REPORT OF THE

AIR POLLUTION CONTROL STUDY COMMISSION

TO

THE GOVERNOR

AND

THE GENERAL ASSEMBLY OF VIRGINIA

SENATE DOCUMENT NO. 25

COMMONWEALTH OF VIRGINIA
DIVISION OF PURCHASES AND SUPPLY
RICHMOND
1979

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Report of the

Air Pollution Control Study Commission

To

The Governor and the General Assembly of Virginia

Richmond, Virginia

February, 1979

To: Honorable John N. Dalton, Governor of Virginia

and

The General Assembly of Virginia

I. INTRODUCTION

In passing the Clean Air Act of 1970, Congress noted that the predominant part of the nation's population was centered in rapidly expanding metropolitan and other urban areas. The continuing urbanization of America, along with industrial development and increasing use of automobiles, had greatly increased the amount and complexity of air pollution. Increased air pollution endangered public health and welfare, including damage to agricultural crops, livestock, and property. Hazards to air and ground transportation also resulted from concentrated air contaminants.

Congress stated that the prevention and control of air pollution at its source was the primary responsibility of state and local governments, and that Federal financial assistance and leadership was essential for the development of cooperative Federal, state, regional, and local programs to prevent and control air pollution.

The Clean Air Act of 1970 was an attempt to protect and enhance the quality of national air resources for the public interest. The Act set forth requirements for air quality standards, emission limitations, motor vehicle emissions and fuel standards, and aircraft emissions.

National ambient air quality standards were designed to protect public health and welfare. Motor vehicle emission standards were established to assist in reducing pollution levels below ambient standards. These air quality standards and emission standards comprised the fundamental approach to air pollution control, with the basic mechanism for the application of this approach being the state implementation plan. The Clean Air Act Amendments of 1977 retained the basic approach and mechanism for air pollution control, while pushing back attainment deadlines and detailing appropriate control measures. Passage of the 1977 amendments necessitated action by the Virginia General Assembly and other state legislatures as well.

The General Assembly acted by creating the State Air Pollution Control Study Commission pursuant to Senate Joint Resolution No. 37.

SENATE JOINT RESOLUTION NO. 37

Creating the State Air Pollution Study Commission; allocation of funds.

WHEREAS, it is the declared policy of the Commonwealth to achieve and maintain such levels

of air quality as will protect human health, welfare and safety; and

WHEREAS, the State Air Pollution Control Board, working in conjunction with the Environmental Protection Agency pursuant to the provisions of the Clean Air Act, has been developing and implementing plans for the attainment of required air quality levels; and

WHEREAS, attainment of the required levels of air quality as mandated by federal law must be considered in proper perspective with promoting the economic and social development of the Commonwealth and the enjoyment of her attractions; and

WHEREAS, after July one, nineteen hundred seventy-nine, the Commonwealth will lose funds for highway construction and air pollution grants unless the Environmental Protection Agency approves Virginia's plan to correct air quality deficiencies in nonattainment areas; and

WHEREAS, other amendments to the Clean Air Act require strict transportation control efforts, increased penalties and permit changes; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the State Air Pollution Control Board is hereby requested to present to the General Assembly recommendations that will address the air quality attainment and maintenance problems on a broad scale State-wide basis as is required by the 1977 amendments to the Clean Air Act.

The study shall also include an analysis of the extent to which present laws, doctrines and policies may frustrate the implementation of a revised State implementation plan which would assure cost effective long term solutions to air pollution control problems in the Commonwealth. In formulating such recommendations, the Board shall identify the extent and nature of the air pollution control problem by areas of the State, and adopt an official position with respect to each problem pursuant to § 10-17.18 of the Code. The Board recommendations shall include any draft legislation required to accomplish each recommendation.

In carrying out the purposes specified in this resolution, a State Air Pollution Control Study Commission is hereby created to provide legislative guidance on any recommended legislation and to assist the Board in holding public hearings throughout the State in order to ensure maximum participation on the part of the local governments, industries, and the citizens of the Commonwealth.

The Commission shall be composed of eleven members appointed as follows: three shall be appointed by the Committee on Privileges and Elections of the Senate from the membership of the Senate; five shall be appointed by the Speaker of the House of Delegates from the membership of the House of Delegates; and the Governor shall appoint one member of the State Air Pollution Control Board and two persons from the State at large. The members of the Commission shall elect a Chairman and Vice-Chairman from the membership thereof. If a vacancy occurs for any reason, the appropriate above-named person or committee shall appoint a successor. All agencies of the Commonwealth shall assist the Board or Commission upon request.

All members of the Commission, other than full-time salaried State employees, shall be entitled to such compensation as is set forth in § 14.1-18 for each day or part thereof devoted to their duties as members of the Commission. In addition to such compensation, all members shall be reimbursed for the actual and necessary expenses incurred in the performance of Commission duties. There is hereby allocated from the contingent fund of the General Assembly a sum sufficient not to exceed fifteen thousand dollars for the purposes of the Commission.

The Commission shall conclude its study and make its report to the Governor and the General Assembly not later than December one, nineteen hundred seventy-eight, and shall set forth therein such measures as will promote the public interest and be conducive to the needs and well-being of the Commonwealth.

II. ORGANIZATION AND WORK OF THE COMMISSION

Members of the Commission are Senator Howard P. Anderson, Chairman, Halifax; Delegate Mary A. Marshall, Vice Chairman, Arlington; Mr. I. Russell Berkness, Richmond;Senator Elmo G. Cross, Jr., Hanover; Mr. Axel T. Mattson, Yorktown; Delegate Thomas W. Moss, Jr., Norfolk; Delegate D. Wayne

O'Bryan, Hanover; Delegate Richard L. Saslaw, Annandale; Delegate W. Ward Teel, Christiansburg; Senator Charles L. Waddell, Sterling; and Mr. Peter O. Ward, Jr., Lynchburg.

Throughout the summer, the Commission concentrated on vehicle emission control inspection and maintenance programs. Inspection/maintenance, hereafter referred to as I/M, is required by Section 172 of the Clean Air Act. The Commission established five criteria in considering an I/M program for Virginia: the cost to individual vehicle owners, consumer convenience and protection, the cost to the state, the effect on air quality and the environment, and the administration of the program. In addition to the meetings of the Commission, public meetings were held in Norfolk, Roanoke, Falls Church, and Richmond. The meetings were attended by private citiznes, representatives from industry, environmentalists, and others having special or general interests in the Clean Air Act. The Commission received comments on many aspects of the federal act, including: emission offset policy, the cost of automobile repairs under I/M, the cost and convenience of I/M, EPA tests and methods, alternatives to I/M, ozone precursors, economic impacts of the Clean Air Act, and I/M program possibilities. The Commission also prepared draft legislation on qualifications of members of the Air Pollution Control Board, and on the assessment and collection of noncompliance penalties.

Upon the request and invitation of the Environmental Protection Agency, the Commission studied I/M programs in general and designated a subcommittee to visit New Jersey and Arizona to specifically study the I/M programs operating in those states.

The Commission extends its appreciation to the staff of the Air Pollution Control Board for their assistance in conducting this study.

III. FINDINGS OF THE COMMISSION:

INSPECTION/MAINTENANCE

An I/M program is one method that can be utilized to aid in meeting National Ambient Air Quality Standards for mobile source related pollutants. I/M programs are composed of two basic functions, inspection and maintenance of the vehicle.

I/M programs do provide some definite advantages listed below over alternative strategies such as mass transit, parking control and car and van pooling.

1. I/M is less disruptive of today's lifestyle. Therefore, it is the method most easily accepted by the public for reducing motor vehicle related pollutants.

2. I/M programs tend to provide the incentive for the public to keep their vehicles better maintained and tuned, and in this respect supplement federal efforts to make auto manufacturers reduce auto emissions.

3. I/M programs are a deterrent to tampering with auto emission control systems. As of September, 1977, thirty states, including Virginia, had anti-tampering laws. These laws are ineffective without an I/M program. A tampering inspection incorporated into an I/M program would serve as a deterrent to tampering and put teeth into the existing laws.

4. I/M programs are presently in operation in various cities and states across the nation. Considerable data related to I/M program implementation and operation is available.

5. I/M programs have been successful in reducing motor vehicle related pollutants. In this respect it is a way for Air Quality Control Regions to implement a structure to aid in reaching the air quality standards requirement under Section 110 of the Clean Air Act. I/M programs result in better tuned cars which operate more efficiently and thus save energy.

There are two types of emission inspections, the idle mode and loaded mode test. The idle mode test is conducted while the vehicle is in neutral or park and the engine is idling. The basic loaded mode test samples the exhaust emissions with the vehicle in a forward drive gear simulating a driving condition.

There are five recognized approaches used to accomplish emissions inspections at the present time. These approaches are as follows:

1. Idle mode test conducted at state inspection stations.

2. Idle mode test conducted at inspection stations operated by a contractor to the state.

3. Idle mode test conducted at privately owned and operated new car dealerships, garages and service stations.

4. Loaded mode test conducted at state inspection stations.

5. Loaded mode test conducted at inspection stations operated by a contractor to the state.

These approaches can be administered and conducted at either a network of centralized inspection lanes or a network of certified private garages. A public authority can be delegated the responsibility of establishing the network of centralized inspection lanes, or a contractor can be commissioned to design, finance, construct and operate the program. The decentralized approach can be accomplished by licensing and/or certifying private garages, service stations and new car dealerships to operate the program utilizing their existing facilities. These facilities should be monitored by and accountable to a public authority which is responsible for the overall program administration.

A major benefit of I/M programs is that the average driver will be encouraged to practice preventive maintenance, thus improving the operating efficiency of his vehicle. An important side benefit is the possible fuel savings.

The success of an I/M program is heavily dependent upon the quality of the work provided by the automobile repair industry. Consumer concerns with the industry include the chance of being exploited and the frustation of being rejected during reinspection. It is important that maintenance services be convenient, be of reasonable cost and be of workmanlike quality. Programs to improve the quality and cost of the mechanic's work include:

1. Training of emissions inspectors.

2. Mechanic training and certification.

3. Repair facility certification.

In addition to the usual functions of program evaluation and supervision, there are three further areas requiring administrative efforts. They are public relations, consumer protection, and consumer convenience.

The function of a public relations program is to familiarize the public and the repair establishment with an I/M program. This includes the explanation of the purpose and objectives of the program, the program benefits, and the practical workings of the program. Under this latter category, the actual testing procedure should be explained. In addition, information regarding station locations, inspection times, and consumer protection measures should be made available.

A public relations program may take a variety of forms. Adverstisements, public service announcements on radio and television, and brochures have all proven to be useful.

Directors of current I/M programs recommend that a public relations program be started six months to a year before any mandatory testing is begun in order to allow vehicle owners to become accustomed to the concept of I/M. In Arizona such a program was not explained fully to the public until after the start of mandatory testing. As a consequence, the Arizona I/M program experienced considerable public opposition in its early stages.

Careful planning of a voluntary maintenance phase before the full mandatory maintenance phase can be very effective in terms of familiarizing the public with goals and procedures of the program. Public opposition can be unintentionally stimulated by having a very high failure rate in the voluntary phase or by having no voluntary phase at all. Voluntary phases have been used in a

number of programs, including New Jersey, Portland, Oregon and Arizona.

Provisions must be made to insure that vehicle owners are protected from abuses which could appear in the system (e.g., overcharging by repair shops and unnecessary repairs) just as care must be taken to avoid hardships in terms of extremely costly repairs or the denial of vehicle registration without due cause. One facet of the consumer protection program is the exemption of certain classes of vehicles, for example, new cars and antique vehciles. In addition, some areas have considered a ceiling on the cost of repairs required for compliance. The ceiling could be either a flat rate or a percentage of the market value of the vehicle. This would eliminate the potential for certain vehicle owners to experience undue financial hardships in retrofitting their vehicles to pass emissions inspections.

Finally, some kind of mechanism should be established to handle consumer complaints concerning overcharging and unnecessary repairs by garages as well as complaints about the program in general. One possibilitiy is a consumer affairs office which could also be responsible for the licensing of repair facilities. If too many complaints about any one repair facility are received, the consumer affairs office could investigate and revoke the license of the garage if the claims are justified.

An I/M program will be more readily accepted by vehicle owners if their inconvenience in terms of travel and waiting times is minimized. Ideally, the average distrance traveled by a vehicle owner to an inspection station is five miles, while a 10-mile travel distance is a reasonable objective as an upper limit. Proximity to local community activity centers is desirable in locating stations.

For a centralized test lane configuration, providing the option to retest at a private garage can reduce consumer travel and waiting time. A vehicle owner can have his car reinspected at the same facility that performs the repairs and eliminate a second trip to the station.

In addition to the inspection fee, those individuals whose vehicles do not meet the emissions standards will incur repair costs. The available data show that costs of the repair have been reasonable in those areas where I/M programs have been established. The actual number of vehicles requiring maintenance is determined by the stringency of the emissions standards established by the state. The improved fuel economy resulting from a well-maintained vehicle will minimize the costs incurred by motorists under an I/M program.

I/M Program Problem Areas

Problems Concerning Inspection

The inspection portion of an I/M program can be accomplished by a centralized inspection facility or a decentralized network of inspection facilities. The advantages and disadvantages of each are as follows:

Centralized Inspection

The centralized inspection consists of a number of contractor or state operated inspection facilities. The facilities are normally located in such a manner as to be readily accessible to a large number of motorists. The centralized inspections system offers the following advantages.

1. High level of quality control - procedures are specified and followed to insure uniformity of the inspection process.

2. Efficient data collection and handling - pre and post emissions data must be collected and analyzed before necessary adjustments can be made to a program.

3. Ease of monitoring - a small number of inspection facilities minimizes the time and effort required by the governing agency to complete required inspections of inspecting facilities.

Following are some of the disadvantages of centralized inspection:

1. Locations often not convenient to all people - a number of people will have to travel out of

their way to have vehicles inspected.

2. Long waiting lines - when a small number of inspection facilities are inspecting a large number of vehicles, long waiting lines may result.

Decentralized Inspections

Decentralized inspection is accomplished by private commercial garages. The decentralized inspection offers the following advantages:

1. Large number of inspection sites - greater convenience to the vehicle owner is offered because of the increased probability of an inspection facility being close to home or office.

2. The larger number of inspection sites are able to inspect a large number of vehicles without long waiting lines.

3. Convenience of repair - in addition to performing inspections, repairs and or adjustments are accomplished at the inspection site. This eliminates the need for a return trip to have a vehicle reinspected.

The following are some of the disadvantages of a decentralized inspection system:

1. Inconsistent quality - the inspection procedure will vary from garage to garage.

2. Increased licensing - a large number of repair facilities must be licensed to perform inspections. This also results in subsequent difficulties in inspecting the facilities for compliance.

3. Data handling and collection - the increased number of inspection stations and people involved increase the difficulty of accurate data collection.

4. Referee stations - decentralized inspection still requires a state operated referee station to handle complaints and problems that cannot be resolved at the private commercial garage.

NOTE: EPA stipulates that each licensed inspection facility be inspected at least once every 90 days. Unless these precautions are taken, the effectiveness of a decentralized I/M approach could be minimal.

At present 31 states and the District of Columbia require periodic safety inspection of registered vehicles. Given the widespread existence of safety inspection programs, the combination of safety and emissions inspection should be considered. Two alternatives for doing so exist.

1. Simply add emissions testing to the list of items to be inspected.

2. Create a new combined testing program of a form different from the existing safety inspection program.

However, the following factors should be considered in drawing a final conclusion:

1. Public reaction to the existing safety inspection program - if the public supports the safety program and feels it is equitable and efficiently administered it would appear that emissions testing could simply be added to the list of items to be inspected. However, if there is low public regard for the safety inspection program, the addition of emissions testing will likely be perceived as an added annoyance.

2. Commercial garage interest in the existing safety inspection program - commercial garage interest in the testing of vehicles must be considered. If service stations and garages exhibit no interest in performing emissions testing, then the choice of action is obvious. Where this group does have an interest in emissions testing, then the combining of safety and emissions testing (in areas having safety inspection done at private establishments) must be included in the list of proposed options.

One of the most commonly voiced fears concerning the I/M programs is that the cost of repairs

necessary to reduce emissions may in some instances be prohibitive. As a means of alleviating this problem, some have suggested the establishment of a price ceiling on repair costs. The ceiling, expressed as an absolute amount and/or a percentage of the book value of the vehicle, would exempt vehicles from having repair work done which exceeded the ceiling.

The cost of exempting certain vehicles from having emissions related repair work performed is the reduction in the overall effectiveness of the program. Given the relatively small percentage of major emissions related repair work, however, it would appear that little decrease in overall emissions reduction would result from the exemption of some vehicles. This is based upon the fact that in Oregon and Arizona only 2 percent of the tested vehicles cost more than $100 to repair. In New Jersey the figure is 5.6 percent. It would appear, therefore, that the gains in terms of public acceptance would tend to outweigh any decrease in emissions reduction resulting from the waiving of repair requirements for certain vehicles. Equally important, the administration of a dollar-limit exemption can be difficult. This difficulty may be alleviated by authorizing the administering agency to specify work that can be required to bring automobiles up to manufacturer's specifications.

NEW JERSEY INSPECTION/MAINTENANCE

The State of New Jersey has conducted safety inspections since 1938 and has had the system of emission inspections added onto the centralized state safety inspection system since July 1, 1972. The program is costly and needs a 10 million dollar per annum appropriation to operate. Emissions inspecting consists of state garage and roadside spot checks. Emission and safety inspections occur one time per year for a $2.50 fee. New Jersey charges $15.00, $22.00 and $46.50 for annual license renewals (registration), depending upon the weight of the vehicle, $2.50 of which pays for the vehicle inspection program. Therefore, no money changes hands at a State lane. One decal will satisfy both the safety and emission inspection. The $2.50 fee barely covers the State's costs in running the program. There are 39 state operated inspection stations in New Jersey with at least one station per county. New Jersey employs 600 full-time motor vehicle examiners and the inspection program costs the state $12,000,000 per year.

New Jersey also performs administrative functions, calibrates equipment and trains personnel. Such functions are performed by the New Jersey Department of Environmental Protection. The Department also provides school materials to mechanics and the Trenton laboratory has donated testing equipment to schools.

The emissions program began in 1972-73. Originally, the maintenance portion of the program was voluntary. In February, 1974, the program became mandatory. Tougher Phase II standards were instituted in 1975. Phase III is about to be put in effect. There is considerable public opposition to Phase III. The voluntary program was educational in nature and did little for air quality. However, it helped pave the way for mandatory testing and was considered successful. The service industry originally had balked at buying equipment without the surety of knowing the program would be a success and be mandatory in the future.

The State also has a reinspection program which can be conducted in either a private garage or at a state operated station. In 1974 New Jersey discovered the state operated stations were overcrowded and that the emission failure rate was rising. In order to relieve the overcrowded system, the State has licensed 4,700 private garages which have emission testers and trained inspectors. Private garages are not authorized to conduct an initial inspection, only safety and emission reinspections. This gives motorists an option. Nearly one-half the vehicles which fail the initial test will use private garages. There is a 25% failure rate for reinspections and an 18% failure rate for the initial test. It is expected that Phase III standards will raise the initial failure rate to 24%.

The emission testing equipment found in private garages is approved and calibrated by the Trenton laboratory of the New Jersey Department of Environmental Protection. The Division of Motor Vehicles employs 45 inspectors to spotcheck garages for calibration. Out-of-service stickers are attached to such equipment. The garages are also expected to retain customer bills which are subject to inspection for consumer fraud. If an inspector discovers a pattern of high billings (the average cost should be $16-30), evidence will be developed for a hearing and possible prosecution. Garages must be checked at least once monthly.

New Jersey does not set a maximum fee for a reinspection. Private garages are authorized to charge an hourly rate (normally $4.50) plus $1.00 for a sticker. If work is performed at the garage, there is no charge for the testing. Nothing special is done for the private garage owners to cover equipment costs (e.g., tax breaks, etc.). Statistics demonstrate the great economic advantages for private garages operating within the system. Also, many private garages had the emission equipment for tuneups and diagnostic work prior to the commencement of the State program.

All cars failing the initial test have 30 days to be reinspected. Although no limit has been placed on the amount of money a motorist must spend to meet emission standards, New Jersey will grant waivers on a case by-case basis. This no-limit policy can present an economic burden to poor persons who often own older vehicles. It was discovered that 11% of all vehicles in New Jersey are pre-1968 vintage. Attrition is reducing the number of such cars. New Jersey personnel recommended that older vehicles be exempted from emission standards (i.e., pre-1968 vehicles). Also, vehicles under two years of age are exempted in New Jersey (except if the car is traded in).

New Jersey has a high overall (safety and emission) initial testing failure rate of 45%. The emissions only rate is 18%. The New Jersey emission standards are based on control group model years (e.g., pre-1968, 1968-70, etc.). 1980 is scheduled as the most stringent standard.

New Jersey also conducts unannounced roadside spot-checks on gasoline powered commercial vehicles (6000 lbs. and over) and at fleet centers (weighing stations) for safety and emission violations. Out-of-State violators are fined $25.00 to $100.00 for a violation, such fine not violating interstate commerce prohibitions on states (condition of using the New Jersey system). 40,000 trucks are inspected annually. New Jersey obtains approximately 20,000 - 25,000 truck violations with a 50% failure rate. It was emphasized that trucks should be included in the inspections since motorists perceive trucks as a much larger air pollution problem than their own vehicles.

Much evidence exists that New Jersey citizens now accept the safety and emissions inspection program, despite some grumbling. Waiting times for the average motorist is now eight minutes. Carbon monoxide levels have been declining 7.9% annually in New Jersey as opposed to the national 5% rate, with very little change in ambient hydrocarbon levels. Vehicles are only one of many sources of ambient hydrocarbons which lead to the formation of oxidants. Fifty per cent of New Jersey's hydrocarbon emissons are estimated to come from stationary sources. Also, weather patterns seem to make hydrocarbons travel northward. Connecticut has the highest oxidant levels in the country except for California. In order to reduce the oxidant levels, neighboring states will have to adopt similar standards.

It is estimated that eight to ten percent gasoline can be saved through appropriate engine adjustment. Energy conservation is a national goal and I/M has been accepted by the Federal government as a useful tool in energy savings.

The cost of the testing equipment can vary from around $1,500.00 to $17,000.00. Many different authorized types are available. The most popular type of equipment in New Jersey private garages appears to be the Sun tester ($2,200.00).

ARIZONA INSPECTION/MAINTENANCE

The 1969 Arizona Clean Air Act required the Arizona Department of Health Services to establish emission standards for all sources. No enforcement procedure was established. In 1972 Arizona went farther by establishing a simple form of vehicular emission I/M in Maricopa (Phoenix) and Pima (Tuscon) counties. It was patterned after the New Jersey approach and also required testing of all government vehicles located in the two counties.

In 1975, voluntary I/M testing was instituted in Maricopa County and Pima County, the two Arizona counties having the worst air pollution problems. It was decided that private industry (contractor approach) would be the most proper and least costly course to take. The first year of the new program featured required inspections but no required maintenance. 1976 was the first year of total mandatory I/M and was marked by a considerable degree of public animosity. Maintenance became mandatory in January, 1977.

The official Arizona Vehicular Emissions Inspections network comprises twelve fixed inspection

stations and one mobile test unit. There are six multi-lane test stations in the Phoenix metropolitan area and three multi-lane stations in Tucson. Single-lane stations are located in Wickenburg, Buckeye, and Ajo. The mobile test unit services Gila Bend and Green Valley. There is a total of 36 test lanes.

In 1977, 1,089,781 vehicles were tested in the contractor-operated network of which 140,524 were free retests. The average waiting time ranged from 10 to 20 minutes depending on the station. Waiting times were as long as two hours during both daytime and evening test hours in Phoenix. However, the maximum waiting times in Tucson were one hour during the evening test hours and 30 minutes during the day. As the public became familiar with the program, the waiting-time problem became less significant.

The essentials of the program consist of vehicular emission inspections performed by a private contractor, Hamilton Test Systems, Inc., for a $5.00 fee. Limitations were placed on the amount of repairs required if a car failed the initial inspection (limits of $25.00 for pre-1968 cars and $75.00 for 1968 on). The first reinspection is performed free of charge. Emission standards are graduated according to car make and year. Out of every $5.00 fee, Hamilton receives $4.66 and Arizona receives .34 for administrative costs. Vehicles cannot be registered without proof of passing the inspection. Besides annual registration, vehicles must also be inspected at title changes. Hamilton's contract expires in 1980.

An Arizona study commission has been formed to evaluate and investigate the present program. It is generally acknowledged that I/M is one of the most controversial issues to arise in Arizona in years. A repeal proposition was placed on the November, 1976 referendum ballot but did not pass. There is evidence now showing increased public acceptance.

There are several advantages to the Arizona-style contractor system:

1. The private contractor system is more responsive and less bureaucratic than a state operated system. Hamilton got the system in operation very quickly (awarded contract in November, 1974; system operating by January 1, 1976).

2. The contractor system provides for better employee control. Dismissals are easier. New jobs are created in the private sector.

3. Contractors are forbidden to be in the repair business.

4. A state assumes no liability. The contractor makes the investment.

5. The contractor system limits bureaucracy. Arizona administers the program with 25 employees.

6. Private contractors pay taxes. There is no need for state appropriations. Fees pay the contractor's costs and state administrative costs.

7. The general public is assumed to have more confidence in the independent contractor.

8. Most of the program's financing, all services for civil and architectural engineering, and numerous other services were obtained in Arizona.

There are disadvantages to the contractor approach:

1. Operations are limited to the scope and terms of the contract.

2. Often the State is not informed of problems. This places too much reliance on the contractor to inform the State when problems exist.

3. Sometimes contractors can cause adverse public sentiment by such practices as hiring out-of-state employees.

It was suggested that I/M cannot be performed as efficiently by private garages as by contractors. It was stated that emissions testing equipment was complicated to understand. When the contractor approach was first initiated, garages were opposed to it. Now, garages support the

program due to the increases in repair work. The Arizona Department of Health Services regularly conducts mechanics seminars. A majority of repairs are performed by the automobile service industry. Substantial improvements in failure rates may be obtained by concentrating on mechanic training and upgrading. It was felt that the main benefit of the contractor approach over the garage approach was the separation of the inspecting and repair functions, thus eliminating conflicts of interest problems. Also, the contractors have easier access to superior technology and equipment. The major disadvantage of the contractor approach is that there are fewer locations available for auto inspections.

Arizona has had no safety program since 1966. The public reacted adversely to it, apparently due to abuses by the private garages.

As stated before, reinspections are performed within 60 days after initial failure by the contractor for no charge. There is a high rate of 27% for reinspection failures. Only 16% fail the initial test. Arizona almost automatically grants waivers for reinspection failures provided the driver shows that he at least got an engine tuneup or other small repairs and has met the upper repair cost limits. The average repair bill in Arizona was found to be $23.00. Statistics show that nearly 99% of inspected vehicles could be in compliance with state emission standards at reasonable costs. Operators of vehicles receiving waivers are invited to bring their vehicles to state facilities for diagnostic treatment.

All Arizona vehicles are required to be inspected. The inspection is annual. As a consumer aid, Arizona law requires dealers to have all used cars inspected before they can be licensed in a new owner's name. New cars are not inspected until they are one year old. Model years 1964 and older are exempted.

Registered owners and licensed automobile dealers with 25 or more vehicles may inspect their own vehicles provided they meet certain requirements. Three hundred twenty-two fleet station permits were in effect at the end of 1977. These fleet emissions inspection stations performed over 100,000 inspections of vehicles in 1977. About 93 percent of the Inspections were performed by licensed dealers on resale vehicles prior to sale. The remaining 7 percent of the inspections were performed by fleets for annual registration.

Approximately 16,000 governmental vehicles must be inspected every year. These vehicles are inspected at fleet inspection stations operated by the governmental entity, at either the Phoenix or Tucson stations operated by the Bureau of Vehicular Emissions Inspection, or on site at the governmental entity using the Bureau operated mobile test unit. Bureau personnel inspected 2327 government vehicles in 1977. Federal agencies inspected their own vehicles at their fleet stations, meeting standards established by the Bureau.

Representatives from Hamilton suggested that Arizona received a number of benefits from its contract. Hamilton pays $350,000.00 in property taxes annually. It has a $2 million dollar payroll. It has $5 million in land/construction expenditures. Nearly all employees are Arizonans. The average travel to a Hamilton station is less than 5 miles. Carbon monoxide emissions at idle are now down 23% and hydrocarbon emissions at idle are down 39%. There are 250 tons a day less pollutants in the air and fuel savings amount to 30-35 million gallons a year.

The capital costs to Arizona consisted of only a $133,000 one-time appropriation by the State. Hamilton's contract amounted to nearly $9,000,000.00.

Arizona officials suggested that I/M requires a great deal of public participation and education. Hamilton has embarked upon a comprehensive public relations and education program utilizing such tools as toll-free information lines, educational brochures, a speaker's bureau, and press and legislative liaison services. It has been projected that Arizona will be in compliance with federal carbon monoxide standards in 1982 and oxidants standards by 1985. Arizona officials estimate that I/M will reduce air pollution by more than 20%.

IV. OTHER AREAS OF CONCERN

While concentrating on the I/M program requirements of the Clean Air Act Amendments, the Commission recognizes that the Amendments will have other social and economic impacts on the

citizens of the Commonwealth. Time has not permitted analysis of these other areas of concern. Among these concerns are economic, demographic, and governmental issues which may need to be addressed in the future. These issues include, but are not limited to: transportation control measures, the role of metropolitan and other planning organizations, industrial location and growth, population redistribution if industry locates outside urban areas, consumer costs, the possibility of tax base decline in urban areas, changing employment patterns, land use planning, federal-state and local-state relations, and the coordination of Virginia air pollution control activities with those of neighboring staes. In addition, the Commission desires to provide legislative input to the Air Pollution Control Board in conducting for the financial analyses and developing an implementation plan suitable for the Commonwealth.

V. RECOMMENDATIONS

The Commission was informed that the U. S. Environmental Protection Agency (EPA) might grant a one-year extension of the deadline for state I/M legislative action. The Commission felt that the time extension (from June 30, 1979 to June 30, 1980) would allow for the necessary further study of I/M program alternatives for Virginia, and asked Governor Dalton to formally request the extension.

E.P.A.'s response to the Governor's letter praised the efforts of the Study Commission and noted the progress made by the Commonwealth in meeting the requirements of the Clean Air Act. It was also noted, however, that it would be "premature and legally inappropriate to grant an executive branch request for an extension before the co-equal legislative branch is also able to address the issue in 1979." Thus E.P.A. rejected the request for an extension "at this time." E.P.A. recognized that the legislature will not have an opportunity to consider the enabling legislation during this session, and felt that the adoption of a joint resolution confirming the committment to consider such legislation during the next legislative session would be "appropriate."

Until such time as the state is able to comply with all applicable standards of the Clean Air Act, the Commission should continue to provide legislative guidance to the State Air Pollution Control Board while assuring maximum participation on the part of local governments, industries, and citizens of the Commonwealth. It is thus recommended that the State Air Pollution Control Study Commission be continued (see Appendix B).

The Commission also recommends the adoption of legislation relating to qualifications of members of the State Air Pollution Control Board, and for the assessment and collection of noncompliance penalties. Legislation to achieve such purposes has been introduced by members of the Commission during the 1979 Session of the General Assembly. At the time of the printing of this report, such legislation has taken the form presented in Appendix A.

Respectfully submitted,

Howard P. Anderson, Chairman

Mary A. Marshall, Vice Chairman

I. Russell Berkness

Elmo G. Cross, Jr.

Axel T. Mattson

Thomas W. Moss, Jr.

D. Wayne O'Bryan

Richard L. Saslaw

W. Ward Teel

Charles L. Waddell

Peter O. Ward

APPENDIX A

A BILL to amend and reenact § 10-17.12 of the Code of Virginia, relating to qualifications of members of the Air Pollution Control Board.

Be it enacted by the General Assembly of Virginia:

1. That § 10-17.12 of the Code of Virginia is amended and reenacted as follows:

§ 10-17.12. Qualifications of members of Board.–The members of the Board shall have the following qualifications: They shall be citizens of the State; they shall be selected from the State at large for merit without regard to political affiliation; the Governor in his appointments shall select persons for their ability and all appointments shall be of such nature as to aid the work of the Board to inspire the highest degree of cooperation and confidence. No officer, employee or representative of any industry, county, city or town which may become subject to the rules and regulations of the Board shall be appointed to the Board. *The provisions of this section shall be in addition to the requirements of the Virginia Conflict of Interests Act (§ 2.1-347 et seq.).*

A BILL to amend the Code of Virginia by adding a section numbered 10-17.18:3, relating to the determination, assessment and collection of noncompliance penalties.

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding a section numbered 10-17.18:3 as follows:

§ 10-17.18:3 Noncompliance penalties; judicial review.—A. The Board is authorized to promulgate regulations providing for the determination of a formula for the basis of the amount of any noncompliance penalty [*to be*] *assessed by a court pursuant to subsection B. hereof, in conformance with the requirements of Section 120 of the* [*federal*] *Clean Air Act, as amended, and any regulations promulgated thereunder. Any regulations promulgated pursuant to this section shall be in accordance with the provisions of the Administrative Process Act (§ 9-6.14:1 et seq.).*

B. Upon a determination of the amount by the Board, the Board shall petition the circuit court of the county or city wherein the owner subject to such noncompliance assessment resides, regularly or systematically conducts affairs or business activities, or where such owner's property affected by the administrative action is located for an order requiring payment of a noncompliance penalty in such sum as the court shall deem appropriate.

C. [~~*Upon assessment of a noncompliance penalty in a final order by a circuit court pursuant to subsection B. hereof, the Board shall file a copy of the order in the circuit courts of all cities and counties wherein the owner subject to the order owns any real estate.*~~] *Any order issued by a court pursuant to this section may be enforced as a judgment of the court. All sums collected, less the costs of assessing and collecting same, shall be paid into the General Fund of the State Treasury by the Board pursuant to such court order.*

D. Any penalty assessed under this section shall be in addition to permits, fees, orders, payments, sanctions, or other requirements under this chapter, and shall in no way affect any civil or criminal enforcement proceedings brought under other provisions of this chapter.

APPENDIX B

SENATE JOINT RESOLUTION NO. 118

Continuing the Air Pollution Control Study Commission; allocation of funds.

WHEREAS, the Clean Air Act and its 1977 amendments require strict State compliance in order to attain required air quality levels; and

WHEREAS, attainment of the required levels of air quality as mandated by federal law must be considered in proper perspective with promoting the economic and social development of the Commonwealth and the enjoyment of her attractions; and

WHEREAS, failure by any State to comply with the federal standards may result in such penalties as the loss of federal highways and sewage construction funds and the inability to permit new industries in nonattainment areas; and

WHEREAS, the Commonwealth has responded to the challenge posed by the Clean Air Act by creating the State Air Pollution Control Study Commission pursuant to Senate Joint Resolution No. 37 in nineteen hundred seventy-eight; and

WHEREAS, the Commission has collaborated with the Executive Branch in technical analyses to determine the best methods for implementation; and

WHEREAS, the Commission, working in conjunction with the State Air Pollution Control Board, presented recommendations to the 1979 Session of the Virginia General Assembly which addressed Virginia's air quality attainment and maintenance problems on a broad scale Statewide basis; and

WHEREAS, the Commission has acquired much knowledge about the different types of inspection and maintenance systems; and

WHEREAS, there is still much uncertainty about the degree of control required since the Environmental Protection Agency is considering a revision to the oxidant standard; and

WHEREAS, the Commission has considered the complex issues involved but has not had sufficient opportunity to conduct all of the necessary technical analyses required; and

WHEREAS, in a short session of the General Assembly, there is insufficient opportunity to consider all of the environmental and economic aspects of such a major program, with resulting impacts on State financial resources; and

WHEREAS, the Commonwealth of Virginia intends to comply fully with the Clean Air Act as amended; and

WHEREAS, the Commission has labored diligently and with great success at little cost to the Commonwealth; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the State Air Pollution Control Study Commission is hereby continued. The Commission shall continue to provide legislative guidance in air quality matters to the Air Pollution Control Board and shall provide such assistance as it deems necessary to the Board in the conduct of continuing and further technical analyses and development of an appropriate inspection and maintenance plan while ensuring maximum participation on the part of the local governments, industries and citizens of the Commonwealth.

The present eleven members shall continue to serve on the Commission. If a vacancy occurs for any reason, successors shall be appointed by the appropriate person or committee pursuant to the method of appointment specified in Senate Joint Resolution No. 37 of the nineteen hundred seventy-eight General Assembly. All agencies of the Commonwealth shall assist the Board or Commission upon request.

All members of the Commission, other than full-time salaried State employees, shall be entitled to such compensation as is set forth in § 14.1-18 for each day or part thereof devoted to their duties as members of the Commission. In addition to such compensation, all members shall be reimbursed for the actual and necessary expenses incurred in the performance of Commission duties. For such other expenses as may be required, the balance of the funds previously allocated to the Commission from the contingent fund of the General Assembly are hereby reallocated for the purposes of this study

The Commission shall conclude its study and make its report, including recommended legislation, to the Governor and the General Assembly not later than December one, nineteen hundred seventy-nine, and shall set forth therein such measures as are required for consideration by the nineteen hundred eighty General Assembly and which will promote the public interest and be conducive to the needs and well-being of the Commonwealth.