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NOTES AND COMMENTS

The Hazy Future: Are State Attempts to Reduce Visibility Impairment in Class I Areas Caught Between Scylla and Charybdis? The Effects of the Clean Air Act Amendments of 1990 on Visibility Protection

David R. Everett

In recent decades, the visibility in America's national parks and other class I areas has declined significantly as a result of manmade air pollution. This Comment provides a comprehensive history of visibility regulations in the United States. It also briefly describes the sources and types of visibility impairment in class I areas and the regulatory and statutory framework enacted to address them. The author examines the various lawsuits brought by northeastern states to force the EPA to promulgate stricter visibility regulations for class I areas. Unfortunately, these suits failed to remedy visibility impairment. The author also describes the different arguments and provisions of the Clean Air Act used in these lawsuits and the reasons for their failures. The author opines that the failure of these suits has placed northeastern states between Scylla and Charybdis (the continued impairment of visibility in class I areas and no legal remedy for the problem). To help northeastern states escape this predicament, this Comment suggests possible arguments and legal solutions which can be used in the future to resolve the states' visibility problems. Finally, this Comment describes and analyzes the 1990 Amendments to the Clean Air Act and their effects on the future protection of visibility in class I areas.

I. Introduction

"It's a bird, it's a plane, it's . . . I can't see what it is, the visibility is too poor." Poor visibility is an environmental problem which affects everybody who enjoys the gift of sight. Poor visibility also affects people's enjoyment of scenic vistas in federal class I areas.¹ Each year, millions of people visit national parks² primarily to experience these vistas.³ However, the pleasure of this experience has declined significantly in recent decades as a result of manmade air pollution.⁴ Allowing this degradation in visibility contravenes the purpose for which the national parks were created — "to conserve the scenery . . . and to provide for the enjoyment of the same in such a manner . . . as will leave [national parks] . . . unimpaired for the enjoyment of future generations."⁵ Clearly, declining visibility will inhibit the enjoyment of these scenic vistas for future generations.

To inhibit the decline in pristine visibility in class I areas. Congress enacted section 169A of the Clean Air Act (CAA or Act) in 1977.⁶ Under this provision, the Environmental Pro-

1. Class I areas are lands in which existing good air quality is deemed to be nationally important. F. ANDERSON, D. MANDELKER & A. TARLOCK, ENVIRONMENTAL PROTECTION: LAW AND POLICY 272 (1984) [hereinafter F. ANDERSON]. Under the Clean Air Act (CAA), class I areas include all national wilderness areas and national memorial parks exceeding 5,000 acres, national parks exceeding 6,000 acres, and international parks, existing on or before August 7, 1977. CAA § 162(a), 42 U.S.C. § 7472(a) (1988). Any of the preceding areas created after August 7, 1977 may be designated as class I areas, but cannot be designated as less than class II areas. CAA § 162(b), 42 U.S.C. § 7472(b) (1988). For a detailed description of class II areas see *infra* text accompanying notes 66-68.

2. H.R. REP. NO. 294, 95th Cong., 1st Sess. 204, reprinted in 1977 U.S. CODE CONG. & ADMIN. NEWS 1077, 1282.

3. See *Impacts of Air Pollution on National Park Units: Hearings Before the Subcomm. on National Parks and Recreation of the House Comm. on Interior and Insular Affairs*, 99th Cong., 1st Sess. 145 (1985) [hereinafter *Hearings*] (statement of Richard Marks, Superintendent, Grand Canyon National Park). Eighty percent of the visitors surveyed at the Grand Canyon stated that air quality was the crucial factor affecting their enjoyment of the park. *Id.* at 151.

4. *Id.* at 542 (statement of the National Park Service). Summertime visibility in much of the eastern United States, which includes many national parks, has decreased more than 50% since 1948. *Id.* at 540.

5. National Park Service Organic Act, 16 U.S.C. § 1 (1988).

6. CAA § 169A, 42 U.S.C. § 7491 (1988).

tection Agency (EPA) was required to enact a comprehensive regulatory program for visibility protection.⁷ In the early 1980's the EPA enacted regulations protecting visibility in class I areas as required by section 169A.⁸ However, many northeastern states believed that these as required by section 169A regulations were inadequate to protect visibility, and therefore, believed that more stringent regulations were required. Consequently, throughout the 1980's, northeastern states such as Connecticut, Maine, Massachusetts, New Jersey, New York, Rhode Island, and Vermont brought lawsuits against the EPA to force it to promulgate stricter visibility regulations.⁹ These suits arose under different provisions of the Act and presented different arguments. However, these judicial challenges failed, leaving states caught between Scylla and Charybdis (the continued impairment of visibility with no legal remedy for the problem).

Generally, this Comment will provide environmental lawyers with a comprehensive history of visibility regulation in the United States. It will also familiarize them with the sources and types of visibility impairment in class I areas and the statutory and regulatory framework enacted to address this impairment. This Comment will also alert state attorneys general and environmental lawyers to the different arguments and provisions of the Act which were used ineffectively in past lawsuits to force the EPA to promulgate stricter visibility regulations. In the future, environmental lawyers should avoid these arguments and provisions when seeking to pressure the EPA to issue such regulations. To help the states escape Scylla and Charybdis, this Comment will suggest possible arguments and legal solutions which the states can use to resolve their visibility problems. In addition, this Comment will describe and analyze the 1990 Amendments to the CAA¹⁰ and their potential effects on the protection of visibility in class I

7. *See id.*

8. *See infra* text accompanying notes 90-102.

9. *See infra* note 110.

10. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

areas.

This Comment contains seven sections. Section II briefly describes the sources and types of visibility impairment.¹¹ Section III explains the provisions of the Act requiring visibility protection in federal class I areas.¹² Section IV explains the EPA regulations addressing visibility impairment.¹³ Section V discusses the different lawsuits brought by northeastern states to force the EPA to promulgate more stringent visibility regulations.¹⁴ It also suggests new legal solutions arising under the 1990 Amendments to the CAA which may be used by states to improve visibility in class I areas. Section VI of this Comment describes and analyzes the 1990 Amendments to the visibility provisions of the Act.¹⁵ The final section, section VII, contains concluding remarks.

II. Sources and Types of Visibility Impairment¹⁶

A. Sources of Visibility Impairment

Visibility is impaired by air pollutants emitted from natural and manmade sources.¹⁷ Natural sources of air pollutants which impair visibility include vegetation metabolism, organic

11. See *infra* text accompanying notes 16-43.

12. See *infra* text accompanying notes 44-89.

13. See *infra* text accompanying notes 90-109.

14. See *infra* text accompanying notes 110-265.

15. See *infra* text accompanying notes 266-303.

16. For a comprehensive review of the types, causes, and sources of visibility impairment, the following reports and their bibliographies may be consulted: U.S. CONG., OFFICE OF TECHNOLOGY ASSESSMENT, ACID RAIN AND TRANSPORTED AIR POLLUTANTS: IMPLICATIONS FOR PUBLIC POLICY, APPENDIX B.4 (1984); EPA, DEVELOPING LONG-TERM STRATEGIES FOR REGIONAL HAZE: FINDINGS AND RECOMMENDATIONS OF THE VISIBILITY TASK FORCE (1985); 4 P. IRVING, NATIONAL ACID PRECIPITATION ASSESSMENT PROGRAM (NAPAP) INTERIM ASSESSMENT 10-57 to 10-83 (1987) [hereinafter NAPAP]; THE NAT'L COMM'N. ON AIR QUALITY, TO BREATHE CLEAN AIR 174-77, 248-50, 303 (1981); P. Samson, The Transport of Suspended Particulates into New York State (June 1981) (available from the State of New York, the Dep't of Law, Albany, New York 12224); Trijonis, *Patterns and Trends in Data for Atmospheric Sulfates and Visibility*, in ACID DEPOSITION: LONG-TERM TRENDS 109-27 (1986); EPA, PROTECTING VISIBILITY: AN EPA REPORT TO CONGRESS (1979).

17. *Protecting Visibility Under the Clean Air Act: EPA Establishes Modest "Phase" I Program*, 11 Env'tl. L. Rep. (Env'tl. L. Inst.) 10,053 (Feb. 1981) [hereinafter *EPA Phase I*].

decay, forest fires and agricultural burning,¹⁸ fog, wind-blown dust, and volcanic eruptions.¹⁹ These sources account for minor visibility impairment in class I areas.²⁰ Conversely, emissions of manmade air pollutants such as sulfur oxides (SO_x), nitrogen oxides (NO_x), and particulates account for seventy-five to eighty percent of the visibility impairment in class I areas.²¹ SO_x is emitted primarily from industrial boilers, smelters, and power plants.²² NO_x is formed when nitrogen combines with ambient oxygen during and immediately after the combustion of any fossil fuel.²³

B. Types of Visibility Impairment

Visibility is impaired by air pollution in three ways:

18. Smoke from tree slash burning used in forestry, and agricultural burning, causes regional haze which impairs visibility in class I areas located in the Pacific Northwest. See *Smoke from Forestry, Farming Major Cause of Haze in Pacific Northwest, Study Finds*, 17 Env't Rep. (BNA) 1668 (Jan. 30, 1987) [hereinafter *Smoke from Forestry*]. See also *Revised Cleanup Plan for Puget Sound Said Scaled Back in Response to Comments*, 17 Env't Rep. (BNA) 1475 (Dec. 26, 1986). To control this visibility problem, northwestern states such as Washington and Oregon have implemented class I visibility protection plans which prohibit slash burning on certain days of the year. *Smoke from Forestry, supra*, at 1668.

19. See EPA, PROTECTING VISIBILITY: AN EPA REPORT TO CONGRESS 6-1 (1979) [hereinafter EPA REPORT].

20. See *id.* at 1-26.

21. *Hearings, supra* note 3, at 65 (statement of Dr. John Trijonis, President, Santa Fe Research Corp.). Particulates and gaseous air pollutants impair visibility by scattering or absorbing light, which in turn reduces visual range, changes the contrast of form (the relative brightness of objects in view), and produces discoloration (pollution-induced changes in the wavelengths of atmospheric light) of distant objects. F. ANDERSON, *supra* note 1, at 286. Nitrogen dioxide (NO₂) and soot impair visibility by absorbing light, thereby changing the color of distant objects. *Id.* For example, NO₂ absorbs blue light, thereby producing a brownish discoloration in air pollution plumes and distant objects. See *id.* See also EPA REPORT, *supra* note 19, at 2-13.

Particulate pollution such as nitrates, sulfates, dust, fly ash, carbonaceous soot, and fine solid or liquid particles, also known as atmospheric aerosols, EPA REPORT, *supra* note 19, at 2-13, impair visibility by scattering and refracting light. EPA Phase I, *supra* note 17, at 10,053. The amount of light scattered depends on the size of the particle. Smaller particles scatter more light because they present a greater surface area per unit of weight. F. ANDERSON, *supra* note 1, at 286.

22. Protection of Visibility, 44 Fed. Reg. 69,116 (1979) (proposed Nov. 21, 1979) [hereinafter Protection of Visibility]. See also EPA Phase I, *supra* note 17, at 10,053.

23. See EPA Phase I, *supra* note 17, at 10,053.

plume blight, regional haze, and pocket haze.²⁴ The EPA defines plume blight as "smoke, dust, colored gas plumes, or layered haze emitted from stacks which obscure the sky or horizon and are . . . [usually traceable] to a single [emission] source or a small group of sources."²⁵ Plume blight is caused primarily by soot, a light absorbing aerosol,²⁶ and by the emissions of NO₂, SO₂, and particulates²⁷ in the plumes of single pollution sources such as utility and industrial boilers,²⁸ smelters, and pulp mills located near national park boundaries.²⁹ Plume blight impairs local visibility for a short time and can be controlled by limiting the emissions from pollution sources located near the borders of class I areas.³⁰ Plume blight accounts for only a small percentage of impaired visibility in class I areas.³¹

Regional haze, however, is a more serious problem because it produces significant visibility degradation in class I areas³² and is difficult to address and control.³³ The EPA defines regional or uniform haze as a "widespread, regionally homogeneous haze from a multitude of sources which impairs visibility in every direction over a large area."³⁴ Regional haze

24. F. ANDERSON, *supra* note 1, at 287. The EPA regulations only address plume blight and regional haze. See, e.g., Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,084-85 (1980) [hereinafter Visibility Protection].

25. *Maine v. Thomas*, 690 F. Supp. 1106, 1108 n.6 (D. Me. 1988), *aff'd*, 874 F.2d 883 (1st Cir. 1989) (citing Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,085 (1980)). For example, plume blight from the Four Corners Power Plant in New Mexico has been directly traced to impaired visibility in national parks such as the Grand Canyon in Arizona and Bryce Canyon in Utah. H.R. REP. NO. 294, 95th Cong., 1st Sess. 204, reprinted in 1977 U.S. CODE CONG. & ADMIN. NEWS 1282, 1283.

26. F. ANDERSON, *supra* note 1, at 286.

27. *Id.* at 286-87.

28. Protection of Visibility, *supra* note 22, at 69,116. See also *EPA Phase I*, *supra* note 17, at 10,053.

29. See *Federal Court Blocks State Effort to Force EPA to Regulate 'Regional Haze'*, 20 Env't Rep. (BNA) 191 (June 2, 1989) [hereinafter *Federal Court*].

30. See Protection of Visibility, *supra* note 22, at 69,119.

31. See Environmental Defense Fund Statement in Support of National Park and Wilderness Protection Amendment to Clean Air Act 2 (available from the Environmental Defense Fund, Inc., 1405 Arapahoe Ave., Boulder, Colo. 80302) [hereinafter EDF Statement].

32. *Id.* at 1. See also *EPA Phase I*, *supra* note 17, at 10,053.

33. See *EPA Phase I*, *supra* note 17, at 10,053.

34. *Maine v. Thomas*, 690 F. Supp. 1106, 1108 n.6 (D. Me. 1988), *aff'd*, 874 F.2d

is formed predominantly from out-of-state sulfur emissions³⁵ such as SO₂. SO₂ emitted from multiple sources in midwestern states such as Ohio, Indiana, and Illinois, is transported by the wind over eastern states where it forms regional haze.³⁶ Consequently, regional haze may impair visibility in areas where few manmade emission sources exist.³⁷ Sulfate particles formed in the atmosphere from sulfur emissions, are the primary cause of regional haze³⁸ and the major contributor to visibility impairment in national parks.³⁹ In addition, sulfates account for approximately forty to eighty percent of regional haze formation in the east.⁴⁰ Experts have concluded that regional haze can be controlled by reducing sulfur emissions across the United States.⁴¹

Pocket haze consists of small pockets of layered haze which form in valleys or around other geographical features such as high terrain.⁴² This haze is formed primarily by secondary aerosols, although NO₂ contributes to the layered effect.⁴³ Pocket haze is caused by a meteorological condition known as a temperature inversion. This occurs when cooler air high in the atmosphere prevents warm air from rising, thereby trapping haze close to the earth.

883 (1st Cir. 1989) (citing Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,085 (1980)).

35. Approval and Promulgation of Implementation Plans; Vermont; Visibility in Federal Class I Areas; Lye Brook Wilderness, 52 Fed. Reg. 26,973, 26,974 (1987).

36. *Hearings*, *supra* note 3, at 296 (statement of Douglas Latimer, Principal Environmental Engineer, Systems Application, Inc.).

37. *Maine v. Thomas*, 874 F.2d 883, 885 (1st Cir. 1989).

38. *Hearings*, *supra* note 3, at 296 (statement of Douglas Latimer, Principal Environmental Engineer, Systems Application, Inc.). Nitrate particles also contribute to regional haze formation. See *EPA Phase I*, *supra* note 17, at 10,053.

39. *Hearings*, *supra* note 3, at 546 (statement of the National Park Service). See also *NAPAP*, *supra* note 16, at 10-64.

40. Brief of Plaintiffs-Appellants at 10, *Maine v. Thomas*, 874 F.2d 883 (1st Cir. 1989) (No. 88-1983).

41. *Hearings*, *supra* note 3, at 297 (statement of Douglas Latimer, Principal Environmental Engineer, Systems Application, Inc.).

42. F. ANDERSON, *supra* note 1, at 287. High eastern humidity hazes and pockets of air pollution surrounding unique western geological features like the Grand Canyon and mountains are examples of pocket haze. *Id.*

43. *Id.*

III. Protection of Visibility Under the Clean Air Act

This section of the Comment focuses on the provisions of the Clean Air Act which require the protection of visibility in class I areas, including the prevention of significant deterioration program and section 169A. This section also provides a foundation upon which to base the discussions and analysis of the visibility regulations and case law contained in sections IV and V of this Comment.

A. Introduction

In the United States, visibility in class I areas is protected by the Clean Air Act.⁴⁴ Congress enacted the Clean Air Act in 1970 to "protect and enhance the quality of the Nation's air resources so as to promote the public health and welfare"⁴⁵ Generally, to achieve this purpose, the Act places nationwide limits on air pollutants to protect the public welfare and health.⁴⁶ For example, under section 109 of the Act, the EPA is responsible for promulgating national primary and secondary ambient air quality standards (NAAQS)⁴⁷ which specify the maximum allowable ambient concentrations of various air pollutants.⁴⁸ The EPA has established NAAQS for a number of air pollutants.⁴⁹ To achieve the NAAQS, the EPA is required to apply control technologies to pollution sources which will continually reduce emissions and result in improved air quality and visibility.⁵⁰ Under the Act, the states

44. CAA § 169A, 42 U.S.C. § 7491 (1988).

45. *Id.* § 101(b)(1), 42 U.S.C. § 7401(b)(1).

46. Clean Air Act Provisions to Protect National Parklands, Cong. Research Serv. (Lib. of Congress) No. 85-1013, at 1 (Oct. 15, 1985) [hereinafter CRS].

47. CAA § 109(b)(1)-(2), 42 U.S.C. § 7409(b)(1)-(2) (1988). Primary NAAQS are promulgated to protect the public health and secondary NAAQS are promulgated to protect the public welfare. *Id.*

48. *Id.*

49. Seven air pollutants for which NAAQS have been promulgated include carbon monoxide, NO₂, SO_x, ozone, hydrocarbons, lead, and particulate matter. F. ANDERSON, *supra* note 1, at 137. Of these seven pollutants, SO_x, NO₂, and particulates impair visibility in federal class I areas. *See supra* note 21 and accompanying text.

50. CRS, *supra* note 46, at 2. For example, the 1990 Amendments to the Clean Air Act require that no major source emitting hazardous air pollutants may be modified, constructed, or reconstructed unless the maximum available control technology

and the federal government share the responsibility for air pollution control. Within nine months after the promulgation or revision of the primary NAAQS, each state is responsible for developing and submitting to the EPA a state implementation plan (SIP)⁵¹ for each air pollutant for which a NAAQS has been promulgated.⁵² Within their SIPs, states are required to describe the strategies to be used to meet the requirements of the Act, including the prevention of significant deterioration of air quality and the protection of visibility.⁵³

(MACT) has been met. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 112, 104 Stat. 2399, 2545 (1990) (to be codified at 42 U.S.C. § 7412). Furthermore, the Act requires that various technologies must be applied to different sources to control the emissions causing visibility impairment in class I areas. For example, under section 165(a), the best available control technology (BACT) must be applied to the construction or modification of major emitting facilities affecting visibility. CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4) (1988). Under section 169A, the best available retrofit technology (BART) must be installed in all existing major stationary sources in PSD areas which are reasonably anticipated to cause or contribute to visibility impairment. *Id.* § 169A(b)(2)(A), 42 U.S.C. § 7491(b)(2)(A). The BART standard is less stringent than the BACT standard. In addition, BACT applies to new sources, whereas BART applies to sources existing on August 7, 1977, but which were not in operation for more than 15 years from that date. *Id.* §§ 165(a), 169A(b)(2)(A), 42 U.S.C. §§ 7475(a), 7491(b)(2)(A).

51. A SIP provides for the implementation, maintenance, and enforcement of the NAAQS within each state. CAA § 110(a)(1), 42 U.S.C. § 7410(a)(1) (1988). Furthermore, within four months after receiving a SIP, the EPA must approve or disapprove a SIP based on 11 criteria specified in section 110(a)(2)(A)-(K) of the Act. *Id.* § 110(a)(2)(A)-(K), 42 U.S.C. § 7410(a)(2)(A)-(K). If a state fails to submit, implement, or revise a SIP, or if the EPA rejects a SIP, then the EPA is required to promulgate a federal implementation plan (FIP) under section 110(c)(1) of the Act. *Id.* § 110(c)(1), 42 U.S.C. § 7410(c)(1). Furthermore, under section 110(a)(2)(E) of the Act, all SIPs must contain "adequate provisions . . . prohibiting any stationary source within the State from emitting any air pollutant in amounts which will . . . interfere with measures required to . . . protect visibility . . ." *Id.* § 110(a)(2)(E), 42 U.S.C. § 7410(a)(2)(E). The Act also requires that SIPs include measures to prevent the significant deterioration (PSD) of air quality in those states having ambient air better than the NAAQS. *Id.* § 110(a)(2)(E)(i)(II), 42 U.S.C. § 7410(a)(2)(E)(i)(II). In those states containing ambient air quality worse than the NAAQS (*i.e.*, those states in nonattainment with the NAAQS), implementation of the PSD program in a SIP is not required. *See id.* § 172(b), 42 U.S.C. § 7502(b).

52. *Id.* § 110(a)(1), 42 U.S.C. § 7410(a)(1).

53. CRS, *supra* note 46, at 8

B. Prevention of Significant Deterioration Program

Under the Act, the protection of visibility in pristine areas was originally sought through the prevention of significant deterioration (PSD) program.⁵⁴ The PSD program was designed to preserve, protect, and enhance the air quality (including visibility) in geographic areas where ambient pollutant levels were substantially cleaner than the levels prescribed by the NAAQS.⁵⁵ However, the protection of visibility under this program proved to be inadequate. This portion of the Comment briefly describes the protection of visibility under the PSD program as well as some of its shortcomings.

1. PSD Provisions Protecting Visibility

The PSD program was designed to protect visibility in a number of ways. For example, the program restricted the increase in levels of air pollutants causing visibility impairment.⁵⁶ The PSD program established "maximum allowable increases" in the levels of SO₂ and particulates over baseline concentrations⁵⁷ established for each of these pollutants.⁵⁸ The program required SIPs to contain regulations assuring

54. See *EPA Phase I*, *supra* note 17, at 10,053. For a detailed examination of the PSD program, see Currie, *Nondegradation and Visibility Under the Clean Air Act*, 68 CALIF. L. REV. 48, 51-79 (1980).

55. See CAA § 160(2), 42 U.S.C. § 7470(2) (1988). See also F. ANDERSON, *supra* note 1, at 270.

56. See CAA § 163(b), 42 U.S.C. § 7473(b) (1988).

57. A "baseline concentration" is composed of the ambient concentration levels of pollutants which exist at the time of the first application for a permit to construct a major emitting facility which may affect visibility in the PSD area. CAA § 169(4), 42 U.S.C. § 7479(4) (1988). The PSD program defines a "major emitting facility" by listing categories of stationary sources which emit, or have the potential to emit, 100 tons annually of any air pollutant. *Id.* § 169(1), 42 U.S.C. § 7479(1). A "major emitting facility" also includes any other nonlisted source which has the potential to emit 250 tons annually of any air pollutant. *Id.* The ambient pollutant level used in calculating the baseline concentration must take into account the projected emissions from any major emitting facility which may affect the air quality in a PSD area. *Id.* § 169(4), 42 U.S.C. § 7479(4).

58. *Id.* § 163(a), 42 U.S.C. § 7473(a). The maximum allowable increases of SO₂ and particulate concentrations in PSD areas are enumerated in subsections 163(b)(1)-(3) of the Act. *Id.* § 163(b)(1)-(3), 42 U.S.C. § 7473(b)(1)-(3).

that these increases did not exceed the NAAQS.⁵⁹ In addition, to reduce the concentrations of air pollutants which impair visibility, the PSD program prohibited the construction of any major emitting facility after August 7, 1977 unless the facility implemented the best available control technology (BACT).⁶⁰

The PSD program specified the maximum allowable increases of pollutants for three different PSD areas or classes:⁶¹ class I,⁶² class II,⁶³ and class III.⁶⁴ In class I areas, minute increases in pollutant concentrations were allowed.⁶⁵ These minute increases help protect and preserve visibility by restricting the levels of pollutants which impair it. These increases also inhibit economic growth in or near class I areas, but do not prohibit it. The increases make it expensive for industries to discharge air pollutants by forcing them to install the pollution control devices needed to adhere to the incremental standards established for class I areas.

Class II areas include those areas which are not class I, but have not been reclassified as class III.⁶⁶ In class II areas, moderate increases in the concentrations of pollutants impairing visibility are allowed.⁶⁷ Accordingly, visibility is only modestly protected in class II areas. These increases were established to permit light economic growth in class II PSD areas.⁶⁸ In class III areas, larger increases in the concentrations of pol-

59. *Id.* § 163(a), 42 U.S.C. § 7473(a).

60. *Id.* § 165(a)(4), 42 U.S.C. § 7475(a)(4). "BACT is defined by each State for each industrial source on a case-by-case basis, taking into consideration cost, energy demands, and other environmental and health effects. BACT is intended to provide indirect control over pollutants for which no PSD increments have as yet been established . . ." CRS, *supra* note 46, at 4.

61. CAA § 163(b)(1)-(3), 42 U.S.C. § 7473(b)(1)-(3) (1988).

62. *Id.* § 162(a), 42 U.S.C. § 7472(a).

63. *Id.* § 162(b), 42 U.S.C. § 7472(b).

64. *Id.* § 164(a), 42 U.S.C. § 7474(a).

65. *See id.* § 163(b)(1), 42 U.S.C. § 7473(b)(1).

66. *Id.* § 162(b), 42 U.S.C. § 7472(b). The Act permits a state, under certain conditions, to reclassify an area from class II to class III. *Id.* § 164(a)(2)(A), 42 U.S.C. § 7474(a)(2)(A). However, a class I area may not be reclassified as either class II or class III. *Id.* § 162(a), 42 U.S.C. § 7472(a).

67. *See id.* § 163(b)(2), 42 U.S.C. § 7473(b)(2).

68. R. FINDLEY & D. FARBER, ENVIRONMENTAL LAW IN A NUTSHELL 91 (2d ed. 1988) [hereinafter ENVIRONMENTAL LAW NUTSHELL].

lutants impairing visibility are allowed.⁶⁹ As a result, visibility will be protected the least in class III areas. In addition, these larger increases permit industrial growth⁷⁰ and allow industry to increase air pollution and use less expensive air pollution control devices in meeting the less stringent class III standards. In general, the Clean Air Act mandates protection of visibility in class I areas, but does not require it for class II or class III areas. Visibility is protected less in class II and III areas since higher levels of pollutants impairing it are allowed.

Section 165 of the PSD program also protects visibility by assuring that visibility impairment is considered before a state can issue preconstruction permits to any major emitting facility planned to be built in or near a class I area.⁷¹ Under this section, the Federal Land Manager (FLM), the federal official directly responsible for managing the class I area,⁷² has an affirmative responsibility to protect visibility in class I areas. If the FLM can demonstrate to a state that a new facility would adversely effect visibility in a class I area, section 165 provides that the state cannot issue a construction permit even though class I increments will not be exceeded.⁷³ Consequently, section 165 of the Act protects visibility by assuring that new facilities cannot be built if their emissions will degrade visibil-

69. See CAA § 163(b)(3), 42 U.S.C. § 7473(b)(3) (1988).

70. ENVIRONMENTAL LAW NUTSHELL, *supra* note 68, at 74.

71. F. ANDERSON, *supra* note 1, at 287.

72. *Id.* at 276. "The [FLM] is the secretary of the department with the authority over the federal land in question." *Id.*

73. See CAA § 165(d)(2)(C)(ii), 42 U.S.C. § 7475(d)(2)(C)(ii) (1988). The FLM has the authority to review and comment on applications for construction permits submitted for major new sources in PSD areas that may adversely affect visibility in their lands. Air Pollution in the Parks: Wyden-Babbitt Statement of Policy and Proposal for Legislation 4 (Dec. 20, 1989) (available from the Office of the Legislative Director/Counsel for Congressman Ron Wyden, 3d Dist., Or., 2452 Rayburn Bldg., Washington, D.C. 20515) [hereinafter Wyden-Babbitt Statement]. However, the authority of the FLM to review and comment on construction permit applications has been inadequate to improve visibility in class I areas because the FLM has not always received data or opportunities needed to assume a meaningful role in siting major new sources that may affect visibility. *Id.* at 2. In addition, if the owner or operator of a new facility can demonstrate to the FLM that emissions from the facility will have no effect on visibility in class I areas, then the state may grant a variance from the maximum allowable increases and issue a permit. CAA § 165(d)(2)(C)(iii), 42 U.S.C. § 7475(d)(2)(C)(iii) (1988).

ity in class I areas.

2. *Inadequacies of the PSD Program*

The protection of visibility under the PSD program was inadequate for a number of reasons. First, the PSD program permits clean air in attainment areas to deteriorate to NAAQS levels until a baseline is triggered. If a baseline concentration is never triggered, then visibility may decline as the concentrations of pollutants (*i.e.*, particulates and SO₂) rise to levels specified in the NAAQS.

Second, visibility impairment may actually increase significantly under the program because it does not regulate levels of pollutants emitted from non-major sources within a PSD area. Thus, pollution from non-major emitting facilities⁷⁴ combined with pollution from major emitting facilities, could contribute significantly to visibility impairment in PSD areas, thereby contravening the requirement to protect visibility under the program. Furthermore, visibility degradation is not considered before non-major emitting facilities can be constructed in or near class I areas. The program does not require preconstruction permits for these facilities.⁷⁵

Third, the PSD program did not establish maximum allowable increases of NO₂ over ambient baseline concentrations.⁷⁶ Since NO₂ contributes to visibility impairment in class I areas,⁷⁷ visibility would decline as levels of NO₂ were allowed to rise to levels specified in the NAAQS. Consequently, in 1977, as a result of these inadequacies, Congress concluded that the PSD program was insufficient by itself to improve visibility impairment.⁷⁸

74. A "non-major emitting facility" is any listed stationary source which has the potential to emit less than 100 tons annually of any air pollutant or any nonlisted stationary source which has the potential to emit less than 250 tons annually of any air pollutant. See CAA § 169(1), 42 U.S.C. § 7479(1) (1988).

75. See *id.* § 165, 42 U.S.C. § 7475.

76. See *id.* § 163(b)(1)-(3), 42 U.S.C. § 7473(b)(1)-(3).

77. See *supra* notes 21, 49, and text accompanying note 27.

78. See *EPA Phase I*, *supra* note 17, at 10,053-54. See also H.R. REP. NO. 294, 95th Cong., 1st Sess. 205, reprinted in 1977 U.S. CODE CONG. & ADMIN. NEWS 1077, 1284.

C. Section 169A

In response to these inadequacies, Congress strengthened the PSD program and its protection of visibility in class I areas by amending the Clean Air Act to include section 169A.⁷⁹ Section 169A was designed to prevent future visibility impairment and to remedy existing impairment caused by manmade air pollutants.⁸⁰

To achieve this goal, Congress established a series of statutory deadlines within which the EPA was directed to implement a comprehensive regulatory program for visibility protection.⁸¹ As part of this program, the EPA was required to promulgate regulations by August 1979 requiring states containing class I areas to incorporate emission limits in their SIPs necessary to make "reasonable progress⁸² toward meeting the national goal" of preventing and remedying visibility

79. See Clean Air Act Amendments of 1977, Pub. L. No. 95-95, § 128, 91 Stat. 685, 742-45 (1977) (codified at 42 U.S.C. § 7491 (1988)). For a detailed evaluation of the provisions of section 169A protecting visibility in class I areas, see Currie, *Nondegradation and Visibility Under the Clean Air Act*, 68 CALIF. L. REV. 48, 79-81 (1980).

80. CAA § 169A(a)(1), 42 U.S.C. § 7491(a)(1) (1988).

81. See *id.* § 169A(a), 42 U.S.C. § 7491(a). See also *Maine v. Thomas*, 874 F.2d 883, 885 (1st Cir. 1989). Generally, this regulatory program consisted of a number of deadlines. First, by August 7, 1978, or within one year after the enactment of section 169A, and after consulting with the Secretary of the Interior, the EPA was required to promulgate a list of states containing mandatory class I areas in which visibility was an important value. CAA § 169A(a)(2), 42 U.S.C. § 7491(a)(2) (1988). On November 30, 1979, the EPA complied with this requirement by promulgating a list of 36 states containing 156 of the nation's 158 mandatory class I areas in which visibility was an important value. See 40 C.F.R. §§ 81.400-437 (1990). See also *Protection of Visibility*, 44 Fed. Reg. 69,116, 69,125 (proposed Nov. 21, 1979).

Second, within 18 months after the enactment of section 169A, or by February 7, 1979, the EPA was required to submit to Congress a comprehensive report addressing the causes of visibility impairment and suggesting possible remedies to the problem. CAA § 169A(a)(3), 42 U.S.C. § 7491(a)(3) (1988). In October 1979, the EPA satisfied this requirement by submitting to Congress a report on visibility impairment. EPA REPORT, *supra* note 19, at iv.

82. "[I]n determining reasonable progress there shall be taken into consideration the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements." CAA § 169A(g)(1), 42 U.S.C. § 7491(g)(1) (1988).

impairment in class I areas.⁸³ The EPA was also required to assure that SIPs contained a requirement that each major stationary source⁸⁴ install and operate the best available retrofit technology (BART)⁸⁵ if that source emits any air pollutants reasonably anticipated to cause or contribute to visibility impairment in class I areas.⁸⁶ A stationary source may be exempt from the retrofit requirement if the EPA determines, in concurrence with the appropriate FLM,⁸⁷ that the emissions from the source, either by itself or in combination with other sources, will not significantly impair visibility in class I ar-

83. *Id.* § 169A(a)(4), 42 U.S.C. § 7491(a)(4). When the EPA failed to comply with the August 1979 deadline, the Friends of the Earth, a national environmental group, sued the EPA to compel the agency to promulgate regulations in accordance with this section. Brief of Plaintiffs-Appellants at 15-16, *Maine v. Thomas*, 874 F.2d 883 (1st Cir. 1989) (No. 88-1983) (citing *Friends of the Earth v. Costle*, No. 79-2311 (D.D.C. filed Aug. 30, 1979)). As a result of this lawsuit, the parties reached a settlement which resulted in promulgation of visibility regulations by the EPA on December 2, 1980. See 40 C.F.R. §§ 51.300-307 (1990). See also *EPA Phase I*, *supra* note 17, at 10,054.

84. Section 169A(g)(7) defines a "major stationary source" by listing the types of stationary sources which have the potential to emit 250 tons of any air pollutant. CAA § 169A(g)(7), 42 U.S.C. § 7491(g)(7) (1988). This definition differs slightly from the definition of a "major emitting facility" referred to in section 169(1) of the PSD program. *Id.* § 169(1), 42 U.S.C. § 7479(1). See also *supra* note 57. Unfortunately, section 169A(g)(7) is silent as to whether this potential emissions limitation is based on monthly or yearly calculations. See CAA § 169A(g)(7), 42 U.S.C. § 7491(g)(7) (1988). However, in all probability, the annual emissions limitations contained in section 169(1) would apply.

85. For the purposes of section 169A, BART is determined by each state. In making this determination, each state must consider the costs of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, any nonair related environmental impacts of compliance, and the degree to which visibility will be improved as a result of using the technology. CAA § 169A(g)(2), 42 U.S.C. § 7491(g)(2) (1988). Since each state determines BART for each pollution source based on the preceding statutory considerations, BART will vary throughout the country, with some sources having more stringent BART requirements than others.

86. *Id.* § 169A(b)(2)(A), 42 U.S.C. § 7491(b)(2)(A). For example, on May 12, 1989, the EPA approved revisions to the SIPs of Arizona, Maine, and Minnesota to include emission standards using BART. *Visibility Standards for National Parks, Wilderness Areas, Approved for Three States*, 20 Env't Rep. (BNA) 180 (May 26, 1989) (citing Assessment of Visibility Impairments and Integral Vista Identification, 54 Fed. Reg. 21,904 (May 12, 1989)). The BART requirements only apply to sources in existence on August 7, 1977, but which have not been in operation for more than 15 years from that date. CAA § 169A(b)(2)(A), 42 U.S.C. § 7491(b)(2)(A) (1988).

87. CAA § 169A(c)(3), 42 U.S.C. § 7491(c)(3) (1988).

eas.⁸⁸ Pursuant to section 169A, the EPA must also require that SIPs contain "a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal specified in . . . [section 169A(a)]."⁸⁹

IV. EPA Regulations Protecting Visibility

In accordance with the required regulatory program enumerated in section 169A, the EPA enacted regulations in 1980 which addressed plume blight, but deferred action on regional haze.⁹⁰ The 1980 regulations required that the regulatory program be implemented in phases.⁹¹ Phase I of the program addressed plume blight. Later phases were to address regional haze and urban plumes at an unspecified date.⁹² This section of the Comment describes these 1980 regulations as well as subsequent regulations enacted by the EPA to protect visibility. The background material discussed in sections II and III of this Comment will be helpful in understanding these regulations.

A. Regional Haze

In the 1980 regulations, the EPA enumerated its reasons for deferring promulgation of regional haze regulations. The EPA stated that it would promulgate future phases concerning regional haze only when regional scale models became refined, when improved monitoring techniques provided more data on source-specific levels of visibility impairment, and when scientific knowledge concerning the relationship be-

88. *Id.* § 169A(c)(1), 42 U.S.C. § 7491(c)(1).

89. *Id.* § 169A(b)(2)(B), 42 U.S.C. § 7491(b)(2)(B).

90. *See* *Maine v. Thomas*, 690 F. Supp. 1106, 1108 (D. Me. 1988), *aff'd*, 874 F.2d 883 (1st Cir. 1989) (citing Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,086 (1980)). *See generally* 40 C.F.R. §§ 51.300 - .307 (1990).

91. Visibility Protection, *supra* note 24, at 80,085-86.

92. Visibility Protection, *supra* note 24, at 80,086. *See also* *Maine*, 690 F. Supp. at 1108. As of April 1, 1991, 14 years after Congress had required the EPA to issue visibility regulations to assure "reasonable progress" toward the national visibility protection goal, *see supra* text accompanying notes 82 & 83, the EPA had not promulgated regulations for regional haze.

tween air pollution and visibility impairment improved.⁹³ However, these reasons are indefensible in 1991 because current state-of-the-art technology exists to identify and control the sources of regional haze.⁹⁴

B. *Plume Blight*

Generally, the Phase I regulations addressing plume blight required the thirty-six states containing mandatory class I areas to revise their SIPs to address visibility impairment.⁹⁵ These regulations specifically required these states to:

- (1) revise their SIPs to assure reasonable progress toward the national visibility goal of preventing future and remedying existing impairment of visibility in mandatory Class I Federal areas,⁹⁶
- (2) determine whether certain existing stationary facilities should install Best Available Retrofit Technology (BART) for controlling those pollu-

93. Visibility Protection, *supra* note 24, at 80,086.

94. *See infra* text accompanying notes 215-17.

95. 40 C.F.R. § 51.302 (1990). The regulations required the states to revise their SIPs within nine months from the date of promulgation of the regulations. *Id.* However, in December 1982, only one of the 36 states had submitted a revised implementation plan to the EPA. Approval and Promulgation of State Implementation Plans; Settlement of Litigation, 49 Fed. Reg. 20,647 (1984) [hereinafter Settlement of Litigation]. Consequently, on December 20, 1982, the Environmental Defense Fund (EDF) filed a citizen suit against the EPA under section 304(a) of the Act. *Environmental Defense Fund v. Gorsuch*, No. C82-6850 (N.D. Cal. filed Dec. 20, 1982); *see also* Settlement of Litigation, *supra*, at 20,647.

The EDF alleged that the EPA failed to implement the visibility regulations it issued in 1980 and that the Agency had failed to perform a nondiscretionary duty under the 1980 regulations by failing to adopt and implement state or federal plans for visibility control. *Id.* In 1984, the parties reached a settlement agreement which established specific deadlines for promulgation of Visibility FIPs by the EPA for those states that had not submitted a revised SIP complying with the EPA's visibility requirements. In addition, deadlines were created for the EPA's approval of SIPs concerning visibility protection in 35 of the 36 states lacking implementation plans. *Id.* Pursuant to this agreement, the EPA incorporated FIPs into the SIPs of 29 states that failed to comply with the EPA's general visibility plan requirements and long-term strategies of 40 C.F.R. sections 51.302 and 51.306. State Implementation Plans for Visibility Long-Term Strategies, Integral Vistas, and Control Strategies, 52 Fed. Reg. 45,132 (1987).

96. 40 C.F.R. § 51.302(c)(2) (1990); Visibility Protection, *supra* note 24, at 80,086. *See also* Assessment of Visibility Impairment: Proposed Rule, 54 Fed. Reg. 36,948 (proposed Aug. 29, 1989).

tants which impair visibility,⁹⁷ (3) develop, adopt, implement, and evaluate long-term strategies for making reasonable progress toward remedying existing and preventing future impairment⁹⁸ . . . and (4) adopt certain measures regarding visibility impacts that will supplement the State's new source review program.⁹⁹

Additionally, the Phase I regulations required states to submit SIPs with provisions allowing FLMs to identify visibility impairment at any time.¹⁰⁰ The SIPs were also to contain a list

97. 40 C.F.R. § 51.302(c)(4)(i)-(v) (1990); Visibility Protection, *supra* note 24, at 80,086.

98. 40 C.F.R. § 51.306(a)-(g) (1990); Visibility Protection, *supra* note 24, at 80,086. On November 9, 1984, the EPA "established an interagency task force to develop a long-term (5-10 year) strategy for dealing with visibility impairment from pollution derived regional haze." Visibility Impairment from Pollution; Public Meetings of Interagency Task Force on Visibility, 49 Fed. Reg. 44,770 (1984). This task force was composed of representatives of the EPA's headquarters and regional offices, the National Park and Forest Services, the Bureau of Land Management, the Department of Energy, the Department of Defense, and the Tennessee Valley Authority. *Id.* at 44,771. The task force was required to issue a report containing its recommendations and findings on addressing regional haze. *Id.* at 44,771. In 1987, the EPA utilized this report to reassess the secondary fine particulate standard for visibility. Revisions to the National Ambient Air Quality Standards for Particulate Matter, 52 Fed. Reg. 24,634, 24,646 (1987).

99. 40 C.F.R. § 51.307(a)-(d) (1990); Visibility Protection, *supra* note 24, at 80,086. On July 12, 1985, the EPA issued regulations implementing two aspects of the 1980 Phase I regulations: (1) the development of a nationwide visibility monitoring strategy, 40 C.F.R. § 52.26 (1990), and (2) preconstruction review of major new stationary sources to assess their impact on visibility in class I areas. *Id.* § 52.28(c). These regulations are applied to any SIP that had been disapproved with respect to visibility. These rules would be effective until states had developed their own equivalent visibility requirements. CRS, *supra* note 46, at 11. Pursuant to these regulations, the EPA, in cooperation with the appropriate FLM, shall monitor visibility in those states whose SIPs have been disapproved for failure to comply with the visibility provisions enumerated in 40 C.F.R. section 51.305. 40 C.F.R. § 52.26(c) (1990). The 1985 regulations also created monitoring requirements, *id.*, and a mechanism for revising monitoring plans. *Id.* § 52.26(d). In addition, the regulations establish separate regulatory systems for nonattainment areas, *id.* § 52.28, as well as state and federal administered attainment areas. *Id.* § 52.27.

100. 32 States Face Visibility SIP Disapproval After Failing to Submit Proposed Strategies, 16 Env't Rep. (BNA) 1811 (Jan. 31, 1986) [hereinafter 32 States]. The 1980 regulations expected the states to coordinate development of their SIPs with FLMs. Visibility Protection, *supra* note 24, at 80,086. For example, in developing a SIP, a state may consider the visibility impairment of an integral vista identified by the FLM. An integral vista is a scenic landmark or panoramic view observed

of emissions limitations for sources causing plume blight pollution.¹⁰¹ The emissions limitations would require all major stationary sources to use BART to solve visibility problems.¹⁰²

However, the plume blight regulations are ineffective in preventing all types of visibility degradation in class I areas.¹⁰³ Plume blight regulations can only address visibility problems caused by sources near the boundaries of class I areas.¹⁰⁴ The visibility in these areas, however, is impaired predominantly by regional haze created by multiple sources located far away from these boundaries. Accordingly, plume blight regulations cannot be used to control visibility problems caused by regional haze.¹⁰⁵ In an attempt to avoid this problem, a state may adopt within its borders plume blight regulations more stringent than those regulations required by federal law.¹⁰⁶ However, a state cannot impose its stricter standards on upwind states in an attempt to control regional haze or plume blight pollution caused by sources in those states.¹⁰⁷ Consequently, a state's stricter plume blight regulations will also be ineffective in regulating visibility impaired by regional haze.

Furthermore, the plume blight regulations have been inadequate in preventing visibility degradation because there are only two pollution sources in the United States to which these regulations can be applied.¹⁰⁸ These sources are the Georgia Pacific paper plant near the Moosehorn National Wildlife Refuge in Maine and the Navajo Generating Station near the Grand Canyon National Park in Arizona.¹⁰⁹

from within a class I area, but located beyond its boundaries. *Id.* For a comprehensive review of visibility regulations governing integral vistas, see Comment, *Integral Vistas in the Wake of Heckler v. Chaney: Gone Forever?*, 8 J. ENERGY L. & POL'Y 151 (1987).

101. See 32 States, *supra* note 100, at 1811.

102. CAA § 169A(b)(2)(A), 42 U.S.C. § 7491(b)(2)(A) (1988). See also 40 C.F.R. § 51.302(c)(4)(i) (1990); Visibility Protection, *supra* note 24, at 80,086-87.

103. EDF Statement, *supra* note 31, at 3.

104. See *Federal Court*, *supra* note 29, at 191.

105. EDF Statement, *supra* note 31, at 2.

106. See CAA § 116, 42 U.S.C. § 7416 (1988).

107. See *Air Pollution Control Dist. v. EPA*, 739 F.2d 1071, 1087-88 (6th Cir. 1984).

108. EDF Statement, *supra* note 31, at 2.

109. *Id.* Plume blight from the Navajo Generating Station in Page, Arizona has

V. The Judicial Treatment of State Attempts to Reduce Visibility Impairment

A. Introduction

As a result of the EPA's continued delay in issuing regional haze regulations and the ineffectiveness of the plume

been blamed for impairing visibility at the Grand Canyon National Park. *Emission Reductions Proposed at Power Plant Near Grand Canyon*, 21 Env't Rep. (BNA) 1798 (Feb. 8, 1991) [hereinafter *Emission Reductions*]. In September 1989, the EPA proposed findings that the Navajo power plant "may reasonably be anticipated to cause or contribute to the visibility impairment in the Grand Canyon." Norris, *The Navajo Generating Plant and Grand Canyon Haze*, 127 PUB. UTIL. FORT. 48, 49 (1991) (citing Assessment of Visibility Impairment: Proposed Rule, 54 Fed. Reg. 36,948, 36,951 (proposed Aug. 29, 1989)) [hereinafter Norris]. Pursuant to revised deadlines reached in the settlement agreement in *Environmental Defense Fund v. Reilly*, No. C82-6850 (N.D. Cal. filed Dec. 20, 1982), see *supra* note 95, the EPA had until February 1, 1991 to propose whether to issue a revised Visibility FIP for Arizona requiring the Navajo power plant to apply BART (as permitted by 40 C.F.R. § 51.302(c)(4)(i) (1990)) as a remedy for the Canyon's plume blight problems. See Approval and Promulgation of Implementation Plans: Revision to the Visibility FIP for Arizona, 56 Fed. Reg. 5173, 5176 (proposed Jan. 3, 1991) [hereinafter FIP for Arizona].

As the February 1991 deadline approached, the EPA stated that it might require the power plant to install BART to reduce its SO₂ emissions by 70% in order to diminish haze at the Canyon. See *Emission Reduction*, *supra*, at 1798. Environmentalists are seeking a 90% reduction in the plant's emissions. *Id.* On February 8, 1991, the EPA formally announced its proposal to revise the Visibility FIP for Arizona to include BART for the Navajo plant. FIP for Arizona, *supra*, at 5178. Ultimately, if the EPA actually requires installation of BART at the power plant, this would be the first federal regulatory action taken by the EPA under section 169A(b)(2)(A) of the Act solely to improve visibility in a class I area. See *Emission Reduction*, *supra*, at 1798.

The utility opposes the proposed EPA requirement for a number of reasons. See *id.* First, the utility asserts that regional haze is creating the Canyon's visibility problems and is therefore beyond the scope of the EPA's current visibility regulations which are limited to plume blight. Assessment of Visibility Impairment: Proposed Rule, 54 Fed. Reg. 36,948, 36,951 (proposed Aug. 29, 1989). Second, it may cost billions of dollars to install retrofit technology such as sulfate removing scrubbers. *Emission Reduction*, *supra*, at 1798. In addition, studies indicate that scrubber installation would only result in minimal visibility improvement in the Canyon. *Id.* at 1799. Finally, the utility believes that the atmospheric evidence indicates that the power plant's plume contributes only a minor percentage to the haze affecting the park. See *id.*

The 1990 Amendments to the Clean Air Act attempt to force the EPA to address the Canyon's visibility problems by requiring the Agency to create a visibility transport commission to evaluate any information concerning visibility impairment at the national park. See Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(f),

blight regulations in controlling visibility degradation in class I areas, several northeastern states brought suits against the EPA. In these suits, northeastern states sought to force the EPA to promulgate stricter visibility regulations under various provisions of the Clean Air Act.¹¹⁰ However, these judicial attempts failed.

This section of the Comment discusses these lawsuits,¹¹¹ including the issues and the arguments raised in each. This discussion is intended to alert state attorneys general and environmental lawyers to those arguments and Act provisions used in past lawsuits and the reasons for their failure to force the EPA to promulgate stricter visibility regulations for class I areas. In the future, environmental lawyers should avoid these arguments and provisions when seeking to pressure the EPA into issuing such regulations. In addition, to help the

104 Stat. 2399, 2697 (1990) (to be codified at 42 U.S.C. § 7492). For additional information concerning plume blight problems in the Grand Canyon caused by the Navajo power plant, see *The Grand Canyon Soot*, Wash. Post, Sept. 4-10, 1989, at 33, col. 1 (national weekly ed.); *Plant Owner Fighting Plan to Clean Canyon Air*, N.Y. Times, Oct. 15, 1989, at 24, col. 2; Environmental Defense Fund, *In Grand Canyon Air Pollution Case, Interior Department is Both Victim and Villain*, EDF Letter, Jan. 1990, at 5; EPA, *EPA Expected to Opt for Less Stringent Visibility Regs for Major Power Plant*, INSIDE EPA WEEKLY REP., Feb. 1, 1991, at 1.

110. For example, in 1986, Vermont sued the EPA under sections 307 and 110 of the Act to force the Agency to approve regional haze regulations in a federally enforceable SIP. *Vermont v. Thomas*, 850 F.2d 99 (2d Cir. 1988); see also *infra* text accompanying notes 112-138. In the early 1980's, New York and Maine attempted to force the EPA to address regional haze problems through sections 307 and 126 (the interstate pollution abatement provision) of the Act. *New York v. EPA*, 852 F.2d 574 (D.C. Cir. 1988), *cert. denied sub nom. Maine v. EPA*, 489 U.S. 1065 (1989); see also *infra* text accompanying notes 146-180. In 1987, Maine attempted to use sections 304 and 169A of the Act to force the EPA to promulgate additional visibility regulations. *Maine v. Thomas*, 690 F. Supp. 1106 (D. Me. 1988), *aff'd*, 874 F.2d 883 (1st Cir. 1989); see also *infra* text accompanying notes 185-209. In 1989, five northeastern states tried to compel the EPA to improve visibility impairment by using sections 307 and 109 of the Act. *NRDC v. Administrator*, 902 F.2d 962 (D.C. Cir. 1990), *vacated*, 921 F.2d 326 (D.C. Cir. 1991); see also *infra* text accompanying notes 223-260.

111. For the states' and the environmentalists' perspectives of these lawsuits and the applicable visibility regulations, see Malley, *Acid Rain: A Decade of Footdragging May Be Coming to an End*, 91 W. Va. L. Rev. 817 (1989). Conversely, for industries' perspectives of these lawsuits and the applicable visibility regulations, see Teague, Lerner, Schulze & Fichthorn, *The Debate Over the Adequacy of the United States Approach to Acid Deposition: The Electric Utility Industry Perspective*, 91 W. Va. L. Rev. 845, 870-83 (1989).

states escape Scylla and Charybdis (the continued decline in visibility, with no legal solution to the problem), this section discusses possible legal solutions to the states' visibility problems as well as the effects the 1990 Clean Air Act Amendments may have on future lawsuits brought to improve visibility in class I areas.

*B. Section 110, State Implementation Plans: Vermont v. Thomas*¹¹²

In April 1986, Vermont submitted a proposed SIP to the EPA pursuant to section 110(a)(1) of the Clean Air Act.¹¹³ A portion of Vermont's proposed plan addressed visibility impairment at the Lye Brook National Wilderness Area (Lye Brook), Vermont's only class I area.¹¹⁴ In the SIP, Vermont concluded that its state laws were adequate to prevent plume blight, however, additional regulations were needed to combat regional haze.¹¹⁵ As a result, Vermont's SIP proposed a "federally enforceable 'long-term strategy' to combat the effects of regional haze at Lye Brook."¹¹⁶ Vermont claimed that a long-term strategy was needed to assure reasonable progress toward the national visibility goal established in section 169A of the Act.¹¹⁷

1. Vermont's Long-term Visibility Strategy

Vermont's long-term strategy contained two elements. In the first element, Vermont requested the EPA to disapprove and revise the SIPs¹¹⁸ of eight upwind states contributing to

112. 850 F.2d 99 (2d Cir. 1988).

113. *Id.* at 101.

114. *Id.* Summertime haze has reduced visibility at Lye Brook by as much as 40% since the mid-1950's. *Id.*

115. *See id.*

116. *Id.*

117. *Id.*

118. Under section 110(a)(2)(E) of the Act, the EPA may disapprove all or part of a SIP if it does not contain adequate provisions prohibiting any stationary source within a state from emitting air pollutants in amounts which will interfere with the visibility protection provisions required in the SIP of another state. CAA § 110(a)(2)(E), 42 U.S.C. § 7410(a)(2)(E) (1988). *See also id.* § 110(c)(1)(B), 42 U.S.C. §

visibility impairment at Lye Brook.¹¹⁹ Such revisions would burden midwestern states by forcing them to reduce emissions that allegedly impaired visibility in Lye Brook. In addition, Vermont requested that four of the eight states¹²⁰ which did not contain class I areas be added to the list of thirty-six states required to submit visibility plans under the EPA's 1980 regulations.¹²¹ In the second element of its strategy, Vermont proposed a forty-eight state emissions reduction plan and a summertime ambient sulfate standard to meet the NAAQS by 1995.¹²²

To support the visibility plan, Vermont claimed that as technologies improved, the 1980 regulations allowed development of long-term strategies to reduce regional haze.¹²³ Accordingly, since the long-term strategy contained in Vermont's SIP fit within the long-term strategy described in the 1980 regulations, it must be approved by the EPA to be consistent with the purposes of the Clean Air Act.¹²⁴ However, the EPA disagreed with most of Vermont's visibility plan and the arguments supporting it.¹²⁵

2. *The EPA's Ruling On Vermont's Visibility Plan*

In July 1987, the EPA issued a final ruling concerning Vermont's proposed visibility plan.¹²⁶ The EPA approved the portions of Vermont's SIP that complied with the 1980 plume blight regulations.¹²⁷ However, the Agency took "no action" on the SIP provisions which attempted to control regional

7410(c)(1)(B); *Vermont*, 850 F.2d at 101.

119. *Vermont*, 850 F.2d at 101. Both the EPA and Vermont concluded that visibility impairment at Lye Brook was caused by regional haze formed from SO₂ emitted from sources in upwind states such as Ohio, Pennsylvania, Indiana, Michigan, Tennessee, Illinois, West Virginia, and Kentucky. *Id.* at 101, 102.

120. The four states included Ohio, Illinois, Indiana, and Pennsylvania. *Id.* at 101.

121. *Id.*

122. *Id.*

123. *Id.* at 103.

124. *Id.*

125. *Id.* at 102.

126. *Id.* See also 40 C.F.R. § 52.2370(c)(19) (1990).

127. *Vermont*, 850 F.2d at 102.

haze.¹²⁸ By taking "no action," the EPA prevented this portion of Vermont's SIP from being federally enforceable. In justifying its decision, the EPA claimed that only those portions of a SIP based on regulations promulgated by the EPA would be enforced.¹²⁹ Accordingly, since the EPA's regulations only addressed plume blight and not regional haze,¹³⁰ Vermont's regional haze regulations could not be enforced in its SIP until the EPA had promulgated such regulations.¹³¹

3. *Judicial Review of the EPA's Ruling*

Consequently, Vermont filed a petition to review the EPA's final ruling.¹³² Vermont filed its petition in the United States Court of Appeals for the Second Circuit pursuant to section 307(b)(1), the judicial review provision of the Act.¹³³

128. *Id.*

129. *Id.*

130. *See supra* text accompanying notes 90-92.

131. *Vermont*, 850 F.2d at 102.

132. *Id.* The Conservation Law Foundation of New England and the Vermont Natural Resources Council also joined Vermont as petitioners. *Id.* at 100. The Alabama Power Company intervened as a respondent. *Id.* at 102. The Alabama Power Company is a consortium of electric power interests which include 64 electric utility companies and three utility trade associations. *Maine v. Thomas*, 690 F. Supp. 1106, 1107 n.2 (D. Me. 1988), *aff'd*, 874 F.2d 883 (1st Cir. 1989). The utility companies opposed Vermont's attempt to force the promulgation of regional haze regulations because they would ultimately bear the financial burden of implementing any new regulations. If new regulations were issued, the utilities would be forced to reduce the emissions of air pollutants causing regional haze by retrofitting their power plants with expensive emissions control technology. For example, the Navajo Generating Station in Arizona may have to spend between \$300 million and \$1 billion to clean its emissions causing haze over the Grand Canyon. *Plant Owner Fighting Plan to Clean Canyon Air*, N.Y. Times, Oct. 15, 1989, at 24, col. 2. The possibility of enormous retrofitting expenses provide the utilities with an incentive to oppose any attempts to promulgate new visibility regulations. For this reason, the Alabama Power Company has intervened as a defendant in other cases brought to compel promulgation of stricter visibility regulations. *See infra* note 194.

133. *Vermont*, 850 F.2d at 102. The judicial review provision of the Clean Air Act provides that a petition for review of the EPA's approval, denial, or promulgation of any SIP under section 110 of the Act (including a partial denial) may be filed in the United States Court of Appeals for the appropriate circuit. CAA § 307(b)(1), 42 U.S.C. § 7607(b)(1) (1988). The petition must be filed within 60 days from the date that notice of the regulatory enactment 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 . . . shall be filed within sixty days after such grounds arise." *Id.* In

On June 23, 1988, the Second Circuit denied Vermont's petition for review.¹³⁴ The court stated that the 1980 regulations contemplated long-term strategies to combat regional haze, but did not authorize states containing class I areas to implement regional haze regulations through federally enforceable SIPs.¹³⁵ Furthermore, the court agreed with the EPA's argument that Vermont's long-term visibility strategy fell outside the scope of the 1980 regulations because neither these regulations nor section 169A of the Act authorized states to incorporate regional haze measures in their SIPs.¹³⁶ The court held that since regional haze measures were not required in a state's SIP, the EPA's "no action" response was appropriate.¹³⁷ Accordingly, Vermont was barred from imposing its controls on upwind states to address regional haze within its borders.¹³⁸ Thus, Vermont failed in its attempt to use section 110 of the Act to compel the EPA to address regional haze.

4. *A Possible Solution to Vermont's Visibility Problem*

The Second Circuit, however, was not unsympathetic to Vermont's visibility problems. In recognizing that Vermont was caught between Scylla and Charybdis (the impaired visibility at Lye Brook and no legal solution to the problem), the court suggested that Vermont pursue an alternative remedy: "filing with [the] EPA . . . a petition for rulemaking under the Administrative Procedure Act, 5 U.S.C. § 553(e), with eventual review in the D.C. Circuit."¹³⁹ However, this remedy was

Vermont v. Thomas, the EPA's partial denial of the regional haze regulations in Vermont's SIP triggered judicial review under section 307(b)(1) of the Act. The 1990 Amendments to the Clean Air Act did not alter the rules enumerated above. See Clean Air Act Amendments of 1990, Pub. L. No. 101-549, §§ 702, 703, 706, 707(h), 104 Stat. 2399, 2681, 2682, 2683 (1990) (to be codified at 42 U.S.C. § 7607).

134. *Vermont*, 850 F.2d at 104.

135. *See id.* at 103.

136. *Id.*

137. *Id.* at 104.

138. *Id.* (citing *Air Pollution Control Dist. v. EPA*, 739 F.2d 1071, 1087-88 (6th Cir. 1984) (holding that air quality standards of a downwind state which are more stringent than the NAAQS do not require upwind states to alter their valid SIPs)).

139. *Id.* at 104. Section 553(e) states: "Each agency shall give an interested per-

ineffective immediately following this decision because, in denying the regional haze provisions in Vermont's SIP, the EPA had reaffirmed its deferral on promulgating regional haze regulations. There was no indication that a new petition would change this position. Yet, as new technology and modelling techniques are developed for controlling the sources of regional haze, states should pursue this remedy by petitioning the EPA to promulgate regional haze regulations. Such technology and modelling techniques are discussed later in this Comment.¹⁴⁰ Furthermore, in the petition for rulemaking, the states should include as much detailed evidence as possible describing the technologies and modelling techniques as well as evidence proving how these items could be used to control regional haze. The more information that is presented to the EPA proving that regional haze can be controlled, the more likely it will be that the EPA will use that information to promulgate such regulations.

5. *Effects of the 1990 Amendments on Protecting Visibility Under Section 110 of the Act*

The 1990 Amendments to section 110 do not provide any new solutions for protecting visibility in class I areas. They also do not change the requirement that SIPs contain adequate provisions prohibiting any source within a state from emitting air pollutants which interfere with the protection of visibility.¹⁴¹ However, the amendments strengthen the EPA's discretionary enforcement authority over SIP violations, including the authority to bring civil actions for penalties, injunctive relief, and new authority to issue administrative penalty orders.¹⁴² Such authority can also be used by the EPA when a state fails to enforce its SIP.¹⁴³ Accordingly, if the

son the right to petition for the issuance, amendment, or repeal of a rule." 5 U.S.C. § 553(e) (1988).

140. See *infra* notes 215-18 and accompanying text.

141. See Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 101, 104 Stat. 2399, 2404 (1990) (to be codified at 42 U.S.C. § 7410).

142. H.R. CONF. REP. No. 101-952, 101st Cong., 2d Sess. 347 (1990).

143. *Id.*

EPA, in its discretion, fails to enforce SIP violations contributing to visibility degradation, an aggrieved state may bring a citizen suit against the violating state or source.¹⁴⁴ However, a state is precluded from bringing a citizen suit against the EPA because such suits can be maintained only when the Agency has failed to perform a mandatory duty required under the Act.¹⁴⁵ Consequently, since under the amendments, EPA enforcement of SIP violations contributing to visibility degradation appears to be discretionary, a citizen suit cannot be maintained against the EPA.

C. *Section 126, Interstate Pollution Abatement: New York v. EPA*¹⁴⁶

In the early 1980's, New York and Maine sued the EPA under sections 307 and 126(b) of the Act. This suit was brought to force the Agency to control air pollution emitted from sources in midwestern states which caused regional haze and interfered with visibility in northeastern states.¹⁴⁷ However, this attempt failed.

1. *The Provisions of Section 126*

Section 126 was enacted to address problems of interstate air pollution.¹⁴⁸ This section allows the EPA to intervene when interstate air pollution prevents a state from attaining the NAAQS for a particular air pollutant or interferes with PSD or visibility standards required in a SIP.¹⁴⁹ Furthermore, section 126(b) allows any state to petition the EPA for a finding that any *major source* in one state emits or would emit air

144. CAA § 304(a)(1), 42 U.S.C. § 7604(a)(1) (1988). Suits may be maintained against a state only to the extent permitted by the eleventh amendment to the U.S. Constitution and the supporting case law. *See id.*

145. *Id.* § 304(a)(2), 42 U.S.C. § 7604(a)(2).

146. 852 F.2d 574 (D.C. Cir. 1988), *cert. denied sub nom.* Maine v. EPA, 489 U.S. 1065 (1989).

147. *Id.* at 577.

148. *See* CAA § 126, 42 U.S.C. § 7426 (1988). *See also* Interstate Pollution Abatement, Final Determination, 49 Fed. Reg. 48,152 (1984) [hereinafter *Interstate Pollution*].

149. *Interstate Pollution*, *supra* note 148, at 48,152.

pollutants which cause another state to violate the required visibility provisions in its SIP, enacted pursuant to section 110(a)(2)(E)(i)(II) of the Act.¹⁵⁰ If the EPA finds that a state has violated section 110(a)(2)(E)(i)(II), new or modified pollution sources cannot be built or operated within that state in violation of the Act's interstate requirements.¹⁵¹ Existing sources within that state must cease operations within three months or comply with a schedule designed to eliminate interstate air pollution.¹⁵²

2. *The 126(b) Petitions Brought by Maine and New York*

In 1980 and 1981, New York and Maine respectively petitioned the EPA pursuant to section 126(b) of the Act.¹⁵³ Both states sought a finding that SO₂ and particulates emitted from sources in seven midwestern states¹⁵⁴ were interfering with the ability of New York and Maine to protect visibility under their SIPs as required by section 110(a)(2)(E)(i)(II) of the Act.¹⁵⁵ In its petition, Maine alleged that the regional haze at its Acadia National Park was caused by air pollution emitted from sources in the seven midwestern states.¹⁵⁶ Also in its petition, Maine presented data which indicated that impermissible levels of interstate air pollutants originating in the mid-

150. CAA § 126(b), 42 U.S.C. § 7426(b) (1988). After a section 126(b) petition has been received, the EPA has 60 days in which to hold a public hearing and approve or deny the petition. *Id.*

151. *New York*, 852 F.2d at 576. See also CAA § 126(c)(1), 42 U.S.C. § 7426(c)(1) (1988).

152. *New York*, 852 F.2d at 576.

153. *Id.* at 577. The EPA consolidated the petitions to allow concurrent review. See Teague, Lerner, Schulze & Fichthorn, *The Debate Over the Adequacy of the United States Approach to Acid Deposition: The Electric Utility Industry Perspective*, 91 W. VA. L. REV. 845, 879 (1989).

154. The seven midwestern states included Illinois, Indiana, Michigan, Ohio, Tennessee, West Virginia, and Kentucky. *New York*, 852 F.2d at 577.

155. See *Interstate Pollution*, *supra* note 148, at 48,152. In their petitions, both New York and Maine also alleged that interstate air pollution prevented maintenance of the PSD program within both states. *Id.* New York further alleged that the pollution prevented New York from attaining the NAAQS for particulates. *Id.*

156. *New York*, 852 F.2d at 577.

west were causing visibility impairment within its borders.¹⁵⁷ However, Maine could not trace the cause of the haze to a specific source or a group of sources.¹⁵⁸ By petitioning the EPA for a finding under section 126, both New York and Maine attempted to compel the EPA to control air pollution from the midwest that impaired visibility in their states.

3. *The EPA's Denial of the 126(b) Petitions*

In December 1984, the EPA denied both petitions.¹⁵⁹ The petitions were denied, *inter alia*, because New York and Maine had failed to produce any evidence which demonstrated that emissions from major sources in midwestern states prevented the petitioning states from attaining the visibility regulations required in their SIPs.¹⁶⁰ Specifically, in denying Maine's petition, the EPA claimed that Maine "had not adopted the required visibility measures contained in the [1980] . . . regulations; moreover, such visibility measures . . . [did] not address regional haze."¹⁶¹ As a result, the EPA argued that Maine could not claim that the emissions from upwind states were interfering with visibility measures contained in its SIP, when its SIP had no visibility measures which could be violated.¹⁶² Consequently, the EPA concluded that since Maine's petition concerned only regional haze, it had failed to prove under section 126(b) that provisions in its SIP were being violated by interstate air pollution.

In denying New York's petition, the EPA argued that the protection of visibility under section 169A and the 1980 visi-

157. *Id.* at 579.

158. *Id.* at 577.

159. *Id.* See also *Interstate Pollution*, *supra* note 148, at 48,152. The EPA had delayed its decision for more than three years after the petitions were originally filed. See *New York*, 852 F.2d at 577. Dissatisfied with this delay, the petitioning states sued the EPA in the United States district court for an order requiring the EPA to decide their petitions. See *id.* As a result of this suit, the EPA was ordered to render a decision within 60 days. *New York v. Ruckelshaus*, 21 Env't Rep. Cas. (BNA) 1721, 1724 (D.D.C. 1984).

160. *Interstate Pollution*, *supra* note 148 at 48,157.

161. *New York*, 852 F.2d at 579 (quoting *Interstate Pollution Abatement*, Final Determination, 49 Fed. Reg. 48,152, 48,153 (1984)).

162. *Id.*

bility regulations applied only to class I areas.¹⁶³ Since class I areas did not exist in New York, its petition could not allege visibility impairment from interstate air pollution.¹⁶⁴

4. *Judicial Review of the Petitions' Denial*

Maine and New York brought a petition in the United States Court of Appeals for the District of Columbia seeking judicial review of the EPA's denial of their section 126(b) petitions.¹⁶⁵ In the court of appeals, the petitioners contended that by filing their 126(b) petitions, the EPA was immediately obligated to undertake an investigation to determine whether the SIPs in upwind states were in compliance with section 110(a)(2)(E) of the Act.¹⁶⁶ Thus, the petitioners claimed that they were not required to produce evidence demonstrating that pollutants emitted in midwestern states were causing the petitioners to violate the required visibility provisions in their SIPs. In their opinion, this was the EPA's responsibility.

In response to this argument, the EPA contended that filing a 126(b) petition does not trigger the type of review contemplated by the petitioners.¹⁶⁷ To support this claim, the EPA argued that the language of section 126(b) focuses on "major sources," not the validity of a SIP as purported by the petitioners.¹⁶⁸ In addition, the EPA contended that if Congress had intended to require the Agency to investigate the allegations in 126(b) petitions, it would have expressly stated so in the Act.¹⁶⁹ The EPA opined that under the Act, it only has sixty days (after receiving the petition) in which to act upon the petition.¹⁷⁰ Thus, "[u]nder Petitioners' theory, once a section 126(b) petition has been filed, the Administrator

163. Interstate Pollution, *supra* note 148, at 48,153.

164. *Id.*

165. *New York*, 852 F.2d at 577. Both Maine and New York filed their petitions pursuant to section 307, the judicial review provision of the Act. *Id.* See also *supra* note 133.

166. *New York*, 852 F.2d at 578.

167. *Id.*

168. *Id.*

169. See *id.*

170. CAA § 126(b), 42 U.S.C. § 7426(b) (1988).

would be required to engage in an entire array of investigative duties" including a complete investigation of the adequacy of the SIPs of those states named in the petition.¹⁷¹ Also during this period, the agency would be required to develop air pollution models, conduct research, and gather data necessary to approve or to disapprove the petition.¹⁷² Consequently, the EPA believed it was reasonable to conclude that Congress did not intend for the EPA to perform these duties within such a short time period without expressly stating so in the Act.¹⁷³ Based on the forgoing arguments, the EPA claimed that it had no affirmative duty to become involved in gathering evidence in response to 126(b) petitions,¹⁷⁴ and accordingly, the states must bear the burden of proof when filing such petitions. The court of appeals agreed with the EPA.¹⁷⁵

In July 1988, the court of appeals held that the EPA had properly denied Maine's 126(b) petition.¹⁷⁶ The court of appeals concluded that Maine had not presented a proper claim under section 126(b).¹⁷⁷ After analyzing the statutory language of this section, the court determined that a 126(b) petition could only be brought for a finding that a *major source* would emit air pollutants in violation of section 110(a)(2)(E)(i)(II).¹⁷⁸ Maine, however, had not alleged that major sources in other states had interfered with the visibility measures contained in its SIP.¹⁷⁹ Furthermore, the court supported the EPA's denial of Maine's petition because current federal regulations only address plume blight and do not encompass federally enforceable measures to alleviate regional haze.¹⁸⁰ Consequently, this decision placed Maine and New York between Scylla and Charybdis (the degradation of eastern visibility by sources in midwestern states and no legal remedy for the problem). Un-

171. *New York*, 852 F.2d at 578.

172. *Id.*

173. *Id.*

174. *See id.*

175. *Id.* at 579.

176. *Id.* at 581.

177. *Id.* at 579.

178. *Id.*

179. *Id.*

180. *Id.* at 579-80.

fortunately, the 1990 Amendments to section 126(b) provide no solution to this problem.

5. *Effects of the 1990 Amendments on Protecting Visibility Under Section 126 of the Act*

Section 126 was amended in 1990 to allow any state to petition the EPA for a finding that any major source *or group of stationary sources* in one state emits or would emit air pollutants which cause another state to violate the prohibitions of section 110(a)(2)(D)(ii) of the Act.¹⁸¹ The amendments added the phrase "or group of stationary sources" and substituted section 110(a)(2)(E)(i) with section 110(a)(2)(D)(ii).¹⁸² By making this substitution, Congress apparently eliminated section 126(b) as a method of protecting visibility in class I areas. Under the old version of this section, which incorporated section 110(a)(2)(E)(i), a state could petition the EPA for a finding that any major source emits air pollution in violation of visibility provisions in the SIPs of downwind states.¹⁸³ However, under the amended version, a state can petition the EPA for a finding that interstate air pollution would violate SIP provisions relating only to section 126 or section 115.¹⁸⁴ Neither of these sections contain any references to the protection of visibility. Consequently, even if Maine had adhered to the requirements of section 126(b) by adopting the EPA's 1980 visibility regulations and proving that compliance with them was hindered by emissions from major sources or groups of sources in upwind states, under the new Act, section 126(b) would be unavailable to it as a remedy for protecting

181. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 109, 104 Stat. 2399, 2469 (1990) (to be codified at 42 U.S.C. § 7426).

182. *Id.*

183. CAA § 126(b), 42 U.S.C. § 7426(b) (1988).

184. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 101, 104 Stat. 2399, 2404 (1990) (to be codified at 42 U.S.C. § 7410). Section 115 allows the EPA to revise SIPs to prevent or eliminate the emission of air pollutants in the United States which may reasonably be anticipated to endanger public health or welfare in a foreign country. CAA § 115, 42 U.S.C. § 7415 (1988). Section 115 contains no reference to visibility protection and was not changed by the 1990 Amendments. *Id.* See Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

visibility.

D. *Section 304(a)(2), Citizen Suits and Section 169A, Visibility Protection for Federal Class I Areas: Maine v. Thomas*¹⁸⁵

In the late 1980's, northeastern states were dissatisfied with the continued decline in visibility and the EPA's persistent delay in promulgating regional haze regulations to rectify this decline. Consequently, in July 1987, seven northeastern states and six environmental groups sued the EPA¹⁸⁶ in the United States District Court of Maine, pursuant to section 304(a)(2) of the Act.¹⁸⁷ This suit was brought to compel the EPA to promulgate additional visibility regulations allegedly required by section 169A.¹⁸⁸

1. *Arguments Presented by the Plaintiffs*

To invoke jurisdiction under section 304(a)(2), the plaintiffs argued that the EPA had a mandatory duty under section

185. 690 F. Supp. 1106 (D. Me. 1988), *aff'd*, 874 F.2d 883 (1st Cir. 1989).

186. *Id.* at 1107. The seven northeastern states which joined as plaintiffs in this litigation were Connecticut, Maine, Massachusetts, New Jersey, New York, Rhode Island, and Vermont. *Id.* at 1107 n.1. The seven states were joined in their suit by the following six environmental groups: the Natural Resources Council, the Environmental Defense Fund, the Conservation Law Foundation of New England, the National Audubon Society, the Sierra Club Legal Defense Fund, and the National Parks and Conservation Association. *Id.*

187. *Id.* at 1109. In general, section 304(a)(2), the citizen suit provision of the Act, provides that any person may commence a civil action in federal district court to compel the EPA to perform any mandatory act or duty required under the Act. CAA § 304(a)(2), 42 U.S.C. § 7604(a)(2) (1988). Citizen suits may be brought in the district courts without regard to the amount in controversy or citizenship of the parties. *Id.* § 304(a), 42 U.S.C. § 7604(a). Furthermore, under the citizen suit provision, a suit may not be commenced prior to 60 days after the plaintiff has given notice to the EPA of the intent to sue the Agency for its failure to perform a nondiscretionary duty. *Id.* § 304(b), 42 U.S.C. § 7604(b). The citizen suit provision was amended by the 1990 Amendments to the Clean Air Act. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 707, 104 Stat. 2399, 2682-84 (1990) (to be codified at 42 U.S.C. §§ 7604, 7607). *See also infra* text accompanying notes 219-20. However, the amendments did not alter the basic concepts enumerated above. *See* Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 707, 104 Stat. 2399, 2682-84 (1990) (to be codified at 42 U.S.C. §§ 7604, 7607).

188. *Maine*, 690 F. Supp. at 1108.

169A(a)(4) of the Act to promulgate comprehensive visibility regulations (including regulations for regional haze) by August 7, 1979.¹⁸⁹ The plaintiffs argued that the plume blight regulations were an insufficient response to that mandatory duty.¹⁹⁰ In addition, they contended that the EPA's persistent delay in promulgating future regional haze regulations was also a failure to perform this nondiscretionary directive.¹⁹¹ The plaintiffs further alleged that the EPA had a mandatory duty to establish emission controls for air pollution sources causing regional haze in class I areas.¹⁹² The plaintiffs moved for an order compelling the EPA to promulgate final visibility regulations concerning regional haze within two years from the date of the motion.¹⁹³

2. Arguments Presented by the EPA

Conversely, the EPA and the defendant intervenors¹⁹⁴ cross-moved to dismiss the complaint by arguing that section 169A did not require the EPA to regulate specific kinds of air pollution emissions, but only required the EPA to promulgate regulations which assured "reasonable progress" toward the national visibility protection goal.¹⁹⁵ The EPA claimed that the Phase I regulations promulgated in 1980 satisfied this requirement under section 169A.¹⁹⁶ Furthermore, the EPA ar-

189. *Id.*

190. *Id.*

191. *Id.*

192. *Id.* See also *Court Denies Northeast States' Request for EPA to Take Action on Regional Haze*, 19 Env't Rep. (BNA) 692, 693 (Aug. 19, 1988).

193. Brief of Plaintiffs-Appellants at 2, *Maine v. Thomas*, 874 F.2d 883 (1st Cir. 1989) (No. 88-1983). See also *Maine*, 690 F. Supp. at 1107.

194. The Alabama Power Company intervened with the EPA as a defendant. Brief of Plaintiffs-Appellants at 2, *Maine v. Thomas*, 874 F.2d 883 (1st Cir. 1989) (No. 88-1983). See also *supra* note 132.

195. *Maine*, 690 F. Supp. at 1109.

196. *Id.* In their motion to dismiss, the defendants raised two additional arguments which the district court did not consider in its decision. The defendants argued that the plaintiffs' claim was barred by res judicata and collateral estoppel because the plaintiffs should have intervened in *Friends of the Earth v. Costle*, No. 79-2311 (D.D.C. filed Aug. 30, 1979). This case decided the EPA's nondiscretionary duty under section 169A to promulgate additional visibility regulations. See *supra* note 83.

In addition, the defendants argued that jurisdiction based on section 304(a)(2)

gued that the district court lacked jurisdiction under section 304(a)(2) because the plaintiffs' claim actually attacked the finality of the EPA's decision to delay promulgation of regional haze regulations, a claim which could only be reviewed by the D.C. Circuit pursuant to section 307(b)(1) of the Act.¹⁹⁷

3. *The District Court's Decision*

The issue presented to the district court was whether the deferral by the EPA in promulgating regional haze regulations was a final agency action under section 307(b)(1) of the Act and therefore not within the jurisdiction of the United States district court.¹⁹⁸ On July 27, 1988, the district court granted the EPA's cross-motion to dismiss, holding that the court lacked subject matter jurisdiction.¹⁹⁹ However, in deciding this issue, the district court circumvented the real issue of whether the EPA's Phase I regulations, which allowed a continued nine-year delay in promulgating regional haze regulations, actually assured "reasonable progress" toward the national goal of preventing future visibility impairment in class I areas.

The district court concluded that despite an expressed intent by the EPA to issue future visibility regulations, the EPA's decision in 1980 to defer promulgation of regional haze regulations was a final agency action which was not reviewable

was improper because section 169A imposed no mandatory duty on the EPA to promulgate additional visibility regulations beyond the plume blight regulations promulgated in 1980. Brief of Plaintiffs-Appellants at 19, *Maine v. Thomas*, 874 F.2d 883 (1st Cir. 1989) (No. 88-1983).

197. Brief of Plaintiffs-Appellants at 19, *Maine v. Thomas*, 874 F.2d 883 (1st Cir. 1989) (No. 88-1983). See also CAA § 307(b)(1), 42 U.S.C. § 7607(b)(1) (1988). In response to this argument, the plaintiffs contended that jurisdiction could not be asserted under section 307(b)(1) because they were not challenging the finality of the Phase I regulations nor the adoption of the EPA's 1980 phased approach. *Maine*, 690 F. Supp. at 1111. Instead, they wanted to compel the EPA to issue additional regulations to fulfill the mandatory duty of assuring reasonable progress toward the national visibility goal established in section 169A. *Id.* Plaintiffs also contended that the 1980 regulations could not be a final action within the meaning of section 307(b)(1), because the regulations specifically provide that the EPA will issue additional regulations in the future. *Id.*

198. *Maine*, 690 F. Supp. at 1109.

199. *Id.* at 1112.

in the district court under the language of section 304(a)(2).²⁰⁰ The court stated that "once the EPA has publicly announced a formal decision not to act or to defer action, and the basis for that decision is set forth in an administrative record," the EPA has taken final action which can be reviewed only in the United States Court of Appeals for the District of Columbia pursuant to section 307(b)(1).²⁰¹ Although the plaintiffs insisted that their claim did not challenge the finality of the EPA's 1980 regulations,²⁰² the court concluded that it was not bound by such a characterization.²⁰³

Consequently, because the EPA's decision to defer was treated as a final action, the district court had no subject matter jurisdiction to hear the case under the citizen suit provision of the Act. Accordingly, the plaintiffs should have sought review in the D.C. Circuit pursuant to section 307(b)(1)²⁰⁴ within sixty days after the 1980 regulations were issued by the EPA. Unsatisfied with the district court's decision, the plaintiffs appealed to the United States Court of Appeals for the First Circuit.

4. *The Court of Appeals Decision*

On May 18, 1989, the court of appeals affirmed the district court's dismissal for lack of subject matter jurisdiction.²⁰⁵ The court of appeals held that the EPA's promise to promulgate future regulations concerning regional haze was "final action taken" within the language of section 307(b)(1) and therefore only reviewable in the Court of Appeals for the Dis-

200. *Id.*

201. *Id.* at 1111 (citing *Bethlehem Steel Corp. v. EPA*, 782 F.2d 645 (7th Cir. 1986) (recognizing that inaction or deferral, if based on an administrative record, can trigger jurisdiction under section 307 of the Act)). In *Maine v. Thomas*, the district court stated that "the EPA's failure to promulgate regional haze regulations was based on an extensive and published administrative record which reflects citizen and agency concerns, the intent to defer, and a rationale based on inadequate technological and scientific information." *Maine*, 690 F. Supp. at 1111-12.

202. *See supra* note 197.

203. *Maine*, 690 F. Supp. at 1111.

204. *Id.* at 1112.

205. *Maine v. EPA*, 874 F.2d 883, 891 (1st Cir. 1989).

trict of Columbia.²⁰⁶ Under these circumstances, the appellants' citizen suit, brought pursuant to section 304(a)(2), could not be used to assert jurisdiction in the district court.²⁰⁷

In addition, the EPA's "final action" was reviewable only in the D.C. Circuit within sixty days from the enactment of the 1980 visibility regulations.²⁰⁸ In its decision, the court implied that since the 1980 regulations had not been challenged within the sixty-day period, any subsequent challenges brought in the court of appeals would also be untimely and therefore denied.

Accordingly, the court of appeals' decision denied the plaintiffs jurisdiction on which to challenge the EPA's 1980 visibility regulations under either section 304(a)(2) or 307(b)(1). By denying the plaintiffs jurisdiction under both provisions, the court had placed the northeastern states between Scylla and Charybdis (the continued impairment of visibility and no jurisdiction on which to challenge the EPA's delay in issuing stricter visibility regulations, specifically, regulations concerning regional haze). However, the court of appeals recognized the jurisdictional dilemma it had created and suggested a possible solution.

5. *A Possible Solution to the States' Visibility Problem*

The court stated that the EPA remained under a "double-barreled duty, statutory and self-imposed under the terms of" its 1980 regulations to control regional haze.²⁰⁹ Therefore, after reviewing the language of section 307(b)(1), the court concluded that the northeastern states could peti-

206. *Id.*

207. *Id.*

208. *Id.* at 886.

209. *Id.* at 889. In announcing the 1980 regulations, the EPA imposed on itself a mandatory duty to promulgate future phases regulating regional haze. *Id.* at 890. In the 1980 regulations, the EPA stated, "We will propose and promulgate future phases when improvement in monitoring techniques provides more data on source-specific levels of visibility impairment, regional scale models become refined, and our scientific knowledge about the relationships between emitted air pollutants and visibility impairment improves." *Id.* at 889 (quoting Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,086 (1980)) (emphasis added by the court).

tion the EPA for new visibility rulemaking based "'on grounds arising after . . . ' the time for challenging the 1980 regulations had expired.'"²¹⁰ Such a petition must be filed in the D.C. Circuit within sixty days after new grounds arise.²¹¹

Throughout the 1980's, the EPA argued that it would only promulgate regional haze regulations when scientific knowledge concerning regional haze improved and regional scale models became refined.²¹² However, if states could demonstrate that these conditions were satisfied, they would have new grounds upon which to petition the EPA to revise the visibility standards to include regional haze regulations.²¹³ If the EPA denied the petition, the petitioners could seek judicial review in the D.C. Circuit pursuant to section 307(b)(1) of the Act.²¹⁴

Presently, states could argue that the conditions enumerated in the 1980 regulations have been satisfied because regional scale models and technology have been developed which will allow the EPA to determine the sources of regional haze.²¹⁵ If the sources can be identified, the EPA can issue guidelines describing the type of control technology (BACT, BART, or RACT) which must be applied to both existing and future sources to control the haze. In general, to determine which sources contribute to the formation of regional haze, tracers²¹⁶ can be injected into the plumes of sources located in

210. *Id.* at 889. See *supra* note 133.

211. CAA § 307(b)(1), 42 U.S.C. § 7607(b)(1) (1988).

212. See *supra* text accompanying note 93.

213. *Maine v. Thomas*, 874 F.2d 883, 890 (1st Cir. 1989). Congress intended citizens to have the ability to confront the EPA with new information sufficient to merit revision of existing regulations. *Id.* (citing *Group Against Smog & Pollution, Inc. v. EPA*, 665 F.2d 1284, 1289-90 (D.C. Cir. 1981)).

214. *Id.*

215. Wyden, *Babbitt, Environmental Groups Seek Tougher Air Requirements for National Parks*, 20 *Env't Rep.* (BNA) 1443, 1443-44 (Dec. 29, 1989). Regional scale models developed under the acid rain program could be used to establish a regulatory program for regional haze. However, in 1986, when the National Park Service requested that the EPA establish such a program based on these scale models, the EPA refused to honor the request. EDF Statement, *supra* note 31, at 2.

216. See *supra* note 215, at 1444. Tracers are gases and other chemical compounds such as deuterated methane, not normally found in the ambient air which are injected into the stack emissions of an air pollution source. See Norris, *supra* note

confined geographical regions in upwind states. A different tracer must be used in each geographical area. Subsequently, as different tracers are detected in regional haze formations, the geographical areas from which those tracers originated will be identified. As the regions contributing to regional haze formation are identified, the EPA should apply a technology standard to the sources within those regions to control this haze.²¹⁷

The states should use this technology to petition the EPA for new visibility regulations concerning regional haze. States should pursue a petition under either section 307(b)(1) of the Clean Air Act or section 553(e) of the Administrative Procedure Act²¹⁸ as a possible solution to preventing the continued degradation of visibility in class I areas.

6. *Effects of the 1990 Amendments on Protecting Visibility Through the Citizen Suit Provision of the Act*

The jurisdictional dilemma created by the decisions in *Maine v. Thomas*, and its hinderance to the protection of visibility in class I areas, may also be solved by implementing the 1990 Amendments to section 304(a), the citizen suit provision of the Act.²¹⁹ This section was amended by adding the following final paragraph:

The district courts of the United States shall have jurisdiction to compel . . . agency action unreasonably delayed, except that an action to compel agency action referred to in section 307(b) which is unreasonably delayed may only be filed in the United States District Court within the cir-

109, at 49. See also Assessment of Visibility Impairments and Integral Vista Identification, 53 Fed. Reg. 35,956, 35,958 (1985) (proposed Sept. 1, 1985). As the tracers are detected in downwind receptors, they provide valuable information regarding the atmospheric transportation of air pollutants. For example, tracers have been used to determine that particulate pollution from the Navajo power plant in Arizona has been transported to the Grand Canyon National Park in Arizona. See *supra* note 215, at 1444.

217. See *supra* note 215, at 1444.

218. See *supra* text accompanying notes 139-40.

219. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 707, 104 Stat. 2399, 2682-83 (1990) (to be codified at 42 U.S.C. §§ 7604, 7607).

cuit in which such action would be reviewable under section 307(b). In any such action for unreasonable delay, notice to the entities referred to in subsection (b)(1)(A) shall be provided 180 days before commencing such action.²²⁰

This amendment effectively reverses the holding in *Maine v. Thomas* by granting district courts exclusive jurisdiction to compel the EPA to issue regional haze regulations. However, jurisdiction can be asserted only if the EPA's delay in issuing such regulations is unreasonable. In future citizen suits brought pursuant to this amendment, states should argue that the EPA's eleven-year delay in promulgating regional haze regulations is unreasonable in light of the fact that knowledge and technology presently exist through which sources contributing to regional haze formation can be identified and controlled.²²¹ As a result of this new amendment, the states should request the district court to compel the EPA to issue such regulations.

To defeat the district court's jurisdiction under this new amendment, the EPA will probably argue that the delay is reasonable because present scientific knowledge and modeling techniques concerning regional haze are inadequate and need further development before they can be used to promulgate such regulations. In enacting the 1990 Amendments, Congress apparently agreed with this proposition, because over the next three years, the Agency is required to conduct studies to identify the sources and source regions contributing to regional haze formation.²²² If Congress had believed that present knowledge was sufficient to identify and control the source areas contributing to regional haze, it would not have directed the EPA to conduct further studies; instead, it would have directed the EPA to apply a specific technology standard to sources within those regions affecting haze formation.

220. *Id.* § 707, 104 Stat. at 2683.

221. See *supra* text accompanying notes 215-17.

222. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816, 104 Stat. 2399, 2695 (1990) (to be codified at 42 U.S.C. § 7492). See also *infra* text accompanying notes 271-74.

Consequently, if a citizen suit was brought against the EPA (within the next three years) pursuant to this new amendment, the EPA could defeat the jurisdiction of the district court. The EPA can argue that its delay in issuing regional haze regulations is reasonable because the agency cannot promulgate such regulations when it is under a statutorily imposed duty to study the problem rather than to issue regulations. In essence, the new amendments make it reasonable for the EPA to delay issuing regional haze regulations for the next three years, or until it has completed the studies.

E. *Section 109, National Primary and Secondary Ambient Air Quality Standards: NRDC v. Administrator*²²³

1. *Background*

In 1989, five northeastern states attempted to force the EPA to address and improve visibility impairment throughout the United States, including national parks, by suing the Agency under sections 307 and 109 of the Act. In *NRDC v. Administrator*,²²⁴ Connecticut, Massachusetts, New Jersey, New York, Vermont, and the Natural Resources Defense Council (NRDC) sued the EPA in the Court of Appeals for the District of Columbia.²²⁵ They sought review of several aspects of the EPA's 1987 revisions to the particulate matter NAAQS,²²⁶ issued pursuant to section 109(d) of the Act.²²⁷ One of the petitioners' claims asserted that the EPA had failed to promulgate a secondary NAAQS for particulate matter that would protect the public welfare against visibility impairment, as required by section 109.²²⁸ The petitioners asked the D.C. Circuit to force the EPA to set such a secondary NAAQS and to establish a one-year timetable for the EPA to implement it.²²⁹

223. 902 F.2d 962 (D.C. Cir. 1990), *vacated*, 921 F.2d 326 (D.C. Cir. 1991).

224. *Id.*

225. *Id.* at 980.

226. *Id.* at 965.

227. CAA § 109(d), 42 U.S.C. § 7409(d) (1988).

228. *NRDC*, 902 F.2d at 980.

229. *See id.* at 980.

However, on April 27, 1990, the portion of the petition requesting a visibility standard was dismissed by the court for lack of jurisdiction.²³⁰ The court did not reach the merits of the petition. Subsequently, on November 27, 1990, the parties voluntarily agreed to dismiss the case primarily because Title IV of the 1990 Amendments requires significant reductions in NO_x and SO₂ emissions which cause visibility impairment throughout the United States.²³¹ Although Title IV was enacted to reduce the emissions of pollutants causing acid rain,²³² it will also indirectly improve visibility in class I areas by reducing the emissions of pollutants contributing to visibility impairment.

Based on the parties' agreement, the court of appeals vacated its entire decision concerning the revisions to the secondary particulate NAAQS.²³³ Although this decision was annulled and thus has no effect on the protection of visibility in class I areas, it still warrants a brief discussion in order to provide information which could be useful in future lawsuits brought under similar circumstances. Accordingly, this section of the Comment briefly describes section 109 of the Act and the EPA's 1987 revisions to the particulate matter NAAQS. It also briefly describes the arguments presented by the parties in this suit as well as the circuit court's decision.

2. *The Provisions of Section 109*

Section 109 of the CAA required the EPA to publish a primary and secondary NAAQS for each air pollutant identi-

230. *See id.*

231. Telephone interview with Joan Leary Matthews, Assistant Attorney General for the State of New York, Environmental Protection Bureau (Apr. 1, 1991) [hereinafter Telephone Interview]. The purpose of Title IV was to reduce the adverse effects of acid deposition through a ten-million-ton reduction in SO₂ emissions and a two-million-ton reduction in NO_x emissions from 1980 emissions levels. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 401(b), 104 Stat. 2399, 2585 (1990) (to be codified at 42 U.S.C. § 7651). Both SO₂ and NO_x impair visibility in class I areas. *See supra* text accompanying notes 21 & 29-30.

232. *See* Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 401(b), 104 Stat. 2399, 2585 (1990) (to be codified at 42 U.S.C. § 7651).

233. NRDC v. Administrator, 921 F.2d 326 (D.C. Cir. 1991), *vacating*, 902 F.2d 962 (D.C. Cir. 1990).

fied pursuant to section 108 of the Act.²³⁴ The primary NAAQS were designed to protect the public health while allowing an adequate margin of safety.²³⁵ The secondary NAAQS were designed to protect the public welfare from any known or anticipated adverse effects caused by the air pollutants identified under section 108,²³⁶ including effects from impaired visibility.²³⁷ Under section 109, the EPA is required to establish a secondary NAAQS to protect the public welfare against certain adverse effects of pollutants, including visibility impairment. In addition, section 109 imposes continuing regulatory responsibilities on the EPA to review, revise, and update secondary NAAQS every five years.²³⁸

3. *The Particulate Matter NAAQS and the 1987 Revisions*

In April 1971, the EPA promulgated the first primary and secondary NAAQS for particulate matter.²³⁹ In March 1984, the EPA proposed revisions to these NAAQS.²⁴⁰ The proposed

234. *NRDC*, 902 F.2d at 980. See also CAA § 109(a)(1)(A), 42 U.S.C. § 7409(a)(1)(A) (1988).

235. *NRDC*, 902 F.2d at 966. See also CAA § 109(b)(1), 42 U.S.C. § 7409(b)(1) (1988).

236. *NRDC*, 902 F.2d at 980. See also CAA § 109(b)(2), 42 U.S.C. § 7409(b)(2) (1988).

237. CAA § 302(h), 42 U.S.C. § 7602(h) (1988). Section 302(h) of the CAA states that the effects on welfare referred to in section 109(b)(2) include, but are not limited to, the effects on visibility, soils, water, crops, vegetation, wildlife, manmade materials, and other items. See *id.*

238. See *NRDC*, 902 F.2d at 966. See also CAA § 109(d)(1), 42 U.S.C. § 7409(d)(1) (1988). Within nine months after the promulgation of a secondary NAAQS protecting the public welfare against adverse effects from visibility impairment, each state must adopt or revise its SIP to provide for attainment and maintenance of this new standard. See *id.* § 110(a)(1), 42 U.S.C. § 7410(a)(1). This new plan must be submitted to the EPA for approval. *Id.* § 110(a)(2), 42 U.S.C. § 7410(a)(2).

239. *NRDC*, 902 F.2d at 966 (citing National Primary and Secondary Ambient Air Quality Standards, 36 Fed. Reg. 8186, 8187 (1971)). The particulate matter standards applied to a subset of particulates known as "total suspended particulates" (TSP). *Id.* at 965.

240. *Id.* at 966 (citing Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter, 49 Fed. Reg. 10,408 (proposed Mar. 20, 1984)). The proposed revisions contemplated "replac[ing] the TSP indicator with PM₁₀ for the primary standard, while retaining TSP for [the] secondary standard." *Id.* PM₁₀ is the abbreviation used to describe a group of particulates with an aerodynamic diameter

revisions contemplated, *inter alia*, a secondary NAAQS protecting the public welfare against the soiling and nuisance effects caused by particulates.²⁴¹ In the proposed revisions, the EPA explained that another principal welfare effect - visibility impairment - was strongly related to fine particulate levels on a regional scale and controls would probably involve regional SO_x emissions.²⁴² The EPA determined that the public welfare must be protected from visibility impairment by promulgating a separate secondary standard for fine particulate matter.²⁴³ However, the Agency "decided to defer a decision on a possible fine particle secondary standard until it [was] possible to link such a standard with a coherent scientifically based strategy for these related regional air quality problems."²⁴⁴ On July 1, 1987, the EPA adopted the revised primary NAAQS for particulate matter and a secondary NAAQS for soiling and nuisance caused by particulates.²⁴⁵ However, the EPA abstained from creating a secondary NAAQS to protect against visibility impairment.²⁴⁶

of 10 microns or less. *Id.* at 965.

241. *Id.* at 981 (citing Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter, 49 Fed. Reg. 10,408, 10,418-19 (proposed Mar. 20, 1984)).

242. *Id.*

243. *Id.*

244. *Id.* (quoting Proposed Revisions to the National Ambient Air Quality Standards for Particulate Matter, 49 Fed. Reg. 10,408, 10,419 (proposed Mar. 20, 1984)).

245. *Id.* at 966-67.

246. *See id.* at 981-82 (citing Revisions to the National Ambient Air Quality Standards for Particulate Matter, 52 Fed. Reg. 24,634 (codified at 40 C.F.R. § 50.6(c) (1990))). In the revised standard, the EPA replaced TSP with PM₁₀ for the primary standard. *Id.* at 966. Furthermore, the EPA explained in its revisions, that it was:

reassessing its position with regard to consideration of a secondary fine particle standard for visibility. In particular, the Agency is considering whether, given the time that would be required to develop, propose, promulgate, and implement a visibility based standard, it would now be appropriate to proceed with consideration of a visibility based standard in parallel with work on acid deposition, so that compatible strategies for dealing with the two problems can be developed at the implementation stage.

Id. at 981-82.

After adopting the revisions, the EPA issued a notice of public rulemaking soliciting public comment on the appropriateness of a secondary fine particulate standard designed to protect visibility. *Id.* at 982. *See also* Review of the National Secondary Ambient Air Quality Standards for Particulate Matter, 52 Fed. Reg. 24,670, 24,670-71

4. *The Decision of the Court of Appeals*

Following the EPA's failure to issue a secondary NAAQS protecting against visibility effects, the petitioners asserted jurisdiction under section 307(b)(1) of the Act²⁴⁷ and sued the EPA in the D.C. Circuit. The petitioners argued that the EPA's failure to create such a secondary particulate NAAQS amounted to an abandonment of its responsibility to protect the environment.²⁴⁸ Accordingly, the petitioners asked the court to force the EPA to promulgate a secondary particulate NAAQS to protect against visibility impairment.

The circuit court stated that under section 307(b)(1), it has jurisdiction to review EPA actions which fall into one of the following categories: (1) action by the EPA in promulgating any national secondary ambient air quality standard; or (2) "any other nationally applicable regulations promulgated;" or (3) final action taken by the EPA.²⁴⁹ The court concluded that categories one and two were inapplicable in this case since the word "promulgate" in the language of section 307(b)(1) refers only to the original promulgation of a NAAQS and not to a "revision."²⁵⁰ Since this case involved revisions to the particulate NAAQS, the court was precluded from exercising jurisdiction under the first two categories of section 307(b)(1).

Furthermore, the court concluded that it could not assert jurisdiction under the third category because the EPA had not taken final action to determine whether a particulate standard protecting the public welfare against visibility impairment was appropriate.²⁵¹ However, in reaching this conclusion, the judges differed slightly in their analysis. In general, Chief Judge Wald recognized that by issuing a notice of public rulemaking concerning a fine particulate standard protecting

(1987). However, since the close of the public comment period in September 1987, the EPA has delayed its decision as to whether it will issue a fine particulate standard. See *NRDC*, 902 F.2d at 986.

247. *NRDC*, 902 F.2d at 982.

248. *Id.*

249. *Id.*

250. *Id.*

251. *Id.* at 980.

against visibility impairment,²⁵² the EPA had taken some preliminary action toward creating a secondary NAAQS protecting against visibility impairment.²⁵³ The chief judge concluded that this action was insufficient to be characterized as "final action" and "without a more definite determination by the Administrator as to how or whether he will act further on the visibility issue," the court cannot conclude that the EPA has taken final action sufficient to trigger judicial review under section 307.²⁵⁴

Conversely, Judge Silberman disagreed with Chief Judge Wald's analysis of the jurisdictional issue.²⁵⁵ In general, Judge Silberman concluded that Judge Wald had adopted a "constructive" final action analysis²⁵⁶ which allowed jurisdiction to attach as the Agency's actions came closer to resembling a final decision. In Judge Silberman's opinion, this standard would create arbitrary lines as courts tried to distinguish between which preliminary actions resembled final actions and which ones did not. In Judge Silberman's view, jurisdiction under section 307 must be based on an actual final decision, not on "constructive" final action.²⁵⁷ When an agency has failed to make a decision, there is no appellate jurisdiction, no matter how close an agency is to a final decision.²⁵⁸ Judge Silberman recognized that by soliciting public comment on the appropriateness of a secondary NAAQS protecting against visibility impairment, the EPA was moving slowly toward making a final decision on whether to issue such a NAAQS.²⁵⁹ However, until the Agency reaches that stage, the court has no jurisdiction under 307.

Accordingly, even though the judges differed in their analysis, they ultimately agreed that the court had no jurisdiction under section 307 to order the EPA to take the action

252. *See supra* note 246.

253. *NRDC*, 902 F.2d at 986.

254. *Id.*

255. *Id.* at 996.

256. *Id.* at 995.

257. *See id.* at 997.

258. *Id.*

259. *See id.* at 998.

contemplated by the petitioners.²⁶⁰ Consequently, the court dismissed the portion of the petition concerning a visibility impairment standard for lack of subject matter jurisdiction. By denying the petitioners jurisdiction on which to challenge the EPA's refusal to issue a secondary NAAQS addressing visibility impairment, the court placed northeastern states between Scylla and Charybdis (the continued impairment of visibility within their borders and no legal solution to the problem).

F. Conclusion

Throughout the 1980's, northeastern states became increasingly concerned about the degradation of visibility in their class I areas and the EPA's inaction in addressing the problem. As a result, they filed a number of lawsuits against the EPA using different provisions of the Clean Air Act in attempts to force the Agency to promulgate stricter visibility regulations for these areas.²⁶¹ However, these attempts failed.

Vermont failed in its attempt to implement regional haze regulations in a federally enforceable SIP under section 110 of the Act.²⁶² In addition, an attempt by New York and Maine to use section 126 of the Act to control interstate air pollution causing impaired visibility also failed.²⁶³ Maine and six other northeastern states also did not succeed in their attempts to use section 169A to force the EPA to promulgate regional haze regulations.²⁶⁴ Finally, the NRDC and five other northeastern states fell short in their attempts to force the Agency to improve visibility under section 109 by issuing a secondary particulate NAAQS to protect against visibility impairment.²⁶⁵ These failures left states caught between Scylla and Charybdis (the continued degradation of visibility in class I areas and no legal solution to the problem). Unfortunately, the 1990

260. *Id.*

261. *See supra* text accompanying note 110.

262. *See supra* text accompanying notes 112-138.

263. *See supra* text accompanying notes 146-180.

264. *See supra* text accompanying notes 185-208.

265. *See supra* text accompanying notes 223-260.

Amendments to the visibility provisions of the Act provide no immediate relief from this predicament.

VI. The 1990 Amendments to Section 169A: Visibility Protection for Federal Class I Areas

In 1990, Congress amended section 169A of the Clean Air Act by adding section 169B.²⁶⁶ Generally, section 169B contains a number of provisions addressing the protection of visibility in class I areas.²⁶⁷ For example, these provisions: (1) re-

266. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816, 104 Stat. 2399, 2695-97 (1990) (to be codified at 42 U.S.C. § 7492). Section 169B was inserted immediately following section 169A. *See id.* Section 169A, however, was not changed by the 1990 Amendments. *See id.*

267. *See id.* The language of section 169B was ultimately derived from the visibility amendments adopted by the Senate. H.R. CONF. REP. No. 101-952, 101st Cong., 2d Sess. 348 (1990) [hereinafter H.R. CONF. REP.]. The amendments approved by the House of Representatives differed substantially from those adopted by the Senate and, in general, were more protective of visibility.

For example, the House amendments protected visibility by expanding the list of class I areas to which visibility regulations would apply. Under this amendment, visibility protection would have been extended to national parks greater than 6,000 acres that were established between the enactment of the 1977 Amendments to the Act and January 1, 1990. *House Clean Air Bill*, 48 CONG. Q. 2148, 2173 (1990).

In addition, the House amendments protected visibility by requiring the EPA to promulgate regional haze regulations ensuring a recognizable improvement in visibility every five years at each class I area. *Id.* After promulgation, states would be required to revise their SIPs within three years to implement these new regulations. *Id.* However, the House's amendments omitted from regional haze regulations areas east of the 100th meridian (which extends down the center of the continental United States). *Id.* These areas were exempt because the House expected visibility would improve in these areas as a result of the acid rain controls created under Title IV of the 1990 Amendments. *Id.*

The House amendments also protected visibility by requiring the EPA (within three years from the enactment of the 1990 Amendments) to determine the impact on visibility in national parks from SO₂ emitted from major uncontrolled sources. *Id.* If the EPA determined that a major uncontrolled source would be reasonably anticipated to impair visibility, the source would be required to install BART. *Id.*

Even though the visibility provisions adopted by the House appeared very protective of visibility, the House conferees agreed to retain the Senate's visibility provisions, H.R. CONF. REP., *supra*, at 348, in order to avoid a threatened filibuster by 24 western Senators opposed to the House visibility language. *Conferees Agree on Clean Air Package; Amendments Bill Now Goes to House, Senate*, 21 ENV'T REP. (BNA) 1203, 1204 (Oct. 26, 1990). In exchange for rejecting the House's visibility provisions, the Senate conferees gave in to the House on an amendment transferring control of air pollution from offshore gas and oil operations from the Department of the Interior

quire the EPA to conduct two studies to identify and evaluate the sources of visibility impairment;²⁶⁸ (2) authorize (but do not require) the EPA to establish visibility transport regions and commissions, including a regional commission for the Grand Canyon National Park;²⁶⁹ and (3) explain the duties and responsibilities of the EPA and the commissions under the new visibility amendments.²⁷⁰ Unfortunately, section 169B provides no immediate solution to the degradation of visibility in northeastern states, nor does it help these states escape Scylla and Charybdis. However, by forcing the EPA to study the causes of visibility degradation, and by authorizing the Agency to create visibility transport regions and commissions, section 169B stimulates the EPA to make minor progress toward achieving the national visibility goal contained in section 169A of the Act. For these reasons, this section of the Comment describes and analyzes section 169B in detail.

A. *Visibility Studies, Section 169B(a)(1)-(2)*

Section 169B(a) requires the EPA to conduct two studies concerning visibility impairment. The first study is to be conducted pursuant to section 169B(a)(1), and a successive study pursuant to section 169B(a)(2).²⁷¹ Under section 169B(a)(1),

to the EPA. *Record of 101st Congress Marked by Progress on Clean Air, Inaction on Hazardous Waste, Cabinet-Level EPA Legislation*, 21 Env't Rep. (BNA) 1370, 1371 (Nov. 16, 1990).

268. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(a)(1)-(2), 104 Stat. 2399, 2695 (1990) (to be codified at 42 U.S.C. § 7492). *See infra* text accompanying notes 271-76.

269. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, §§ 816(c), (f), 104 Stat. 2399, 2695-97 (1990) (to be codified at 42 U.S.C. § 7492). *See infra* text accompanying notes 277-293.

270. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, §§ 816(d), (e), 104 Stat. 2399, 2696-97 (1990) (to be codified at 42 U.S.C. § 7492). *See infra* text accompanying notes 294-303.

271. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(a)(1)-(2), 104 Stat. 2399, 2695 (1990) (to be codified at 42 U.S.C. § 7492). In addition to the studies required under subsections 169B(a)(1)-(2), the 1990 Amendments also require the EPA to conduct a study concerning the causes of visibility degradation in southwestern New Mexico. *Id.* § 809, 104 Stat. at 2690. In conducting this study, the EPA is encouraged to cooperate with the Mexican government and other federal agencies. *Id.*

the EPA is required, in conjunction with the National Park Service and other appropriate federal agencies, to conduct a study "to identify and evaluate sources and source regions of both visibility impairment and regions that provide predominantly clean air in class I areas."²⁷²

After reviewing the results of the research conducted pursuant to section 169B(a)(1) and other technical and scientific studies and data relating to visibility source-receptor relationships, section 169B(a)(2) requires the EPA to conduct a second study to identify "sources and source regions of visibility impairment including natural sources as well as source regions of clean air for class I areas."²⁷³ This section also requires the EPA to produce interim findings from the study conducted pursuant to section 169B(a)(2) within three years after the enactment of the 1990 Clean Air Act Amendments.²⁷⁴

272. *Id.* § 816(a)(1), 104 Stat. at 2695. Pursuant to section 169B(a)(1), the EPA is required to address the following visibility concerns in its research: "(A) expansion of current visibility related monitoring in class I areas; (B) assessment of current sources of visibility impairing pollution and clean air corridors; (C) adaptation of regional air quality models for the assessment of visibility; [and] (D) studies of atmospheric chemistry and physics of visibility." *Id.* Apparently, section 169B(a)(1) imposes a mandatory duty on the EPA to include only the above items in its research. Accordingly, if the research fails to address these items, a citizen suit may be brought in the district court against the EPA for its failure to perform the mandatory duty created under this provision. See *supra* note 187.

The research constraints described in section 169B(a)(1) should be interpreted by the EPA as minimum requirements, not as maximum requirements. Nothing in section 169B(a)(1) prohibits the EPA from addressing visibility concerns in addition to those items enumerated in this section. Moreover, the EPA's research should include as much additional scientific information concerning visibility as is needed to develop controls for visibility degradation in class I areas, specifically the degradation caused by regional haze. However, this section imposes no mandatory duty on the EPA to include any research in addition to the items described in section 169B(a)(1). See *id.* § 816(a)(1), 104 Stat. at 2695. Consequently, states cannot maintain a citizen suit against the EPA for its failure to include additional visibility research in its studies. See *supra* note 187.

273. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(a)(2), 104 Stat. 2399, 2695 (1990) (to be codified at 42 U.S.C. § 7492). For a description of natural sources of visibility impairment, see *supra* text accompanying notes 18-19.

274. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(a)(2), 104 Stat. 2399, 2695 (1990) (to be codified at 42 U.S.C. § 7492). The 1990 Amendments were enacted on November 15, 1990. Therefore, section 169B(a)(2) gives the EPA until November 15, 1993 (three years from the date upon which the 1990 Amendments were enacted) to conduct two studies and prepare the interim findings. In ad-

At first glance, these studies appear important because they force the EPA to research the "sources and source regions of visibility impairment."²⁷⁵ The use of this phrase may imply that Congress intended the EPA to study both individual sources causing plume blight and the source regions causing regional haze impairment. If the studies identify the actual sources or source regions contributing to visibility impairment in eastern class I areas, the EPA can then apply different control technologies to those sources or source regions. The 1990 Amendments force the EPA to study visibility degradation, including regional haze problems, and propel the EPA toward achieving the national visibility goal contained in section 169A. However, they also effectively give the EPA a congressionally sanctioned three-year moratorium on enacting regional haze regulations until the EPA has completed its visibility studies.²⁷⁶

Theoretically, the EPA could issue more stringent visibility rules, such as regional haze regulations, before it completes the studies required under section 169B(a). However, based on the Agency's continued eleven-year delay in promulgating visibility regulations, such action is unlikely. In this respect, the 1990 Amendments have placed northeastern states between Scylla and Charybdis (three continued years of impaired visibility and no immediate and foreseeable solution to the problem).

B. *Visibility Transport Regions and Commissions, Section 169B(c)*

Section 169B(c)(1) of the 1990 Amendments authorizes the EPA to establish a visibility transport region for air pollu-

dition, nothing in section 169B prevents the EPA from issuing both studies at the same time, and under the same cover. Section 169B(a)(2) only requires that the second study be based upon findings contained in the first report. Consequently, both studies could be contained in one report as long as the second study is based on the findings of the prior study. This consolidation will simplify references between both studies and eliminate administrative costs of issuing and circulating two separate reports.

275. *Id.* § 816(a)(1)-(2), 104 Stat. at 2695.

276. *See supra* text accompanying notes 222-23.

tants whenever it "has reason to believe that the current or projected interstate transport of air pollutants . . . contributes significantly to visibility impairment in class I areas located in the affected States" ²⁷⁷ A transport region may be created at the EPA's discretion or upon a petition from the governors of at least two affected states. ²⁷⁸ Accordingly, only affected states containing class I areas can petition the EPA to be included in a transport region. ²⁷⁹

Virginia has recently petitioned the EPA for the creation of a visibility transport region to address visibility impairment in its class I areas such as the Shenandoah National Park. ²⁸⁰ Consequently, to create a transport region under the requirements of section 169B(c)(1), another affected state near Virginia must also petition for such a region. ²⁸¹ Even if another petition is filed, the EPA may decline to grant both petitions if it has reason to believe that the transportation of air pollutants from an upwind state does not contribute significantly to visibility impairment in the class I areas located in Virginia

277. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(c), 104 Stat. 2399, 2695-96 (1990) (to be codified at 42 U.S.C. § 7492). Section 169B(c)(1) also provides that:

The Administrator, upon the Administrator's own motion or upon petition from the Governor of any affected State, or upon the recommendations of a [visibility] transport commission established under [section 169B(c)(2)] . . . may —

(A) add any State or portion of a State to a visibility transport region when the Administrator determines that the interstate transport of air pollutants from such State significantly contributes to visibility impairment in a class I area located within the transport region, or

(B) remove any State or portion of a State from the region whenever the Administrator has reason to believe that the control of emissions in that State or portion of the State pursuant to this section will not significantly contribute to the protection or enhancement of visibility in any class I area in the region.

Id. § 816(c)(1), 104 Stat. at 2696.

278. *Id.* § 816(c)(1), 104 Stat. at 2695-96.

279. *Id.* For example, New York State cannot petition for the creation of a visibility transport region because New York contains no class I areas. See *Interstate Pollution*, *supra* note 148, at 48,153.

280. Telephone Interview, *supra* note 231.

281. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(c)(1), 104 Stat. 2399, 2695-96 (1990) (to be codified at 42 U.S.C. § 7492).

or the other petitioning state.²⁸² However, both states could challenge the denial by arguing that based on the available atmospheric evidence, the Agency's decision should be set aside under the Administrative Procedure Act as being arbitrary and capricious.²⁸³

This argument presents the question of which party must bear the burden of proof in each petition for the creation of a visibility transport region. The EPA may argue that the creation of a transport region requires the petitioning states to present scientific and technical evidence in their petitions proving that the current or projected transport of air pollutants from one or more states significantly contributes to visibility impairment in the class I areas of the petitioning states. This argument is supported by the EPA's position requiring states, when filing section 126(b) petitions, to provide detailed evidence demonstrating that the interstate transportation of air pollutants is causing the petitioning states to violate the required visibility provisions in their SIPs.²⁸⁴

Conversely, the petitioning states may argue that the EPA, after receiving the petitions from at least two affected states, must undertake an immediate scientific investigation to determine whether air pollutants from one state impair visibility in the class I areas of another. To support this position, the states may argue that based on the data compiled in the 1979 Visibility Report,²⁸⁵ in the studies conducted pursuant to subsections 169B(a)(1)-(2),²⁸⁶ and in the reports of the interagency task force on visibility,²⁸⁷ the EPA is in the best position to conduct a quick and thorough investigation of the petitions' allegations. However, states fearful of relying on the

282. *Id.*

283. See 5 U.S.C. § 706 (1988). Section 706 of the Administrative Procedure Act states that a reviewing court may hold unlawful and set aside an Agency's decision if that decision is found to be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law . . ." *Id.* § 706(2)(A); see also *Citizens to Preserve Overton Park, Inc. v. Volpe*, 410 U.S. 402 (1971) (holding that to be valid, a court must find that the actual agency decision was not arbitrary or capricious).

284. See *supra* text accompanying notes 166-175.

285. See *supra* note 19.

286. See *supra* text accompanying notes 271-74.

287. See *supra* note 98.

EPA's data may want to submit their own data to refute any opposing EPA conclusions. Unfortunately, the 1990 Amendments to the Clean Air Act are ambiguous on this point and provide no direct answer to this question. In all probability, future litigation will supply these answers.

In addition, the 1990 Amendments present other ambiguities which must be resolved before the amendment's effects on visibility protection can be determined. For example, the amendments are unclear as to which states should be included in a visibility transport region. Plausibly, a transport region will consist of at least the states containing the affected class I areas and the state or states contributing to the impaired visibility in those areas. A region may also include other states in geographical proximity to either the contributing or the affected states.²⁸⁸ For example, even though New York contains no class I areas, it may still be included in a transport region if air pollutants emitted in midwestern states travel through New York to impair class I areas in Vermont, New Hampshire, or Maine. However, as states begin to petition the EPA for the creation of transport regions, this ambiguity may also be resolved through litigation or through the EPA's interpretation of the 1990 Amendments.

The visibility amendments are also ambiguous as to whether the EPA will create transport regions for specific air pollutants similar to the pollutant specificity required in SIPs under section 110(a)(1) of the Act.²⁸⁹ For example, if the EPA reasonably believes that the current or projected interstate transportation of SO_x from Ohio will impair visibility in Maine's Acadia National Park, then may it create a visibility transport region for SO_x encompassing Maine, Ohio, and any states in between? Moreover, if the EPA reasonably believes that the current or projected interstate transportation of SO₂ and particulates from Ohio and West Virginia will impair visibility in New Jersey's class I area, may the EPA create a visibility transport region for SO₂ and particulates which includes New Jersey, Ohio, West Virginia, and any states in between?

288. Telephone Interview, *supra* note 231.

289. See *supra* text accompanying notes 51-52.

In all likelihood, transport regions will not be pollutant specific.²⁹⁰ But this ambiguity may also be ultimately resolved through litigation or through the EPA's interpretation of the amendments.

Finally, whenever a transport region is established by the EPA under section 169B(c)(1), the Agency must also create a transport commission for that region.²⁹¹ The EPA is also specifically required to establish a visibility transport commission for the region affecting the visibility in the Grand Canyon National Park within twelve months from the enactment of the 1990 Amendments.²⁹² At a minimum, each commission must be comprised of the governor of each state in the visibility transport region or his designee, a representative of each federal agency in charge of managing each class I area located within the transport region, and the Administrator or his designee.²⁹³

C. *Duties of the Visibility Transport Commissions, Section 169B(d)*

Section 169B(d) defines the duties and responsibilities of the visibility transport commissions. Pursuant to this section, each transport commission must assess the scientific and technical data (including the studies conducted in accordance with 169B(a)(1)) "pertaining to adverse impacts on visibility from potential or projected growth in emissions from sources located in the Visibility Transport Region."²⁹⁴ Additionally, within four years after being created, a commission must issue a report to the EPA recommending what measures should be taken to remedy visibility degradation within its transport region.²⁹⁵ At a minimum, each report must address: (1) "the promulgation of regulations under section 169A to address

290. Telephone Interview, *supra* note 231.

291. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(c)(2), 104 Stat. 2399, 2696 (1990) (to be codified at 42 U.S.C. § 7492).

292. *Id.* § 816(f), 104 Stat. at 2697.

293. *Id.* § 816(c)(2)(A)-(C), 104 Stat. at 2696.

294. *Id.* § 816(d)(1), 104 Stat. at 2696.

295. *Id.* § 816(d)(2), 104 Stat. at 2696.

long range strategies for addressing regional haze which impairs visibility in affected class I areas,"²⁹⁶ (2) "the establishment of clean air corridors, in which additional restrictions on increases in emissions may be appropriate to protect visibility . . .,"²⁹⁷ and (3) "the imposition of the requirements . . . affecting the construction of new major stationary sources or major modifications to existing sources in such clean air corridors specifically including the alternative siting analysis provisions of section 173(a)(5)"²⁹⁸

D. Duties of the EPA Under the 1990 Visibility Amendments, Section 169B(e)

Subsections 169B(e)(1)-(2) define the duties and responsibilities of the EPA under the new visibility amendments. For example, within a year and a half after receiving a report from a visibility transport commission, required pursuant to section 169B(d)(2), the EPA is directed to carry out its regulatory responsibilities under section 169A.²⁹⁹ These responsibilities include the development of criteria for measuring "reasonable progress" toward the national goal of preventing and remedying any existing impairment of visibility in class I areas.³⁰⁰ To carry out these responsibilities, section 169B requires the EPA to take into account the studies conducted under section 169B(a)(1) and the reports issued by the transport commissions pursuant to section 169B(d)(2).³⁰¹ However, the EPA is not required to consider the studies conducted pursuant to section 169B(a)(2).³⁰²

Finally, section 169B(e)(2) requires that any regulations promulgated by the EPA pursuant to section 169B(e)(1) shall require affected states to revise their SIPs under section 110 of the Act, within twelve months, to contain such compliance

296. *Id.* § 816(d)(2)(C), 104 Stat. at 2697.

297. *Id.* § 816(d)(2)(A), 104 Stat. at 2696.

298. *Id.* § 816(d)(2)(B), 104 Stat. at 2696.

299. *See supra* text accompanying notes 80-89.

300. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 816(e)(1), 104 Stat. 2399, 2697 (1990) (to be codified at 42 U.S.C. § 7492).

301. *Id.*

302. *See id.*

schedules, emission limits, and other measures as may be necessary to carry out regulations promulgated under this section.³⁰³

VII. Conclusion

In recent decades, the visibility in America's national parks and other class I areas has declined significantly as a result of manmade air pollutants such as NO_x, SO_x, and particulates. These pollutants combine in the atmosphere to impair visibility principally through plume blight and regional haze. Plume blight consists of smoke plumes from single emission sources located near the boundaries of a class I area.³⁰⁴ Plume blight only accounts for minor visibility impairment in class I areas.³⁰⁵ On the other hand, regional haze is a more serious problem because it produces significant visibility impairment in class I areas.³⁰⁶ Regional haze is caused by air pollutants emitted from numerous and diverse sources which create a widespread regionally homogenous haze over a large area.³⁰⁷

In response to the decline in visibility caused by plume blight and regional haze, and the inadequacies of the PSD program in controlling this problem,³⁰⁸ Congress amended the Clean Air Act in 1977 by enacting section 169A.³⁰⁹ This section was enacted to prevent future visibility impairment in class I areas, and to remedy existing impairment caused by manmade air pollutants.³¹⁰ In enacting section 169A, Congress gave the EPA authority to implement the provisions of that section by promulgating visibility regulations.³¹¹ However, the EPA was slow in issuing these regulations.

In 1980, three years after Congress enacted section 169A,

303. *Id.* § 816(e)(2), 104 Stat. at 2697.

304. *Federal Court*, *supra* note 29, at 191.

305. *See* EDF Statement, *supra* note 31, at 2.

306. *Id.*

307. Visibility Protection, *supra* note 24, at 80,085.

308. *See supra* text accompanying notes 74-78.

309. CAA § 169A, 42 U.S.C. § 7491 (1988).

310. *Id.* § 169A(a)(1), 42 U.S.C. § 7491(a)(1).

311. *Id.* § 169A(a)(4), 42 U.S.C. § 7491(a)(4).

the EPA finally issued visibility regulations addressing plume blight,³¹² but declined to promulgate rules for controlling regional haze.³¹³ The EPA stated that it would delay indefinitely promulgating such regulations until scientific knowledge regarding this problem improved.³¹⁴ In 1991, however, knowledge and technology exist which will allow the EPA to address visibility impaired by regional haze.³¹⁵ As a solution to visibility impairment, states should use this technology to petition the EPA pursuant to section 307(b)(1) of the CAA³¹⁶ or section 553(e) of the Administrative Procedure Act³¹⁷ for promulgation of new visibility regulations concerning regional haze.

In addition to the failure to issue regional haze regulations, the 1980 plume blight regulations proved to be inadequate to control major visibility degradation in class I areas.³¹⁸ The regulations were inadequate primarily because they only addressed visibility problems caused by air pollution sources located near class I areas.³¹⁹ Accordingly, such regulation could not be used to control the many out-of-state sources contributing to the regional haze problems in class I areas.³²⁰

As a result of the ineffectiveness of the plume blight regulations in controlling visibility degradation and the EPA's failure to issue regional haze regulations, northeastern states containing class I areas sued the EPA to force it to promulgate stricter visibility regulations under different provisions of the CAA.³²¹ However, all these attempts failed, leaving northeastern states caught between Scylla and Charybdis (the continued decline in visibility in class I areas and no legal solution

312. Visibility Protection, *supra* note 24, at 80,084.

313. *Maine v. Thomas*, 690 F. Supp. 1106, 1108 (D. Me. 1988), *aff'd*, 874 F.2d 883 (1st Cir. 1989) (citing Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,086 (1980)).

314. *Id.* (citing Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,086 (1980)).

315. See *supra* text accompanying notes 215-17.

316. See *supra* text accompanying notes 209-18.

317. See *supra* text accompanying notes 139-140.

318. See *supra* text accompanying notes 103-09.

319. See *supra* text accompanying note 104.

320. See *supra* text accompanying note 105.

321. See *supra* note 110.

to the problem).

On November 15, 1990, Congress extensively amended the CAA, including section 169A.³²² Unfortunately, the 1990 Amendments failed to help the states escape Scylla and Charybdis because they provide no immediate and foreseeable solution to the degradation of visibility in class I areas. However, by requiring the EPA to conduct two studies concerning visibility degradation,³²³ including regional haze problems, and by authorizing the EPA to create visibility transport regions and commissions,³²⁴ the 1990 Amendments force the EPA to take a more active role in addressing visibility impairment in class I areas.³²⁵

Despite this fact, the visibility amendments contain numerous ambiguities which must be resolved before the amendment's effects on visibility protection in class I areas can be ascertained. For example, the 1990 Amendments contain the following ambiguities: (1) whether the EPA or the states must bear the burden of proof when petitioning for the creation of a visibility transport region; (2) which states should be included in a transport region; and (3) whether the transport regions will be air pollutant specific. Ultimately, these ambiguities will have to be resolved either through the EPA's interpretation of the amendments or through litigation initiated by aggrieved states.

The history of visibility regulations in the United States has shown a continued reluctance by the EPA to act effectively to control visibility problems in class I areas. The Agency's plume blight regulations were ineffective in controlling visibility impairment and the EPA's continued delay in issuing regional haze regulations has left national parks with serious visibility problems. This lamentable action has continued even after northeastern states brought four separate lawsuits against the Agency in attempts to force it to control visi-

322. Clean Air Act Amendments of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (1990).

323. *Id.* § 816(a)(1)-(2), 104 Stat. at 2695.

324. *Id.* § 816(c), 104 Stat. at 2695-96.

325. Telephone Interview, *supra* note 231.

bility impairment. Unfortunately, the courts have provided no relief to this problem.

Without more stringent visibility regulations, the regional haze problems are expected to worsen over the next twenty years, especially in the east.³²⁶ This decline in visibility will impair the enjoyment of the panoramic landscapes and the scenic vistas of this country's national parks for future generations unless the EPA initiates and enforces stringent federal visibility regulations. The time has come for the EPA to act on visibility impairment. Without such actions, the future enjoyment of national parks will be hazy. It would be a shame to be known as the generation that destroyed the enjoyment of the scenic vistas in America's national parks simply because we procrastinated in enacting desperately needed visibility regulations for these areas.

326. *EPA Phase I*, *supra* note 17, at 10,058.