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# TRANSMOGRIFICATION: STATE AND FEDERAL REGULATION OF AUTOMOTIVE AIR POLLUTION\*

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Considerable interest in environmental pollution has developed in the United States during the past decade. One of the principal areas of current concern is air pollution, its sources and control. The attention of scientists, conservationists, and lawmakers has focused particularly upon motor vehicles as the leading contributor to air pollution.<sup>1</sup> Since California called national attention to its special brand of air known as smog,<sup>2</sup> motor vehicles, especially automobiles, have been the center of protracted legislative and technological attention. Even so, neither the federal government nor the vast majority of states has, to date, enacted comprehensive legislation setting forth standards for vehicular pollution control on new and old models and procedures for enforcement. With the exception of less than a handful of states, the federal and state governments have not provided for periodic inspection and monitoring of the continued performance and efficiency of pollution-control equipment.<sup>3</sup> According to the Automobile Manufacturers Association,<sup>4</sup> the automotive industry recognized motor vehicles as a contributor to air pollution in the early 1950s and has been working to eliminate the pollutants since then. Yet, the first emission controls were not installed in automobiles until the 1962 model year,<sup>5</sup> and then only on cars sold in California.<sup>6</sup>

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1. Council on Environmental Quality, First Annual Report, Environmental Quality, 62 (1970); *id.*, Second Annual Report, Environmental Quality, 213 (1971) [Annual Reports of the Council on Environmental Quality hereinafter cited as CEQ Annual Report]; see United States Bureau of the Census, Statistical Abstract of the United States, Table No. 288 Air Pollutant Emissions: 1970 (1972) [hereinafter cited to table name and numbers].

2. California smog, which is basically photochemical in composition and is derived almost exclusively from motor-vehicle contamination, differs from the atmospheric condition to which the term was first applied. "Smog" was first used to describe a combination of smoke and fog of which sulphur oxides are a principle constituent. This form of smog is associated with stationary sources found in industrialized and mining areas. It has been responsible for thousands of deaths in several major episodes in Europe and the United States. See, e.g., Public Health Service, U.S. Dep't. of Health, Education, & Welfare, Air Pollution (1970).

3. See, e.g., CEQ, First Annual Report *supra* note 1, at 75, 83, 87, 88; Comment, *The Clean Air Amendments of 1970: Better Automotive Ideas from Congress*, 12 B.C. Indus. & Commercial L. Rev. 571 (1971); Note, *Air Pollution—Automobile Smog: A Proposed Remedy*, 14 DePaul L. Rev. 436 (1965); see notes 141-65, *infra* and accompanying text.

4. Automobile Manufacturers Association, *Your Car and Clean Air 2* (rev. ed. 1970).

5. *Id.* at 3.

6. *Id.*

It was not until 1965, with federal legislation pending,<sup>7</sup> that manufacturers began installing pollution-control devices as standard equipment on all automobiles.<sup>8</sup>

This note will first outline briefly the scope of automotive air pollution problems and then explore the status of present federal and state legislation, enforcement programs and prospects for future-governmental control of motor vehicle emissions. Since both the federal and California legislation have been the subject of much exposition and analysis,<sup>9</sup> the present note avoids repeating this material as much as possible and instead explores the role of the states *vis à vis* the federal government in implementing the 1970 Clean Air Amendments. In addition, suggestions are made concerning the course federal and state action should take in developing a cooperative national program for setting and enforcing emission standards for vehicles in use.

#### AUTOMOBILE AIR POLLUTANTS: SOURCE, NATURE, DAMAGE, CLEANUP

Automobile air pollution is a form of contamination, the effects of which have not always been apparent.<sup>10</sup> For a long period after their introduction, motor vehicles were individual pollution sources whose collective contamination of the air could be absorbed and recycled by the natural cleansing process of the atmosphere. But as engines increased in size, as fuels became more refined and as numbers of vehicles increased, the natural dispersing capacity of many urban skies became more and more taxed.<sup>11</sup> Today, due to the concentration of motor vehicles in metropolitan areas, air pollution is considered to be mainly an urban problem.<sup>12</sup> The effects of air pollution are not, however, confined exclusively to cities.<sup>13</sup>

Motor vehicles, powered by internal combustion engines operating on carbonaceous fuel, emit five principal pollutants: carbon monoxide, particulates, sulphur oxides, hydrocarbons, and nitrogen

7. Motor Vehicle Air Pollution Control Act of 1965, 42 U.S.C. §§1857-57(1) (1969), as amended 42 U.S.C. §§1857-58(a) (Supp. 1972).

8. See Note, *supra* note 3; Comment, *A History of Federal Air Pollution Control*, 30 Ohio St. L.J. 516, 527 (1969).

9. See, e.g., Currie, *Motor Vehicle Air Pollution: State Authority and Federal Pre-Emption*, 68 Mich. L. Rev. 1083 (1970); Kennedy & Weeks, *Control of Automobile Emissions—California Experience and the Federal Legislation*, 33 Law & Contemp. Prob. 297 (1968); O'Fallon, *Deficiencies in the Air Quality Act of 1967*, 33 Law & Contemp. Prob. 275 (1968); Comment, *supra* note 3; Comment, *supra* note 8.

10. See Wolozin, *The Economics of Air Pollution: Central Problems*, 33 Law & Contemp. Prob. 227 (1968).

11. See CEQ, First Annual Report, *supra* note 1, at 62, 66.

12. *Id.* at 62.

13. For example, Los Angeles smog damages pine forests fifty miles away in the San Bernardino mountains. See *id.* at 70.

oxides.<sup>14</sup> According to federal government figures,<sup>15</sup> motor vehicles are responsible for small amounts of the total output of particulates and sulphur oxides<sup>16</sup> but large percentages of carbon monoxide, hydrocarbons and nitrogen oxides.<sup>17</sup> These pollutants cause varying types of injury to human health, both directly<sup>18</sup> and indirectly.<sup>19</sup> They are also responsible for economic damage costing billions of dollars per year just to counterbalance.<sup>20</sup>

14. See, e.g., *id.* at 62-63.

15. Government figures are used since statistics presented by non-governmental sources vary considerably in elements of emphasis and thus tend to be misleading.

At least one author has criticized the efficacy of quoting percentage figures at all since such figures ignore the fact that some pollutants are more toxic in smaller quantities than others. Currie, *supra* note 9, at 1083-84. Such figures do, however, serve a useful purpose by giving some tangible framework for comprehending the magnitude of the pollution problem.

16. Particulates, 3.1% sulphur oxides, 3.4% (percentages by weight). Table No. 288, Air Pollution Emissions: 1970, *supra* note 1. For earlier figures, see also National Air Pollution Control Administration, U.S. Dep't of Health Education & Welfare, Pub. No. AP-73, National Inventory of Air Pollutant Emissions 1968, at 7, 10 (1970) [hereinafter cited as NAPCA, DHEW].

17. Carbon Monoxide, 74.6%, hydrocarbons, 55.9%, nitrogen oxides, 52.7%. Table No. 288, Air Pollutant Emissions: 1970, *supra* note 1.

18. The effect of these contaminants in various concentrations on human health is the subject of a growing number of studies. See, e.g., Comment, *Air Pollution Generated by Internal Combustion Engines*, 35 Albany L. Rev. 280 (1971) and primary sources cited therein. A comprehensive bibliography is beyond the scope of this article. However, a reader wishing to obtain general or technical information is advised to consult Environmental Protection Agency, Pub. No. AP-88 Photochemical Oxidants and Air Pollution: An Annotated Bibliography (1971); Pollution Abstracts (W. Farmer ed. 1970-current).

Nitrogen oxides cause eye irritation and are associated with a variety of respiratory diseases. See, e.g., Environmental Protection Agency, Pub. No. AP-84, Air Quality Criteria for Nitrogen Oxides (1971). Carbon monoxide in less than lethal doses, can produce impairment of vision, dizziness, headaches and physiological stress. See, e.g., NAPCA, DHEW, Air Quality Criteria for Carbon Monoxide, Pub. No. AP-62 (1970); 1 BNA, Environmental Reporter, Current Developments 608 (Oct. 9, 1970), 1026 (Jan. 22, 1971) [hereinafter cited as ERCD].

19. While, according to present scientific knowledge, hydrocarbons do not affect humans at existent atmospheric concentrations, they do pose an indirect threat to health since they combine with nitrogen oxides under the influence of sunlight to produce a group of secondary pollutants known as photochemical oxidants. NAPCA, DHEW, Pub. No. AP-64, Air Quality Criteria for Hydrocarbons (1970). The photochemical oxidant group includes a variety of compounds such as ozone and nitrogen dioxide. See note 2 *supra* and accompanying text. They cause irritation of mucous membranes, alter resistance to bacterial infection and have been implicated as accelerators in the aging process. NAPCA, DHEW, Pub. No. AP-63, Air Quality Criteria for Photochemical Oxidants (1970).

20. Like health effects, economic damage inflicted by air pollutants from mobile sources is fairly well known and documented. See, e.g., CEW, First Annual Report, *supra* note 1, at 66-71; Gerhardt, *Incentives to Air Pollution Control*, 33 Law & Contemp. Prob. 358 (1968); Comment, *Air Pollution: The Problem of Motor Vehicle Emissions*, 3 Conn. L. Rev. 178 (1970). Among the more common and evident forms of damage are corrosion of metal and stone structures, chronic injury to agricultural crops and livestock, more frequently required commercial and private cleaning of clothes and buildings, and adverse effects on air travel. See, e.g., CEQ, First Annual Report, *supra* note 1, at 70-71; Agricultural Research Service, U.S. Dep't of Agriculture, Agriculture Handbook No. 380, Air Pollutants Affecting the Performance of Domestic Animals (1970); NAPCA, DHEW, Pub. No. AP-71, Air Pollution Injury to Vegetation (1970).

The total costs of these and other effects of air pollution have not been precisely calculated.

As knowledge of the effects and costs of automotive air pollution has expanded, attention has focused upon methods of abating the pollution. Unlike water, air cannot be cleansed by man-made apparatus once it has been polluted.<sup>21</sup> Thus, efforts to abate automotive air pollution have concentrated upon preventing the release of contaminating emissions into the atmosphere.

Presently, two basic approaches to developing a pollution-free vehicle are being taken: improvement of the internal combustion engine<sup>22</sup> and production of alternative power sources.<sup>23</sup> None of the

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Such measurements are difficult to make since the pollutants, once released into the air, interact with one another and with other components of the atmosphere producing unanticipated results. Environmental Protection Agency, *The Economics of Clean Air*, S. Doc. No. 92-6, 92d Cong., 1st Sess. 1-5 (1971); CEQ, Second Annual Report, *supra* note 1, at 272, 289-90; Cassell, *The Health Effects of Air Pollution and Their Implications for Control*, 33 *Law & Contemp. Prob.* 197 (1968); Chase Econometrics, Inc., *Automobiles, The Economic Impact of Pollution Control. A Summary of Recent Studies*, 43-68 (EPA Pub. 1972); Wolozin, *supra* note 10, at 228-33.

21. Wolozin, *supra* note 10, at 228.

22. The automotive industries have repeatedly asserted that improvement of the internal combustion engine is the best route for providing pollution free vehicles. Automobile Manufacturers Association, *Your Car and Clean Air* 13-14 (1970); 1 BNA, ERCD 762 (Nov. 20, 1970) (quoting Edward N. Cole, president of General Motors); Atlanta Constitution, Sept. 25, 1972, at 1A, col. 2. Consequently, the industry has developed a number of devices and refined systems which, to a limited extent, control pollutants at the source of their emission: crankcase, carburetor, fuel tank and exhaust. *E.g.*, NAPCA, DHEW, Pub. No. AP-66, *Control Techniques for Carbon Monoxide, Nitrogen Oxide and Hydrocarbon Emissions from Mobile Sources* (1970). These devices are not, however, newly discovered. Some of them were in existence nearly forty years ago. J. Esposito, *Vanishing Air* 49-50 (1970).

In addition to the automotive industry, fuel companies, governmental agencies and private developers are conducting research on modifications of the internal combustion engine. *E.g.*, 1 BNA, ERCD 51 (May 15, 1970) (DuPont exhaust manifold thermal reactor system); *id.* at 129 (June 5, 1970) (Cummins' electrical process to remove particulates from diesel smoke); *id.* at 179 (June 19, 1970) (Texaco exhaust filter to remove lead particles); *id.* at 429 (Aug. 14, 1970) (NASA thermal reactor after burner to replace standard exhaust); *id.* at 605 (Oct. 9, 1970) (Texaco transistorized ignition system); *id.* at 666 (Oct. 23, 1970) (Esso exhaust catalyst); *id.* at 679 (Oct. 30, 1970) (General Motors' electronic fuel injection system, catalytic converters, exhaust gas recirculation system); *id.* at 1215 (Mar. 5, 1971) (Universal Oil Products catalytic converter being tested in Chicago). For a detailed discussion of these modifications, see Esposito, *supra* at 48-51; NAPCA, DHEW, Pub. No. AP-66 *supra*. One alternative being tested and operated is the Wankel rotary engine. While the Wankel, if uncontrolled, emits more air pollutants than the standard piston engine, its smaller size and adaptability to pollution-control devices makes it attractive. 1 BNA, ERCD 711 (Oct. 30, 1970); Cole, *The Wankel Engine*, *Scientific Am.*, Aug. 1972, at 14; Schultz, *Your Pollution-Free Car of 1975*, *Sci. Dig.*, May 1971, at 51-52; Wakefield, *Principles & Promises of the Wankel*, *Road & Track*, Feb. 1971, at 49. One such rotary engine is currently used in the Mazda from Japan. The engine is reported to be in line with federal emission standards. *N.Y. Times*, March 16, 1972, at 35, col. 5.

23. The alternatives include electric and steam engines, the Rankine cycle steam engine (similar to a standard steam engine but operated on a high-pressure gas produced from heating a liquid refrigerant), and gas and steam turbines. *E.g.*, Bond, *Should We Get Steamed Up?* *Road & Track*, Sept. 1968, at 110 (steam); 1 BNA, ERCD 56 (May 15, 1970) (electric); *id.* at 478 (Aug. 28, 1970) (Rankine); *id.* at 491 (Sept. 4 1970) (steam); *id.* at 928-30 (Jan. 1, 1970) (electric and gas turbine); *id.* at 988 (Jan. 15, 1971) (gas turbine); *Freon Engine for Datsun*, *Popular Mechanics*, Oct. 1970, at 48c (Rankine); Lindsley, *New: Minto's Unique Steamless "Steam" Car*, *Popular*

efforts to date, has produced a totally pollution-free internal combustion engine, although some progress is being made in reducing emissions on newly manufactured vehicles.<sup>24</sup> By far the more promising alternative is elimination of the internal combustion engine and adoption of alternative power sources. Such an alternative, however, will never be followed on a national scale until the recalcitrance of American auto manufacturers is overcome.<sup>25</sup> Besides modifying or rejecting the internal combustion engine, a third alternative is being tested in some areas: conversion of fuel from gasoline to liquified natural gas (LNG), liquified petroleum gas (LPG), and compressed natural gas (CNG).<sup>26</sup> LNG, LPG and CNG reduce pollutants significantly, apparently improve the useful life of other engine parts, and cost less than gasoline.<sup>27</sup> The principal drawback to immediate conversion to these other fuels is the present scarcity of refueling stations.<sup>28</sup>

These developments have taken place over roughly the past decade. Prior to the imposition of government standards, however, manufacturers treated pollution as a cost of production to be borne by all who breathe the air rather than as an internalized cost to be absorbed partly by vehicle purchasers and partly by the industry itself.<sup>29</sup> Even when pollution control became economically feasible, the automotive industry did not voluntarily apply the new technology.<sup>30</sup> It was not until legislative control of motor vehicle emis-

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Science, Oct. 1970, at 51 (Rankine); Schultz, *supra* note 22, at 48, 54 (electric and gas turbine); Competition Press & Autoweek, Dec. 19, 1970, at 7, col. 4 (electric); *id.*, Jan. 30, 1971, at 7, col. 1 (gas turbine); Atlanta Journal, Sept. 23, 1971, 20-B, col. 2 (Rankine). Industrialist-inventor William Lear has introduced a vapor-turbine engine bus and car which reportedly more than meet the present 1975 vehicle emission standards. Atlanta Constitution, Feb. 12, 1972 at 2-B, col. 1; N.Y. Times, Feb. 13, 1972, at 60, col. 6. The stratified charge engine, which is actually a hybrid internal combustion and diesel has been tested and apparently meets the 1976 proposed emission standards. According to the federal government, further tests must be run to check the engine's performance over a useful life distance of 50,000 miles. 1 BNA, ERCD 1043 (Jan. 29, 1971); 2 BNA, ERCD at 647 (Oct. 1, 1971); Schultz, *supra* note 22, at 49.

24. See Environmental Protection Agency, The Economics of Clean Air, S. Doc. No. 92-6, 92d Cong., 1st Sess., 3-4 to -12 (1971).

25. Operational alternatives to the internal combustion engine now exist. See note 23 *supra*. For a revealing discussion of the feasibility of converting to alternate engines, see Esposito, *supra* note 22, at 26-47.

26. 1 BNA, ERCD 309 (July 24, 1970) (Los Angeles); *id.* at 474-75 (Aug. 28, 1970) (General Services Administration; Washington Gas Light Co.; Ontario, Canada); BNA, Environmental Reporter, Federal Laws, 51:4301 (1970).

27. 1 BNA, ERCD 474-75 (Aug. 28, 1970); Wilder, *Clean Air Car Race*, Road & Track, Dec. 1970, at 26.

28. 1 BNA, ERCD 474-75 (Aug. 28, 1970). CNG is presently a feasible propellant for car owners in Los Angeles where gas is piped throughout the city and gasoline stations can tap into the line. Wilder, *supra* note 26, at 29.

29. See Esposito, *Air and Water Pollution: What to Do While Waiting for Congress*, 5 Harv. Civ. Rights-Civ. Lib. L. Rev. 32 (1970).

30. Staff Report, U.S. Dep't of Health Education & Welfare, PHS Pub. No. 1549, State and

sions was pending or enacted that control devices were put into mass use.<sup>31</sup>

### FEDERAL LEGISLATION: HISTORY AND PRESENT STATUS

Government regulation of automotive air pollution did not develop until the early 1960s, first from the state of California<sup>32</sup> and then from the federal government,<sup>33</sup> followed by a few other states.<sup>34</sup> It had been generally assumed that the states, rather than the federal government, should and would assume the burden of control.<sup>35</sup> Since few states have demonstrated an intention to assume this responsibility, federal legislation has been propounded over the past five years which clearly excludes state control in two areas: setting emission standards for new, post-1967 vehicles and inspecting new, post-1968 vehicles.<sup>36</sup> Federal legislation has left to the states the responsibility for requiring inspection of used post-1968 vehicles and the entire regulation of pre-1968 vehicles.<sup>37</sup> State legislation, where it has been enacted,<sup>38</sup> has concentrated upon regulation of used motor vehicles.

The automotive industry favors total federal control of vehicular air pollution.<sup>39</sup> At least one author supports exclusive state control.<sup>40</sup> The first arrangement has the advantage of offering a unified system of emission standards and enforcement procedures. It has the practical

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Local Programs for Air Pollution Control (1966); Comment, *supra* note 8, at 523. There are several reasons for this resistance: industry concern for short-term profit structure, alleged costs of retooling (in actuality less than annual retooling for style changes), simplicity of alternate engines eliminating formerly necessary parts and replacement costs to the consumer. The profit margin in the sale of replacement parts exceeds that in the sale of new cars. Obsolescence and deterioration, planned or otherwise, of parts will be less with motors that do not require standard transmissions, carburetors or distributors. Esposito, *supra* note 22, at 29, 34-36.

31. The industry emphasizes that the installation of control devices was accomplished before federal standards were imposed. The manufacturers fail to note, however, that legislation was pending before Congress at the time the first control devices were installed nationwide. See Esposito, *supra* note 22, at 50-51.

32. Cal. Health & Safety Code §§39000-39275 (West Supp. 1972), discussed at notes 142-51 *infra* and accompanying text.

33. Motor Vehicle Air Pollution Control Act of 1965, 42 U.S.C. §§1857-57(1) (1969), as amended 42 U.S.C. §§1857-58a (Supp., 1972).

34. See Currie, *supra* note 9, at 1089.

35. See Currie, *supra* note 9, at 1085; Comment, *supra* note 8, at 523.

36. Air Quality Act of 1967, 42 U.S.C. §1857f-6a(a) (Supp. V, 1965), as amended, 42 U.S.C. §1857f-6a(a) (1970).

37. Cf. *id.* at §1857f-6a(c); Clean Air Amendments of 1970, 42 U.S.C. §1857f-6a(a) (1970) [hereinafter cited as Clean Air Amendments with code sections from Title 42]. No federal legislation enacted prior to 1967 attempted to pre-empt state control and that legislation passed in 1967 and 1970 is prospective only in application.

38. See notes 170-73, *infra* and accompanying text.

39. See *Hearings on Air Pollution—1967 Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 90th Cong., 1st Sess., pt. 1, at 403 (1967); *Hearings on Air Pollution—1970 Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 91st Cong., 2d Sess., pt. 5, at 1583 (1970) [hereinafter cited as 1970 *Hearings*].

40. See Currie, *supra* note 9.

disadvantage of requiring an extremely expensive, nationwide inspection network. The second alternative makes it more difficult for the automotive industry to obtain favorable emission standards and controls since manufacturers would have to approach fifty legislative bodies rather than one. The second has the advantage of multiple inspection agencies whereby the costs of inspection may be spread over a wider base. The states, however, have simply not demonstrated their willingness or capacity to assume total and exclusive responsibility in this area.

Given the present status of federal and state legislation, a third alternative appears to be more viable than the other two previously mentioned: the federal government should set emission standards for used vehicles and approve uniform inspection procedures; the states should enforce the standards and implement inspection. As a practical matter, the trend in federal and state legislation as briefly outlined above has been toward the third alternative. This scheme combines advantages of the first two arrangements of vehicular pollution regulation: uniform emission standards and inspection procedures and multiple agencies. On the other hand, it does have a drawback inherent in having one governmental agency setting standards, namely, potential vulnerability to pressure to reduce emission standards so that regardless of how well the standards are enforced they will be ineffective in controlling automobile air pollution.<sup>41</sup> The objectives of this third alternative are to define as clearly as possible the scope of federal pre-emption and to eliminate confusion, overlap and competition between state and federal agencies in automotive pollution control. The extent to which this third alternative is developing can be explored by analyzing in greater detail current federal legislation and federal agency regulations implementing the legislation.

The trend toward federal pre-emption of various aspects of vehicular pollution control was not evidenced in initial federal air pollution control laws. On the contrary, the first federal law, the Air Pollution Control Research and Technical Assistance Act of 1955, emphasized

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41. While the Environmental Protection Agency has refused manufacturers' requests for an extension of the 1975 emission standards for new cars, it has reportedly eased proposed emission limitations on heavy-duty vehicles and has delayed application until 1974. Atlanta Constitution, Feb. 12, 1972, at 16-A, col. 1.

In the recent case of *International Harvester Co. v. Ruckelshaus*, 41 U.S.L.W. 2444 (D.C. Cir. Feb. 10, 1973), the court remanded the EPA Administrator's decision not to grant plaintiff auto manufacturers a one-year postponement of 1975 new-car pollution standards. The court found that the Administrator's denial was not supported with a reasoned presentation sufficient to overcome plaintiffs' prima facie showing of a lack of reasonably available technology. The court noted, however, that its decision did not imply any acceptance of plaintiffs' findings, but merely that the EPA had failed to demonstrate sufficiently the reliability of its own data. See note 130 *infra*.



that the primary responsibility for the control of air pollution rests with the states.<sup>42</sup> This Act limited the federal role to conducting and coordinating research and granting technical and financial assistance to state and local governments, thereby prodding the states to assume responsibility for regulation.<sup>43</sup> The 1963 Clean Air Act<sup>44</sup> re-emphasized the states' responsibility to control air pollution but added the phrase "at its source."<sup>45</sup> This Act, to some extent, also increased federal advisory involvement in local pollution problems.<sup>46</sup>

It was not until 1965, however, after a fairly uniform failure by the states to act in the area,<sup>47</sup> that Congress enacted the Motor Vehicle Air Pollution Control Act, which specifically concerns motor vehicles.<sup>48</sup> This law granted the Secretary of Health, Education and

42. Air Pollution Control—Research and Technical Assistance Act of 1955, ch. 360, §§1-7, 69 Stat. 322, as amended, 42 U.S.C. §§1857-571 (1970).

Just what constitutes "primary responsibility" and how that responsibility may be effectuated has been a matter of concern and confusion among the states. The federal government has not been particularly helpful since national legislation has not clearly defined the roles of the federal and state governments even though it should, given the reluctance of the states to enter a field where there is a strong possibility of federal pre-emption. See e.g., Currie, *supra* note 9, at 1089; Comment, *supra* note 3, at 580. The federal statutes merely state that the states are to have primary responsibility. Air Pollution Control—Research and Technical Assistance Act of 1955, ch. 360, §1, 69 Stat. 322:

In recognition of the dangers to public health and welfare, injury to agricultural crops and livestock, damage to and deterioration of property and hazards to air and ground transportation from air pollution, it is hereby declared to be the policy of Congress to preserve and protect the primary responsibilities and rights of the States and local governments in controlling air pollution. . . .

This position of the 1955 Act was reaffirmed in succeeding legislation. Clean Air Act of 1963, 42 U.S.C. §1857(a)(3) (1964):

(a) The Congress finds—

(3) that the prevention and control of air pollution at its source is the primary responsibility of States and local governments. . . .

The Motor Vehicle Air Pollution Control Act of 1965 did not mention or change the above language of the 1963 Act. The Air Quality Act of 1967, 42 U.S.C. §1857(a)(3) (Supp. V, 1965) re-enacted the provision quoted from the 1963 Act. The Clean Air Amendments do not mention or change this provision.

43. Air Pollution Control—Research and Technical Assistance act of 1955, ch. 360, §§1-7, 69 Stat. 322.

44. 42 U.S.C. §§1857-571 (1964).

45. 42 U.S.C. §1857(a)(3) (1964). At least one author suggests that this change in wording seems to be "a recognition of the interstate characteristics of much of the existing air pollution and an indication that increased federal participation is likely." Comment, *supra* note 8, at 520 n.35.

46. For example, the 1955 Act permitted the Surgeon General to investigate a local air pollution problem upon the rest of a state or local government. Air Pollution Control—Research and Technical Assistance Act of 1955, ch. 360, §3, Stat. 322. The 1963 Act expanded the prerogative to investigate if the pollution caused in one state affected an area in another. Clean Air Act of 1963, 42 U.S.C. §1857d(c)(1)(A) (1964). The federal findings, however, were advisory only and did not have to be followed by state or local authorities. *Id.* §§1857d(c)(3)(d).

47. See Note, *supra* note 3, at 439.

48. Motor Vehicle Air Pollution Control Act of 1965, 42 U.S.C. §§1857-571 (1969).

Welfare the power to set emission standards for new motor vehicles.<sup>49</sup> While this Act marks the beginning of federal regulatory involvement in vehicular pollution, it did not specifically pre-empt states from setting emission standards or from otherwise regulating automotive air pollution.

Several states did enact standards for new motor vehicles<sup>50</sup> until Congress revealed its intent to regulate such emissions in the Air Quality Act of 1967:

No State or any political subdivision thereof shall adopt or attempt to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines subject to this subchapter. No State shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle or new motor vehicle engine as condition precedent to the initial retail sale, titling (if any), or registration of such motor vehicle, motor vehicle engine, or equipment.<sup>51</sup>

At the same time, Congress explicitly limited its sphere of regulation to new motor vehicles:

Nothing in this subchapter shall preclude or deny to any State or political subdivision thereof, the right *otherwise* to control, regulate, or restrict the use, operation, or movement of registered or licensed motor vehicles.<sup>52</sup> (emphasis added)

The provisions of the 1967 Act were the subject of much criticism which focused upon cumbersome procedures, inadequate enforcement provisions, and failure by the Secretary of Health, Education and Welfare to interpret the powers given him to test assembly-line vehicles.<sup>53</sup> In a decided attempt to meet the inadequacies of the 1967 law, Congress passed the Clean Air Amendments of 1970.<sup>54</sup> These Amendments strengthened federal exhaust emission standards for new motor vehicles,<sup>55</sup> specifically permitted assembly-line testing of new motor vehicles by the Administrator of the Environmental Protection

49. *Id.* §1857f-1(a).

50. *See* Currie, *supra* note 9, at 1089.

51. Air Quality Act of 1967, 42 U.S.C. at §1857-6a(a) (1970). For a discussion of the rationale for enacting uniform federal standards, *see* S. Rep. No. 192, 89th Cong., 1st Sess., 6, 8 (1965); Currie, *supra* note 9, at 1087-89; Comment, *supra* note 3, at 584-85, 585 n.90; Comment, *supra* note 8, at 526-29.

52. Air Quality Act of 1967, 42 U.S.C. at §1857f-6a(c) (1970).

53. *See, e.g.*, 1 BNA, ERCD 3-4 (May 1, 1970); *id.* at 50 (May 15, 1970); Ottinger, *Legislation and the Environment: Individual Rights and Governmental Accountability*, 55 Cornell L. Rev. 666 (1970); Comment, *supra* note 3, at 587.

54. *See* Comment, *supra* note 3, at 581.

55. Clean Air Amendments, 42 U.S.C. §§1857f-1(a)(1), (b)(1)(A) & (B), (d)(1) & (2) (1970).

Agency (EPA)<sup>56</sup> and required a warranty from the manufacturer to the ultimate and subsequent purchasers for compliance with the new standards for the motor vehicles' useful lives.<sup>57</sup>

While Congress has clearly indicated in the 1970 Amendments that emissions from new motor vehicles are to be controlled at the national level,<sup>58</sup> it has not been so clear with respect to the extent to which, if any, it intended to pre-empt regulation of pollution from motor vehicles owned and operated by ultimate purchasers.<sup>59</sup> An example of this lack of clarity is the warranty provision of the 1970 Clean Air Amendments. The Amendments require manufacturers to warrant compliance with applicable federal emission standards by vehicles manufactured after 1970,<sup>60</sup> and to warrant compliance by vehicles in actual use if administrative procedures for testing are established.<sup>61</sup> These warranties run to the ultimate and subsequent purchasers. Thus, the federal government seems to have assumed a role generally considered to be one left to the states, that is, regulation and inspection of used motor vehicles, *i.e.*, ones that have passed to an ultimate purchaser.<sup>62</sup>

One of the primary difficulties with this provision is the wording which requires the Administrator to "establish" the procedures he deems available and reasonable for testing conformity of post-1970 vehicles with applicable federal emission standards during the useful life of such vehicles.<sup>63</sup> "Establishment" could mean either recognition of a given state inspection procedure as acceptable to the federal government, or it could mean organization of an exclusively federal inspection program. The EPA has apparently adopted the second definition since it is developing plans to have 1972 automobiles, which

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56. *Id.* at §1857f-5(a)(1).

57. *Id.* at §§1857f-5a(a), (b). The Environmental Protection Agency has promulgated regulations requiring auto manufacturers to provide instructions on proper maintenance of air pollution control systems to assure continued compliance with federal standards for the useful life of the vehicles. 36 Fed. Reg. 16905 (1971).

58. See note 36 *supra* and accompanying text.

59. The original Senate version of the Clean Air Amendments contained the following provision:

Nothing in this title shall preclude or deny to any State or political subdivision thereof the right otherwise to control, regulate or restrict the use, operation or movement of registered or licensed motor vehicles, particularly such controls, regulations, or restrictions necessary to achieve compliance with national ambient air quality standards and national ambient air quality goals established pursuant to title I of this Act. S. 3229, 91st Cong., 2d Sess., §210(c) (1970).

The final version omits the phrase beginning after "motor vehicles." Clean Air Amendments, 42 U.S.C. 26 §1857f-6a(c) (1970).

60. Clean Air Amendments, 42 U.S.C. at §1857f-5a(a) (1970).

61. *Id.* at §1857f-5a(b).

62. See note 37 *supra* and accompanying text.

63. Clean Air Amendments, 42 U.S.C. at §1857f-5a(b)(1) (1970).

have been in use for a while, tested with the voluntary permission of owners by a private contractor under contract to the EPA.<sup>64</sup>

The first interpretation, however, accords more closely with the rest of the provision. This conclusion is supported by the subsection which speaks of inspection facilities simply as being available for carrying out the established procedures, rather than having to be federally initiated and operated.<sup>65</sup> Another section provides that inspections conducted for testing compliance with national standards of post-1970 vehicles shall be voluntary, "except as may be provided by any State or local inspection program."<sup>66</sup> This phrase seems to indicate that a federal program can at best be voluntary, whereas, such an infirmity does not afflict state or local inspection programs.

Where a state has undertaken a federally acceptable inspection program, the Administrator could utilize the state's findings since nothing in the Amendments directs the Administrator to use an exclusively federal program. Where, however, no acceptable state program exists, the federal government could initiate its own on a voluntary basis. To serve the purposes of federal inspection of post-1970 vehicles, that is, to check for compliance with the warranty requirement, not all vehicles in all states need be tested but only a substantial number in a given class or category of vehicles.<sup>67</sup> The federal government could thus cooperate closely with a few states having mandatory inspection programs and high concentrations of motor vehicles to accomplish the necessary inspections.<sup>68</sup>

Although the trend in federal legislation from 1967 through the Clean Air Amendments has been to pre-empt entirely state regulation of emissions from new vehicles, the federal role as standard setter in the third alternative scheme has not been clearly articulated. Congress has, by default, left to the states the entire regulation of emissions from pre-1968 vehicles.<sup>69</sup> It has set emission standards for vehicles manufactured between 1968 and 1971 but does not require federal post-sale inspection.<sup>70</sup> Under the Clean Air Amendments Congress granted the EPA Administrator discretionary power to establish federally accepted inspection procedures for testing used post-1970 vehicles and to utilize a voluntary federal inspection

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64. Letter from B. Richard Fandel, EPA Office of Public Affairs, to Evelyn Angeletti, Nov. 8, 1971. [All letters subsequently cited were addressed to the author and will be cited by the name of the sender only].

65. Clean Air Amendments, 42 U.S.C. at §1857f-5a(b)(2) (1970).

66. *Id.* at §1857f-5a(f).

67. *Cf. id.* at §1857f-5a(c)(1).

68. New Jersey is one such state. See note 153 *infra* and accompanying text.

69. See CEQ, Second Annual Report, *supra* note 1 at 41; Currie, *supra* note 9, at 1095-96; Comment, *supra* note 3, at 596-98.

70. See 42 U.S.C. at §1857f-5 (1970) (historical note).

program.<sup>71</sup> Thus, states are not pre-empted from enacting and enforcing mandatory inspection programs of used motor vehicles to test for compliance with applicable national emission standards. This is the principal area for action left open to the states. Arguably the need for a program directed toward pre-1970 vehicles will decrease over the years as more vehicles are replaced with later models. As a result, many states without a current, extensive automobile pollution problem may simply do nothing and wait for the problem to go away, relying upon federal regulations on new vehicles to regulate pollution.<sup>72</sup> Some states are apparently adopting this position, which the EPA approves.<sup>73</sup> Despite any such governmental attitude, the need will remain for inspection of post-1970, used vehicles to insure continued compliance with federal standards and to permit all owners in all states to take advantage of any federally required warranty with respect to their vehicles.

The extent to which the states are likely to become implementers of inspection programs for post-1970 vehicles can be analyzed by reviewing the encouragement given the states by the Clean Air Amendments and agency regulations implementing them. The Amendments contain a number of general provisions relating to the role of states *vis à vis* the federal government in motor-vehicle pollution control. The Amendments first reiterate the federal position that the prevention and control of air pollution at its sources is primarily the responsibility of state and local governments.<sup>74</sup> They encourage federal financial assistance and leadership in developing cooperative federal, state and regional programs, uniform state air-pollution control laws, and state compacts for mutual assistance and enforcement of air pollution laws.<sup>75</sup> The EPA Administrator is authorized to make grants to state air-pollution control agencies for research, manpower training, and maintenance of control programs.<sup>76</sup>

With respect more specifically to vehicular pollution control, each state is made responsible for implementing national primary and secondary ambient air-quality standards within its boundaries.<sup>77</sup> State

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71. Clean Air Amendments, 42 U.S.C. at §§1857f-5a(b), (f) (1970).

72. *Id.* at §1857a(a).

73. 37 Fed. Reg. 10842, 44 (1972); Atlanta Journal, Feb. 17, 1972, at 4-A, col. 2.

74. Clean Air Amendments 42 U.S.C. at §1857(a)(3) (1970).

75. *Id.* 42 U.S.C. at §§1857(a)(4), 1857a (a), (c) (1970), *as amended*, 42 U.S.C. at §§1857(a)(4), 1857a (a), (c) (Supp. 1972).

76. *Id.* at §§1857b(a)(3), (5), 1857b-1(a)(2), 1857c. For statistics on federal assistance in state air pollution programs, see CEQ, Third Annual Report, Table A-1 at 197 (1972); Statistical Abstract of the United States (1972), Table No. 660, General Revenue of State and Local Governments—Origin and Allocation, by States: 1970, note 1 *supra*.

77. Clean Air Amendments, 42 U.S.C. at §1857c-2, -5 (1970).

implementation plans, among other provisions, must include emission limitations necessary to insure attainment and maintenance of air standards, including transportation controls,<sup>78</sup> must provide "to the extent necessary and practicable, for periodic inspection and testing of motor vehicles to enforce compliance with applicable emission standards,"<sup>79</sup> provide for attainment and maintenance of national standards within three years of approval of the plan,<sup>80</sup> and assure adequate personnel, funding and authority to carry out the plan.<sup>81</sup> Thus, according to the legislation, states are not only encouraged but required to become active enforcers of vehicular pollution regulation to the extent necessary and practicable to insure compliance with and maintenance of applicable emission standards before the plan may be approved by the EPA Administrator.<sup>82</sup>

Since states must submit plans implementing these provisions of the Clean Air Amendments to the EPA Administrator for approval, the EPA promulgated guidelines to aid states in developing implementation plans.<sup>83</sup> Preliminary guidelines<sup>84</sup> were published on April 7, 1971, and, after time for comments, were promulgated in final form on August 14, 1971.<sup>85</sup> Ostensibly, the purpose of the regulations is to guide states in the preparation, adoption and submission of plans meeting the requirements of the Clean Air Amendments.<sup>86</sup> The extent to which the EPA guidelines have actually served this end is open to question.<sup>87</sup> First, several changes weakening the forcefulness of the regulations were made from the preliminary to the final draft.<sup>88</sup> The regulations also fail to conform in language and spirit to the Clean Air Amendments.<sup>89</sup> The regulations in effect penalize inclusion of an inspection program in a state's implementation plan<sup>90</sup> and relegate transportation controls, including vehicular inspection, to one of many alternatives for aggregate control of pollution rather than

78. *Id.* at §1857c-5(a)(2)(B).

79. *Id.* at §1857c-5(a)(2)(C).

80. *Id.* at §1857c-5(a)(2)(A)(i). In a recent federal district court case, *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (D.D.C. 1972), the court held that the EPA Administrator could not approve a state implementation plan that would allow significant deterioration of existing air quality in areas where the air is cleaner than it would be under EPA standards. The EPA has appealed the decision. *Sierra Club v. Ruckelshaus*, Civil No. 72-1528 (D.C. Cir. 1972).

81. Clean Air Amendments, 42 U.S.C. at §1857c-5(a)(2)(F)(i) (1970).

82. *Id.* at §1857c-5(a)(2)(C).

83. 36 Fed. Reg. 15486-15505 (Aug. 14, 1971).

84. 36 Fed. Reg. 6680 (April 7, 1971).

85. 36 Fed. Reg. 15486 (Aug. 14, 1971).

86. *Id.*

87. See note 80 *supra*.

88. See notes 104, 107, 128, *infra* and accompanying text.

89. See note 118, *infra* and accompanying text.

90. See note 123, *infra* and accompanying text.

emphasizing them as necessary goals in themselves as required by the Clean Air Amendments.<sup>91</sup> Individually, these inadequacies of the regulations do not constitute death blows to the usefulness of the guidelines in directing development of state implementation plans. Cumulatively, however, they emasculate the effectiveness of the regulations in encouraging vehicular pollution control by the states. The regulations appear to require state control of automotive emissions only where the air pollution is so great as to offer no alternative but to require their inclusion. Even then EPA granted states delays in effectuating transportation controls of as much as two-years beyond the statutorily set deadline of 1975.<sup>92</sup> A recent decision of the Court of Appeals for the District of Columbia has held these delays impermissible under the Clean Air Amendments.<sup>93</sup>

The shortcomings of the guidelines may be demonstrated by examples concerning the scope of the EPA Administrator's discretion in approving state implementation plans, the recommended contents of the plans, and the methods to be followed in determining air pollution levels and the necessity for control. Before the Administrator can approve an implementation plan he must determine that "it includes emission limitations . . . necessary to insure attainment and maintenance of . . . primary or secondary standard[s], including, but not limited to, land-use and transportation controls . . ."<sup>94</sup> Furthermore, the Amendments expressly require compliance with primary ambient air standards within three years from the date of approval of such plan (roughly mid-1975).<sup>95</sup> A two-year extension of this deadline may be obtained only upon application of a state's governor and upon a detailed showing of a lack of reasonably available alternative methods of control.<sup>96</sup> Even before requests for extensions were submitted, however, the EPA Administrator determined that transportation control measures could not be developed and available soon enough to permit attainment of primary standards within the required three-year period.<sup>97</sup> As a result, the Administrator concluded that two-year extensions were justified where transportation controls would be necessary.<sup>98</sup> In *Natural Resources Defense Council, Inc., v.*

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91. See note 117, *infra* and accompanying text.

92. See discussion *infra* at notes 97-98.

93. *Natural Resources Defense Council v. Environmental Protection Agency*, Civil No. 72-1522 (D.C. Cir. Jan. 31, 1973). See discussion *infra* at notes 98-99.

94. Clean Air Amendments, 42 U.S.C. at §1857c-5(a)(2)(B) (1970).

95. *Id.* at §1857c-5(a)(2)(A)(i).

96. *Id.* at §1857c-5(e), (f).

97. 37 Fed. Reg. 10842, 45 (May 31, 1972).

98. *Id.* These regulations state, however, that timetables for attainment of standards will be subject to review and revision if more expeditious attainment is practicable. *Id.* Extensions until

*Environmental Protection Agency*,<sup>99</sup> a recent suit challenging the authority of the Administrator to grant two-year extensions based upon these determinations, the Court held that the Administrator's grant of extensions did not conform with the procedures set forth in the Clean Air Amendments and must be rescinded. The Court also held that the Administrator must review all previously approved implementation plans and require amendments where necessary to insure maintenance of primary standards after 1975.

This decision indicates that the EPA Administrator's scope of discretion is strictly circumscribed by the procedural safeguards of the Amendments. The detailed requirements in the Amendments for state requests for extensions were designed to prevent unnecessary delay by states in attaining and maintaining the given levels of clean air. The Administrator's unilateral decision, however, has effectively hindered states' consideration of transportation controls for use in implementation plans. Furthermore, the decision assumes that transportation control measures, as a class, cannot be developed and available to aid attainment of primary standards by 1975. In view of the *Natural Resources Defense Council* case, the Administrator should promulgate guidelines indicating the relative availability and effectiveness of the various kinds of vehicular controls.<sup>100</sup> Thus, for example, developing and operating a rapid transit or shuttle bus system for a major metropolitan area may not be possible by 1975. However, requiring maintenance and inspection of vehicles may be quite possible and very effective. Information from both California and New Jersey is and has been readily available to the EPA which indicates that inspection programs are effective and reasonably available methods of transportation control.<sup>101</sup>

Another difficulty with the guidelines is the requirement that the

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1977 for meeting standards related to auto air pollution in at least some state regions were granted the following states upon their request or upon the EPA Administrator's initiative: Alabama, Arizona, California, Colorado, Indiana, Kansas, Maryland, Massachusetts, Minnesota, Nevada, New Jersey, New Mexico, New York, Ohio, Pennsylvania, Texas, Utah, Washington.

99. This action was originally brought in the Court of Appeals for the District of Columbia Circuit. When that Court denied the Council's motion for declaratory judgment that the court's decision would apply to the Administrator's decisions as to all state implementation plans, not just the District of Columbia's, the Council filed identical suits in all the circuits and moved for transfer to the D.C. Circuit. See *Natural Resources Defense Council v. EPA*, 465 F.2d 492 (1st Cir. 1972). As of October 29, 1972, five courts had permitted transfer, four denied, and two had not decided. Interview with David Hawkins, attorney for Natural Resources Defense Council, Oct. 29, 1972.

100. It seems incongruous for the EPA to determine transportation controls are unfeasible and yet to permit reliance on projected emission reductions from post 1974 vehicles. The technological feasibility of meeting 1975 standards is hotly contested by manufacturers. Yet almost everyone agrees that a properly tuned and serviced vehicle will emit fewer pollutants than an untuned one, which regular inspections can help assure.

101. See discussion *infra* at notes 142-58.



Administrator must determine whether periodic inspection and testing of motor vehicles by a given state are necessary and practicable.<sup>102</sup> The EPA regulations do not indicate that the Administrator will make a preliminary determination per se that a particular implementation plan should contain an inspection provision. Rather, inspection and testing may be included in an over-all control strategy, but at such time as the Administrator determines that such programs are feasible and practicable.<sup>103</sup> The word used is not “necessary” (which appears in the legislation) but “feasible.”<sup>104</sup> This terminology in the regulations, according to which the implementation plans were formulated, contrasts with more recent EPA statements. In the introduction to the approval of state implementation plans in May 1972, the EPA indicates that states must take steps to reduce emissions from transportation sources “whenever such steps are *necessary* for attainment and maintenance of national ambient air quality standards” (emphasis added).<sup>105</sup> Yet, in this same document, the EPA states that transportation controls cannot be developed and available to permit attainment of primary ambient air standards by 1975.<sup>106</sup> This vacillation in terms and requirements can only hinder the states in their understanding of their role in implementing the Clean Air Amendments.

As noted above, the Administrator uses the term “feasible” rather than “necessary” in the August 1971 guidelines. The preliminary version of the guidelines also includes the term “feasible” in the same context as the final version noted above. But, unlike the final guidelines, the draft specifically included a provision requiring implementation plans to show that the agency charged with enforcing the plan had authority to carry out inspection and testing of motor vehicles when necessary and practicable and to impose other necessary controls on transportation provided in the plan.<sup>107</sup> What remains in the final version is a general provision stating that the plan

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102. Clean Air Amendments, 42 U.S.C. at §1857c-5(a)(2)(G). (1970). The EPA has arranged with the National Academy of Sciences to conduct a study of the technological feasibility of meeting light duty vehicle emission standards. 37 Fed. Reg. 13299 (1972).

103. 36 Fed. Reg. 15486 (1971).

104. It is interesting to note that in hearings on the Senate version of the Clean Air Amendments, representatives of the automotive industry strongly urged that technological feasibility be the measure of emission standards. 1970 *Hearings, supra* note 39, at 1578, 1579, 1604, 1611. The Ford Motor Company also expressed its disapproval of multiple state inspection programs, *Id.* at 1605. On the other hand, General Motors President Cole is reported as saying that compulsory inspection may be the answer to the problem that to operate at low emissions it is critical to keep automobiles in good condition, but that most motorists do not appear willing to accept this responsibility. 2 BNA, ERCD 31 (May 14, 1971).

105. 37 Fed. Reg. 10842, 10844 (1972).

106. See discussion *supra* at note 97.

107. 36 Fed. Reg. 6682 (1971).

shall show that the state has legal authority to adopt emission standards and limitations and any other measures necessary for attainment and maintenance of national ambient air standards.<sup>108</sup>

The most that the EPA recommends directly as an example of an emission limitation which is feasible, or more precisely, attainable with "reasonably available technology,"<sup>109</sup> is elimination of visible particulate emissions.<sup>110</sup> Yet, effective and practicable methods of inspection by states are now available. For example, New Jersey has conducted an extensive study of a comprehensive inspection program and has enacted regulations based thereon.<sup>111</sup> California completed a study in June 1971, in which the consultant recommended an inspection program similar to New Jersey's.<sup>112</sup> Even so, neither of these states' efforts was even mentioned in the guidelines to offer encouragement to the states to investigate the necessity and practicability of an inspection program.<sup>113</sup> The introduction to the guidelines merely says that EPA is preparing information to assist states in using vehicular pollution control measures.<sup>114</sup> This information was not available before states submitted implementation plans. The Administrator should offer such information now that he must withdraw extensions and review all implementation plans pursuant to the court's order in *Natural Resources Defense Council*.<sup>115</sup>

Besides requiring the EPA Administrator to determine whether inspection by a state is necessary and practicable, the Clean Air Amendments require any such inspection to be for the purpose of enforcing compliance with applicable emission standards.<sup>116</sup> The guidelines, both the preliminary and the final versions,<sup>117</sup> speak in terms of aggregate reduction of emissions for attainment of a national

108. 36 Fed. Reg. 15489 (1971); see note 123 *infra*.

109. 26 Fed. Reg. 15487 (1971):

"Reasonably available control technology" means devices, systems, modifications, or other apparatus or techniques, the application of which will permit attainment of the emission limitations set forth in Appendix B.

Appendix B gives examples of emission limitations, principally for stationary sources, which states may, or may not, utilize in their implementation plans as they see fit.

110. 36 Fed. Reg. 15495 (1971).

111. New Jersey Bureau of Air Pollution Control, Dep't of Environmental Protection, The New Jersey REPAIR Project (1971) [hereinafter cited as N.J. REPAIR Project].

112. 1 Northrop Corp., Mandatory Vehicle Emission Inspection and Maintenance, Part A—Feasibility Study 1-1 (1971).

113. In view of the studies done in several states, including New Jersey and California, it is interesting to note the reason given by the EPA for allowing the postponements: the recognition that "States have had practically no experience with transportation control measures as a means of dealing with air quality problems. . . ." 37 Fed. Reg. 10844 (1972).

114. 36 Fed. Reg. 15486 (1971).

115. See discussion *supra* at notes 99-100.

116. Clean Air Amendments, 42 U.S.C. at §1857c-5(a)(2)(G).

117. 36 Fed. Reg. 6680, 6683 (1971); *id.* at 15486, 15487 (1971).

ambient air quality standard. They do not refer to checking for compliance by vehicles to meet emission standards set for vehicles alone—a requirement apparently set by the Clean Air Amendments. The guidelines, instead, relegate provision for inspection of motor vehicles to one of a number of alternatives in controlling aggregate air pollution by stationary and mobile sources. While vehicles are the single largest contributor of several air pollutants, stationary sources also produce a large percentage. Thus, by reducing stationary source pollution, the aggregate picture appears better even though pollution from vehicles remains the same or even increases. The purpose of the Clean Air Amendments was to reduce pollution from as many sources as possible, not to trade reduction in one area for inattention in another; but, the EPA regulations apparently fail to pursue this purpose.

This failure can also be seen in another provision of the regulations which also deals with the utilization of vehicular inspection in a state implementation plan. The states are encouraged not to adopt any emission limitations

without consideration of (1) the necessity of imposing such emission limitations in order to attain and maintain a national standard, (2) the social and economic impact of such emission limitations, and (3) alternative means of providing for attainment and maintenance of a national standard.<sup>118</sup>

If read in conjunction with the Clean Air Amendments, this provision is misleading as to the role a provision requiring inspection is to play in an implementation plan. According to federal legislation, the purpose of vehicular inspection is to insure compliance with emission standards, not with the overall national ambient air quality standards. Of course, the indirect effect of compliance with an emission standard would be a reduction in overall pollution, but that is not the primary end to be attained. By presenting a misleading interpretation of the purpose of vehicular inspection, the guidelines fail to conform to the letter and the spirit of the Clean Air Amendments. No such provision was contained in the preliminary guidelines.

Furthermore, states are encouraged by the guidelines 'to identify alternative control strategies, as well as the costs and benefits of each such alternative, for attainment and maintenance of the national standards.'<sup>119</sup> In both the preliminary and final guidelines, with respect to motor vehicle emissions, a control strategy may include, but is not limited to, the following:

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118. 36 Fed. Reg. 15487 (1971).

119. *Id.* at 15489.

Periodic inspection and testing of motor emission control systems, at such times as the Administrator determines that such programs are feasible and practicable.

. . . Emission control measures applicable to in-use motor vehicles, including, but not limited to, measures such as mandatory maintenance, installation of emission control devices, and conversion to gaseous fuels.

. . . Measures to reduce motor vehicle traffic, including, but not limited to, gasoline rationing, parking restrictions, or staggered working hours.<sup>120</sup>

Even though these measures are listed in the guidelines, according to later regulations by which implementation plans have been approved, the EPA has granted extensions for their application.<sup>121</sup> Furthermore, the EPA has indicated that it is reluctant to require states to use transportation controls against their wills.<sup>122</sup>

If a state does, in fact, include an inspection provision in its implementation plan, the plan must show when the state will have legal authority to require testing and inspection.<sup>123</sup> Such a requirement offers no problem for states which already have enabling legislation. These states, however, are a minority.<sup>124</sup> In all other states, an administrative agency can perhaps predict if and when the legislature will enact requisite authority. If the guess proves wrong, however, and a state plan relies in part upon such testing and inspection to help it comply with national emission standards, then the plan may have to be revised. The process of amending and resubmitting a state plan for approval by EPA would not only be time consuming but would also, in the meanwhile, reduce the net effectiveness of the entire plan. Thus, states are discouraged from using a vehicular inspection program.

In computing the emission reductions for which control strategies

120. 36 Fed. Reg. 6683 (1971); *id.* at 15487 (1971).

121. 37 Fed. Reg. 10842 (1972); *see* note 98 *supra*.

122. Atlanta Journal, Feb. 17, 1972, at 4-A, col. 1:

When EPA Administrator William D. Ruckelshaus announced the air quality standards April 30 [1971], he emphasized that many cities would have to curb traffic. "I don't anticipate any delay in their implementation," Ruckelshaus said of the standards.

But in an interview Wednesday [February 16, 1972], the EPA official in charge of reviewing state applications said the agency probably would forego the deadline rather than force traffic restrictions which may be unpopular with commuters.

123. 36 Fed. Reg. 15489 (1971).

124. *See* note 174 *infra* and accompanying text. States are required to have the legal authority described in the August 1971 regulations available to them at time of submission of implementation plans, with the sole exception of authority to carry out vehicular control measures. Only where a state's control strategy includes vehicular controls must it give a timetable for obtaining the necessary authority. 37 Fed. Reg. 10842 (1972).

must provide, a state is permitted by the regulations to assume, where specific data are unavailable, that the existent federal vehicle emission standards set forth in the Clean Air Amendments will result in the emission reductions listed in the regulations.<sup>125</sup> These emission reductions are calculated upon the federal test procedure for new motor vehicles,<sup>126</sup> probable deterioration of control devices, urban vehicle-mile projections, distribution of automobiles by age, and relative miles of travel for old and new vehicles.<sup>127</sup> In comparison the preliminary draft of the guidelines added two other factors in calculating anticipated emission reductions: vehicle-mile projections from trucks<sup>128</sup> and the effect of tune-ups and the installation of emission control devices on pre-1968 automobiles.<sup>129</sup> Comparative graphs including these factors are eliminated in the final version, despite the fact that they clearly illustrate the beneficial results that could be achieved through regulating emissions from pre-1968 vehicles.

Some meaningful standard must be set by which a state can intelligently appraise its control strategy for motor vehicles. The standard offered by the EPA has one shortcoming, however, for which there may be no solution: the federal calculations assume that 1975 emission standards for motor vehicles will be met by all vehicles, at least when they leave the assembly line. This assumption serves well for theoretical projections; but, as a practical consideration, it may well over-estimate the degree of compliance by manufacturers with new-vehicle standards for 1975 emissions and the rate of deterioration of control systems during the life of a vehicle. The American automotive industry has persistently maintained that present and foreseeable technology is not adequate to clean up the internal combustion engine to the extent necessary to meet the 1975 standards.<sup>130</sup> When the EPA Administrator refused to grant one-year extensions for meeting the 1975 standards,<sup>131</sup> several auto manufac-

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125. 36 Fed. Reg. 15490, 15500-02 (1971).

126. 45 C.F.R. §§1201.1-133 (1971).

127. 36 Fed. Reg. 15500 (1971).

128. 36 Fed. Reg. 6698 (1971).

129. *Id.*

130. *See, e.g., 1970 Hearings, supra* note 39, at 1547, 1610-11. A report of the National Academy of Sciences states that the technology needed to meet 1975 light-duty vehicle emission standards is not available. Further, periodic maintenance of emission control systems is essential to meet present standards by vehicles during use. 2 BNA, ERCD 1118 (Jan. 14, 1972); *see* note 41 *supra*.

General Motors has reportedly developed an emission control system which it believes will meet the 1975-76 standards. Atlanta Constitution, Sept. 25, 1972, at 1-A, col. 2. The day after this report appeared, however, the president of General Motors, Edward N. Cole, announced that the auto industry would not be able to meet the 1975 standard because of a lack of testing before the 1975 models are placed on the market. Atlanta Journal, Sept. 26, 1972, at 12-A, col. 4.

131. *See* 37 Fed. Reg. 11385 (1972), 15193 (1972).

urers appealed the decision in suits now pending in federal court.<sup>132</sup> This does not mean however, that state or federal standards should be made to conform to existing technology. Rather states should recognize that federally projected emission levels may be scaled too low and should, therefore, be used only as a rough minimum figure for determining control strategies.<sup>133</sup> Review of the implementation plans submitted prior to *Natural Resources Defense Council* indicates that federal figures have been followed as an absolute guide.<sup>134</sup> States may well find that their control strategies are substantially inadequate and subject to time-consuming revision. States could have, as an alternative, assumed that vehicles will meet only 1970 standards absent further control and project emission levels from these figures. As another alternative, states could have included a provision in their implementation plans for a vehicular inspection program to become effective if it later appeared that the other parts of its plan would be insufficient to maintain national ambient air standards absent regulation of mobile sources. Of course there was little encouragement in the 1971 guidelines for states to include such a preventative measure.<sup>135</sup> This is especially true since the guidelines speak of aggregate reduction of pollution to meet national ambient air standards rather than of checking for compliance by vehicles to meet emission standards set for vehicles alone.<sup>136</sup>

The purpose of the guidelines was to help states meet their responsibilities under the Clean Air Amendments. With respect to the control of automotive air pollutants, they fail in a number of instances. While the guidelines do indicate a variety of motor vehicle pollution control measures which might eventually be used by a state in its control strategy,<sup>137</sup> none of these is made mandatory or even strongly recommended for adoption. The guidelines are tempered with the remonstrance to states to consider the socio-economic impact and relative costs and benefits of control strategies.<sup>138</sup> The guidelines fail to clarify the roles of the federal government and the states in motor vehicle pollution control to the extent that little encouragement is offered to the states to develop and submit rigorous

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132. *General Motors v. Ruckelshaus*, Civil No. 72-1525 (D.C. Cir., filed June 8, 1972).

133. EPA Administrator Ruckelshaus is quoted as saying that several cities will have difficulty meeting the national standards, particularly for carbon monoxide, if reliance is placed only on the federal program for vehicular emission control. 2 BNA, ERCD 3 (May 7, 1971).

134. A number of state agencies have made copies of their plans available to the author. Representatives of agencies in other states have indicated that their plans rely exclusively on the federal standards.

135. See note 123 *supra* and accompanying text.

136. See note 117 *supra* and accompanying text.

137. 36 Fed. Reg. 15487 (1971).

138. *Id.* at 15486, 15487, 15489, 15495.

control strategies for automotive pollution<sup>139</sup> and thereby assume the role of enforcer in an unified state-federal program. Most important of all, the guidelines relegate provision for periodic inspection by states to one of several suggested alternatives for reducing aggregate air pollution.

Based on prior experience the states are reluctant to enter an area which may be subject to federal pre-emption. Yet, clear counseling as to the course cooperative action should take in motor vehicle inspection is not now evident in the EPA guidelines. If, for example, the EPA pursues a course of independent testing on a voluntary basis, states may well ask what is the purpose to be served by individual state inspection programs. Of course, the Administrator may determine that periodic testing and inspection of motor vehicles are feasible and prescribe that they be part of a state's control strategy. Absent such action by the Administrator, however, states have little federal incentive to adopt an inspection program for post 1970 vehicles.

#### STATE LEGISLATION: EMISSION STANDARDS AND CONTROLS

The states follow almost as many different patterns of vehicular air pollution control as there are states, ranging from explicit exemption of vehicles from control, to limited periodic inspection. The legislation, inspection programs and studies of two states, California and New Jersey, are the most comprehensive to date among the states in automotive air pollution control.<sup>140</sup> Two other states, Arizona and Wisconsin, have also begun the first stages of inspection programs of limited and varying natures. The programs of these states suggest provisions and test procedures which could be adopted by other states, even though one state's legislation, namely California's, may not be emulated by other states absent critical conditions comparable to those in that state.<sup>141</sup>

California is a state whose problems with air pollution caused principally by motor vehicles have placed it in the forefront of state emission regulation.<sup>142</sup> The State Air Resources Board, California's

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139. The final guidelines were attacked by Congressman Paul Rogers as having been substantially altered after the preliminary guidelines were reviewed by the federal Office of Management and Budget. This charge has been denied by the EPA. 2 BNA, ERCD 1201 (Feb. 4, 1972). For a discussion of the incident, see Note, 61 Geo. L.J. 172-76 (1972).

140. Each state was contacted concerning the nature of its motor vehicle inspection program. A member of an air pollution control board or agency responded in forty-nine of fifty states. The replies ranged from detailed responses with accompanying printed material to hastily penciled one-word answers on the author's letter of inquiry.

141. See BNA, ERCD 813 (Dec. 4, 1970).

142. See, e.g., 1 BNA, ERCD 361 (July 31, 1970); *id.* at 742 (Aug. 28, 1970); *id.* at 787-88 (Nov. 27, 1970); Comment, *supra* note 20, at 183-86.

principal air pollution administrative agency, is required to set regulations for accrediting used motor vehicles within a specified time limit from the date of enactment of the pollution-control legislation.<sup>143</sup> Such a provision, which would be particularly useful to other states, encourages action rather than delay on the part of an agency, assuming that the agency has the necessary funds and manpower to implement the regulations effectively.<sup>144</sup> The Board is empowered to accredit pollution control devices and require their attachment to used motor vehicles.<sup>145</sup> To be accredited a device must meet several enumerated standards including maximum cost chargeable to the purchaser and minimum useful life.<sup>146</sup> Inspection stations are licensed by the state and may not charge for installing a pollution control device.<sup>147</sup> When a new low emission vehicle has been tested and approved by the Board, the state is required to purchase it to fill state needs for state used vehicles.<sup>148</sup>

California law provides for both spot inspection of motor vehicles<sup>149</sup> by highway patrolmen and certification of compliance with state emission standards upon transfer of ownership from a non-resident to a resident.<sup>149</sup> A study of the feasibility of mandatory periodic

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143. Cal. Health & Safety Code §39175(d) (West Supp. 1972).

144. Texas, for example, has had a law since 1967 which specifically grants the state Air Control Board authority to include in its rules and regulations requirements as to the particular method to be used to control and reduce emissions from land vehicles. Tex. Rev. Civil Stat., Art. 4477-5, §3.10(d) (1969). As late as October 1971, the Board was neither staffed nor funded to a degree which would allow it to establish an inspection program. Letter from Gerald R. Severson, Esq., Texas Air Pollution Control Services, Oct. 18, 1971. In 1972, a provision for inspection was formulated, but then only as part of the federally required implementation plan. The inspection is supposed to be a five-point check (spark plugs, distributor, timing, PC valve and air filter) to be included in the state's annual safety inspection. Letter from Gerald R. Severson, Sept. 29, 1972. This inspection provision has not yet been implemented due to, *inter alia*, the Board's concern that such an inspection would require additional legislation. *Id.* The Board is currently reevaluating its vehicular control strategy. *Id.*

In contrast, Arizona set a time table in its legislation concerning vehicular inspections. Ariz. Rev. Stat. Ann. §36-1717 (Supp. 1972). In less than two years, the state Department of Health had begun a vehicular inspection program. See Ariz. Rev. Stat. Ann. §§36-1751 to -54 (Supp. 1972); note 159 *infra* and accompanying text.

145. Cal. Health & Safety Code §39175(d) (West Supp. 1972). Two devices designed to control exhaust emissions have been approved for 1955-65 model-year light-duty vehicles. They are currently required to be installed on all such vehicles. California Air Resources Board, Exhaust Emission Control Devices—1955-65 Vehicles, 11-72 ARB Fact Sheet 72-13 (1972). Devices—1955-65 Vehicles, 11-72 ARB Fact Sheet 72-13 (1972).

146. Cal. Health & Safety Code §39180 (West Supp. 1972)

147. Cal. Business & Professions Code §§9888.1-89.19 (West Supp. 1972).

The prohibition against charging for installation would not work a hardship on privately operated inspection stations since they may charge for the inspection and the parts replaced. Furthermore, if the work needed on a vehicle would be too labor and time consuming, the inspection station is not by law required to do the work and so can advise the owner to have the work done elsewhere and then bring the vehicle back for inspection.

148. Cal. Health & Safety Code §§39251-55 (West Supp. 1972).

149. Cal. Vehicle Code §§2814, 4000.1(a) (West Supp. 1972).



inspection of vehicles was completed in June 1971.<sup>150</sup> The study concluded that periodic inspection was feasible in terms of emission reduction, program and vehicle owner costs and public acceptability.<sup>151</sup> The results of the study have been given to the legislature for consideration.

Thus, California's pollution control program offers several possible provisions for legislation and enforcement of motor vehicle emission control. These include requiring installation of low cost, state certified control devices on pre-1968 automobiles, state use of approved low emission vehicles, periodic inspections for compliance by state operated inspection stations, and a prohibition against charging for installation of pollution control devices by inspection stations. Provisions such as these could be used by a state not only to determine standards and control for pre-1968 vehicles but also to require maintenance of factory installed devices on post-1968 vehicles.<sup>152</sup>

New Jersey's Department of Environmental Protection has developed a state inspection program which requires inspection of all light duty motor vehicles for compliance with emission standards for carbon monoxide and hydrocarbons.<sup>153</sup> The program is based, in part, upon a Department study of alternative inspection procedures.<sup>154</sup> The study concluded that periodic emission inspections and maintenance of vehicles can result in significant reductions in polluting emissions in urban areas,<sup>155</sup> and that, "[a]t the present time, reliable, low cost exhaust emission testers are available to support the service industry to fulfill the needs of an idle inspection program."<sup>156</sup> The essence of

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150. Northrop Corp., Mandatory Vehicle Emission Inspection and Maintenance, Final Report (1971).

Pursuant to a directive from California Governor Ronald Reagan, a task force of various agency members reported in October, 1972, on, *inter alia*, the need for inspection and maintenance of automotive emission controls and legislations necessary to accomplish the task force's recommendations. The task force recommended expansion of idle emission testing and state regulation of repair work and maintenance. Task Force Report on Periodic Vehicle Inspection and Maintenance for Emissions Control, and Recommended Program, October, 1972.

151. 1 Northrop Corp., Mandatory Vehicle Emission Inspection and Maintenance, Part A—Feasibility Study 1-1 (1971).

152. See Currie, *supra* note 9, at 1093, 1095-97.

153. New Jersey Dep't of Environmental Protection, Air Pollution Control Code, ch. 15 (1972) [hereinafter cited as N.J. Dep't Code]. Motorcycles are specifically exempted from inspection. *Id.* §4. Public hearings were conducted in August 1971. The department promulgated regulations requiring annual inspection for exhaust emissions on January 6, 1972. 2 BNA, ERCD 1130 (Jan. 14, 1972).

154. N.J. REPAIR Project, *supra* note 111.

155. *Id.* at 25. This conclusion of the New Jersey study is corroborated by the California study and by a similar test conducted by the Georgia Department of Public Health in early 1971. Georgia Dep't of Public Health Press Release, Auto Tests Show High Percent Pollute Air, Need Repairs (May 13, 1971): 1 Northrop Corp., Mandatory Vehicle Emission Inspection and Maintenance, Part A—Feasibility Study 1-1 (1971).

156. N.J. REPAIR Project, *supra* note 111, at 3, 5, 25. The Department studied eight

the state's program is to require proper maintenance of motor vehicles, regardless of age or existence of pollution control equipment.<sup>157</sup> Costs to owners in the event tune ups should be necessary average about \$20, a figure which is not considered too large for the benefits derived from reduced emissions and lower gasoline consumption.<sup>158</sup> Like California, New Jersey requires periodic inspection of vehicles. The New Jersey plan also provides an effective means of controlling emissions from pre-1968 vehicles which have few, if any built-in pollution control devices; that is, the plan requires mechanical tune ups where necessary.

Arizona is just beginning the first stage of a vehicle inspection program whereby a prototype inspection station has been erected for evaluating inspection procedures.<sup>159</sup> This phase is to be completed by July, 1973, when the selected inspection procedure will be made mandatory for vehicles in the two counties, Pima and Maricopa, where sixty-eight per cent of registered vehicles are located.<sup>160</sup> In 1975 inspection will be made mandatory statewide. Inspection stations, as in New Jersey, would be state owned and operated.<sup>161</sup> The results of the Arizona tests would be more comprehensive than those of the New Jersey inspection. New Jersey has only an idle emission test, whereas, Arizona adds inspection of vehicles moving at controlled speed on a dynamometer, a kind of treadmill for cars.<sup>162</sup>

Of these states which have begun testing of emissions from vehicles in use, Wisconsin has the most limited form of inspection. The program is initially confined to southeastern Wisconsin. Owners of vehicles in that area will be required to certify that the engines of their vehicles are set at manufacturers' recommended idle speed and fuel mixture.<sup>163</sup> Inspection and repair of the pollution control system is also required.<sup>164</sup> Wisconsin does not, however, have a systematic

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different testing devices and selected one costing \$2,100 per unit for the study. A comparison of the devices considered, including prices, is given in the study report. *Id.* at 5.

157. N.J. Dep't Code, *supra* note 153, at 19 (explanatory text accompanying proposed ch. 15).

158. *Id.* at 11; N.J. REPAIR Project, *supra* note 111, at 14-16.

159. See Ariz. Rev. Stat. Ann §§36-1751 to 54 (Supp. 1972); Arizona Dep't of Health, Air Pollution Control Implementation Plan (Revision No. 1), at 2-8 (May 1972) [hereinafter cited as Arizona Implementation Plan].

160. Arizona Implementation Plan, *supra* note 159 at 2-8.

161. Arizona Dep't of Health, Vehicular Emission Test Program, Findings of the Vehicular Emission Test Program, VEC:AAA-0110, 7 (1971).

162. Arizona Dep't of Health, Amendments to Rules and Regulations for Air Pollution Control, Reg. 7-1-9.2 (1972).

163. Wisc. Admin. Code §154.17(3) (1972); letter from Douglas W. Evans, Chief, Air Pollution Control Section, Wisconsin Dep't of Natural Resources, Sept. 25, 1972.

164. Wisc. Admin. Code §154.17(3) (1972).

procedure whereby compliance with these regulations may be assured. At the most, the owner's certification would have to be displayed during a random safety check by traffic officers.<sup>165</sup>

At the opposite end of the spectrum from these four states is Tennessee. By statute Tennessee excludes motor vehicles from any kind of air pollution control and inspection.<sup>166</sup> Until recently, Ohio also exempted motor vehicles from control.<sup>167</sup>

Between these two extremes the rest of the states fit roughly into one or more of the following categories:

- a. Legislative provisions for periodic vehicle safety inspection (twelve states);<sup>168</sup>
- b. Legislative provisions or administrative regulations for periodic safety inspection including inspection of mufflers and exhaust systems (nine states);<sup>169</sup>
- c. Legislative provisions or administrative regulations prohibiting excessive visible emissions (six states),<sup>170</sup> or prohibiting persons from dismantling, rendering inopera-

165. Letter from Douglas W. Evans, *supra* note 163.

166. Tenn. Code Ann. §53-3409(b) (Cum. Supp. 1971). Tennessee requires inspection of lights and brakes only. *Id.* at §§59-912, -914 (1968).

It is interesting to note that, despite Tennessee's statutory abstention in dealing with motor vehicle emissions, the federal Department of Health, Education and Welfare has made a training grant of \$33,414 to Tennessee to help train garage mechanics in reducing automotive air pollution. Atlanta Constitution, Oct. 7, 1971, at 19-B, col. 6. Alabama, Florida, Georgia, Mississippi, North Carolina and South Carolina also received grants. *Id.*

167. Ohio Rev. Code §3704.10 (1971). The exclusion was repeated without enactment of any substituting legislation. Thus, under existing law, §3704.03 (Cum. Supp. 1972), the Ohio Department of Health would have power to require inspections. There are, however, no pending proposals for such regulation. Letter from Harvey A. Rosenzweig, Executive Secretary, Ohio Air Pollution Control Board, Sept. 27, 1972.

168. Hawaii Rev. Laws §286-26 (1968) (over 10 years old, semi-annual; less than 10 years old, annual); La. Rev. Stat. Ann. §32.1304A (1963) (annual); Miss. Code Ann. §8258-03 (Cum. Supp. 1972) (spot check by state patrol); Nev. Rev. Stat. §484.695 (1968) (annual); R.I. Gen. Laws Ann. §31-38-4 (1968); S.C. Code Ann. §§46.644.1, .645 (Cum. Supp. 1971) (annual); S.D. Code §32-21-2 (1967) (annual); Utah Code Ann. §41-6-158 (1971) (at least annual, at most biannual); Vt. Stat. Ann. §23-1222 (Cum. Pocket Supp. 1972) (biannual); Va. Code Ann. §§46.1-315(a), -318, -319 (1972) (time to be set by department of safety); W. Va. Code Ann. §17C-16-4(a) (1966) (annual); Wyo. Stat. Ann. §31-214.3(a) (1967) (inspection upon registration).

169. Ark. Stat. Ann. §75-2103 (Cum. Pocket Supp. 1971) (annual); Ga. Code Ann. §68-1726(a) (Cum. Pocket Part 1971) (annual); Idaho Code Ann. §§49-2501, & -02 (Cum. Pocket Supp. 1971) (annual); Ill. Ann. Stat., Tit. 95½, §13-101 (Cum. Pocket Part 1972); Ind. Stat. Ann. §47-3407(e) (Cum. Pocket Supp. 1970) (annual); Ky. Rev. Stat. 189.645(2) (Cum. Supp. 1968) (annual); Me. Rev. Stat. Ann., Tit. 29, 2122 (Cum. Pocket Supp. 1970-71) (biannual); Okla. Stat. Ann., Tit. 47 §13-102 (1962) (spot checks); Tex. Rev. Civil Stat. Ann., Art. 6701d, §140(a) (Cum. Ann. Pocket Part 1972) (annual).

170. Mich. Stat. Ann. §257.715 (1967); N.C. Gen. Stat. §20-128.1 (Cum. Supp. 1971); Ore. Admin. Rules, ch. 340, §24-015 (1970) (visible emissions); S.C. Code Ann. §46-601 (1962); Wash. Rev. Code Ann. §46.37.390 (2) (1970); Wyo. Stat. Ann. §31-205 (1967).

tive or failing to maintain factory installed pollution devices (six states)<sup>171</sup> or both (nineteen states);<sup>172</sup>

d. Legislative provisions or administrative regulations requiring inspection of factory installed pollution control devices to insure that the devices are connected and operating properly (nine states);<sup>173</sup>

e. Legislative provisions delegating to a state agency authority to determine whether, when and what type of inspection program for pollution control is to be established (nineteen states);<sup>174</sup>

171. Ind. Stat. Ann. §35-4610(b) (Cum. Pocket Supp. 1972); Me. Rev. Stat. Ann., Tit. 29, §2127.2 (Cum. Pocket Supp. 1970-71); [1972] Pa. Sess. Laws, Act No. 154, §2; Tex. Rev. Civil Stat. Ann., Art. 670ld, §134(c) (Cum. Ann. Pocket Part 1972); Tex. Air Control Bd., Tex. Air Pollution Reg. IV, Rule 401 (1972); Vt. Stat. Ann. §10-20-11c(b) (Cum. Supp. 1972).

172. Ala. Code, Tit. 36, §39 (1959) (visible emissions); Ala. Air Pollution Control Comm'n, Ala. Air Pollution Control Rules & Regs. §4.1.2 (1972), *as amended*, §§9.1.1-.5 (1972) (excessive smoke and dismantling); Ark. Stat. Ann. §75-2103 (Cum. Pocket Supp. 1971) (dismantling); Ark. Dep't of Pollution & Ecology Control, Ark. Air Pollution Control Code §9 (1972) (excessive smoke and dismantling); Conn. Gen. Stat. Ann. §14-100c (Cum. Ann. Pocket Part 1972-73) (dismantling); Conn. Dep't of Environmental Protection, Admin. Regs. §19-508-18(a)(2) (1972) (visible emissions); [1971] Ga. Laws, Act. No. 68 §2, Act. No. 69, §1; Idaho Dep't of Health, Reg. for Control of Motor Vehicle Emissions (1972); Ill. Environmental Protection Agency, Air Pollution Control Regs., Rules 703, 706 (1972); Md. Ann. Code, Art. 66 ½, §§12-402.1 (1970), -402(c) (Cum. Supp. 1972); Md. Dep't of Health & Mental Hygiene, Air Pollution Regs. 43PC1-09 (1970) (dismantling); Mass. Ann. Laws, ch. 90, §70 (Cum Supp. 1971) (dismantling); Mass. Dep't of Public Health, Mass. Regs. for Air Pollution Control in Metropolitan Boston Air Pollution Control Dist., Reg. 6.5 (1970) (visible emissions); Minn. Pollution Control Agency, Reg. APC 12 (1971); Mont. Rev. Codes Ann. §32-21-146(b) (1961) (dismantling and visible emissions); Mont. Dep't of Health, Reg. 90-013 (1968) (dismantling); Nev. Rev. Stat. §484.611 2. (1969) (visible emissions); [1971] Nev. S. B. 275, §§41-43 (dismantling); N.H. Rev. Stat. Ann. §263:46 II (1968) (visible emissions); N. H. Air Pollution Control Comm'n, N.H. Air Pollution Control Regs., No. 9 III A, C (1971) (dismantling, visible emissions); N.Y. Comp. Codes, Rules & Regs., §§192.1-9 (1972); N.D. Cent. Code Ann. §39-21-37 (Pocket Supp. 1971) (visible emissions); N.D. Dep't of Health, Air Pollution Control Regs., R23-23-08.100-220 (1972) (dismantling and visible emissions); Okla. Dep't of Health, Air Pollution Control Regs., No. 2, 7 (1969, 1971) (dismantling, visible emissions); Ore. Rev. Stat. §§449.845, 483.448(1) (dismantling and visible emissions), S.D. Code §32-15-17 (1967) (visible emissions); S.D. Air Pollution Control Comm'n, Air Pollution Control Regs., No. 9.1-.2.2 (1972) (dismantling, visible emission); Utah Code Ann. §41-6-147(c) (Pocket Supp. 1971) (dismantling); Utah Div. of Health, Code of Air Conservation Regs., No. 3.2.3-.2.7, 3.4 (1972) (dismantling, visible emissions); Va. Code Ann. §46.1-301.1 (Cum. Supp. 1972) (dismantling); Va. Air Pollution Control Bd., Regs. for the Control and Abatement of Air Pollution, No. 4.10.01-.02 (1972) (dismantling, visible emissions).

173. Colo. Rev. Stat. Ann. §13-5-113(2) (Perm. Cumm. Supp. 1969) (biannual inspections); Fla. Stat. Ann. §325.19(2) (Cum. Ann. Pocket Part 1972-73 (includes check for excessive visible emissions); Iowa Code Ann. §321.238(10) (Cum. Ann. Pocket Part 1972) (includes check of exhaust system); Kan. Stat. Ann. §65-3017(b) (Cum. Pocket Part Supp. 1969); Mass. General Laws Ann., ch. 90, §7A (Cum. Supp. 1971); Mo. Ann. Stat. §307.360 1. (1972); Mo. Air Conservation Comm'n, Mo. Auto Exhaust Emission Controls, Reg. S-1 (1968); N.M. Stat. Ann. §64-21-1.1A (1972); N.Y. Vehicle & Traffic Law §301(c) (McKinney Supp. 1972-72); N.C. Gen. Stat. §20-183.3 (Advance Leg. Serv. Supp. 1971) (annual).

174. [1971] Ala. Acts No. 769, §16; Alas. Stat. §28.05.030(4) (1970); Conn. Gen. Stat. Ann. §14-100C (Cum. Ann. Pocket Part 1972); Del. Code Ann. §7-6701 (Cum. Pocket Part 1971-72); Hawaii Rev. Laws §322-64(10) (1968); Ill. Ann. Stat., Tit. III ½, §1010(f) (Cum. Ann. Pocket Part

I. administrative regulations have (seven states)<sup>175</sup> or have not (ten states)<sup>176</sup> been promulgated;

1972); Kan. Stat. Ann. §65-3017(a) (Cum. Pocket Part Supp. 1969); Mass Ann. Laws, ch. 90, §7A (Cum. Supp. 1971); N.Y. Vehicle & Traffic Law §301(c) (McKinney Supp. 1972-73); N.C. Gen. Stat. §§20.128, .128.1 (Supp. 1971); Okla. Stat. Ann., Tit. 63, §2002(C)(m) (Cum. Ann. Pocket Part 1972-73); [1971] Ore. Laws, ch. 454, p. 708, §4; [1972] Pa. Sess. Laws, Act No. 154, §1(a); Utah Code Ann. §26-24-5(13) (Pocket Supp. 1971); Vt. Stat. Ann. §10-366(a) (Cum. Pocket Supp. 1971-72); W. Va. Code Ann. §§16-20-11c(a), (c), (d) (Cum. Supp. 1972).

Indiana has a statute which grants administrative agencies authority to establish vehicular inspection programs but limits any such inspections to enumerated equipment, including air pollution control devices, positive crankcase ventilation and exhaust emission control systems. Ind. Stat. Ann. §47-3409.3 (Cum. Pocket Supp. 1972).

175. Ala. Air Pollution Control Comm'n, Ala. Air Pollution Control Rules & Regs. §§9.1-9.7 (1972) (dismantling, visible emissions, properly connected and functioning pollution control systems). The Commission expects to implement these regulations when the state legislature authorizes a statewide safety inspection program. Letter from John E. Daniel, Attorney, Ala. Air Pollution Control Commission, Sept. 25, 1972.

Conn. Dep't of Environmental Protection, Admin. Regs. §19-508-18(a)(2) (1972) (visible emissions). The Department is now studying various programs, including the possibility of an inspection system to assure compliance of Connecticut vehicles with federal standards. Letter from Eckardt C. Beck, Director of Air Compliance, Oct. 2, 1972.

Ill. Environmental Protection Agency, Air Pollution Control Regs., Rules 701-708 (1972) (maintenance, visible emissions). The Agency is evaluating the costs, effectiveness and nature of an inspection program, particularly for the metropolitan Chicago area whereby these rules may be effectuated. Letters from John R. Roberts, Manager, Division of Air Pollution Control, Oct. 6, 1971, Sept. 25, 1972.

Mass. Dep't of Pub. Health, Regs. for the Control of Air Pollution in the Metropolitan Boston Air Pollution Control Dist., No. 6.5, 6.6 (1970) (visible emissions). The District is currently studying various combinations of means for reducing automotive air pollution including inspections, alternate power sources such as LPG, CNG and LNG, traffic control, mass transit systems and staggered working hours. Letter from William F. Cass, Director, Metropolitan Boston Air Pollution Control Dist., Oct. 6, 1972.

N.Y. Comp. Codes, Rules & Regs. §§192.1-9 (1972) (comprehensive standards for crankcase, exhaust and visible emissions). New York has begun spot checks using a roadside, idle emission test. The Department of Environmental Conservation plans to establish a periodic inspection system as the second stage in implementing these regulations. N.Y. Dep't of Environmental Conservation, N.Y. City Metropolitan Area Air Quality Implementation Plan, at 8-16 (rev. May 1972). The Plan points out that delays in establishing an implementation plan are due in part to EPA's delays in announcing what it considers an acceptable inspection procedure. *Id.*

Okla. Dep't of Health, Air Pollution Control Regs., No. 2, 7 (1969, 1971) (dismantling, visible emissions). The Department is investigating vehicular inspection programs. Letter from John Stallings, Head, Engineering Section, Air Pollution Control Div., Sept. 27, 1972. In a statement before a legislative committee, Robert Blanche, Director of the Air Pollution Control Division, noted that, in order to assume adequate maintenance of pollution control devices so that 1975 standards may be maintained, an inspection system would have to be established. Statement of Robert Blanche for Presentation to the Okla. Leg. Council's Comm. on Environmental Quality, 4-5 (May 18, 1972).

Utah Div. of Health, Code of Air Conservation Regs., No. 3.2.3-2.7, 3.4 (1972) (dismantling, visible emissions). No inspection program has thus far been instituted. "Other controls will be implemented as they become feasible." Letter from Mary C. Sewall, Public Information Representative, Bureau of Environmental Health, Oct. 10, 1972.

176. Alaska, letter from Thomas Hanna, Air Quality Control, Oct. 13, 1971; Delaware, letters from Robert French, Manager, Air Resources Section, Div. of Environmental Control, Oct. 6, 1971, Oct. 5, 1972; Hawaii, letter from Wilbur Loomis, Jr., M.D., Deputy Dir. of Health, Oct. 12, 1971; Indiana, letter from Harry Williams, Director, Div. of Air Pollution Control, Oct. 5, 1972; Kansas, letter from Howard Saiger, P.E., Chief, Air Quality & Occupational Health

2. administrative regulations are being considered (five states);<sup>177</sup>

3. administrative regulations are not being considered and probably will not be in the near future (five states).<sup>178</sup>

One of the principal shortcomings of the New Jersey, California or Arizona plans to other states is the cost of purchasing and maintaining the emission monitoring units. New Jersey maintains thirty four state operated inspection stations with a total of seventy eight inspection lanes.<sup>179</sup> Thus, providing one tester for each lane would require an initial outlay of approximately \$163,800.

Unlike New Jersey, many states do not maintain government-operated inspection stations but instead license many independent garages and service stations to perform vehicular inspections.<sup>180</sup> Georgia, for example, has approximately 2,100 safety inspection stations.<sup>181</sup> Purchasing one unit similar to those used by New Jersey for each Georgia station would require an initial outlay of over four million dollars.<sup>182</sup> Before making such an investment, states generally want to be assured that the benefits in the form of reduced pollution will actually occur and that the monetary value of such benefits will equal or exceed the costs of inspection.<sup>183</sup> Many of the costs are either long range or qualitative and do not lend themselves to short range, quantitative measurement. Inspection programs, however, are flexible and can be adopted to the needs of a given state. For instance, one of the means by which states with independent inspection stations, large geographical areas and large motor vehicle populations can initiate an emissions testing program is to establish regional stations. Arizona, with its vehicular population concentrated

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Section, Section 24, 1971; Oregon, letters from H. M. Patterson, Director, Air Quality Div., Sept. 30, 1971, Sept. 21, 1972; Pennsylvania, letter from Gary L. Triplett, Director, Div. of Air Resource Management & Research, Oct. 8, 1971; Vermont, letter from Richard Valentinetti, Air Pollution Control Officer, Oct. 22, 1971; West Virginia, letter from Carl Beard, II, Director, W. Va. Air Pollution Control Comm'n, Nov. 22, 1971; North Carolina, *see* letter from W. E. Knight, Chief, Air Quality Div., Oct. 2, 1972.

177. Alaska, Delaware, Hawaii, Oregon, Pennsylvania, *supra* note 176.

178. Indiana, Kansas (reliance upon federal standards to reduce emissions to acceptable levels by 1977), North Carolina (auto emissions not currently at a level to require controls), Vermont (watch activity of more populous urban states), West Virginia (emphasis on stationary-source control), *supra* note 176.

179. *See* N.J. REPAIR Project, *supra* note 111, at 3.

180. Arkansas, Colorado, Florida, Georgia, Hawaii, Idaho, Illinois, Kentucky, Louisiana, Maryland, Mississippi, Missouri, Nebraska, New Hampshire, New Mexico, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Utah, Vermont, Virginia, West Virginia, Wyoming.

181. Georgia Dep't of Public Health Press Release 2 (May 13, 1971).

182. *Id.*

183. *See*, for example, I Northrop Corp., Mandatory Vehicle Emission Inspection and Maintenance, Part A—Feasibility Study (1971).

in a few areas is planning such an arrangement with a combination of mobile and stationary testing stations.<sup>184</sup> The number of stations in a given region would depend upon vehicular population density. The stations could be operated by state or private inspectors, whichever would be economically preferable. The state could bear the cost of purchasing and installing the monitoring equipment and recoup at least part of the outlay each year by charging for the inspection. The charge need not be large. For instance, in Texas, which has approximately five million automobiles in 1971,<sup>185</sup> a fee of fifty cents for each annual inspection would increase the gross state revenue by two and one half million dollars annually. While the net gain to revenues may be lower than a gross figure, a state thus could still defray the cost of inspection.

The success of any motor vehicle pollution control program, whether state or federal, depends ultimately upon enforcement. From even this brief synopsis of current state legislation and regulation, we find that the vast majority of states lack enforcement programs designed to effectively abate vehicular pollution. Yet states are a preferable enforcing agent to the federal government since they are more numerous and generally have pre-existing administrative organs which could enforce the programs on a local level. Reasons given by states for lack of enforcement include insufficient numbers of vehicles at present to justify intensive regulation,<sup>186</sup> insufficient administrative appropriations,<sup>187</sup> lack of trained manpower,<sup>188</sup> and insufficient legislative authority.<sup>189</sup>

Some state agencies, from which information has been obtained,

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184. Arizona Vehicular Emissions Control Section, Dep't of Health, Findings of the Vehicular Emission Test Program, Report VEC: AAA-0196 at 7 (1971).

185. Statistical Abstract of the United States 1972, Table No. 891, *Motor Vehicle Registrations, 1950-1971, and Drivers Licenses, 1970, by States, supra* note 1.

186. Idaho, letters from Murray Michael, Air Quality Specialist, Environmental Protection Div., Oct. 5, 1971, Sept. 25, 1972; Montana, letters from Lynn Brant, Air Pollution Control Specialist, Nov. 22, 1971, Sept. 22, 1972 (but recognition of growing problem); North Dakota, letter from Dana Mount, Sept. 29, 1971; South Carolina, letters from W. G. Crosby, Chief, Div. of Air Pollution Control, Oct. 13, 1971, Sept. 25, 1972 (higher readings for oxidants at border near Charlotte, N.C.); Vermont, letter from Richard Valentinetti, Oct. 22, 1971; West Virginia, letter from Carl Beard, II, Director, W. Va. Air Pollution Control Comm'n, Nov. 22, 1971 (concentrating on stationary sources).

187. Nevada, letters from Larry G. Bettis, Deputy Att'y Gen., Sept. 28, 1971, Sept. 29, 1972; New Mexico, letter from Bruce Nicholson, P. E., Environmental Engineer, Nov. 10, 1971; Texas, letter from Gerald Severson, Attorney, Texas Air Pollution Control Services, Oct. 18, 1971.

188. Minnesota, Edward M. Wiik, P. E., Director, Div. of Air Quality, Dec. 20, 1971 (being corrected, *see* letter, Sept. 27, 1972); Nebraska, letter from Walter Franke, Director, Air Pollution Control, Nov. 11, 1971; Nevada, letters from Larry G. Bettis, Deputy Att'y Gen., Sept. 28, 1971, Sept. 29, 1972.

189. Georgia, interview with William Estes, Program Manager, Air Quality Evaluation Services, Sept. 19, 1971; Tennessee, letter from Edward Kelly, Jr., Staff Attorney, Div. of Air Pollution Control, Sept. 22, 1972.

are not satisfied with their states' current air pollution programs and are working to improve them.<sup>190</sup> Their approaches vary, depending upon enabling legislation and budgetary appropriations.<sup>191</sup> Other agencies apparently consider federal involvement sufficient for the present to preclude them from action.<sup>192</sup>

### CONCLUSION

The problem of motor vehicle pollution requires a unified, cooperative effort on the part of federal and state governments to control it effectively. Federal involvement in setting standards for new car emissions and possibly requiring future inspection of vehicles during their useful lives raises the question of the extent to which the federal government intends to pre-empt the states from enforcement of emission standards for vehicles owned by ultimate purchasers. Thus, despite the legislative requirement that states must implement national ambient air standards, the regulations set by the EPA and followed by the states do not encourage adoption of vehicular inspection programs as well as other forms of transportation controls, as part of the implementation plans. This situation should change, however, in view of the *National Resources Defense Council* decision.

There is still confusion, real or imagined, as to the respective roles to be played by the federal and state governments in controlling automotive air pollution. If the Environmental Protection Agency does not promulgate clear and decisive guidelines, further federal

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190. Arkansas, letter from Roger Morris, Information Officer, Dep't of Pollution Control & Ecology, Sept. 29, 1971; Delaware, letters from Robert French, Manager, Air Resources Section, Div., of Environmental Control, Oct. 6, 1971, Oct. 5, 1972; Idaho, letters from Murray Michael, Air Quality Specialist, Environmental Protection Div., Oct. 5, 1971, Sept. 25, 1972; Kentucky, letter from Frank Partee, Director, Ky. Air Pollution Control Com'n, Oct. 8, 1971; Louisiana, letters from Vernon Parker, Head, Div. of Air Control and Occupational Health, Oct. 1, 1971, Sept. 26, 1972; Oregon, letters from H. M. Patterson, Director, Air Quality Control Div., Sept. 30, 1971, Sept. 21, 1972.

191. Arkansas (working on plan with state patrol for periodic inspection of pollution-control devices); Delaware (simple, fast test procedure to be incorporated in safety inspection; offer tune-up service); Idaho (obtain visual inspection of pollution control devices to assure connected); Kentucky (study project to determine needs and costs); Louisiana (study New Orleans' inspection program; incorporated emission testing into state vehicle inspection program); Oregon (study with EPA consultant to evaluate inspection program). Sources of material in parentheses are letters cited note 190 *supra*.

192. Letter from John Soet, Chairman, Michigan Air Pollution Control Commission, Sept. 30, 1971:

At the present time no monies are allotted for motor vehicle pollution control. Before any program is established in Michigan, the federal government which has in major part preempted motor vehicle pollution activity should establish some positive measures in testing procedures and sufficient monies to carry out testing programs.

This position is particularly evident in state implementation plans which rely exclusively or extensively on compliance with projected federal standards for 1975. See note 73 *supra* and accompanying text.



legislation, which defines the federal role in automotive pollution control as standard setter and the state role as enforcing agent, may be the only recourse.

Legislation and enforcement of motor vehicle pollution controls vary considerably in form, content and effectiveness among the states. State governments have the potential of being efficient administrators and enforcers of motor vehicle pollution control in comparison with the monolithic federal structure. Most states already have some form of periodic safety inspection. Elements of the New Jersey, California and Arizona programs could be tailored by other states to suit their needs.

The automotive industry has demonstrated its reluctance, and often refusal, to adopt voluntarily the technology required either to clean up the internal combustion engine or to adopt alternative power sources. To deal with such resistance and to insure adequate, breathable air, the state and federal governments must develop and enforce effective legislation and implementation programs controlling vehicular emissions.