Implementing the New Eight-Hour NAAQS for Ozone—What Happened to the 1990 Clean Air Act?

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One of the more difficult air pollution problems that the Clean Air Act (CAA or the Act)[1] addresses is the persistent, high ambient levels of ozone, that is a major contributor to urban smog in many areas of the United States. For much of the history of the CAA, efforts to reduce ozone concentrations have been unsuccessful for a number of technical and programmatic reasons. In 1990, Congress sought to address these problems by creating a detailed program for controlling ozone that departed in a number of important respects from the traditional CAA nonattainment program. The recent decision by the Environmental Protection Agency (EPA or Agency) to revise the national ambient air quality standard (NAAQS) for ozone raises substantial legal and practical

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1. CAA §§ 101-618, 42 U.S.C. §§ 7401-7671*q* (1994).

questions about how the EPA's program will fit with the components of Congress's statutory approach to reducing ozone. The EPA's dramatic departure from the congressional scheme also threatens to revive some of the problems that hindered ozone reduction efforts before 1990.

I. STRATEGIES TO CONTROL OZONE

Ozone in the ambient air is the product of reactions in the atmosphere involving volatile organic compounds (VOC) and nitrogen oxides (NOx).[2] Ozone production is controlled by physical and chemical factors that are highly influenced by the relative concentrations of VOC and NOx, as well as by a number of atmospheric and meteorological conditions.[3] The VOC and NOx emissions that contribute to these reactions are produced both naturally and by human activities, and are emitted by many different types of sources both inside and outside of the areas experiencing high ozone levels.[4]

Because of the many interconnected variables that affect ozone production and transport, designing control strategies to address ozone problems has proved both difficult and costly. In this sense, regulating ozone is very different from controlling other pollutants that are also addressed under the NAAQS program for which there is a clearer relationship between emissions of a certain pollutant from specific, identifiable sources and the ambient concentrations of that same pollutant. For example, other criteria pollutants such as sulfur dioxide, lead, carbon monoxide, and most particulate matter are emitted directly into the atmosphere, rather than being formed in the atmosphere from other constituents. Implementing strategies to reduce ambient levels of the former type of pollutant is much more straightforward.

The complex nature of the ozone problem caused many areas of the country to miss the first deadline in 1982 to improve air quality so that it would "attain" (i.e., be at or below) the level established by the ozone NAAQS.[5] Many areas then also missed the 1987 extended deadline for attainment of the ozone NAAQS that was established by the 1977

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2. *See* OFFICE OF RESEARCH & DEVELOPMENT, EPA, AIR QUALITY CRITERIA FOR OZONE AND RELATED PHOTOCHEMICAL OXIDANTS, EPA/600/P-93/004F, at 1-2 to 1-4 (July 1996) [hereinafter AIR QUALITY CRITERIA FOR OZONE]; *see also* Virginia v. EPA, 108 F.3d 1397, 1400 (D.C. Cir. 1997) (discussion of ozone formation).

3. *See generally* AIR QUALITY CRITERIA FOR OZONE, *supra* note 2, at 1-2 to 1-4.

4. *See id.* at 1-3 to 1-4.

5. Areas attaining and not attaining the NAAQS are "attainment" and "nonattainment" areas, respectively. CAA § 107(d), 42 U.S.C. § 7407(d).

Amendments to the CAA.[6] The persistent problems with reducing ozone led Congress in 1990 to amend the Act by taking the unusual step of mandating very specific control strategies along with a phased attainment schedule requiring showings of improvement at specified times, but no absolute attainment deadlines.[7] It also mandated control requirements based on the nature and magnitude of the ozone problem in a given area.[8] This ozone-specific program was established in a new subpart 2 of the CAA, Title I, Part D.[9] Subpart 2 is specifically based on the one-hour ozone NAAQS of 0.12 parts per million (ppm)[10] that was in existence in 1990.

In July 1997, the EPA issued a final rule replacing the one-hour NAAQS with an eight-hour NAAQS.[11] In that rule, the EPA amended the 40 C.F.R. Part 50 regulation establishing the one-hour NAAQS to provide that the "[one]-hour standards set forth in this section will no longer apply to an area once EPA determines that the area has air quality meeting the one-hour standard."[12] In the preamble to the rule, the EPA explains that this means that the subpart 2 program applies to an area "as a matter of law for so long as an area is *not* attaining the [one]-hour standard."[13] However, once the EPA "determines" that an area has air quality attaining the one-hour standard, "the provisions of subpart 1 of Part D of Title I of the Act would apply to the implementation of the new [eight]-hour [] [ozone] standards," and the subpart 2 program would cease to apply in that area.[14]

On January 16, 1998, the EPA issued as a direct final rule a list of areas "attaining" and "not attaining" the one-hour NAAQS.[15]

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6. *See* SENATE COMM. ON ENVIRONMENT AND PUBL. WORKS, 103D CONG., 1ST SESS., A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS OF 1990, at 3170-71 (Comm. Print 1993) [hereinafter 1990 LEGIS. HIST.].

7. *See id.* at 3253-57.

8. *See id.*

9. The standard provisions otherwise governing nonattainment areas are found in subpart 1 of CAA Title I, Part D.

10. A one-hour NAAQS means that attainment is judged by evaluating ambient ozone concentrations over a one-hour averaging period. *See* Identification of Ozone Areas Attaining the 1-Hour Standard and to Which the 1-Hour Standard Is No Longer Applicable, Direct Final Rule, 63 Fed. Reg. 2726 (1998) (to be codified at 40 C.F.R. pt. 50).

11. National Ambient Air Quality Standards for Ozone, Final Rule, 62 Fed. Reg. 38,856 (1997) (to be codified at 40 C.F.R. pt. 50).

12. *Id.* at 38,894.

13. *Id.* at 38,873 (emphasis added).

14. *Id.*

15. Identification of Ozone Areas Attaining the 1-Hour Standard and to Which the 1-Hour Standard Is No Longer Applicable, Direct Final Rule, 63 Fed. Reg. 2726 (1998) (to be codified at 40 C.F.R. pt. 50). Although the EPA issued its notice as a direct final rule, the Agency received some "adverse comments" on the notice. Accordingly, the EPA treated its original notice as a proposed rule and anticipated issuing a final rule in the spring or summer of 1998.

Interestingly, the EPA has determined that some areas that are designated "nonattainment" have air quality meeting the one-hour NAAQS (e.g., Saginaw-Bay City-Midland, MI; Flint, MI; Evansville, IN; Sussex County, DE),[16] and several areas designated "attainment" are listed as having air quality that does *not* meet the one-hour NAAQS (e.g., Detroit-Ann Arbor, MI; Grand Rapids, MI; Dayton-Springfield, OH; Kansas City, MO and KS; Memphis, TN; and the San Francisco-Bay areas, CA).[17] Moreover, large portions of the Northeast that have been subject to subpart 2 as a result of their being located in the "ozone transport region" created by Section 184 of the Act are listed as having air quality meeting the one-hour NAAQS and, therefore, are now exempt from subpart 2.[18]

As a result of the EPA's actions, the subpart 2 ozone reduction program "cease[s] to apply" in many areas of the country.[19] Instead, states and the EPA will develop area designations under the eight-hour NAAQS, and states will ultimately be required to develop state implementation plan (SIP) provisions to ensure attainment and maintenance of the eight-hour NAAQS in accordance with the different deadlines and criteria contained in subpart 1 of Part D. To complicate things further, the EPA has proposed in a separate action to require twenty-two states and the District of Columbia to revise their SIPs—independent from and in advance of any state plan development to address eight-hour NAAQS nonattainment problems within the state—to address potential interstate contribution to nonattainment of the eight-hour NAAQS by mandating a cap on NOx emissions that will force many sources to install additional controls.[20]

Identification of Ozone Areas Attaining the 1-Hour Standard and to Which the 1-Hour Standard Is No Longer Applicable, Withdrawal of Direct Final Rule, 63 Fed. Reg. 12,652 (1998).

16. *See* Identification of Ozone Areas Attaining the 1-Hour Standard and to Which the 1-Hour Standard Is No Longer Applicable, Direct Final Rule, 63 Fed. Reg. at 2742, 2749, 2762.

17. *See id.* at 2737, 2753, 2762, 2766, 2779, 2787.

18. *See id.* at 2742 (Delaware), 2760 (Maine), 2761 (Maryland), 2772-73 (New Hampshire), 2773 (New Jersey), 2774-76 (New York), 2783-84 (Pennsylvania), 2793 (Vermont).

19. *Id.* at 2726; *see also* Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, 62 Fed. Reg. 38,421, 38,424 (1997) (Presidential Memorandum of July 16, 1997) ("EPA will publish an action identifying existing nonattainment areas and maintenance areas to which the one-hour standard will cease to apply because they have attained the one-hour standard."); EPA, OZONE AND PARTICULATE MATTER NAAQS AND REGIONAL HAZE PROGRAM—ISSUES OF CONCERN TO STATES AND LOCALITIES: EPA'S RESPONSE TO QUESTION 1-101, at Question 1 (Dec. 5, 1997) (presented to the NGA/ECOS/STAPPA/ALAPCO/EPA Air Standards Workshop, Dec. 11-12, 1997, Washington, D.C.) [hereinafter EPA Response to States].

20. *See* Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, Notice of Proposed Rulemaking, 62 Fed. Reg. 60,318 (1997) (to be codified at 40 C.F.R. pt. 52) (proposing a "SIP call" pursuant to CAA § 110(k)(5), 42 U.S.C. § 7410(k)(5)).

The EPA has begun to issue guidance on how its new approach to ozone regulation will work.[21] Environmental groups and industry groups already have filed challenges to some of this guidance.[22] More rules and guidance are promised within the next few years.[23] As a result, while the uniform, national program crafted by Congress in 1990 to address persistent ozone levels has been "replaced," the full contours of the EPA's new ozone reduction program are not yet clear.[24] Especially problematic is the existence of dual programs applicable to different areas of the country, and the potential confusion about the scope and continuing applicability of any subpart 2 requirements. This Article summarizes the ozone reduction programs under the Act and under the EPA's 1997 rule and reviews some of the questions and problems that are raised by the EPA's new approach to addressing ozone nonattainment in light of the specific program established by Congress in subpart 2.

II. THE 1990 CLEAN AIR ACT

The fundamental CAA program for control of stationary source emissions is contained in Title I. The NAAQS program under this title is intended to ensure that air quality control areas keep the level of air pollution below a concentration level that protects public health and welfare.[25] Under Sections 108 and 109 of the Act, the EPA promulgates primary (health-based) and secondary (welfare-based) NAAQS for the criteria pollutants, one of which is ozone.[26] Once a NAAQS is promulgated, states and the EPA must identify areas as

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21. *See* Memorandum and Attachment from Richard D. Wilson, EPA Acting Assistant Administrator for Air and Radiation, to EPA Regional Administrators, *Guidance for Implementing the One-hour Ozone and Pre-Existing PM10 NAAQS* (Dec. 23, 1997) (referenced at 63 Fed. Reg. 8196 (1998)) (on file with author) [hereinafter Implementation Guidance]; EPA, CONCEPT PAPER ON IMPLEMENTING THE NEW SOURCE REVIEW PROGRAM IN TRANSITIONAL AREAS UNDER THE 8-HOUR OZONE STANDARD (Oct. 31, 1997) [hereinafter NSR Concept Paper]; Letter from Jonathan Cannon, EPA, General Counsel, to Rep. Thomas J. Bliley (R-VA) (Oct. 29, 1997) (on file with author); *see also* note 19 *supra*.

22. *See, e.g.*, Appalachian Power Co. v. EPA, No. 98-1072 (D.C. Cir.) (challenging Implementation Guidance Memo); Delaware Valley Citizens Council for Clean Air v. EPA, No. 98-1079 (D.C. Cir.) (same).

23. *See, e.g.*, EPA Response to States, *supra* note 19, at Question 19 (the EPA expects to need until 2000 to determine area boundaries); *id.* at Question 6 (guidance to be developed for attainment dates for transitional areas); *id.* at Question 20 (the EPA expects to address implementation of the eight-hour NAAQS); Implementation Guidance, *supra* note 21, at 4 (the EPA expects to address implementation of the eight-hour NAAQS); *id.* at 3 (separate guidance to be issued on continued applicability of subpart 2 in the Northeast Ozone Transport Region).

24. *See* National Ambient Air Quality Standards for Ozone, Final Rule, 62 Fed. Reg. 38,856 (1997).

25. *See* CAA §§ 101(b), 109(b), 42 U.S.C. §§ 7401(b), 7409(b).

26. *See* CAA §§ 108(a), 109(b), 42 U.S.C. §§ 7408(a), 7409(b).

either attaining or not attaining the NAAQS.[27] Depending on an area's designation, different criteria and schedules for development and implementation of control programs apply under either CAA Section 110 (for both attainment and nonattainment areas) and, if applicable, subpart 1 of Part D (for nonattainment areas only).[28] In 1990, however, Congress enacted a detailed nonattainment program for ozone as subpart 2 of Part D, changing in fundamental ways the control requirements and schedules for ozone programs in nonattainment areas.

A. The Subpart 1 Program[29]

Subpart 1 of Title I, Part D of the CAA contains the traditional program for implementation of new or revised NAAQS and is the program that applied to ozone nonattainment areas prior to 1990.[30] Since this program would now once again govern implementation of the eight-hour standard in all nonattainment areas, it is important to review the criteria and schedules in subpart 1 for control strategy development.

Under Section 107, upon promulgation of a new or revised NAAQS, state governors have up to one year—until July 1998—to designate areas within the state as "attaining" or "not attaining" the NAAQS, or as "unclassifiable."[31] The EPA then has up to one year—until July 1999—to approve those designations, although the EPA can extend this deadline by one year upon a showing that more data are needed to make designations.[32] The EPA "currently" takes the position, however, that it will not have adequate data to draw new nonattainment area boundaries until at least 1999-2000, so area designations will be delayed.[33]

Sections 110 and 172 of the Act govern the states' obligations to develop control strategies for sources that emit the criteria pollutant addressed by the new or revised NAAQS. Section 110 addresses general requirements regarding attainment and maintenance of NAAQS that apply to both attainment and nonattainment areas.[34] These SIP requirements include, *inter alia*, enforceable emission limits, monitoring

27. *See* CAA § 107(d)(1)(A), 42 U.S.C. §7407(d)(1)(A).
28. CAA §§ 110, 172, 42 U.S.C. §§ 7410, 7502.
29. CAA §§ 171-179B, 42 U.S.C. §§ 7501-7509*a*.
30. *See id.*
31. *See* CAA § 107(d)(1)(A), 42 U.S.C. § 7407(d)(1)(A).
32. *See* CAA § 107(d)(1)(B), 42 U.S.C. § 7407(d)(1)(B).
33. *See* EPA Response to States, *supra* note 19, at Question 19. The EPA recognizes that the results of the transport analyses prompted by its regional NOx rulemaking (SIP call) may have important implications for determining area boundaries and attainment status. *Id.*
34. CAA § 110, 42 U.S.C. § 7410.

provisions, and preconstruction permit provisions.[35] SIPs must also contain "adequate provisions . . . 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 . . . contribute significantly to nonattainment in, or interfere with maintenance by, any other State" with respect to that pollutant.[36] Moreover, under Section 110(l), "[t]he Administrator shall not approve a revision of a plan . . . [that] would interfere with any applicable requirement concerning attainment and reasonable further progress" toward attainment.[37]

For all areas, Section 110 requires that the state submit to the EPA within three years of promulgation—by July 2000—a plan that addresses these requirements for implementation and enforcement of the revised NAAQS.[38] The Administrator must then act on the submittal within one year of the submittal being deemed "complete."[39] Since the EPA is allowed two to six months to evaluate the submittal's completeness, the Administrator will have to act no later than January 2002.[40]

For areas designated "nonattainment," the Administrator is required to establish a schedule for plan submission at the time she promulgates a nonattainment designation.[41] This schedule cannot extend more than three years beyond the date the designation was made (i.e., assuming a July 2000 promulgation of area designations, by July 2003).[42] Once the state makes a "complete" submittal, the EPA then has one year (i.e., until September 2004, to January 2005, depending on the date of the completeness determination) to approve or to disapprove that submittal.[43]

For nonattainment areas, Section 172(c) provides general criteria for control strategy development, including requirements for installation of "reasonably available control technology" (RACT) at existing major sources, for achieving the "lowest achievable emission rate" (LAER) for new/modified major sources, for "reasonable further progress" towards attainment of the NAAQS, and for emission offsets for new/modified major sources.[44] The NAAQS must be attained "as expeditiously as practicable, but no later than 5 years from" the date of nonattainment

35. *See id.*
36. CAA § 110(a)(2)(D)(i)(I), 42 U.S.C. § 7410(a)(2)(D)(i).
37. CAA § 110(l), 42 U.S.C. § 7410(l).
38. CAA § 110(a)(1), 42 U.S.C. § 7410(a)(1).
39. *See* CAA § 110(k)(2), 42 U.S.C. § 7410(k)(2).
40. *See id*.
41. *See* CAA § 172(b), 42 U.S.C. § 7502(b).
42. *See id.*
43. *See* CAA § 110(k)(2), 42 U.S.C. § 7410(k)(2).
44. CAA § 172(c), 42 U.S.C. § 7502(c).

designation (i.e., assuming July 2000 designations, by July 2005).[45] This deadline may be extended by five years if "appropriate . . . considering the severity of nonattainment and the availability and feasibility of pollution control measures."[46]

Where pollution transported across state boundaries creates a nonattainment problem in another state, Section 176A of the Act authorizes the creation of "interstate transport commissions" to make recommendations to the EPA on "strategies for mitigating the interstate pollution."[47] The Administrator can implement those recommendations only through a formal process created by Section 110(k)(5), involving a finding that an individual state's plan is substantially inadequate to meet the state's obligations under Section 110(a)(2)(D) of the Act.[48]

B. The Subpart 2 Program[49]

Subpart 2 requires that "[e]ach area designated nonattainment for ozone pursuant to Section 107(d)"—*not*, it should be noted, nonattainment for any particular ozone NAAQS—"shall be classified at the time of such designation" and "*by operation of law*" pursuant to one of five classifications contained in Section 181(a).[50] These classifications are based on the one-hour NAAQS and "the interpretation methodology issued by the Administrator most recently before" the 1990 CAA Amendments.[51] These classifications, which are based on the degree to which the area's ambient ozone concentrations exceeded the existing one-hour standard at the time of enactment of the 1990 CAA Amendments, are listed below:

45. CAA § 172(a)(2)(A), 42 U.S.C. § 7502(a)(2)(A).
46. *Id.* Under certain additional circumstances, the Administrator may grant two one-year extensions of the attainment date. CAA § 172(a)(2)(C), 42 U.S.C. § 7502(a)(2)(C).
47. CAA § 176A, 42 U.S.C. § 7506*a*.
48. CAA § 110(k)(5), 42 U.S.C. § 7410(k)(5).
49. CAA §§ 181-185B, 42 U.S.C. §§ 7511-7511*f*.
50. CAA § 181(a)(1), 42 U.S.C. § 7511(a)(1) (emphasis added).
51. *Id.*

Classifications And Attainment Dates[52]

Area Class	Design value[1]	Primary standard attainment date[2]
Marginal	.121 up to .138	3 years after enactment
Moderate	.138 up to .160	6 years after enactment
Serious	.160 up to .180	9 years after enactment
Severe	.180 up to .280	15 years after enactment
Extreme	.280 and above	20 years after enactment

[1]The design value is measured in parts per million (ppm).
[2]The primary standard attainment date is measured from the date of the enactment of the Clean Air Amendments of 1990.

Congress further emphasized the primacy of these subpart 2 classifications by amending the general provisions contained in subpart 1 related to classification of nonattainment areas and deadlines for attainment to clarify that subpart 1 "shall not apply with respect to nonattainment areas" such as ozone areas for which classification requirements and attainment dates "are specifically provided under other provisions of this part."[53]

Once classified according to Section 181(a), the statute assigns an area an attainment deadline and a set of specific control strategies based on the severity of its nonattainment problem.[54] Section 182 contains provisions for each classification defining differing reasonable "rates of progress" in ozone reduction; it addresses special RACT requirements; it includes new definitions of "major source" and offset and trading provisions for the preconstruction permit program; and it authorizes special transportation, mobile source, and clean fuels requirements.[55] Section 183 authorizes new federal ozone control measures.[56]

Congress, in subpart 2, also recognized the special problems created for the design of ozone control strategies as a result of the variable factors that affect ozone production in the atmosphere. In this regard, Congress recognized that NOx emissions can lead to either increases or decreases in ozone concentrations (depending upon the ratio of VOC-to-NOx in an area). Congress, therefore, provided in Section 182 that control strategies applicable to major sources of VOC would generally apply also to major sources of NOx, but that a state (or other person) could avoid this result

52. CAA § 181(a), 42 U.S.C. § 7511(a).
53. CAA § 172(a)(1)(C), (a)(2)(D), 42 U.S.C. § 7502(a)(1)(C), (a)(2)(D).
54. CAA § 181(a), 42 U.S.C. § 7511(a).
55. CAA § 182, 42 U.S.C. § 7511*a*.
56. CAA § 183, 42 U.S.C. § 7511*b*.

by demonstrating, according to specific statutory criteria, that NOx reductions would not produce ozone benefits.[57]

Subpart 2 also addresses, with more specificity than does subpart 1, the interstate transport of ozone. In particular, Congress created in Section 184 of the Act an ozone transport region comprised of the mid-Atlantic and Northeastern states, called the Ozone Transport Region (OTR), whose representatives comprise the Ozone Transport Commission (OTC).[58] Congress provided that all major sources in all areas in the region—*both* attainment and nonattainment areas—would be subject to control strategies for "moderate" nonattainment areas.[59] In contrast to subpart 1, subpart 2 provides that, if an area fails to demonstrate attainment due to transported air pollution, the EPA could not apply the otherwise applicable CAA sanctions to that area.[60]

Perhaps most importantly, subpart 2 establishes more flexible schedules for control strategy implementation that replace, for ozone, the fixed attainment deadlines that applied prior to 1990. That is, once an area is classified under Section 181(a) based on the magnitude of its ozone nonattainment problem, it is assigned a specific set of control strategies to implement by the deadline contained in Section 181(a).[61] If implementation of those control strategies and the other strategies provided for by the state's attainment demonstration does *not* produce attainment, the area is "bumped up" to the next more serious classification and given a new deadline and new set of control strategies.[62] Ultimately, if an area has not achieved attainment by 2005 or, for some areas, 2007, it is given another set of control requirements designed to allow the area to continue to make progress towards attainment.[63] Rather than providing a specific deadline for attainment, Section 181(b)(4) provides for application of a fee provision (for VOC emissions in excess of eighty percent of a baseline amount) and a percent reduction requirement, "and the [s]tate shall demonstrate that such percent reduction has been achieved in each 3-year interval . . . until the standard is attained."[64]

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57. CAA § 182(f), 42 U.S.C. § 7511*a*(f).
58. CAA § 184(a), 42 U.S.C. § 7511*c*(a).
59. *See* CAA § 184(b), 42 U.S.C. § 7511*c*(b).
60. *See* CAA § 182(j)(2), 42 U.S.C. § 7511*a*(j)(2).
61. CAA § 181(a), 42 U.S.C. § 7511(a).
62. *See* CAA § 181(b)(2), 42 U.S.C. § 7511(b)(2) (except for severe or extreme areas).
63. *See* CAA § 181(b)(4), 42 U.S.C. § 7511(b)(4).
64. *Id.*

III. THE EPA'S APPROACH TO IMPLEMENTING ITS NEW OZONE NAAQS

In its final ozone NAAQS decision, the EPA concluded that even though Congress carefully considered the broad social, economic, and public health consequences of achieving ozone reductions, and on that basis adopted a detailed statutory program tied to the one-hour NAAQS, the Administrator may nonetheless revise the one-hour NAAQS and revoke the subpart 2 program based on her own balancing of only a subset of these factors.[65]

In contrast to the uniform, national ozone reduction program established by Congress in 1990 that balanced the public health risks associated with ozone exposures as addressed by the one-hour NAAQS with the difficulties of achieving ozone reductions, the final rule creates a patchwork of areas subject to different ozone implementation programs based on two different ozone NAAQS. Under the EPA's rule, the eight-hour NAAQS will apply in all areas and the one-hour NAAQS in some areas.[66] Under the EPA's current guidance, however, the EPA evidently intends that the subpart 2 program will control in those areas in which it applies;[67] an eight-hour NAAQS subpart 1 program will control in nonattainment areas where subpart 2 does not apply;[68] a special eight-hour "transitional" program will apply in still others;[69] and perhaps a one-hour NAAQS subpart 1 program in yet others.[70] In this regard, the EPA states that it will be impossible to designate eight-hour NAAQS "nonattainment areas" before the year 2000 and that no control strategies for the eight-hour NAAQS will be required before 2003.[71] For areas attaining *neither* the one-hour NAAQS nor the eight-hour NAAQS, the EPA explains that only local control strategies associated with implementation of the one-hour NAAQS will typically be required until

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65. *See* National Ambient Air Quality Standards for Ozone, Final Rule, 62 Fed. Reg. 38,856, 38,878-83 (1997) (to be codified at 40 C.F.R. pt. 50).

66. *See* Implementation Guidance, *supra* note 21, at 2.

67. *See id.*

68. *See id.* at 2-3; EPA Response to States, *supra* note 19, at Question 20.

69. *See* EPA Response to States, *supra* note 19, at Questions 1-5. The EPA is creating a special "transitional" classification pursuant to CAA § 172(a)(1), 42 U.S.C. § 7502(a)(1), to address certain areas that attain the one-hour NAAQS but not the eight-hour NAAQS. This special classification is available, however, *only* if the area participates in the regional NOx reduction strategy (SIP call) and/or submits plans to address the eight-hour NAAQS earlier than otherwise required. The EPA intends to allow transitional areas to take advantage of more flexible implementation requirements. Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, Presidential Memorandum, 62 Fed. Reg. 38,421, 38,425 (1997).

70. *See* EPA Response to States, *supra* note 19, at Question 37; Implementation Guidance, *supra* note 21, at 2.

71. *See* Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, Presidential Memorandum, 62 Fed. Reg. at 38,424-25; EPA Response to States, *supra* note 19, at Question 19.

the one-hour NAAQS is attained, possibly not until 2005 or later.[72] The EPA also explains that it will waive unnecessary local planning and control strategy requirements for eight-hour NAAQS nonattainment areas called "transitional areas" if they participate in a new regional air quality program being developed by the EPA to address alleged interstate impacts on ozone.[73] This new regional program would require sources to be controlled based on their effects on achieving the eight-hour NAAQS in *other* states, at a time before the state in which the sources are located—or any other state, for that matter—is required to develop a SIP addressing local air quality effects.[74] As a result, aspects of the implementation of the eight-hour NAAQS may, in fact, be accelerated.

Under this new approach to ozone reduction, how NOx emissions are treated, which interstate transport programs apply, which sanctions are triggered, and perhaps even which federal programs for VOC apply—among other issues—will depend on the area in which a source is located and perhaps on the air quality status of other areas affected. The January 1998 notice in which the EPA "revoked"[75] the one-hour NAAQS for many areas also raises questions regarding the status and obligations of those areas. In its final rule and throughout its guidance to date, the EPA maintains that what is dispositive with respect to "attainment" of the one-hour NAAQS is not whether an area satisfies the redesignation criteria,[76] or in fact is redesignated,[77] but rather, whether the EPA includes the area on its revocation list.[78] This approach creates an incongruity to the extent an area's formal designation is at odds with how it is characterized on the EPA's "list."

The EPA promises to issue over the next one to two years rules and guidance governing the determination of eight-hour area designations and area boundaries; the demonstrations required for "transitional" eight-hour

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72. *See* Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, Presidential Memorandum, 62 Fed. Reg. at 38,426-27; EPA Response to States, *supra* note 19, at Questions 16-17, 31.

73. *See* Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, Presidential Memorandum, 62 Fed. Reg. at 38,425.

74. Finding of Significant Contribution and Rulemaking for Certain States in the Ozone Transport Assessment Group Region for Purposes of Reducing Regional Transport of Ozone, Notice of Proposed Rulemaking, 62 Fed. Reg. 60,318 (1997) (to be codified at 40 C.F.R. pt. 52).

75. *See* Identification of Ozone Areas Attaining the One-Hour Standard and to Which the One-Hour Standard Is No Longer Applicable, Direct Final Rule, 63 Fed. Reg. 2726, 2727 (1998) (to be codified at 40 C.F.R. pt. 50).

76. CAA § 107(d)(3), 42 U.S.C. § 7407(d)(3) (1994); *see also* CAA § 181(b)(1), 42 U.S.C. § 7511(b)(1).

77. The redesignation process entails procedures and demonstrations that are time-consuming and that involve public participation and a significant state role. *See* CAA § 107(d)(3), 42 U.S.C. § 7407(d)(3).

78. Implementation Guidance, *supra* note 21, at 2-3.

classifications; the development of subpart 1 control strategies for eight-hour nonattainment and "transitional" areas; and the development of subpart 1 control strategies for certain one-hour nonattainment areas, including what NOx controls will apply in these areas.[79] In this regard, the EPA characterizes its current pronouncements on ozone NAAQS implementation as reflecting only its "current views" on the issues—issues that will ultimately "be addressed in future rulemakings as appropriate."[80] The following discussion reviews some of the many questions raised by the EPA's attempt to rewrite Congress's ozone reduction strategy. How the EPA resolves these issues in the coming years will have a dramatic effect on the scope and pace of future ozone reductions in the United States.

A. Area Designations

The EPA's unilateral listing of areas meeting, or not meeting, the one-hour NAAQS bypasses the formal redesignation process. It is unclear what the interplay is between the EPA's list and the area redesignation process.

For example, Section 181(a) says that subpart 2 applies "by operation of law" to areas designated "nonattainment for ozone"—*not* nonattainment for a specific ozone standard—under Section 107.[81] Does designation of an area as having air quality meeting the one-hour NAAQS override nonattainment designations for purposes of Section 181(a)? Does an area that is designated nonattainment but that the EPA lists as having air quality meeting the one-hour NAAQS cease to have nonattainment planning obligations? In its guidance, the EPA explains that its "current" view is that "the [one]-hour NAAQS will no longer be in effect for these areas," and "the existing area designations for such areas will no longer be applicable *since the purpose of the provisions of subpart 2 will have been achieved* and those provisions will no longer apply."[82] At the same time, the EPA states that the EPA-approved maintenance plans, written in terms of preserving attainment of the *one-hour standard*, and conformity requirements remain effective, even

79. Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, Presidential Memorandum, 62 Fed. Reg. 38,421, 38,422 (1997); *see also* Implementation Guidance, *supra* note 21, at 4.

80. Implementation Guidance, *supra* note 21, at 1.

81. CAA § 181(a), 42 U.S.C. § 7511(a).

82. Implementation Guidance, *supra* note 21, at 2-3 (emphasis added).

though the one-hour NAAQS has been revoked,[83] and the purpose of subpart 2 "ha[s] been achieved."[84]

The EPA's position that certain subpart 2 requirements should continue to apply, such as existing maintenance plans that the EPA approved prior to January 16, 1998, (the date of publication of the EPA's proposed revocation of the one-hour standard), highlights a contradiction in the EPA's approach to implementation of the ozone standards. On one hand, subpart 2 is no longer applicable to certain areas; on the other hand, the programs already instituted pursuant to subpart 2, or at least some of them, may not be "revoked" by the states. Moreover, the EPA's position reveals a fundamental inequity between those areas where the EPA had already acted to approve their maintenance plans and those areas where the EPA had not yet acted. The former group would be required to continue to adhere to the maintenance plan, whereas the latter would not be similarly constrained. If maintenance plans are not necessary for the latter group of attainment areas, why are they required for the former group of attainment areas?

In addition, the Agency says that "[t]he implications of revoking the [one]-hour NAAQS on the Ozone Transport Region are not discussed in this guidance. The EPA will issue separate guidance on these relationships."[85] Therefore, do the one-hour NAAQS or subpart 2 still have some residual effect in the context of interstate pollution transport?

Because Section 181(a), on its face, makes no distinction as to the form of the ozone NAAQS under which an area is designated "nonattainment for ozone," how does the "by operation of law" provision of Section 181(a) apply when areas are designated "nonattainment for ozone," pursuant to Section 107, based on the eight-hour NAAQS? EPA, at least currently, has concluded that Section 181(a) has no applicability to an area that is designated "nonattainment for ozone" because that area fails to meet the eight-hour standard for ozone.[86]

Conversely, does an area formally designated as "attainment" but that the EPA lists as "not attaining" the one-hour NAAQS (e.g., Detroit)[87] have any nonattainment planning obligations? The EPA's guidance suggests that it may list additional areas as not meeting the one-hour NAAQS based on its review of 1997 air quality data.[88] The EPA's

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83. *See id.* at 3.
84. *Id.* at 2.
85. *Id.* at 3.
86. *See id.* at 4.
87. Identification of Ozone Areas Attaining the One-Hour Standard and to Which the One-Hour Standard Is No Longer Applicable, Direct Final Rule, 63 Fed. Reg. 2726 (1998) (to be codified at 40 C.F.R. pt. 50).
88. *See* Implementation Guidance, *supra* note 21, at 2.

guidance in this context, seems to suggest that any nonattainment obligations for such an area that had been designated earlier as "attainment" would be triggered only by redesignation.[89] This result is at odds with the rest of the guidance that indicates that an area's control obligations are defined by how the EPA characterizes the area on its list of areas meeting or not meeting the one-hour NAAQS.[90]

Moreover, subpart 2 applies, by its terms, to areas that at some future date fail to attain the one-hour NAAQS under the same "by operation of law" analysis.[91] Will the EPA's list of areas with air quality meeting the one-hour NAAQS remain fixed? If not, might some areas become subject, for the first time, to subpart 2 obligations at some future date? Curiously, the EPA's guidance suggests that any future planning for attainment of the one-hour NAAQS in areas that are now listed as "meeting" the one-hour NAAQS, but for which the EPA decided to list as "not meeting" based on its review of 1997 air quality data, may take place under subpart 1.[92]

As previously noted, the EPA states that, given data problems, boundaries for eight-hour ozone nonattainment areas cannot be determined until 2000.[93] This uncertainty suggests that one-hour and eight-hour nonattainment area boundaries may not coincide. Might a state have to develop different control strategies for the two NAAQS in the same geographical area if this is the case?

B. Attainment Deadlines

What attainment deadlines will apply to ozone nonattainment areas? If nonattainment designations for the eight-hour NAAQS take place in 2000, Section 172 requires attainment "as expeditiously as practicable" but no later than 2005, with a possible extension.[94] How does this square with Congress's policy determination in subpart 2 *not* to apply absolute attainment deadlines, given the special problems associated with reducing ozone concentrations?[95]

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89. *See id*.

90. *See id.* The EPA's guidance provides that "the provisions of subpart 2 continue to apply to an area as a matter of law *until EPA determines that the area has air quality data meeting the 1-hour standard*," rather than until the EPA *redesignates* the area. *See id.* (emphasis added).

91. *See* CAA § 181(b)(1), 42 U.S.C. § 7511(b)(1) (1994).

92. Implementation Guidance, *supra* note 21, at 2.

93. *See supra* note 33 and accompanying text.

94. CAA § 172, 42 U.S.C. § 7502.

95. Interestingly, the EPA's regulatory impact analysis of the final ozone NAAQS suggests that full attainment of the new eight-hour ozone NAAQS will be impossible without the development new, yet-unknown technologies. *See* OFFICE OF AIR QUALITY AND STANDARDS, EPA, REGULATORY IMPACT ANALYSIS FOR THE PARTICULATE MATTER AND OZONE NATIONAL

How is an area treated that is currently nonattainment for the one-hour NAAQS and subject to subpart 2, but that significantly influences a nonattainment area that is subject to the eight-hour NAAQS? Does the subpart 1 schedule that applies in the second area then override the subpart 2 schedule that applies in the one-hour nonattainment area? Similar questions would arise with respect to an area that is nonattainment for both the one-hour and eight-hour NAAQS.

C. Regional Transport

Since the EPA's final NAAQS rule, in conjunction with the January 1998 list of areas, "revokes" the subpart 2 program for all attainment areas in the East, what happens to the Ozone Transport Region and control requirements that apply to attainment areas in that region solely as a result of subpart 2? Areas no longer subject to subpart 2 would seem to have no obligation to implement the provisions of Section 184 addressing control obligations of the OTR states, because the Section 184 program was specifically made part of subpart 2 of the Act and tied to the *one-hour* NAAQS that is now revoked for many parts of the OTR.[96] As a result, must controls that are directed at significant contributions to nonattainment of an ozone NAAQS in another state, and that apply to sources in areas no longer subject to subpart 2, now be based on a recommendation by state governors and EPA action on those recommendations, as required by Section 176A of the Act?[97] Despite its "revocation" of subpart 2 for many areas within the OTR, the EPA apparently contends that the specific subpart 2 control requirements continue to apply even to areas for which subpart 2 was revoked.[98] The EPA's justification in this case—that "the measures are prescribed, required controls that the Act does not allow the EPA discretion to remove"—contrasts markedly with its overall approach to subpart 2.[99] This approach is to revoke the statutory subpart 2 provisions through rulemaking, although they, too, would appear to be "prescribed" and "required" under the Act.[100]

Areas subject to subpart 2 may, under some circumstances, seek an exemption from CAA sanctions if the nonattainment problem is caused

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AMBIENT AIR QUALITY STANDARDS AND PROPOSED REGIONAL HAZE RULE, at 9-2, 9-5 (July 16, 1997).

96. *See* CAA § 184(b), 42 U.S.C. § 7511*c*(b).
97. *See* CAA § 176A, 42 U.S.C. § 7506*a*.
98. Implementation Guidance, *supra* note 21, at 8.
99. *Id.*
100. *Id.*

by out-of-state pollution.[101] Since eight-hour NAAQS nonattainment areas are not subject to subpart 2, is there a possibility of seeking such an exemption?

Finally, for all areas—including those outside the OTR—that the EPA decides meet the one-hour ozone standard so that *the one-hour standard no longer applies*,[102] is there still an obligation under Section 110(a)(2)(D) to ensure that their SIP includes provisions prohibiting activities that "contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to" the one-hour standard?

D. NOx Reductions

Reflecting controversy during the 1980s regarding the use of NOx control strategies to address ozone, Congress specified in Subsections 182(b) and (f) the circumstances under which NOx controls would presumptively be required in ozone nonattainment areas and the conditions under which states were to avoid reliance on NOx control strategies.[103] For areas in which subpart 2 no longer applies, there would no longer appear to be any presumptive statutory requirement to control NOx emissions. Does the EPA, or the state, now bear the burden of demonstrating that NOx control would produce an ozone benefit in a specific area? In this regard, the EPA states "that substitutions [of NOx reductions for VOC reductions] in waiver areas may be allowed only if the EPA determines that the substitution would result in a reduction in ozone concentrations in the nonattainment area with waivers."[104] The EPA also states that it "does not believe that it should allow NOx reductions from within [nonattainment areas that received NOx waivers under subpart 2 because of a showing of ozone dis-benefits] to be substituted for required VOC reductions without [(1)] certain technical assurances" that lower ozone levels will result and (2) the submission of an "amended NOx waiver request."[105]

E. Additional Federal Requirements

If subpart 2 no longer applies to an area, what happens to the federal ozone reduction measures authorized by subpart 2? For example, what becomes of special rules regarding new source review applicability,

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101. *See* CAA § 182(j)(2), 42 U.S.C. § 7511*a*(j)(2) (1994).

102. *See* National Ambient Air Quality Standards for Ozone, Final Rule, 62 Fed. Reg. 38,856, 38,894 (1997) (to be codified at 40 C.F.R. pt. 50).

103. CAA § 182(b), (f), 42 U.S.C. § 7511*a*(b), (f).

104. Implementation Guidance, *supra* note 21, at 7.

105. *Id.*

offsets, and trading? What becomes of motor vehicle inspection and maintenance programs and transportation controls?

Furthermore, since the transportation conformity measures of Section 176 only apply to nonattainment and maintenance areas,[106] once the one-hour NAAQS and subpart 2 program no longer apply to an area, there would no longer appear to be any transportation conformity requirements that apply to the area until nonattainment areas are designated for the eight-hour NAAQS. Under this approach, transportation projects in such areas would no longer be subject to EPA sanctions for a state's failure to submit subpart 2 demonstrations for the area for which subpart 2 no longer applies. The EPA's guidance raises questions about the continued applicability of conformity requirements, however, by stating that "transportation and general conformity will continue to apply in those areas with EPA-approved maintenance plans, even after the [one]-hour ozone standard is revoked."[107]

F. Transitional Areas

In an attempt to address the burdens that it recognizes would be associated with simultaneous implementation of one-hour and eight-hour NAAQS, the EPA suggests that if an area commits, by 2000, to impose controls on sources within its jurisdiction to address problems attaining the eight-hour standard in another jurisdiction through the proposed EPA SIP call, and further demonstrates that it will attain the eight-hour NAAQS by 2005, the EPA will "exercise its discretion under the law to eliminate unnecessary local planning requirements" in spite of the fact that such area will be designated as "nonattainment" for the eight-hour NAAQS.[108] For example, the EPA says that it will offer flexibility with respect to new source review requirements and conformity.[109]

But, what if control of a source's NOx emissions to address nonattainment in another jurisdiction aggravates local ozone problems, as may be the case for NOx reductions in certain areas of the country? This precise issue is emerging in some states as they begin to evaluate their response to the EPA's SIP call.[110]

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106. *See* Environmental Defense Fund v. EPA, 82 F.3d 451, 454 n.2 (D.C. Cir. 1996).

107. Implementation Guidance, *supra* note 21, at 3-4.

108. Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, Presidential Memorandum, 62 Fed. Reg. 38,421, 38,425 (1997) (to be codified at 40 C.F.R. pt. 50).

109. *See id. See also* EPA's Response to States, *supra* note 19, at Questions 2-4.

110. NOx reductions in Michigan, as called for by the EPA, may produce a local disbenefit in the Detroit area, actually resulting in *increased* ozone levels. *Michigan Lawmakers Fear New EPA Ozone Rule May Foul Air in Detroit*, INSIDE EPA'S CLEAN AIR REPORT, Jan. 8, 1998, at 22. Moreover, increased localized ozone levels may raise environmental justice

Other issues are likely to arise with respect to transitional areas. For example, can the state ignore other CAA requirements triggered by promulgation of a new NAAQS, including the limitation in Section 165 of the Act against constructing or modifying major sources that contribute significantly to nonattainment?[111]

IV. CONCLUSION

When Congress enacted the subpart 2 ozone reduction program in 1990 after extensive consideration and careful deliberation and compromise,[112] it thought that it resolved the question of how this country would go about the difficult and complex task of achieving ozone reductions for years to come. The EPA's recent ozone NAAQS rule effectively "revokes"—in an extraordinarily complicated way—that congressional program. The EPA's new approach raises significant questions and uncertainties about the consistency of that approach with the CAA, and it creates confusion regarding the continuing applicability of subpart 2 provisions and the applicability of other provisions under subpart 1. Already, states have expressed concerns about the legality and practicality of the EPA's implementation plan, especially about the confusion it creates with respect to seemingly conflicting mandates under the EPA's hybrid system.[113] Whether and how the new the EPA program will work will not be known for several years until the EPA, states, and regulated sources address, in a concrete way, the many legal and practical issues raised by the EPA's 1997 promulgation of a new ozone NAAQS.

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concerns to the extent such localized increases disproportionately affect minority communities, such as those in certain industrial areas. *See* Exec. Order No. 12,898, 59 Fed. Reg. 7629 (1994).

111. *See* NSR Concept Paper, *supra* note 21, at 48-53 (proposing relaxed requirements for sources subject to new source review in transitional areas).

112. *See* 136 CONG. REC. H2939-40 (daily ed. May 23, 1990) (statement of Rep. Roukema (R-NJ, 5th)); 1990 LEGIS. HIST., *supra* note 6, at 3001 (provisions of Subpart 2 embody the "culmination of a decade of work").

113. *See, e.g.*, Letter from Barry R. McBee, Chairman, Texas Natural Resources Conservation Commission, to EPA (Feb. 17, 1998) (Document No. VI-B-03, EPA Air Docket No. A-97-42); Letter from Robert Cuellar, Interim Executive Director, Texas Department of Transportation, to EPA (Feb. 13, 1998) (Document No. VI-B-09, EPA Air Docket No. A-97-42); *see also* State Petitioner's Merit Brief at 5-13 (Mar. 23, 1998); American Trucking Ass'n, Inc. v. EPA, Nos. 97-1440, 97-1502, 97-1441, 97-1599, 97-1546, 97-1619 (D.C. Cir.).