United States and Canadian Approaches to Air Pollution Control and the Implications for the Control of Transboundary Pollution

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UNITED STATES AND CANADIAN APPROACHES TO AIR POLLUTION CONTROL AND THE IMPLICATIONS FOR THE CONTROL OF TRANSBOUNDARY POLLUTION

In addition to sharing an immense border, the United States and Canada share an air pollution problem in the two major industrial areas along the international boundary, Detroit-Windsor and Buffalo-Niagara. This air pollution ignores the political boundaries and is not susceptible to control by the internal clean-air schemes of either nation. As a result, and because the quality of the air is steadily deteriorating in these areas, it has become apparent that the two nations must enter into cooperative action to combat the problem.

Consideration of the problem of air pollution and its control should naturally commence with the recognition of the two nations' common heritage in British legal tradition. Two basic actions were developed in British common law to enable individuals to mitigate the harm caused to their property by smoke, dust, soot, and other air contaminants: private nuisance\(^1\) and trespass.\(^2\) These remedies have long been recognized in the courts of both countries,\(^3\) although they have been followed more

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1. Nuisance is generally defined as an unreasonable, unwarranted, or unlawful use by an individual of his own property in a manner which interferes with the rights of another. For a detailed discussion of this topic see W. Prosser, The Law of Torts § 86 (4th ed. 1971). The first acknowledged case involving air pollution as a private nuisance was in 1611. William Aldred's Case, 77 Eng. Rep. 816 (K.B. 1611). There the court formulated the principle that a property owner has the right to keep the air above his home free from the infection and pollution of a neighboring hog sty.

2. Traditionally trespass has been used by an individual who can show a direct interference with the possession of his property. Once such an interference is shown, the court will grant relief without determining whether there has been substantial damage to the plaintiff's property, and without applying a balancing test. In the case of air pollution, the plaintiff must show that the defendant has intentionally and wrongfully caused some material physical pollutant to be placed upon his land without the legal right to do so. Prosser, supra note 1, at § 13.

closely in Canada than in the United States. But despite these traditional judicial remedies, air pollution has continued to abound in both nations, and is now reaching alarming proportions in many of the major metropolitan areas, including those along the common international border.

To a large degree, the inadequacy of these common law remedies as methods of pollution control is due to the magnitude of the problem which is far beyond the scope of individual legal action. And the private nuisance action, while granting relief to prevent material interferences with the use and enjoyment of property, has been subjected in both nations to a variety of defenses which severely curtail its effectiveness.

4. See, e.g., Hulbert v. California Portland Cement Co., 161 Cal. 259, 118 P. 928 (1911), where plaintiffs obtained an injunction to stop the discharge of cement dust upon their properties from defendant's cement works.

The decision of the Ontario Supreme Court in Godfrey v. Good Rich Refining Co., [1939] 2 D.L.R. 115 (Ont. Sup. Ct.) aff'd, [1940] 2 D.L.R. 164 (Ont. Ct. App.) is typical of traditional Canadian cases. There the plaintiff sought to enjoin the noxious odors and fumes emanating from defendant's oil refinery. The defendant contended that its enterprise was conducted in a reasonable manner and that it complied with all the current developments in science. But the court held that an injunction should be granted, because the refinery should be held answerable for the nuisance it caused. Accord, Quebec City v. Wilfrid Cantin, Inc., [1938] 3 D.L.R. 289 (Can. Sup. Ct.).

5. Most notable among these defenses are the doctrines of reasonable use, statutory sanction, prescription, and coming to the nuisance.

In order to spur infant industry, several United States courts recognized at the turn of the century that an individual should have a right to use his property as he pleased. Thus they borrowed the reasonableness doctrine from tort law and concluded that a polluter would not be liable for a nuisance when he installed the most modern equipment, utilized improved technology, and otherwise operated his plant in a reasonable manner. See, e.g., Phillips v. Lawrence Vitrified Brick & Tile Co., 77 Kan. 643, 82 P. 787 (1905). The reasonableness doctrine was enhanced by the Restatement of Torts § 822 (1939). Under the Restatement view liability could only arise if the injury was intentional or, if not intentional, if it was caused by some negligent, reckless, or ultrahazardous act. See Wright v. Masonite Corp., 237 F. Supp. 129 (D.C.N.C. 1965), aff'd, 368 F.2d 661 (4th Cir. 1966).


Several jurisdictions in the United States recognize that it is a complete defense to an action for nuisance that a legislature has authorized the particular use of property which constitutes a nuisance. Thus, when a defendant has been granted a license to operate his plant, an action to enjoin the plant will fail even if there is an actionable interference with the use and enjoyment of plaintiff's property, unless there is a clear showing that defendant has abused the statutory authority. See, e.g., National Container Corporation v. State, 138 Fla. 32, 189 So. 4 (1939). In Canada, since legislative acts are not subject to judicial review, a legislative grant is generally recognized as a complete justification for a nuisance. Topham v. Edmonton, [1932] 1 W.W.R. 696 (Alta. Sup. Ct. 1931); Fieldhouse v. City of Toronto, [1919] 44 D.L.R. 392 (Ont. Sup. Ct. 1918); Aubertin v. Montreal Light, Heat & Power Co., 74 Que. C.S. 171 (1956).

Both United States and Canadian courts recognize that the open and persistent pollution of an area for a number of years operates to give a polluter a prescriptive right to continue his act. See, e.g., Beam v. Birmingham Slag Co., 245 Ala. 318, 10
Further, under the doctrine of "balancing the equities," the remedy of an injunction against a large polluter has often been denied. Likewise the remedy of trespass has been subjected to limitations; interference with an individual's possession of his property must be shown to be direct, rather than consequential. As a result, most courts in the United States and all courts in Canada treat air pollutants, particularly gas emissions (which make up the bulk of objectionable air pollutants) as actionable only in private nuisance.

So. 2d 162 (1942); Bradbury Marble Co. v. Laclede Gaslight Co., 128 Mo. App. 96, 106 S.W. 594 (1907); Campbell v. Seaman, 63 N.Y. 568 (1879); Coxe & Eldridge v. T.T. Warne, Ltd., [1939] 1 D.L.R. 718 (N.S. Sup. Ct.). However, the courts are careful to apply this principle only when it has been conclusively shown that the defendant has openly and notoriously maintained his right to pollute during the entire statutory period. See Danforth Glebe Estates Ltd. v. W. Harris & Co., 15 Ont. W.N. 21 (H. Ct. Div. 1918), aff'd, 16 Ont. W.N. 41 (App. Div. 1919).

A final defense, commonly characterized as "coming to the nuisance," has been utilized against plaintiffs who voluntarily move into a neighborhood with knowledge that the source of pollution is operating there. However, this defense has had only limited application in the United States, and has not been successfully invoked in Canada. The defense was successfully invoked in Clark v. Wamfold, 165 Wis. 70, 160 N.W. 1039 (1917) and Steele v. Rail & River Coal Co., 42 Ohio App. 228, 182 N.E. 592 (1927). But see Buckleye Cotton Oil Co. v. Ragland, 11 F.2d 291 (5th Cir. 1926); Higgins v. Decorah Produce Co., 214 Iowa 276, 242 N.W. 109 (1932); and see Drysdale v. Dugas, 5 Que. C.S. 418 (1934), aff'd, 6 Que. Q.B. 278 (1935), aff'd, 26 Sup. Ct. R. 10 (1936).

6. The leading United States decision arose in Madison v. Ducktown Sulphur, Copper & Iron Co., 113 Tenn. 331, 83 S.W. 655 (1904), where the court "balanced the equities" between the rights of several subsistence farmers and the interests of a community in the continued operation of copper reduction plants, and concluded that an injunction should not be awarded. Although some courts in the United States do not yet recognize this balancing test, e.g., Davis v. Palmetto Quarries Co., 212 S.C. 456, 48 S.E.2d 329 (1948); Huibert v. California Portland Cement Co., 161 Cal. 229, 118 P. 928 (1911); and Sam Warren & Son Stone Co. v. Gruesser, 307 Ky. 98, 209 S.W.2d 817 (1948), the recent decision of Boomer v. Atlantic Cement Co., 55 Misc. 2d 1923, 237 N.Y.S.2d 112 (Sup. Ct. 1967), aff'd, 30 App. Div. 2d 480, 234 N.Y.S.2d 452 (1968), aff'd, 26 N.Y.2d 219, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970), suggests that this reluctance may be short-lived. Although it had previously followed the traditional approach of enjoining a continuing nuisance, the New York Court of Appeals awarded damages to homeowners instead of enjoining the continued operation of a $45,000,000 cement plant. See generally Roberts, supra note 3.

Canadian courts have also been responsive to this doctrine when there is a great disparity in the economic consequence between the effect of an injunction and the effect of the continuing nuisance. In Bottom v. Ontario Leaf Tobacco Co., [1935] 2 D.L.R. 689 (Ont. Ct. App.), the plaintiff was unsuccessful in his attempt to close a tobacco factory. But see Rombough v. Crestbrook Timber Ltd., [1966] 57 D.L.R.2d 49 (B.C. Ct. App.), where, in similar circumstances, the court approved an injunction which limited the emission of smoke and fumes from defendant's sawmill burner to the level just prior to trial.

7. See, e.g., Ryan v. Emmetsburg, 222 Iowa 600, 4 N.W.2d 435 (1942); Arvidson v. Reynolds Metals Co., 125 F. Supp. 481 (W.D. Wash. 1954), aff'd, 236 F.2d 224 (9th Cir. 1956). A Canadian case where an air violation was found to be an actionable trespass was Teplitsky & Bookman v. O.E. Carson, Ltd., [1956] 5 D.L.R.2d 635 (Ont. H. Ct.), where defendant's erection of a neon sign in plaintiff's airspace was found to constitute the requisite direct interference with plaintiff's possessory interest in land.

However, a recent decision by the Supreme Court of Oregon suggests that strict
Consequently, this century has witnessed a gradual shift in emphasis away from the common law remedies, and a concurrent move towards a legislative approach. Recently the two nations have both enacted substantial federal legislative schemes to control the most pervasive forms of domestic air pollution. These schemes provide a valuable basis from which to attack the transboundary pollution problem. It is the purpose of this Note to trace and compare the development of the legislative approaches of both nations and determine, in light of existing international agreements between them, how they might be adapted for the control of transboundary air pollution.

I

LEGISLATIVE ENACTMENTS TO CONTROL AIR POLLUTION

A. Public Nuisance and the Early Municipal Control of Air Pollution

In its earliest stages, the legislative approach to the problem expressed itself on the municipal level, and in the first half of this century many public nuisance ordinances relating to air pollution were promulgated to control stationary sources of pollution (e.g., factories which emitted bad odors, smoke, or dust).

However, these early attempts proved to be generally ineffectual: proof of actual violation was difficult due to the notorious inaccuracy of smoke measurement methods; adherence to the common law may be on the wane. In Martin v. Reynolds Metals Co., 221 Ore. 86, 342 P.2d 790 (1959), cert. denied, 362 U.S. 918 (1959), the court reported that the size of air pollutants which invade a complainant's property is not as important as the energy or force of the intrusion, and concluded that the intrusion of fluoride particulates from defendant's aluminum plant onto the plaintiff's ranch constituted a trespass. Further, in Martin, and soon thereafter in Fairview Farms v. Reynolds Metals Co., 176 F. Supp. 178 (D.C. Ore. 1959), the courts suggested that the traditional distinction between trespass and nuisance was losing its significance for air pollution cases. Although they did not elaborate, the conclusion that trespass and nuisance have merged suggests that the numerous limitations which have been devised by courts in the United States for private nuisance, most notably "balancing the equities," may become applicable to traditional trespassory invasions.

It appears quite doubtful that a Canadian court will deem particulates to be a direct infringement of a complainant's possessory interest in land, because in British courts, whose influence is clearly felt in Canada, it appears that a trespass will be affirmed only when there has been a breaking and entering upon real property. See Southport Corp. v. Esso Petroleum Co., 2 All E.R. 561 (1954), rev'd on other grounds, 3 All E.R. 564 (1955).

8. By 1912, twenty-three of the twenty-eight cities in the United States with a population in excess of 200,000 had some form of smoke control ordinance which provided either criminal sanctions or regulatory administrative agencies as the means of enforcement. Edelman, Air Pollution Control Legislation, in 3 AIR POLLUTION 560 (2d ed. A.C. Stern ed. 1968).

9. The usual measuring device was the Ringlemann Smoke Chart, which measured
sanctions were rarely enforced by reluctant district attorneys or unwilling judges\textsuperscript{10} and regulatory agencies routinely granted variances to give established industries an exemption from regulations and control requirements. Because the courts and regulatory agencies rarely assessed heavy fines, industries found it more expedient to admit their guilt and pay the fines rather than spend the money to obtain more modern and effective control equipment.\textsuperscript{11} Furthermore, since these ordinances were public in nature, courts in the United States and Canada did not allow individuals to bring actions to abate public nuisances unless these individuals could show that they suffered some special damage beyond that suffered by the public at large.\textsuperscript{12} If they were unable to show these special injuries, then they were required to defer to public officials—even if it was demonstrable that serious air pollution existed and that the public officials were not inclined to take any action.\textsuperscript{13}

The experience of Los Angeles is the only notable example of effective municipal control in the two countries. An air pollution control agency was created there in 1947,\textsuperscript{14} and in subsequent years progressively elimi-
nated or contained numerous stationary sources of air pollution: industrial smoke and dust, burning of rubbish in backyard and industrial incinerators, and the burning of sulfur-bearing fuel oil for the generation of electricity by public utilities, oil refineries, and the metal smelting industry. But although the commitment of the public was strong, and the rules promulgated were strictly enforced, the control of these stationary sources was ineffective in controlling overall air pollution in the Los Angeles basin because of the tremendous increase of automobile exhaust emissions in the 1950's and 1960's. This result vividly demonstrates the basic weakness in public nuisance ordinances—designed to deal with stationary sources of air pollution, they are unable, even if rigidly enforced, to control the more pervasive forms of transitory pollution, such as motor vehicle exhaust emissions.

Clearly, the success of public nuisance ordinances in the control of air pollution is limited. Individuals are usually unable to sue to abate public nuisances because they are unable to show the requisite special damages suffered apart from the general public. Consequently, only district attorneys and regulatory agencies have the clear right to obtain abatement of public nuisances. Yet because many of these officials fail to act and, as in the case of Los Angeles, because the most significant forms of air pollution are transitory in nature, it has become apparent that piecemeal municipal control cannot be effective in mastering the substantial forms of pollution which plague the United States and Canada today.

B. Federal Legislation in the United States

For many years Congress relied upon municipal regulations for the control of air pollution. As a result, early federal legislation did no more than provide for research and financial assistance to local agencies. But

15. Id. at 82-114.
16. From 1954 to 1956, when the United States government was spending only $8.6 million for air pollution control, the people of Los Angeles County were investing more than $8 million to support the effort for air pollution control. Id. at 87.
17. In its first twenty-five years, the Los Angeles Air Pollution Control District adopted more than one hundred rules restricting the emission of air pollution from stationary sources. During the years 1955-67, 36,565 cases were prosecuted, with a ninety-six percent conviction rate and fines amassing $880,000. Hill, The Politics of Air Pollution: Public Interest and Pressure Groups, 10 Ariz. L. Rev. 37, 46-47 (1968).
18. In 1967, it was estimated that over ninety percent of the smog in the Los Angeles Basin was attributable to automobile exhaust emission. Statement by Warren Dorn, Member, Board of Supervisors, Los Angeles County, Hearings on S. 780 Before the Subcommittee on Air and Water Pollution of the Senate Committee on Public Works, 90th Cong., 1st Sess., pt. 1, at 101 (1967).
as it became more apparent that municipal control could not effectively regulate the modern forms of air pollution, especially exhaust emissions, Congress took an increasingly active role in the area.\textsuperscript{20} It was not until 1967, however, that Congress enacted its first major piece of air pollution legislation, the Air Quality Act,\textsuperscript{21} which was subsequently strengthened by the adoption of the Clean Air Amendments in 1970.\textsuperscript{22}

1. The Air Quality Act of 1967

In this first major piece of federal legislation, Congress authorized the Secretary of Health, Education, and Welfare to designate air quality regions on the basis of meteorologic and urban factors, and to publish air quality criteria describing the effects of various levels of air pollutants.\textsuperscript{23} From this data, Congress required that the States establish air quality standards and implementation plans for the regions designated.\textsuperscript{24} The Secretary was authorized to bring federal enforcement action in either of two situations: first, if intrastate pollution was involved, the Secretary could seek abatement (a) at the direct request of the governor of the state or (b) if the Secretary determined that an offending source constituted an "immediate and substantial endangerment to the health of persons" and the state had failed to take action;\textsuperscript{25} and second, if interstate pollution was involved, the Secretary could take action (a) if any state failed to meet its air quality standards or (b) if the offending source was in one state and caused substantial injury in a neighboring state.\textsuperscript{26}

Despite the Secretary's power, however, the Act did not establish effective federal enforcement machinery to diminish air pollution. Rather it provided for a long and cumbersome process of hearings and conferences before federal action could be taken.\textsuperscript{27} As a result, between 1967

\textsuperscript{24} 42 U.S.C. § 1857d (1967).
\textsuperscript{25} 42 U.S.C. § 1857d(c) (1967).
\textsuperscript{26} 42 U.S.C. § 1857d(d) (1967).
\textsuperscript{27} The Secretary could make recommendations for remedial action to abate a pollution source, wait six months, and then call a public hearing where evidence from all sides would be heard by his delegates. The delegates would then make recommendations to the Secretary, who would forward them to the polluter. If after six months the polluter did not remove the objectionable pollutant, the Secretary could then ask the Attorney General to initiate court action under the Act. 42 U.S.C. §§ 1857d(e)-(g) (1967).
and 1970, only one case reached the courts under the enforcement provisions of the Act.\textsuperscript{28} In addition, the designation of specific regional air quality control districts left significant parts of many states without any protection under the federal legislation.\textsuperscript{29} Further, since the individual states were responsible for implementing their own air quality criteria, some of the more heavily industrialized states were permitted to elect to implement less stringent standards so as not to impede existing industry or to discourage further industrial development.

\section*{2. The Clean Air Amendments of 1970}

The Clean Air Amendments are by far the most significant Congressional legislation dealing with air pollution control, and represent an important change in legislative policy. Instead of promulgating rules commensurate with current technology and economic feasibility, the Amendments recognize the paramount need for speedy eradication of all forms of air pollution regardless of the state of current technology and the consequence to those industries responsible for pollution.\textsuperscript{30} The four significant provisions of the Clean Air Amendments deal with (1) national ambient air quality standards, (2) automobile emissions, (3) enforcement, and (4) citizen suits.

First, the Amendments provide that the Environmental Protection Agency (EPA), the new federal agency for environmental control,\textsuperscript{31}

\begin{quote}
\textsuperscript{29} The Secretary was required to designate air quality regions only for those areas which had a current pollution problem. There was no air quality region designated for those areas where there was no current threat of pollution, thereby potentially leaving them unprotected from subsequent encroachment by polluters.
\textsuperscript{30} Senator Muskie, one of the sponsors of the Clean Air Amendments, introduced the Senate version of the Amendments by explaining: The first responsibility of Congress is not the making of technological or economic judgments—or even to be limited by what is or appears to be technologically or economically feasible. Our responsibility is to establish what the public interest requires to protect the health of persons. This may mean that people and industries will be asked to do what seems to be impossible at the present time. . . .
Detroit has told the nation that Americans cannot live without the automobile. This legislation would tell Detroit that if that is the case, they must make an automobile with which Americans can live.
\textsuperscript{116} CONG. REC. 32901-02 (1970).
\textsuperscript{31} In 1970, the President consolidated the various federal bureaus involved in the work of pollution control into this one integrated pollution control and enforcement agency. As a part of this reorganization, the functions of the Secretary of Health, Education, and Welfare under the Clean Air Act of 1967 were transferred to the Administrator of the EPA. Reorganization Plan No. 3 of 1970, § 2(a)(5), eff. Dec. 2, 1970, 5 U.S.C. App. at 610 (1970).
\end{quote}
develop air quality criteria for the major pollutants, including particulates, sulfur dioxide, carbon monoxide, hydrocarbons, and nitrogen oxides, and select from these criteria national ambient air quality standards to be applied uniformly throughout the fifty states. In a departure from previous Congressional thinking, the Amendments require the EPA to establish "primary" and "secondary" air quality standards. Primary standards are those which are "requisite to protect the public health," and thus are mandatory standards representing the maximum level that can be tolerated by public health. Secondary standards are those "requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutants in the ambient air," and reflect the preferred or acceptable level of pollution for the comfort of the citizenry.

In April 1971 the EPA published the national primary and secondary standards relating to the six major classes of air pollutants. The Amendments require that, upon publication of these standards, the states then formulate plans to implement these standards in each air quality region within their borders, attain the primary standards within three years, and achieve the secondary standards within a stipulated time thereafter. The EPA is given full authority to review and reject the state proposals and, if their plans are unsatisfactory, the EPA may impose plans of its own upon the states. Most state plans are still in the process of finalization.

Second, the Amendments give the EPA a substantial degree of control over the enforcement of motor vehicle standards set by Congress. These standards were formulated by Congress as deadlines necessary to protect

33. Id. §§ 1857c-4(b)(1) & (2).
34. 40 C.F.R. §§ 50.4-11 (1973). In addition, the decision of Fri v. Sierra Club, 412 U.S. 541 (1973), affg by an equally divided Court sub nom. Sierra Club v. Ruckelshaus, 94 F. Supp. 223 (D.D.C. 1972), has further refined the criteria in areas where the air is superior to the standards promulgated. For those "clean air states," further degradation of the air is not permitted, even though the air quality exceeds the minimum standards.
36. Id. § 1857c-5(c).
37. By July 1, 1973, the EPA had approved just ten of the fifty state implementation plans. 40 C.F.R. § 52.2850 (1973). In addition, plans for the District of Columbia, Guam, Puerto Rico, and the American Samoa have been approved. 40 C.F.R. §§ 52.2850, 52.2872, 52.2722, 52.2822 (1973).
the public health without regard for the state of automobile technology and they require that the automobile manufacturers meet a ninety percent reduction in exhaust emissions for new vehicles produced in 1975 and 1976. Further, the Amendments provide that the EPA, to assure compliance with these standards, can regulate the manufacture and sale of fuels which may cause harmful emissions or which interfere with the adjustment of automobile engines.

Third, once the implementation plans are put into effect by the states, the EPA is charged with supervision and enforcement of the air quality standards. The EPA may enforce the plan by issuing an order to require any individual polluter to comply with the standards, or to force a polluter to cease operation immediately when it determines that the pollution emanating from his plant is imminently dangerous to the health of persons. If any polluter fails to comply with such an order, the EPA may commence a civil action for a temporary or permanent injunction.

Finally, in one of its most far-reaching provisions, the Amendments allow any citizen to commence a civil action against a violator of the standards promulgated under the Act if the EPA has failed to do so. The federal courts are given jurisdiction, without regard to the amount in controversy or the diversity of parties, to enforce the emission standards or other limitations promulgated pursuant to the Act.

38. Clean Air Amendments of 1970, 42 U.S.C. §§ 1857f-1(b)(1)(A) & (B) (1970). The specific standards require ninety percent reductions in hydrocarbons and carbon monoxide by 1975 and ninety percent reductions in oxides of nitrogen by 1976. However, due to the Energy Crisis during the winter of 1973-74, several proposals have been made by the President and in Congress to retain earlier, less stringent standards in order to ensure that there would be no increased demands on existing national fuel supplies. See generally 4 Env. Rep. 1277 (1975).


40. Id., §§ 1857c-8(a) & 1857h-1. Section 1857h-1 gives the EPA so-called “emergency powers” when there is an “imminent and substantial endangerment to the health of persons” from a pollution source. This was the authority utilized by the EPA on November 18, 1971, when it ordered twenty-three industries in Birmingham, Alabama to cease operations in order to curtail the emission of air pollutants in a particularly severe “smog attack.” EPA, ANNUAL REPORT OF THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY 3 (1972).

41. Clean Air Amendments of 1970, 42 U.S.C. § 1857c-8(b) (1970). Any polluter who refuses to comply with an order to cease operation is subject to a fine of up to $25,000 per day. When an automobile manufacturer fails to comply with the motor vehicle emission standards promulgated by Congress, it is also subject to a temporary or permanent injunction, and to civil penalties of up to $10,000 for each violation. Id. §§ 1857c-8(c)(l) & 1857f-4.

42. Id. § 1857h-2. This was the provision successfully utilized by the plaintiff in Fri v. Sierra Club, 412 U.S. 541 (1973).
C. Legislation in Canada

1. Federal Legislation

As in the United States, the Canadian federal government was reluctant to impose a national scheme for air pollution control on the cities and provinces, and instead for many years relied upon municipal regulation. But unlike the Congress, Parliament has not yet fully abandoned this principle.

Until 1970, federal involvement in air pollution control was negligible. Since that time, however, Parliament has taken three significant steps toward implementing a national air pollution control program by creating Environment Canada, the national department for environmental control, and by enacting the Clean Air Act and Motor Vehicle Safety Act.

The Clean Air Act, the first major piece of federal legislation, together with the provisions of the Motor Vehicle Safety Act provides many of the same general features as the United States Clean Air Amendments. First, the Clean Air Act provides that the Minister of Environment Canada formulate ambient air quality objectives for the major air contaminants and publish these objectives as guidelines for the maintenance of ambient air quality. The Act requires that these objectives be divided into three levels: the "tolerable," "acceptable," and "desirable" ranges. The tolerable range is the equivalent of the United States primary standard, and indicates the level at which there is "imminent danger" to
the public health. The acceptable range is comparable to the United States secondary standard—the level at which crops, soil, water, and the general public comfort are protected from any known or anticipated effects. The desirable range represents the long-range goal for all of Canada. It sets the maximum level of pollution which will be allowed the presently pollution-free parts of the country and provides a basis for future development of control technology to reduce current pollution levels in the more polluted parts of the country.47

In October 1971 the Minister proposed air quality objectives for the acceptable and desirable levels.48 These objectives are not mandatory for the provinces, but are intended merely to support the provincial agencies in their control of air pollution. The Act authorizes the Minister to enter into agreements with the individual provinces to utilize the air quality objectives in controlling provincial and interprovincial air pollution.49 This is quite unlike the situation in the United States, where the states are required to adhere to the air quality standards established by the federal government. Yet the Parliament expects most, if not all, provinces to enter into agreements with the Minister, thereby achieving uniformity of standards across Canada on a voluntary basis.50

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<thead>
<tr>
<th>Pollutant and Concentration</th>
<th>United States Secondary Standards</th>
<th>Canadian Acceptable Objectives</th>
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<td>Particulate Matter:</td>
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<tr>
<td>Annual Geometric Mean</td>
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<td>70</td>
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<tr>
<td>Maximum 24 hr. concentration</td>
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<td>120</td>
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<td>Sulfur Dioxide:</td>
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<tr>
<td>Annual Arithmetic Mean</td>
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<tr>
<td>Maximum 24 hr. concentration</td>
<td>260(.10)</td>
<td>300(.11)</td>
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<td>Carbon Monoxide:</td>
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<td>Maximum 8 hr. concentration</td>
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<tr>
<td>Maximum 1 hr. concentration</td>
<td>40(35)</td>
<td>35(30)</td>
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<td>Photochemical Oxidants:</td>
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<tr>
<td>Maximum 1 hr. concentration</td>
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<td>Hydrocarbons:</td>
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<td>Maximum 3 hr. concentration</td>
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</table>

The Act also authorizes the Minister to set national emission standards for stationary sources of pollution where there is a significant danger to health or where international agreements on air pollution are involved. These standards are obligatory upon the provinces and the polluters, and may be enforced when the Minister deems a particular air pollution problem to be a national emergency.

Second, although the Clean Air Act only authorizes the Minister to regulate fuel composition, control of automobile emissions at the federal level has been authorized by the Motor Vehicle Safety Act. Pursuant to this authority, the Motor Vehicle Emissions Control Project was initiated in 1970, and has been responsible for promulgating emission control regulations. It is currently involved in proposing new motor vehicle emission requirements for 1975–76 automobiles and, in conjunction with the Minister of Environment Canada and the Transport Minister, has been active in assuring that these proposed requirements are incorporated by Parliament in the Motor Vehicle Safety Act. In large part, these proposed requirements are the same standards established by Congress in the Clean Air Amendments and, once passed by Parliament, would put Canada and the United States on an equal footing for controlling automobile emissions at the federal level.

Third, although the major responsibility for enforcement is at the provincial level, the Minister is authorized by the Clean Air Act to prosecute actions when he determines that a pollution source constitutes a significant danger to the health of persons or will violate a term of any international obligation entered by Canada. In addition, he may order any federal work, undertaking, or business to cease operations when it has failed to meet his air quality standards.

Thus, while the Minister of the Environment does not have the broad
authority of the Administrator of the EPA in the United States, in that the Minister cannot enforce his own ambient air quality objectives if the provinces fail to do so, the federal legislation does allow the Minister to enforce international pollution agreements. But, unlike the provisions of the Clean Air Amendments, the Clean Air Act does not allow citizen suits to be brought in Canada when the Minister has failed to take an action specifically required by law.

2. The Responsibility of the Provinces

Unlike the United States, where the Clear Air Amendments give to the federal government the major responsibility for control, the provinces are still the main source of air pollution control in Canada. The Clean Air Act expressly leaves to the provincial governments the initiative for devising and enforcing appropriate pollution control measures in order to attain the air quality objectives promulgated by the Minister of the Environment.60

Ontario was the first province to enter upon an active program to abate air pollution, and in the years since has gained a reputation for strict enforcement and control. The first major provincial legislation was the Ontario Air Pollution Control Act of 1967,60 which has been augmented by the Environmental Protection Act of 1971.61 These acts have created the Air Management Branch of the Department of the Environment, which is empowered to establish air quality standards and detailed control regulations for both stationary sources of pollution and automobile emissions.62 A certificate of approval for air pollution control is required before a new stationary source of pollution can be constructed.63 Investigations and hearings may be called when the Director of the Air Management Branch determines that an existing source of pollution creates a serious danger to health, and if it is determined that the source has violated the Director's standards, he may issue a "stop order" directed to the person responsible for the contaminant.64

59. Id. § 19.
62. Id. §§ 5, 23.
63. Id. § 8(1).
64. Id. §§ 7, 8(4). Any person who fails to comply with a stop order or regulation of the Air Management Branch is guilty of a criminal offense, and is subject on a first conviction to a fine of not more than $5,000, and is subject to a fine of not more than $10,000 per day thereafter. Id. § 102.
British Columbia has also been involved for over a decade in the abatement of air pollution, but its scheme has not proved as successful as that of Ontario. In 1955 the City of Vancouver promulgated an air pollution by-law, which was amended in 1965 to provide for a regional district to include the entire lower mainland of the province. In a manner characteristic of the early municipal control of public nuisances, both enactments established administrative agencies to enforce smoke abatement ordinances. In 1970 legislation was passed to extend the jurisdiction of the provincial water pollution control board to include the control of air pollution. However, the practical experience of air pollution control legislation in British Columbia, both at the municipal, regional, and provincial levels, has pointed to vacillation and overall inadequacy. One writer noted that the provincial Pollution Control Board, from its inception in 1967 to 1971, failed to institute any prosecution for either an air or water pollution violation.

D. Conclusion: Legislative Provision for the Control of Air Pollution

In the last decade, both Congress and Parliament have assumed an increasing role in the control of air pollution. In the United States, the Clean Air Amendments have taken nearly all the responsibility from the states, and have created a significant control apparatus of mandatory air quality standards imposed upon stationary sources of pollution and new motor vehicles. In addition, Congress has recognized the importance of individual action by providing for citizen suits.

In Canada, the Clean Air Act merely establishes the federal government as a model for provincial and local control. The federal apparatus is responsible for devising air quality objectives which will be mandatory only on federal projects. Otherwise the federal agency may act only where a specific pollution source constitutes a danger to public health or where international agreements on air pollution are involved. As a result, substantial initiative rests with the provinces and their own concept of necessary air pollution control.

68. See, e.g., the statistics reported for the Vancouver By-Law, supra note 11.
69. Good, supra note 11, at 275.
II

THE CONTROL OF TRANSBOUNDARY AIR POLLUTION

A. THE WORK OF THE INTERNATIONAL JOINT COMMISSION

The International Joint Commission (IJC) was established by the Boundary Waters Treaty of 1909.\textsuperscript{70} The treaty was negotiated and signed by the United States and Great Britain, and was concluded in order “to inaugurate an ordered regime for the use, obstruction, or diversion of the international waters . . . [along] the common boundary between the United States and the Dominion of Canada. . . .”\textsuperscript{71} The predominate function of the Treaty was to create a permanent arbitral commission to settle transboundary water and navigational problems, but the farsighted draftsmen also provided that other matters of difference arising between the two nations could be referred to the IJC for resolution.\textsuperscript{72} Since 1909 the IJC has realized these wider aims through major investigative and judicial efforts directed toward transboundary air pollution.

1. The Trail Smelter Arbitration

In 1896 a smelter was constructed near the international border at Trail, British Columbia, which caused considerable damage to the property of farmers in the State of Washington.\textsuperscript{73} The farmers appealed to the United States government, which initiated proceedings on August 7, 1928, under the Boundary Waters Treaty.\textsuperscript{74} The United States asked the IJC to investigate the extent of the farmers' property damage and to assess the amount of indemnity necessary to compensate them. The Canadian

\textsuperscript{70} Treaty with Great Britain relating to Boundary Waters, and Questions Arising with Canada, January 11, 1909, 36 Stat. 2448 (1911), T.S. No. 548 (effective May 13, 1910) [hereinafter cited as Boundary Waters Treaty].

\textsuperscript{71} C.J. CHACRO, THE INTERNATIONAL JOINT COMMISSION 22 (1932).

\textsuperscript{72} Boundary Waters Treaty, supra note 70, art. IX:

The High Contracting Parties further agree that any other questions or matters of difference arising between them . . . along the common frontier between the United States and the Dominion of Canada, shall be referred from time to time to the International Joint Commission for examination and report, whenever either the Government of the United States or the Government of the Dominion of Canada shall request that such questions or matters of difference be so referred.

The International Joint Commission is authorized in each case so referred to examine into and report upon the facts and circumstances of the particular questions and matters referred, together with such conclusions and recommendations as may be appropriate . . . .

\textsuperscript{73} Rubin, Pollution by Analogy: The Trail Smelter Arbitration, 50 Ore. L. Rev. 259, 260 (1971).

\textsuperscript{74} Note 72 supra.
government agreed to this arbitration and after a series of investigations and hearings the IJC recommended that damages of $350,000 be paid by the smelting company to cover all claims up to January 1, 1932. On April 15, 1935, the two governments agreed to the award, and soon thereafter the company paid. Both governments later established another tribunal to determine post-1931 damages. This tribunal was directed to apply common law standards for private nuisance in determining its award, and it concluded that further damages of $78,000 should be awarded to the farmers. In 1941 the tribunal made its final report, indicating that the company had sufficiently improved its operation so that it no longer constituted a common law nuisance.

The significance of the Trail Smelter Arbitration is that the two nations cooperated in settling a dispute that was remarkably similar to a common law action in private nuisance. In fact, the tribunal explicitly rejected the United States claim that Canada had violated United States sovereignty, and instead adhered closely to the principle that the farmers in Washington, as the sole complainants, could not recover unless there were provable, substantial, physical damages to their traditional interests at common law. The consequences of this arbitration for the control of transboundary air pollution are manifest. The United States government, as an international complainant, was granted standing to sue in the IJC upon a showing of substantial damages to its citizens' property interests. Like the traditional common law remedies applied within each nation, the international remedy was limited to those specialized interests of individual citizens, and therefore is not available for the abatement of the more pervasive forms of air pollution common today along the international border.

76. Rubin, supra note 73, at 260.
78. Id. art. IV.
79. L.M. Bloomfield & G.F. Fitzgerald, supra note 75, at 138; Rubin, supra note 73, at 261-62.
80. L.M. Bloomfield & G.F. Fitzgerald, supra note 75, at 138; Rubin, supra note 73, at 261-62.
81. Rubin, supra note 73, at 273-74.
2. Subsequent Activities of the Commission

Since the Trail Smelter decision, the two nations have called upon the Commission on two occasions to deal with the problem of air pollution on the Great Lakes. In 1948 the nations asked the IJC to assess the extent of pollution in Detroit and Windsor caused by vessels in the Detroit River. After a series of investigations spanning twelve years, the study concluded that vessels were not a major source of pollution. Instead, it was determined that industrial, domestic, and transportation activities on land contributed the major portion of air contamination to the area. The study also concluded that the United States contributed a significantly larger share of the foul air and, due to the direction of the prevailing winds, Canada received the greater portion of the polluted air most of the time.

In 1966 the governments asked the Commission to make a further study into the sources of air pollution in the Detroit-Windsor area to ascertain what preventive or remedial measures could be taken to abate the pollution, and to estimate the cost of implementation. In January 1971 the investigation was completed, the Commission finding that over 4,250,000 tons of pollutants were generated annually in the Detroit-Windsor area, with the greatest portion being emitted from sources in the United States.

The Commission concluded that the current flow of pollutants created an ambient air quality inferior to the air quality standards promulgated by both of the federal governments, and that an annual expenditure of at least $65,000,000 would be required before transboundary pollution could be controlled and desirable air quality restored. The two governments have not yet acted on this report.

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82. L.M. Bloomfield & G.F. Fitzgerald, supra note 75, at 183.
83. Id. at 184-85.
85. International Joint Commission, Joint Air Pollution Study of St. Clair-Detroit River Areas 3-8, table 3-2 (1971). The report found that over three and one half million tons of pollutants were emitted in the Detroit-Windsor area, with United States sources responsible for between ninety percent and ninety-six percent of the total. Id. at 3-9, 7-10.
86. Id. at xxi.
87. Id. at xxiv.
88. Letter from John F. Hendrickson, Executive Director, United States Section, International Joint Commission, Washington, D.C., to author, October 10, 1973, on
3. Limitations on the Commission's Effectiveness

In 1966 the two governments also authorized the Commission to utilize its investigative power to examine any international air pollution problems which it might observe in the future, and to draw these problems to the attention of both governments for resolution. As a result, the International Air Pollution Advisory Board has been established under the auspices of the IJC to investigate and report upon air contamination along the border. Although the creation of the Advisory Board suggests that the two governments have agreed upon a cooperative, on-going program of air pollution control, the weaknesses and limitations in the Advisory Board are readily apparent. The Advisory Board has been given authority only to investigate pollution sources and to report its findings to the two governments. It has no control over the implementation of its recommendations and has no authority to impose sanctions upon polluters. If the two nations truly seek to control pollution under the auspices of the Commission, they will have to grant it some measure of independent authority in order that it may embark upon an active program of control and abatement of transboundary air pollution.

B. LEGISLATIVE RECOGNITION OF TRANSBOUNDARY AIR POLLUTION

1. United States Legislation

Congress recognized that industrial activities along its international borders might endanger the health and welfare of foreign nationals, and provided in the Air Quality Act of 1967 that the Secretary of Health, Education, and Welfare could invite a foreign country which has been adversely affected by pollution emitted from the United States to attend and participate in the hearings and conferences which occurred before control measures were undertaken. The foreign government would...
then be given all the rights of a state air pollution control agency to enforce the air quality standards of the state where the polluter resides in abatement proceedings resulting from these conferences.\textsuperscript{93} In addition, the Secretary could act on behalf of the foreign country to request the Attorney General to commence an action for abatement.\textsuperscript{94}

The Clean Air Amendments retained these provisions,\textsuperscript{95} and added one significant feature—the citizen suit. Under this provision, not only may citizens of the United States commence a civil action, but also any foreign national may commence a civil action on his own behalf either against any polluter who violates an emission standard or an order of the EPA, or against the EPA when it has failed to perform its duties under the Act.\textsuperscript{96}

2. \textit{Canadian Legislation}

Parliament has given the Minister of the Environment authority under the Clean Air Act to seek abatement of any stationary source which has infringed upon a national emission standard where the infringement is "likely to result in the violation of a term . . . of any international obligation entered into by the Government of Canada" relating to air pollution along the international boundary.\textsuperscript{97} Thus, Parliament appears to be anticipating an agreement between the two nations for mutual control of transboundary air pollution. Once such an agreement is reached, the federal government will take over primary responsibility from the provinces in the areas affected by transboundary pollution.

The Canadian legislation has been drafted to encourage international agreement on air pollution. It should be assumed that Parliament, cognizant of the IJC's report of transboundary pollution in the Detroit-\textit{St. Clair} River areas, added this provision concerning international agreements in the hope that the two governments would reach an accord on these problems. Whether such an agreement will be forthcoming depends in large part upon the reception of the Commission's report in Washington and Ottawa.

\textsuperscript{93} \textit{Id.}\textsuperscript{94} \textit{Id.} § 108(g)(1).\textsuperscript{95} Clean Air Amendments of 1970, 42 U.S.C. §§ 1857d(c), (g)(1) (1970).\textsuperscript{96} Id. § 1857h-2(a).\textsuperscript{97} Clean Air Act, 19 & 20 Eliz. 2, c. 47, §§ 7(1)(b), 9(1)(a) (Can. 1971). See note 100 infra.
C. CONCLUSION: A PROPOSAL FOR THE CONTROL OF TRANSBOUNDARY AIR POLLUTION

The United States and Canada enjoy a cooperative association arising from their common heritage and extensive border. As early as the 1920s they entered into a mutual accord to provide relief to United States citizens whose property had been damaged by fumes from a Canadian smelter. Yet the Trail Smelter Arbitration was essentially a private nuisance action, wherein individual plaintiffs with special property damage were awarded monetary damages. Since that time the activities of the International Joint Commission have made it obvious that the pervasive forms of air pollution in the Detroit-Windsor area, especially stationary sources of pollution, cannot be controlled by arbitral commissions settling disputes between individual citizens.

It has been suggested that Americans and Canadians can obtain jurisdiction to bring individual actions against foreign sources of transboundary pollution. But the inherent limitations upon such private remedies make it all the more crucial that an international agency be established with powers to investigate, report, and take action in order to control the mounting pervasive forms of transboundary pollution incapable of resolution by mere actions in private nuisance. The basic framework for such an agency is present in the International Joint Commission. The nations should expand the powers of the Commission to ensure that its efforts are no longer obscured by the major emphasis given in each country to the national schemes; otherwise, control of transboundary air pollution will continue to be less than satisfactory. The Commission has already executed the first step in the expansion by designating “transboundary air quality objectives” for air flowing in either direction across the international boundary in the Detroit-St. Clair River areas. What the Commission needs now is an effective cooperative agreement enabling it to enforce these objectives.

Legislation in both countries already provides the basic mechanism for such a cooperative agreement. The United States Clean Air Amendments provide for state agencies to enforce the federal air quality standards. The Canadian Clean Air Act provides for provincial enforcement.

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except where a federal work or an international obligation is involved. As a result of these provisions, an independent international control agency with enforcement power can be established between the nations without requiring Congress or Parliament to change their basic domestic air pollution control plans. This agency would have the authority to regulate and prosecute sources of pollution by utilizing the provisions of the Clean Air Amendments to control emissions from United States sources which invade Canadian airspace and by utilizing the provisions of the Clean Air Act to control emissions from Canadian sources which invade the United States airspace.

While the agency might conceivably be denied the power to set transboundary standards, and be permitted only to enforce United States standards against United States polluters and Canadian standards against Canadians, the agency should be permitted to create a uniform set of ambient air quality standards to apply to both sides of the international boundary so that it would not be required to administer dual standards. Such a double standard may lead to inequitable results and is certainly unnecessary, not only because the United States and Canadian ambient air quality standards are readily comparable, but also because the Com-

100. Section 7 of the Clean Air Act provides:

(1) Where the emission into the ambient air of an air contaminant in the quantities and concentrations in which it is consumed or produced in the operation of stationary sources... would

(2) be likely to result in the violation of a term or terms of any international obligation entered into by the Government of Canada relating to the control or abatement of air pollution in regions adjacent to any international boundary or throughout the world,

the Governor in Council may prescribe national emission standards establishing the maximum quantities, if any, and concentration of such air contaminant that may be emitted into the ambient air by stationary sources...

Clean Air Act, 19 & 20 Eliz. 2, c. 47, § 7 (1971). Section 9 of the same act is its enforcement provision.

101. The international agency proposed herein will be responsible only for the control of stationary sources of pollution affecting the quality of transboundary ambient air. Motor vehicle emissions do not require regulation at the international level because of the uniform stand taken by the two nations with regard to new vehicles manufactured after 1975-76. See note 56 supra and accompanying text.

102. A less ambitious proposal to enhance the effectiveness of the IJC was made by Frederick J.E. Jordan, supra note 91, at 300-01. He suggested that the governments

(1) add a clause to the Boundary Waters Treaty specifically giving the IJC authority over transboundary air pollution, (2) vest the Commission with jurisdiction to investigate sources of air pollution and suggest corrective measures, (3) authorize the IJC to formally report offenders to the appropriate national Attorney General to request remedial action, (4) give statutory effect to the Commission's air quality objectives and power to the Attorneys General to enforce these objectives, and (5) grant substantial financial aid to the Commission in order to pursue its research, investigative, and regulatory activities.

103. See note 48 supra.
mission has already demonstrated the workability of uniform standards by designating its own transboundary air quality objectives.\textsuperscript{104}

If given effective financial aid, and the cooperation of the EPA and Environment Canada, this agency would become the necessary international mechanism for the control of air pollution which now escapes the watchful eye of the two national control programs by spilling into the neighboring nation's airspace.

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\textsuperscript{104} See note 99 supra and accompanying text.