significantly to the violation of the PM–10 standard in the area.

§ 7513a - Plan Provisions And Schedules For Plan Submissions

(a) Moderate Areas

(1) Plan provisions

Each State in which all or part of a Moderate Area is located shall submit, according to the applicable schedule under paragraph (2), an implementation plan that includes each of the following:

(A) For the purpose of meeting the requirements of section 7502(c)(5) of this title, a permit program providing that permits meeting the requirements of section 7503 of this title are required for the construction and operation of new and modified major stationary sources of PM–10.

(B) Either

(i) a demonstration (including air quality modeling) that the plan will provide for attainment by the applicable attainment date; or

(ii) a demonstration that attainment by such date is impracticable.

(C) Provisions to assure that reasonably available control measures for the control of PM–10 shall be implemented no later than December 10, 1993, or 4 years after designation in the case of an area classified as moderate after November 15, 1990.

(2) Schedule for plan submissions

A State shall submit the plan required under subparagraph (1) no later than the following:

(A) Within 1 year of November 15, 1990, for areas designated nonattainment under section 7407(d)(4) of this title, except that the provision required under subparagraph (1)(A) shall be submitted no later than June 30, 1992.

(B)18 months after the designation as nonattainment, for those areas designated nonattainment after the designations prescribed under section 7407(d)(4) of this title.

(b) Serious Areas

(1) Plan provisions

In addition to the provisions submitted to meet the requirements of paragraph (a)(1) (relating to Moderate Areas), each State in which all or part of a Serious Area is located shall submit an implementation plan for such area that includes each of the following:

(A)A demonstration (including air quality modeling)—

(i)that the plan provides for attainment of the PM–10 national ambient air quality standard by the applicable attainment date, or

(ii)for any area for which the State is seeking, pursuant to section 7513(e) of this title, an extension of the attainment date beyond the date set forth in section 7513(c) of this title, that attainment by that date would be impracticable, and that the plan provides for attainment by the most expeditious alternative date practicable.

(B) Provisions to assure that the best available control measures for the control of PM–10 shall be implemented no later than 4 years after the date the area is classified (or reclassified) as a Serious Area.

(2) Schedule for plan submissions

A State shall submit the demonstration required for an area under paragraph (1)(A) no later than 4 years after reclassification of the area to Serious, except that for areas reclassified under section 7513(b)(2) of this title, the State shall submit the attainment demonstration within 18 months after reclassification to Serious. A State shall submit the provisions described under paragraph (1)(B) no later than 18 months after reclassification of the area as a Serious Area.

(3) Major sources

For any Serious Area, the terms "major source" and "major stationary source" include any stationary source or group of stationary sources located within a contiguous area and under common control that emits, or has the potential to emit, at least 70 tons per year of PM–10.

(c) Milestones

(1) Plan revisions demonstrating attainment submitted to the Administrator for approval under this subpart shall contain quantitative milestones which are to be achieved every 3 years until the area is redesignated attainment and which demonstrate reasonable further progress, as defined in section 7501(1) of this title, toward attainment by the applicable date.

(2) Not later than 90 days after the date on which a milestone applicable to the area occurs, each State in which all or part of such area is located shall submit to the

Administrator a demonstration that all measures in the plan approved under this section have been implemented and that the milestone has been met. A demonstration under this subsection shall be submitted in such form and manner, and shall contain such information and analysis, as the Administrator shall require. The Administrator shall determine whether or not a State's demonstration under this subsection is adequate within 90 days after the Administrator's receipt of a demonstration which contains the information and analysis required by the Administrator.

(3) If a State fails to submit a demonstration under paragraph (2) with respect to a milestone within the required period or if the Administrator determines that the area has not met any applicable milestone, the Administrator shall require the State, within 9 months after such failure or determination to submit a plan revision that assures that the State will achieve the next milestone (or attain the national ambient air quality standard for PM–10, if there is no next milestone) by the applicable date.

(d) Failure to attain

In the case of a Serious PM–10 nonattainment area in which the PM–10 standard is not attained by the applicable attainment date, the State in which such area is located shall, after notice and opportunity for public comment, submit within 12 months after the applicable attainment date, plan revisions which provide for attainment of the PM–10 air quality standard and, from the date of such submission until attainment, for an annual reduction in PM–10 or PM–10 precursor emissions within the area of not less than 5 percent of the amount of such emissions as reported in the most recent inventory prepared for such area.

(e) PM–10 precursors

The control requirements applicable under plans in effect under this part for major stationary sources of PM–10 shall also apply to major stationary sources of PM–10 precursors, except where the Administrator determines that such sources do not contribute significantly to PM–10 levels which exceed the standard in the area. The Administrator shall issue guidelines regarding the application of the preceding sentence.

§ 7513b - Issuance of RACM and BACM guidance

The Administrator shall issue, in the same manner and according to the same procedure as guidance is issued under section 7408(c) of this title, technical guidance on reasonably available control measures and best available control measures for urban fugitive dust, and emissions from residential wood combustion (including curtailments and exemptions from such curtailments) and prescribed silvicultural and agricultural burning, no later than 18 months following November

15, 1990. The Administrator shall also examine other categories of sources contributing to nonattainment of the PM–10 standard, and determine whether additional guidance on reasonably available control measures and best available control measures is needed, and issue any such guidance no later than 3 years after November 15, 1990. In issuing guidelines and making determinations under this section, the Administrator (in consultation with the State) shall take into account emission reductions achieved, or expected to be achieved, under subchapter IV–A of this chapter and other provisions of this chapter.

8. Clean Air Act § 307(b)(1), (d)(1)(A), (d)(3), (d)(6)(A), (d)(6)(B) and (d)(9), 42 U.S.C. § 7607(b)(1), (d)(1)(A), (d)(3), (d)(6)(A), (d)(6)(B) and (d)(9)

§ 7607 - Administrative Proceedings And Judicial Review

* * *

(b) Judicial review

(1)A petition for review of action of the Administrator in promulgating any national primary or secondary ambient air quality standard, any emission standard or requirement under section 7412 of this title, any standard of performance or requirement under section 7411 of this title, any standard under section 7521 of this title (other than a standard required to be prescribed under section 7521(b)(1) of this title), any determination under section 7521(b)(5) of this title, any control or prohibition under section 7545 of this title, any standard under section 7571 of this title, any rule issued under section 7413, 7419, or under section 7420 of this title, or any other nationally applicable regulations promulgated, or final action taken, by the Administrator under this chapter may be filed only in the United States Court of Appeals for the District of Columbia. A petition for review of the Administrator's action in approving or promulgating any implementation plan under section 7410 of this title or section 7411(d) of this title, any order under section 7411(j) of this title, under section 7412 of this title, under section 7419 of this title, or under section 7420 of this title, or his action under section 1857c–10(c)(2)(A), (B), or (C) of this title (as in effect before August 7, 1977) or under regulations thereunder, or revising regulations for enhanced monitoring and compliance certification programs under section 7414(a)(3) of this title, or any other final action of the Administrator under this chapter (including any denial or disapproval by the Administrator under subchapter I of this chapter) which is locally or regionally applicable may be filed only in the United States Court of Appeals for the appropriate circuit. Notwithstanding the preceding sentence a petition for review of any action referred to in such sentence may be filed only in the United States Court of Appeals for the District of Columbia if such action is based on a determination of nationwide scope or effect and if in taking such action the Administrator finds and publishes that such action is based on such a determination. Any petition for review under this subsection shall be filed within sixty days from the date notice of such promulgation, approval, or action appears in the Federal Register, except that if such petition is based solely on grounds arising after such sixtieth day, then any petition for review under this subsection shall be filed within sixty days after such grounds arise. The filing of a petition for reconsideration by the Administrator of any otherwise final rule or action shall not affect the finality of such rule or action for purposes of judicial review nor extend

the time within which a petition for judicial review of such rule or action under this section may be filed, and shall not postpone the effectiveness of such rule or action.

* * *

(d) Rulemaking

(1) This subsection applies to—

(A)the promulgation or revision of any national ambient air quality standard under section 7409 of this title,

* * *

(3) In the case of any rule to which this subsection applies, notice of proposed rulemaking shall be published in the Federal Register, as provided under section 553(b) of title 5, shall be accompanied by a statement of its basis and purpose and shall specify the period available for public comment (hereinafter referred to as the "comment period"). The notice of proposed rulemaking shall also state the docket number, the location or locations of the docket, and the times it will be open to public inspection. The statement of basis and purpose shall include a summary of—

(A)the factual data on which the proposed rule is based;

(B)the methodology used in obtaining the data and in analyzing the data; and

(C)the major legal interpretations and policy considerations underlying the proposed rule.

The statement shall also set forth or summarize and provide a reference to any pertinent findings, recommendations, and comments by the Scientific Review Committee established under section 7409(d) of this title and the National Academy of Sciences, and, if the proposal differs in any important respect from any of these recommendations, an explanation of the reasons for such differences. All data, information, and documents referred to in this paragraph on which the proposed rule relies shall be included in the docket on the date of publication of the proposed rule.

* * *

(6)

(A) The promulgated rule shall be accompanied by

(i) a statement of basis and purpose like that referred to in paragraph (3) with respect to a proposed rule and

(ii) an explanation of the reasons for any major changes in the promulgated rule from the proposed rule.

(B) The promulgated rule shall also be accompanied by a response to each of the significant comments, criticisms, and new data submitted in written or oral presentations during the comment period.

* * *

(9) In the case of review of any action of the Administrator to which this subsection applies, the court may reverse any such action found to be—
(A)arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;
(B)contrary to constitutional right, power, privilege, or immunity;
(C)in excess of statutory jurisdiction, authority, or limitations, or short of statutory right; or
(D)without observance of procedure required by law, if
(i) such failure to observe such procedure is arbitrary or capricious,
(ii) the requirement of paragraph (7)(B) has been met, and
(iii) the condition of the last sentence of paragraph (8) is met.

9. 40 C.F.R. § 50.1(e)

§ 50.1 Definitions.

* * *

(e) *Ambient air* means that portion of the atmosphere, external to buildings, to which the general public has access.

10. 40 C.F.R. pt. 51, App. M, Method 201A § 1.5

Appendix M to Part 51 – Recommended Test Methods for State Implementation Plans

METHOD 201A—DETERMINATION OF PM*10* AND PM*2.5* EMISSIONS FROM STATIONARY SOURCES (Constant Sampling Rate Procedure)

* * *

1.5 Limitations. You cannot use this method to measure emissions in which water droplets are present because the size separation of the water droplets may not be representative of the dry particle size released into the air. To measure filterable PM*10* and PM*2.5* in emissions where water droplets are known to exist, we recommend that you use Method 5 of appendix A-3 to part 60. Because of the temperature limit of the O-rings used in this sampling train, you must follow the procedures in Section 8.6.1 to test emissions from stack gas temperatures exceeding 205 °C (400 °F).

11. 40 C.F.R. pt. 51, App. W, § 8.2

Appendix W to Part 51 – Guideline on Air Quality Models

§ 8.2 Background Concentrations

* * *

8.2 Background Concentrations

8.2.1 Discussion

a. Background concentrations are an essential part of the total air quality concentration to be considered in determining source impacts. Background air quality includes pollutant concentrations due to: (1) Natural sources; (2) nearby sources other than the one(s) currently under consideration; and (3) unidentified sources.

b. Typically, air quality data should be used to establish background concentrations in the vicinity of the source(s) under consideration. The monitoring network used for background determinations should conform to the same quality assurance and other requirements as those networks established for PSD purposes. [83] An appropriate data validation procedure should be applied to the data prior to use.

c. If the source is not isolated, it may be necessary to use a multi-source model to establish the impact of nearby sources. Since sources don't typically operate at their maximum allowable capacity (which may include the use of "dirtier" fuels), modeling is necessary to express the potential contribution of background sources, and this impact would not be captured via monitoring. Background concentrations should be determined for each critical (concentration) averaging time.

8.2.2 Recommendations (Isolated Single Source)

a. Two options (paragraph (b) or (c) of this section) are available to determine the background concentration near isolated sources.

b. Use air quality data collected in the vicinity of the source to determine the background concentration for the averaging times of concern. Determine the mean background concentration at each monitor by excluding values when the source in question is impacting the monitor. The mean annual background is the average of the annual concentrations so determined at each monitor. For shorter averaging periods, the meteorological conditions accompanying the concentrations of

concern should be identified. Concentrations for meteorological conditions of concern, at monitors not impacted by the source in question, should be averaged for each separate averaging time to determine the average background value. Monitoring sites inside a 90° sector downwind of the source may be used to determine the area of impact. One hour concentrations may be added and averaged to determine longer averaging periods.

c. If there are no monitors located in the vicinity of the source, a "regional site" may be used to determine background. A "regional site" is one that is located away from the area of interest but is impacted by similar natural and distant man-made sources.

8.2.3 Recommendations (Multi-Source Areas)

a. In multi-source areas, two components of background should be determined: contributions from nearby sources and contributions from other sources.

b. *Nearby Sources:* All sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration for emission limit(s) should be explicitly modeled. The number of such sources is expected to be small except in unusual situations. Owing to both the uniqueness of each modeling situation and the large number of variables involved in identifying nearby sources, no attempt is made here to comprehensively define this term. Rather, identification of nearby sources calls for the exercise of professional judgement by the appropriate reviewing authority (paragraph 3.0(b)). This guidance is not intended to alter the exercise of that judgement or to comprehensively define which sources are nearby sources.

c. For compliance with the short-term and annual ambient standards, the nearby sources as well as the primary source(s) should be evaluated using an appropriate Appendix A model with the emission input data shown in Table 8-1 or 8-2. When modeling a nearby source that does not have a permit and the emission limit contained in the SIP for a particular source category is greater than the emissions possible given the source's maximum physical capacity to emit, the "maximum allowable emission limit" for such a nearby source may be calculated as the emission rate representative of the nearby source's maximum physical capacity to emit, considering its design specifications and allowable fuels and process materials. However, the burden is on the permit applicant to sufficiently document what the maximum physical capacity to emit is for such a nearby source.

d. It is appropriate to model nearby sources only during those times when they, by their nature, operate at the same time as the primary source(s) being modeled. Where a primary source believes that a nearby source does not, by its nature, operate at the same time as the primary source being modeled, the burden is on the primary source to demonstrate to the satisfaction of the appropriate reviewing authority (paragraph 3.0(b)) that this is, in fact, the case. Whether or not the primary source has adequately demonstrated that fact is a matter of professional judgement left to the discretion of the appropriate reviewing authority. The following examples illustrate two cases in which a nearby source may be shown not to operate at the same time as the primary source(s) being modeled. Some sources are only used during certain seasons of the year. Those sources would not be modeled as nearby sources during times in which they do not operate. Similarly, emergency backup generators that never operate simultaneously with the sources that they back up would not be modeled as nearby sources. To reiterate, in these examples and other appropriate cases, the burden is on the primary source being modeled to make the appropriate demonstration to the satisfaction of the appropriate reviewing authority.

e. The impact of the nearby sources should be examined at locations where interactions between the plume of the point source under consideration and those of nearby sources (plus natural background) can occur. Significant locations include: (1) the area of maximum impact of the point source; (2) the area of maximum impact of nearby sources; and (3) the area where all sources combine to cause maximum impact. These locations may be identified through trial and error analyses.

f. *Other Sources:* That portion of the background attributable to all other sources (e.g., natural sources, minor sources and distant major sources) should be determined by the procedures found in subsection 89.2.2 or by application of a model using Table 8-1 or 8-2.

12. 40 C.F.R. § 52.21(b)(50), (k)(1)(i), (*l*)(1)

§ 52.21 - Prevention Of Significant Deterioration Of Air Quality

* * *

(50) *Regulated NSR pollutant,* for purposes of this section, means the following:
(i) Any pollutant for which a national ambient air quality standard has been promulgated and any pollutant identified under this paragraph (b)(50)(i) as a constituent or precursor for such pollutant. Precursors identified by the Administrator for purposes of NSR are the following:
(*a*) Volatile organic compounds and nitrogen oxides are precursors to ozone in all attainment and unclassifiable areas.
(*b*) Sulfur dioxide is a precursor to PM*2.5* in all attainment and unclassifiable areas.
(*c*) Nitrogen oxides are presumed to be precursors to PM*2.5* in all attainment and unclassifiable areas, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area's ambient PM*2.5* concentrations.
(*d*) Volatile organic compounds are presumed not to be precursors to PM*2.5* in any attainment or unclassifiable area, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of volatile organic compounds from sources in a specific area are a significant contributor to that area's ambient PM*2.5* concentrations.
(ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;
(iii) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act;
(iv) Any pollutant that otherwise is subject to regulation under the Act as defined in paragraph (b)(49) of this section.
(v) Notwithstanding paragraphs (b)(50)(i) through (iv) of this section, the term *regulated NSR pollutant* shall not include any or all hazardous air pollutants either listed in section 112 of the Act, or added to the list pursuant to section 112(b)(2) of the Act, and which have not been delisted pursuant to section 112(b)(3) of the Act, unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.
(vi) Particulate matter (PM) emissions, PM*2.5* emissions and PM*10* emissions shall include gaseous emissions from a source or activity which condense to form particulate matter at ambient temperatures. On or after January 1, 2011 (or any earlier date established in the upcoming rulemaking codifying test methods), such

condensable particulate matter shall be accounted for in applicability determinations and in establishing emissions limitations for PM, PM*2.5* and PM*10* in PSD permits. Compliance with emissions limitations for PM, PM*2.5* and PM*10* issued prior to this date shall not be based on condensable particular matter unless required by the terms and conditions of the permit or the applicable implementation plan. Applicability determinations made prior to this date without accounting for condensable particular matter shall not be considered in violation of this section unless the applicable implementation plan required condensable particular matter to be included.

* * *

(k) Source impact analysis—(1) Required demonstration. The owner or operator of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:
(i) Any national ambient air quality standard in any air quality control region; or

* * *

(*l*) Air quality models.(1) All estimates of ambient concentrations required under this paragraph shall be based on applicable air quality models, data bases, and other requirements specified in appendix W of part 51 of this chapter (Guideline on Air Quality Models).

13. 40 C.F.R. pt. 58, App. D, §§ 4.3.2(a)(1) and 4.7.1(b)

Appendix D to Part 58 – Network Design Criteria for Ambient Air Quality Monitoring

§ 4.3.2 - Requirement for Near-road NO*2* Monitors

(a) Within the NO*2* network, there must be one microscale near-road NO*2* monitoring station in each CBSA with a population of 500,000 or more persons to monitor a location of expected maximum hourly concentrations sited near a major road with high AADT counts as specified in paragraph 4.3.2(a)(1) of this appendix. An additional near-road NO*2* monitoring station is required for any CBSA with a population of 2,500,000 persons or more, or in any CBSA with a population of 500,000 or more persons that has one or more roadway segments with 250,000 or greater AADT counts to monitor a second location of expected maximum hourly concentrations. CBSA populations shall be based on the latest available census figures.

(1) The near-road NO*2* monitoring stations shall be selected by ranking all road segments within a CBSA by AADT and then identifying a location or locations adjacent to those highest ranked road segments, considering fleet mix, roadway design, congestion patterns, terrain, and meteorology, where maximum hourly NO*2* concentrations are expected to occur and siting criteria can be met in accordance with appendix E of this part. Where a State or local air monitoring agency identifies multiple acceptable candidate sites where maximum hourly NO*2* concentrations are expected to occur, the monitoring agency shall consider the potential for population exposure in the criteria utilized to select the final site location. Where one CBSA is required to have two near-road NO*2* monitoring stations, the sites shall be differentiated from each other by one or more of the following factors: fleet mix; congestion patterns; terrain; geographic area within the CBSA; or different route, interstate, or freeway designation.

* * *

§ 4.7.1 – General Requirements

* * *

(b) Specific Design Criteria for PM*2.5*. The required monitoring stations or sites must be sited to represent community-wide air quality. These sites can include sites collocated at PAMS. These monitoring stations will typically be at neighborhood or urban-scale; however, in certain instances where population-oriented micro-or middle-scale PM*2.5* monitoring are determined by the Regional Administrator to

represent many such locations throughout a metropolitan area, these smaller scales can be considered to represent community-wide air quality.
(1) At least one monitoring station is to be sited in a population-oriented area of expected maximum concentration.
(2) For areas with more than one required SLAMS, a monitoring station is to be sited in an area of poor air quality.
(3) Additional technical guidance for siting PM*2.5* monitors is provided in references 6 and 7 of this appendix.

14. 40 C.F.R. pt. 58, App. E, § 6.4(a)

Appendix E to Part 58 – Probe and Monitoring Path Siting Criteria for Ambient Air Quality Monitoring

§ 6.4 – Spacing for Nitrogen Dioxide (NO*2*) Probes and Monitoring Paths

(a) In siting near-road NO*2* monitors as required in paragraph 4.3.2 of appendix D of this part, the monitor probe shall be as near as practicable to the outside nearest edge of the traffic lanes of the target road segment; but shall not be located at a distance greater than 50 meters, in the horizontal, from the outside nearest edge of the traffic lanes of the target road segment.

Exhibit 1

DECLARATION OF TRAYLOR CHAMPION

I, Traylor Champion, declare as follows:

1. I am the Vice President, Environmental Affairs for Georgia-Pacific LLC ("Georgia-Pacific" or "GP"), in Atlanta, Georgia. In that capacity, I am primarily responsible for all of GP's environmental compliance and permitting activities.

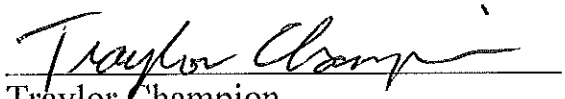
2. Georgia-Pacific is a member of Petitioners Chamber of Commerce of the United States of America and National Association of Manufacturers. Georgia-Pacific also belongs to the American Forest and Paper Association, which is a member of Petitioner PM NAAQS Coalition.

3. Georgia-Pacific operates facilities that must comply with the Clean Air Act, and Georgia-Pacific is in the process of trying to obtain prevention of significant deterioration (PSD) permits for several of its facilities.

4. In preparing these PSD permit applications, Georgia-Pacific has had to address the primary national ambient air quality standards (NAAQS) for $PM_{2.5}$ that became effective on March 18, 2013.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed this 19th day of August, 2013.



Traylor Champion