Chapter 21: Environmental Law

Jeffrey G. Miller
C H A P T E R 21

Environmental Law

JEFFREY G. MILLER

§21.1. Introduction. During the 1972 Survey year, a number of developments, state and federal, legislative and administrative, altered significantly the thrust of Massachusetts efforts in environmental protection. One major development was the promulgation of administrative regulations which finalize most of the details of the Massachusetts plan to implement the provisions of the Federal Clean Air Act Amendments of 1970.\(^1\) The Clean Air Act provides for general federal supervision of the manner in which states fulfill their pollution control responsibilities. The procedural steps by which the Massachusetts implementation plan was developed and the various facets of the plan itself are discussed in Part A of this chapter.

The Federal Water Pollution Control Act Amendments of 1972\(^2\) provide for similar federal supervision of state water pollution control programs. Although the details of the Massachusetts response to this federal enactment have yet to be finalized, some of the major provisions of the 1972 Amendments are highlighted in Part B.

In addition, a number of Massachusetts statutes enacted during the 1972 Survey year dealt with environmental considerations. The most significant of these was Chapter 781 of the Acts of 1972 which requires that the environmental impact of all projects proposed by state agencies be fully examined and all practicable measures be taken to prevent damage to the environment. Chapter 781 is discussed in Part C.

Other 1972 Massachusetts enactments amended statutes which grant tax incentives for industrial air and water pollution control facilities, afford protection of wetlands, floodplains and marine resources and create a private right of action. These statutory changes are discussed in Part D.

A. Air Pollution Control

§21.2. The Massachusetts implementation plan: Introduction and background. Through a series of enactments collectively known as the

JEFFREY G. MILLER is a member of the Massachusetts Bar.

Mr. Miller wrote §§21.2-21.6.

§21.2  ENVIRONMENTAL LAW

Clean Air Act,1 Congress has developed a plan by which the states may institute their own programs to control air pollution within their boundaries while keeping within the framework of a general federal plan. While the Act declares a Congressional policy of leaving the responsibility for the achievement and maintenance of air quality to the states,2 it also reveals an intent to develop a viable national control strategy through the provisions authorizing federal intervention should states fail to implement or enforce minimum federal standards.3 The wrinkles of "new federalism" inherent in these provisions are sometimes surprising, often confusing, and invariably complex. The following sections will explore the scope and enforceability of the Massachusetts statutes and regulations which implement the Act's provisions for the control of air pollution.

Under the provisions of the Clean Air Act, several phases of state-federal interaction must precede final adoption of state implementation plans: (1) federal designation of air quality control regions;4 (2) federal listing of air pollutants for which completed air quality criteria and standards must be issued;5 (3) federal publication of national primary and secondary ambient air quality standards6 for each air pollutant for


Responsibility for air pollution at the federal level was originally vested in the Surgeon General and later in the Secretary of Health, Education and Welfare. By virtue of Reorg. Plan 3 of 1970, 35 Fed. Reg. 15623 (1970), and the Clean Air Amendments of 1970, the federal air pollution control responsibilities were transferred from the Secretary to the Administrator of the newly-created Environmental Protection Agency.

2 See the congressional finding, dating back to the 1955 legislation, that "the prevention and control of air pollution at its source is the primary responsibility of States and local governments," but "Federal financial assistance and leadership is essential," 42 U.S.C. §1857(a) (3)-(4) (1970). See also 42 U.S.C. §1857c-2(a) (1970). However, the trend of federal legislation since the initial 1955 Act has been toward increased federal responsibility at the expense of state autonomy. Compare the provisions of the successive federal legislation cited in note 1, supra.


6 "National primary ambient air quality standards . . . [are] ambient air quality standards the attainment and maintenance of which in the judgment of the [EPA], based on [air quality] criteria and allowing an adequate margin of safety, are requisite to protect the public health." 42 U.S.C. §1857c-4(b)(1) (1970).
which air quality criteria had been issued;7 (4) state preparation of an implementation plan designed to achieve and maintain the federal air quality standards;8 (5) federal approval of satisfactory portions of state plans;9 (6) federal publication of regulations which, if not subsequently incorporated by states, would supplant unsatisfactory aspects of state plans;10 and (7) state and federal enforcement of approved state plans and federal enforcement of federally-substituted plans.11

Within this administrative framework, the Environmental Protection Agency (the EPA)—the agency which is charged with the implementation of the Clean Air Act—has designated six air quality control regions, three interstate and three intrastate, within Massachusetts’ jurisdiction.12 Following the listing of a number of pollutants and the publication of air quality standards and criteria for these pollutants,13 the EPA promul-

8 Id. §1857c-5.
9 Id. §1857c-5(a)(2).
10 Id. §1857c-5(c).
11 Id. §1857c-8.
12 35 Fed. Reg. 18978-79 (1970), republished 36 Fed. Reg. 4543-5 (1971), now found at 40 C.F.R. §§81.12 to 81.267 (1972). The regions subject to Massachusetts jurisdiction are: (1) the Metropolitan Boston Intrastate Air Quality Control Region; (2) the Hartford-New Haven-Springfield Interstate Air Quality Control Region; (3) the Metropolitan Providence Interstate Air Quality Control Region; (4) the Merrimac Valley-Southern New Hampshire Interstate Air Quality Control Region; (5) the Berkshire Intrastate Air Quality Control Region; and (6) the Central Massachusetts Intrastate Air Quality Control Region, listed respectively in 40 C.F.R. at §§81.19, 26, 31, 81, 141, and 142 (1972).


13 Prior to December 31, 1970, the EPA had on two occasions issued air quality criteria for five pollutants: (1) 34 Fed. Reg. 1988 (1969) (for particulate matter and sulfur oxides); and (2) 35 Fed. Reg. 4768 (1970) (for carbon monoxide, photochemical oxidants, and hydrocarbons). Section 109 of the Act required that by January 30, 1971, the EPA publish proposed national primary and secondary ambient air quality standards for each pollutant for which air quality criteria
gated procedural and substantive regulations outlining the requirements for preparation, adoption and submission of state implementation plans.\textsuperscript{14} In January of 1972 the department adopted the Massachusetts implementation plan and submitted it,\textsuperscript{15} together with two specific time extension requests, for EPA approval.\textsuperscript{16} The EPA approved the plan, with three exceptions,\textsuperscript{17} and granted the two requested extensions in May 1972.\textsuperscript{18} Shortly thereafter the EPA published proposed regulations


\textsuperscript{15} 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §51.1120(b) (1972).

\textsuperscript{16} The first request was for an eighteen-month extension of time for developing a plan to attain and maintain the secondary standards for particulate matter and sulfur oxides in the Metropolitan Boston Region. The extension was granted under the authority of 42 U.S.C. §1857c-5(b) (1970); see also 40 C.F.R. §51.31 (1972). The second request was for an extension of time to devise a plan to achieve primary and secondary carbon monoxide standards in the Massachusetts portion of the Hartford-New Haven-Springfield region. This extension was granted under the authority of 42 U.S.C. §1857c-5(b) and (e) (1970); see also 40 C.F.R. §51.30, .31 (1972).

\textsuperscript{17} 37 Fed. Reg. 10842-46, 10872 (1972), inserting 40 C.F.R. §§51.1120 to .1128 (1972). The exceptions related to (1) the control strategy for nitrogen dioxide in the Massachusetts portion of the Hartford-New Haven-Springfield region; (2) the failure to require compliance schedules for meeting certain regulations; and (3) the failure to provide for enforceable procedures to prevent construction of new sources or the modification of existing sources which would violate the implementation plan, 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §§51.1124 to .1126 (1972). Compliance schedules are required by 42 U.S.C. §1857c-5(a) (2) (B) (1970) and 40 C.F.R. §51.15(a) (2) (1972). Enforceable procedures are required in connection with the construction of new sources and the modification of existing sources by 42 U.S.C. §§1857c-5(a) (2) (D) and (4) (1970), and 40 C.F.R. §51.18(c) (1972).

\textsuperscript{18} 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §51.1128 (1972). Concurrently with the grant of the two extensions, the EPA allowed the department until February 15, 1973 to formulate, and until December 30, 1974 to implement, transportation controls to achieve and maintain the primary and secondary standards for carbon monoxide and photochemical oxidants in the Metropolitan Boston region. Such standards are required by 42 U.S.C. §1857c-5(a) (2) (B) (1970) and 40 C.F.R. §§51.11(b) and .14 (1972).
to correct the three deficiencies in the Massachusetts plan.\textsuperscript{19} Thereupon the department submitted revisions intended to correct two of the deficiencies;\textsuperscript{20} the EPA approved the revisions and indicated that it would hold in abeyance the promulgation of final regulations regarding the third stated deficiency.\textsuperscript{21}\* Once approved, the substantive provisions of the Massachusetts air pollution control implementation plan became enforceable both by the EPA and by the state.\textsuperscript{22} Additionally the plan's


\*In Natural Resources Defense Council v. Environmental Protection Agency, Cases No. 72-1219 and 72-1224 (1st. Cir.), a decision rendered as this article was going to press, the First Circuit Court of Appeals held that the EPA's approval of the Massachusetts implementation plan was defective in a number of respects. Acting under its original jurisdiction in reviewing the approval of implementation plans (42 U.S.C. §1857h-5(b)(1)), the Court ordered the EPA to disapprove the variance and source reporting procedures in the Massachusetts plan. It held that, apart from brief postponements of a few weeks or months necessitated by mechanical breakdowns or acts of god, variances could not be granted after the mandatory deadline for the attainment of air quality standards. That deadline for primary standards is July 1975 or, where a two-year extension has been granted, July 1977. After that attainment date has passed, an implementation plan may be changed only upon the request of the governor of a state and the finding by the EPA that: (1) good faith efforts have been made to comply prior to the attainment date; (2) compliance is impossible because necessary technology is not available; (3) interim control measures will reduce the impact of the source on public health; and (4) the continued operation of the source is essential to national security or public health or welfare. 42 U.S.C. §1857c-5(f). These stringent tests make it unlikely that many variances will be granted after the air quality standards attainment dates have passed. In the meantime, variances may not be granted before such date without EPA approval. The court found that the Massachusetts source reporting requirements were defective insofar as they did not require periodic reporting but only upon the discretionary request of the Department of Public Health. It also found that the Commonwealth's legal authority might be insufficient to require public disclosure of all source emission data. It ordered the EPA to disapprove the Massachusetts plan in all of these respects and to promulgate regulations to correct the deficiencies.

\textsuperscript{22} 42 U.S.C. §1857c-8 (1970). It should be noted, however, that other parts of the plan have been and may be affected by rulings in two cases. The first, Sierra Club v. Ruckelshaus, 344 F. Supp. 253, 4 E.R.C. 1205 (D.D.C. 1972), aff'd 4 E.R.C. 1815 (D.C. Cir. 1972), required disapproval of those parts of state implementation plans which may allow future pollution, however slight, of areas that are presently pollution-free. Accordingly, on November 9, 1972, the EPA disapproved all state plans insofar as they did not guarantee the pollution-free future of unpolluted areas. 37 Fed. Reg. 23836 (1972), inserting 40 C.F.R. §52.21 (1972). The second case, Natural Resources Defense Council v. Environmental Protection Agency (1st Cir., No. 72-1224), has challenged EPA approval of all state implementation plans, including that of Massachusetts, due to the EPA's allegedly unwarranted granting of a time extension for the submission of transportation controls designed to reduce the pollution generated by vehicular traffic.
provisions became enforceable by private citizens under the citizen suit provision of the Clean Air Act, subject to various procedural requirements enabling state and federal authorities to take prior action.\textsuperscript{23} Similar enforcement power is also afforded private citizens under state law.\textsuperscript{24}

Prior to the 1970 revisions to Clean Air Act, a number of Massachusetts statutes conferred upon the Department of Public Health jurisdiction over air pollution control. G.L., c. 111, §§142A-E empower the department to undertake such regulatory functions as are necessary to control air pollution in the Commonwealth. G.L., c. 111, §142D, added in 1969, specifically authorizes the department to implement the provisions of the 1970 Clean Air Act.\textsuperscript{25} Of the wealth of material submitted by the Commonwealth to the EPA, the regulations promulgated by the department are most relevant for purposes of this discussion of the Massachusetts implementation plan. Under the plan submitted for approval, separate regulations were adopted for each of the six regions designated by the EPA.\textsuperscript{26} Although the structure of the regulations is identical for each region, the individual provisions vary substantively from region to region due to the differing air pollution problems peculiar to each region. Three categories of regulations will be considered in the following sections: (1) regulations of general applicability; (2) regulations pertaining to each of the six pollutants for which primary and secondary ambient air quality standards have been promulgated; and (3) regulations governing other types of air contaminants.

§21.3. Regulations of general applicability. The general thrust of the department's regulations is to abate present sources of air pollution and to prevent the creation of additional air pollution sources. Regulation 1 imposes an overall prohibition upon the operation of any emission source, alone or in conjunction with other sources, in a manner which will cause a condition of air pollution.\textsuperscript{1} As a condition precedent to con-

\textsuperscript{24} G.L., c. 214, §10A.
\textsuperscript{25} Not all Massachusetts statutes and regulations controlling air pollution implement the Clean Air Act. Some of those that do not are treated in §21.5, infra. Some of the statutes and regulations that do implement the Act were already in existence, in either their present or similar forms, prior to the administrative interplay triggered by the Act. In addition, not all of the provisions of the Act contemplate implementation through state action; some of these exclusively federal aspects of the Act are set forth in §21.5, infra.
\textsuperscript{26} "Regulations for the Control of Pollution in the Berkshire (Central Massachusetts, Merrimack, Metropolitan Boston, Pioneer Valley and Southeastern Massachusetts) Air Pollution Control District[s]," adopted by the department on January 26, 1972, were filed with the Secretary of State on April 24, 1972 and made effective as of June 1, 1972. These regulations supplanted less extensive regulations previously in effect.

§21.3. 1 "Air pollution," as defined in Regulations, Definition 5, encompasses conditions which (1) cause a nuisance; (2) may injure persons, animals, vegetation or property; or (3) unreasonably interfere with the comfortable enjoyment of life or property or the conduct of business.
continued operation, certain major pollution sources must be registered annually with the department under the provisions of Regulation 12. Regulation 2 strictly limits the construction or modification of emission sources. Specifically, no building permit may be issued for the construction or modification of an emission source unless the source has been registered under the provisions of Regulation 12, nor may the construction or modification of the source proceed unless operational details have been approved by the department. Regulation 6 sets maximum smoke density and smoke emission rates for stationary sources.

§21.4. The six specifically regulated pollutants. As a prelude to a discussion of the Massachusetts regulations governing the six air pollutants for which the EPA has promulgated national primary and secondary ambient air quality standards—namely, sulfur oxides (SO₂), particulate matter, nitrogen oxides (NOₓ), hydrocarbons (HC), carbon monoxide (CO), and photochemical oxidants (commonly known as "smog")—it is appropriate to interject some background information relating to those pollutants. In terms of volume and severity of effects, these six pollutants have been identified as the major air contaminants. Table 1 lists the source and quality of emissions for five of the six pollutants.

2 Regulation 12.1. Sources covered by this regulation include: (1) fossil fuel utilization facilities having a heat input capacity in excess of 3 million BTU per hour (the size required for small manufacturing establishments, hospitals and very large apartment complexes), Regulation 12.2.1; (2) incinerators having the capacity of reducing in excess of 1,000 pounds of waste per hour (the size required by larger commercial, industrial or municipal establishments), Regulation 12.4.1; and (3) a variety of specified industrial sources (see Regulation 12.3.2) emitting specified amounts of particular pollutants (see Regulations 12.5.1 and 12.1).

3 Regulation 12.1.

4 Regulation 2.1. Department disapproval, of course, could only be based on factors which might result in a condition of air pollution. Regulation 2.2. Since no enforcement mechanism was originally provided to prevent construction or modification of such sources, as required by 42 U.S.C. §1857c-(a)(2)(D) (1970), this portion of the implementation plan was disapproved, 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §52.1126 (1972). See also 40 C.F.R. §51.18 (1972). The deficiency was corrected by amendments to the department's regulations (Regulations 2.1.1 to 2.1.4, effective September 1, 1972) and this portion of the plan was subsequently approved, 37 Fed. Reg. 23088 (1972), revoking 40 C.F.R. §52.1126 (1972), promulgated 37 Fed. Reg. 11834 (1972); see §21.2., notes 17-19 and accompanying text, supra.

5 Visible emissions from incinerators are dealt with in Regulation 6.2. Stationary sources other than incinerators may not emit smoke with a density greater than No. 1 on the Ringleman Chart (see Regulations, Definition 8) (approximately 20% opacity) for periods aggregating more than six minutes in any hour or with a density greater than No. 2 on the Ringleman Chart (approximately 40% opacity) at any time, Regulation 6.1.1. Other sources, except incinerators, may not emit smoke of an opacity that could be controlled through available technology or operating procedures or, in any event, of an opacity greater than 20% for periods aggregating more than two minutes in any hour, Regulation 6.1.2. "Smoke," as defined in Regulations, Definition 38, does not include water vapor.
Table 11

<table>
<thead>
<tr>
<th>Source</th>
<th>SO₂</th>
<th>Particulates</th>
<th>NOₓ</th>
<th>HC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>(in millions of tons per annum)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>0.8</td>
<td>1.2</td>
<td>8.1</td>
<td>16.6</td>
<td>63.8</td>
</tr>
<tr>
<td>Fuel Combustion</td>
<td>24.7</td>
<td>8.9</td>
<td>10.0</td>
<td>0.7</td>
<td>1.9</td>
</tr>
<tr>
<td>Industrial Process</td>
<td>7.3</td>
<td>7.5</td>
<td>0.2</td>
<td>4.6</td>
<td>9.7</td>
</tr>
<tr>
<td>Solid Waste Disposal</td>
<td>0.1</td>
<td>1.1</td>
<td>0.6</td>
<td>1.6</td>
<td>7.8</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.6</td>
<td>9.6</td>
<td>1.7</td>
<td>8.5</td>
<td>16.9</td>
</tr>
</tbody>
</table>

The sixth pollutant, photochemical oxidants or smog, is not listed on Table 1 because it has not been technologically possible to establish the quantity of this pollutant. Smog is not emitted directly but is produced in the atmosphere by the chemical reaction of two other pollutants, nitrogen oxides and hydrocarbons, in the presence of sunlight. Consequently, any strategy to control smog must necessarily be aimed at reducing these two pollutants.

The table illustrates that transportation sources produce nearly one-half of the hydrocarbon and carbon monoxide emissions. Strategies to reduce these pollutants, as well as smog, must therefore focus upon motor vehicle emission controls. Control over aircraft and new motor vehicle emissions is not within the ambit of state enforcement since such state jurisdiction is largely pre-empted by Title II of the Clean Air Act. The states do, however, retain jurisdiction over the control of emissions from motor vehicles manufactured in prior years and even over aircraft (in the latter case, only to the extent that such control is not more demanding than the federal control).

Strategies to reduce the quantity of any one pollutant often have an effect extending beyond the control of that pollutant inasmuch as emissions of other pollutants will be simultaneously reduced. For example, in the greater Boston area, the use of low-sulfur fuel to reduce sulfur dioxide emissions has resulted in a reduction of particulate matter emissions since the low-sulfur fuel has a lower ash content than the high-sulfur fuel previously used. The regulations which are discussed below as control measures for particular pollutants can therefore be expected to control emissions of other pollutants as well. The extent of this collateral effect is illustrated in Table 2.


Table 2

<table>
<thead>
<tr>
<th>Regulation</th>
<th>$SO_2$</th>
<th>Particulates</th>
<th>NOx</th>
<th>HC</th>
<th>CO</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. General</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>2. Plan Approval and Emission Limitations</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>3. Nuclear</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>+</td>
</tr>
<tr>
<td>4. Fossil Fuel Facilities</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>5. Sulfur Content of Fuel</td>
<td>+</td>
<td>+</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>+</td>
</tr>
<tr>
<td>6. Visible Emissions</td>
<td>O</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>O</td>
<td>+</td>
</tr>
<tr>
<td>7. Open Burning</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>8. Incinerators</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>9. Dust and Odor</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>+</td>
</tr>
<tr>
<td>10. Noise</td>
<td>O</td>
<td>+</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>+</td>
</tr>
<tr>
<td>11. Transportation</td>
<td>O</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

+ Reduces emissions  O No effect on emissions

Sulfur oxide regulations. Each state implementation plan must demonstrate that the application of statutes and regulations contained in the plan will achieve the primary and secondary standards for sulfur oxides in each air quality control region within the time period specified in the Act. Four separate regulations promulgated by the department deal

3 "Regulations—Contaminant Relations" from III-22 of the Massachusetts implementation plan.

4 The primary standards for sulfur oxides are: (1) an annual arithmetic mean of 80 micrograms per cubic meter (0.03 parts per million), and (2) a maximum 24-hour concentration, not to be exceeded more than once per year, of 365 micrograms per cubic meter (0.14 parts per million). 40 C.F.R. §50.4 (1972).

These concentrations and others incorporated in the primary and secondary standards are to be measured at 25°C and 760 millimeters of mercury pressure. 40 C.F.R. §50.3 (1972). Tests for sulfur dioxide are to be made by the reference method described in 40 C.F.R. Part 50, Appendix A, or equivalent method.

5 The secondary standards for sulfur oxides are: (1) an annual arithmetic mean of 60 micrograms per cubic meter (0.02 parts per million), (2) a maximum 24-hour concentration, not to be exceeded more than once per year, of 260 micrograms per cubic meter (0.1 parts per million) and (3) a maximum 3-hour concentration, not be exceeded more than once a year, of 1,300 micrograms per cubic meter (0.5 parts per million), 40 C.F.R. §50.5 (1972). Test methods are the same as for primary standards, note 1, supra.

6 40 C.F.R. §51.13(a) (1972). The Act specified that the primary standards were to be attained "as expeditiously as practicable," but no later than three years after the approval of the implementation plan by the EPA and that the secondary standards were to be achieved within a "reasonable time," 42 U.S.C. §1857c-5(a)(2)(A) (1970). A "reasonable time" is three years if the secondary standards can be met by the application of "reasonably available control technology," unless the state shows good cause for postponing the application of such technology, 40 C.F.R. §51.13(b)(1) (1972). Where the secondary standards cannot be met by applying such technology or where they can be met but the state shows good cause for postponing the application of that technology, the meaning of "reasonable time" is not defined. 40 C.F.R. §51.13(b)(2) (1972).

Each state was required to make use of proportional or diffusional models or other appropriate procedures to demonstrate that its plan would meet the standards within the timetable specified in the Act, 40 C.F.R. §51.13(e)(1) (1972).
directly with the sources of sulfur oxide emissions. First, Regulation 5 limits the use of various types of fuel. The sulfur content of residual oil or coal burned in the core Metropolitan Boston region is limited to 0.5% and that burned elsewhere in the state to 1.0%. The sulfur content of No. 2 fuel oil burned throughout the Commonwealth is limited to 0.3%. However, a source may burn fuel of a higher sulfur content if the department approves an alternate plan which will have an air pollution effect not exceeding that resulting from use of the fuel prescribed by the Regulation. Residual fuel oil may not be burned at all in a fossil fuel utilization facility with an input capacity of three million or less BTU per hour, and may not be burned in the core Metropolitan Boston region after July 1, 1973 in such a facility with an hourly input capacity of six million or less BTU. No fuel with a sulfur content in excess of that prescribed for a particular region may be shipped to or within that region unless the department has approved the use of the fuel shipped. To facilitate enforcement, sellers and distributors of fossil fuel to be burned within the Commonwealth must register with the department and keep detailed records of sulfur content for all fuel transactions. Secondly, Regulation 4 provides that certain fossil fuel utilization facilities may not be constructed or modified until the department has approved plans and procedures and that no such facility, operated as a high-pressure system or otherwise designated by the department, may burn fossil fuel unless the facility is equipped with a smoke density sensing device of a type approved by the department and

7 In submitting its implementation plan to the EPA for approval in the fourth phase, §21.3, note 5, supra, of the Act's administrative program, the department requested, and was granted, an extension for submitting its plan to meet the secondary sulfur oxide standards in the Metropolitan Boston region, see 37 Fed. Reg. 10872, (1972) inserting 40 C.F.R. §52.1122(a) (1972). Such extension is authorized by 42 U.S.C. §1857c-5(b) (1970).
8 Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton, Somerville, Waltham and Watertown, Regulation 5.1.1 for the Metropolitan Boston region.
9 The limitation is actually expressed as 0.28 pounds of sulfur per million BTU heat release potential, the equivalent of 0.5% sulfur content, Regulation 5.1.1 for the Metropolitan Boston region.
10 The limitation is actually to 0.55 pounds of sulfur per million BTU heat release potential, the equivalent of 1% sulfur content, Regulations 5.1.2 for all regions, including the Metropolitan Boston region except in those cities and towns specified in note 8, supra.
11 The limitation is actually to 0.17 pounds of sulfur per million BTU heat release potential, the equivalent of 0.3% sulfur content, Regulation 5.1.3.
12 Regulations 5.1.1(a) and (b), 5.1.2(a) and (b), and 5.1.3(a) and (b).
13 Regulation 5.2.2.
14 Regulation 5.2.2. for the Metropolitan Boston region. But see Regulation 5.2.3 for that region.
15 Regulation 5.1.4.
16 Regulation 5.1.5.
17 Regulations 5.1.4(c) and 5.6.
18 Regulation 4.1.
maintained in a good state of repair. \textsuperscript{19} Thirdly, emissions of sulfur dioxide by industrial facilities and contact sulfuric acid plants are limited by Regulation 2.\textsuperscript{20} These sources must meet prescribed standards under the same compliance schedule established for particulate emissions, see §21.7, \textit{infra}. Finally, Regulation 12 provides that industrial facilities\textsuperscript{21} emitting more than four pounds of sulfur dioxide hourly may not be operated unless registered with the department.\textsuperscript{22}

The status of the standards that have been established by the EPA with regard to sulfur oxides has not been fully resolved. In \textit{Kennecott Copper Corp. v. Environmental Protection Agency},\textsuperscript{23} the national secondary standards were attacked under Section 307 of the Act\textsuperscript{24} on the grounds that they were arbitrarily imposed without adequate factual justification. The court of appeals found no indication of the basis upon which the EPA had established the secondary air quality standards for sulfur oxides and remanded the case to the EPA either for an indication of the basis upon which the standards were established or for a revision of the standards.\textsuperscript{25} The court specifically stated that the remand in the \textit{Kennecott} case was not intended to "halt or delay the on-going proceedings for state adoption of implementation plans to meet and maintain the national standards."\textsuperscript{26}

It is apparent that the validity of state statutes and regulations enacted or promulgated to attain a federal standard may be suspect in the event the federal standard is subsequently declared invalid. In \textit{Associated Industries of Massachusetts v. Frechette},\textsuperscript{27} however, the superior court ruled that the department's authority to promulgate regulations is not limited to the attainment of federal primary and secondary standards, but inures from the broader power "to prevent pollution or undue contamination of the atmosphere" under G.L., c. 111, §§142B and 142D. This ruling is also in accord with the Clean Air Act which expressly provides that, in most areas, the states merely have to meet the national standards as minimal standards and are free to enact regulations that

\textsuperscript{19} Regulations 4.2.1, 4.2.2 and 4.2.3.
\textsuperscript{20} Industrial facilities, as described in §21.3., note 2, \textit{supra}, may not emit more than 25 pounds of sulfur dioxide per hour. Contact sulfuric acid plants may not emit more than four pounds of sulfur dioxide per ton of production if new, or 27 pounds if existing. No such industrial facility or contact sulfuric acid plant may emit sulfur dioxide in concentrations greater than 500 parts per million. Regulation 2.5.
\textsuperscript{21} The types of facilities listed in §21.3., note 2, \textit{supra}.
\textsuperscript{22} Regulation 12.3.1.
\textsuperscript{23} 462 F.2d 846, 3 E.R.C. 1682 (D.C. Cir. 1972).
\textsuperscript{25} 462 F.2d at 850-51, 3 E.R.C. at 1685.
\textsuperscript{26} Id. at 851, 3 E.R.C. at 1685. As of this writing the EPA has taken no reported action pursuant to this remand.
\textsuperscript{27} 3 E.R.C. 1629, Eq. No. 94128 (Suffolk Super. Ct., Final Decree Jan. 27, 1972).
§21.4 ENVIRONMENTAL LAW

are more demanding than is necessary to meet the national standards.\textsuperscript{28} On the other hand, if the EPA were unable to justify a particular secondary standard as necessary to protect the public welfare, it might be difficult for a state to justify a statute or regulation aimed at a similar objective. Such speculation is largely academic inasmuch as the Act specifies a thirty-day time limit for challenging promulgated standards.\textsuperscript{29} *Kennecott* was the only challenge within the period, and it relates exclusively to the secondary standards for sulfur oxides.

In *Associated Industries* the plaintiffs, an association and three of its fuel-consuming members,\textsuperscript{30} challenged the department's refusal to grant them either a one-year deferment for implementing the sulfur content regulations or a one-year general variance from the application of the regulations. Arguing that the primary and secondary standards were met by the limitations of Massachusetts regulations previously in effect,\textsuperscript{31} plaintiffs contended that the regulations implementing the Act were unnecessary and arbitrary. The superior court rejected these arguments, holding, first, that the department's actions were reasonably supported by the evidence and, secondly, that the regulations need not be predicated on compliance with federal primary and secondary standards. The first holding was based on the familiar rule that the scope of judicial review of administrative action is limited to a determination of whether the administrative action "had reasonable support in the evidence."\textsuperscript{32} Such support was found in the testimony of "federal and state officials, and meteorological, medical and economic experts from the public and private sectors"\textsuperscript{33} relating to the concentrations of sulphur dioxide that could safely be emitted into the atmosphere. The second holding, as noted previously, was based on the department's statutory power to issue regulations to prevent or minimize pollution. Although the court concluded that the department's power was not limited to attaining or

\textsuperscript{30} The court held that the association had no standing in the case, relying on Kelley v. Board of Registration in Optometry, 351 Mass. 187, 192, 218 N.E.2d 130, 133-34 (1966). But for a more liberal view of standing in environmental cases see Sierra Club v. Morton, 405 U.S. 727 (1972).
\textsuperscript{31} Sulfur content regulations promulgated pursuant to the Clean Air Act of 1967 limited the sulfur content of residual oil (1) burned in the core Metropolitan Boston region, see note 8, supra, to 1.0% from October 1, 1970 to September 30, 1971, and to 0.5% thereafter, and (2) burned elsewhere in the state to 2.2% from October 1, 1970 to September 30, 1971, and to 1.0% thereafter. These regulations were approved by the EPA for the attainment of the primary standard for sulfur oxides in a letter to the Governor of Massachusetts dated August 4, 1971, notice of which was published in the Federal Register on February 3, 1972, 37 Fed. Reg. 2581-82 (1972).
\textsuperscript{33} 3 E.R.C. at 1630.
maintaining primary and secondary standards, the holding is alternatively based on its finding that there was "reasonable support in the evidence" to conclude that the second stage of the implementation plan (i.e., the regulations in issue) was necessary for the 'maintenance and attainment' of the ambient air quality standards." The plaintiffs conceded that they bore the burden to prove that the requested variance would not interfere with the attainment or maintenance of air quality standards, and the court appeared to concur. If this principle is extended to variance applications generally, then the burden on future applicants will be a heavy one.

Particulate matter regulations. The Massachusetts strategy to reduce particulate matter contamination is to be accomplished, not only by the reduction in particulate emissions resulting from the sulfur oxide regulations, but also through a number of regulations specifically aimed at controlling particulate matter emissions. Regulation 2 limits emissions of particulate matter from a number of sources including fossil fuel utilization facilities, ferrous cupola foundaries and non-ferrous foundries, asphalt batching plants, incinerators, and other specified industrial sources. All such sources were to have submitted compliance schedules to the department by December 31, 1972. Following public hearing and departmental approval, compliance schedules are to be

34 See Getty Oil Company v. Ruckelshaus, note 29, supra.
35 3 E.R.C. at 1631.
36 Id. at 1630.
37 40 C.F.R. §§50.4, 50.5 and 51.13 (1972).
38 The primary standards for particulate matter are: (1) an annual geometric mean of 75 micrograms per cubic meter, and (2) a maximum 24-hour concentration, not to be exceeded more than once a year, of 260 micrograms per cubic meter. 40 C.F.R. §30.6 (1972). The secondary standards are 60 and 150 micrograms per cubic meter, respectively. 40 C.F.R. §50.7 (1972). For particulate matter emission test methods and procedures see 40 C.F.R. §50.3 and Part 50, Appendix B (1972).
39 Regulation 2.5.1.
40 Regulation 2.5.2.
41 Id.
42 Regulation 2.5.3.
43 Regulation 2.5.2. Other specified industrial facilities are those listed in §21.3., note 2, supra.
44 Regulation 2.5. The Regulation originally required major sources, as defined in Definition 23, to submit compliance schedules by October 1, 1972, but enabled the department to allow other sources until December 31, 1973 to submit such schedules. This latitude was in contravention of 40 C.F.R. §51.15(a)(2) (1972) which required that states submit required compliance schedules to the EPA by February 15, 1973. Consequently the EPA disapproved this part of the Massachusetts implementation plan. 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §52.1125(a) (1972). The Regulation was then amended to its present state, which the EPA then approved, 37 Fed. Reg. 23088 (1972), revoking 40 C.F.R. §52.1125(a) (1972), promulgated by 37 Fed. Reg. 10972 (1972).
46 Regulation 2.5.
submitted to the EPA for its approval.\textsuperscript{47} Compliance schedules must provide for the achievement of the applicable emission limitation as soon as possible but in no case later than January 1, 1975. Schedules contemplating achievement of the emission limitations later than November 30, 1973, must include specific increments of progress to be met by specified dates.\textsuperscript{48} The department may adopt a compliance schedule by order and may require more stringent emission limitations than otherwise required by departmental regulations.\textsuperscript{49} Regulation 5, which limits the use of various types of fuel, limits the ash content of fossil fuels burned in the state to 9.0% by dry weight.\textsuperscript{50} Persons selling or distributing fossil fuels for burning within the state must register with the department,\textsuperscript{51} keep pertinent records, including the ash content of fuel sold, and make such records available to the department.\textsuperscript{52} Regulation 7, with certain exceptions, prohibits the open burning of any material.\textsuperscript{53} Emission sources must be registered under Regulation 12, and no industrial facility\textsuperscript{54} emitting more than five pounds of particulate matter per hour may be operated unless it is registered.\textsuperscript{55} Regulation 8 grants the department jurisdiction over incinerators. No incinerator may be sold, built, modified or used unless its design and operating procedure have been approved by the department.\textsuperscript{56} The department has commenced a suit against the Boston Housing Authority for the purpose of enjoining it from violating Regulation 8 through its continued use of more than five hundred incinerators of a design which has not been approved.\textsuperscript{57} No municipal, commercial or industrial incinerator may be built, modified or operated at a site not approved by the department.\textsuperscript{58}

\textsuperscript{47} Id. 40 C.F.R. §51.15(a)(2) (1972).

\textsuperscript{48} The stages include submittal of engineering plans, ordering of equipment, installation date, and compliance date. Regulation 2.5. See also 40 C.F.R. §51.15 (c) (1972).

\textsuperscript{49} Regulation 2.5 provides that the department may adopt a schedule by order contingent upon approval of the source's engineering plans for compliance.

\textsuperscript{50} Regulation 5.4.1.

\textsuperscript{51} Regulation 5.1.5.

\textsuperscript{52} Regulations 5.1.4(c) and 5.6. Distributors and shippers of fossil fuel must, upon demand, furnish their customer-users with satisfactory evidence of the ash content of fuel sold to them. Regulation 5.4.2.

\textsuperscript{53} Regulation 7.1. Exceptions include open burning for cooking, to assist in fighting fires, for training fire fighters, for agricultural and land clearing purposes, burning by blow-torches, burning of fungus-infested elm wood and burning approved by the department as meeting stated criteria, all where no alternative method of disposal is available. When adverse meteorological conditions would be aggravated by any open burning, the department may, after giving sufficient public notice, prohibit even the aforementioned burnings. Regulations 7.2.1 to 7.2.8.

\textsuperscript{54} Industrial facilities listed in §21.3, note 2, \textit{supra}.

\textsuperscript{55} Regulation 12.3.1(a).

\textsuperscript{56} Regulations 8.1.1 to 8.1.4 and 8.2.1.


\textsuperscript{58} Regulations 8.2.1 and 8.3.1.
and no incinerator may be operated at a site if the department determines that its operation at that site is likely to cause a nuisance.\textsuperscript{59} Incinerators must meet emission limitations set for particulate matter\textsuperscript{60} and may not emit smoke with a density greater than No. 1 on the Ringleman Chart (20\% opacity).\textsuperscript{61} No incinerator capable of reducing more than 1000 pounds of refuse per hour may be operated unless it is registered.\textsuperscript{62}

The foregoing regulations are not expected to achieve the secondary standards for particulate matter in the Metropolitan Boston region.\textsuperscript{63} The department therefore requested, and has received, an extension until November 30, 1972, to promulgate additional regulations which in conjunction with the regulations outlines above, will achieve the secondary standards.\textsuperscript{64}

\textbf{Nitrogen dioxide regulations.} State implementation plans were required to establish a control strategy to limit nitrogen dioxide emissions sufficiently to attain the federal primary and secondary standards,\textsuperscript{65} taking into account specified projected reductions in nitrogen dioxide emissions resulting from federal motor vehicle emission standards.\textsuperscript{66} Many of the regulations designed to reduce emissions of sulfur oxides and particulates will also reduce nitrogen dioxide emissions.\textsuperscript{67} Regulation 2 limits the amount of nitrogen dioxide per million BTU heat input capacity that may be emitted by fossil fuel utilization facilities.\textsuperscript{68} A new industrial facility\textsuperscript{69} or an existing industrial facility in a designated critical area may not emit more than 10 pounds of nitrogen dioxide per hour, while an existing industrial facility not in a designated critical area may not emit more than 20 pounds of nitrogen dioxide per hour. No industrial facility may emit nitrogen dioxide in concentrations greater than 250 parts per million.\textsuperscript{70} Sources must meet these emission limitations within the time frame and in accordance with the same type of compliance schedule discussed previously with respect to particulate matter emission limitations set forth by Regulation 2. Regulation 6 provides that no visible air contaminant, other than water vapor, may be emitted from

\begin{itemize}
  \item \textsuperscript{59} Regulation 8.1.5. See Regulations, Definition 5.
  \item \textsuperscript{60} Regulation 2.5.3.
  \item \textsuperscript{61} Regulation 6.2 and Regulations, Definition 8.
  \item \textsuperscript{62} Regulation 12.4.1.
  \item \textsuperscript{63} 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §51.1122(a) (1972).
  \item \textsuperscript{64} Id.
  \item \textsuperscript{65} The primary and secondary standards for nitrogen dioxide are identical: an annual arithmetic mean 100 micrograms per cubic meter (0.05 parts per million). 40 C.F.R. §50.11 (1972). For test methods and procedures see 40 C.F.R. §50.3 (1972) and Part 50, Appendix F.
  \item \textsuperscript{66} 40 C.F.R. §51.14 (1972). See §21.4, note 2, \textit{supra}.
  \item \textsuperscript{67} See Table 2, \textit{supra}.
  \item \textsuperscript{68} A new fossil fuel utilization facility with a heat input capacity in excess of 250 million BTU per hour may not emit more than 0.3 pounds of nitrogen dioxide per million BTU, Regulation 2.5.1.
  \item \textsuperscript{69} An industrial facility of the type listed in §21.3, note 2, \textit{supra}.
  \item \textsuperscript{70} Regulation 2.5.2.
\end{itemize}
an internal combustion engine (1) in a motor vehicle, for more than five seconds or for more than the first one hundred feet of travel and (2) in other than a motor vehicle, for more than ten seconds.\textsuperscript{71} Regulation 11, which deals with transportation sources, states that, with certain exceptions, no motor vehicle may idle continuously for more than five minutes.\textsuperscript{72} Under the emission source registration requirement prescribed by Regulation 12, no industrial facility\textsuperscript{73} emitting more than one pound of nitrogen dioxide per hour may be operated unless it is registered.\textsuperscript{74}

Since these measures would not achieve the requisite reduction of nitrogen dioxide emissions in the Massachusetts section of the Hartford-New Haven-Springfield interstate air quality control region, the EPA has discovered the department's nitrogen dioxide control strategy for that region.\textsuperscript{75} Presumably, the deficiency will be remedied by EPA-promulgated regulations.\textsuperscript{76} It should be noted, however, that questions have been posed concerning the accuracy of methods used to test nitrogen dioxide levels.\textsuperscript{77} If these problems are resolved by the adoption of a new test method which shows lower concentrations of nitrogen dioxide in the region, the end result may be EPA approval of the department's nitrogen dioxide control strategy.

**Hydrocarbon regulations.** The requirements outlined for state nitrogen dioxide control strategies apply as well to control strategies for hydrocarbon emissions.\textsuperscript{78} Since over one-half of the hydrocarbons emitted originate in transportation sources\textsuperscript{79} which are subject to rigorous federal motor vehicle standards,\textsuperscript{80} the state control strategy for hydrocarbons is to a large extent, preempted and consequently is not as elaborate as the state strategy to combat sulfur dioxide or particulate matter contamination. Although many departmental regulations have the incidental effect of reducing hydrocarbon emissions, only two provisions, Regulations 2 and 12, are directed primarily towards their control. Regulation 2 requires that storage tanks for "organic material,"\textsuperscript{81} be equipped with the

\textsuperscript{71} Regulation 6.5. For visible emission limitations applicable to marine vessels, aircraft and diesel engines, see Regulations 6.3, 6.4 and 6.6, respectively.
\textsuperscript{72} Regulation 11.1.2. For similar regulations applicable to diesel trains, aircraft and marine vessels, see Regulations 11.2, 11.3 and 11.4, respectively.
\textsuperscript{73} Industrial facilities of the type listed in §21.3., note 2, \textit{supra}.
\textsuperscript{74} Regulation 12.3.1(d).
\textsuperscript{75} 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §52.1124 (1972).
\textsuperscript{78} The primary and secondary standards for hydrocarbons are identical: a maximum three-hour concentration 6 to 9 a.m. not to be exceeded more than once per year of 160 micrograms per cubic meter (0.24 parts per million). 40 C.F.R. §50.10 (1972). For test methods and procedures see 30 C.F.R. §50.3 and Part 50, Appendix E (1972). See also 40 C.F.R. §51.14 (1972).
\textsuperscript{79} See Table 2, \textit{supra}.
\textsuperscript{80} See note 2, \textit{supra}.
\textsuperscript{81} Organic material "is generally defined as carbon compounds." Regulations, Definition 30. Regulation 2 applies primarily to petroleum products.
departmentally approved pollution control devices specified by Regulation 2. This regulation applies primarily to petroleum product storage. Various types of equipment meeting department approval, such as vapor recovery systems and pressure tank systems, must be installed on certain storage tanks and fuel transfer systems. Storage tanks must meet these requirements within the same time period and in accordance with the same type of compliance schedule as that previously discussed with regard to particulate matter emissions limitations set forth under Regulation 2. Regulation 12 provides that industrial facilities emitting more than forty pounds of organic material per day may not be operated unless registered.

_Carbon monoxide and photochemical oxidant regulations._ The Act requires that state implementation plans embody control strategies to achieve national primary and secondary standards for carbon monoxide and photochemical oxidants. Almost two-thirds of carbon monoxide emissions are generated by transportation sources. If noncontrollable sources such as forest fires and the like, are discounted, transportation sources may be said to be responsible for three-quarters of the carbon monoxide emitted. Photochemical oxidants are produced by the interaction of nitrogen oxides and hydrocarbons in the presence of sunlight. Nitrogen oxides and hydrocarbons are also produced primarily by transportation sources, and the federal motor vehicle emission standards are expected to significantly reduce the emission of nitrogen oxides and hydrocarbons as well as carbon monoxide. Although several of the de-
partment's regulations will effect a reduction of carbon monoxide and photochemical oxidant emissions, there are no regulations designed primarily for their control.

Because the EPA has determined that more control will be necessary to meet the standards for carbon monoxide and photochemical oxidants in the Metropolitan Boston region than in the other five regions, the department was required to adopt, by February 15, 1973, a transportation control strategy for that region. This strategy, together with the federal motor vehicle emission standards, and existing controls on hydrocarbon emissions must meet the standards for carbon monoxide and photochemical oxidants in that region. Legislative authority and regulations to implement the strategy are required by June 30 and December 30, 1974, respectively. More controls will also be necessary to meet the standards for carbon monoxide in the Massachusetts sector of the Hartford-New Haven-Springfield interstate region. The department has therefore requested a two-year extension of the date by which the standards in that region must be attained. The EPA has granted the department's requested two-year extension of the date by which carbon monoxide standards in the interstate region must be attained.

The Court of Appeals for the District of Columbia, however, in Natural Resources Defense Council v. Environmental Protection Agency held that this and similar two-year extensions granted to other states could not be justified under the Act. It ordered states requiring transportation control strategies to submit, by April 15, 1973, implementation plans to achieve by May 31, 1975 primary air standards. Official notice of the requirements, as modified by the court, was published by the EPA on March 20, 1973. Massachusetts did not submit an implementation plan by the April 15 deadline. Under the court's order the EPA must therefore disapprove the Commonwealth's implementation plan on June 15, 1973 insofar as it does not contain a transportation control strategy. If the Commonwealth has not developed and submitted an approvable strategy by August 15, 1973, the EPA must promulgate on that date and a plan implementing such a strategy.

Complex Sources. Partially as a result of Natural Resources Defense Council v. Environmental Protection Agency, supra, states are also required to promulgate and submit implementation plans to control "complex sources." "Complex sources" are facilities that affect air quality standards not because of their own emissions but because of other sources associated with them. They include airports, amusement parks, highways, shopping centers, sports facilities and parking areas, all of which may affect air quality standards because of emissions from the motor vehicles associated with them. States must promulgate plans to control complex

93 37 C.F.R. 10872 (1972), inserting 40 C.F.R. §52.1122(b) (1972).
95 --Fed. Reg.--.
sources and submit such plans to the EPA for approval by August 15, 1973. The EPA then has until October 15, 1973 to approve or disapprove such plans and, in the case of disapproved plans, until December 15, 1973 to promulgate its own regulations to correct the resulting deficiencies in the state implementation plan.96

§21.5. Other provisions. The federal Act, state statutes and departmental regulations all provide for the control of pollutants and sources of pollution other than those which, according to the Act, are to be controlled through the use of state implementation plans. The Clean Air Act deals specifically with these other types of air pollution in its provisions for the control of motor vehicle emissions,1 motor vehicle fuels,2 aircraft emissions,3 emissions of pollutants determined by the EPA to be hazardous,4 and new sources for which the EPA publishes standards of performance.5 Under certain circumstances, the programs for the control of hazardous pollutants and for the establishment of standards of performance for new stationary sources may be delegated to the states.6 In addition, there is a provision for the control of air pollutants for which performance standards have not yet been established.7 When these additional standards have been set, the states will be required to control such pollutants as they are emitted from existing as well as new sources. This result is accomplished in a fashion similar to that employed in the formulation of state implementation plans: each state must establish emission standards for such pollutants and provide for the implementation and enforcement of the standards.

Massachusetts statutes presently control load spills from motor vehicles,8 regulate excess fuel discharges from aircraft,9 and enable the department to adopt rules and regulations for the general purpose of preventing "pollution or undue contamination of the atmosphere."10 The provision

96 See 38 Fed. Reg. 9599—9601, where the chronology established by the court is explained and where requirements for the complex source component of state implementation plans are proposed.

§21.5. 1 See §21.4., note 2, supra.
3 Id. §1857f-9.
4 Id. §1857c-7. Mercury, beryllium and asbestos have been declared hazardous, 36 Fed. Reg. 5931 (1971), and regulations have been proposed to control emissions of these substances, 36 Fed. Reg. 23239-56 (1971), but not promulgated.
5 42 U.S.C. §1857c-6 (1970). New source performance standards have been promulgated for sulfuric and nitric acid plants, Portland cement plants, incinerators of more than 50 tons per day charging rate, and fossil fuel fired steam generators of more than 250 million BTU per hour heat input, 40 C.F.R. §§60.1 to 60.85 (1972).
8 G.L., c. 85, §36.
9 Id. c. 111, §142F.
10 Id. c. 111, §§142B and 142D.
regarding fuel discharges from aircraft is partially pre-empted by the Act, since no state may enforce an emission standard which differs from the applicable federal standard.11

The department has also issued regulations completely outside the scope of the Clean Air Act regarding fuel additives,12 dust,13 odor,14 and noise.15 The status of these regulations in relation to the Act poses an interesting problem. The promulgation of the regulations was not required by the Act but they were submitted to and apparently approved by the EPA as part of the Massachusetts implementation plan. It is questionable whether these additional state regulations may be classified as part of an "applicable implementation plan" as defined by the Act16 and thus become enforceable by the federal government or by citizens. It is submitted that the regulations are not enforceable under the Act since no federal standards were established for these pollutants and the EPA approved the Massachusetts plan only to the extent that it provided for the "attainment and maintenance of the national standards."17 (Emphasis added). This is consistent with the Act's scheme, under which substantive regulations, i.e. regulations subject to federal enforcement, are based on standards previously established by the EPA.

§21.6. Enforcement. As mentioned above, the scheme of the Clean Air Act vests in the states the primary responsibility for achieving and maintaining primary and secondary standards.1 A necessary corollary of this scheme is that primary responsibility for enforcing state implementation plans is also vested in the states.2

The department has promulgated three regulations which relate primarily to enforcement. Regulation 12, which has already been discussed in reference to various specific pollutants, forbids the operation of major air pollution sources unless they register annually with the department. Regulation 13 provides that stack tests, when required by the department, must be conducted through the use of approved procedures by competent stack testing personnel in the presence of department personnel. The Regulation further requires that if the department desires to stack test for enforcement purposes, the source must allow the department access to the stack, and must provide erected scaffolding, sampling ports, and a power source. Regulation 14 requires categories or classes of sources designated by the department to install, maintain and use emission

11 42 U.S.C. §1857f-11 provides that no state may adopt or enforce any standard respecting an emission of any air pollutant from any aircraft different than a federal standard.
12 Regulation 5.5.
13 Regulation 9.
14 Id.
15 Regulation 10.

monitoring devices of a design approved by the department. All three
regulations contain reporting requirements.

The department’s regulations relating to the Metropolitan Boston re-

region are enforceable under the authority of G.L., c. 111, §142B; regu-

lations pertaining to the rest of the Commonwealth are enforceable under
G.L., c. 111, §142D. Both sections make knowing violation of regulations
punishable by fines of $10 to $50 per day. More importantly, the sections
provide that the department, through the Public Health Council, may
issue an order to any person responsible for an air pollution source to
abate a violation of the department’s regulations. The Commissioner of
Public Health is also authorized to issue such an order.\(^3\) The issuance
of abatement orders is, of course, subject to the state Administrative
Procedure Act.\(^4\) Violation of an order is punishable by a fine of $50 to
$100 a day for first offenses, and $200 to $500 per day for succeeding
offenses. By statute, the superior court is granted jurisdiction in equity
to enjoin violations of the department’s regulations.\(^5\) Subject to various
procedural requirements the department’s regulations may also be en-
forced by private citizens.\(^6\) In at least one case, involving the faulty
operation of a municipal incinerator, private citizens have initiated an
enforcement action.\(^7\)

According to the Clean Air Act, either the EPA, through the federal
enforcement provision, or an individual, through the citizen suit pro-

vision, may enforce the state implementation plan if the state has re-
fused or neglected to take action against a source in violation of a
regulation contained in the plan.\(^8\) If the violation relates to a particular
pollution source, the EPA Administrator or his delegate\(^9\) must issue a
notice of violation to the source and to the state in which the violation
occurs. If the violation persists for more than thirty days after the
issuance of notice, the EPA must\(^10\) either issue an order requiring the

\(^3\) G.L., c. 111, §2C.
\(^4\) Id., c. 30A.
\(^5\) Id., c. 111, §§142B and 142D.
\(^6\) Id., c. 214, §10A. Qualified plaintiffs under the statute include ten citizens
or a political subdivision. In either case plaintiffs must give 21 days notice to the
Attorney General before filing suit. This provision is discussed in 1971 Ann. Surv.
Mass. Law §§8.2 to 8.5; and McGregor, Private Enforcement of Environmental
Law: An Analysis of the Massachusetts Citizen Suit Statute, 1 Env. Affairs 606
(1971).
\(^7\) Bleiler v. Wellesley, 4 E.R.C. 1014, Eq. No. 104825 (Norfolk Super. Ct.,
\(^8\) Such enforcement action may be taken without regard to state enforcement
procedures if taken pursuant to a provision of the Act which is not implemented
by state plans, and the enforcement of which has not been delegated to the
state involved.
\(^9\) Authorization to issue notice of violation has been delegated to the Regional
Administrators of the Environmental Protection Agency, EPA Order 1150.18,
August 17, 1972.
“shall” regarding the issuance of an order or the initiation of a civil action
source to comply with the requirements of the implementation plan or commerce a civil action seeking compliance by a court order. The purpose of the thirty-day notice is to afford the state an opportunity to take remedial action before the federal order issues. However, if the EPA finds that violations of an implementation plan result from the state's general failure to enforce its plan, it is empowered to assume total enforcement responsibility. In such an instance, the state must be given notice of the EPA's finding and be allowed thirty days to correct the situation. If the EPA determines that the state has not corrected the deficiency within the thirty day period, it must give public notice.

might indicate that the EPA is not bound to take any of the specified courses of action upon finding that a violation has not been abated. It should be noted, however, that "may" is used before each of the two alternatives. The provision, it is submitted, is most logically interpreted as meaning that although the Administrator is not bound to take either of the two alternatives, he must take one of them.

11 A compliance order was issued by the EPA against the Delmarva Power & Light Company. See Getty Oil Co v. Ruckelshaus, §21.4, note 29, supra.

12 The Act, as originally enacted, was not entirely clear on the extent of the EPA's power to enforce by bringing civil actions. Section 1857c-8(a)(1) provides that the EPA may issue an order or "bring a civil action in accordance with subsection (b)." But subsection (b) originally provided for civil actions only in given circumstances: (1) a violation of an EPA order; (2) a violation of a state implementation plan during a period of federally-assumed enforcement responsibility continuing for more than 30 days after the EPA had issued a notice of violation to the source; or (3) a violation of provisions of the Act not implemented by state plans. The problem was compounded by the fact that subsection (a) also gives the EPA the choice of an order or a civil action "in accordance with subsection (b)" both during periods of federally-assumed responsibility and for violations of provisions of the Act not implemented by state plans. At the same time, subsection (b) specifically provides for civil relief in the above circumstances. Of course, it could have been argued that the original subsection (b) should have been read to effectuate the clear intent of Congress in subsection (a)(1) that civil relief be available without prior recourse to an administrative order. Ultimately, the problem was averted by technical amendments to subsection (b) which made it clear that a civil action could be initiated for violations at any time during periods of federally-assumed enforcement and for violations continuing more than 30 days after the EPA had issued a notice of violation to the source decreeing other periods. Similar technical amendments to the provisions for criminal sanctions in §113(c) were effected by the Comprehensive Health Manpower Training Act of 1971, which was signed by the President on November 11, 1971, 85 Stat. 431.

13 Thirty days notice to the state is not required in cases where the Act contemplates that the primary enforcement role is federal rather than state. 42 U.S.C. §§1857c-8(a)(2) and (3) and 1857c-8(b)(2) (1970). Similarly, a private citizen's secondary enforcement role is inherent in 42 U.S.C. §1857h-2(b) (1970), which requires the citizen seeking to enforce the Act to give sixty days prior notice to the EPA and the appropriate state, thus barring the citizen from commencing his action if the Administrator or the State has previously done so and is diligently prosecuting the action.

and thereafter assume enforcement responsibility until the state gives satisfactory evidence of its intent to enforce the plan.

The only appreciable difference between total federal enforcement of the state's implementation plan and the ordinary supplemental enforcement would appear to be in the prior notice that must be given to the source and to the state prior to federal administrative or court action. Whereas violation notice must be given to both parties when the EPA takes partial enforcement action, the statute does not require that comparable notice be sent to either the source or the state during periods when the EPA has assumed complete enforcement responsibility. Public notice of intended assumption of enforcement activity presumably suffices as notice to the state and potential polluter-defendants of imminent EPA enforcement activity. The federal enforcement procedures available during periods of federally-assumed enforcement responsibility resemble the procedures for the enforcement of the provisions relating to hazardous pollutants and standards of performance for new sources: no notice of contemplated action need be sent to the offender prior to issuance of an order or prior to commencement of civil actions.¹⁵ Nevertheless, except where there is a possible violation of a standard regarding hazardous pollutants, the EPA may not issue an enforcement order until the source has been given an opportunity to attend an informal conference regarding the violation.¹⁶ Criminal penalties of up to $25,000 per day of violation and/or one year of imprisonment are provided for violation of: (1) EPA orders; (2) the hazardous emission or new source standard provisions; (3) the provisions of state implementation plans during periods of federally assumed enforcement responsibility; and (4) the provisions of state implementation plans more than 30 days after the Administrator has issued a notice of violation to the source. Second convictions carry penalties of up to $50,000 per day of violation, two years imprisonment, or both.¹⁷

Enforcement actions may often be prosecuted with a minimum of discovery effort since the government may require a source to provide evidence of its violations of the Act. In the first administrative enforcement proceeding under the Act,¹⁸ the EPA required the Delmarva Light & Power Company to reveal that it was burning oil with a higher sulfur content than allowed by applicable regulations. It did so pursuant to 42 U.S.C. §1857c-9(a)(1) which provides that the EPA may require an emission source to: "(A) establish and maintain such records, (B) make such reports, (C) install, use, and maintain such monitoring equip-

ment or methods, (D) sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the [EPA] shall prescribe), and (E) provide such other information as [the EPA] may reasonably require.” Further, the EPA is given a right of entry to premises upon which an emission source is located, the right to inspect and copy records, the right to inspect monitoring equipment and the right to sample emissions.\(^{19}\) Moreover, refusal to provide the foregoing information is itself a criminal act punishable by fine of up to $25,000 per day of violation or by up to one year imprisonment, or both.\(^{20}\) Providing false evidence is also a criminal act, entailing penalties up to $10,000 and six months imprisonment.\(^{21}\) These provisions of the Act and similar state provisions\(^{22}\) will perhaps be subjected to Fifth Amendment scrutiny, since they require a source to provide the EPA with evidence that could be used in a criminal proceeding. However, as far as corporations, which are the major sources of air pollution, are concerned, this possible constitutional objection may not be valid since it is well settled that the Fifth Amendment privilege against self-incrimination does not extend to corporations.\(^{23}\)

The only manner of avoiding enforcement when compliance with departmental regulations is impossible or otherwise undesirable is to secure a variance. The department is authorized to issue a variance only when “necessary for the public good or to allay undue hardship.”\(^{24}\) However, unless it is approved by the EPA, a variance will not preclude federal or citizen enforcement.\(^{25}\) Approval is required because a variance results in a de facto revision of the implementation plan control strategy and the Act requires EPA approval of all revisions to implementation plans.\(^{26}\)


\(^{20}\) 42 U.S.C. §1857c-9(a) (1970) requires that an air pollution source submit such information as the EPA may “reasonably require.” Upon refusal by a source to furnish requested information the EPA may either issue an order requiring the source to furnish the information or bring a civil action to compel it to do so. 42 U.S.C. §1857c-5(a)(3) (1970).


\(^{22}\) See 42 U.S.C. §1857c-5(a)(2)(C), (F) and (G) (1970). The EPA Administrator's authority under 42 U.S.C. §1857c-9 may be delegated to the states. 42 U.S.C. §1857c-9(b) (1970). Quaere the effect of such delegation if state law forbids state officials to engage in such activities?

\(^{23}\) Wilson v. United States, 221 U.S. 361, 382 (1911).

\(^{24}\) Regulation 50.

\(^{25}\) 37 Fed. Reg. 26312 (1972), inserting 40 C.F.R. §§51.4 and 51.6 (1972). See Getty Oil Company v. Ruckelshaus, 221.4, note 29, supra, where the plaintiff oil company discovered that its involvement in seeking a variance from state authorities was not allowed to delay EPA enforcement since the relevant state regulation had been approved by the EPA and therefore became, for all practical purposes, a federal regulation also.

\(^{26}\) 42 U.S.C. §1857c-5(a)(3) (1970); 40 C.F.R. §51.6 (1972). It may be argued that if the state's regulations contain a variance provision, such as the department's Regulation 50, EPA approval of the state's implementation plan constituted an approval of the included variance provision and all variances issued under it. It is submitted that this argument is without merit. States were re-
Where control devices and other means of compliance, such as low-sulfur fuel, are available and the granting of a variance would cause a failure to attain the primary air quality standards "as expeditiously as practicable," EPA approval of variances in heavily-polluted areas should be withheld. The burden of proving that the standards will be met within the designated times notwithstanding the granting of a variance appears to rest on the variance applicant. Interestingly, the first two variances submitted to and approved by the EPA under the Act pertained to application of the department's sulfur content regulations in areas that do not appear to be heavily polluted.

**B. Water Pollution Control**

§21.7. The Federal Water Pollution Control Act Amendments of 1972. By the enactment of the Federal Water Pollution Control Act Amendments of 1972 (the Amendments), Congress revised existing water pollution control laws to create a water pollution abatement plan as sweeping in scope and detail as that contained in the Clean Air Act Amendments of 1970. The premise that states bear primary responsibility for enforcement of pollution control has pervaded both federal air and water pollution control legislation. Nevertheless, the federal legislation requires that the EPA assume a state's water pollution control functions when the state fails or refuses to satisfy federal pollution control objectives.

In addition to delineating the EPA's National Environmental Policy Act (NEPA) obligations, the 1972 Amendments extend federal jurisdiction to all of the nation's waterways and preempt what had amounted to exclusive state jurisdiction over non-navigable waters. Water pollution required to submit plans to achieve primary and secondary standards for the designated pollutants, 42 U.S.C. §1857c-5(a)(1) (1970), and the EPA approved plans only to the extent that they provided "for the attainment and maintenance of the national standards," 37 Fed. Reg. 10872 (1972), inserting 40 C.F.R. §51.1123 (1972). A variance provision has no status under the Act since it is not required or contemplated by the Act nor is it directly related to the attainment or maintenance of the national air quality standards.


2 Discussed at §21.2, supra.
3 Amendments §502(7) defines "navigable waters" as "the waters of the United States, including the territorial seas," thus extending federal jurisdiction broadly over all United States waterways. The program established under the 1972 Amendments, not only extends federal jurisdiction to all the nation's waterways, but it also requires permits for publicly-owned sewage treatment plants and municipally-controlled discharge points. Moreover, the overall thrust of the Amendments is aimed at national pollution problems, including pollution of...
control objectives are to be accomplished by a "National Pollutant Discharge Elimination System," an EPA-administered permit program supplanting that administered by the Army Corps of Engineers under the authority of the Refuse Act of 1899. The Refuse Act prohibited industrial pollutant discharges into navigable waterways except where authorized by permit. In 1971 the Army Corps of Engineers permit program was effectively halted by the decision in *Kalur v. Resor* which required that the Corps file a NEPA impact statement for each permit issued. To a large extent, the 1972 Amendments alleviate this administrative bottleneck since, under the new permit program, the EPA must file NEPA impact statements only (1) where federal grants are provided to assist in the construction of publicly-owned waste treatment facilities; or (2) when the EPA issues a permit to a "new" source, that is, a source constructed after promulgation of final regulations prescribing performance standards for that type of source. Consequently, the EPA...
would not be required to file NEPA reports for permits issued to pollution sources in existence before final regulations are promulgated.\(^9\)

Although the Amendments characterize the permit system as a "national" program, the necessity for state participation is recognized. Where a state adequately demonstrates its capability and willingness to administer the permit system for its own waters in conformance with the national guidelines, the EPA may delegate that administrative responsibility to the state.\(^10\) As a necessary corollary, the Amendments require the state to appraise EPA of its administration of the program.\(^11\) Where the EPA determines that administration by a state is inadequate, it must revoke the delegation of responsibility and resume its administration of the plan.\(^12\) Therefore, if Massachusetts is to retain jurisdiction of water pollution control efforts within its boundaries, it must satisfy the EPA that relevant statutes and regulations facilitate implementation of the federal permit program. If the present Massachusetts water pollution control apparatus does not satisfy EPA requirements,\(^13\) significant amendments to the Massachusetts Clean Waters Act\(^14\) will be necessary.

\(^9\) Amendments, §511(c). While the Amendments thus limit the EPA's NEPA obligations to these two instances and consequently exempt a sizeable portion of its permit-issuing activities (i.e., re existing pollution sources), the bureaucratic burden created for the Massachusetts permit-issuing authority (the division of water pollution control) by G.L., c. 30, §§61 and 62, the Massachusetts environmental review statute, MEPA, see §§21.8-21.10, infra, will not be similarly ameliorated. MEPA, instead, would appear to require the filing of an impact statement in conjunction with each permit issued under state administration of the national permit program.

\(^10\) Id. §§402(a) (5), (b), and (c) (1) and (2).

\(^11\) Id. §§402(d) (1) and (2).

\(^12\) Id. §402(c) (9).

\(^13\) The EPA has promulgated regulations listing the elements which a state permit program must contain in order to participate in the National Pollutant Discharge Elimination System. Under these regulations, a state permit-issuing agency must have authority to: "(a) issue permits for terms not exceeding 5 years upon the same conditions relating to effluent limitations and water quality standards as are applicable to permits issued by the [EPA]; (b) adequately notify members of the public, other States, and the Secretary of the Army of pending permit applications; (c) abate violations of permits, including civil and criminal penalties; (d) insure that the State permitting agency receive adequate notice of new introductions or substantial changes in the volume or character of pollutants introduced into publicly owned treatment works; and (e) insure that any industrial user of publicly owned treatment works complies with pretreatment effluent standards and other requirements. The State must also have an approved continuing planning process under section 303(e) of the [1972 Amendments] before approval of its permit program can be granted.

"In addition to these requirements, a State permit program cannot be approved unless it conforms to guidelines issued under section 304(h)(2) of the [1972 Amendments] prescribing minimum procedural and other elements of any State program under section 402. These guidelines . . . must include, but are not limited to, monitoring and reporting requirements (including procedures to make information available to the public), enforcement provisions, and requirements for funding, personnel qualifications, and manpower." 37 Fed. Reg. 24087 (1972), republished 37 Fed. Reg. 28390 (1972).

\(^14\) G.L., c. 21, §§26-58, inclusive.
§21.8  ENVIRONMENTAL LAW 605

C. ENVIRONMENTAL IMPACT STATEMENTS: MEPA

§21.8. MEPA: Introduction. During the 1972 Survey year the Massachusetts legislature created a state environmental review process, by enacting the Massachusetts Environmental Policy Act (MEPA), modeled after the National Environmental Policy Act (NEPA). MEPA requires every state agency, department, board, commission and authority to analyze the environmental impact of all their "works, projects and activities," and to minimize any anticipated damage by all practicable means. Comparable federal impact evaluation requirements have made NEPA one of the most litigated federal environmental statutes yet enacted; almost one hundred cases involving its application have been decided in federal courts since the statute was passed in 1970.

NEPA requires that proposals by federal agencies for "major . . . actions significantly affecting the quality of the human environment" must be accompanied by a "detailed statement" which describes:

(i) the environmental impact of the proposed action, (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented, (iii) alternatives to the proposed action, (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

The basis for most of the litigation arising under NEPA has been the adequacy of the impact statement for a particular project. When federal agencies have undertaken projects without filing impact statements, or when the statements filed appeared inadequate, private citizen groups have sought to enjoin the proposed federal action. Many of these suits have successfully challenged federal activities ranging from housing projects to the proposed trans-Alaskan pipeline. Other NEPA suits have
failed, but in the process they have settled many basic issues involved in the environmental review process. Against the background of this federal environmental review experience, the ramifications of the MEPA impact statement requirement become apparent. MEPA must be examined not only for questions of statutory interpretation, but also with reference to the decisional and administrative development of comparable NEPA provisions.

§21.9. MEPA Section 61. G.L., c. 30, §61 provides that "agencies, departments, boards, commissions and authorities of the commonwealth shall review, evaluate, and determine the impact on the natural environment of all works, projects or activities conducted by them" and that they "shall use all practicable means and measures to minimize damage to the environment." The statute would not seem to encompass political subdivisions, since they are not specifically mentioned. However, "authorities" of political subdivisions are specifically included in the provisions of Section 62, discussed below.

Works, projects or activities are broad terms designed to include a multitude of state governmental functions. They should be construed as broadly as the comparable NEPA term, "federal action," which has been held to include licensing activities, cancellation of government contracts, sale of leases for oil and gas extraction, and issuance of water pollution control permits. Under NEPA, however, some "federal actions" have been excluded from the impact statement filing requirement where special considerations applied. Action by the Federal Price Commission approving increased mass transit fares, for example, was exempted from NEPA because of the need for immediate action. Likewise, approval of leases of Indian trust lands was exempted in part from NEPA because other environmental legislation specifically applied to the leases. It is possible that some works, projects or activities involving special considerations may be similarly exempted from the MEPA environmental review requirement. Given the broad purpose underlying the MEPA legislation, however, works, projects or activities should be construed to include virtually all programs supported or directed by the commonwealth.

Section 61 requires that state administrative bodies scrutinize the environmental impact of a proposed activity and determine whether "all

3 National Helium Corp. v. Morton, 455 F.2d 650, 2 E.R.C. 1372 (10th Cir. 1971).  
feasible measures have been taken to avoid or minimize [that] impact.”

The scope of this review appears far more comprehensive than the review contemplated by NEPA. Federal agencies are required only to make a detailed and objective appraisal of the environmental consequences of proposed action. Once the effects of an action have been fully set forth in the impact statement, the NEPA requirements have been satisfied. By contrast, impact reports filed under MEPA must not only appraise the environmental impact of the proposed action, but they must also demonstrate that the least environmentally-destructive option has been chosen. Because of this limitation, MEPA has a far greater potential for preventing the deterioration of the environment than the federal statute.

The stringency of MEPA reporting requirements is somewhat diluted, however, by the inconsistent use of the operative words “feasible” and “practicable” in Section 61. What is “feasible” or “practicable” in a particular situation will surely be hotly contested. Whereas it may be “feasible” from an engineering standpoint to follow the least-destructive alternative, it may not be economically “practicable.” The use of such mutually inconsistent terminology raises issues under MEPA which do not exist under the national act.

In anticipation of the interpretive issues that may be raised by the arguably inconsistent usage of the terms “feasible” and “practicable,” another unique provision of MEPA should be considered. Section 61 also provides that, “[u]nless a clear contrary intent is manifested, all statutes shall be interpreted and administered to minimize and prevent damage to the environment.” This legislatively-imposed rule of statutory construction is obviously intended to inject an environmental awareness into the application of all state laws—an objective consistent with the fundamental rationale of MEPA that environmental consequences should be an important consideration in all governmental decision-making. Whether

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8 Section 102(2) of NEPA [42 U.S.C. §4332(2) (1970)] details the operating procedures which must be followed to insure that the impact report filed by the federal agency is a careful evaluation of the proposal's environmental impact. Sections 101 [42 U.S.C. §4331 (1970)] and 102(1) [42 U.S.C. §4332(1) (1970)] of NEPA state the policy goals to be achieved by the statute. The courts have rigorously interpreted the requirements of Section 102(2) but paid mere lip-service to the thrust of Sections 101 and 102(1). See Cohen and Warren, Judicial Recognition of the Substantive Requirements of the National Environmental Policy Act of 1969, 13 B.C. Ind. & Com. L. Rev. 685 (1972).

9 The inconsistency is found in the following language of Section 61: “All agencies, departments, boards, commissions and authorities of the commonwealth shall review, evaluate, and determine the impact on the natural environment of all works, projects or activities conducted by them and shall use all practicable means and measures to minimize damage to the environment. . . . Any determination made by an agency of the commonwealth shall include a finding describing the environmental impact, if any, of the project and a finding that all feasible measures have been taken to avoid or minimize said impact.” (Emphasis added). Although the two words have synonymous meanings in some dictionaries, it is submitted that they may—and should—be given different meanings by the judicial and administrative bodies that interpret them.
the rule of statutory construction can impose an environmental consciousness upon activities not expressly covered by MEPA is questionable. It is submitted that this rule of construction has practical pertinence only in MEPA contexts.10

The requirement to review, evaluate, and determine would appear to be retroactive as to "on-going" projects.11 If this is so, administrative bodies must determine the environmental impact of projects commenced before the effective date of the statute and use all “practicable measures” to limit environmental damage caused thereby. However, the extent of such measures that must be undertaken is unclear. Undoubtedly, redesign of a completed project is not “practicable” and is thus beyond the scope of the statute. Moreover, it would be clearly impossible to make even moderate changes in every project in Massachusetts so as to amend its environmental impact. The statute does, however, contemplate a review of existing activities, to assess their environmental effects and to determine what can be done to reduce damage. If MEPA is construed as applying to all on-going state projects, one of the major defects of NEPA will be avoided. Federal courts have been required to determine on a case by case basis which projects were far enough along at NEPA's effective date to avoid its application.12 A Massachusetts court faced with the claim that Section 62 does not apply to activities commenced prior to the effective date of the Section13 will probably be able to side-

10 In utilizing this rule to resolve the apparent conflict between the terms “feasible” and "practicable" in Section 61, a more sensible construction might be that the option which would minimize environmental injury is to be selected, unless it would present overwhelming difficulties grossly disproportionate to its benefits. The balancing of interests effected by this approach would bear a heavy predelegation in favor of the option presenting the optimum environmental result: that option would prima facie be the one selected unless opponents meet a heavy burden of countervailing proof.

11 The language of the statute reads: “All agencies . . . shall review, evaluate, and determine the impact . . . of all works, projects or activities conducted by them. . . .” (Emphasis added). The tense of the operative word “conducted” would seem to include activities presently under way as well as those to be initiated in the future. Thus, if Section 61 is construed to impose an environmental review requirement on on-going projects, the more elaborate impact report procedure described in Section 62 is addressed only to projects yet to be started. Section 62 provides: “No agency . . . shall commence any work, project, or activity . . . until sixty days after it has published a final environmental impact report.” (Emphasis added). It is submitted that the divergent terminology between Sections 61 and 62 reflects the legislature's intent to make Section 61 applicable to both on-going and future state projects and to limit Section 62 to prospective projects.

For a distinction between “on-going” projects and “continuing” projects under NEPA, see Lee v. Resor, 4 E.R.C. 1579, 1581 (M.D. Fla. 1972).


§21.10 ENVIRONMENTAL LAW

step the issue by requiring an environmental review and a determination as to "feasibility" and "practicability" under Section 61. Any new state activities will, of course, be subject to the requirements of Section 62.

_Damage to the environment_,14 defined in Sections 61 and 62, corresponds to the meaning given it in G.L., c. 214, §10A, a statute authorizing enforcement of environmental laws and regulations by private lawsuits.15 In both MEPA and in G.L., c. 214, §10A, damage to the environment specifically excludes any "insignificant damage." If the Section 61 environmental impact finding concludes that more than "insignificant" damage to the environment will result from the proposed state activity, an environmental impact report will be required under Section 62. Whether or not an impact report is required, however, the Section 61 findings, must include a description of the anticipated environmental impact and a determination that all "feasible" protective measures have been taken. To be meaningful, such findings must be based upon supporting facts derived from the agency's review process and, presumably, may be challenged if the conclusions are not based upon an adequate investigatory process.

§21.10. MEPA Section 62. G.L., c. 30, §62 requires that state governmental units and authorities of political subdivisions prepare and publish an environmental impact report prior to commencing "any work, project, or activity which may cause damage to the environment." With the exception of work necessary to prepare this impact report, the section proscribes activity of any sort in furtherance of the project until sixty days following either publication of a final report or completion of any public hearing held in connection with the report. Preparation of the impact report is to be initiated during the project's earliest planning stages. The preparation and dissemination of the report must be sufficient to alert interested parties to the expected environmental consequences of and alternatives to the project. This report is to be circulated among interested parties prior to the commitment of state monies for and the commencement of any work on the project. Those state agencies which have statutory jurisdiction over the proposed activity, or which have special expertise pertaining to the anticipated environmental impact, must attach written comments to the final report.

14 As defined in MEPA, "damage to the environment" means "any destruction, damage or impairment, actual or probable, to any of the natural resources of the commonwealth and shall include but not be limited to air pollution, water pollution, improper sewage disposal, pesticide pollution, excessive noise, improper operation of dumping grounds, impairment and eutrophication of rivers, streams, flood plains, lakes, ponds, or other surface or subsurface water resources, or destruction of seashores, dunes, marine resources, wetlands, open spaces, natural areas, parks, or historic districts or sites. Damage to the environment shall not be construed to include any insignificant damage to or impairment of such resources." A similar definition is found in G.L., c. 214, §10A. See note 15, infra.

The final report is then submitted to the Secretary of Environmental Affairs (hereinafter the secretary) who must issue a written statement commenting on the adequacy of the report's compliance with the provisions of Section 62. Although there is no prescribed sanction for submitting an inadequate report such a determination would be a formidable obstacle for the reporting agency in any suit brought to halt the project. Furthermore, an adverse determination by the secretary would probably preclude further work on the project until the deficiency is corrected. Otherwise, the statutory purposes would be undercut. Whether the publication of a final report will toll the sixty day waiting period should therefore depend upon the secretary's determination of the report's compliance with MEPA provisions.

§21.10. Neither Section 61 nor Section 62 indicates how, and by whom, a suit may be brought to enforce MEPA. One answer to this question may be found by examining the extent to which these MEPA sections have a nexus in common with the private right of action statute, G.L., c. 214, §10A, reviewed in 1971 Ann. Surv. Mass. Law §§8.2-8.5. In both of these statutes there is a similar definition of "damage to the environment", see §21.9, note 14, supra. Arguably, both statutes seek to facilitate public scrutiny and review of those actions which have a potential for environmental damage. It is possible, therefore, that a state agency which fails to make the evaluation and finding required by Section 61, or which fails to publish a report required by Section 62, may be subject to a Section 10A suit in equity, to enjoin further progress on the disputed "work, project or activity."

The manner in which a citizen suit brought under Section 10A is likely to influence, or be influenced by, the MEPA environmental review requirement may revolve around a member of issues: (1) the seriousness of the asserted damage to the environment; (2) the asserted MEPA deficiency (i.e., whether the report is allegedly inadequate or whether no report was in fact filed); or (3) the action, if any, which the secretary has taken on the controverted report. In instances where a citizens' suit has been dismissed because the alleged environmental damage was "insignificant," there would be no further question concerning the necessity of any MEPA filing since the court's determination would automatically exempt the proposed "work, project or activity" from the operation of MEPA. Where a citizens' suit challenges either the adequacy of a report or the necessity for a filing thereof, the primary issues will concern fulfillment of statutory obligations. As discussed previously, any determination of adequacy made by the secretary will preclude further litigation on that issue. Absent regulations providing for a public hearing procedure, it would appear that judicial review of the secretary's determination could not be had under the Massachusetts Administrative Procedure Act, G.L., c. 30A, since §14 of that Act requires an "adjudicatory proceeding" prior to judicial review.

It may be possible to argue that, not withstanding the ten citizen requirement of G.L., c. 214, §10A, standing is conferred on any individual or group as an implicit part of the MEPA statute. This approach has been adopted in the federal courts with regard to NEPA, see West Virginia Highlands Conserv. v. Island Creek Coal Co., 441 F.2d 232, 2 E.R.C. 1422 (4th Cir. 1971). However, the close nexus between the private right of action statute and MEPA may lead some Massachusetts courts to limit enforcement of MEPA to actions brought under G.L., c. 214, §10A. Moreover, Acts of 1972, c. 784, see §21.11, infra, provides that the private right of action statute is to be the means by which citizens enforce the wetlands protection provisions of G.L., c. 131, §40. See §21.11, note 5, infra.
Compared with provisions of the federal statute, the MEPA administrative approval requirement is innovative. NEPA impact statements must be reviewed by the EPA and the President's Council on Environmental Quality. Although both agencies may criticize an impact report, neither is charged with the duty of determining whether the report adequately complies with statutory standards. Consequently, the final arbiter of the adequacy of NEPA reports is the federal court system, and its decisions are often made without the benefit of any environmental expertise beyond that supplied by the preparing agency. Federal courts have found impact statements inadequate on several grounds including (1) failure of the agency to prepare and evaluate the report itself and reliance, instead, upon a report prepared by a prospective beneficiary of the proposed plan; (2) failure to consider all relevant environmental factors; (3) failure to discuss reasonable alternatives to the proposed plan which might be less damaging to the environment; (4) failure to circulate the impact statement to other agencies with pertinent expertise; or (5) failure to give public notice of the completed impact statement. Federal courts have generally required that the findings of environmental effect be supported by "substantial evidence" and be made upon a record which is sufficient to permit an informed and objective decision.

Under MEPA, however, the function of evaluating impact statements will be administrative rather than judicial. Faced with a determination of non-compliance by the secretary, the proposing agency may either attempt to correct the deficiencies of the statement or proceed with the project despite the adverse determination. However, a citizen suit challenging the project would be far more likely to succeed if the agency pursues its plan notwithstanding the secretary's adverse determination. Courts should defer to the secretary's environmental expertise unless his determination can be shown to be a clear abuse of discretion. Of course the ultimate finality of the secretary's determination may be resolved on a political level—in the governor's office.

Regardless of the course any controversy concerning a MEPA impact statement may take, the adequacy of the report will probably not be

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3 Id. Section 10.
4 Greene County Planning Board v. FPC, 455 F.2d 412, 3 E.R.C. 1595 (2d Cir. 1972).
9 Scenic Hudson Preserv. Conf. v. FPC, 453 F.2d 463, 3 E.R.C. 1232 (2d Cir. 1971).

http://lawdigitalcommons.bc.edu/asml/vol1972/iss1/24
determined in a judicial forum. The resolution of MEPA impact statement controversies on an administrative level will undoubtedly promote a more professional appraisal of complex technical issues than has been the case in NEPA litigation. The interagency give-and-take that is likely to result under MEPA, moreover, should produce impact reports of higher quality than those produced under the federal procedure. Court opinions seldom explain how a defective NEPA report may be cured; presumably, in MEPA controversies, the secretary will be willing to make at least an informal explanation.

On the other hand, the secretary's role as environmental arbiter may create some new difficulties not experienced under NEPA. Once the secretary has ruled that a report meets all the requirements of MEPA, it will be difficult or impossible for a citizen lawsuit to upset this determination. MEPA thus removes from private citizens and state courts the ability to review the environmental wisdom of state works, projects or activities. Instead, it will be the secretary alone who will make this review of projects for which a report is filed. The secretary answers to the Governor; and it is not inconceivable that pressure could be put upon the secretary to approve the report of a favored project, perhaps with promises of correcting deficiencies as the project proceeds. The extent to which the MEPA process would thereby be undermined is, at best, a subject for speculation. Suffice it to say that the MEPA review process may require some refinements to prevent this type of political erosion. It is submitted that a public hearing procedure should be developed to ensure public participation in the secretary's review. The secretary's findings in controversial cases would thereby be accompanied by an evidentiary record and citizen comment. Such a procedure would strengthen public confidence in the secretary's decisions and insure that extraneous considerations would not dominate the decision-making process. Section 62 requires that each of the cabinet secretaries adopt regulations to implement the MEPA review process. These regulations should provide such a public hearing requirement.

D. Other Massachusetts Legislative Developments

§21.11. Wetland protection procedures. Chapters 782 and 784 of the Acts of 1972 effect other changes in Massachusetts environmental law by altering procedures for wetland protection. Chapter 784 incorporates former G.L., c. 130, §27A into G.L., c. 131, §40 to create a single procedure for regulating activities affecting all wetlands, coastal as well as inland. It also effects a notable change in regulatory power. Whereas Section 40 formerly vested exclusive power in the department of natural resources to regulate by order the manner in which activities affecting wetland were to be conducted, it now vests primary regulatory authority

§21.11. 1 Protective orders, whether issued by the department under prior law or issued by a municipality [see note 2, infra], pursuant to Chapter 784,
in the municipality where the proposed activity is to be conducted. Previously, municipalities could only recommend what measures should be included in the department's regulatory order to protect the public interest. They now have jurisdiction to issue such orders themselves. The department is not completely divested of jurisdiction over wetland control, however, for Chapter 784 also stipulates that if any party, including the department, is dissatisfied with an order issued by a municipality pursuant to Chapter 784, the local order may be reviewed by the department. Any order subsequently issued by the department supersedes the local order. The department's order may be reviewed, in turn, under the state Administrative Procedure Act. Chapter 784 also provides for stringent civil remedies and criminal penalties for violation of its provisions.

Chapter 782 supplements Section 40A of Chapter 313 with a more

must be predicated upon a determination by the regulating authority that the site of the proposed activity requires special protection. Under the former version of G.L., c. 131, §40, the department was required to determine that the site was "essential to public or private water supply, to the ground water supply or to proper flood control." The former version of G.L., c. 131, §27A permitted the division of marine fisheries to protect shellfish or other marine resources by imposing conditions on work projects which were to be carried out in or near areas within which such resources were located. Chapter 784 now requires that the municipality make a determination that the site is "significant to public or private water supply, to the ground water supply, to flood control, to storm damage prevention, to protection of land containing shellfish, or to the protection of fisheries" as a sine qua non to the exercise of its power to issue any protective order.

2 The statute now provides that the hearings conducted by municipalities for regulatory purposes are to be held by "the conservation commission or, if none [by] the board of selectmen in a town or [by] the mayor of a city." G.L., c. 131, §40.

3 The statute requires that, prior to the issuance of notice of local hearings, the applicant must obtain "all permits, variances and approvals required by local by-law with respect to the proposed activity." (Emphasis added). Although Chapter 784 was enacted as a wetlands protection statute, it is possible to construe the above requirement as requiring that the applicant procure some permits, variances and approvals that, although integrally related to the entire project, have no relevance to that portion of the project affecting wetlands.

4 G.L., c. 30A.

5 "Any person who purchases, inherits or otherwise acquires real estate upon which work has been done in violation of the provisions of this section or in violation of any order issued under this section shall forthwith comply with any such order or restore such real estate to its condition prior to any such violation. Any court having equity jurisdiction may restrain a violation of this section and enter such orders as it deems necessary to remedy such violation, upon the petition of the attorney general, the commissioner of natural resources, a city or town, an owner or occupant of property which may be affected by a said removal, filling, dredging or altering, or ten residents of the commonwealth under the provisions of [G.L., c. 214, §10A].

"Whoever violates any provision of this section shall be punished by a fine of not more than one hundred dollars or by imprisonment for not more than six months or both." G.L., c. 131, §40.
refined statement of procedures by which the department may protect inland wetlands and flood plain areas. Section 40A now provides that the department, by its commissioner, may issue orders establishing the conditions under which activities in inland wetlands must be conducted. It also grants the department power to establish certain inviolate zones in which "no obstruction or encroachment shall be placed by any person, firm or corporation, public or private, unless authorized" by the department. Finally, the new Section 40A strengthens the department's authority to act in the face of local opposition: in addition to shortening from one year to six months the time that the department must refrain from proceeding to promulgate its regulations when faced with local objections thereto, Chapter 784 also requires that local objections must be supported by a written statement indicating the reasons for opposition.

Sections 40 and 40A provide a somewhat complementary—albeit muddled—approach to the problem of inland wetland protection. The procedure established by the new Section 40 allows municipalities to protect wetlands within their jurisdiction which are not otherwise protected by the department pursuant to Section 40A. Section 40A on the other hand, allows the department wide latitude to establish minimum standards for any work to be done in inland wetlands. To some extent, however, the department's power under Section 40A to pre-empt municipal jurisdiction over wetlands strikes at the fundamental transfer of authority apparently achieved by Section 40.

§21.12. Coastal marine resources. Chapter 789 of the Acts of 1972 effects several changes in the provisions of G.L., c. 130 relative to pollution of coastal waters. The restrictions on discharges likely to harm marine resources, formerly found in Section 22, are now consolidated into a new and expanded Section 23. Section 23 now provides increased penalties for unauthorized discharges into coastal waters "which directly or indirectly materially injure fish, fishspawn or seed therein." The taking of fish by discharge of proscribed substances and the killing or destruction of fish by use of explosives is also made unlawful by Section 23. Sections 24 and 27 were also revised by increasing the penalties recoverable by the commonwealth, municipalities and private citizens against persons damaging shellfish or other marine resources. Other provisions of Chapter 789 exempt from statutory prohibitions the discharge of heated effluent authorized under either a federal or state permit program.

§21.13. Other developments. Chapter 219 of the Acts of 1972 clarified a potentially-troublesome aspect of G.L., c. 214, §10A, the so-

6 Pursuant to G.L., c. 130, §105, the department is empowered to issue orders similarly regulating work performance standards in coastal wetlands.


called "Private Right of Action" statute, by inserting therein a definition of the term "Person:"

As used in this section "persons" shall mean any individual, association, partnership, corporation, company, business organization, trust, estate, the commonwealth or any political subdivision thereof, any administrative agency, public or quasi-public corporation or body, or any other legal entity or its legal representatives, agents or assigns.

The amendment is clearly intended to obviate any definitional questions that may arise with respect to who may be properly identified as petitioners or respondents in a private suit brought to prevent damage to the environment.

Chapter 707 of the Acts of 1972 clarifies existing provisions granting real property tax exemptions and corporate income tax deductions for certain air and water pollution abatement facilities.

Chapter 775 of the Acts of 1972 provides municipalities with procedures for financing pollution control facilities similar to that provided for industrial development facilities.

2 G.L., c. 59, §5, cl. forty-fourth.
3 G.L., c. 63, §38D.
5 Amending G.L., c. 40D by inserting in §1 thereof clause 0½ and by adding §22.