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ACID RAIN OVER THE UNITED STATES AND CANADA: THE D.C. CIRCUIT FAILS TO PROVIDE SHELTER UNDER SECTION 115 OF THE CLEAN AIR ACT WHILE STATE ACTION PROVIDES A TEMPORARY UMBRELLA

Carol Garland*

I. INTRODUCTION

Unfortunately, future generations may not enjoy the wonders of nature and all its diversity if we continue to allow acid rain to destroy the ecosystem’s delicate balance and spoil natural resources in the United States and Canada. Acid rain is a transboundary pollution problem that cannot be addressed adequately by the efforts of one state or province alone. Thus, the acid rain problem must be solved by the joint efforts of the United States and Canada.

Existing United States law has proved ineffective in ameliorating or eliminating the adverse effects of acid rain.¹ International agreements such as the Memorandum of Intent signed in 1980 and the commitment made at the 1984 conference in Ottawa to reduce emissions by thirty percent have also proved unsuccessful.² The most recent attempt to resolve the dispute through the appointment by the U.S. and Canadian governments of two special envoys on acid rain has been a disappointment, as evidenced by their report re-

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† See infra notes 89-142 and accompanying text.

¹ See H. Harvey, Common Problem, Dissaggregated Response, and Stillness at Last (March 6-8, 1986) (speech presented at the “Acid Rain: Clouds Over the Midwest, Science and Solutions” conference in Chicago); cf. Harris, Canadian Positions, Proposals, and the Diplomatic Dilemma: Acid Rain and Emerging International Norms, 17 TOLEDO L. REV. 121 (1985) (part of a special symposium issue regarding acid rain and international issues).
leased in January of 1986. Although the envoys recognized that acid rain is a "serious environmental problem in both the United States and Canada" and recommended further research, their report lacked any direct solutions, such as an emissions reduction program.

To date, acid rain bills introduced in Congress have failed to garner enough votes for passage. In addition, litigation in the American courts has failed to produce any progress towards a solution to the acid rain problem. Such efforts to abate acid rain have been frustrated by a political climate adverse to an expeditious resolution to this urgent environmental problem. Advocates of strong acid rain control argue that extensive research is not necessary because scientific evidence concerning acid rain is no longer inconclusive. Why then must we wait any longer for solutions? What is preventing the United States from moving forward with acid rain controls?

This Article explores those questions. It begins with brief explanations of the cause and effects of acid rain. Next, it discusses the failure of the United States Clean Air Act to control acid rain. This Article focuses in particular on a recent decision by the Court of Appeals for the District of Columbia Circuit in Thomas v. New York.

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4 See generally id. at 29–35.
5 One Canadian official stated that appropriations for clean coal technology do not adequately respond to the current transboundary acid deposition problem. See Canada May Denounce Acid Rain Envoys' Agreement As Not Working, Inside EPA Weekly Report, Jan. 16, 1987, at 1, 15 (contains a short excerpt regarding the Canadians' frustration with the agreement signed by the two special envoys on acid rain).
6 At this writing two acid rain control bills have been introduced in the 100th Congress, S. 1894 (Sen. Mitchell, Maine) and H.R. 2666 (Rep. Sikorski, Minnesota). The Senate Environmental and Public Works Committee passed S. 1894 but the bill has yet to be scheduled for a debate and vote on the Senate floor. H.R. 2666 is still tied up in the House Environment and Health Subcommittee as a result of congressional disagreement over reauthorization of the Clean Air Act. Telephone interview with Richard Pfhol, Legislative Assistant of Rep. Sikorski (Sept. 2, 1988); see also Acid Rain Compromise Kindles Hope for Senate Clean Air Bill, Conservation 88, Aug. 1988, vol. 6, at 7–9; Inside EPA Weekly Report, Mar. 9, 1988, at 1, 2.
7 See infra text accompanying notes 113–23.

a case regarding the validity of an action brought under section 115, the international provision of the Clean Air Act. The district court found section 115 to be a viable mechanism in eliminating harm to Canada caused by acid rain that originates in the United States. The D.C. circuit court reversed the district court's opinion, and the United States Supreme Court denied certiorari. This Article suggests that the shortfalls of the D.C. Circuit's opinion led it to a result contrary to the Clean Air Act's congressional purpose and intent. It follows that the Supreme Court should have granted certiorari to review the plaintiffs' request for relief under section 115 in order to rectify the error of the appeals court, whose decision fails to employ a proper statutory analysis and thereby ignores the directive Congress set forth in the Clean Air Act.

This Article contends that uniform federal legislation in Canada and the United States is necessary to provide both countries with relief against the effects of acid deposition before the "silent spring of the 80's" forever silences our environment. Meanwhile, independent action from states and provinces will provide a temporary umbrella of protection until Congress passes a stringent acid rain bill.

II. CAUSE AND EFFECTS OF ACID RAIN

Acid rain is formed when sulfur dioxide (SO₂) and nitrogen oxides (NOₓ) emitted into the atmosphere undergo the chemical process of oxidation and are transformed into sulfates, nitrates, and hydrogen ions. These pollutants fall to Earth along with precipitation in the form of rain, snow, dew, frost, sleet, or fog. These chemicals can also fall to the ground with windblown dust and particulate matter.
Acid deposition, therefore, is a more accurate term than acid rain because it includes both wet and dry forms.

Although acid deposition originates from both natural and anthropogenic sources, emissions from human sources account for 93% of acid deposition, a significant amount in comparison to natural sources which contribute only 7% of total sulfur oxides.\(^\text{16}\) Fossil fuel fired power plants and smelters are the sources that generate the greatest amount of sulfur dioxide.\(^\text{17}\) Emissions from motorized vehicles and industrial fuel combustion produce nitrogen oxides.\(^\text{18}\) In the United States, the Ohio River Valley is the region that produces the greatest amount of SO\(_2\) emissions.\(^\text{19}\) In contrast, nitrogen oxide emissions are distributed more evenly throughout the country. The greatest NO\(_x\) concentrations, however, are found in the Ohio River Valley and adjacent states.\(^\text{20}\)

In Canada, the principal sources of SO\(_2\) pollution are nonferrous smelting plants.\(^\text{21}\) The two provinces that emit the greatest amount of acidic gases are Quebec and Ontario, contributing three-fourths of eastern Canadian SO\(_2\) emissions.\(^\text{22}\) The provincially owned power utility, Ontario Hydro, has four coal burning electrical plants. Of greater concern to the Canadians, however, are the six nonferrous smelters located east of the Manitoba/Saskatchewan border.\(^\text{23}\) The largest plants are found in the Sudbury basin. Approximately one-half of the acid deposition that affects sensitive areas in eastern


Natural sources of acid deposition result from emissions of sulfur compounds from volcanic eruptions, sea spray, decomposition of organic matter, coastal wetlands, and forest fires. Natural sources of nitrogen oxides come from lightning, chemical decomposition of nitrates, and the sea. Survey of Data, supra note 15, at 14; Cad, supra note 13, at 103; Gorham, Acid Rain—An Overview (Mar. 29, 1982) (presented before the Division of Envtl. Chemistry, Am. Chemical Soc'y, Las Vegas, Nev.).

\(^{18}\) See Cad, supra note 13, at 109; Survey of Data, supra note 15, at 9–11.

\(^{19}\) Cad, supra note 13, at 117, 119; Survey of Data, supra note 15, at 16.

\(^{20}\) Illinois, Pennsylvania, and Ohio are three of the highest NO\(_x\) emitting states. D. Lewis & W. Davis, supra note 3, at 9 (Jan. 1986).

\(^{21}\) Harris, supra note 2, at 125.

\(^{22}\) D. Lewis & W. Davis, supra note 20, at 26.

\(^{23}\) Harris, supra note 2, at 125.
Canada originates in Canada, with the balance coming from the United States. In certain areas, such as the Muskoka-Haliburton tourist and recreation area in Ontario, two-thirds of the acid deposition that falls there originates upwind in the United States. According to a U.S. government report, “the U.S. exports about 4 times as much SO\textsubscript{2} as it imports from Canada each year.”

In the 1960’s and 1970’s, industry used tall stacks to disperse pollution high into the atmosphere in order to mitigate local pollution concentration problems. Industry believed that pollution dispersed over a large area would eventually fall to Earth in harmless traces, thereby eliminating harmful threats. The tall stacks, however, spew pollutants high into the atmosphere and thus enable them to become part of the air mass and travel long distances. The longer the pollutants remain in the atmosphere, the more likely it is that they will undergo chemical reactions that transform the SO\textsubscript{2} and NO\textsubscript{x} into sulfuric and nitric acids. Initially used as a pollution control mechanism, tall stacks may have contributed to the long range transportation of pollutants and thus have exacerbated the acid deposition problem.

Scientists can now use a technique best described as “finger-printing” to trace chemical elements found in deposition back to the sources from which they were emitted. Scientists analyze direct

24 D. Lewis & W. Davis, supra note 20, at 21.
25 Id.
26 Id.
27 Survey of Data, supra note 15, at 3.
28 R.H. Boyle & R.A. Boyle, supra note 12, at 19; see also Natural Resources Defense Council, Tall Stacks: A Decade of Illegal Use; A Decade of Damage Downwind 2 (Mar. 1985) (a report to the National Clean Air Coalition).
30 Wetstone & Rosencranz, supra note 29, at 15; see also Survey of Data, supra note 12, at 3 n.7 (citing Swedish Ministry of Agriculture, Acidification: A Boundless Threat to Our Environment (1983)); cf. Survey of Data, supra note 15, at 3 n.8 (citing personal communication with Males, Electric Power Research Institute (Nov. 30, 1983)).
31 But cf. Wayne, Clarifying the Scientific Unknowns, 8 Electric Power Inst. J. 8 (Nov. 1983) (special edition on acid rain). In this article, industry confirms the fact that sulfates “can travel hundreds of miles under the right weather conditions.” Id. However, this statement seems contradictory to the personal communication made by Males, who maintained that “tall stacks can account for no more than 100 to 150 kilometers of additional plume support [beyond normal circumstances].” Survey of Data, supra note 15, at 3 n.8.
measurements of pollutants in rainfall and thus chart the path of acid rain in order to determine its geographic origin. For example, researchers have found that 50% of aerosol sulfates in air sampled in parts of Rhode Island and Vermont were derived from local sources and 50% originated in the Midwest. However, scientists discovered that in applying the tracer system exclusively to rainfalls at the Rhode Island site, 75% to 80% of the sulfates originated in the Midwest.

III. EFFECTS OF ACID DEPOSITION

Acid deposition alters the chemical balance between acidity and alkalinity; thus, it poses a present and severe danger to the delicate aquatic and terrestrial ecosystems. An ecosystem sensitivity is based on its ability to neutralize the acidic compounds it receives. Regions that contain granitic or siliceous bedrock and thin soils composed of silts and sands have a low buffering capacity and lack essential minerals that can neutralize excess acids. Examples of such regions in the United States include the Adirondacks of New York, New England, the Upper Midwest, coastal areas in Florida, and mountainous regions of the west.

In Canada, much of the eastern portion of the country is sensitive to acid deposition. Hundreds of Ontario lakes have already acidified, and especially vulnerable is the Muskoka-Haliburton region. The Province of Quebec reports that more than 1000 lakes are in

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34 Id.
35 Id.
36 OTA, supra note 14, at 5. "The acidity and alkalinity of any solution is measured in terms of pH—the negative logarithm of the concentration of hydrogen ions." Cowling, supra note 15, at 80. Thus, a solution with a pH of 4 is ten times more acidic than a solution with a pH of 5, and one hundred times more acidic than a solution with a pH of 6. Normal or pure rainwater is slightly acidic and has a pH between 5.6 and 5.7. See id. at 80–81; OTA, supra note 14, at 5.
37 Statement of Need and Reasonableness at 28, In the Matter of the Proposed Adoption of Minnesota Rules parts 7005.4010 to 7005.4050, Relating to an Acid Deposition Standard and Control Plan, Minn. Pollution Control Agency, No. PCA-85-002-AK, 6-2200-34-1 (Nov. 15, 1985) [hereinafter SONAR].
39 CAD, supra note 13, at 20–22.
41 Id. at 57.
danger, and low pH values of precipitation threaten salmon rivers in Nova Scotia and Newfoundland. Acid deposition is also a threat to the western provinces of Saskatchewan and British Columbia.

A. Aquatic Effects

The adverse effects of acid deposition are most clearly evidenced in aquatic ecosystems. The Environmental Protection Agency (EPA) and the National Acid Precipitation Assessment Program (NAPAP) completed a study in June 1986 of the pH and buffering capacity of lakes and streams in the eastern United States. The report estimates that 9,015 lakes in fifteen eastern states are sensitive to acid deposition. 2,243 of these lakes have acid levels at or below a pH of 6.0 and 628 lakes within ten states have a pH below 5.0. At these levels, fish and other aquatic wildlife are harmed. Scientists have discovered that many fish species such as lake, rainbow, and brown trout, smallmouth bass, and walleye cannot reproduce under such low pH conditions. Complete extermination of fish life has occurred in severely acidified lakes and streams.

In Canada, the Ontario Ministry of the Environment estimated that acid deposition has altered ten thousand lakes, or approximately 20% of the lakes in eastern Canada. Of two million lakes in Quebec and Ontario, 43% are sensitive to acidification. In more than 200

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42 Id. at 11.
43 Id.
44 D. LEWIS & W. DAVIS, supra note 20, at 11.
46 NWF Release, supra note 45, at 1.
47 Id. at 2.
48 Id.
49 Schindler, Mills, Malley, Findlay, Shearer, Davies, Turner, Lindsey & Cruikshank, Long-Term Ecosystem Stress: The Effects of Years of Experimental Acidification of a Small Lake, 228 SCIENCE 1395-96 (June 21, 1985) (these authors concluded that irreversible stress on aquatic ecosystems occurs at pH values of 5.8, and that no species of fish reproduced at pH values below 5.4). See also J. EILERS, G. LEIN & R. BERG, AQUATIC ORGANISMS IN ACIDIC ENVIRONMENTS: A LITERATURE REVIEW (Technical Bulletin No. 150, Wisconsin Dep't Natural Resources 1984) (this report reviews aquatic sensitivity at various pH levels).
50 NWF Release, supra note 45, at 2.
51 OTA, supra note 14, at 42; ACIDIFICATION TODAY, supra note 16, at 50; see also STILL WATERS, supra note 40, at 57.
52 OTA, supra note 14, at 43.
53 Id.
large Ontario lakes, and in several of Nova Scotia's salmon rivers, fish populations have been reduced or eliminated.\textsuperscript{54}

\textbf{B. Terrestrial Effects}

Acid deposition also affects terrestrial ecosystems. Research continues to determine its impacts on forests, soils, and agricultural crops.\textsuperscript{55} The potential for forest damage is of prime concern to both Canada and the United States. Studies have found that acid deposition may be a contributing factor to forest decline, a phenomenon characterized by the loss of needles or leaves, altered shape and color of leaves, premature dropping of healthy green leaves, and a decrease in annual ring growth.\textsuperscript{56} Although forest decline has been most remarkable in West Germany,\textsuperscript{57} a similar decline can also be observed in the Appalachian mountain ranges northward to the Green and White mountains of New England.\textsuperscript{58} Studies on three species of pine in New Jersey's Pine Barrens provide convincing evidence that acid deposition is a contributing factor to forest dieback.\textsuperscript{59}

A large portion of Canadian forests lie in the sensitive regions of Quebec and Ontario. Moreover, roughly one-half of Canada's productive forests receive high levels of acid deposition.\textsuperscript{60} Currently, there is no precise accounting of acid deposition damage to Canadian forests, though scientific research continues and available evidence

\textsuperscript{54} Still Waters, supra note 40, at 11.

\textsuperscript{55} SONAR, supra note 37, at 68-69; Loucks, Acid and Other Pollutant Impacts on Forests and Crops: Midwest Results in Acid Rain: Clouds Over the Midwest, Science and Solutions 61 (National Clean Air Fund Conference, Chicago, Ill., Mar. 7-8, 1986) [hereinafter Clouds Over the Midwest]; Survey of Data, supra note 15, at 37; Postel, Air Pollution, Acid Rain, and the Future of Forests, 58 Worldwatch Paper 6 (Mar. 1984).

Many scientists conclude that although acid deposition may not be the only factor which adversely affects forest systems, it is recognized as a contributing factor. SONAR, supra note 37, at 68-69.

\textsuperscript{56} These are only some of the factors and, as with all the factors, they vary according to species and location. Survey of Data, supra note 15, at 37; Cowling, What's Happening to Germany's Forests?, 3 Envtl. F. 7 (May 1984).

\textsuperscript{57} Cowling, supra note 56.

\textsuperscript{58} These are the same areas which have acid sensitive lakes. Survey of Data, supra note 15, at 37 (citing Backiel, Acid Rain: Does it Contribute to Forest Decline? (Cong. Research Serv. Mini Brief No. 84204, Feb. 1, 1984)).

\textsuperscript{59} Postel, supra note 55, at 11 (citing A.H. Johnson, Recent Changes in Patterns of Tree Growth Rate in the New Jersey Pinelands: A Possible Effect of Acid Rain, J. Envtl. Qual. (Oct.–Dec. 1981)); see also Tomlinson, Air Pollutants and Forest Decline, 17 Environ. Sci. & Technol. 246A (June 1983) (the author supports the hypothesis that acid deposition is a possible cause of forest decline in Europe and North America).

\textsuperscript{60} D. Lewis & W. Davis, supra note 20, at 23.
suggests increased acidification of forest soils. Because the potential for damage is so great, protection of forest resources that are vital to Canada's economy is warranted.

C. Materials Damage

Acid deposition degrades building materials such as marble, limestone, certain paints and galvanized steel. It has accelerated the erosion of such historic treasures as the Acropolis in Athens, ancient monuments in Rome, various cathedrals in Germany, the Statue of Liberty, and the United States Capitol Building. In the United States, a seventeen state study completed by NAPAP found the replacement costs for bronze and marble statues alone could reach $1.2 billion, and damage to historic buildings could approach the $1 billion mark as well. These figures do not account for the amenity value derived from historic buildings and monuments. These historic landmarks, representing American heritage, are a cultural benefit that cannot be quantified.

Building materials such as metals, paint, and masonry are most affected by acid deposition. A study estimating material damage for Midwestern cities reported, based on costs of maintenance or repair, which includes repainting or replacement, the following annual damage figures: Cleveland, $53.1 million; Louisville, $14 million; Indianapolis, $28.7 million; Chicago, $272 million. The analysis demonstrated that per capita costs in areas studied were between $15 to $45 per person.

A Canadian report suggested that "the annual damage to building materials in Canada is at least $285 million." Further, the report published by Canada's House of Commons' Subcommittee on Acid

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61 Still Waters, supra note 40, at 110.
62 Harris, supra note 2, at 124; see also Opening Address by the Honorable John Roberts, Minister of the Environment, Acid Rain and Forest Resources Conference (Quebec City, June 14, 1988).
63 D. Lewis & W. Davis, supra note 20, at 13.
64 Scholle, Acid Deposition and the Materials Damage Question, 25 Environment 25, 30-31 (Oct. 1983); Survey of Data, supra note 15, at 43; see also R.H. Boyle & R.A. Boyle, supra note 12, at 83.
65 16 Env't Rep. (BNA) 504 (July 26, 1985).
66 Id. (citing the National Acid Precipitation Assessment Program (NAPAP) draft study).
67 Scholle, supra note 64, at 29.
68 Lipfert, Acid Deposition Damage to Materials in the Midwestern States in Clouds Over the Midwest, supra note 55, at 29, 30, 41.
69 Uncertainties in either direction by a factor of three were noted by the author. Id. at 31.
70 Still Waters, supra note 40, at 110.
Rain stated this figure was "undoubtedly a serious understatement of total materials damage from acid rain." This figure does not account for the estimate made by the International Joint Commission that acid deposition causes 50% of the corrosion to automobiles.

D. Human Health Effects

Finally, the serious adverse effects on human health from acid deposition further demonstrate the need for a solution to this environmental problem. Impacts can be either direct or indirect. Direct impacts may occur from the inhalation of nitrates and sulfates. At this time much less is known about the health effects caused by sulfates and nitrates, in comparison to the related pollutants—sulfur dioxide and nitrogen oxide, which have been associated with respiratory ailments in areas where levels of these pollutants exceeded air quality standards. Yet evidence suggests that sulfate and nitrate exposure levels in North America produce an excess of respiratory fatalities from the inhalation of these vapors.

In contrast to direct effects, the indirect effects to human health from acid deposition have generated greater concern. Indirect health effects can occur from drinking water supply contamination and from fish contamination which result in a food source unfit for human consumption. Drinking water supplies such as lakes or groundwater aquifers can become contaminated by toxic metals that leach from the soil as acid deposition percolates through the ground to the water.

\[71\] Id.
\[72\] Id.
\[73\] See Goyer, Health Effects of Acid Precipitation: Overview, 63 ENVTL. HEALTH PERSP. 3 (1985). For a general discussion of the human health effects from acid deposition see generally 63 ENVTL. HEALTH PERSP. (1985) (containing articles presented at the Conference on Health Effects of Acid Precipitation sponsored by National Institute of Environmental Health Services at Research Triangle Park, N.C. (Nov. 1984)).
\[74\] SONAR, supra note 37, at 73; Maugh, Acid Rain's Effects on People Assessed, 226 SCIENCE 1408 (Dec. 21, 1984).
\[75\] Stern, Transpoted Air Pollution and Human Health in Clouds Over the Midwest, supra note 55, at 119.
\[76\] Miller, Reviewing Health Effects of Pollutants, 17 ENVTL. SCI. & TECH. 128A, 129A (March 1983); SURVEY OF DATA, supra note 15, at 44.
\[77\] See Lippman, Airborne Acidity: Estimates of Exposure and Human Health Effects, 63 ENVTL. HEALTH PERSP. 63 (1985).
\[78\] See SONAR, supra note 37, at 73; Stern, supra note 75, at 19; see also Nordberg, Goyer, and Clarkson, Impact of Effects of Acid Precipitation on Toxicity of Metals, 63 ENVTL. HEALTH PERSP. 169 (1985).
Groundwater acidification occurs in areas where the soil lacks the capacity to buffer the incoming acidity. Acidified water also leaches heavy metals from pipes and plumbing systems. As a result, these dissolved metals are transported to the tap and contaminate drinking water.

Acidification of surface waters consequently can lead to increased levels of metals in the aquatic environment including increased concentrations in the aquatic biota. Fish occupy the top of the food chain and therefore accumulate elevated levels of metals such as mercury. Persons who consume contaminated fish can experience health problems resulting from metal toxicity.

Swedish research indicates that acidification exacerbates the bioaccumulation of mercury in fish. In the Midwest, a study of fish populations in Wisconsin concluded that "mercury in levels in fish from acidic lakes exceeded the U.S. Food and Drug Administration 'Action Level' for human consumption." The State of Minnesota has been studying the fish mercury problem since 1970. The most recent report issued by the Minnesota Pollution Control Agency contains findings from a study on lakes in northeastern Minnesota, a region dependent upon the fishing-tourism industry. The report concluded in part that mercury concentrations in fish fillets "exceeded health guidelines for long-term consumption in some cases, especially for large fish."

As the preceding illustrated, there are many adverse effects caused by acid deposition. Nevertheless, efforts to mitigate or eliminate this problem have been unsuccessful mainly because the Clean

\[\text{\textsuperscript{79} See SONAR, supra note 37, at 74.}\]
\[\text{\textsuperscript{80} Id.}\]
\[\text{\textsuperscript{81} Id.; Maugh, supra note 74, at 1409–10.}\]
\[\text{\textsuperscript{82} See SONAR, supra note 37, at 84.}\]
\[\text{\textsuperscript{84} SONAR, supra note 37, at 81.}\]
\[\text{\textsuperscript{85} National Swedish Environment Protection Board, Report on Mercury in the Swedish Environment: Global and Local Sources 64 (1984); Maugh, supra note 74, at 1409; SONAR, supra note 37, at 83; see also CAD, supra note 13, at 42.}\]
\[\text{\textsuperscript{86} See SONAR, supra note 37, at 81–82. The U.S. allowable level of mercury is 1.0 ug/g wet weight. Id. at 82.}\]
\[\text{\textsuperscript{87} Minnesota Pollution Control Agency, Fish Mercury in NE Minnesota Lakes 5 (1985).}\]
\[\text{\textsuperscript{88} Id. at 1. The Minnesota Department of Health has issued previous fish consumption advisories in response to elevated levels of mercury in fish. See Minnesota Dep't of Health, Fish Consumption Advisory for Minnesota Waters (1985).}\]
Air Act does not directly or forcefully address transboundary pollution problems.

IV. INEFFECTIVENESS OF THE CLEAN AIR ACT

The literature overwhelmingly recognizes the ineffectiveness of the U.S. Clean Air Act\(^9\) in abating acid deposition. Numerous articles have examined the Act critically in light of the current acid deposition problem facing the United States and Canada.\(^9\) These authors have reached remarkably consistent conclusions. They conclude that the Act, although established "to protect and enhance the quality of the Nation’s air resources,"\(^9\) has failed dramatically at this very task in response to the problem of acid deposition.\(^9\) The consensus among the commentators is that the Act cannot ensure adequate protection, nor is it a viable remedy despite congressional findings concerning the complexity of air pollution and a clear mandate to protect air quality.\(^9\)

The Act’s failure to resolve the current acid deposition problem can be attributed to two reasons. First, these laws were not designed to respond to the problems of long range pollution emissions. Second, yesterday’s pollution control techniques which allowed tall smokestacks have only exacerbated today’s acid deposition problem downwind from those sources.\(^9\)

The major thrust of the Clean Air Act and corresponding state regulations is to control ground level, or ambient concentrations for specific pollutants. In 1970 Congress directed the EPA to issue air quality criteria in order to establish national ambient air quality standards (NAAQS) for those pollutants which “may reasonably be

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\(^9\) 42 U.S.C. §§ 7401-7642 (1982 & Supp. III 1985). It is beyond the scope of this comment to provide a detailed section by section analysis of the Clean Air Act due to its length and complexity. However, for background see generally W. RODGERS, JR., HANDBOOK ON ENVIRONMENTAL LAW (1977); D. CURRIE, AIR POLLUTION §§ 1.08-1.13 (1987); F. GRAD, TREATISE ON ENVIRONMENTAL LAW §§ 2.01-2.09 (1986).


\(^9\) See commentaries cited in supra note 90.

\(^9\) SONAR, supra note 37, at 71; D. LEWIS & W. DAVIS, supra note 20, at 15–16.

\(^9\) SONAR, supra note 37, at 71; see also Comment, Acid Precipitation, supra note 90, at 712-14.
anticipated to endanger public health or welfare." In accordance with that mandate EPA set standards for the following pollutants: sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and hydrocarbons. Note that the list does not include either sulfates or nitrates—the chemicals which make up acid deposition. The legislative history of the Act, however, expressly states with regard to acid deposition, that the addition of sulfates and nitrates to the criteria pollutant list is not prohibited. Moreover, standards for sulfur dioxide and nitrogen dioxide, the precursor pollutants of acid deposition, are not stringent enough to control the current acid deposition problem. Furthermore, it is unlikely that the EPA will either add sulfate and nitrate to the current list of criteria pollutants, or tighten the existing standards for \( \text{SO}_2 \) and \( \text{NO}_2 \). The Agency purports that at this time evidence is still inconclusive with regard to the long range transportation of these chemicals and therefore further research is necessary before a change is warranted.

The most relevant provision of the Act as related to the acid deposition dilemma confronting the United States and Canada is section 115, the international provision. Section 115 contains

\[ 42 \text{ U.S.C.} \, \S\, 7408(a)(1)(A) \, (1982). \]
\[ 40 \text{ C.F.R.} \, \S\, 50.4-50.12 \, (1985). \]
\[ \text{Comment, Acid Precipitation, supra note 90, at 710-11; see also Comment, The Applicability of Clean Air Act Section 115 to Canada's Transboundary Acid Precipitation Problem, 11 B.C. ENVTL. AFF. L. REV. 539, 560 (1983) [hereinafter Comment, Section 115].} \]
\[ \text{Comment, Acid Precipitation, supra note 90, at 700, 711; Comment, Section 115, supra note 98, at 560.} \]
\[ \text{See D. LEWIS & W. DAVIS, supra note 20, at 17.} \]
\[ 42 \text{ U.S.C.} \, \S\, 7415 \, (1982) \, \text{provides:} \]
\[ \text{(a) Whenever the Administrator, upon receipt of reports, surveys or studies from any duly constituted international agency has reason to believe that any air pollutant or pollutants emitted in the United States cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare in a foreign country or whenever the Secretary of State requests him to do so with respect to such pollution which the Secretary of State alleges is of such nature, the Administrator shall give formal notification thereof to the Governor of the State in which such emissions originate.} \]
\[ \text{(b) The notice of the Administrator shall be deemed to be a finding under section 7410(a)(2)(H)(ii) of this title which requires a plan revision with respect to so much of the applicable implementation plan as is inadequate to prevent or eliminate the endangerment referred to in subsection (a) of this section. Any foreign country so affected by such emission of pollutant or pollutants shall be invited to appear at any public hearing associated with any revision of the appropriate portion of the applicable implementation plan.} \]
\[ \text{(c) This section shall apply only to a foreign country which the Administrator determines has given the United States essentially the same rights with respect to the} \]
sweeping language encompassing all forms of air pollution and thus includes both sulfate and nitrate. Pursuant to the Act, Canada theoretically could obtain relief under this provision as a result of the damages caused by acid deposition that originated in the United States. However, in order to trigger action under section 115, two actions are necessary. First, before action can be initiated, the Administrator of EPA must conclude based upon reports from a “duly constituted international agency” that emissions from the U.S. are endangering human health or property in a foreign country. Action can also be initiated upon request of the Secretary of State. Second, the Administrator must determine that the foreign country provides reciprocal air pollution rights.

The recent ruling by the D.C. Circuit in Thomas v. New York, however, overturned a federal district court decision that upheld the validity of a section 115 action brought by plaintiffs seeking relief from acid rain damage caused to Canada. This case will be discussed in detail below but is mentioned at this point to demonstrate the failure to secure relief under the international provision of the Act.

The remaining provisions of the Act that are relevant to the problem of acid deposition also have shortfalls and thus further illustrate the Act’s ineffectiveness in regard to this transboundary pollution problem. Section 126 concerns the abatement of interstate pollution and allows states to petition the Administrator for a finding that the emissions from a source are in violation of a state’s approved pollution standards. Upon the Administrator’s finding of a violation the culpable source must lower its emission levels. However, the language of the Act refers to “any major source” and thus implies that only one particular source can be held responsible for a violation under a single petition. As one commentator noted, this “piecemeal process” creates a hardship for petitioning states who

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102 See 42 U.S.C. § 7415(a); see also Comment, Section 115, supra note 98, at 570; Wooley, Acid Rain: Canadian Litigation in U.S. Court and Agency Proceedings, 17 U. Tol. L. Rev. 139, 141–42 (1985).
103 Comment, Section 115, supra note 98, at 560–62.
104 42 U.S.C. § 7415(a).
105 Id.
106 Id. § 7415(c).
109 Comment, Acid Precipitation, supra note 90, at 737.
must initiate separate proceedings against each source that the State suspects is responsible for degrading its air. Not only is this process “expensive and time-consuming,” but it places a practically impossible burden of proof on the petitioning States to show that the emission from a particular source caused acidification to a lake hundreds of miles away.

State petitioners seeking relief from EPA under section 126 have been unsuccessful. Moreover, judicial review of EPA’s denial of interstate air pollution petitions has not brought success to petitioners. EPA has claimed that it lacks sufficient information about the long range transportation of pollutants to determine with particular accuracy which sources cause violations to a state’s State Implementation Program (SIP). The Agency claims that the techniques for monitoring long range transportation are not yet sophisticated enough to detect such information, and that current state-of-the-art techniques limit this monitoring capability to 50 kilometers.

Similarly ineffective is section 110 regarding State Implementation Plans (SIPs). This provision requires all states to submit a plan to the EPA in order to meet National Ambient Air Quality Standards (NAAQS) for criteria pollutants. States are not obligated to develop standards for sulfate or nitrate because EPA has not yet listed these chemicals as criteria pollutants. Further, as long as a state does not exceed the federal NAAQS levels, it has little incentive to develop plans that will prevent pollution problems beyond the state’s border. The lack of sophistication in computer modeling techniques prevents states from assessing pollution’s impact at great distances from the source.

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110 Id.
111 Id. at 737–38.
112 New York v. Ruckelshaus, 21 Env’t Rep. Cas. (BNA) 1721 (D.D.C. 1984). In Ruckelshaus the district court ordered the EPA to make a determination on the section 126 petition. Subsequently, the EPA denied petitioners a permit. See Wooley, supra note 102, at 141 n.9.
113 Air Pollution Control Dist. v. EPA, 739 F.2d 1071 (6th Cir. 1984); see also Connecticut v. EPA, 696 F.2d 147 (2d Cir. 1982); Connecticut Fund for the Env’t, Inc. v. EPA, 696 F.2d 169 (2d Cir. 1982); Connecticut Fund for the Env’t, Inc. v. EPA, 696 F.2d 179 (2d Cir. 1982); see generally F. GRAD, supra note 89, § 2.05, § 2.09(4)(b)(i).
114 See D. LEWIS & W. DAVIS, supra note 20, at 10–11.
115 Comment, Acid Precipitation, supra note 90, at 700.
117 Id.
118 Comment, Acid Precipitation, supra note 90, at 724.
119 Id. at 713.
120 Id.
adverse impact on neighboring states. As with interstate petitions, the problem lies with proof of causation, as it is nearly impossible to show that SO₂ originating in one state significantly affects another state’s air quality. Accordingly, courts have consistently deferred to the EPA’s scientific and technical expertise and thus have refused to find violations of the Clean Air Act based on section 110.

Section 123 concerns the height of smokestacks. This provision permits polluters to operate with stacks taller than prescribed by Good Engineering Practices (GEP), which insures that pollution concentrations do not exceed accepted standards. Congress delegated to EPA the authority to promulgate regulations for GEP, but because the Agency process is so time-consuming it has failed to provide any immediate relief. Thus, polluters are not required to utilize a greater degree of pollution control than if their stacks were at the prescribed GEP height.

Section 111 sets standards for the performance of new stationary sources. Consequently, this provision will only provide long-term help as new plants come on line and are regulated by stricter standards than old plants. Unfortunately, there are many older plants still in operation with many years of service remaining before they must be replaced. Subsection (d) of this provision sets standards of performance for existing sources and the remaining useful life of

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121 See, e.g., Air Pollution Control Dist. v. EPA, 739 F.2d 1071 (6th Cir. 1984); New York v. EPA, 716 F.2d 440 (7th Cir. 1983); New York v. EPA, 710 F.2d 1200 (6th Cir. 1983). See supra note 113; Grad, supra note 89, § 2.09(4)(b)(i).

122 See Comment, Acid Precipitation, supra note 90, at 725; Vestigo, Acid Rain and Tall Stack Regulation Under the Clean Air Act, 15 ENVTL. L. 711, 738–39 (1985); see also Case, Problems in Judicial Review Arising From the Use of Computer Models and Other Quantitative Methodologies in Environmental Decisionmaking, 10 B.C. ENVTL. AFF. L. REV. 251 (1982); Pedersen, Formal Records and Informal Rulemaking, 85 YALE L.J. 38, 59 (1975) (advocating the need for rigorous judicial review).


124 See also F. Grad, supra note 89, § 2.03(7)(a)(ii).

125 See Vestigo, supra note 122, at 733; Wooley & Wappett, supra note 90, at 57–58.

126 See Vestigo, supra note 122, at 736. It took EPA almost eight years to promulgate final regulations regarding stack height, during which time tall stacks without additional emission controls were allowed to operate. Id.


128 Comment, Section 115, supra note 98, at 565.

129 Id.; see generally Natural Resources Defense Council, Tall Stacks: A Decade of Illegal Use; A Decade of Damage Downwind (March 1985) (for more detailed information on tall stacks in the United States).
a source. At first blush this section appears useful. However, it fails to provide relief because this subsection applies only to those pollutants that are “caused” by a source or are “directly” emitted by a source. Sulfate and nitrate are indirectly emitted from sources such as power plants. Moreover, only three pollutants have been regulated under this subsection.

Similarly, section 112, concerning national emission standards for hazardous air pollutants, fails to provide relief. This section requires the EPA to identify hazardous pollutants, list them, and develop standards with an ample margin of safety to protect the public health. This section, however, is an inadequate regulator of airborne carcinogens. A limited number of chemicals have been regulated, including asbestos, beryllium, mercury, vinyl chloride, benzene, radio nuclides, and radon-222.

The Clean Air Act is an ineffective mechanism to control acid deposition because the Act’s focus is centered too heavily on individual source emissions and fails to give attention to interstate transportation of pollutants. The Act fails to incorporate quickly new scientific and technological knowledge into the regulatory system. Thus it lacks the necessary flexibility to accommodate minor changes or mechanical revisions. In addition, commentators contend that the EPA has been overcautious in interpreting the Act and has construed provisions too narrowly. Moreover, the massive administrative effort required to implement change traps the EPA in institutional immobility. Political and economic pressure all too often hold the EPA back from pursuing action, and the easy way out is to claim a lack of scientific evidence. Finally, commentators

132 Comment, Acid Precipitation, supra note 90, at 731–32.
133 Id.
135 See generally F. Grad, supra note 89, § 2.03(15); D. Currie, supra note 89, §§ 3.26–3.28.
136 Comment, Acid Precipitation, supra note 90, at 734.
137 40 C.F.R. § 61 (1980); see also Cross, Section 111(d) of the Clean Air Act: A New Approach to the Control of Airborne Carcinogens, 13 B.C. Envtl. Aff. L. Rev. 215 (1986).
138 Pedersen, supra note 90, at 1060, 1080.
140 Id.
contend that EPA must take a more aggressive role under the Clean Air Act to control air pollution based on cumulative impacts.142

V. NEW YORK v. THOMAS143—SECTION 115 LITIGATION

On January 13, 1981, during the final days of the Carter Administration, Douglas Costle, then Administrator of the Environmental Protection Agency, sent a letter to former Secretary of State, Edmund Muskie. In his letter, Costle stated that based on a recent report released by the International Joint Commission, "acid deposition is endangering public welfare in the U.S. and Canada and that U.S. and Canadian sources contribute to the problem not only in the country where they are located but also in the neighboring country."144 Costle also stated in his letter to Muskie that provisions in the Canadian Clean Air Act provided the United States with essentially the same rights as the U.S. Clean Air Act grants to Canada.145

However, the incoming EPA Administrator, Anne Gorsuch-Burford, appointed by President Reagan, did not follow through with Costle's findings.146 She did not issue formal SIP revision notifications to the governors of the polluting states as a follow up action to Costle's findings concerning the problem of acid deposition. Quite to the contrary, Gorsuch-Burford stated that Costle's findings were not sufficient to invoke action under section 115 of the Clean Air Act.147 Moreover, her successors, William Ruckelshaus and Lee Thomas, both refused to invoke a section 115 action.148

RESOURCES 1, 40 (1984) (discussing OMB's power and influence on EPA rulemaking which stresses economics over health and environmental factors).

142 Wooley & Wappett, supra note 90, at 38.
145 Thomas, 802 F.2d at 1445.
146 See Thomas, 613 F. Supp. at 1485.
147 Thomas, 802 F.2d at 1445. Douglas Costle served as Administrator for President Carter. President Reagan appointed Anne Gorsuch-Burford to head EPA. She resigned in March 1983, in the wake of the Superfund cover-up scandal; subsequently, President Reagan appointed William Ruckelshaus who then resigned in November 1984. Lee Thomas currently serves as the Administrator of EPA. See 13 Env't Rep. (BNA) 2027 (March 11, 1983) (regarding Burford's resignation); 15 Env't Rep. (BNA) 1299 (Dec. 12, 1984) (regarding the resignation of Ruckelshaus); 15 Env't Rep. (BNA) 1323 (Feb. 10, 1985) (regarding the appointment of Thomas).
148 Although Administrator Ruckelshaus presented acid rain control options to President Reagan and the Cabinet Council on the Environment, Reagan rejected those options and the EPA took no action in response to Costle's findings. 14 Env't Rep. Cas. (BNA) 1747-48 (Feb. 10, 1984); see also Nat'l Ass'n of Attorneys General, Briefing Material on Acid Rain, Meeting
As a result of inaction on the part of current EPA Administrator Thomas, the state of New York, along with the five other states, four environmental organizations and four individuals filed suit in federal district court to compel the Administrator to initiate action in order to abate the harm to Canada from acid deposition caused by pollutants that originate in the United States. The plaintiffs claimed that Administrator Costle’s findings were sufficient to trigger section 115 of the Clean Air Act which requires that polluting states revise their state implementation plans (SIPs) upon notification by the EPA Administrator. Plaintiffs argued that Costle’s findings imposed a mandatory duty on Administrator Thomas that he identify those states that are responsible for the harm caused by acid deposition, and then send notifications ordering those states to revise their SIPs accordingly.

The district court held in plaintiffs’ favor and ordered the EPA to re-evaluate Costle’s determination concerning reciprocal rights under the Canadian Clean Air Act. In addition, the court ordered that, if reciprocity exists, the EPA must issue SIP revision notices to the polluting states within 180 days. Pursuant to the court’s order, Thomas determined on October 22, 1985, that reciprocity exists between Canada and the United States. However, the district court then stayed its order with respect to the issuance of SIP revision notices as to permit EPA to appeal the decision to the D.C. Circuit.

A three judge panel of the appellate court reversed the district court’s decision and remanded the case with instructions to dismiss. In a brief opinion the court held that Costle’s letter cannot serve as a basis for judicial relief because the former Administrator’s conclusion was issued without notice and comment rulemaking.
The D.C. Circuit sidestepped the merits of the case and instead made its decision on procedural points of administrative law. The court first examined the Administrative Procedures Act (APA) which defines a rule as "the whole or a part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy." Based on this definition the court concluded with regard to Costle's findings that "clearly, an agency statement that bound subsequent EPA Administrators to issue SIP revision notices would be a statement of 'future effect designed to implement . . . law or policy' and thus a rule."

Next, the court examined those rules under the APA that are exempt from notice and comment rulemaking in order to determine whether Costle's findings could be appropriately classified as one of the following exceptions: "interpretive rules, general statements of policy, or rules of agency organization, procedure, or practice." The court concluded that Costle's findings did not constitute an "interpretive rule" because they did not interpret an existing rule or statute. Nor were the findings a "general statement of policy," because if his findings bind a subsequent Administrator to take action, then they "do more than express without the 'force of law' the EPA's tentative intentions for the future." Finally, Costle's findings could not be considered a rule of "agency organization, procedure, or practice" because they go beyond formality and instead 'jeopardize,' or 'substantially affect,' the rights and interests of private parties. Thus, the court determined that Costle's findings did not fall within any of the preceding exceptions.

Furthermore, the court concluded without any analysis that if Costle's findings "left the EPA no alternative but to issue SIP [revision] notices . . . if they forced the EPA to take direct and substantial regulatory actions—they could not be promulgated without notice-and-comment [rulemaking] procedures." The court based the preceding conclusory statement on an assumption that rulemaking was the only alternative. The D.C. Circuit nevertheless held that Costle's findings were insufficient grounds for judicial relief because they were issued without notice and comment rulemaking.

\[\text{footnotes}\]

\footnote{Id. at 1446 (quoting 5 U.S.C. § 551(4) (1982)).}
\footnote{Id. at 1446–47 (footnote omitted).}
\footnote{Id. at 1447 (quoting 5 U.S.C. § 553(b)(A) (1982)).}
\footnote{Id. (quoting Pacific Gas & Electric Co. v. FPC, 506 F.2d 33, 38 (D.C. Cir. 1974)).}
\footnote{Id. at 1447.}
\footnote{Id.}
\footnote{Id. at 1446, 1447.}
The court noted that whether or not the EPA chooses to issue revision notices to the states and initiates rulemaking is a matter of agency discretion and not subject to review by the circuit court.\footnote{Id. at 1448.}

To confirm its conclusion the court relied on \textit{National Asphalt Pavement Association v. Train},\footnote{539 F.2d 775 (1976). Various asphalt concrete plant companies joined NAPA as petitioners in this lawsuit.} a 1976 case decided in the D.C. Circuit. In \textit{National Asphalt}, the asphalt industry petitioned the D.C. Circuit for review of an action taken by former EPA Administrator Train.\footnote{Id. at 779.} The Administrator, in accordance with section 111 of the Clean Air Act, published two notices in the Federal Register announcing the inclusion of the asphalt industry as a “significant contributor” of pollution and proposing performance standards for the asphalt plants.\footnote{Id. at 780.} The petitioners claimed that meaningful public comment on the issue concerning the designation of the asphalt industry as a “significant contributor” was precluded because the simultaneous publication of the two notices suggested that the Administrator’s “significant contribution” determination was final and not open for comment.\footnote{Id. at 779.}

The D.C. Circuit in \textit{National Asphalt} agreed with the petitioners that the “significant contributor” determination was “a pivotal and integral part of the rulemaking process.”\footnote{Id. at 779 n.2.} However, the court found that the Agency had provided all interested parties with a meaningful opportunity to comment on that aspect of the Administrator’s proposal. Thus the court refused to remand the case to EPA for further proceedings on the issue of “significant contributor.”\footnote{Id. at 781–82.}

The D.C. Circuit in \textit{Thomas} found Administrator Train’s designation of a “significant contributor” in \textit{National Asphalt} similar to Costle’s findings on acid deposition in \textit{Thomas}.\footnote{See \textit{Thomas v. New York}, 802 F.2d 1443, 1446 (D.C.Cir. 1986) (the court states that \textit{National Asphalt} involved a similar EPA Clean Air Act determination), \textit{cert. denied}, 107 S.Ct. 3196 (1987).} Thus, the court apparently reasoned that because notice and comment rulemaking was required on the “designation issue” in \textit{National Asphalt}, similar rulemaking was necessary under the facts in \textit{Thomas}.

The \textit{Thomas} plaintiffs filed a petition with the Supreme Court for a writ of certiorari to review the appellate court’s decision and to
reinstate the district court's ruling. Petitioners argued, although unsuccessfully, that certiorari should have been granted to assure proper implementation of Congress' directives as set forth in the Clean Air Act in order to remedy the transboundary problem of acid deposition. In addition, petitioners asserted that review by the Court is necessary to prevent lower courts from overriding specific congressional mandates prescribed by the Clean Air Act.

VI. ANALYSIS OF THE D.C. CIRCUIT'S OPINION

By sidestepping the merits of the case, the appellate court's conclusion in Thomas v. New York begged the question of whether Costle's findings were indeed sufficient to trigger action under section 115. At two points in the court's opinion it suggested that Costle's findings may have a binding effect on the current Administrator. Yet the court refused to expressly make the crucial determination of whether the findings in fact had a binding effect. Instead, the court held that Costle's findings would have required rulemaking if they bound the current Administrator. However, this assumption avoids the crux of the dispute, which is whether section 115 of the Clean Air Act imposed a mandatory duty upon the current Administrator as a result of the former Administrator's findings.

This section addresses the following shortfalls of the court's opinion. First, the court failed to examine section 307 of the Act which specifically sets forth those actions subject to rulemaking. Second, the court misinterpreted congressional intent regarding the execution of a section 115 action. Third, the court erred in relying on National Asphalt for confirmation on the issue of rulemaking because that case is clearly distinguishable on its facts from Thomas. Fourth, the court's decision failed to comport with the Clean Air Act's purpose and intent and thereby circumvented Congress' mandate as set forth in section 115, the international provision.

A. Section 307—Administrative Procedure

The court's failure to examine section 307 of the Clean Air Act concerning administrative procedures is a significant oversight. Sub-

174 Id. at 13.
175 Thomas, 802 F.2d at 1446, 1447.
176 Id. at 1447.
section 307(d) specifically sets forth thirteen actions that must proceed according to informal notice and comment rulemaking. Section 115 actions are not among those enumerated actions contained in the subsection. The Act’s legislative history does not discuss the need for rulemaking in regard to section 115 actions. In contrast, however, Congress specifies under section 307 precisely those actions that are to proceed by notice and comment rulemaking. Furthermore, the legislative history of the Clean Air Act states that the section on administrative procedures was implemented in lieu of the APA. The Clean Air Act is therefore the controlling authority on matters of administrative procedure.

B. Rulemaking and Section 115

The court misinterprets congressional intent regarding the execution of section 115. The court stated that Congress probably anticipated that section 115 findings and notification to the states would be issued together, at which time notice and comment proceeding would commence. However, according to a close reading of section 307, rulemaking on a 115 action is initiated only if the state fails to submit a plan to EPA within 60 days after it receives notification from the Administrator that a revision of the state’s pollution control plan (SIP) is required to prevent or eliminate endangerment to a foreign country.

Section 307 states that rulemaking applies, inter alia, to section 110(c) actions regarding the promulgation or revision of a SIP. Accordingly, section 110(c)(1)(C) requires rulemaking in the event that a state fails to revise its SIP within 60 days of receipt of notification by the Administrator as set out in 110(a)(2)(H) of the Act. Section 110(a)(2)(H)(ii) concerns instances in which the “Ad-
ministrator finds on the basis of information available to him that [a state's] plan is substantially inadequate . . . or to otherwise comply with any additional requirements established under the Clean Air Act Amendments of 1977.”

Concomitantly, section 115 provides that “[t]he notice of the Administrator shall be deemed to be a finding under section 7410(a)(2)(H)(ii) of this title which requires a plan revision” in order to eliminate transboundary pollution. “Notice” as used in 115(b) refers to the notification the Administrator is required to give the governors of each state whose pollution endangers a foreign country. It is this notice to the governors which, according to the Act, triggers a plan revision under 110(a) and not the Administrator's determination that pollutants originating in this country are endangering public health or welfare in a foreign country.

Likewise, section 307(d) does not require notice and comment rulemaking for section 110(a) actions involving the adoption of State Implementation Plans. Rather, Congress set forth clearly and explicitly that rulemaking only applies in 110(c) actions if: “the State fails to submit an implementation plan which meets the requirements of this section”; or, if any portion of the plan is “not in accordance with the requirements of this section”; or, if “the State fails, within 60 days after notification by the Administrator . . . to revise . . . [a] plan as . . . referred to in subsection (a)(2)(H) of this section.”

Clearly, the fact that Congress did not require section 115 actions to proceed in accordance with notice and comment rulemaking was not an oversight. On the contrary, it makes perfect sense that Congress would exclude section 115 actions from rulemaking because, as stated in the Clean Air Act, the Administrator's notice to a polluting state under section 115 is deemed a finding under section 110(a)(2)(H)(ii). Further, Congress determined that section 110(a) sections did not warrant notice and comment rulemaking unless a state failed to submit a SIP, or the SIP submitted was inadequate. Prior to the Administrator's disapproval of a SIP, there is no reason to commence rulemaking because during this time that state has the responsibility of formulating or revising its plan. In so doing, the state must afford interested parties reasonable notice and conduct

188 Id. § 7410(a)(2)(H)(ii).
189 Id. § 7415(b).
190 Id. § 7415(a).
191 Id. § 7410(c)(1)(A)-(C).
192 Id. § 7415(b).
193 See supra notes 183–90 and accompanying text.
public hearings; therefore, the procedural safeguards of notice and comment rulemaking are not necessary.\(^{194}\)

### C. Thomas is distinguishable from National Asphalt

The *Thomas* court mistakenly relied on *National Asphalt Pave­ment Ass'n v. Train*,\(^{195}\) to confirm its view on the propriety of rulemaking. *National Asphalt*, on the facts of the case alone, is plainly distinguishable from *Thomas*. As mentioned above, the relevant issue in *National Asphalt* for purposes of comparison to the *Thomas* case concerned EPA Administrator Train’s designation of the asphalt industry as a “significant contributor” to pollution.\(^{196}\) This designation by the Administrator was made in accordance with section 111 of the Clean Air Act\(^{197}\) which concerns performance standards for new stationary sources.

Section 111 directs the Administrator to maintain a list of stationary sources which may “cause[] or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”\(^{198}\) In addition, the Act requires the Administrator to publish performance standards for the particular industry within 120 days of his designation of such industry as a “significant contributor.”\(^{199}\) Upon publication in the Federal Register, the Administrator must proceed according to notice and comment rulemaking,\(^{200}\) following requirements set out explicitly in section 111 and section 307. Conversely, the need for rulemaking is expressed neither in section 115 nor in section 307 on administrative proceedings.\(^{201}\)

Costle’s findings on acid deposition and legislative reciprocity in *Thomas* were not similar to Administrator Train’s designation in *National Asphalt*. Costle’s findings on endangerment to Canada were based on one report issued by the International Joint Commission.\(^{202}\) In contrast, Train’s determination that the asphalt industry was a “significant contributor” was based on “the Administrator’s

\(^{194}\) D. Currie, *supra* note 89, § 4.09.

\(^{195}\) 539 F.2d 775 (D.C. Cir. 1976).

\(^{196}\) Id. at 779.


\(^{198}\) Id. § 7411(b)(1)(A).

\(^{199}\) Id. § 7411(b)(1)(B).

\(^{200}\) Id. § 7607(d)(1)(C).


examination of the rate of emissions of particulate matter from uncontrolled plants, the stringency of existing state and local regulations limiting emissions from these plants, the number of existing plants, and the expected rate of growth in the number of plants." Train's designation of the asphalt industry as a "significant contributor" was published in the Federal Register on the same day as the proposed standards. Prior to publication in the Federal Register, the Agency gathered factual evidence and analyzed data in order to support its findings concerning the asphalt industries.

Furthermore, the court in National Asphalt cited Portland Cement Ass'n v. Ruckelshaus for the proposition that "in order to have 'meaningful' opportunity to comment, one must be aware of the information the agency finally decides to rely on in taking agency action." Administrator Costle's finding was only preliminary in contrast to Train's determination in National Asphalt. Clearly an interested party in Thomas would not have the information necessary to submit a "meaningful comment" as understood by the D.C. Circuit in National Asphalt or Portland Cement. However, according to a close reading of the Clean Air Act, a party's inability to submit a meaningful comment would not occur because the Act does not require rulemaking during the initial stages in a 115 action.

Section 307(d)(3) sets forth procedures for rulemaking consistent with the Administrative Procedures Act requirements that a notice of proposed rulemaking be published in the Federal Register along with a statement of basis and purpose which must include: factual data on which the rule is based; the methodology used in obtaining data and analyzing it; and legal interpretations and policy considerations underlying the rule. Clearly, Costle's letter constituted only a preliminary finding that required extensive data analysis in order to determine which states must receive revision notifications in order to eliminate the harm to Canada. Therefore, only after such studies have been completed, and data gathered and analyzed could the Administrator notify states to revise their pollution control...
plans. The EPA in *National Asphalt* had studied and analyzed the asphalt industry's contribution to the pollution problem. The EPA in *Thomas*, however, had not yet analyzed data concerning United States emissions and deposition in Canada; rather, Costle had based his preliminary finding on one document.

Additionally, the court in *National Asphalt* noted that the "'significant contributor' designation is an 'integral and pivotal part of the rulemaking process under Section 111' [and thus] . . . requires that interested persons have a meaningful opportunity to comment on that part of the rule."\(^{211}\) In contrast to Train's determination, Costle's findings on reciprocity and endangerment, although significant, are hardly "integral or pivotal" as the terms were understood by the court in *National Asphalt*. If any issue in a 115 action can be considered "integral or pivotal" it is EPA's finding of which states must revise their pollution control plans in order to eliminate harm to a foreign country. This later finding implies much greater ramifications than an initial finding on endangerment because of the responsibility it places on states and the corresponding effect it may have on a state's industry.

Finally, if there is any factual similarity between the section 111 action in *National Asphalt* and the section 115 action in *Thomas*, it is the designation of an industry as a "significant contributor" under section 111 and the notification to particular polluting states under section 115. Both findings involve a determination of which sources are responsible for a pollution problem. In the section 111 action EPA identifies particular industries, and in a section 115 action the Agency identifies particular states that are responsible for pollution. In some respects, proposed standards under section 111 are therefore similar to the revisions of a state's pollution control plan fashioned by the EPA if the polluting state fails to revise its own regulations.

Likewise, Costle's findings could be compared to EPA's initial determination that a pollution problem from stationary sources existed prior to any extensive EPA research into which sources were culpable. Although one can draw comparisons between the two actions, the contrasts are more prominent and thus demonstrate that the two cases are more different from one another than alike. In *National Asphalt*, while the issue focused on the opportunity to submit a meaningful comment, neither the plaintiffs, defendants, nor the court questioned the propriety of rulemaking in this section 111

\(^{211}\) *National Asphalt*, 539 F.2d at 779 n.2 (emphasis in original).
action. In contrast, there was a dispute in Thomas over the propriety of rulemaking. The Thomas court deemed it necessary to a section 115 action but the parties contend the significant issue is the Administrator's duty under the Clean Air Act. Because there was no consensus as to the issue of rulemaking in Thomas, National Asphalt is a poor case from which to draw support for reaching a determination in Thomas.

D. Force and Effect of the Clean Air Act

The Thomas appellate court failed to determine whether Costle's findings bound subsequent Administrator Thomas. Instead, the court implied that Costle's action was a rule, and because it was not promulgated according to notice and comment rulemaking it did not bind subsequent Administrator Thomas and failed to provide the basis for judicial relief.212 However, this reasoning improperly overrules statutory interpretation of the Clean Air Act. As stated above, the Act does not require notice and comment rulemaking with regard to a section 115 action. Thus the Thomas court's result is incongruous with congressional intent. At the very least, the court should have raised and discussed this conflict. The court should have addressed the issue of whether Administrator Costle's initial findings made in accordance with an Act of Congress imposes a statutory duty on subsequent Administrator Thomas and thus binds Thomas to follow through with Congress' mandate.213

The Administrator's duty under section 115 is analogous to a similar duty imposed upon the Administrator under section 109 to adopt standards for criteria pollutants.214 The Second Circuit determined that the language in section 109 created a mandatory, not discretionary, duty.215 Accordingly, when an Administrator fails to perform a nondiscretionary duty, a lawsuit compelling his action under section 304, the citizen's suit provision, is perfectly appropriate. As Professor Currie points out, "[t]he paradigm citizen suit under § 304(a)(2), as indicated by the statutory language, seeks not to correct errors in what the Administrator has done, but to compel him to act when he has done nothing at all."216 Clearly, Thomas is just that particular situation.

214 See D. Currie, supra note 89, § 4.03.
215 Natural Resources Defense Council, Inc. v. Train, 545 F.2d 320, 328 (2d Cir. 1976).
216 D. Currie, supra note 89, § 9.11.
The court should have required Administrator Thomas to fulfill the duty Congress imposed upon him in section 115, once Costle made the initial finding of endangerment to Canada. This is not to say that Administrator Thomas must take the same actions that Administrator Costle would have taken; rather, only that Thomas undertake the duty the Clean Air Act imposed upon him. Pursuant to his duty Thomas could have properly determined that only limited reductions were necessary to abate harm to Canada, or perhaps after analysis he could have determined that no reductions were warranted. At the minimum, however, Thomas had a duty to take some affirmative action.

The Clean Air Act’s words alone are not effective without action. The court must not ignore the force and effect of the Act and its binding effect on agencies. Professor Stewart’s commentary concerning the demand upon EPA to develop standards for unregulated pollutants is equally applicable to a section 115 action: “The draconian commands of the Clean Air Act clearly produced a new attitude of seriousness and urgency on the part of governmental agencies and polluters alike, and have apparently resulted in some substantial improvements in air quality.”217

The circuit court’s failure to uphold the district court’s decision is an outcome characteristic of previous court battles aimed at abating the adverse effects of acid deposition. Advocates of acid rain control have not yet found protection from either the courts, the EPA under the Reagan Administration, or Congress. Meanwhile, independent state action provides a temporary umbrella, offering protection in certain areas of the country until uniform federal legislation is passed. Although the approaches taken by the states are varied, all are aimed at the same result—elimination of the adverse effects of acid deposition on the environment. The approach taken in Minnesota is examined below and compared to the methods used in New York, Massachusetts, Wisconsin, and California.

VII. MINNESOTA ACID RAIN RULEMAKING

On July 25, 1986, the Pollution Control Agency’s (PCA) nine-member Citizens Board adopted the report submitted by the Minnesota Administrative Law Judge who presided over 35 days of a

217 Stewart, The Development of Administrative and Quasi-Constitutional Law in Judicial Review of Environmental Decisionmaking: Lessons From the Clean Air Act, 62 Iowa L. Rev. 713, 727 (1977); see also D. Currie, supra note 89, § 4.03.
formal rulemaking on acid deposition in Minnesota. The judge determined that the PCA’s recommended standard and control plan was both needed and reasonable. As a result, Minnesota now has the most stringent acid deposition standard in the world.

Admittedly Minnesota does not receive the highest levels of acid deposition in comparison to regions such as the Adirondacks of New York, or the Muskoka area of Ontario. Minnesota, the “Land of Lakes,” however, contains many waterways that are sensitive to the adverse effects of acid deposition. The state’s northeastern section boasts pristine wilderness areas including Superior National Forest, Voyageurs National Park, and the Boundary Water Canoe Area Wilderness (BWCA). This area is unique because it contains some of the only remaining stands of virgin timber in the lower 48 states, and is one of the few places where the cry of the wolf can still be heard. Much of this area remains the same as in the early days when the Voyageurs of the North Woods canoed and portaged there.

Concern over acid deposition first began in Minnesota in 1976 when Ontario Hydro proposed to build a major coal-fired electric generating facility near Atikokan, Ontario, approximately 40 miles from the BWCA. Based on the recognition that the lakes and forests in northeastern Minnesota were susceptible to the adverse effects of acid deposition, both the state of Minnesota and the EPA Research Lab in Duluth initiated studies on the effects of a nearby power plant.

In response to the concern raised by both the scientific community and the general public, the Minnesota legislature passed the Acid Deposition Control Act of 1980, the first piece of acid deposition legislation in the United States. The 1980 Act required the Minne-

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219 See SONAR, supra note 37, at 5–6. Minnesota enforces a 11 kg/hectare/year standard. By comparison, New York and Canada both have standards of 20 kg/hectare/year. Id.

220 See id. (some areas in New York receive levels of deposition in excess of 40kg/ha/yr).

221 Id. at 2; Rept. of ALJ, supra note 218, at 14.


223 SONAR, supra note 37, at 20.

224 Id. at 20–21.

sota Pollution Control Agency (MPCA) to investigate the cause and effects of acid deposition in Minnesota.\footnote{1980 Minn. Laws ch. 490. See generally Roberts, Acid Rain: Minnesota Legislation, 1 WM. MITCHELL ENVTL. L. REV. 117, 121–22 (1983) (for background on the Minnesota legislation).} The Act also contained a unique provision which called for a program to educate Minnesotans about the acid deposition phenomenon.\footnote{MINN. STAT. § 116E.035 (1982).} As a result of the Agency's findings and a mounting alarm regarding acid deposition, the legislature passed the Minnesota Acid Deposition Control Act of 1982.\footnote{Acid Deposition Control Act, MINN. STAT. §§ 116.42–116.45 (1982).} This Act mandated the MPCA to identify the areas within Minnesota sensitive to acid deposition, and to regulate acid deposition by establishing a standard and control plan.\footnote{Id.}

The investigation of acid deposition, including the identification of sensitive areas and the development of a standard and control plan, was an extensive MPCA effort. In addition to utilizing its own staff, the Agency hired many consultants to work on special issues.\footnote{SONAR, supra note 37, at 13–14 (for a list of expert witnesses).} Furthermore, a Technical Review Commission was established for the purpose of sharing information and identifying major areas of dispute prior to the formal rulemaking process.\footnote{See Rept. of ALJ, supra note 218, at 3.} The Commission included representatives from the electric utility industry, the paper industry, mining companies, environmental groups, and other state agencies\footnote{See id.} who were able to contribute to the standard making process. The Committee was established with the intent that uncovering some of the problem issues early in the process would save time once the hearings were under way. Thus it was hoped that cooperation between the factions would occur, although in fact, the utility companies were hesitant to be willing participants, and did not always operate in an open manner as was anticipated.\footnote{This is the author's personal opinion based on my experience as litigation coordinator for the coalition of environmental organizations during the Minnesota acid rain rulemaking hearings. I worked as coordinator through Hamline Law School's independent study program.}

The MPCA staff measured deposition at various sites throughout Minnesota, monitored lakes, streams, and soils for chemical changes and examined the relationship between pollutant doses and responses in the environment. Further, the staff reviewed the existing scientific literature, met and corresponded with numerous scientists from around the world who are currently studying the phenomenon.
of acid deposition. The staff also conducted elaborate and highly technical computer modeling systems that assessed the long-range and short-range transportation of pollution.234

Staff economists analyzed the methods and costs of sulphur dioxide emissions in order to assess control options available to attain and maintain the MPCA’s proposed deposition standard.235 The Agency also contracted a study to determine the socioeconomic value of Minnesota’s natural resources.236 Environmental amenities, such as the intrinsic worth of walking along one’s favorite lake, cannot be evaluated using market data because in many instances the thing of worth is neither exchanged nor associated with a market for goods or services. The study, however, utilized a contingent valuation method in order to estimate the monetary value that Minnesotans attach to pristine aquatic ecosystems.237 The report issued by the Administrative Law Judge found that in accordance with the study, the actual value of the risk was between $78 million and $260 million.238 Moreover, the report found that this study was the “most sophisticated, best planned and most focused attempt to place a total value on the resource.”239 The MPCA also presented a travel-cost study which, in contrast to the contingent valuation study, measures actual expenditures by users of lake resources.240 Based on data gathered by the Minnesota Department of Natural Resources, the MPCA estimated that the economic value at risk was between $1 million and $89 million.241 Northern States Power Company also conducted a travel-cost study which estimated that the total value at risk amounted to $11.48 million.242 However, the Administrative Law Judge concluded that the travel-cost studies suffer from the inability to measure either the “existence value” or “image value” of a lake.243 Thus the judge found these studies would be more likely to underestimate “the magnitude of value at risk” and that the travel-cost studies therefore deserved less confidence than the contingent valuation study.244

234 See SONAR, supra note 37, at 1–13.
235 Id. at 559.
236 Id. at 602.
237 Id.
238 Rept. of the ALJ, supra note 218, at 46.
239 Id.
240 Id. at 45.
241 Id.
242 Id.
243 Id. at 46.
244 Id.
The formal rulemaking centered on two key issues: first, the acid deposition standard which set a level of allowable deposition within a designated area over a given period of time; and second, the control plan which sets out emissions limitations in order to make sure the standard is not exceeded.\textsuperscript{245} There were 35 days of hearings, during which 75 expert witnesses gave testimony on a wide variety of topics, and entered approximately 965 exhibits into the record.\textsuperscript{246} In addition, the general public submitted some 800 exhibits. The exhibits submitted from the major parties consisted primarily of reports and almost all those received from the public were letters voicing support for the acid rain standard proposed by the MPCA.\textsuperscript{247} General topic areas covered during the proceeding included terrestrial sensitivity, atmospheric deposition chemistry and monitoring, aquatic sensitivity, aquatic chemistry and modeling, biological impacts of acidification, control plan issues concerning emission reductions, economic analysis, and long-range transport modeling.

Preliminary hearings were held in early 1985 to obtain the views of the general public throughout the state. However, the formal rulemaking hearings did not begin until January 1986. The Minnesota Pollution Control Agency proposed an annual standard of 11 kilograms of total wet sulfate deposition per hectare, the equivalent of approximately 24 pounds per 2.5 acres.\textsuperscript{248} The staff reached this figure by determining the pH of rainfall tolerable to Minnesota's most sensitive lakes. They found that a pH of 4.7 or greater is necessary to adequately protect these lakes. Next, the staff calculated the amount of deposition that would result, given the average amount of rainfall and a pH of 4.7, and determined the tolerable level of 11 kilograms of wet sulfate.\textsuperscript{249} The Agency concluded that the standard will protect even the most sensitive lakes in Minnesota.

The standard, however, was a controversial issue in the rulemaking. The utilities argued that it was too restrictive and the environmental groups claimed that it was not stringent enough. The utility representatives argued that it is not necessary to provide this degree of protection to the wide majority of lakes because many of these sensitive lakes are in bog areas and have a naturally low pH, and thus do not require protection. The environmentalists, on the other

\begin{itemize}
  \item \textsuperscript{245} Id. at 6.
  \item \textsuperscript{246} Id. at 2.
  \item \textsuperscript{247} Id.
  \item \textsuperscript{248} SONAR, supra note 37, at 1.
  \item \textsuperscript{249} Id. at 1–2.
\end{itemize}
hand, claimed that episodic events and other unknowns were not analyzed properly, and thus the standard does not reflect an adequate margin of safety for such unaccounted factors. Examples of episodic events include spring snowmelt or unusually heavy acidic rainfalls that cause lakes and streams to be deluged with acidic compounds, in other words an acid pulse, which puts stress on an already sensitive ecosystem and may result in severe damage.

In order to meet the standard the state agency proposed a control plan that put a cap on emissions on the largest utilities by restricting statewide sulfur dioxide emissions to 224,000 tons per year by 1990 and 190,000 tons by 1994. The MPCA also recommended the use of reasonably available control technology on the largest Minnesota emitters. In addition, the MPCA proposed a two year study period from 1990–1992, to assess whether the 1994 emission level requires a change.

While other states have passed statutes or regulations in order to combat the adverse effects of acid deposition, only Minnesota utilized the formal administrative rulemaking process to reach a solution. The advantages of rulemaking are that it amasses a more extensive record, affords the participants an opportunity to introduce the testimony of experts in the field of acid deposition study, is open to the public, operates relatively independent from political influence (in contrast to the legislative process), and thereby is a more impartial, objective process.

VIII. Other States’ Remedies

In the Northeastern region of the United States, where the problem of acid deposition is most severe, several states have taken some type of recourse to protect their resources. In New York, the legislature passed an Acid Deposition Control Act in 1984. Pursuant to the Act, regulations were promulgated to reduce SO2 emissions in two phases. Phase one requires a 17% reduction by 1988, and

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250 Compare Northern States Power Company’s Brief in Opposition to Proposed Standard and Control Plan with Memorandum of Sierra Club et al., In the Matter of Proposed Adoption of Minnesota Rules Parts 7005.4010–7005.4050, Relating to an Acid Deposition Standard and Control Plan, Minn. Pollution Control Agency, No. PCA-85-002-AK, 6-2200-34-1; see also Acid Rain Update Memorandum, Coalition of Environmental Organizations (March 25, 1986).

251 SONAR, supra note 37, at 54–55.

252 Id. at 10–12.

phase two calls for an additional reduction of 22% by 1991. New Hampshire also passed an Acid Deposition Control Act in 1985. This statute mandates a 25% reduction in SO\textsubscript{2} emissions by 1990 and requires an additional 25% reduction by 1995—contingent upon the passage of federal legislation. In 1985, Massachusetts also passed an Acid Deposition Control Act. This law requires a 30% decrease in emissions by 1995 to be accomplished by regulating a statewide emissions limit of 1.2 lbs./BTU. Maine has established a program to monitor and study the effects of acid deposition.

Although most people associate the acid rain problem with the Northeastern states, other regions of the country also suffer the adverse effects of acid deposition. In the Midwest, Michigan and Wisconsin join Minnesota in combating acid deposition. Michigan's Air Pollution Control Commission made its SO\textsubscript{2} emission levels more stringent in order to reduce emissions 25% by 1988. In addition, Michigan has initiated a research and monitoring program. Wisconsin recently passed legislation that calls for a 50% reduction in SO\textsubscript{2} from five major utility companies by 1993. The reduction will occur according to staged emission control requirements. The first stage mandates an emissions cap at 350,000 tons of SO\textsubscript{2} by 1989, and 135,000 tons of NO\textsubscript{x} by 1991. The next stage establishes overall emission targets for both utilities and non-utilities, such as paper pulp mills. The main thrust of this legislation is the emissions limit of 1.2 lbs./BTU for the 5 major utilities by 1993.

Acid deposition is not a problem confined to the northeastern and midwestern portions of the United States, as areas in the west also suffer from its adverse effects. Sensitive regions include the Rockies, the coastal range of Washington, the Cascades, and the Sierra

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254 N.Y. ENVTL. CONSERV. LAW §§ 19-0909, 19-0911.
256 N.H. REV. STAT. ANN. § 125-D:3.
258 Id.
262 See Wis. STAT. ANN. § 144.389(2).
263 Id. § 144.386(2)(a).
264 See CALIFORNIA AIR RESOURCES BOARD, FOURTH ANNUAL REPORT TO THE GOVERNOR AND THE LEGISLATURE ON THE AIR RESOURCES BOARD'S ACID DEPOSITION RESEARCH AND MONITORING PROGRAM (Dec. 1986) [hereinafter FOURTH ANNUAL REPORT].
Nevadas. The California legislature, in 1982, passed the Kapiloff Acid Deposition Act in recognition of the problem. This Act established a comprehensive five-year research and monitoring program to investigate the problem of acid deposition in California. At this point the California Air Resources Board is still studying the effects of acid deposition and analyzing data and control strategies. The Board has not yet made any specific reduction proposals. The State of Washington has also enacted a program to study and evaluate the effects of acid deposition.

In comparison to the preceding state action on acid deposition, Minnesota stands unique in that it is the only state that has chosen to proceed through formal administrative rulemaking. The advantages include a complete, formal record of the entire proceeding, and an unbiased outcome based on scientific evidence, devoid of the political pressures which accompany legislative decisionmaking.

IX. CONCLUSION

There is no doubt that acid deposition is a serious environmental problem. Scientists from around the world have documented the causes and many adverse effects associated with this phenomenon. Even the Reagan Administration has acknowledged these facts. Despite the scientific evidence, acid deposition persists as a serious environmental, as well as political, problem.

The most likely measure to curb acid deposition, the Clean Air Act, has been ineffective and cannot ensure adequate protection despite Congress' mandate to protect air quality. Litigation based on the Act's provisions has been unsuccessful. The decision in Thomas v. New York was a great disappointment not only because it sidestepped the merits of the case, but also because its result was incongruous with the Clean Air Act's purpose and intent.
Although acid rain control advocates have not found protection from the EPA, the courts, or from Congress, independent state action provides a temporary umbrella until uniform federal legislation is passed. Many states are working towards a common goal—the elimination of the adverse effects acid rain has on the environment.

To date, in the United States, the greatest number of acidified lakes have been discovered in the New England region. Minnesota, a state that takes pride in its many beautiful lakes, hopes to safeguard its natural resources through its recent rulemaking proceeding on acid deposition. The Administrative Law Judge stated succinctly in his memorandum to the report “[i]n sum . . . although acid deposition is a problem and . . . the Agency’s control plan is needed (and reasonable), Minnesotans can feel some relief that none of our resources have been irrevocably damaged as yet. We can also take pride in how well we have done so far. Although adoption of the Agency’s control plan will cost us money, it is a rational and prudent plan that will avoid having to fashion a ‘crash program’ in the future.”270 Until federal legislation is enacted, Minnesota’s solution provides the best model for other states to follow in curbing acid rain.

270 Rept. of the ALJ, supra note 218, at 51.