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PASSENGER VEHICLE AIR POLLUTION CONTROL IN CALIFORNIA: ENFORCEMENT PROGRESS AND PROBLEMS

INTRODUCTION

One product of our oftentimes wasteful society is air pollution. In many areas the air is riddled with particulate matter and various pollutant gases, generated by both stationary and vehicular sources. The most prolific single source is the automobile. In looking at California's experience in the regulation of emissions from passenger vehicles, the watchword has been and continues to be change. Governmental, scientific, industrial, public and political perspectives and policy positions have all fluctuated at one time or another during the short history of air pollution control. The present legal structure of passenger vehicle emission regulation reflects this phenomenon: it is the product of several inputs and countervailing forces, and is developing all the time. As a result, the law is not problem-free in terms of its effectiveness and enforceability.

The purposes of this comment are threefold. The first is informational. There are numerous statutes and agency regulations relating to vehicular air pollution control in California. Unfortunately, they are scattered throughout the state codes and much information is given only limited publication. An overview of the control system is presented as a guide to attorneys and other persons interested in acquainting themselves with this area of the law,

2. STANFORD WORKSHOP ON AIR POLLUTION, AIR POLLUTION IN THE SAN FRANCISCO BAY AREA 53 (1970). The three major air pollutants from automobiles are carbon monoxide (CO), hydrocarbons (HC), and oxides of nitrogen (NOx). “The latter two chemicals react in sunlight to produce California’s photochemical smog.” California State Air Resources Board Fact Sheet No. 5, at 1 (May 1972) [hereafter this agency will be cited as the Air Resources Board in referring to its fact sheets and staff reports and as the “Board” where appropriate in textual statements].
3. CAL. VEH. CODE § 465 (West 1971) provides in part: “A ‘passenger vehicle’ is any motor vehicle, other than a motor-truck or truck tractor, designed for carrying not more than 10 persons including the driver, and used or maintained for the transportation of persons. . . .” This comment focuses on this category of vehicles because the regulatory system is most concerned with it.
which to date has been subjected to extremely sparse legal discussion.

The second purpose is analytical. The legal issues involved in the problems presently hindering the enforceability of the system are focused upon in the second part of the comment. These include the dispersion of administrative agency power, the lack of manufacturer and dealer compliance with regulations, available remedies, the nature and breadth of manufacturers’ warranties, the scope of agency discretionary authority, and the equal protection ramifications of the regulatory scheme. A case study of the controversial program to control emissions of 1966-70 model year vehicles is used to illustrate some of these issues in relation to the technological and political factors affecting the system.

The final purpose of the comment is to be critical. In a three-part discussion of the legal future of controlling passenger vehicle air pollution in California, the author (1) examines how federal preemption of new vehicle emission standard setting could improve the state control system under certain conditions; (2) recommends a statewide program of mandatory vehicle inspection; and (3) suggests a change in the air pollution control bureaucracy.

AN OVERVIEW OF THE PASSENGER VEHICLE REGULATORY SCHEME IN CALIFORNIA

California has always been at the forefront of air pollution regulation, and for good reason: photochemical smog was first discovered here in early 1950’s. In 1961, the newly-formed California Motor Vehicle Pollution Control Board began (perhaps belatedly) a program to confront the automotive air pollution problem. In 1963, the Board required that new vehicles manufactured in the United States and sold in California be equipped with crankcase control devices, to reduce hydrocarbon emissions. In 1966, exhaust control devices were made mandatory for such vehicles. When Congress decided to meet the nationwide air pollution problem head-on with the stringent, technology-forcing regulations set out in the 1970 Clean Air Act Amendments, it preempted the

5. Bay Area Air Pollution Control District, Air Pollution and the San Francisco Bay Area 16 (8th ed. 1973).
6. Air Resources Board Fact Sheet No. 5, at 1 (May 1972).
7. Id. at 2.

Through the 1970 amendments, Congress shifted its perspective from estab-
states from the regulation of new vehicles or new engines, but ex-
empted California, allowing it to continue its attempt to handle its
own special problems. The initial federal standards were basically
adaptations of the California standards for hydrocarbons and car-
bon monoxide. California emission standards have generally
preceded the federal standards by at least one full model year. The
historical development of this regulatory pattern has allowed man-
ufacturers to scale up their production processes for nationwide
distribution as improved emission control technology is developed
for and implemented in California. Since approximately 10 per-
cent of the new cars made in the United States are sold in this
state, the Detroit automakers, as well as foreign manufacturers,
have acquiesced in California’s special status.

The Air Resources Board

At present the primary agency regulating vehicular emissions
in California is the State Air Resources Board. The Board has the
authority to consider and adopt emissions standards designed to
lishing emissions standards that would reflect existing technological feasibility, as
was the case under the earlier acts, to a perspective which attempts to force tech-
nology to catch up with emissions standards.

The entire issue of 4 ECOLOGY L.Q. No. 3 (1975) is comprised of analyses
of the Clean Air Act.

(a) 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 part. 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, til-
ing (if any), or registration of such motor vehicle, motor vehicle engine,
or equipment.
(b) The Administrator shall, after notice and opportunity for public
hearing, waive application of this section to any State which has adopted
standards (other than crankcase emission standards) for the control of
emissions from new motor vehicles or new motor vehicle engines prior
to March 30, 1966, unless he finds that such State does not require
standards more stringent than applicable Federal standards to meet com-
pelling and extraordinary conditions or that such State standards and ac-
companying enforcement procedures are not consistent with section
1857f-1(a) of this title.
(c) Nothing in this part 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.

10. 1 F. GRAD, TREATISE ON ENVIRONMENTAL LAW 2-258 (1973) [herein-
after cited as GRAD].


12. Id.

13. The Air Resources Board was established in 1967 by the Mulford-Carrel
Act. Cal. Stats. 1967, ch. 1545, § 1 at 3680. It replaced the Motor Vehicle Pol-
lution Control Board, which was abolished by CAL. HEALTH & SAFETY CODE §
39064 (West 1973). The Board is also the chief control agency of nonvehicular
air pollution regulation in this state; it coordinates the activities of the local air
pollution control districts. See note 1 supra.
eliminate the adverse effects from motor vehicle air pollution on health, welfare and the quality of life and property. It has implemented emission control regulatory programs for both new and used cars.

**New Vehicle Emission Control**

In the control of new car emissions, the Pure Air Act of 1968 established progressively stricter standards for new 1970-74 model year vehicles; these became the most stringent new vehicle standards in the nation. Considering that the exhaust emission control program has been developing for less than ten years, the results of the regulation have been impressive. The average reductions of exhaust emissions of the 1974 vehicles, compared to the pre-1966 vehicles with uncontrolled exhaust emissions, are as follows: hydrocarbons (HC), 83 percent reduction; carbon monoxide (CO), 79 percent; oxides of nitrogen (NOx), 58 percent.

For 1975 passenger vehicles sold in California the standards are even stricter. To meet them manufacturers have employed a controversial catalytic converter technology. There have been indications that these systems will suffer deterioration in actual use after only a few thousand miles, but subsequent studies have shown greater durability than was originally predicted in 1973. Another problem, in terms of protecting air quality, is that 1975 model year car sales are down. The reduced emission capabilities

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14. CAL. HEALTH & SAFETY CODE §§ 39080-39201 (West Supp. 1975). CAL. HEALTH & SAFETY CODE § 39052.5 (West 1973) conditions this authority as follows: "[t]he board may adopt . . . standards . . . which the board has found to be necessary and technologically feasible to carry out the purposes of this part." 15. Id. § 39080-39201. 16. Air Resources Board Fact Sheet No. 20 (July 1973). 17. Air Resources Board Staff Report No. 74-19-6, Surveillance of Emissions from In-Use Vehicles in California 4 (Oct. 9, 1974) [hereinafter cited as ARB Staff Rep. No. 74-19-6]. 18. 4 ENVIRONMENT REP., CURRENT DEVELOPMENTS 1934, 1935 (Mar. 22, 1974). 19. The catalytic converter accelerates the rate at which the exhaust HC and CO gases coming out of the engine react with oxygen in the air to form harmless CO\(_2\) and water. The catalytic material also allows these reactions to take place at lower temperatures than would otherwise be required. 40 Fed. Reg. 11901 (1975). 20. GRAD, supra note 10, at 2-266. For a discussion of other problems of catalytic converters, see note 132 infra. 21. More recent, albeit preliminary, data has demonstrated that the durability of catalytic systems installed on production vehicles is at least as good as for pre-catalyst emission control systems. 40 Fed. Reg. 11901 (1975). 22. New vehicle sales in the period from January 11 to 20, 1975, were 15.4 percent below the same period in 1974 and were the lowest for that period in 14 years. Sales for the first ten days in January were the lowest for that period in more than two decades. San Francisco Chronicle, Jan. 24, 1975, at 1, col. 2.
of these new vehicles are only marginally significant if the vehicles are not purchased and used in place of older, less controlled vehicles.

**Used Vehicle Emission Control**

Because automotive air pollution existed before the new vehicle emission controls were implemented, used vehicle emission control programs have also been developed in California. Section 39175 of the Health and Safety Code\(^\text{28}\) authorized the Board to set standards and accredit devices for controlling HC, CO, and NOx in 1955-65 model year vehicles. Devices were accredited in December, 1971 and February, 1972, and a schedule was adopted requiring installation during change of ownership within the South Coast Air Basin, the San Diego Air Basin, and the San Francisco Air Basin,\(^\text{24}\) between September, 1972 and February, 1973.\(^\text{25}\) This program remains in effect in these urban areas.

Also, the control of used passenger vehicle emissions has been directly affected by the control of new vehicles. When exhaust control devices were required for new 1966 vehicles sold in California,\(^\text{26}\) hydrocarbon and carbon monoxide emissions were reduced by 42 percent and 58 percent respectively; these reductions, however, were achieved in part by the leaning of fuel mixtures. The higher combustion temperatures increased the emissions of oxides of nitrogen,\(^\text{27}\) thus requiring a retrofit control program, begun in 1971, to curb production of these compounds in 1966-70 vehicles.\(^\text{28}\) This program will be discussed in other contexts to fol-

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For the whole year of 1974, new vehicle sales for the four major United States automakers were off 23 percent from a record year in 1973. It was the worst nonstrike year in 15 years. San Francisco Chronicle, Jan. 8, 1975, at 9, col. 6.


24. *Id.* §§ 39011, 39051 authorize the Board to divide the state into air basins based upon similar meteorological and geographical conditions. The three basins mentioned include completely or partially the counties of Los Angeles, Orange, Riverside, San Bernadino, Ventura, and Santa Barbara (South Coast Air Basin); San Diego (San Diego Air Basin); San Francisco, San Mateo, Santa Clara, Alameda, Contra Costa, Solano, Napa, Sonoma, and Marin (San Francisco Bay Area Air Basin).


26. See note 7 and accompanying text supra.

27. Air Resources Board Fact Sheet No. 5, at 2 (May 1972).

28. **CAL. HEALTH & SAFETY CODE** § 39107.6 (West 1973) empowers the Board to set standards for devices to reduce the oxides of nitrogen as much as possible. *Id.* §§ 39177.1-4 provide for the implementation of the program with accreditation of devices, exemptions, warranties, and the setting of price standards. **CAL. VEH. CODE** § 4000.1 (West Supp. 1975) requires a certificate of compliance with the program upon initial registration and upon transfer of ownership and registration of subject vehicles.

Since 1971, NOx controls have been required on all new vehicles.
but it is important here to note the close relationship which obtains in the changing vehicular air pollution field between available technology and legal regulation: technology implemented because of emission standard setting and enforcement can solve some problems but aggravate others, thereby creating the need for further regulatory demands for added emission control with even more hardware.

Furthermore, new vehicles do not remain new. It has been established that as vehicles become older even the most effective pollution control systems deteriorate. A viable system for testing and regulating the emissions of vehicles in actual use is of paramount importance in any attempt to protect air quality. As time passes, older vehicles will account for the major contribution to the automotive pollutant load of the ambient air.

The Inspection System

To complete this overview of California’s efforts to establish a structure with which to resolve the technological problems of passenger vehicle emission control, an examination of the system of inspection is in order. This will facilitate an analysis of the current enforcement problems.

California operates a multi-phased inspection program. Vehicles are first inspected prior to the time prototype models are allowed to be built. Section 39052(m) of the Health and Safety Code authorizes the Board to “adopt . . . emission standards and test procedures applicable to motor vehicles manufactured for sale in this state.” Manufacturers must obtain Board approval of prototype fleets, using sample tests of at least two percent of each engine family, with an allowable failure rate of 10 percent or less.

After test fleets have been approved and full scale production begins, assembly line tests of new vehicles are also required of the manufacturers. Each vehicle is “functionally” tested to ensure that devices and hardware crucial to the control of emissions are in

29. See text accompanying notes 88-131 infra.
33. Interview with Kingsley Macomber, Air Resources Board Staff Counsel, in Sacramento, California, Oct. 29, 1974 [hereinafter cited as Macomber Interview, Oct. 29, 1974].

Prototype test fleets are sample vehicles of each manufacturer representing each engine family proposed for assembly line construction. “Engine family” is a term of classification, meaning all the types or models of vehicles using a certain size and type of engine.
proper working order and that engine timing and speed are correct. As each vehicle leaves the assembly line, tests are conducted for HC and CO while the engine is idling to identify vehicles with emissions grossly above established standards. Quality audit tests also are carried out on a randomly selected representative sample comprising two percent of the vehicle production intended for sale in this state. The sampling plan and the results must be submitted quarterly to the Air Resources Board.

Inspection of new vehicles also takes place at dealers' premises. The most popular vehicles, and those models suspected of emission violations because of previous tests of the model line, are subjected to random inspection. The significance of this phase of inspection will be explored below in the discussion of enforcement problems.

For the surveillance of vehicles in use, California employs two methods of non-periodic and limited inspection. A spot check inspection program is conducted by the California Highway Patrol at temporary roadside stations. Exhaust emission tests while the vehicle is idling and under-the-hood inspections are made. Approximately 11-13 percent of all vehicles in the state are checked each year by this method. Vehicles are also checked when certain designated events occur, such as the transfer of ownership or initial registration in the state.

The California vehicular regulatory scheme is thus sophisticated and relatively comprehensive; as noted at the outset, however, the legal structure is a function of almost continual changes in

34. COMMISSION ON CALIFORNIA STATE GOVERNMENT ORGANIZATION AND ECONOMY, A REVIEW OF CALIFORNIA'S VEHICLE EMISSION CONTROL PROGRAM 16-18 (1975) [hereinafter cited as COMMISSION]. For a consideration of the enforcement significance of these tests, see text accompanying note 52 infra.

35. CAL. HEALTH & SAFETY CODE §§ 39051(c), 39052(m), and 39150(a) (West 1973) require the Board to adopt regulations necessary to implement its statutory duties. Title 13, California Administrative Code, section 2101, states that it is the Board's policy to monitor motor vehicles from manufacture, through distribution, to and into the hands of consumers. Section 2150(c) requires functional, engine tune-up specifications and steady state inspection tests at dealerships. Section 2052 sets out test procedures. These tests are performed by state personnel from the Board and the Bureau of Automotive Repair.


38. In 1973-74, about one fourth of the approximately 1.7 million vehicles subjected to inspection failed to comply with various standards of the Board. COMMISSION, supra note 34, at 44.

39. Certificates of compliance are required pursuant to CAL. VEH. CODE § 4000.1 (West Supp. 1975). They must be obtained from one of the approximately 10,000 privately-owned motor vehicle pollution control device installation and inspection stations licensed and inspected by the Bureau of Automotive Repair. See note 41 and accompanying text infra.
scientific knowledge, technology, popularity, and governmental attention to its various aspects. Its idealistic regulations aimed at achieving emission minimization are not so readily enforceable as they might be. Problems exist in several areas and for many reasons.

PROBLEMS OF ENFORCEMENT

Multiple Agency Involvement

The initial difficulty with enforcement is organizational. A complex problem is being attacked by a diversified government. Five governmental entities are directly involved in the enforcement process. The Air Resources Board, a department of the Resources Agency, is the chief research, policy-setting and coordinating agency.40 Within the Agriculture and Services Agency, Department of Consumer Affairs, the Bureau of Automotive Repair has the function of monitoring motor vehicle pollution control device installation and inspection stations.41 In the Business and Transportation Agency, the Department of Motor Vehicles processes certificates and waivers relating to compliance with applicable emissions provisions, which are required upon initial registration in California and upon transfer of ownership.42 The role of the California Highway Patrol, also a branch of the Business and Transportation Agency, has been discussed.43 The fifth major agency is the Department of Justice, Office of the Attorney General, which serves as the legal advisor for the aforementioned governmental units.44

This structure has been criticized for lacking a cohesive and comprehensive enforcement policy. Each agency has discretion in areas under its own control, sometimes resulting in a lack of interrelated action.46 For example, the Air Resources Board contracts with the Highway Patrol for passenger vehicle inspection and with the Bureau of Automotive Repair for the regulation of pollution control device installation and inspection stations. The Board, theoretically the primary control agency, in reality has little administrative control over these elements of the total enforcement system.46 Recent violations found by the Board and recommended for processing through administrative channels by the Bureau of Au-

40. See notes 13 and 14 and accompanying text supra.
42. See notes 28 and 39 and accompanying text supra.
43. See note 37 and accompanying text supra.
44. CAL. GOV'T CODE § 11157 (West 1966).
45. COMMISSION, supra note 34, at 5-6.
46. Id. at 50.
A recommendation for simplifying the administrative structure of the enforcement system can best be considered after a presentation of the other enforcement problems and the interrelationships among them.

Lack of Compliance

Surveillance programs have disclosed widespread violations of various regulations. This has forced the regulatory agencies to confront the problem of what avenues of enforcement should be followed. The actions taken to remedy the lack of compliance are laudable in some respects but not in others.

With respect to violations found in the new vehicle assembly line testing program, four cases have been filed by the Office of the Attorney General at the behest of the Board (the plaintiff in each) against Ford Motor Company, American Motors Corporation, Volkswagen of America, Inc., and Chrysler Corporation. The factual patterns were similar in each case; only the engine types were different. The Board claimed that each defendant manufactured or distributed various 1972 model year vehicles which failed to comply with emission standards set by the Board. The suits primarily sought a civil penalty of fifty dollars for each noncomplying vehicle which was first sold in this state. The cases against Ford and American Motors were settled for $55,000 and $23,000, respectively; the Volkswagen case was dismissed; and the Chrysler case is at the stage of settlement negotiations.

These cases illustrate some problems inherent in the nature of the enforcement system. First of all, while it is commendable that the standards are being enforced in the courts, the system of information gathering that led up to the legal action needs to be closely scrutinized. The testing of vehicles on factory assembly lines is not
done by the Board, but rather by the manufacturers, who then submit quarterly reports to the Board. The Board does send monitoring teams to manufacturing plants in the United States, Europe and Japan, but there is no specific schedule of inspection. All manufacturing sites are probably not inspected each year. Thus, surveillance by the regulating agency is not in all instances firsthand; it begins only after the initial inspection testing of the regulated party by the regulated party. Although the staff counsel of the Board is of the opinion that manufacturers can probably take little if any action to alter the results of their tests, it is lamentable, in terms of program enforceability, that the control agency lacks sufficient funds and manpower to control completely the crucial testing aspect of its new vehicle enforcement program. A recommendation for the alleviation of this problem will be presented in the concluding section on the legal future of the enforcement system.

New vehicle dealerships are another setting in which surveillance has disclosed a significant lack of compliance. A preliminary survey of 711 1974 model year vehicles conducted by the Board in conjunction with the Bureau of Automotive Repair at 45 new vehicle dealerships from April 1 through June 30, 1974, showed that 28 percent of these vehicles exceeded one or more emission control limits. The Board’s staff recommended that enforcement action be taken against certain manufacturers under Health and Safety Code section 39068.1(c)7 for violations of assembly line control limits or carbon monoxide tune-up specifications, and for violations of the California Highway Emission Standards, because those emission violations directly impair air quality. Similar actions against dealers were recommended under Health and Safety Code section 39052(m), or administratively through the Department

52. See note 34 and accompanying text supra.
53. The Board inspection teams check to see that the required test procedures are being followed. Sometimes they take along their own equipment to conduct confirmatory tests of the manufacturer’s equipment. Telephone interview with Kingsley Macomber, Air Resources Board Staff Counsel, Feb. 27, 1975 [hereinafter cited as Macomber Interview, Feb. 27, 1975].
55. See text accompanying notes 133-52 infra.
57. CAL. HEALTH & SAFETY CODE § 39068.1(c) (West 1973) provides in part: Commencing with the 1973 model year, no new motor vehicle shall be sold in California that does not meet the emission standards adopted by the board, and any manufacturer who sells, attempts to sell, or causes to be offered for sale a new motor vehicle that fails to meet the applicable emission standards shall be subject to a civil penalty of five thousand dollars ($5,000) for each such action.
of Motor Vehicles or the Bureau of Automotive Repair to revoke or suspend the dealers' licenses. The staff recommended that some violations be pursued in civil actions, and that some be prosecuted administratively, to determine the effectiveness of the respective remedies.

As of this writing, enforcement actions have been quite limited. The Bureau of Automotive Repair has issued a warning and the Board has discussed with manufacturers the improvement of methods for dealers to check shipments of new vehicles. Only one dealer has been fined. Thus, another enforcement problem related to lack of compliance is the reluctance or sluggishness of the Board and the Bureau of Automotive Repair to pursue available enforcement routes in a number of instances.

A legislative step toward solving this problem would be the enactment of a citizen suit provision authorizing private civil actions directly against manufacturers and dealers. Citizen enforcement is currently limited to mandamus actions against governmental bodies, such as the Board, to compel performance of a duty imposed by law or to compel judicial inquiry into the validity of an administrative order or decision. While the process by which a private group may compel an administrative agency to carry out its obligations certainly can be effective, it is a cumbersome and time-consuming means of enforcing the emission control laws against the actual violators. Private citizens' groups could base their direct actions against manufacturers and dealers on the new vehicle testing data and the dealership surveillance results, which are made available to the public by the Air Resources Board.

The citizen suit section of the Clean Air Act Amendments of 1970 could serve as an appropriate model for establishing similar

60. CAL. VEH. CODE § 11705 (West Supp. 1975) provides for revocation or suspension of dealers' licenses through administrative proceedings conducted by the Department of Motor Vehicles. Grounds for revocation include violations of CAL. VEH. CODE §§ 4000.1, 24007(b) (West Supp. 1975), which relate to dealers transmitting certificates of compliance or waivers with applications for vehicle registration, indicating that vehicles are equipped with the required pollution control devices.


62. Macomber Interview, Jan. 3, 1975, supra note 36. On May 19, 1975, the Board levied a $350 fine against a dealer in Sacramento, California, who brought into California eight new vehicles which had not received emission tests or been properly labeled. 6 ENVIRONMENT REP., CURRENT DEVELOPMENTS 252, 253 (May 30, 1975).

63. CAL. CIV. PRO. CODE § 1085 (West 1955).

64. Id. § 1094.5 (West Supp. 1975).


legislation in California. That section authorizes the commencement of a civil action for abatement against any private individual or firm who violates any emission standards established under the act or any orders issued with respect to such standards. In writing the federal legislation, Congress was concerned that citizens' suits would not always be brought as a public service, but might be used to harass manufacturers. Such frivolous or harassing litigation is discouraged by the prospect of an award of costs to any party, including the defendant, whenever the court considers it appropriate to do so. This power of the court also functions well where furtherance of the public interest is the purpose for bringing the suit, for in such cases Congress intended that the citizen proponents be entitled to attorneys' fees. Similar provisions relating to suits for violations of California's unique emissions standards and programs could serve the same function.

Legal Remedies

When and if prosecutions are implemented, another enforcement problem exists in the present structure of available legal remedies. Some fines are so extreme as to be of limited utility. Manufacturers of 1973 and later model year vehicles can be subjected to a $5,000 civil penalty for each act of sale, attempted sale, or for causing an offer of sale of a vehicle that does not meet emissions standards. Considering that the 1972 model year case recently settled with Ford Motor Company was based on a $50 per vehicle fine and the settlement was for $55,000, a similar violation pattern for 1973 or later model years would allow for a fine of several million dollars. This would appear to be an effective deterrent to violators, but the Board has been reluctant to seek enforcement of this penalty because of its extreme nature. Thus, the remedy remains unused.

At the other extreme, wilfully disconnecting or otherwise tampering with any required pollution control device is merely a

67. Id. § 1857h-2(a)(1). The term "person" includes an individual, corporation, partnership, association, State, political subdivisions thereof, and the United States. Id. §§ 1857h(e), 1857h-2(a)(1).
70. Id.; 5 ENVIRONMENT REP., MONOGRAPHS 19 (July 12, 1974), at 8.
71. CAL. HEALTH & SAFETY CODE § 391068.1(c) (West 1973). See note 57 supra.
72. See notes 48-51 and accompanying text supra.
73. Macomber Interview, Jan. 3, 1975, supra note 36. For example, on May 20, 1975, the Board ordered Chrysler Corporation to recall and repair approximately 11,000 vehicles manufactured for sale in California in 1975 because of emission tests failures. The Board decided not to impose the possible fine of $5,000 for each vehicle because of Chrysler's financial condition. 6 ENVIRONMENT REP., CURRENT DEVELOPMENTS 252 (May 30, 1975).
criminal infraction\textsuperscript{74} carrying a $50 fine for the first offense.\textsuperscript{78} It is a well-known fact that many pollution control devices decrease gas mileage,\textsuperscript{76} thereby increasing fuel costs and contributing to the energy shortage. Dealers, independent dealer preparation service contractors, and private parties who might be inclined to break this law may be little affected by such a small potential penalty, and the fact that proof of guilt beyond a reasonable doubt is required.\textsuperscript{77} Classifying the offense at least as a misdemeanor would seem to be more reasonable, because of the possibility of a greater fine and/or imprisonment.\textsuperscript{78}

\textit{Warranties}

Vehicle manufacturers are required by California law to warrant the performance of emission control systems for the useful life of each motor vehicle or engine they sell.\textsuperscript{79} However, a preliminary survey conducted in Oakland, California and other East Bay communities disclosed discrepancies in the warranty coverage practices of various manufacturers. Some do not include such engine components as valves and valve guides in their warranty statements.\textsuperscript{80} In other instances warranties are extended requiring customer contribution to the cost of repairs.\textsuperscript{81} These unfortunate inconsistencies may result in part from the lack of specific

\textsuperscript{74} Crimes classified as infractions are not punishable by imprisonment. \textit{Cal. Pen. Code} § 19c (West 1970).


\textsuperscript{76} See note 84 and accompanying text \textit{infra}.

\textsuperscript{77} \textit{Cal. Pen. Code} § 19d (West 1970) provides in part: "[e]xcept as otherwise provided by law, all provisions of law relating to misdemeanors shall apply to infractions, including . . . burden of proof."

\textsuperscript{78} Except in cases where a different punishment is prescribed by any law of this State, every offense declared to be a misdemeanor is punishable by imprisonment in the county jail not exceeding six months, or by fine not exceeding five hundred dollars or by both. \textit{Cal. Pen. Code} § 19 (West 1970).

\textsuperscript{79} \textit{Cal. Health & Safety Code} § 39156 (West 1973) states that the manufacturer must warrant that each motor vehicle and engine conforms with applicable regulations at the time of sale. \textit{Id.} § 39157(a) defines "useful life" to be five years or 50,000 miles, whichever occurs first, in the case of motor vehicles under 6,001 pounds gross weight, and engines used in such vehicles.

For used vehicles, \textit{id.} § 39177.3(c) provides that [a]n accredited exhaust control device shall equal or exceed the performance criteria established by the board for devices for new motor vehicles or, in the alternative, have an expected useful life of at least 50,000 miles of operation.

\textsuperscript{80} Air Resources Board Staff Report No. 74-13-4, Survey of Manufacturer's Emission Control System Warranties (July 10, 1974).

\textsuperscript{81} \textit{Id.}
identification of emission control components. The statutory language is general; the enforcement system would by enhanced by the Board's establishing and distributing descriptions of the emission control components that must be covered by the warranty, thereby establishing a specific requirement of uniformity.

Another problem lies in the unique nature of the emission control system to which the warranty applies. In discussing the very similar warranty requirements applicable in the other 49 states under the Clean Air Act Amendments of 1970, Professor Grad noted that the warranty is unusual in that it accords the least benefit to the person to whom it runs. The emission control system does not especially benefit the purchaser—it benefits the general public in that it reduces emissions. The system is likely to increase the cost of the car, decrease gas mileage, and adversely affect the driving performance of his vehicle. Consequently, the vehicle owner may have little incentive to force the manufacturer to live up to its obligations. If the protection of air quality is to be promoted through the warranty requirement, the onus is on the state to implement an enforcement system that can ensure effective inspection of vehicles and penalize owners to such an extent that they will be encouraged to enforce their warranties against manufacturers.

As stated earlier, California annually inspects about 11-13 percent of all in-use vehicles plus those which are subject to change of ownership or initial registration in the state. There is ample room for improvement here; action which can be taken to strengthen the inspection system will be discussed in the concluding section.

Technological Uncertainty, Unpopularity, and Political Compromise: A Case Study of Changing Perspectives

Three more general but no less important problems of enforcement can best be illustrated by a case study of the program for retrofitting 1966-70 model year vehicles with devices to reduce oxides of nitrogen (NOx) emissions.

Technological uncertainty has had a significant impact on this aspect of California's regulatory scheme. When it was determined that the NOx emissions in 1966-70 vehicles required significant reduction, the Board faced the problem of determining what

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82. Id.
83. 42 U.S.C. § 1857f-5a(a) (1970) states in part that the manufacturer . . . shall warrant . . . that such vehicle or engine is (1) designed, built, and equipped so as to conform at the time of sale with applicable regulations . . . and (2) free from defects . . . which cause vehicle or engine to fail to conform . . . for its useful life . . .
84. Grad, supra note 10, at 2-217.
85. Id. at 2-218.
86. See notes 38-39 and accompanying text supra.
87. See text accompanying notes 159-63 infra.
88. See text accompanying notes 26-28 supra.
could be done within the statutory limitations.\textsuperscript{89} Because of the lack of sufficient funds and facilities, the regulatory agency, the Air Resources Board, was forced to rely heavily on the regulated industry in determining how effective available technology could be. Based on device manufacturers' reports of what emission reduction levels were achievable, initial standards were adopted.\textsuperscript{90} This illustrates the problem the Board faces in not being able independently to consider complex technological questions. To be sure, NOx emission control is an area of uncertain technology. Only eight days after a program of statewide installation of control devices upon change of ownership became operative, it was suspended because the Board had received data that some devices might cause engine damage. However, an administrative hearing in August, 1973, found no causal relation between vacuum spark advance disconnect and engine valve wear, and shortly thereafter new schedules were adopted which would have required the installation of devices statewide by the end of 1974.\textsuperscript{91} This course of events, coupled with the present absence of a consensus among scientists as to the effects of various concentrations of NOx on photochemical smog,\textsuperscript{92} clearly show that technological uncertainty has been and

\textsuperscript{89} CAL. HEALTH \& SAFETY CODE § 39177.3(a) (West 1973) requires that accredited devices shall not cost more than $35, including the cost of installation.

\textsuperscript{90} Air Resources Board Staff Report No. 5, Proposed Standards for Oxides of Nitrogen Control Devices (February 16, 1972). The standards required a reduction in NOx emissions of 30 percent for Class B through F vehicles and 20 percent reduction for Class A vehicles. Air Resources Board Fact Sheet No. 29, at 1 (December 19, 1973). Fortunately for air quality, the first devices accredited were capable of achieving a 42 percent reduction, and the Board has subsequently raised the standard to that level. Macomber Interview, Jan. 3, 1975, supra note 36.

\textsuperscript{91} Air Resources Board Fact Sheet No. 29, at 1-2 (Dec. 19, 1973).

\textsuperscript{92} Air Resources Board Staff Report No. 73-28-5, Consideration of NOx Retrofit Device Installation Schedule Because of the Need to Conserve Fuel App. II (December 19, 1973) [hereinafter cited as ARB Staff Rep. No. 73-28-5], states that three models of the relationship have been advanced. The Environmental Protection Agency model, used by the Air Resources Board in preparing its implementation plan for the accomplishment of the national ambient air quality standards within California's air quality control regions under the Clean Air Act Amendments of 1970, posits that minor changes in NOx emissions would have little effect on photochemical smog, but would be limited to changes in the direct effects of nitrogen dioxide. The Los Angeles Air Pollution Control District's model formerly indicated that a minor decrease in NOX would increase oxidant concentrations and eye irritation. Its current position is that the retrofit program would result in smog reduction so small as to be probably undetectable. Air Resources Fact Sheet 7 (Mar. 31, 1975). The former Technical Advisory Committee to the Board used a model which concluded that a six percent reduction in NOx would effect approximately a three percent reduction in photochemical smog.

"[T]he existing analyses relating NOx emissions to subsequent oxidant formation are considered inadequate." 3 COORDINATING COMMITTEE ON AIR QUALITY STUDIES, NATIONAL ACADEMY OF SCIENCES, NATIONAL ACADEMY OF ENGINEERING, AIR QUALITY AND AUTOMOBILE EMISSION CONTROL 9 (1974).

Thus, further research should be directed toward the determination of the optimal level of NOx emission control necessary most effectively to inhibit oxidant formation.
continues to be a significant impediment to the effectiveness of the passenger vehicle pollution control system.

The control system also has been affected substantially by the social factors of public unpopularity and political compromise. During November, 1973, when public concern about the “energy crisis” was very high, then Governor Reagan requested the Board to “reconsider” its statewide retrofit project.\(^9\) In December, 1973, Governor Reagan replaced four of the five members of the Board “in what was widely interpreted as an attempt to kill the politically unpopular program.”\(^9\) Shortly thereafter, on December 19, 1973, the Board delayed the project.\(^9\) The Board’s staff noted that NOx devices can increase fuel consumption by 10 percent and “with the imminent shortage of gasoline and the possibility of gas rationing a 10 percent fuel penalty could prove very burdensome.”\(^9\) The Board’s position was that the energy crisis was an extraordinary and compelling reason for delaying the program.\(^9\)

The Supreme Court of California took a different view. In the summer of 1974, it decided, in *Clean Air Constituency v. California State Air Resources Board*,\(^9\) that the decision to delay the program because of the energy crisis exceeded the scope of the Board’s

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93. ARB Staff Rep. No. 73-28-5, *supra* note 92, at 2. At the time of the request, the transfer of ownership/initial registration program was operating in 16 counties. On January 1, 1974, the program was scheduled to expand to all counties and the program of mandatory installation according to license plate numeral was to commence statewide.

94. 3 ENVIRONMENT REP., CURRENT DEVELOPMENTS 1561 (Jan. 18, 1974).

95. The delay was accomplished by deferring the installation of devices upon initial registration and transfer of ownership in counties other than the sixteen located completely or partially within the South Coast, San Diego, and San Francisco Air Basins from Jan. 1, 1974, to Apr. 1, 1974. Also, the program of mandatory installation of devices based on the last arabic numeral on the license plates of subject vehicles was postponed for one year. Air Resources Board Resolution No. 73-27G (Dec. 19, 1973). This schedule would have prevented a 0.5% (50 million gallons) increase in gasoline consumption in 1974 and about 0.13% (13 million gallons) in 1975. There would have been additional NOx emissions of approximately 100 tons per day in 1974 and 30 tons per day in 1975. ARB Staff Rep. No. 73-28-5, *supra* note 2-3.

96. *Id.* at 2. The staff also noted that “to increase the production of heating oil and diesel fuel, which are also in short supply, the production of gasoline must be reduced.” *Id.* at 3.


For extraordinary and compelling reasons only, the State Air Resources Board may, by regulation, after a public hearing, defer or delete the requirement of certificates of compliance required pursuant to this subdivision.

This language was relied upon by the Board.

Subsequently, the “extraordinary and compelling reasons only” clause was deleted from the statute. *CAL. VEH. CODE* § 4602 (West Supp. 1975), *formerly* Cal. Stats. (1971), ch. 1507, § 6, at 2980.

authority under Government Code section 11374. The court held that the discretionary authority of the Board to delay or defer must relate to the goals of the retrofit legislation, which are: "speedy installation of accredited devices, substantial reduction of NOx emissions, and effective enforcement of emission control requirements." In ascertaining the purposes of the NOx legislation, the court applied the principle that it should construe every statute with reference to the entire scheme of law of which it is part so that the whole may be harmonized and retain effectiveness. It concluded that speedy installation was a goal of the retrofit program, based on the legislative declaration that the act was an urgency statute which should take immediate effect and because of the manifestation of intention to require statewide installation by 1973. The court determined that the objective of substantial reduction of NOx emissions derived from the statutory language that the primary consideration should be "the greatest possible reduction of oxides of nitrogen," and that the effective enforcement goal arose from the requirements of vehicle inspections, certificates of compliance, and other enforcement measures deemed practicable by the Air Resources Board, the Department of Motor Vehicles, and the Highway Patrol. Thus, the California Supreme Court did not decide whether the concern for energy conservation was, as a matter of fact, an extraordinary and compelling reason to delay the program, but

99. CAL. GOV'T CODE § 11374 (West 1966) provides:
Whenever by the express or implied terms of any statute a state agency has authority to adopt regulations to implement, interpret, make specific, or otherwise carry out the provisions of the statute, no regulation adopted is valid or effective unless consistent and not in conflict with the statute and reasonably necessary to effectuate the purpose of the statute.
The Clean Air Constituency court noted that
[i]f Gov't Code section 11374 or legislative intent does not confine the scope of Vehicle Code section 4602 to extraordinary and compelling reasons relating to the purposes and goals of the Air Resources Act, then section 4602 would constitute an unconstitutional delegation of powers.
11 Cal. 3d at 816, 523 P.2d at 626, 114 Cal. Rptr. at 586.
100. 11 Cal. 3d at 816, 523 P.2d at 626, 114 Cal. Rptr. at 586.
101. Id. at 814, 523 P.2d at 624-25, 114 Cal. Rptr. at 584-85.
101. Id. at 814, 523 P.2d at 624-25, 114 Cal. Rptr. at 584-85.
102. Id. at 814, 523 P.2d at 625, 114 Cal. Rptr. at 585.
105. CAL. HEALTH & SAFETY CODE § 39107.6 (West 1973), cited by the Clean Air Constituency court, 11 Cal. 3d at 814-15, 523 P.2d at 625, 114 Cal. Rptr. at 585.
rather that such a concern was, as a matter of law, outside the scope of the Board's discretionary authority to consider reasons for delaying the program.

The Board characterized this court decision as a conservative approach to the discretionary authority of an administrative agency, which might restrict its ability to deal with practical realities. Hindsight may provide some insight here. It was not so much the administrative agency's discretionary authority which was the determinative factor in restricting the retrofit program, but rather the pressure exerted by the executive branch to undercut the legislative mandate under which the administrative agency was supposed to be operating. The Board's legislatively-created concern is air resources, not the scarcity of energy—which in the view of this writer is more properly a legislative function unless specifically delegated. An agency should not be allowed to venture into new areas of management without legislative authorization. Consequently, the decision of the court as to the discretionary authority of the Air Resources Board was not so conservative after all.

As a result of the decision, the NOx retrofit program was reinstated two weeks later, with a mandatory statewide installation program to be completed by June 30, 1975. However, by this time the perspective of the state legislature was undergoing alteration. Minutes before midnight on August 31, 1974, S.B. 2471 was passed, continuing the statewide requirement of NOx control device installation upon change of ownership or initial registration in California, but limiting the mandatory installation by license plate number to the South Coast Air Basin. This modification of the law on which the California Supreme Court decision had been based was not the result of extensive scientific study, but rather a creature of political compromise. S.B. 2471 initially called for repeal of the program in its entirety. An amendment was then attached which would have made the program applicable to the San Francisco, San Diego, and South Coast Air Basins. The amendment which finally passed, however, made the program of mandatory installation applicable only in the South Coast Air Basin.

Governor Reagan signed the bill into law on September 5, 1974, and the Board modified its regulations so as to suspend the

108. Cal. Health & Safety Code § 39013 (West 1973) provides: "It is imperative to provide a single state agency for administration, research, establishment of standards, and the coordination of air conservation activities carried on within the state."
109. Air Resources Board Staff Report No. 74-17-3, Legislation Relating to NOx Retrofit Program 1 (Sept. 11, 1974).
mandatory phase of the program outside the South Coast Air Basin because, as the new law would not take effect until January 1, 1975, the program would otherwise have continued throughout the state until then. The Board was concerned whether this action was contrary to the recent court decision, but on the advice of the Office of the Attorney General decided that since its enforcement plan would be significantly disrupted if it did not comply, a compelling reason existed for curtailing the program. It would appear that the Board acted within the law, because the Clean Air Constituency case dealt with the scope of authority of the administrative agency, and by this time its legislative mandate had been reduced drastically.

Public disapproval of the retrofit program continued into 1975, resulting in a legislative repeal of the mandatory installation portion of the program in the South Coast Air Basin, effective April 23, 1975. Prior to the repeal, Governor Brown ordered the Board to conduct further tests of the effectiveness of the program. Based on the Board's report that at least 62 percent of the NOx devices on vehicles at that time were installed incorrectly or improperly adjusted, the Governor signed the repeal bill into

111. 5 ENVIRONMENT REP., CURRENT DEVELOPMENTS 760-61 (Sept. 20, 1974).
112. Macomber Interview, Oct. 29, 1974, supra note 33. Due to the schedule of installation in effect at the time Cal. S.B. 2471 became law, if the Board had not modified its regulations pertaining to areas outside of the South Coast Air Basin, owners of subject vehicles with license plate digits ending in 1 through 4 would have been required to have a device installed, but the remainder would not.
113. Thousands of written and telephoned complaints were registered in the offices of the Governor, legislators, and the Air Resources Board. Los Angeles Times, Apr. 15, 1975, at 21, col. 2. During a hearing in Los Angeles on April 23, 1975, Governor Brown cited a poll indicating 72 percent of Southern Californians opposed the retrofit program. Los Angeles Times, Apr. 24, 1975, at 24, col. 2.

A major objection to the retrofit program has been the economic burden of $35 or less placed upon the 1966-70 model year vehicle owner. See note 89 supra. This complaint has been made despite the fact that at least one of the retrofit devices is generally available for under $20. Air Resources Board Fact Sheet 8 (Mar. 31, 1975).

Increased fuel consumption has been another argument used by opponents of the program. The NOx retrofit devices create an average fuel penalty of five percent, which is comparable to that experienced by 1971 and later model year vehicles with factory-equipped NOx control equipment. Id. at 3.

A further complaint against the program has been that NOx devices damage engines. The Board has found absolutely no evidence to substantiate this charge. In a 1973 study, NOx devices were installed on one hundred various makes and model years of 1966-70 vehicles and mock or "dummy" devices were placed on fifty additional vehicles. Thirty-five percent of the drivers with the NOx devices reported worse engine performance and 48 percent of the drivers with nonfunctioning "dummy" devices reported worse performance. Id. at 6.

law,\textsuperscript{116} despite the finding of the Board that the devices function properly when installed and adjusted correctly.\textsuperscript{117}

As of this writing, 1966-70 model year vehicles throughout the state must be retrofitted with NOx control devices only upon change of ownership or initial registration in California.\textsuperscript{118}

The history of the program to control emissions of oxides of nitrogen in 1966-70 model year vehicles is thus a case study in changing perspectives. The factors of technological uncertainty, unpopularity and political compromise have severely reduced the scope of this aspect of the air pollution control system. The import of these forces warrants consideration.

What was initially designated as an urgency program, on the ground that the technology applied to new vehicles in the 1966-70 model year had inadvertently increased NOx emissions from them by approximately 50 percent,\textsuperscript{119} is now incapable of solving this problem as quickly as originally planned. The statewide mandatory retrofit program would have significantly remedied the problem by November 1, 1974.\textsuperscript{120} The Board's fuel crisis decision, although subsequently vacated, would have delayed the program by one year. If the mandatory phase of the program had continued solely in the South Coast Air Basin, where air pollution is more severe than anywhere else in the state and approximately half of the passenger vehicles are registered,\textsuperscript{121} it would have been complete by mid-1975, and a five percent reduction in ozone in that basin would have resulted.\textsuperscript{122} Less than a month prior to the legislative repeal of the mandatory program in that area, the Board stated that this is a significant reduction, because if applied to the oxidant levels recorded in 1974, the downtown portion of the city of Los Angeles and Upland, California, (probably the most polluted area) would have experienced eleven fewer days of first-stage smog

\begin{footnotesize}
\begin{enumerate}
\item[117.] \textit{Id.} at 2.
\item[118.] \textit{Id.} at 1.
\item[120.] ARB Staff Rep. No. 73-28-5, \textit{supra} note 92, at 1. All 1966-70 vehicles would have been required to have devices which would have reduced emissions of NOx by at least 42 percent. See notes 90 and 92 \textit{supra}. However, more recent tests indicate that the retrofit devices may reduce NOx emissions by as little as 32 percent rather than 42 percent, as expected earlier. Air Resources Board Fact Sheet 1 (Mar. 31, 1975).
\item[121.] Macomber Interview, Jan. 3, 1975, \textit{supra} note 36.
\item[122.] Besides reducing NOx emissions, the retrofit devices also cause a 21 percent reduction in emissions of HC and a seven percent reduction in CO. These are conservative test figures. Air Resources Board Fact Sheet 1 (Mar. 31, 1975).
\end{enumerate}
\end{footnotesize}
alerts, and Riverside, California, would have had thirteen fewer first-stage alerts.\footnote{123}

With the present change of ownership program in the South Coast Air Basin, there will be only a two to three percent reduction in ozone by mid-1975.\footnote{124} A five percent reduction in ozone will probably not be reached in that area until 1981, when almost all 1966-70 vehicles will have been retrofitted, assuming the change of ownership portion of the retrofit program continues.\footnote{125}

If the program is totally discontinued the NOx passenger vehicle air pollution problem—spawned by imperfect technological control of other forms of air pollution—will not be totally resolved until 1985, when it is estimated that nearly all 1966-70 passenger vehicles will be off the road.\footnote{126}

Besides the consequences for air quality, the present program has resulted in a new enforcement problem. An estimated 60 percent of the 1.9 million 1966-70 vehicles in the South Coast Air Basin already have installed retrofit devices.\footnote{127} But vehicle owners who installed the devices under the mandatory phase of the program are free to disconnect them, while those who acquired devices pursuant to the change of ownership or initial in-state registration requirement are not,\footnote{128} because this phase of the program continues in effect. There will be problems in distinguishing between these two categories of owners, once a 1966-70 vehicle has been sold and re-registered.\footnote{129} A mandatory inspection system, to be

\footnote{123. First stage smog alerts occur on days with oxidant concentrations equal to or greater than 0.20 parts per million. \textit{Id.} at 1-2. It is important to note that the five percent reduction in ozone figure comes from the Air Resources Board and the statewide Air Pollution Research Center of the University of California. The Los Angeles Air Pollution Control District disagrees, arguing that smog reduction from the program would be minimal. \textit{Id.} at 7. See note 92 and accompanying text supra.}

\footnote{124. Telephone interview with Don Bratton, Associate Air Sanitation Engineer, California Air Resources Board, Sacramento, Cal., May 14, 1975. These are current estimates and are subject to change.

125. \textit{Id.} This statistic is based on information from the Department of Motor Vehicles that approximately 20 percent of all vehicles change ownership each year.


127. Los Angeles Times, Apr. 15, 1975, at 21, col. 4. But in mid-April, 1975, more than two million 1966-70 model year vehicles in the entire state were not equipped with the devices. San Francisco Chronicle, Apr. 18, 1975, at 20, cols. 5-6.


129. A spokesman for the California Highway Patrol said there could be some policing of vehicles required to have the retrofit device during the first year after re-registration upon sale or entering the state, but after the first year, when a new registration card is issued, it would be extremely difficult to determine whether the vehicle falls within the existing requirements of the NOx retrofit program. The spokesman stated that officers could not be expected to trace registrations to determine whether the vehicle had been purchased as a used car. Los Angeles
discussed in the next section, 130 would greatly enhance the enforce-
ability of what remains of the NOx retrofit program. 131

ENFORCEMENT IN THE FUTURE: ACTION IN THE PRESENT

The California experience with organizing and enforcing a
legal system for the control of vehicular emissions is plagued by a
host of problems which, as has been demonstrated, have their roots
in several sources. Some are internally generated, such as the multi-
agency nature of our present government bureaucracy, the lack of
sufficient manpower necessary for a more comprehensive inspec-
tion system under complete agency control, the statutory problems
in providing remedies and enforcing warranties, and agency reluc-
tance to pursue some known violations. Other problems have come
from outside the system in reaction to it: the economic burdens
associated with pollution control equipment have resulted in un-


The Department of Motor Vehicles is working on a registration coding sys-
tem to remedy this problem. Telephone interview with Kingsley Macomber, Cali-
ifornia Air Resources Board Staff Counsel, Sacramento, Cal., May 5, 1975.

130. See text accompanying notes 153-65 infra.

131. Although now only of historical significance, constitutional challenges
were levied against the now-defunct mandatory retrofit program in the South Air
Basin. They are noteworthy because they illustrate some of the legal problems
which may arise in attempting to enforce air pollution control programs which
focus on a specific geographical region.

In County of Los Angeles v. California St. Air Resources Bd., Civil No.
C-104695 (Super. Ct., filed Dec. 4, 1974), it was alleged that the mandatory retro-
fit program was unconstitutionally classifying the South Coast Air Basin differ-
tently from other urban air basins in the state. While it is true that the San Diego
and San Francisco Bay Area Air Basins were originally scheduled to be included
in the initial stages of the Board's pre-fuel crisis installation plan, the Board took
the position that the greater Los Angeles area has the worst air pollution problem
in the nation, and that it made sense to concentrate on such a problem area. Los
Angeles County also alleged that there was no rational basis for distinguishing
between the desert basin portion of Los Angeles County and the desert basin por-
tions of adjoining desert counties not located within the South Coast Air Basin.

Similarly, in City of Santa Maria v. California St. Air Resources Bd., Civil
No. SM-15405 (Super. Ct., filed Oct. 29, 1974), the city of Santa Maria, Califor-
nia, challenged the inclusion of non-urban northern Santa Barbara County (in
which the city is located) for enforcement purposes, even though not all of the
county is actually located in the South Coast Air Basin. The Board has admitted
that "the rural areas of the state have little or no need for the NOx retrofit pro-
gram." It is indeed unfortunate that meteorologically-determined air basins do
not conform with political boundaries, but program enforceability is greatly facili-
tated by including all areas of all counties situated wholly or partially within the
air basin for jurisdictional purposes. It would be extremely difficult for the High-
way Patrol and the Department of Motor Vehicles to distinguish between vehicles
being operated on the highways which are owned by urban dwellers and those
vehicles owned by nonurban dwellers within the basin, or between county resi-
dents who actually live outside and those that live inside the precise contours of
the air basin. Therefore, a strong argument exists in support of the rationality
of the classification of counties within the basin; too much precision in this area
of the law would render enforcement virtually impossible.
popularity and political compromise, which have significantly affected the enforceability of the program. The central hindrance to enforceability of the control system has been the subject of air pollution itself. Vehicular air pollution is the result of our complex technology of mobilization; developing and regulating new technology to control it is at present an extremely inexact science.\footnote{132}

Given this present state of affairs, to view the future with more than guarded optimism would be unrealistic. There are three trends presently in a state of genesis which both presage the darkness of uncertainty and represent rays of hope for effective enforcement. In discussing these trends, measures will be recommended to enhance the enforceability of the passenger vehicle air pollution control system.

**Federal Preemption of Emission Standard Setting**

First of all, the standards for new vehicles represent an equivocal situation. At the federal level, concern over the potential health problems stemming from the sulfate emissions of new vehicles equipped with catalytic converters\footnote{133} has been used to justify a suspension of the federal statutory emission standards for HC and CO in the 1977 model year.\footnote{134} The current 1975 standards for those pollutants have been extended to 1977 as interim stan-

\footnote{132. In addition to the problems created by technological uncertainty that have been discussed, preliminary studies show that more vehicles will require air injection to meet the more stringent hydrocarbon standards proposed for 1975 and the future. There are indications that catalyst-equipped vehicles with air injection emit approximately three times more sulfates than do catalyst cars without air injection. Air Resources Board Staff Report No. 74-21-4b, Staff Report on Proposed Emission Standards for 1977 Model-Year Passenger Cars and Light-Duty Trucks 9 (November 13, 1974). The new catalyst technology tends to turn the sulfur, which is a natural impurity in gasoline, into sulfate compounds—principally sulfuric acid mists.

The Environmental Protection Agency has noted that sulfate emissions could become serious in California within two years and on a nationwide basis within four years. There are indications that the use of oxidation catalysts will be accompanied by a net increase of heart and lung disorders. San Francisco Chronicle, Jan. 28, 1975, at 6, cols. 5-6.

Dr. Bernard D. Goldstein, a director of environmental medicine at the New York University Medical Center, has warned the Environmental Protection Agency that it would be risking a potential widespread health hazard if it allows catalytic converter devices to be placed on vehicles without further study of the consequences. San Francisco Chronicle, Feb. 19, 1975, at 3, col. 3. Legal steps may be required to control these new chemical complications of the present automotive emission control strategy if the catalyst technology continues to be used. On Mar. 5, 1975, the Administrator of the Environmental Protection Agency stated an intention to establish an emissions standard for sulfate compounds, particularly sulfuric acid, for the 1979 model year. 40 Fed. Reg. 11900, 11903 (1975).

133. See note 132 supra.

134. 40 Fed. Reg. 11900-01 (1975).}
In California, with respect to the 1977 model year, the Air Resources Board has chosen to continue its policy of requiring emission reductions that are more extensive than those mandated by the federal controls applicable in the other 49 states. However, the present practice of setting emissions standards, under which California's standards are more stringent than the federal counterparts, may be subject to change in 1978. Under the present language of the Clean Air Act, 1978 is the year during which automobile emissions must be reduced by at least 90 percent from the levels of 1970 model year vehicles. Based on the standard Environmental Protection Agency test procedure, the emission levels needed to comply with this statutory mandate are a maximum of 0.41 grams per mile of HC and 3.40 grams per mile of CO. For NOx, a level of 0.40 grams per mile is currently proposed. Although the Air Resources Board at this writing has not proposed California standards for the 1978 model year, if the standards set for 1977 are extended, the federal standards in that model year for CO and NOx will be more strict than California's standards, and the HC standards will be the same, resulting in California's losing its waiver from federal preemption of emissions standard setting for new passenger vehicles.

Nationwide federal preemption of emissions standard setting is an idea whose time may well have come. From an historical perspective, California admirably has taken the initiative to solve vehicular pollution problems, but now that the federal government is

135. The federal standards for 1977 are now set at 1.5 grams per mile of HC, 15 grams per mile of CO, and 2.0 grams per mile of NOx. 40 Fed. Reg. 11900-01 (1975).
136. The 1977 California limits for passenger vehicles are 0.41 grams per mile of HC, 9.0 grams per mile of CO, and 1.5 grams per mile of NOx. San Francisco Chronicle, Mar. 19, 1975, at 1, col. 8.
139. Id. at n.1.
140. 42 U.S.C. § 1857f-6a(b) (1970) directs the Administrator of the Environmental Protection Agency to waive application of federal preemption of standard setting for new motor vehicles to any state (this section was directed at California) which had adopted such standards prior to March 30, 1966, "unless he finds that such State does not require standards more stringent than applicable Federal standards . . . ." The proposed standards are:

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<tr>
<td>HC</td>
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All figures represent grams per mile. See notes 135-36, 138-39 and accompanying text supra.
working in earnest to decrease the atmospheric pollutant load in a manner that will not be detrimental to health, the pollution control efforts of this state can be more effectively concentrated elsewhere.

Because of the potential scope and seriousness of the sulfate emissions problem, the Environmental Protection Agency has, however, recommended that the statutory standards mandated for 1978 by the Clean Air Act be postponed until 1982 and graduated standards be established for the interim, in order to allow development of the necessary technology to eliminate the sulfate emissions. The question of whether this new technological problem should warrant further delays in an already much-delayed program is an extremely difficult one. The actual seriousness of the sulfate emissions problem is the subject of ongoing scientific study and debate. One study conducted by the Environmental Protection Agency, subsequent to its Administrator's decision to suspend the statutory standards for HC and CO in the 1977 model year and its recommendation that Congress postpone the statutory standards until 1982, has suggested that production line 1975 model year vehicles, in contrast with the prototype fleet vehicles on which earlier tests were conducted, actually emit only about half as much sulfuric acid as previously believed. But as of April 8, 1975, this preliminary study was still being reviewed and was not reflective of the policy of the Environmental Protection Agency.

This highly uncertain situation undoubtedly requires much additional study in order to determine the actual health hazards created by the new catalytic converter technology. It may be a misallocation of the limited air pollution control resources in this coun-

141. See note 132 supra.
142. The interim year recommendations of the Administrator are:

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<th>1979</th>
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<td>NOx</td>
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All figures represent grams per mile. 40 Fed. Reg. 11901 (1975).

143. See notes 133-34 and accompanying text supra. An Environmental Protection Agency paper dated January 30, 1975, was critical of EPA Administrator Russell E. Train's decision to suspend the 1977 standards for one model year. 5 ENVIRONMENT REP., CURRENT DEVELOPMENTS 1952 (Apr. 11, 1975). A draft study dated April 3, 1975, has challenged the findings of the January 30, 1975, paper. Id.

144. See text accompanying note 142 supra.


146. Only six production vehicles were used in this test; consequently, the results are far from conclusive. The draft paper noted that final emission estimates will require extensive testing of production vehicles over a driving cycle to be developed by EPA. 5 ENVIRONMENT REP., CURRENT DEVELOPMENTS 1952, 1953-54 (Apr. 11, 1975).
try for both the state of California and the federal government to attack this problem independently and set new vehicle standards accordingly.

Of course, there is no guarantee that federal efforts to resolve the technological uncertainties related to further emissions reduction will not be hampered by political compromise. Indeed, President Ford, in setting forth an energy conservation program in his State of the Union address in January, 1975, proposed a five-year moratorium on setting stricter emission control standards in exchange for a promise from auto manufacturers that they would improve the gasoline mileage of their vehicles by an average of 40 percent by 1980.\textsuperscript{147} Political compromise probably is one of the least soluble enforcement problems. Should it eventually result that the Environmental Protection Agency has indeed overestimated the seriousness of the sulfate problem, but the Congress chooses to postpone the 1978 statutory standards for other reasons, then federal preemption of California's emission standard setting program obviously would not be beneficial to the improvement of air quality in this state. Unless the preemption section of the Clean Air Act\textsuperscript{48} were also amended by Congress, California would still have the opportunity to promulgate state standards more stringent than those in effect in the other 49 states under federal law, and thereby continue its independent pursuit of vehicular emission minimization.

But, in the situation where the Environmental Protection Agency has been able to evaluate adequately the technological problems resulting from further emission reduction requirements and is not being impeded by political unpopularity, the positive effects of federal preemption are several: without the responsibility of setting standards, the California Air Resources Board could focus more energy on the enforcement of standards. It would not have to process the quarterly assembly line inspection reports submitted by the manufacturers,\textsuperscript{149} and it would not have to send inspection teams throughout the nation and the world in an attempt to monitor testing procedures.\textsuperscript{150} The problems inherent in these inspection efforts have been demonstrated.\textsuperscript{151}

\begin{itemize}
  \item \textsuperscript{147} Los Angeles Times, Feb. 28, 1975, at 2, col. 6; \textit{id.} at 9, col. 1. As a counterweight to the argument that stricter standards should be postponed in order to allow manufacturers to increase fuel economy, it is noteworthy that the catalyst technology used to meet the 1975 standards in California has realized an average 13.5 percent improvement over comparable non-catalyst-equipped 1974 models.
  \item \textsuperscript{148} 42 U.S.C. § 1857f-6a(b) (1970). See note 140 supra.
  \item \textsuperscript{149} See text accompanying note 34 supra.
  \item \textsuperscript{150} See note 53 and accompanying text supra.
  \item \textsuperscript{151} See text accompanying notes 54-55 supra.
\end{itemize}
Increased in-state surveillance at new vehicle dealerships would be a better allocation of resources. Given totally uniform standards, the federal Environmental Protection Agency, which now sets standards and inspects the manufacturing phase of vehicular pollution control for the other 49 states, could assume these responsibilities for vehicles sold in California with a minimum of effort. The California Air Resources Board would still be checking new vehicles, but within its own borders at an increased rate of cost effectiveness. The burden on manufacturers would also be reduced, because they would not have to construct special vehicles for sale in California or contend with state as well as federal prototype fleet and assembly line testing requirements.

In suggesting that California step up new vehicle dealership surveillance in the event of federal preemption, the Clean Air Act Amendments of 1970 must be considered. Section 1857f-6a bars preempted states from requiring inspection of new vehicles as a condition precedent to initial sale or registration.\footnote{42 U.S.C. § 1857f-6a(a) (1970) provides in relevant part:}

\begin{quote}
No State shall require certification, inspection, or any other approval relating to the control of emissions from any new motor vehicle \ldots as condition precedent to the initial retail sale titling (if any), or registration of such motor vehicle \ldots .
\end{quote}

\footnote{Id. § 1857f-6a(c) states:
Nothing in this part 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.}

While a state cannot prevent the sale and registration of noncomplying vehicles, there is still room in the federal law for it to impose fines to deter continued noncompliance. In this fashion, the state and federal inspection systems could work together to promote the same end.

**Statewide Mandatory Inspection**

Should California lose its power to approve new vehicles, it could concentrate more heavily on the inspection of vehicles presently in use. Even if it does not lose its new vehicle approval power, there are strong arguments for increasing in-use inspection now. Requiring sophisticated standards and complex equipment is of little value if the program is not subjected to adequate surveillance.

A positive trend in this direction is gestating in Riverside, California, in the form of a pilot study of mandatory inspection of all vehicles registered in the South Coast Air Basin.\footnote{CAL. BUS. & PROF. CODE §§ 9889.50-.61 (West Supp. 1974) provide for a mandatory vehicle emission inspection and testing program of all motor vehicles to begin in 1974 and 1975.}

Inspection will occur at permanent, state-operated facilities. At the end of 1975, all subject vehicles are to be inspected upon
each transfer of registration, and subsequent to December 31, 1976, upon initial registration and each yearly renewal of registration. The Bureau of Automotive Repair has been directed to consider expanding the program, and to make appropriate recommendations by the end of 1974. Because the emission standards for new vehicles might not be made more stringent, and because the 1966-70 model year retrofit program has been decreased in scope, there is a definite need to maintain a close watch over the present controls. Hence it is strongly recommended that a statewide system be enacted for the mandatory inspection of all vehicles in use. The presently planned system of staggered vehicle registration which will distribute the registration process evenly throughout the year, would facilitate putting a mandatory inspection system into operation. Vehicles could be inspected at one or two year intervals, based on a determination of the appropriate time period allowable between inspections, as part of the registration process. Since registration will be staggered, inspection stations would receive a steady flow of vehicles throughout each year. A program of mandatory inspection would be a substantial improvement over the current non-periodic, comprehensive inspection system.

With statewide mandatory inspection, the marginally effective passenger vehicle inspection lane program of the California Highway Patrol could be discarded. Considering that only about 11-13 percent of the total in-use vehicle population is annually checked by the present system, and one-fourth of these fail to comply with various Board standards, it is important to note that a statewide mandatory inspection program would uncover all non-complying registered vehicles. Moreover, the uniformed traffic officers now involved in the regulatory system could be channeled back into traffic law enforcement. Also significant is the fact that the present emission control technology on new vehicles may be...
not hold up throughout their useful lives.\textsuperscript{161} Thus, even though more heavily polluting older vehicles may no longer be in use within another decade,\textsuperscript{162} mandatory inspection will serve as a useful and necessary enforcement mechanism until the emission control technology on newer vehicles is conclusively proved to be effective over a much longer period. In the interim, statewide mandatory inspection would serve to stimulate owners whose vehicles are found not to comply with state or federal regulations to enforce their emission control performance warranties on manufacturers.\textsuperscript{163} In this instance, the state and private enforcement mechanisms would sustain each other.

Even though statewide mandatory inspection of all passenger vehicles would be beneficial for several reasons, the transition from the present system may create new problems of enforcement. The law requires that a vehicle be registered in the county where the owner resides.\textsuperscript{164} In the pilot program now beginning in the South Coast Air Basin, a possible loophole exists in the language of Vehicle Code section 4004.5.\textsuperscript{165} Residents of the basin who own vehicles used for business purposes within and outside of the basin, and owners who also reside in counties outside of the basin for more than thirty days each year may avoid, at the discretion of the Department of Motor Vehicles, the mandatory inspection program by securing permission to register their vehicles outside of the basin. It is strongly urged that the Department of Motor Vehicles be made aware of this problem and seek to minimize its effect. With a statewide mandatory inspection system, this loophole would not exist.

\textbf{Structural Reorganization}

Along with the trends toward federal preemption of standard setting and mandatory vehicle inspection, a third developmental trend through which to gauge the future of enforcement is represented by the organizational structure of the air pollution control system. The primary regulatory agency, the Air Resources Board, is on the verge of undergoing positive change. In February, 1975, Governor Brown proposed a 55 percent budget increase for the Board,\textsuperscript{166} and a substantial increase in new vehicle dealership surveillance with more prosecutions of violators has been prom-

\textsuperscript{161} See text accompanying notes 18-21, 30 and note 79 supra.
\textsuperscript{162} See, e.g., text accompanying note 126 supra.
\textsuperscript{163} See text accompanying notes 84-87 supra.
\textsuperscript{164} CAL. VEH. CODE § 4150(b) (West 1971).
\textsuperscript{165} CAL. VEH. CODE § 4004.5 (West 1971) allows the Department of Motor Vehicles discretion to determine the total number of vehicles which must be registered or exempted from registration in any particular county in the case where the owner resides in more than one county for a period of more than 30 days per year, or uses a vehicle for business purposes in more than one county.
\textsuperscript{166} San Francisco Chronicle, Feb. 23, 1975, at 10, col. 1.
Such changes are definitely needed to remedy some of the current enforcement problems, but all faith cannot be reposed in the executive and legislative branches, for as was seen in the NOx retrofit drama, the predilections of these bodies in our democratic polity can result in negative as well as positive effects on the regulatory system. Consideration must be given to changing the administrative organization of the system, so as to maximize its effectiveness in implementing the legislation and programs that exist at a given time.

As a step in this direction, the problem of the Board's lack of administrative control over the Highway Patrol and the Bureau of Automotive Repair could be mitigated by transferring the inspection duties of the Highway Patrol to the statewide inspection stations suggested for operation by the Bureau of Automotive Repair. One less governmental body in the regulatory system would mean one less source through which administrative control may be diffused. This would help to define the accountability of administrators by reducing the role of the Business and Transportation Agency in the control system to the regulation of the relatively minor functions of the Department of Motor Vehicles of processing vehicle registration documents for compliance with emission-related regulations.

This comment has shown that in the exceedingly complex, uncertain, and constantly changing field of passenger vehicle air pollution control, problems of enforcement are inevitable. Having developed a sophisticated regulatory system, now is the time for California to focus upon that system's operational deficiencies. Hopefully, the suggestions presented here will aid in the process of improving this developing area of the law.

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167. Id.
168. See text accompanying notes 45-46 supra.
169. See text accompanying notes 157-63 supra.
170. See text accompanying notes 37, 42-43 supra.
171. Subsequent to the writing of this comment, a decision was made to discontinue the passenger vehicle inspection lane program of the Highway Patrol, effective July 1, 1975, in Northern California, and November 1, 1975, in Southern California (Los Angeles southward). This event strengthens the need for an effective system of mandatory vehicle inspection. Telephone interview with Officer Keith Chapman, Public Affairs Officer, California Highway Patrol, in San Francisco, Cal., Aug. 6, 1975.