

MINUTES

ENVIRONMENT AND PUBLIC RESOURCES COMMITTEE
March 24, 1977

Members Present: Chairman Moody
Mr. Coulter
Mr. Chaney
Mr. Kissam
Mr. Polish
Mr. Ross
Mr. Serpa
Mr. Rhoads

Members Absent: Mr. Jeffrey

Guests Present: Carl Chaplin, W.N.C.C.
T. C. Fawcett, Cpl., U.S.M.C. Ret.
Glen Griffith, Nevada Fish & Game Department
Bill Parsons, Nevada Fish & Game Department
Fred Wright, Nevada Fish & Game Department
Senator Bill Hernstadt
Jim Hannah, Environmental Protection Service
John Holmes
Stan Warren, Nevada Bell
Tom Benedict, W.N.C.C.
Daryl Capurro, Nevada Franchised Auto
Dealers Association
Karen Smith
Dan Stone, Hamilton Test Systems
Larry Taylor, Hamilton Test Systems
Robert C. Alexander, Hamilton Test Systems
Daisy Talvitie, League of Women Voters
Tom Ballow, Environmental Commission
Wink Richards, Motor Carrier
John Ciardelli, Department of Motor Vehicles
Howard Hill, Department of Motor Vehicles
Dick Serdoz, Human Resources, Air Quality
Don Arkell, Clark County Health District
Matt Feiertag, A.G., Environmental Protection
Service
Assemblyman Jim Schofield
Virgil Anderson, A.A.A.

The meeting was called to order by Chairman Moody. He stated that the first order of business was A.J.R. 35. He asked Mr. Rhoads, who had introduced the Resolution, for his testimony in favor of A.J.R. 35.

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ASSEMBLY JOINT RESOLUTION 35 - Urges Congress to transfer Ruby Lake Wildlife Refuge from national to state jurisdiction.

Assemblyman Dean Rhoads explained that this is a resolution memorializing Congress to turn over the jurisdiction of the Ruby Lake Marshes, partly located in Elko County and partly in White Pine County in Northeastern Nevada to the state. This particular area was set aside around 30 years ago as a joint venture between the federal government with the cooperation of the State of Nevada. At that time, it was used for a duck nesting ground for the birds on their way to Mexico and then back up north. Since that time, it has become an excellent bass fishing area and outstanding boating area. During the past few years, the U. S. Fish and Wildlife has placed severe restrictions on the area and they have cut down on the multiple use concept of the water, and beginning in 1978 the boating restrictions will be so strict that the multiple use concept is going to be practically eliminated. The people in Elko and White Pine Counties, and people in other parts of the state and out of the state, feel that it would be better to turn over the jurisdiction of the Ruby Marshes to the State of Nevada if the U. S. Fish and Wildlife will not back up and try to get along with us. There have been several meetings with the U. S. Fish and Wildlife as recently as two weeks ago, and they indicated that they had their minds made up and would not back down. There was a meeting with the Governor regarding this problem and we are going to try to negotiate in every possible way before going this route of the Resolution, but they want to have it on the books in case we do have to go through the courts.

Mr. Moody asked Mr. Rhoads if the Governor is in favor of this measure. Mr. Rhoads answered that the Governor said that if actions that he is currently involved in are not successful, he feels that this is the route we should take, and Mr. Rhoads feels sure that funds will be provided, as it will cost money.

Testimony was concluded on A.J.R. 35.

Chairman Moody called for testimony in favor of A.B. 464, which was introduced by Assemblyman Schofield.

ASSEMBLY BILL 464 - Requires certificate of emission control compliance before motor vehicle is registered.

Assemblyman James Schofield explained that the intent of A.B. 464 is to try to solve the problem of the auto emission effect on air pollution. The bill was drafted initially for the total state, however, Mr. Schofield has prepared a preliminary amendment which would limit this bill to counties having a population of 100,000 or more, which would now be Clark and Washoe Counties. He asked some people from the Hamilton Test Systems, who are handling the Arizona testing program, to present a slide program on how it is being handled in Arizona since their problems are similar to ours.. He stated that there has been some protest

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over the \$5.00 fee from service station and garage owners who might handle the inspections, as \$2.00 of that fee would be paid to the state to acquire the inspection certificate and would leave only \$3.00 for the operator. A copy of the proposed amendments to the bill is attached hereto and marked Exhibit A. Mr. Schofield read from a letter which had been mistakenly addressed to his brother, Senator Jack Schofield. He read paragraph three regarding the fact that 85 to 90 percent of the pollution is being derived from motor vehicle exhausts. A copy of this letter is attached hereto and marked Exhibit B. He asked Don Arkell to give testimony regarding this bill.

Don Arkell, Director of the Air Pollution Control Division, Clark County Health District, Las Vegas, testified that they have observed, over the past winter in particular, an increasing amount of air pollution in the Las Vegas Valley. There were three periods of time last year during which alerts were called, two in November and one in December. During the period of November 2 - 4, 1976, the concentrations of carbon monoxide exceeded the level at which health is adversely affected. Advisories were issued over radio, television and newspapers warning people that they should take precautions against activities that would increase respiratory or cardiac problems. They requested, at that stage, a voluntary curtailment of unnecessary motor vehicle trips. The second period occurred December 4 - 5, 1976. The same actions were taken. At that time, they got some feedback from physicians in the area regarding increased incidents of patients coming in with respiratory or other ailments caused by the pollution. The third period occurred over Christmas when it is difficult to curtail vehicle travel. During November and December, there was about 60 percent of the days during which the first advisory stage was exceeded. This means to them that despite the federal exhaust pollution requirements on new motor vehicles, there has to be some followup method. It is not enough to rely entirely on the federal motor vehicle emission control program to clean up the exhaust emissions from motor vehicles in urban areas. Recent studies conducted by the E.P.A. indicate that previously projected deterioration rates on emission control systems are far greater than they had been anticipated initially. They think a system of inspection and maintenance is the best way to go about control. Under this system, vehicles which are high emitters are identified to the owner and enforcement agency. There is assurance that the federal emission control systems that are required on motor vehicles are on and operating. A side benefit is increased vehicle mileage and performance. They are working on specific amendments and will work with Mr. Schofield on them and they should be available by March 31. Attached hereto, and marked Exhibit C, is a copy of a memorandum submitted by Mr. Arkell, and a copy of The Evaluation of Nevada

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Inspection/Maintenance Program, Executive Summary, which is referred to at the bottom of the second page of the memorandum

Mr. Schofield introduced Bob Alexander, Larry Taylor and Dan Stone of the Hamilton Test Systems from Arizona and California and said that they would give a slide presentation on how this problem has been handled in Arizona. Mr. Stone, from Phoenix, is Manager of Western Operations for Hamilton Test Systems, which is responsible for operating the Arizona program. The slide program dealt with the subject of emission inspection and maintenance. Arizona used the inspection option of the motor vehicle inspection contractor. Hamilton does the Arizona inspections, the U.S. Postal Service inspections, and inspections for the U.S. Army, National Highway Traffic Safety Administration for the State of California and for many manufacturers. In Arizona the repair industry was against being given inspection responsibilities. They preferred to just deal in the adjustment and maintenance business and leave the testing to someone else. There is much sophisticated equipment necessary for uniformity of testing. With the state or contractor operated system, the control over quality is considerably easier. California is now accepting bids from contractors and their statutes prohibit the inspection contractor from being in the repair business. In Arizona, the law authorizing the annual inspection program was passed in 1974 and became effective January 1, 1976. They had one year of voluntary repair but mandatory maintenance. Beginning this January, they have mandatory repair and mandatory inspection. Arizona decided to contract after surveying and determining that there were several companies that were interested in supplying the service to the state. They appropriated \$132,000 to conduct the competition, write specifications and provide surveillance of the contractor during the first year of the setup. The contractor invested eight to nine million dollars in an inspection network. The main advantages were the schedule, with the lack of the need for major appropriations to begin the program, with very positive economic impact and convenience factors, all of which were considered very carefully. In Arizona, they have a total of nine large stations and three small stations plus mobile test unit capability to serve some of the outlying districts, with a total of thirty-five fixed lanes. They design the operation on a three to four acre area with easy ingress and egress. In economic summary, the program, being a private operation, hires many employees for construction of the stations, purchases equipment, and hires employees to operate the stations. It does pay taxes and is not a governmental operation. The advantages of the contractor approach are: The lack of appropriations, the addition of non-governmental jobs, the network does pay property taxes, the schedule is compressed quite significantly, and it is extremely easy for the state to monitor the quality of the operation.

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They then showed another slide show regarding the public information and education program. This showed the public the causes and effects of air pollution and the reasons for the control program and the effects on health and environment. It explained the systems for inspection and the costs incurred. It explained the health hazards of pollution, and explained how much pollutants will be removed by the control program.

Senator Bill Hernstadt commended Assemblyman Schofield for an excellent piece of legislation. He said that he has a similar bill in the Senate, S.B. 332, which he does not feel is as good as Mr. Schofield's bill, so he is supporting A.B. 464. He stated that, according to E.P.A. figures, 90 percent of the pollutant problems in the Las Vegas, Clark County area are from auto emissions. He believes in the private enterprise system and would recommend that the inspections be left in the hands of private garages, even though there is the criticism that private garages may write themselves repair order tickets for work or will not comply fully with the law and issue some certificates when, in fact, the vehicle does not comply. He doesn't think this would be a significant problem. He feels that this would eliminate some of the lines at the end of a registration period if you could take the vehicle to your own repair center. You could also have the vehicle repaired at the same time of inspection instead of going to two different places. He urged the committee to consider tailpipe standards to be established by the Commission rather than checking every mechanical gadget, as sometimes altered cars have lower pollution rates than ones with all the gadgets. Also, the standards should take into account altitude. Vehicles tuned to manufactureres specifications are usually set for sea level and they cannot pass inspection at various altitudes. He said all public vehicles should set the standards and examples for the rest of the population and inspection should cover all of them. Fleets have a particular problem as their licenses usually expire at the same time and some fleets would like the right to be self certified. If this is done, there should be a provision for spot checking by the state agency to assure compliance. He believes that this bill should be limited to counties of 100,000 or more, but would also suggest that areas covered by bi-state compacts be covered to take care of cars registered in the Tahoe Basin, which has a pollution problem. That would overlap two counties, but would only cover those living at the top of the hill. Finally, he suggested that he doesn't want more federal intervention in the affairs of our state, but to keep this from coming about, we have to have responsible state action. Something will have to be done before the situation gets to the stage where cars must be banned from the road during the alerts, which would adversely affect the economy of the state.

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Dick Serdoz, Department of Human Resources, State Air Quality Officer for the State of Nevada, presented a prepared statement, a copy of which is attached hereto and marked Exhibit D. The justifications for his statements are contained in the charts and graphs submitted with the statement and which are part of the exhibit.

Mr. Polish asked how much pollution the catalytic converters remove from emissions. Initially, according to Mr. Serdoz, it removes 90-95 percent, dropping down to about 75 percent after a five year period. Mr. Polish asked why converters are not put on larger vehicles. Mr. Serdoz said mainly they are not put on because the percentage of those vehicles is so low. In this state, passenger vehicles far outnumber heavier vehicles.

Vice Chairman Coulter called for testimony in opposition to A.B. 464.

Daryl Capurro, representing the Nevada Franchised Automobile Dealers Association, testified that he was not really in opposition to the bill per se, but had some thoughts to offer. When the Environmental Protection Agency was first formed, they promulgated a proposed regulation for California regarding a transportation plan and an emission control system that, when broken down and analyzed by the head of the California Air Resources Board, indicated that you would have to remove the entire population of the Los Angeles Basin, and they would still not meet the standards. On the first page of the bill he also suggested that systems be removed and that it revert back to the transportation controls standards inspection testing program. Otherwise, it would be unnecessarily restrictive. On Page 2, regarding the distinction between light and heavy duty vehicles, there are no established standards for heavy duty vehicles over 6,000 pounds. There are no federal guidelines for those standards. On Page 2, Line 39, he feels that this should be restricted to used motor vehicles as new ones would have to get a certification for registration and that is not necessary as they are already certified to federal standards upon sale. It should be required only upon renewal of registration. Vehicles operating through Nevada and not based here, under the apportionment act should not have to be certified as they are already registered in the State of Nevada and covered under federal laws and certified that way. This is referred to in Line 36, Page 2. He feels that there should not be a set fee of \$5.00 for inspection, as the current language contained in the bill provides some restrictions to the cost that can be charged for inspections and the private competitive system takes care of the situation. We should not be writing flat charges into the law. He is concerned with the pollution and current inspection system, so agrees that some changes have to be made. He feels that tying the certification process to

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the registration scheme could create problems with the mailin renewal on the staggered registration system. This system should not be jeopardized. He proposed providing for an extension of the private garage system like they now have in Clark County to an annual inspection scheme for Washoe County between now and the next session of the legislature, because the machinery is already set up in Clark County and we already know how to handle this system, and see how it works.

Stan Warren of Nevada Bell testified regarding fleet operations. They have 550 vehicles and have chosen to register vehicles annually in one county with redistribution of the costs so that each county gets its fair share. He asked that if the bill passes, a fleet carrier who qualifies be allowed to check vehicles sometime during the year so they won't have to have all emission checks in the short time prior to registration of the vehicles. He is not opposed to the legislation but would like the fleet clause put in. He left a copy of an amendment which he would like to see added which is attached hereto and marked Exhibit E.

Virgil Anderson, representing A.A.A., agreed with Mr. Capurro's suggestion for a limited program in Nevada. He said that California does not have a full on-going inspection program for emission control. There is a test program going on in Riverside County. This issue is still controversial in California and has not been resolved yet. Regarding Senator Hernstadt's suggestion of including the bi-state area of Douglas County and Carson City areas, he suggested that it would not be desirable to impose that burden on this area at the present time, as there is no inspection station on the California side of the border. He feels that 90 percent of the cars at Tahoe on weekends are California cars.

John Holmes, representing himself, stated that he would hope that we would look to tailpipe checks rather than equipment. If there are few pollutants coming out of the tailpipe, it doesn't matter what is under the hood. He also agreed with previous testimony about the altitude problems of inspection. He commented on the extremely expensive equipment needed to test for emissions and that would be a very expensive bill for the taxpayers. He also agreed that this should be only in the counties of 100,000 population or more. He doesn't feel that \$5.00 would anywhere near cover the cost of the inspection for a private operator. It is not clear to him whether the fleet operator of less than 25 vehicles would have to pay the \$50.00 for a set of forms. He hopes that the legislation would allow personal work to be done on an individual's car and that he would not be required to take it to a mechanic if he is capable of doing his own work.

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Daisy Talvitie, President, League of Women Voters of Nevada, testified that she has been working with Mr. Schofield on some definite amendments which will be brought in at the next hearing. She believes that the inspection should relate to what is coming out of the tailpipe and inspections should be limited to counties with more than 100,000 population; that the inspection should be taken out of the private garage and serious consideration be given to the method of the private contractor, and that is still private enterprise and the fee collected is adequate to reimburse the state for its cost in supervising this system of inspection. There can be more consistency in data and testing by the private contractor system and more public confidence in it because there is no conflict of interest.

Mr. Polish asked the experts in the audience about the results of checking tailpipes of diesel motors. Mr. Serdoz said that at present only gasoline powered vehicles are being tested. However, diesel power is less polluting. Mr. Polish suggested that we go to diesel then. Mr. Capurro said that the carbon monoxide levels of diesel are lower but the "noxide" is higher and the manufacturers are having problems in bringing that down.

Mrs. Talvitie said that Nevada has some of the worst meteorological conditions in the country affecting air pollution. Reno is potentially one of the worst spots in the country.

John Ciardelli of the Department of Motor Vehicles said that the current emission control program is within their division. The Department of Motor Vehicles is governed by the rules and regulations set by the State Environmental Commission. They are inspecting around 4500 vehicles a month now. If the program were brought to an annual inspection they would need 180 more stations in Clark County. At the present time they have 122 there. Reno would take 90 stations. They would need eight months lead-in time to get stations authorized, mechanics tested and to hire people. Now the inspections run between \$12.00 and \$14.00, and with that the vehicle gets a minor tuneup to manufacturer's specifications. Most of the inspection stations feel that they cannot handle the inspections for only \$5.00. They feel that there should be a \$10.00 minimum including the \$2.00 certification. For new vehicles he believes the seller should provide the certificate of compliance, and possibly also the seller of a used vehicle.

The meeting was adjourned by Vice Chairman Coulter.

Respectfully submitted,


Ruth Olguin

Assembly on Environment and Public Resources

ASSEMBLY BILL NO. 464—ASSEMBLYMEN SCHOFIELD, VER-
GIELS, JEFFREY, WAGNER, HORN, GOMES, DREYER,
GOODMAN, HICKEY, BANNER, SENA, ROBINSON, BROOK-
MAN, HAYES, KISSAM, ROSS AND KOSINSKI

MARCH 15, 1977

Referred to Committee on Environment and Public Resources

SUMMARY—Requires certificate of emission control compliance before
motor vehicle is registered. (BDR 40-982)

FISCAL NOTE: Local Government Impact: No.
State or Industrial Insurance Impact: No.

EXPLANATION—Matter in *italics* is new; matter in brackets [] is material to be omitted.

AN ACT relating to registration of motor vehicles; requiring a certificate of emis-
sion control compliance before motor vehicle is registered; requiring state
environmental commission to designate acceptable emission control systems;
permitting authorized stations to charge for inspecting a motor vehicle; and
providing other matters properly relating thereto.

*The People of the State of Nevada, represented in Senate and Assembly,
do enact as follows:*

- 1 SECTION 1. NRS 445.620 is hereby amended to read as follows:
2 445.620 1. The state environmental commission [may by regula-
3 tion] shall prescribe standards for exhaust emissions, fuel evaporative
4 emissions and visible smoke emissions from mobile internal combustion
5 engines on the ground or in the air, including but not limited to aircraft,
6 motor vehicles, snowmobiles and railroad locomotives.
7 2. Such regulations shall be uniform throughout the state.

Sec. 2. NRS 445.630 is hereby amended to read as follows:

1. In counties having a population of 100,000 or more,
the commission shall, in cooperation with the department of
motor vehicles and any local air pollution control agency,
adopt regulations for motor vehicle emission control systems.
2. [IF] In counties having a population of less than
100,000, if

- 9 ~~445.630 1. If~~ the commission determines that it is feasible and
10 practicable to implement a program of inspecting and testing motor
11 vehicles and motor vehicle emission control systems, and if the imple-
12 mentation of such program is deemed necessary to achieve or maintain
13 prescribed ambient air quality standards [in areas of the state designated
14 by the commission,] the commission shall, in cooperation with the
15 department of motor vehicles and any local air pollution control agency
16 established under NRS 445.546 which has jurisdiction in a designated
17 area, adopt [such rules,] regulations and transportation controls as may
18 be necessary to implement such a program.
19

- 1 2. **Such rules and** *The* regulations shall distinguish between light-
2 duty and heavy-duty motor vehicles and may prescribe:
3 (a) Appropriate criteria and procedures for the approval, installation
4 and use of motor vehicle pollution control devices; and
5 (b) Requirements for the proper maintenance of motor vehicle pollu-
6 tion control devices and motor vehicles.
- 7 3. **Such rules and** *The* regulations shall establish:
8 (a) Requirements by which the department of motor vehicles shall
9 license authorized stations to inspect, repair, adjust and install motor
10 vehicle pollution control devices, including criteria by which any person
11 may become qualified to inspect, repair, adjust and install such devices.
12 (b) Requirements by which the department of motor vehicles may
13 license an owner of a fleet of three or more vehicles as an authorized
14 station provided that such owner complies with the regulations of the
15 commission. Such fleet owners shall only certify vehicles which constitute
16 such fleet.
- 17 4. The commission shall consider, **prior to promulgating any rule**
18 **or** *before adopting any* regulation or establishing any criteria pursuant
19 to subsection 2: **of this section, the following:**
20 (a) The availability of devices adaptable to specific makes, models
21 and years of motor vehicles.
22 (b) The effectiveness of such devices for reducing the emission of each
23 type of air pollutant under conditions in this state.
24 (c) The capability of such devices for reducing any particular type or
25 types of pollutants without significantly increasing the emission of any
26 other type or types of pollutant.
27 (d) The capacity of any manufacturer to produce and distribute the
28 particular device in such quantities and at such times as will meet the
29 estimated needs in Nevada.
30 (e) The reasonableness of the retail cost of the device and the cost of
31 its installation and maintenance over the life of the device and the motor
32 vehicle.
33 (f) The ease of determining whether any such installed device is func-
34 tioning properly.

5. Population is determined by using the last preceding
national census of the Bureau of the Census of the United
States Department of Commerce.

35 SEC. 3. NRS 445.640 is hereby amended to read as follows:
 36 445.640 [1. Subject to any applicable limitation of NRS 445.650 or
 37 any regulation promulgated pursuant thereto, no used motor vehicle as
 38 defined in NRS 482.132, may be registered by a new owner in certain
 39 areas of this state as designated by the commission.]

A motor vehicle which is based in any county having a
 population of 100,000 or more as determined by the
 last preceding national census of the Bureau of the
 Census of the United States Department of Commerce

40 shall not be registered by the department of motor vehicles unless the
 41 application for registration is accompanied by a certificate of emission
 42 control compliance issued by any authorized station certifying that the
 43 vehicle is equipped with motor vehicle pollution control devices required
 44 by federal regulation or [such other requirements as the commission may
 45 by regulation prescribe under the provisions of NRS 445.610 to 445.710,
 46 inclusive.

47 2. If the seller of a used vehicle is required, pursuant to the provi-
 48 sions of NRS 482.424, to complete a dealer's report of sale, such seller
 49 shall also provide the buyer with any certificate of emission control com-
 50 pliance required pursuant to subsection 1.

1 3. The requirements of this section apply only in counties where a
 2 program of inspecting and testing motor vehicles and motor vehicle emis-
 3 sion control systems has been implemented pursuant to NRS 445.630.]
 4 by the commission's regulations.

5 SEC. 4. NRS 445.700 is hereby amended to read as follows:
 6 445.700 1. [In areas of the state where and at such times as a pro-
 7 gram of implementation is commenced pursuant to NRS 445.630 to
 8 445.670, inclusive, the following fees shall be paid to the department of
 9 motor vehicles and deposited in the state treasury:] ~~The department of~~
 10 ~~motor vehicles may charge the following fees:~~

11 (a) For the issuance and annual renewal of license for an
 12 authorized station..... \$25;
 13 (b) For each set of 25 forms certifying emission control com-
 14 pliance..... 50.

15 2. All fees [collected and deposited in the state treasury pursuant to
 16 subsection 1 of this section] shall be deposited with the state treasurer and
 17 shall be held in trust as a credit to the department of motor vehicles to be
 18 withdrawn by that department as needed to [implement] carry out the
 19 provisions of NRS 445.610 to 445.710, inclusive.

20 3. [The department of motor vehicles may prescribe by regulation
 21 routine inspection fees at the prevailing shop labor rate, including maxi-
 22 mum charges for such fees, and for the posting of such fees in a conspic-
 23 uous place at the authorized station.] An authorized station shall not
 24 charge more than \$5 for inspecting a motor vehicle. An additional charge
 25 shall not be made if a certificate of emission control compliance is issued.

26 SEC. 5. NRS 482.215 is hereby amended to read as follows:
 27 482.215 1. All applications for registration, except applications for
 28 renewal registration, shall be made as provided in this section.
 29 2. Applications for all registrations, except renewal registrations,
 30 shall be made in person, if practicable, to any office or agent of the
 31 department.
 32 3. Each application shall be made upon the appropriate form fur-
 33 nished by the department and shall contain:
 34 (a) The signature of the owner.
 35 (b) His residence address.
 36 (c) His declaration of the county where he intends the vehicle to be
 37 based, unless the vehicle is deemed to have no base. The department
 38 shall use this declaration to determine the county to which the privilege
 39 tax is to be paid.
 40 (d) A brief description of the vehicle to be registered, including the
 41 name of the maker, the engine, identification or serial number, whether
 42 new or used, and the last license number, if known, and the state in which
 43 issued, and upon the registration of a new vehicle, the date of sale by
 44 the manufacturer or franchised and licensed dealer in this state for the
 45 make to be registered to the person first purchasing or operating such
 46 vehicle.
 47 (e) A signed declaration by the applicant that he has and will maintain
 48 security as required by chapter 698 of NRS covering the motor vehicle to
 49 be registered.
 50 (f) ~~A~~ certificate of emission control compliance.

1 4. The application shall contain such other information as may be
 2 required by the department, and shall be accompanied by proof of own-
 3 ership satisfactory to the department.
 4 5. For purposes of the declaration required by paragraph (e) of sub-
 5 section 3, vehicles which are subject to the license fee and registration
 6 requirements of the Interstate Highway User Fee Apportionment Act
 7 (NRS 706.801 to 706.861, inclusive), and which are based in this state,
 8 may be declared as a fleet by the registered owners thereof, on the orig-
 9 inal or renewal applications for proportional registration.

10 SEC. 6. NRS 482.280 is hereby amended to read as follows:
 11 482.280 1. The registration of every vehicle referred to in subsection
 12 1 of NRS 482.206 shall expire at midnight on the last day of the last
 13 month of the registration period. The registration of every vehicle referred
 14 to in subsection 2 of NRS 482.206 shall expire at midnight on December
 15 31. The department shall mail to each holder of a valid registration cer-
 16 tificate an application form for renewal registration for the following reg-
 17 istration period. Such forms shall be mailed by the department in
 18 sufficient time to allow all applicants to mail the applications to the
 19 department and to receive new registration certificates and license plates,
 20 stickers, tabs or other suitable devices by mail prior to expiration of sub-
 21 sisting registrations. An applicant may, if he chooses, present the applica-
 22 tion to any agent or office of the department.
 23 2. An application mailed or presented to the department or to a
 24 county assessor under the provisions of this section shall include: [a]
 25 (a) A signed declaration by the applicant that he has and will maintain
 26 security as required by chapter 698 of NRS covering the motor vehicle
 27 to be registered.
 28 (b) ~~A~~ certificate of emission control compliance.
 29 3. The department shall insert in each application form mailed as
 30 required by subsection 1 of this section the amount of privilege tax to be
 31 collected for the county under the provisions of NRS 482.260.
 32 4. An owner who has made proper application for renewal of regis-
 33 tration previous to the expiration of the current registration but who has
 34 not received the number plate or plates or registration card for the ensu-
 35 ing registration period is entitled to operate or permit the operation of
 36 such vehicle upon the highways upon displaying thereon the number
 37 plate or plates issued for the preceding registration period for such time
 38 as may be prescribed by the department as it may find necessary for
 39 issuance of such new plate or plates or registration card.
 40 5. The registration fees for a motortruck and truck tractor, and for
 41 any trailer or semitrailer having an unladen weight of 3,501 pounds or
 42 more shall be reduced by one-twelfth for each calendar month which has
 43 elapsed from the beginning of each calendar year, the fee so obtained,
 44 rounded to the nearest one-half dollar, but in no event to be less than
 45 \$5.50.
 46 SEC. 7. NRS 445.635 is hereby repealed.

If required,
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If required,
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ASSEMBLY MAN
JIM SCHOFIELD

EXHIBIT B
Page 1.

March 21, 1977

Senator Jack Schofield,
Nevada Legislative Building,
Carson City, Nev.

Dear Senator Schofield:

Over a period of two years the Nevada Environmental Commission has studied, received testimony and held hearings on the effect of automobile emissions on air quality and the desirability of inspection and maintenance being made mandatory.

As a member of the commission I would like to offer the following comments in the hope they will prove helpful to your deliberations on A.B. 464.

Over the past six years it has been determined that the major cause of deterioration of ambient air quality standards in the metropolitan areas of Las Vegas and Reno are carbon monoxide and hydrocarbons. Continuing analysis of these two pollutants have determined that from 85 to 90 per cent of them are derived from motor vehicle exhausts.

Tests conducted by the ~~the~~ Nevada Motor Vehicle Department show that with rather simple adjustments and replacement of dirty air filters and faulty spark plugs, these emissions can be substantially reduced--37 per cent of the ~~hydrocarbons~~ hydrocarbons and 42 per cent of the carbon monoxide. There is an additional benefit of fuel consumption. It is estimated the better performance resulting from maintenance provides a gas saving of approximately 15 gallons of gas per car per year.

The Arizona Department of Health has determined that with only mandatory inspection and no maintenance requirement there has been a reduction of 4 per cent of CO and 9 per cent HC. "Specific model year vehicles have shown as much as 19.6 per cent reduction in HC, and 9.8 per cent in CO." The reason seems to be that the inspection encourages the motorists to seek tuneups for improved engine performance on their own.

There is little if any disagreement about the role of CO and HC play in degrading air quality, and what can be accomplished under an inspection/maintenance program.

The disagreements come over mandatory inspection and maintenance, and ~~who~~ over who will do the inspecting. The quality of air in the Las Vegas and Washoe basins and the increasing frequency of alert warnings should be sufficient reason for mandatory inspection and maintenance.

The unresolved question, then, is on the system of inspection. It can be done by the state, by an inspection contractor or by the auto repair industry. Arizona uses a contractor system. California started with state-run stations, but is changing to the contractor system. Nevada turned inspection over to garages and service stations

In requiring all motorists in Clark County and Washoe County, ~~the~~ or air shed that might include Tahoe and Carson City, it is the responsibility of the state to provide every protection possible for the motorist. This can only be done ~~not~~ by seperating inspection from maintenance. To put these two separate and distinct functions in the same hands is to condemn a car owner to an analysis of his problems by the same person who has a financial stake in the solution. The opportunity of abuse is obvious. The temptation to misuse the ~~inspection to provide "proof" for repairs profitable to those doing the inspection would be difficult for some garages and service stations operators to resist.~~ inspection to provide "proof" for repairs profitable to those doing the inspection would be difficult for some garages and service stations operators to resist.

If inspection is done by an independent contractor or the state, there is an automatic consumer protection. The car owner learns from the inspection exactly what has to be done to bring his vehicle into compliance, and he can insist that this and no more be done by the repairman. Then the second inspection, free in Arizona, determines if the work has been done properly. The ~~new~~ motorist, since he is under state compulsion, has the right to expect state protection. Under a system whereby a garage or service station does the inspection of its own work, neither the state nor the motorists can be certain their interests are being served.

The ~~a~~ law also should make an exemption for the aged, those on welfare and working people with families in the lower income brackets. Reduced standards should be set for older cars, such as pre-1970 models. And a ceiling should be set for repairs necessary to meet standards, such as \$100.

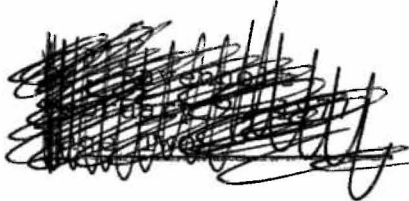
A contractor or state-run system ~~not~~ would not hurt the garage and service station operators. They would still get the work. And the inspection equipment they purchased to become licensed stations under the current system would still be needed in their business.

The state might consider following Arizona in a two-step program. The first year there would be mandatory inspection and volunteer maintenance. The second year there would be mandatory maintenance.

A final argument for contractor inspection stations is reduced cost for the motorist. Arizona inspections are done for \$5. In Nevada the auto industry charges from double to triple that amount.

Sincerely,

William Vincent
William Vincent



Probable Facility	Type of Test	Estimated Total Emission Reductions Las Vegas Valley (Percent)	
		(CO)	(HC)
Private Garage	Idle	7.2-11.4	5.3- 8.1
Contractor or State Garage	Loaded	7.5-11.0	4.2- 7.1
Contractor or State Garage	Loaded with Mechanic Training	10.6-15.2	8.1-11.6

Several studies claim that the reduction percentages increase each year with a continued inspection/maintenance program.

Discussion

~~The previous memo I sent to you on I/M (1/7/77) described the conservative estimate for the benefit of idle testing. It would appear that loaded testing is no better than idle testing; loaded with mechanic's training offers significantly better results.~~

Costs/Savings for the Motorist

Idle mode testing, whether done by private, State or contractor garage, would cost the motorist between \$4 and \$8². Loaded mode testing, by a contractor or by the State, would cost the motorist \$5 - \$10². These charges would recover all construction, operating, and administrative costs. Of the vehicles tested, 88% to 97% should pass the test as a result of obtaining the minor tune-up that is part of the inspection. For those vehicles failing any of the tests, repair costs should average \$11 to \$30^{1,2}.

Those vehicles requiring at least the minor tune-up to pass the inspection would realize an average fuel savings of \$30 annually. It is estimated that the improved mileage per average auto, in the total population, results in a fuel savings of \$9 per year.

MN/gdb
Attachments

REFERENCES

- 1 The Need For and Benefits of I/M of In Use Motor Vehicle, EPA, 11/76.
- 2 Evaluation of the Nevada I/M Programs, GCA, 8/76.

TABLE 1.

I/M STUDY RESULTS

Fleetwide Initial (immediately following repair) Effectiveness

FTP Evaluations

Name of Study	Short Test	Special Conditions	Sample Size	Model Years	% Failure	Emission Reduction		
						HC (%)	CO (%)	NO _x (%)
Olson Short Cycle	Idle		299	1957-71	31	21.7	16.5	(-)1.4
" " "	Loaded		149	1957-71	32	20.3	15.9	0
" " "	Loaded	w/ mechanic training	150	1957-71	34	33	22	(-)1.5
ATL-TRW Colorado	Idle	high altitude	55	1964-73	50	18	12	(-)0.8
Olson Degradation	Idle		144	1968-74	41	23.1	14.8	(-)2.8
CARB-Riverside	Idle		238	1955-74	35	18.8	15.0	1.4
" "	Loaded		393	1955-74	35	17.3	15.6	(-)1.5
" "	Idle		167 ²	1975-76	17.5	12 (est.)	22 (est.)	9 (est.)

Short Test Evaluations

Name of Study	Short Test	Special Conditions	Sample Size	Model Years	% Failure	Emission Reduction		
						HC (%)	CO (%)	NO _x (%)
Exxon	Idle		396	1959-72	14	22	11	--
"	Idle		"	"	24	23	17	
"	Idle		"	"	56	35	31	
New Jersey	Idle		9070 ²	thru '74	26	26.5	27.3	

²Before and after repair comparisons not performed on same cars. Sample size is for all vehicles tested.

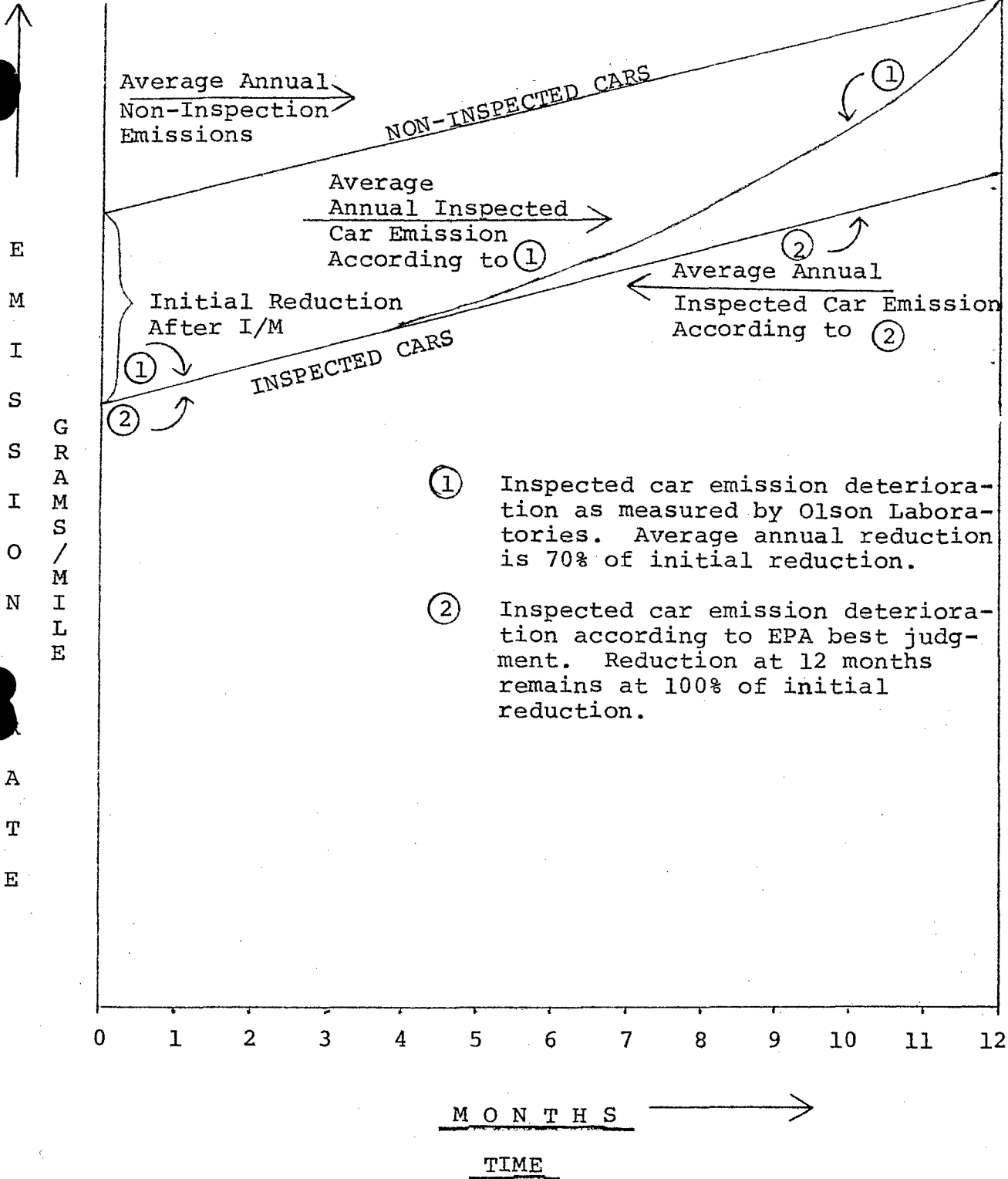


FIGURE 1

AUTO EMISSION REDUCTIONS, DETERIORATION,
INSPECTED AND NON-INSPECTED AUTOS
DURING FIRST YEAR

APPENDIX

ESTIMATING BENEFITS OF AUTOMOBILE
INSPECTION/MAINTENANCE IN CLARK COUNTY FOR FIRST YEAR

I. Summary of Empirical Studies: *Initial Auto Emission Reductions Measured by FTP (From Table 1).*

<u>Probable Facility</u>	<u>Type of Test</u>	<u>Initial Auto Emission Reduction</u>	
		<u>(CO)</u>	<u>(HC)</u>
1) Private Garage	Idle	14.8-16.5	21.7-23.1
2) Contractor or State	Loaded	15.6-15.9	17.3-20.3
3) Contractor or State	Loaded with Mechanic's Training	22	33

II. Estimating *Annual Reductions* using Range of Deterioration Factor. *Emissions can Vary From 70% to 100% of the Initial Emission Reductions.*

<u>Probable Facility</u>	<u>Type of Test</u>	<u>Average Annual Emission Reduction</u>	
		<u>(CO)</u>	<u>(HC)</u>
1) Private Garage	Idle	10.4-16.5	15.2-23.1
2) Contractor or State	Loaded	10.9-15.9	12.1-20.3
3) Contractor or State	Loaded with Mechanic's Training	15.4-22	23.1-33

APPENDIX-Continued

III. Estimates of Reduction in Valley Emissions.

Local Autos produce 69% of Valley CO. Local Autos produce 35% of Valley HC. Legislation presumably would apply to local autos only.

Reduction percentages in the Valley are estimated by multiplying Part II ranges by above automobile relative contributions.

<u>Probable Facility</u>	<u>Type of Test</u>	<u>Total Emission Reduction</u>	
		<u>(CO)</u>	<u>(HC)</u>
1) Private Garage	Idle	7.2-11.4	5.3- 8.1
2) Contractor or State	Loaded	7.5-11.0	4.2- 7.1
3) Contractor or State	Loaded with Mechanic's Training	10.6-15.2	8.1-11.6

THE EVALUATION OF NEVADA INSPECTION/MAINTENANCE PROGRAM

EXECUTIVE SUMMARY

INTRODUCTION:

Since 1970, measurement of the air pollutants of carbon monoxide (CO) and hydrocarbons (HC) in the Las Vegas metropolitan area have indicated an increasing deterioration of ambient air quality standards. The increase of these contaminants (CO) and (HC) is considered to be detrimental to both health and esthetic values.

Inventory analysis indicates that 85-90% of these two contaminants are derived from motor vehicle emissions. The implementation plan adopted by the State, and approved by EPA, included as a control strategy for the reduction of (CO) and (HC) in Clark County Nevada, an inspection - maintenance program (I/M) for motor vehicles. In 1973, the legislature authorized the Environmental Commission and Department of Motor Vehicles to implement an I/M program in Clark County. This program became operational in 1974.

This report is an evaluation of the results of this project with respect to seeing whether or not a measurable effect on the emissions of contaminants as (CO) and (HC) can be obtained by I/M program of motor vehicles. Assuming that an I/M program would substantially and significantly reduce concentration of ambient air (CO) and (HC), the report additionally reviews the cost effectiveness of several alternative inspection systems.

CONTENT OF STUDY

The overall objective of this study is the analysis of the effectiveness of the present inspection maintenance (I/M program) in Clark County Nevada, with respect to the reduction of ambient air concentration of the carbon monoxide and hydrocarbon contaminants, and an analysis of the cost and effectiveness of various alternative I/M programs. The fulfillment of this objective involves two major tasks, each of which is discussed below. The first task involves a detailed review of the current regulations for the Nevada I/M program and of all the associated test procedures, hardware, and specifications. Included in this task is the identification of the strength and weakness of the current program including hardware selection, calibration practices, inspection procedures and quality insurance practices. Included, is a detailed review of inspection results of several thousand automobiles of all makes and most years to the amount of reduction in emissions following an I/M inspection. Information on the present cost of the system is also presented.

The second part of the study is the analysis of the alternative I/M programs. Two basic I/M programs are the idle-mode testing and the loaded-mode testing. Each of these methodologies is analyzed in terms of the operational alternatives of a State run, contractor run and privately run systems. Each of these alternatives is analyzed in terms of it's cost, effectiveness, energy impacts and consumer protection features.

DEFINITION AND PURPOSE OF INSPECTION/MAINTENANCE

Inspection/maintenance is an air quality strategy which deals with automotive pollutants. Under such a system, motorized vehicles are inspected at established

by the state. Vehicles failing to pass such a test are required to have the necessary repairs performed in order to bring them into compliance with the standards. The minimum requirement of an emission test is that it be short, applicable to warmed-up vehicles and can identify the high emitting vehicles. Two distinct emission testing procedures have been developed for measuring pollutants emitted through the vehicle exhaust system, which satisfy these criteria. These test procedures are referred to as idle-mode and loaded-mode testing.

The idle-mode test is the test of the exhaust emissions with the vehicle in a neutral gear operating at an unloaded state. Often (HC) and (CO) levels are recorded at both a low and a high (or hot) idle speed. The test at the low idle speed is taken at the manufacturer's recommended idle, measured in revolutions per minute (rpm), then the engine speed is increased to 2250 ± 10 percent rpm for the high (or hot) idle speed test. The standards must be met at both levels.

The loaded (or key) mode test is the test of the exhaust emissions with the vehicle in a forward drive gear operating at a loaded state. Pollutants are measured at various test conditions as specified by a testing procedure. The loaded-mode, steady state (simulated highway cruise) test measures emissions at high cruise, low cruise, and idle. Emissions are not tested at the transient modes of acceleration and deceleration. A chassis dynamometer is utilized to apply the desired loads to simulate driving conditions.

The primary purpose of inspection/maintenance is to improve air quality. I/M does this by providing a way by which pollutants from motorized vehicles can be kept to defined, acceptable levels. That air quality in Clark County needs to be improved is evidenced by data which indicates continuing violations of the National Ambient Air Quality Standards for carbon monoxide and oxidants. Table 1 presents the Clark County Health District's data for these pollutants from 1973 through 1975.

1976 32.7
29.2

Table 1 MEASURED AIR QUALITY IN LAS VEGAS, NEVADA

	National standard	High			Second high		
		1973	1974	1975	1973	1974	1975
Carbon monoxide	10 mg/m ³ (8-hour)	16.6	16.3	25.4	16.2	16.0	24.5
Oxidant	160 ug/m ³ (1-hour)	438	316	425	351	310	262

EXHIBIT C
Page 8

In addition to its air quality benefit, I/M is also an energy saving strategy. This is due to the fact that a well-tuned engine not only pollutes less, but consumes less fuel. Annual fuel savings of \$9.00 per vehicle have been estimated to result from I/M.

REVIEW OF THE KEY ISSUES ASSOCIATED WITH INSPECTION/MAINTENANCE

The key issues associated with any I/M program are given in Table 2. As shown, these issues include the dimensions of the program, the instrumentation used, testing frequency required, the emission standards and rejection rates set, and the means by which the program is implemented.

REVIEW OF THE PRESENT NEVADA PROGRAM

The present I/M program in Clark County is a hot idle test administered by stations licensed by the Emission Control Section of the Department of Motor Vehicles. All light-duty vehicles which change ownership are required to be tested prior to being registered by the new owner. Through December 1976, 227,000 vehicles have been tested by the 125 certified inspection stations.

The inspection procedure consists of adjusting parameters as timing, dwell-angle, RPM, and carburetor to the manufacturers specifications. The inspector then inserts an instrument probe into the vehicle exhaust pipe and measures the concentration of the carbon monoxide and hydrocarbons as a percentage of the total exhaust gases.

idle reduction
↓
The tested vehicle in order to pass the inspection and thereby received a certificate must have emissions less than those outlined in Table 3. By this simple procedure the average reduction in hydrocarbon and carbon monoxide were 37% and 42% respectfully. Expressed alternatively, the hydrocarbon and carbon monoxide emissions after testing were 63 and 58% respectfully of the pre-test values.

These results were obtained with a consumer cost shown in Table 3. The average inspection fee which includes the initial adjustment and final measurement is \$11.74. This fee applied to 97% of the vehicles tested. For those 3% of vehicles tested which did not pass the test, the repair costs averaged \$10.96.

A related question is the percentage of all used vehicles that could not even pass unless subjected to major engine rebuilding or overhaul. This estimate ranged from 2-10%, and averaged 4% as based on data from 22 inspection stations consisting of dealers, garages, and services stations.

A less apparent, but real economic spin-off from the I/M program is the savings in fuel costs. The estimate for each vehicle is \$9.00 per year or approximately 15 gallons annually. The aggregate fuel savings for the 55,000 vehicles tested annually are \$495,000 per year or 825,000 gallons of gasoline.

It is estimated that for those vehicles tested, hydrocarbon emissions after testing were 63 percent of the emissions before testing. The ratio for carbon monoxide is 0.58. The estimate of fuel savings for each vehicle tested is \$9.00 per year or approximately 15 gallons of gasoline. The aggregate fuel savings for the 55,000

Program Issue	Objectives	Quality Control Activity
I Dimensions	Test all applicable motor vehicles	Enforcement through registration process or window sticker system
II Performance of I/M	Identify high emitting vehicles and repair	Inspector training and licensing. Mechanic/garage training and licensing. Surveillance program. Public education programs.
II Instrumentation	Emission analyzing	Equipment certification. Calibration methods.
IV Test frequency	Net emission reduction	Data monitoring
V Emission standards and rejection rates	Emission reduction per vehicle	Data monitoring and surveillance for program effectiveness
VI Implementation	Public acceptance	Public education program
II Operation	Effectiveness	Rules and regulations

Table 3
AVERAGE CONSUMER COSTS OF THE CURRENT I/M PROGRAM

	Range	Average
Inspection cost ^a	\$8.50 - \$17.00	\$11.74
Repair cost	\$1.95 - \$101.31	\$10.96

^aIncludes the \$2 charge for Certificate of Compliance.

Table 5 presents the positive aspects of the current program while Table 6 lists its negative aspects. It is felt that the present I/M program represents a good first step in the implementation of an annual I/M program for all light duty vehicles in Clark County. The analysis of selected alternatives for a total program follows.

ALTERNATIVE INSPECTION/MAINTENANCE PROGRAMS FOR CLARK COUNTY

Three alternatives exist for the operation of an I/M program:

1. state owned and operated
2. private garage operation
3. contractor hired by the state

Table 7 presents a comparison of these alternatives.

Inspection could be accomplished by state-owned and operated lanes with the state responsible for the specification of repair procedures and surveillance of the repair industry. In this program the state must finance the initial capital costs, determine inspection sites and design and monitor construction of the facilities.

Private garages could provide facilities for the inspection by mechanics. The mechanics and the garages would be licensed and monitored by the state. Quality control programs operated by the state would need to develop mechanisms for checking the work of the private garages. Lower initial costs to the state compared with inspection lanes are involved. This alternative is the most convenient for the consumer.

A contractor hired by the state to develop, construct and operate the I/M program can achieve the effectiveness of the state-owned and operated program but eliminate most of the initial capital cost requirements to the state. Again the state would be required to develop quality control programs for program surveillance and training and licensing of the test inspectors. As with the other two alternatives, the state would be responsible for public relations to gain consumer acceptance.

Four alternative I/M systems are analyzed for Clark County. Scenarios reflecting different weekly distribution of inspections are developed for each option. Based upon these scenarios, estimates of the capital and operating costs, repair costs, energy savings, inspection fee, and emissions reduction potential were made for four alternate systems. The systems analyzed are given below:

1. Privately run idle mode test
2. State run idle mode test
3. Contractor run idle mode test
4. Contractor run loaded mode test

Table 6 NEGATIVE ASPECTS OF THE EXISTING NEVADA I/M PROGRAM

Area of impact	Negative aspect
Technical	<ol style="list-style-type: none"> 1. No separate standards for 1975 and 1976 vehicles. 2. Only vehicles which change ownership are required to have emissions testing. 3. Lack of chronological testing.
Administration	<ol style="list-style-type: none"> 1. Inspection form precludes before/after evaluation. 2. Poor program monitoring, especially data analysis. Initially, but marked improvement by 1976. 3. Lack of mechanics' training program. 4. Buyer in private transaction is liable for testing.
Public acceptance	<ol style="list-style-type: none"> 1. No one fixed inspection fee for all inspection stations. 2. No ceiling on repair costs.

Table 5 POSITIVE ASPECTS OF THE EXISTING NEVADA I/M PROGRAM

Area of impact	Positive aspect
Technical	<ol style="list-style-type: none"> 1. Use of accepted instrumentation. 2. Setting dwell and ignition timing of all cars to manufacturers' specifications. 3. Inspection of vehicles required to have positive crankcase ventilation valve for connection and operation of same. 4. Observe for visible smoke.
Administrative	<ol style="list-style-type: none"> 1. Certification of stations and inspectors.
Public acceptance	<ol style="list-style-type: none"> 1. Minimal registered complaints.

	Advantages	Disadvantages
State test lane	<ol style="list-style-type: none"> 1. Designed specifically for high capacity, emission testing 2. Economy of multilane inspection stations 3. Simplified data handling and processing due to minimum facility collection points 4. Effective monitoring of repairs and maintenance 5. Greater quality control potential 6. Diagnostic recommendation by trained personnel 7. Benefits from computer applications 	<ol style="list-style-type: none"> 1. Additional travel for consumer's vehicles which fail test 2. Long lead time for construction 3. Significant initial expenditure of state funds for capital construction 4. Minor adjustments not made at time of inspection 5. Administrative function expense as unit cost for quality control
Private garage	<ol style="list-style-type: none"> 1. I/M at one station-indirect costs less to consumer 2. Minor adjustments made at time of inspection 3. Large number of stations-greater convenience 4. Reduces financial burden of state-capital investments 	<ol style="list-style-type: none"> 1. Frequent use of highly trained and paid personnel for test performance- cost issue 2. A large number of private stations required 3. State administrative function expense as unit cost for quality control 4. Nonuniformity of enforcing criteria 5. Data handling and reduction more cumbersome
Contractor test lane	<ol style="list-style-type: none"> 1. Same as 1 to 7 for state test lane 2. Stimulation of the local economy by private investment 3. Industry operations more efficient; flexible decision making capability and experience of program operation 4. Minimal investment 	<ol style="list-style-type: none"> 1. Additional travel for consumer's vehicles which fail test 2. Long lead time for construction 3. State administrative function expense as unit cost for quality control 4. Profit motives

Assumptions

The estimates made involve assumption on given features of the program. The general assumptions applicable to all alternatives include the following:

1. Vehicles are inspected annually. The number of annual inspections is the total number of light duty vehicles registered in Clark County minus exemptions for new vehicles. Fleet operations are assumed to perform their own emissions testing under the privately run system.
2. A failure rate of 33 percent is assumed. This is consistent with the failure rates observed in other I/M programs. A typical distribution of reasons for failure has also been assigned. Given the testing procedure followed in Clark County, however, only ~~33~~ 12 percent of the initial inspections will have to be retested. This is due to the minor adjustments made as a standard part of the inspection procedure. In Addition, the ~~33~~ 12 percent retest assumes that engine overhauls will be exempt from the program due to a price limit placed upon repairs.

Table 8 presents a summary of the cost and benefit estimates for each alternative analyzed.

IMPACT ON AMBIENT AIR WITH ANNUAL INSPECTION

Any estimate upon the improvement of ambient air concentration of (CO) and (HC) by an annual I/M of all light duty motor vehicle is based upon ~~extrapolated~~ ^{extrapolated} of data collected from the Clark County experience and others. ¹⁵ While the Clark County data suggests an immediate approximate 40% reduction in emissions, the effect is relatively short-lived. Limited observational data indicates that the inspected vehicle's emission will be back to pre-adjusted levels within 7-8 ^{months}. On an annual basis the integrated improvement averages to 15-18% reduction in (CO) and (HC) emissions.

An annual ^{9.4% for automobiles in CO emissions} inspection program probably would have only minimal effect on the ambient air concentration until at least 50-60% of the registered vehicles had undergone adjustment and inspection. Once all vehicles are on an annualized cycle, one should expect a reduction of current ambient concentration by ~~15-18%~~ ^{6.5%}.

With time, the effect will further improve as newer (after 1975) models become a greater proportion of the motor vehicle population. These models with catalytic converters have extremely low emission concentrations. Since the converters deteriorate from use on contamination, annual inspections will assist in detecting these defective systems. Additionally, the standards to pass for these newer models should be more stringent, resulting in an even greater long term improvement in the ambient air quality.

This report presented information on the costs, benefits, and the issues associated with four alternate I/M systems for Clark County, Nevada. While no attempt has been made to recommend one alternative over another, the data provided should aid decision makers in their final evaluation of an I/M program for Clark County.

Table 8 SUMMARY OF I/M ALTERNATIVES FOR CLARK COUNTY NEVADA

Alternative	Inspection fee ^a	Annual repair costs/vehicle	Annual energy savings/vehicle	Percent emissions reduction	
				HC	CO
Privately run idle mode	\$3.50-6.26	\$11.00 ^b	\$9.00	18	14
State run idle mode	\$3.30-6.60	\$20.00 ^c	\$9.00	20	16
Contractor run idle mode	\$3.80-7.50	\$20.00 ^c	\$9.00	20	16
Contractor run loaded mode	\$4.75-9.40	\$20.00 ^c	\$9.00	22	18

^aIncludes all construction, operating and administrative cost.

^bAverage for 12 percent requiring retest.

^cAverage for 33 percent of the vehicle population.

ASSEMBLY COMMITTEE ON ENVIRONMENT
AND PUBLIC RESOURCES
ROOM 214

March 24, 1977, 3:00 p.m.

A. B. 464

STATEMENT OF DICK SERDOZ
AIR QUALITY OFFICER
ENVIRONMENTAL PROTECTION SERVICES

I AM HERE TO TESTIFY IN SUPPORT OF A. B. 464. THERE HAVE BEEN TWO STATE AGENCIES, THE DEPARTMENT OF HUMAN RESOURCES AND THE HIGHWAY DEPARTMENT, THAT HAVE GATHERED AMBIENT AIR QUALITY DATA IN OUR METROPOLITAN , OR ENVIRONMENTALLY SENSITIVE AREAS. BOTH OF THESE DEPARTMENTS INDICATE THAT THERE HAVE BEEN VIOLATIONS OF THE AMBIENT AIR STANDARDS FOR CARBON MONOXIDE AND OXIDANTS, AND IN THE ENVIRONMENTAL IMPACT STATEMENT WHICH WAS PREPARED BY THE NEVADA HIGHWAY DEPARTMENT, IT INDICATES THAT EVEN WITH THE CONSTRUCTION OF SOME MAJOR THOROUGHFARES, VIOLATIONS OF THOSE STANDARDS WILL OCCUR THROUGH 1990. THE ASSUMPTION THAT WAS MADE IN PREPARING THE ENVIRONMENTAL IMPACT REPORT WAS THAT DETERIORATION OF THE NEW MOTOR VEHICLES WOULD BE RELATIVELY SLOW AND THE NEW MOTOR VEHICLES WOULD CONTINUE TO OPERATE WITHIN FEDERAL EMISSION LIMITATIONS OVER A FIVE YEAR PERIOD.

THIS, HOWEVER, HAS NOT OCCURRED. RECENT DATA IN THE TAHOE BASIN, THAT WERE COLLECTED BY THE CALIFORNIA AIR RESOURCES BOARD, INDICATES THAT DETERIORATION OF IN USE VEHICLES IS AT LEAST TWICE AS FAST AS WAS PROJECTED IN THE REPORTS THAT WERE PREPARED BY THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY.

THE OTHER TWO AGENCIES THAT HAVE BEEN COLLECTING AMBIENT AIR DATA ARE THE WASHOE COUNTY DISTRICT HEALTH DEPARTMENT AND THE CLARK COUNTY DISTRICT HEALTH DEPARTMENT. IN WASHOE COUNTY THE TRAILER SITE, WHICH IS HIGHLIGHTED IN FIGURE 5, RENO-SPARKS AREA MAP ENCLOSED IN MY TESTIMONY, IS LOCATED IN THE DOWNTOWN AREA RIGHT OFF OF VIRGINIA BETWEEN FOURTH AND SECOND STREET, NEAR THE RAILROAD TRACKS. A DESCRIPTION OF THAT SITE IS ALSO CONTAINED IN THE HANDOUT. THIS SITE MEASURES CARBON MONOXIDE, NITROGEN DIOXIDE, SOILING INDEX, OZONE, HYDROCARBONS, AND SULFUR DIOXIDE. THE PROBLEM POLLUTANTS ARE CARBON MONOXIDE AND OZONE. AS YOU CAN SEE FROM FIGURE 18 THE OZONE PROBLEM IN THE RENO AREA IS RELATIVELY SMALL. THE DATA THAT WERE GATHERED IN 1972, 1973, AND 1974, INDICATE THERE WERE NO VIOLATIONS OF THE ONE HOUR STANDARDS. THERE WERE LESS THAN TWENTY HOURS OF VIOLATIONS IN 1975, AND LESS THAN TEN HOURS OF VIOLATIONS IN 1976. THIS WOULD INDICATE THE OZONE PROBLEM IN THE RENO AREA IS NOT GREAT. HOWEVER, IF YOU LOOK AT THE STATELINE AREA, WHICH IS AT A HIGHER ELEVATION, YOU CAN SEE THAT THERE WERE OVER NINETY HOURS OF OZONE VIOLATIONS IN 1975 AND 1976 IN THE TAHOE BASIN. IN FIGURE 19 YOU CAN SEE WHAT THE PROBLEM IS IN RENO, AND THAT IS CARBON MONOXIDE. THIS IS WHY A TRANSPORTATION CONTROL PLAN HAS TO BE DEVELOPED. AT THE RENO TRAILER SITE YOU CAN SEE THAT IN 1973 THERE WERE 160 EIGHT HOUR VIOLATIONS, DROPPED OFF SIGNIFICANTLY IN 1974, PROBABLY BECAUSE OF THE FUEL CRISIS, STARTED INCREASING IN 1975, AND AGAIN IN 1976. ALSO, DURING THIS TIME, THERE WERE FIVE DAYS IN 1975 IN WHICH A HEALTH ADVISORY SHOULD HAVE BEEN CALLED. THIS IS WHEN THE CONCENTRATIONS IN THE AREA WERE HIGH ENOUGH TO CAUSE NORMALLY HEALTHY PEOPLE TO HAVE DIZZINESS AND THE VERY YOUNG WITH STRENUOUS

EXERCISE TO HAVE SIGNIFICANT SHORTNESS OF BREATH, IN ADDITION, THE HIGHER ELEVATION OF THE RENO AND TAHOE AREAS, WOULD SIGNIFICANTLY AFFECT THE ELDERLY. IF YOU LOOK AT FIGURE 19 FOR NORTHERN NEVADA, AT THE STATELINE AREA, YOU CAN SEE THAT THERE WERE, IN 1975, TWENTY DAYS OF VIOLATION OF THE EIGHT HOUR CARBON MONOXIDE STANDARD, IN BOTH 1975 AND 1976. ALSO IN 1975 IN THE TAHOE BASIN THERE WERE TEN DAYS IN WHICH THE HEALTH ADVISORY COULD HAVE BEEN CALLED. THE SITE IN THE TAHOE BASIN IS HIGHLY IMPACTED BY ITS LOCATIONS, AND IT IS IN THE AREA OF PREDICTED MAXIMUM CONCENTRATION FOR CARBON MONOXIDE, AND WAS PLACED IN THIS POSITION TO DETERMINE WHAT THE MAXIMUM CONCENTRATIONS CAN BE EXPECTED IN THE BASIN.

AS WE MOVE SOUTH INTO THE LAS VEGAS AREA WE BASICALLY HAVE THREE SITES. TWO SITES MEASURE BOTH OZONE AND CARBON MONOXIDE; THAT IS, THE CASINO CENTER SITE AND AT THE CLARK COUNTY HEALTH DEPARTMENT. AT THE EAST CHARLESTON SITE, THEY MEASURE CARBON MONOXIDE. AGAIN THE EAST CHARLESTON WAS PICKED BECAUSE OF A PROJECTED FLOW OF CARBON MONOXIDE INTO THE LOWER LYING AREAS OF LAS VEGAS. IF WE LOOK AT THIS WE CAN SEE THAT IN 1974 BOTH THE CLARK COUNTY HEALTH DEPARTMENT AND THE CASINO CENTER OZONE WAS VIOLATED MORE THAN IN 1975 AND 1976. THIS WAS PROBABLY DUE TO SPECIFIC METEOROLOGICAL CONDITIONS THAT OCCURRED IN 1974. THIS IS BEING REVIEWED, AND THE REVIEW WILL BE COMPLETE THIS YEAR, BUT YOU CAN SEE, BOTH OF THOSE SITES HAVE OVER DOUBLE THE HOURS OF VIOLATIONS IN 1974 THAN THEY HAD IN 1975 AND 1976. HOWEVER, THE MAXIMUM CONCENTRATIONS WERE NOT SIGNIFICANTLY CHANGED, BUT THE NUMBER OF HOURS OF VIOLATION WERE SUBSTANTIALLY REDUCED. YOU CAN SEE ALSO THAT THE CLARK COUNTY HEALTH DEPARTMENT IS STARTING TO CLIMB IN 1976.

MORE EVIDENCE OF THIS IS IN THE CARBON MONOXIDE VIOLATIONS WHICH ARE CONTAINED IN FIGURE 19. YOU CAN SEE THAT THE CASINO CENTER WAS RELATIVELY CONSTANT, LESS THAN TWENTY DAYS OF VIOLATION IN 1974. IN 1975 THE NUMBER OF VIOLATIONS AT CASINO CENTER AND EAST CHARLESTON WERE LESS THAN FORTY DAYS IN WHICH A VIOLATION OCCURRED. HOWEVER, WHEN WE LOOK AT 1976, WE CAN SEE THAT THERE IS A SUBSTANTIAL JUMP IN NUMBERS OF DAYS OF VIOLATIONS; THERE WERE ALSO TWELVE DAYS OF VIOLATIONS OF THE HEALTH ADVISORY LEVEL IN THE LAS VEGAS AREA IN 1976. AS YOU CAN SEE FROM THIS POLLUTION IS NOT GETTING BETTER, EVEN THOUGH A MAJOR TRANSPORTATION PLANNING EFFORT HAS BEEN IMPLEMENTED AND IS BEING IMPLEMENTED BY THE STATE HIGHWAY DEPARTMENT, AND THE LOCAL TRANSPORTATION AGENCY.

THE TRANSPORTATION PLAN THAT WAS ADOPTED IN 1968 BY THE REGIONAL TRANSPORTATION AGENCIES IS BEING IMPLEMENTED; MAYBE NOT AS FAST AS WAS PROJECTED IN 1968, BUT IT IS BEING IMPLEMENTED. AGAIN, WE ARE STILL RUNNING INTO VIOLATIONS OF THE AMBIENT AIR STANDARD. THEREFORE, ADDITIONAL MEASURES ARE NECESSARY.

AUTOMOBILE INSPECTION IS NOT GOING TO BE THE CURE OR SAVE ALL. IT IS GOING TO BE ABLE TO REDUCE THOSE CONCENTRATIONS BY FROM 9% TO 15%. YOU CAN SEE FROM THE LOCATION OF THE SAMPLING SITES, THAT IN SOME CASES THE VIOLATIONS ARE BEING CAUSED BY THE LOCAL POPULATION AND NOT THE VISITOR. THEREFORE, FROM THE INFORMATION I PRESENTED TO YOU, THERE IS A NEED FOR ADDITIONAL CONTROL MEASURES ON THE AUTO-MOBILE, AND IT IS SUBSTANTIATED BY THE AMBIENT AIR DATA THAT HAVE BEEN GATHERED BY BOTH THE STATE AND LOCAL AGENCIES.

A QUICK HISTORY OF EXISTING INSPECTION MAINTENANCE PROGRAMS THROUGHOUT THE COUNTRY: ARIZONA HAS A PROGRAM, IN A TWO COUNTY AREA. INSPECTIONS ARE ONCE A YEAR. IT'S A LOADED TEST AND IS CONTRACTOR RUN.

OREGON HAS A PROGRAM IN A THREE COUNTY AREA. THE INSPECTIONS ARE ONCE EVERY TWO YEARS, TO GO ALONG WITH THEIR REGISTRATION. IT IS ONLY AN IDLE MODE AND IT IS STATE OPERATED. NEW JERSEY IS STATEWIDE, ONCE A YEAR. IT IS AN IDLE MODE AND IT IS STATE OPERATED. HOWEVER, IF THE VEHICLE FLUNKS THE STATE STATION IT CAN BE INSPECTED IN A PRIVATE GARAGE AFTER THE REPAIR WORK HAS BEEN COMPLETED, AND CERTIFIED AT THAT PRIVATE GARAGE. ILLINOIS HAS IT ONLY IN THE CITY OF CHICAGO. IT IS AN ANNUAL INSPECTION, AND IS CITY RUN. OHIO HAS AN INSPECTION SYSTEM IN A ONE COUNTY AREA. IT IS ONCE A YEAR AND IT IS AN IDLE TEST. IT IS HANDLED THROUGH THE PUBLIC UTILITIES. CALIFORNIA INSPECTION HAS BEEN ESTABLISHED IN THE SOUTH COAST BASIN. THEY HAVE A THREE PHASE PROGRAM. THE FIRST IS A PILOT PROGRAM FOR A YEAR; THEN IT'S A CHANGE OF OWNERSHIP PROGRAM FOR A YEAR; AND A MANDATORY INSPECTION AFTER THAT. IT WILL BE STATE RUN.

IN REVIEWING THE INFORMATION, WE'VE HAD ON THE AVERAGE REPAIR COSTS FOR THE VEHICLES THAT WERE REJECTED OR FAILED THE EMISSION TEST INITIALLY, IN ARIZONA THE AVERAGE COST IS \$20.00, ON THE VEHICLES THAT NEED TO BE REPAIRED. IN NEW JERSEY IS WAS \$32.00. IN OREGON IS WAS AROUND \$22.00. PROBABLY THE REASON NEW JERSEY REJECTION COSTS WERE SO HIGH, IS INITIALLY THERE ARE A NUMBER OF VEHICLES THAT NEEDED MAJOR WORK, AND THOSE VEHICLES HAD THE WORK COMPLETED IN ORDER TO PASS THEIR INSPECTION. THERE WERE NO CUTOFFS OR MAXIMUM REPAIR COSTS THAT COULD BE MANDATED, EITHER BY REGULATION OR BY STATUTE, TO PROTECT THE CONSUMER. I FEEL THAT SOME CONSIDERTION BY THIS COMMITTEE SHOULD BE GIVEN TO THE CONSUMER IN THE STATUTE. REMEMBE THESE ARE THE AVERAGE REPAIR COSTS FOR ONLY THE REJECTED VEHICLES. NOW IF WE LOOK AT THE AVERAGE ENERGY SAVINGS FOR ALL VEHICLES BECUASE OF

THIS PROGRAM, IT WILL PROVIDE EACH AND EVERY VEHICLES OPERATED IN THE STATE OF NEVADA OR THAT RUNS THROUGH THE INSPECTION MAINTENANCE PROGRAM AN AVERAGE ENERGY SAVINGS OF \$9.00 PER VEHICLE. IF WE ONLY LOOK AT THE MAJOR METROPOLITAN AREAS, CLARK COUNTY, WASHOE COUNTY, DOUGLAS COUNTY, AND CARSON CITY, FROM THE INFORMATION WE HAVE FOR 1976 IS THAT THERE ARE APPROXIMATELY 332,360 VEHICLES IN THOSE FOUR COUNTIES. APPROXIMATELY 20% OF THEM ARE LESS THAN ONE YEAR OLD, WHICH PROBABLY WOULDN'T BE AFFECTED BY THE PROGRAM. THIS LEAVES APPROXIMATELY 266,000 VEHICLES, AT A SAVINGS OF \$9.00 PER VEHICLE OR ABOUT \$2.4 MILLION SAVINGS OR ABOUT ONE MILLION GALLONS OF GAS A YEAR, WHICH IS QUITE AN ENERGY SAVINGS FOR SUCH A SMALL STATE AS NEVADA.

THE RESULTS OF THE NEW JERSEY AIR QUALITY MONITORING PROGRAM EXHIBITS A 13% IMPROVEMENT IN AMBIENT AIR QUALITY ATTRIBUTED TO THE INSPECTION MAINTENANCE. THE NEW INFORMATION WHICH WE HAVE JUST RECEIVED FROM THE STATE OF OREGON, EVEN WITH ONLY AN INSPECTION EVERY TWO YEARS TIED TO REGISTRATION, THEY HAVE HAD A 27% REDUCTION IN THE WORST DAY CONDITION AND A 66% REDUCTION IN THE NUMBER OF VIOLATIONS OF THE CO HEALTH STANDARD. I WILL HAVE TO QUALIFY MY STATEMENT THAT THERE WERE OTHER TRANSPORTATION CONTROL MEASURES THAT WERE IMPLEMENTED IN OREGON, BUT A SIGNIFICANT PORTION OF THIS IMPROVEMENT IS CREDITED TO THE INSPECTION MAINTENANCE BECAUSE IT HAS ALSO BEEN NOTICED AT MONITORING STATIONS THAT WERE NOT AFFECTED BY THE TRAFFIC FLOW IMPROVEMENTS.

I HAVE SUBMITTED IN THE BACK OF MY PRESENTATION THIS REPORT ON OREGON BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY, DATED FEBRUARY 22, 1977, FOR YOUR INFORMATION. MUCH OF THE INFORMATION I PRESENTED TO YOU TODAY DEALING WITH INSPECTION MAINTENANCE ALTERNATIVES IS CONTAINED

AND WAS TRANSMITTED TO THE LEGISLATIVE COUNSEL BUREAU ON OPENING DAY OF THE SESSION.

THAT CONCLUDES MY PRESENTATION ON NEED FOR THE PROGRAM, AND ITS COST EFFECTIVENESS. I WOULD LIKE TO NOW DISCUSS THE ACTUAL BILL THAT YOU HAVE BEFORE YOU TODAY, A.B. 464. I BELIEVE THERE SHOULD BE SOME AMENDMENTS IN THIS BILL AND I WILL NOW SUGGEST THOSE AMENDMENTS, FOLLOWED BY THE REASON FOR MY SUGGESTIONS.

-SECTION 1 OF THE BILL REQUIRES THE STATE ENVIRONMENTAL COMMISSION TO PRESCRIBE STANDARDS FOR ALL TYPES OF VEHICLES AND IT CHANGES IT FROM MAY TO SHALL. I BELIEVE THAT THE AMENDMENT ON LINES 2 AND 3 SHOULD BE DELETED AND KEEP THE MAY IN THOSE TWO LINES.

-A NEW SUBSECTION 2 BE ADDED AT LINE 7, CHANGING THE EXISTING SUBSECTION 2 ON LINE 7 TO SUBSECTION 3. THE NEW SUBSECTION 2 THE STATE ENVIRONMENTAL COMMISSION SHALL PRESCRIBE STANDARDS FOR EXHAUST EMISSIONS AND VISIBLE EMISSIONS FROM IN USE MOTOR VEHICLES. ON LINE 19 BEFORE THE WORD "EMISSION", ADD EXHAUST AND DELETE THE WORD SYSTEMS.

-ON PAGE 2 I RECOMMEND DELETION OF EVERYTHING FROM LINE 17 THROUGH LINE 34 OR AN ALTERNATIVE TO THIS DELETION WOULD BE TO ADD THE SUBSCRIPT OF (a) RIGHT AFTER 2 ON LINE 19, "TO SUBSECTION 2(a): [OF THIS SECTION, THE FOLLOWING:]

-ON LINE 40, RIGHT AFTER MOTOR VEHICLES, ADD

IN AREAS OF THE STATE DESIGNATED BY THE COMMISSION.

JUSTIFICATION OF THOSE PROPOSED AMENDMENTS IS AS FOLLOWS:

IN SECTION 1, THE PROPOSED AMENDMENT IN A.B. 464 REQUIRES THAT THE COMMISSION ESTABLISH BOTH EXHAUST EMISSION STANDARDS, FUEL EVAPORATIVE STANDARDS, AND VISIBLE SMOKE EMISSION STANDARDS FROM ALL INTERNAL COMBUSTION ENGINES, IN THE AIR AND ON THE GROUND. THE AUTHORITY TO ESTABLISH SUCH EXHAUST EMISSIONS FROM AIRCRAFT IS NOT PERMITTED UNDER CURRENT FEDERAL LAW. ALSO, THE MANDATORY ESTABLISHMENT OF EXHAUST EMISSIONS FROM SNOWMOBILES AND RAILROAD LOCOMOTIVES IS QUESTIONABLE AT THIS TIME. THERE WOULD BE A SIGNIFICANT FISCAL NOTE ATTACHED FOR THE ESTABLISHMENT OF SUCH STANDARDS. THEREFORE, MY PROPOSED AMENDMENT HAS NOT REMOVED THE AUTHORITY FOR THE ESTABLISHMENT OF SUCH STANDARDS IN COOPERATION WITH THE FEDERAL ENVIRONMENTAL PROTECTION AGENCY OR OTHER FEDERAL AGENCIES DEALING WITH INTERSTATE TRANSPORTATION, THE COMMISSION COULD STILL ESTABLISH THOSE STANDARDS WHICH ARE EQUIVALENT TO ADOPTED STANDARDS TO INSURE ADEQUATE MAINTENANCE OF THE VEHICLES OR EQUIPMENT. HOWEVER, MY PROPOSED AMENDMENT WILL REQUIRE THE STATE ENVIRONMENTAL COMMISSION TO ADOPT STANDARDS THAT ARE UNIFORM THROUGHOUT THE STATE, SO A VEHICLE OPERATING IN CLARK COUNTY WILL HAVE TO MEET THE SAME EMISSION STANDARDS AS A VEHICLE OPERATED IN WASHOE COUNTY.

AGAIN, ON PAGE 1, THE AMENDMENT ON LINE 19, THIS AMENDMENT REQUIRES THE COMMISSION TO ESTABLISH EXHAUST EMISSION STANDARDS. THE CURRENT BILL, A.B. 464, AS PROPOSED, INFERS THAT THE COMMISSION IS TO ESTABLISH RETROFIT STANDARDS FOR ALL VEHICLES. I DO NOT FEEL THE COMMISSION IS READY AT THIS TIME OR GO INTO A PROGRAM OF EVALUATING AND

ESTABLISHING RETROFIT DEVICES FOR IN USE VEHICLES. THE COST OF SUCH DEVICES AND THEIR CERTIFICATION, I BELIEVE IS BEYOND THE SCOPE OF THE COMMISSION'S TECHNICAL ABILITY AT THIS TIME. IN SOME FUTURE YEARS IT MAY BE WITHIN THE TECHNICAL CAPABILITIES OF ENVIRONMENTAL PROTECTION SERVICES OR THE DEPARTMENT OF MOTOR VEHICLES OR OTHER SUCH STATE AGENCIES.

MY PROPOSED AMENDMENT ON PAGE 2, 17 THROUGH 34, THIS WAS PLACED IN STATUTE IN 1973, AND DEALS MAINLY WITH A RETROFIT DEVICE, AND THE ADOPTION OF THIS MAJOR PIECE OF LEGISLATION DEALING WITH EMISSION CONTROLS CAME FROM THE RETROFIT BILL THAT WAS BEING HEARD AT THAT TIME. I THEREFORE THINK THERE ARE TWO BASIC ALTERNATIVES, EITHER TO CONDITION THIS SUBSECTION 4 OF 445.630 ONLY TO SECTION 2(a) OF THIS STATUTE, WHICH IS BASICALLY AGAIN DEALING WITH RETROFIT DEVICES, OR DELETE IT ALTOGETHER. I DO NOT BELIEVE THE COMMISSION SHOULD BE RESPONSIBLE FOR DETERMINING WHAT THE EFFECTIVENESS OF THE DEVICES THAT THE MANUFACTURERS HAVE PLACED ON THEIR MOTOR VEHICLES TO MEET THE FEDERAL EMISSION STANDARDS AND ALSO I WOULD LIKE TO REMIND YOU THAT THESE MANUFACTURERS HAVE TO WARRANTY THOSE DEVICES FOR FIVE FULL YEARS OR 50,000 MILES. IN A SMALL STATE SUCH AS OUR THE REQUIREMENTS AND TECHNICAL EXPERTISE THAT GO ALONG WITH SUCH AN EVALUATION OF THE DEVICES OR MODIFICATIONS OF SUCH DEVICES, AND STILL KEEP THE VEHICLE WITHIN THE FEDERAL EMISSION STANDARDS FOR THE FIVE FULL YEARS AND THEREBY NOT CIRCUMVENT THE FIVE YEAR WARRANTY PROVISION, SHOULD NOT BE PLACED ON THE ENVIRONMENTAL COMMISSION. THIS TYPE OF CERTIFICATION PROGRAM IS VERY COSTLY, AND FOR THE HALF A MILLION MOTOR VEHICLES THAT ARE LOCATED IN THE STATE, I DO NOT BELIEVE IT IS COST EFFECTIVE.

LAST, THE AMENDMENT TO LINE 40 WOULD ENABLE THE COMMISSION TO DESIGNATE AREAS WHERE THE MOTOR VEHICLES WILL HAVE TO BE INSPECTED

PRIOR TO REGISTRATION OR REREGISTRATION BY THE DEPARTMENT OF MOTOR VEHICLES. THE CURRENT BILL A.B. 464 IS ALL INCLUSIVE WHICH REQUIRES ALL OF THE COUNTIES TO PROHIBIT REGISTRATION UNTIL IT IS INSPECTED FOR EMISSION.

I FEEL THIS MAY BE TOO MUCH AT THIS TIME, ESPECIALLY IF WE LOOK AT THE TOTAL PASSENGER TYPE VEHICLES THAT ARE REGISTERED IN THIS STATE, THE DATA WE HAVE INDICATE THERE WERE, AS OF DECEMBER 1976, 368,949 PASSENGER VEHICLES REGISTERED IN THE STATE OF NEVADA, AND FOR THE FOUR COUNTY AREA OF WASHOE, CLARK, DOUGLAS, AND CARSON CITY, THE NUMBER OF VEHICLES WAS 332,360 VEHICLES OR 90% OF THE TOTAL VEHICLES REGISTERED IN THE STATE. THE 10% THAT ARE REGISTERED OUTSIDE OF THOSE COUNTIES WILL NOT HAVE A SIGNIFICANT IMPACT ON AMBIENT AIR QUALITY IN THE COUNTIES WHERE THIS AUTO TYPE POLLUTION IS MEASURED.

IF YOU HAVE ANY FURTHER QUESTIONS, I WILL BE HAPPY TO ANSWER THEM AT THIS TIME.

Number of Violations of One-Hour Ozone Standard

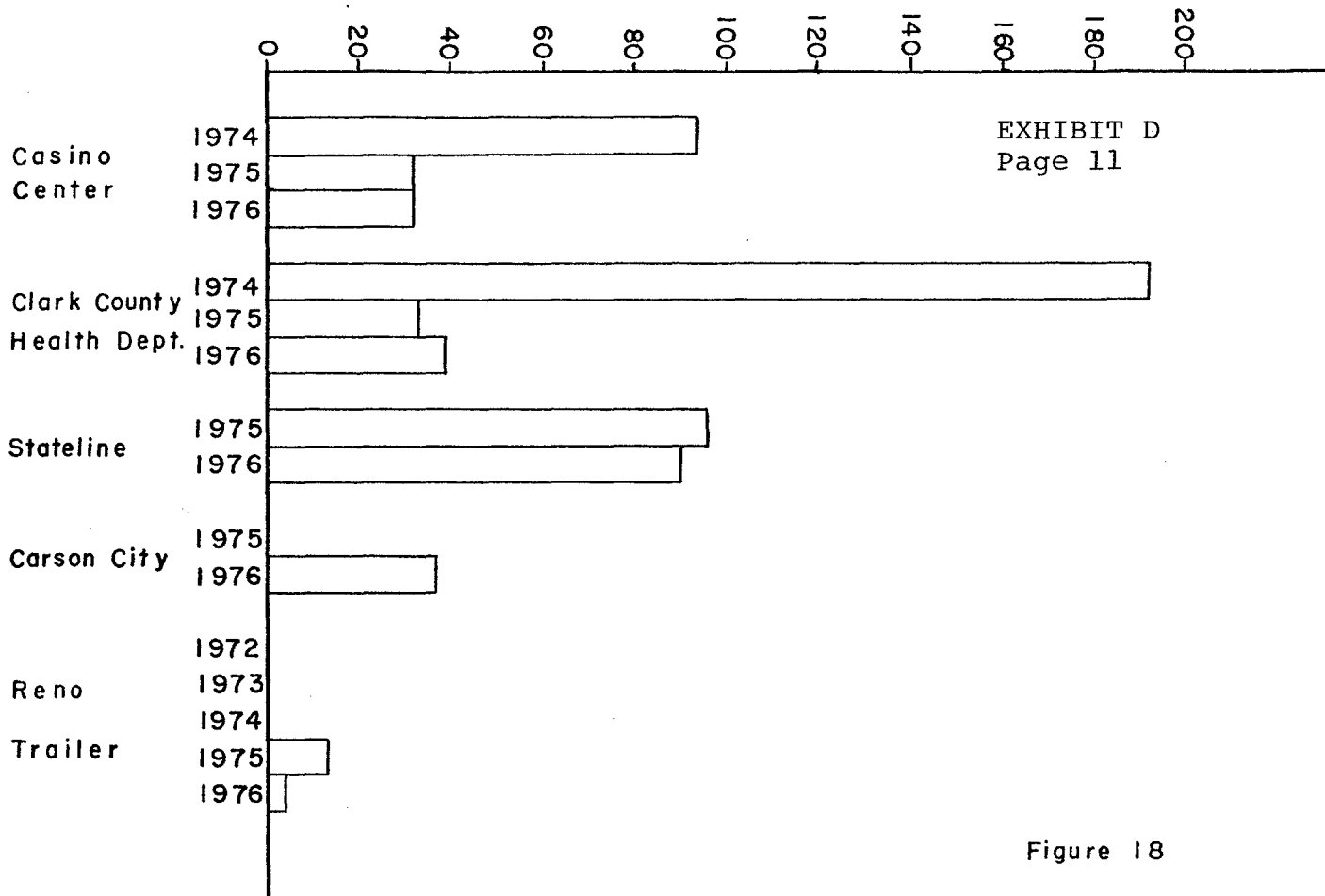
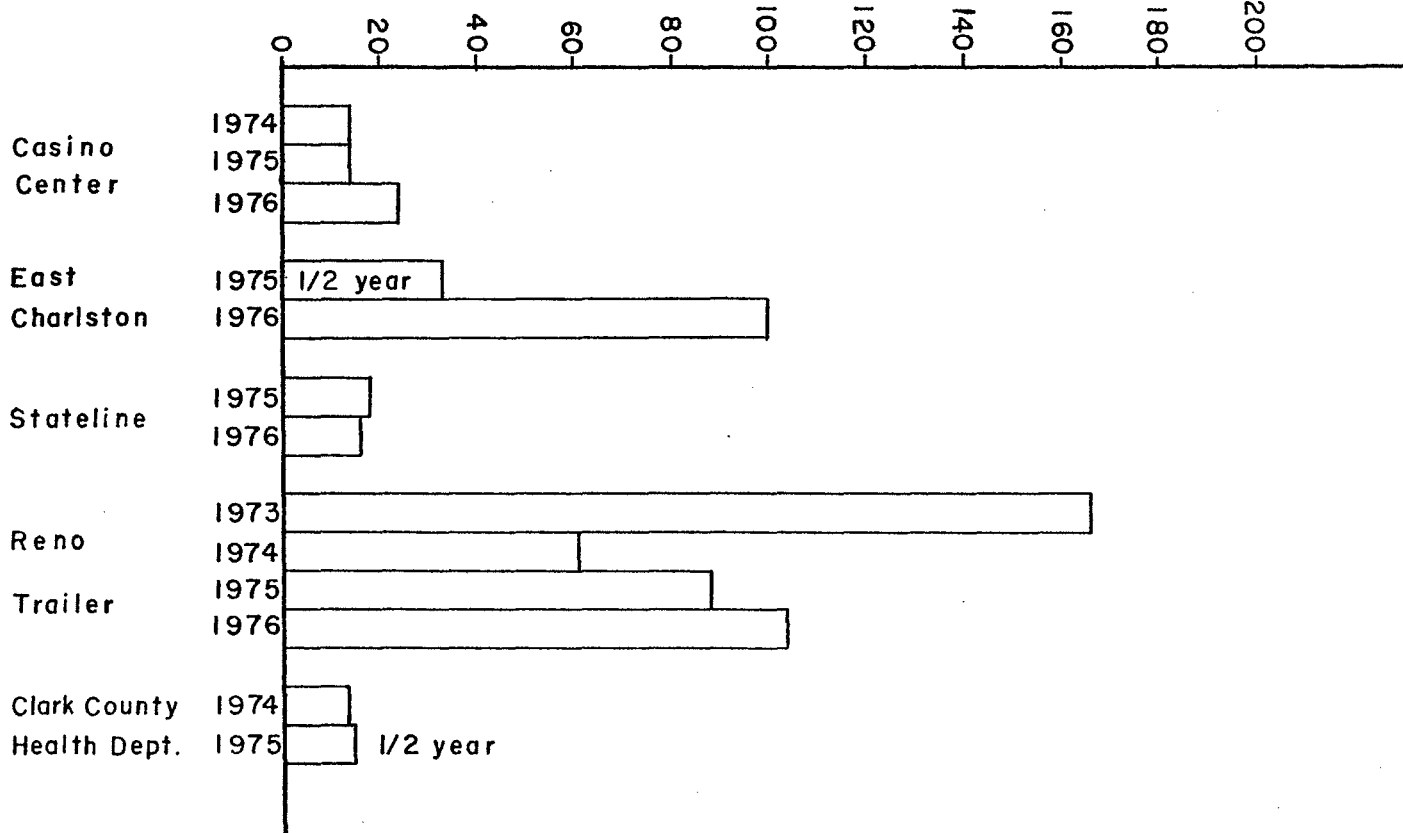


EXHIBIT D
Page 11

Figure 18

Number of Violations of Eight-Hour Carbon Monoxide Standard



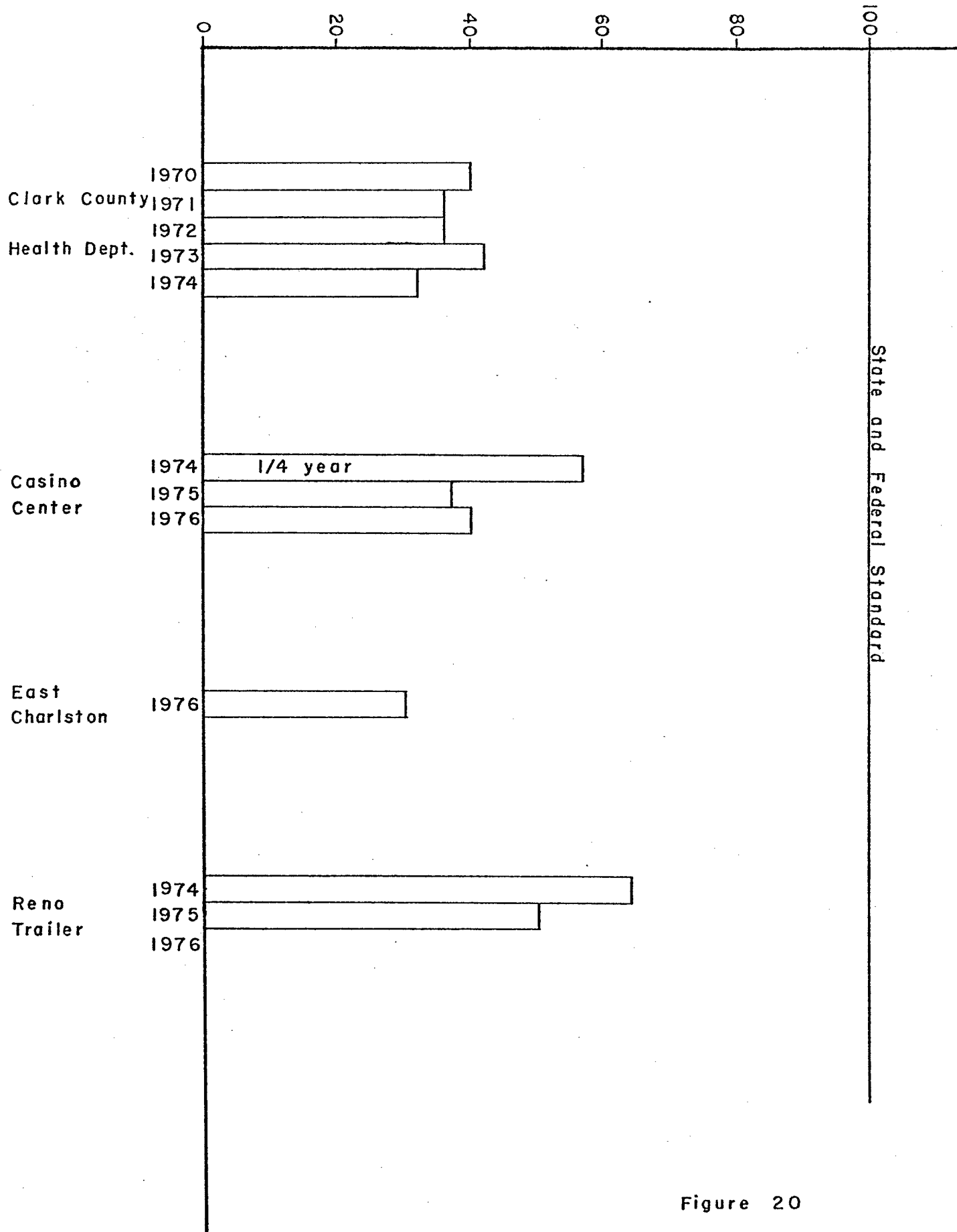


Figure 20

O R E G O N I D A H O

C A L I F O R N I A

U T A H

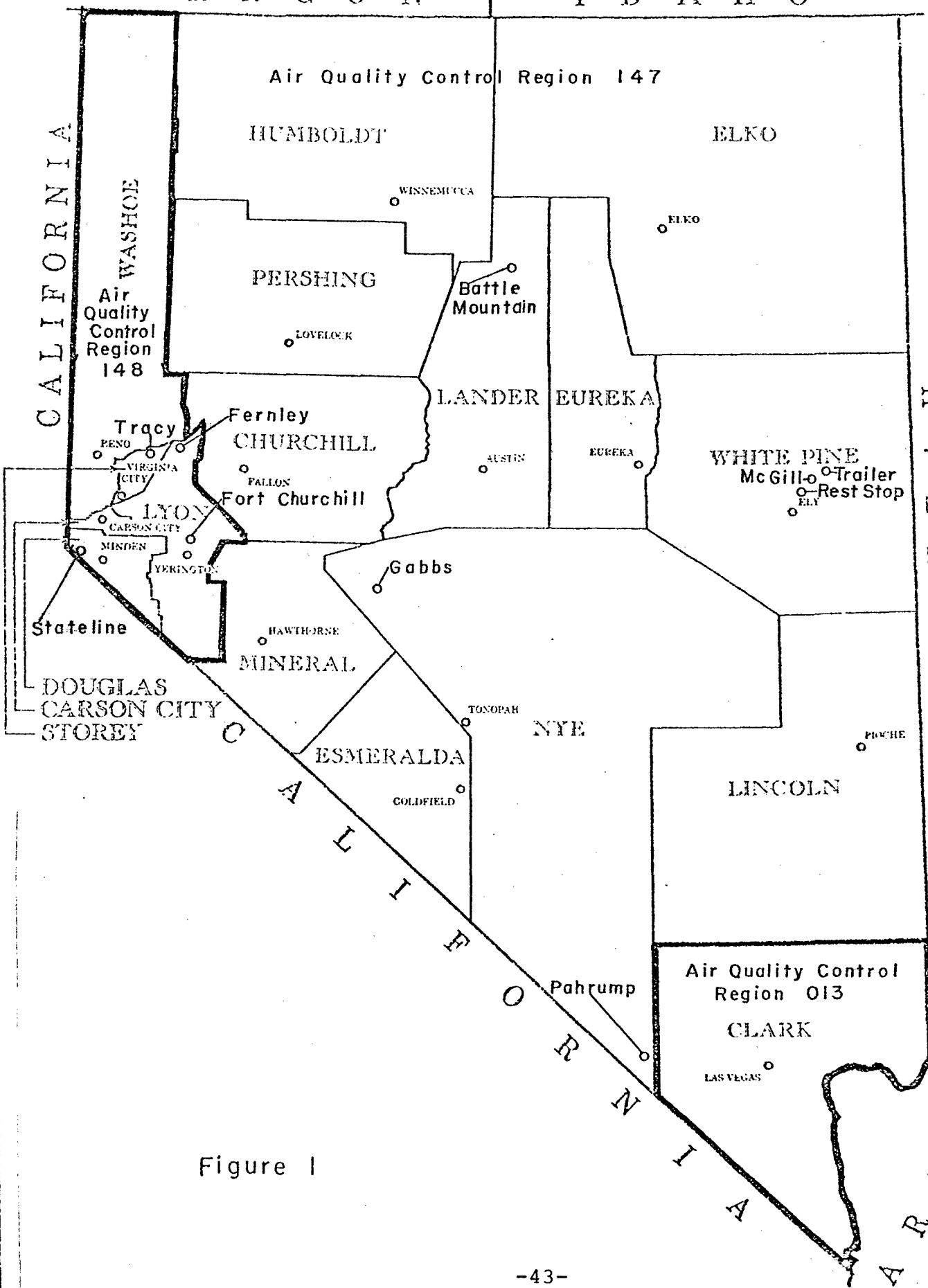
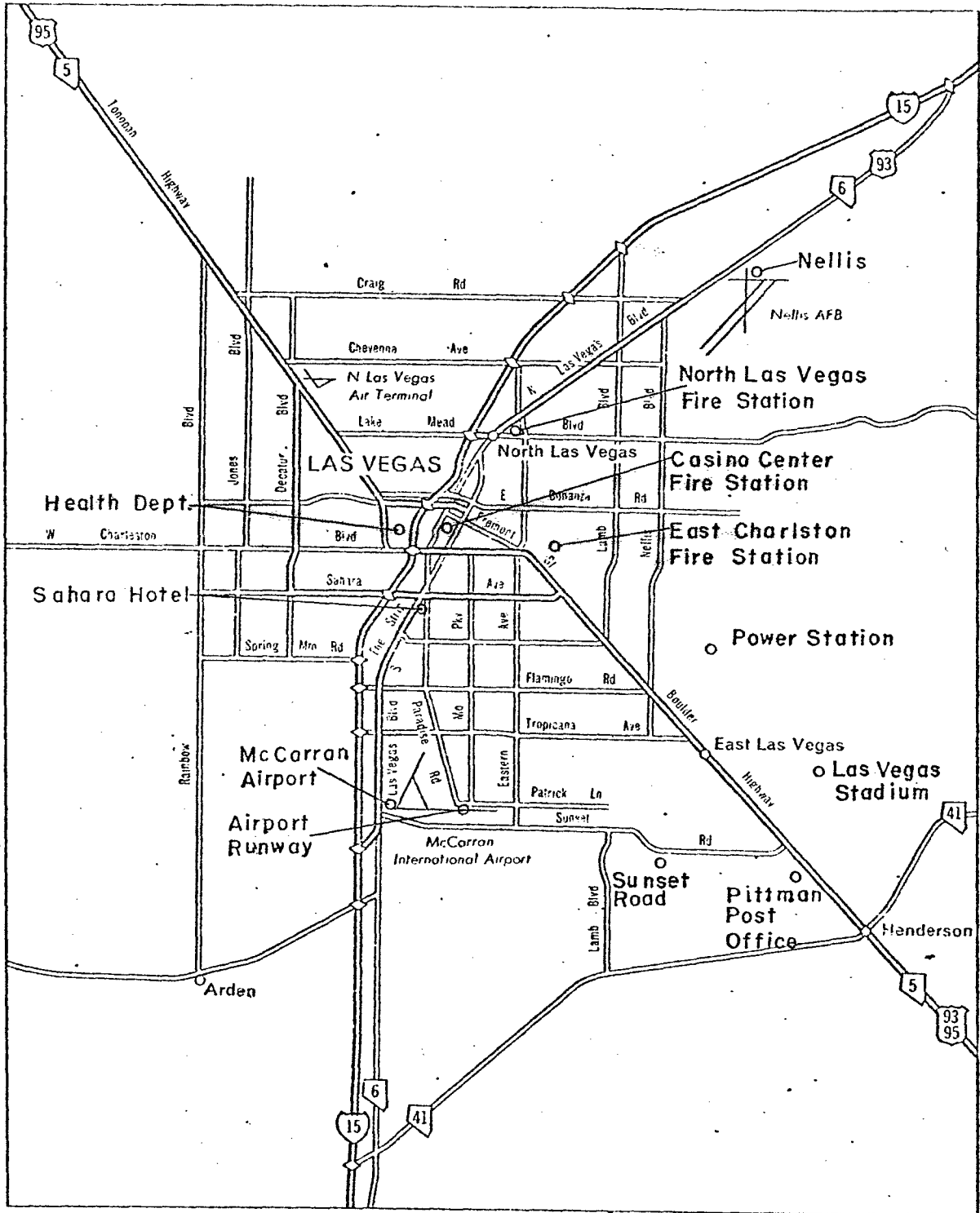
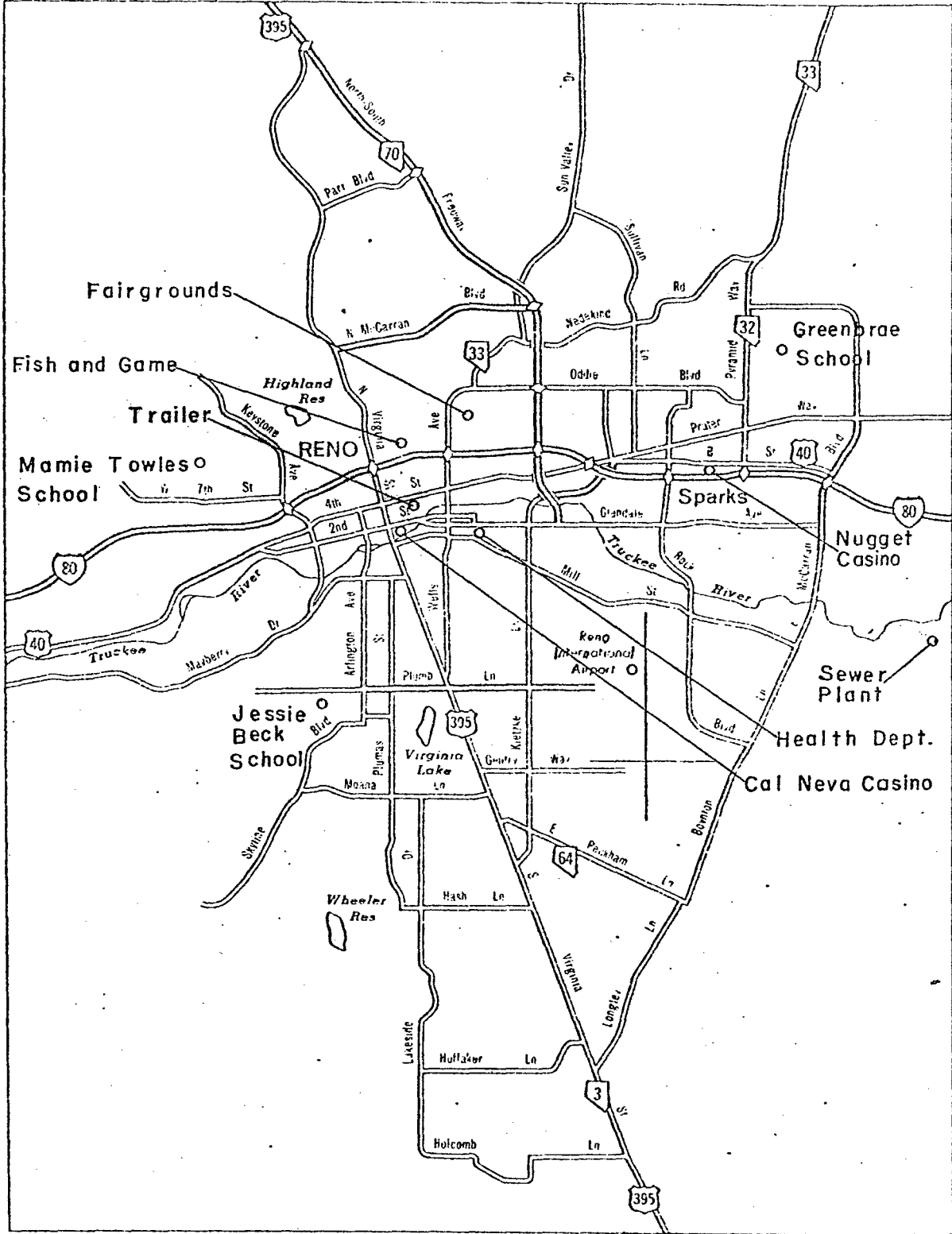


Figure 1



LAS VEGAS AREA

Figure 3



RENO-SPARKS AREA

Figure 5

Clark County Health Department

This site is located at the County Health Department building at 625 Shadow Lane, Las Vegas. The site is population oriented and is located in a residential area approximately three blocks from the Interstate 15 freeway. Pollutants measured -- total suspended particulates, ozone.

Casino Center

This site is located on the roof of the fire station at 300 N. Casino Center Blvd., Las Vegas. The site is population oriented and is in a commercial area. Pollutants measured -- total suspended particulates, carbon monoxide, nitrogen dioxide, ozone, nitric oxide.

Stateline

The site is located in the urbanized area of the Lake Tahoe Basin. It was selected to represent the casino core area. The site supplies data on soiling index, particulates, carbon monoxide, total oxidant, and meteorology. Most of the area around the sampling site is paved or has good ground cover such as on a golfcourse. The major contributor to the pollutants in the area is the automobile.

Carson City

The site is located near the commercial area between major north-south highways by the Capitol and Legislative Buildings. The site presently has data for suspended particulates, total oxidant and meteorology. The area has governmental offices, light industry and tourism as the primary economic base.

Reno-Trailer

This sampler site is located in a trailer at the intersection of Evans and Plaza Streets in downtown Reno. The area is primarily commercial with some light industry in the vicinity. Immediately to the south are the Southern Pacific railroad tracks. Pollutants measured -- carbon monoxide, nitrogen dioxide, soiling index, ozone, hydrocarbons and sulfur dioxide.

Slick

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IX
100 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94111

RECEIVED

MAR 22 1977

Environmental Protection

Mr. Roger Trounday, Director
Department of Human Resources
308 N. Curry Street, Room 205
Carson City, NV 89710

MAR 17 1977

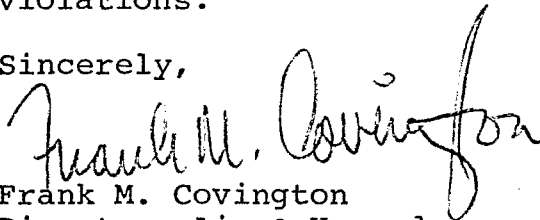
Dear Mr. Trounday:

We have recently received an interesting report on I/M that may be of interest to you and your staff. Enclosed is a summary prepared by EPA's Office of Transportation and Land Use Policy of the report by the Oregon Department of Environmental Quality on their ongoing I/M program in the Portland area.

CO emissions have been reduced 25% and HC emissions 15 percent during the first year of the I/M program.

Portland's aggressive TCP program that includes, bus lanes, carpooling and downtown mall has reduced CO violations by 66% and contributed to a reduction in the number of oxidant violations.

Sincerely,



Frank M. Covington
Director, Air & Hazardous
Materials Division

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: FEB 22 1977

SUBJECT: Report for Oregon House Task Force on Auto
Emission Control

FROM: Thomas E. Wilson *Thomas E. Wilson*
Office of Transportation and Land Use Policy (AW-445)

TO: John O. Hidinger, Director
Office of Transportation and Land Use Policy

The Oregon State Legislature, in early 1976, requested a review of that State's motor vehicle emission control program. An extensive report has been filed by the Oregon Environmental Quality Commission as a result of that request. Pertinent comments, conclusions, and recommendations contained in the report have been extracted and are summarized below. It should be noted that this summation is intended as an overview only-readers are cautioned to refer to the original document for questions of substance.

Background - The Oregon Department of Environmental Quality instituted a mandatory vehicle inspection/maintenance program for the metropolitan Portland area in July 1975. All light-duty vehicles (LDV) registered within the city's Metropolitan Service District (approximately 580,000 vehicles) are required to successfully pass an exhaust emission test prior to renewal of the vehicle's registration. Inspections are required biennially at present as the vehicle registration is valid for a two year period. These inspections are conducted at state-operated facilities utilizing idle mode testing.

Program Effectiveness

Light-duty vehicle exhaust emissions at idle have been reduced an average of 25 percent for CO and 15 percent for HC during the first year of program operation. Until a quantifiable correction between FTP and idle mode testing is established, however, a first year credit of 14 percent CO and 7 percent HC is being projected (based upon AP-42 and Appendix N).

Two factors have been identified that reduce the program's potential effectiveness: 1) the incursion of unregulated vehicles from outside the Portland area limits the program's maximum effectiveness to approximately 90 percent of its potential, and 2) the biennial nature of the inspection requirement limits the program's effectiveness to "considerably less than that of an annual program".

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Air Quality Improvement

Carbon Monoxide - Downtown Portland CO air quality has improved over the past four years as a result of the Portland Transportation Control Strategy (TCS). The number of CO health standard violations has been reduced 66 percent since inception of the TCS, while "worst day" air quality has improved 27 percent.

While a major portion of this improvement in air quality is credited to traffic flow improvements, the benefit of I/M has been noted at monitoring stations located at points unaffected by traffic flow measures. (Impact of FMVCP is not expected to become significant until 1979). Attainment date for CO is projected to be accelerated by approximately 6 years if an annual I/M program is implemented.

Hydrocarbons - Oxidant air quality in downtown Portland has improved since implementation of the TCS. While worst day air quality has not changed significantly, no oxidant ambient air quality standard violations were recorded in downtown Portland during 1975 and one violation recorded in 1976 as compared to 7 days in 1970 and 14 days in 1971. While the report defers any attempt to quantify the contribution of I/M to this reduction until completion of additional studies and modeling efforts, it is stated that "In any event, it is clear that an annual I/M program could greatly aid in reducing the areawide oxidant health standard violations".

Program Expansion

Continued expansion of the metropolitan Portland area may require redefinition of the boundaries within which I/M is required. The development of a region-wide Transportation Control Strategy for the Portland area is also likely to be necessary. The marginal nature of CO and Ox air quality standard violations in the Eugene-Springfield and Salem areas, however, indicate that an I/M Program is probably not justified for these areas at this time.

Private Contractor Operation

The study concludes "that independent contractor operation of the Oregon program is a viable alternative to state operation provided the program is converted to

3.

an annual cycle". No lowering of the vehicle inspection fee would be expected from such a move; however, customer service could be improved due to the contractor's ability to make large capital investments in inspection facilities.

Consumer Costs

Repair costs were found to typically range between \$20 to \$25, with over one-half of all owners reporting repair or adjustment costs of less than \$10. No incidents of consumer "rip-off" were documented.

Type of Repair

Over 78 percent of all failing vehicles were found to require only a simple carburetor adjustment, while an additional 14 percent required a tune-up in order to pass the retest. Overall, 72 percent of rejected vehicles failed for excessive CO only, 13 percent for excessive HC only, and 8 percent for both CO and HC.

An overall retest failure rate of 18 percent was noted. Mechanics appeared to be better able to correct CO malfunctions (14 percent refail rate) as compared to either HC only failures (32 percent refail rate) or CO/HC failures (38 percent refail rate). The type of facility performing the repair was found to be highly correlated with vehicle age, with dealership maintenance decreasing, and home maintenance increasing, as the vehicle ages.

Fleet Self-inspection Program

Under the Portland I/M program, fleets of more than 100 vehicles are allowed to conduct self-inspections. A thorough fleet surveillance program has been conducted in order to determine the effectiveness of this approach. Support and cooperation by the fleet managers was found to be high, and only minor variances were detected in the fleets' testing procedures.

Heavy Duty and Commercial Vehicle I/M

The current inspection program is restricted to vehicles of 8400 lbs or less. Preliminary emission testing conducted on vehicles in excess of this weight indicates

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that potential benefits can be gained by including such vehicles under the inspection program. The wording of some statutes, however, raises the question of authority to require inspections on vehicles which may be registered, in part, to operate outside the State of Oregon. This, and other, legal question must be resolved before the inspection program is extended to heavy-duty gasoline powered vehicles.

Program Circumvention

Impact upon program effectiveness by individuals seeking to avoid the program requirements by either falsifying their place of residence or readjusting the vehicle after passage of the emissions test was reviewed. The incidence of improper vehicle registration was found to be "very small". Several surveys of tampering placed the incidence of readjustment following maintenance at approximately 20 percent.

Waiting Time Survey

A six week study was conducted to determine the average waiting time at the various inspection stations. The results of the study indicated that the overall average system waiting time was approximately 15 minutes, with a range from 5.8 minutes to 21.7 minutes at different facilities.

Exhaust Analyzer Accuracy Survey

Exhaust analyzer repeatability and accuracy between inspection stations was studied over an extended period of time via a cross-reference procedure. This method "has effectively documented the accuracy and repeatability of the testing equipment."



AB 404

An amendment should be requested at Page 2, line 16, as follows:
"such fleet. Such certification shall be valid for one year from
the date of last emission certification and such emission certi-
fication shall be valid for any interim registration period."