



Cal/EPA

California
Environmental
Protection
Agency



Air Resources Board

H A A G E N - S M I T
LABORATORY
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El Monte, CA
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Mail Out #MSC97-02

February 4, 1997



Pete Wilson
Governor

James M. Strock
Secretary for
Environmental
Protection

To: ALL INTERESTED PARTIES

Re: Notice of Workshop Concerning Development of Voluntary
Accelerated Vehicle Retirement Program Regulations

This letter is notification of two public workshops, both to be held on one day by the staff of the California Air Resources Board (ARB), concerning the development of regulations for voluntary accelerated vehicle retirement programs. These will be the third and fourth workshops on this subject.

The subject of the third workshop will be the draft regulations as developed by the ARB staff. A draft of the regulations is attached to this letter as Appendix A. A staff discussion of the regulations is attached as Appendix B. This workshop to discuss the draft regulations will be held at the following time and location:

Friday, March 7, 1997
1:00 p.m. to 3:00 p.m.

California Air Resources Board
Annex 4
9530 Telstar Ave.
El Monte, California

Senate Bill 501 of 1995, the legislation mandating these regulations, specifically directs that the regulations be sensitive to the concerns of car collector interests. On Thursday, August 15, 1996, ARB staff held a workshop dedicated to issues of concern to car collectors. At that workshop, several comments were made to the effect that it is difficult for the majority of individuals with car collector interests to attend workshops during working hours and therefore an evening workshop would be helpful. To accommodate this concern, ARB staff has scheduled a repeat of that workshop, this time to be held during the evening, to address again the car collector issues surrounding voluntary accelerated vehicle retirement programs. This fourth workshop will include the latest staff proposals in this area, updated since the August workshop. This collector issues workshop will be held at the following time and location:

Friday, March 7, 1997
7:00 p.m. to 9:00 p.m.

California Air Resources Board
Annex 4
9530 Telstar Ave.
El Monte, California

In November 1994, ARB approved the State Implementation Plan (SIP), which outlines the approach to be taken in bringing the state's air quality into attainment with federal ozone standards.

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One measure contained in the SIP is measure M1, which calls for accelerated retirement of older, higher-emitting light-duty vehicles in the South Coast Air Basin. Full implementation of this measure is intended to begin in 1999 and will achieve emission reductions of reactive organic gases (ROG) and oxides of nitrogen (NOx), eventually resulting in a reduction of 25 tons per day of ROG + NOx in 2010. The SIP also provides for such programs in other areas of the state, on an as-needed basis. In October 1995, the Governor signed Senate Bill 501 (SB 501), which directs ARB to develop regulations concerning programs to encourage the voluntary accelerated retirement of older, light-duty vehicles in the state. These regulations will define the method by which SIP measure M1 and similar programs will be implemented.

A vehicle owner, whose vehicle meets criteria to be contained in the regulations, will be given the opportunity to sell the vehicle to a program operator. The program operator would then dispose of the vehicle in such a manner as to ensure it does not return to service. Participating vehicle owners would be compensated financially with an amount to be determined by the market. Upon vehicle disposal, the program operator would be granted mobile source emission reduction credits of appropriate value, which may in turn be sold on the open market.

The staff will make a presentation concerning the proposed regulations at the March 7, 1997 afternoon workshop. In addition, the ARB assembled a Technical Advisory Group (TAG) to help address the details of the credit calculation procedure. Accordingly, a brief presentation of the TAG's recommendations also will be presented for comment at the March 7, 1997 afternoon workshop. At the March 7, 1997 evening workshop, the staff will make a presentation describing those portions of the draft regulations involving issues of importance to car collectors.

Because the regulations are still in the development stage, the staff is interested in public input on these subjects and would like to receive constructive comments and suggestions related to these draft regulations. Please note that the draft regulations reference two documents to be incorporated by reference. These documents are not included in this workshop notice package, but will be available at the workshop. In addition, that section of the regulations concerning purchase of credits by the ARB is still being developed and will also be available at the workshop.

Of course, the staff is always interested in obtaining feedback on all areas of public interest to this project. ARB encourages all interested parties to present comments and information on the subject of voluntary accelerated vehicle retirement for emission reductions at these workshops. Those who are unable to participate in person at the workshops or who wish to supply additional information are encouraged to submit written comments. Workshop participants who wish to discuss unresolved technical issues or confidential data may schedule individual meetings with the staff.

The public board hearing for this regulatory item has been tentatively scheduled for June 1997. If you have any questions or comments regarding this subject, please contact Ms. Krista Fregoso, Air Pollution Specialist, Regulatory Strategy Section, at

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(916) 445-5035, or Mr. Steve Church, Air Resources Engineer,
Regulatory Strategy Section, at (916) 323-5189 or by e-mail to
schurch@arb.ca.gov on the Internet.

Sincerely,

/s/

Robert H. Cross, Chief
Mobile Source Control Division

Attachments

Appendix A
Draft Regulations

Title 13, California Code of Regulations
Division 3, Air Resources Board
Chapter 13, Voluntary Accelerated Vehicle Retirement Enterprises
Article 1, Voluntary Accelerated Light-Duty Vehicle Retirement Enterprises

§2600 Purpose: The provisions of this article apply to the generation of emission reduction credits through the accelerated retirement of light-duty on-road motor vehicles, including passenger cars and light-duty trucks.

§2601 Definitions:

- (a) “voluntary accelerated vehicle retirement” (“VAVR”) means the use of cash payments or other incentives to encourage a vehicle owner to voluntarily retire his or her vehicle from service earlier than otherwise would have occurred;
- (b) “Inspection and Maintenance Program” (“I/M”) or “Smog Check” means the motor vehicle inspection program established by the Health and Safety Code section 44000, et seq.;
- (c) “enterprise operator” means a person who conducts a voluntary accelerated vehicle retirement enterprise according to these regulations. The enterprise operator purchases vehicles, arranges for a vehicle’s permanent removal from operation, and receives any emission reduction credit generated thereby;
- (d) “dismantler” means the person or business, licensed according to the requirements of the California Vehicle Code §220, et seq., and other business codes and the regulations of the Department of Motor Vehicles, who dismantles or otherwise removes from service those vehicles obtained as part of a voluntary accelerated vehicle retirement enterprise;
- (e) “emission reduction credit” means a credit representing the amount of emission reductions from accelerated retirement of vehicles, which can be applied to the emission reduction obligations of another source or to air quality attainment goals. VAVR enterprises can generate emission reduction credits that may be sold on the open market;
- (f) “pilot program” means a limited VAVR enterprise to be conducted under contract to the Air Resources Board (“ARB” or “Board”) during the first two years following adoption of these regulations, with the intent of assessing the effectiveness of such enterprises and of these regulations;
- (g) “SIP” means the State Implementation Plan for ozone attainment, approved by the Board in 1994 and as subsequently amended;
- (h) “measure M1” means the mobile source control measure of the SIP which calls for utilizing VAVR enterprises in the South Coast Air Basin for the purpose of achieving needed emission reductions;
- (i) “NOx” means oxides of nitrogen, NO and NO₂, measured as NO₂, emitted in automotive exhaust;
- (j) “CO” means carbon monoxide, as emitted in automotive exhaust;
- (k) “PM” means particulate matter, as emitted in automotive exhaust;
- (l) “ROG” means reactive organic gas emissions, as emitted in both automotive exhaust and evaporative emissions;

- (m) “district” means local air quality management district or air pollution control district which has responsibility for administering VAVR enterprises within its jurisdiction;
- (n) “Executive Officer” means the Executive Officer of the Air Resources Board;
- (o) “collector-interest vehicle” means any vehicle purchased by a car collector or car enthusiast primarily for its historic or esthetic value, rather than primarily as a means of transportation;

§2602 District Responsibility

- (a) Within 6 months of the date of adoption of these regulations, each district allowing the operation of VAVR programs within its jurisdiction will implement and enforce these regulations, or will amend existing rules to comply with these regulations.
 - (1) Existing operators of accelerated retirement enterprises shall comply with district rules and these regulations;
- (b) Each participating district shall have responsibility, with ARB oversight, for administering and auditing VAVR enterprises conducted within its jurisdiction;
- (c) Each participating district shall administer and monitor the use of credits generated by enterprises operated under these regulations and shall, with ARB oversight, certify or reject the accuracy and validity of any credits generated, as required;

§2603 Vehicle Eligibility

- (a) To be eligible for generation of emission reduction credits through a VAVR enterprise, a vehicle shall meet the following criteria:
 - (1) It shall be voluntarily sold to the enterprise operator for a price mutually agreed by the seller and the operator;
 - (2) It shall be currently registered with the Department of Motor Vehicles as an operable vehicle, and shall have been so registered for 24 consecutive months immediately prior to the final date of sale to the VAVR enterprise, to an address or addresses within the district in which the enterprise is being operated. A vehicle may also be eligible if the owner of the vehicle placed the vehicle in planned nonoperational status per Vehicle Code §4604, et seq., for a total of two months during the continuous 24 month registration period, occurring at least three months prior to the date of sale to the VAVR enterprise. Acceptable evidence of the vehicle’s registration history or planned nonoperational status history can consist of:
 - (i) confirmation based on Department of Motor Vehicles records or Bureau of Automotive Repair Smog Check data base records, or;
 - (ii) copies of the applicable vehicle registration certificates or planned nonoperation status certificates covering the necessary time period, as presented by the vehicle owner, or;
 - (iii) a copy of the most recent vehicle registration certificate and/or planned nonoperation status certificate in combination with a sworn statement from the vehicle owner, made under penalty of

perjury, as to the address to which the vehicle was registered for any portion of the required 24 consecutive month time period not covered by the submitted registration certificate and/or planned nonoperation status certificate;

- (3) It shall be a passenger car or light-duty truck, meeting the requirements for participation in Smog Check II inspections, except those subject only to change-of-ownership inspections;
 - (4) It shall not be flagged as an unrepaired gross polluter or an unrepaired high emitter in the Bureau of Automotive Repair's Smog Check data base, and shall not be operating under a Smog Check II waiver or hardship extension;
 - (5) It shall be operational and equipped according to these requirements:
 - (i) The engine shall start readily through ordinary means, without the use of starting fluids or external booster batteries;
 - (ii) The vehicle shall be driven forward a minimum distance of ten yards, and in reverse a minimum distance of ten yards, in the presence of the enterprise operator;
 - (iii) The vehicle shall have the required equipment including, but not be limited to: windshields and other glass, lights, bumpers, brakes, turn signals, seat belts, horn, doors, hoods, trunk lids and any equipment required under the California Vehicle Code. Minor infractions, such as burnt out bulbs or windshield cracks, of themselves shall not render a vehicle ineligible;
 - (iv) The vehicle shall be driven to the purchase site under its own power;
- (b) Candidate vehicles shall be inspected by a Bureau of Automotive Repair Smog Check II referee station inspector, or the inspector of another ARB-approved facility, to verify the vehicle's functional and equipment eligibility for participation under this section;
- (1) The inspection shall include verification of the eligibility requirements of §2603 (a);
 - (2) The fee for this eligibility inspection shall be paid by the vehicle owner and shall not exceed \$20;
 - (3) Upon satisfactory completion of the inspection, the inspector will issue a certificate of functional and equipment eligibility;
 - (i) At a minimum, the certificate of functional and equipment eligibility shall state that the vehicle was inspected by a Bureau of Automotive Repair Smog Check II referee station inspector, or the inspector of another ARB-approved facility, who found the vehicle meets the requirements of §2603 (a)(3), (a)(4) and (a)(5)(I) through (iii). The certificate shall also contain the inspector's name, Bureau of Automotive Repair or other appropriate inspector identification designation, the inspector's signature attesting to the

- validity of the inspection under penalty of perjury, the date and time of the completion of the inspection, and the address and the Bureau of Automotive Repair identification designation, or other appropriate identification designation, for the inspection station where the inspection was conducted;
- (ii) A master copy of the certificate of functional and equipment eligibility is included in the document “Voluntary Accelerated Vehicle Retirement Certificate of Functional and Equipment Eligibility and Inspection Form”, incorporated herein by reference;
 - (iii) The certificate of functional and equipment eligibility shall be valid for a period not to exceed 30 days from the date of issue;
- (4) Vehicles which do not meet the functional and equipment eligibility criteria of this section, as determined by the inspector, shall not be issued a certificate of functional and equipment eligibility and cannot be retired to generate emission reduction credits through a VAVR enterprise;
- (i) A vehicle owner who disputes the outcome of an eligibility inspection shall submit the matter in writing within 30 days of the date of the inspection, with full description of the specific issue and with copies of any applicable documentation, to the district for resolution. Should the district subsequently determine that the vehicle meets the eligibility requirements of this section, the district will issue to the vehicle owner a letter to that effect, such a letter will be considered to be the same as a certificate of functional and equipment eligibility, valid for a period not to exceed 30 days from the date of issue;
- (5) At time of final sale to the VAVR enterprise, the vehicle owner shall provide a written statement, made under penalty of perjury, that the vehicle equipment configuration and functional operability have not been changed since the time of inspection;

§2604 VAVR Enterprise Operator Requirements

- (a) The enterprise operator shall either:
 - (1) be an auto dismantler, licensed according to the requirements of the California Vehicle Code and other business codes and the regulations of the Department of Motor Vehicles, for the purpose of vehicle disposal after purchase, or
 - (2) have a binding agreement with a duly authorized auto dismantler, for the purpose of vehicle disposal after purchase;
- (b) The enterprise operator shall verify that a vehicle purchased as part of a VAVR enterprise and whose accelerated retirement creates emission reductions that are to be used as the basis for generating emission reduction credits, meets the vehicle eligibility requirements of §2603 (a) (1) through (a) (2), obtain from the vehicle owner the certification of functional and equipment eligibility issued per §2603 (b) , and confirm the requirements of §2603 (a) (5) (iv) and §2603 (b) (5).

- (c) A vehicle purchased as part of a VAVR enterprise and whose accelerated retirement creates emission reductions that are to be used as the basis for generating emission reduction credits, shall be permanently destroyed by the enterprise operator, or the enterprise operator's duly contracted dismantler, within 30 days of the date it is sold to the enterprise operator, and may not be resold to the public or put into operation in any way, except such a vehicle may be briefly operated for purposes related to the dismantling or disposal of the vehicle as part of normal disposal procedures;
 - (1) For purposes of this regulation, the vehicle will be considered destroyed when the engine block or crankcase has been rendered permanently nonfunctional as described in §2604(c)(2)(I), and all appropriate records maintained by the Department of Motor Vehicles have been updated to reflect that the vehicle is permanently removed from service and its Vehicle Identification Number cannot be reregistered in accordance with the Department of Motor Vehicles regulations, the California Vehicle Code and the California Health and Safety Code §44011, et seq.;
 - (2) Within 30 days of the date of sale of the vehicle to the enterprise operator, any part may be removed from the vehicle and resold by the dismantler where permitted by, and in accordance with, existing local, state and federal law or regulation, except the engine block in the case of liquid-cooled engines, or the crankcase in the case of air-cooled engines, either by itself or with other parts attached, shall not be resold and shall be rendered permanently nonfunctional, within 30 days of the date of sale of the vehicle to the enterprise operator. A retired vehicle whose engine block or crankcase, as applicable, is not destroyed in accordance with this subparagraph, shall not be eligible as the basis for generating emission reduction credits under these regulations;
 - (i) Within 30 days of the date of sale of the vehicle to the enterprise operator, that portion of the vehicle remaining after any components have been removed according to this paragraph, shall be crushed, shredded or otherwise rendered permanently and irreversibly incapable of functioning as originally intended;
 - (ii) All retired vehicle fluids and hazardous materials shall be disposed according to existing local, state and federal laws and regulations;

§2605 Offering Vehicles to the Public

- (a) There shall be a minimum period of 14 days between the time a vehicle is first offered for sale into a VAVR enterprise and the time of completion of the sale;
 - (1) During this period, with the vehicle owner's permission, the enterprise operator will submit a description of the vehicle to the local district, which in turn will make it available to the public, including local car collector enthusiasts and their organizations, for a minimum of 10 days for purposes of allowing interested third parties to examine the car and to negotiate with

the owner for purchase of the vehicle before it is otherwise sold to the VAVR enterprise;

- (i) At a minimum, the description shall consist of the vehicle make, model, model year, a brief equipment description (including engine type and displacement, and transmission type), odometer reading, a general appraisal of vehicle condition, and, with the owner's permission, the owner's name and telephone number or other appropriate contact information;
 - (ii) The vehicle owner is free to accept or reject any resulting purchase offer and shall be informed explicitly and prominently of such right;
 - (iii) The vehicle owner shall be informed explicitly and prominently of the right to deny permission to make personal information and the vehicle's description available for such public distribution. If the vehicle owner denies such permission, the 14 day minimum waiting period requirement is waived;
- (2) The enterprise operator shall also make use of this time period, if available, to conduct any necessary steps, where appropriate and as required by these regulations or other existing laws and regulations, related to the purchase of vehicles for dismantling purposes;
 - (3) No emission reduction credits shall be granted for any vehicle resold to the public in this manner;
- (b) At the enterprise operator's discretion, the enterprise operator may make a vehicle purchased as part of a voluntary accelerated vehicle retirement enterprise available for sale to the general public, provided:
- (1) Any person selling a vehicle to a VAVR enterprise operator may specify that the vehicle shall not be resold to the public, in which case the enterprise operator may not make such vehicle available for sale;
 - (i) The enterprise operator shall provide full and prominent disclosure of this non-resale option to the seller during the initial contact between the operator and the seller;
 - (2) The resale of the vehicle shall follow commonly accepted practices and all requirements of law and regulation in effect at time of resale;
 - (3) No emission reduction credits shall be granted for any vehicle resold to the public in this manner;

§2606 Advertising

- (a) Any advertising conducted by an enterprise operator for the purpose of recruiting vehicle owners to sell their cars into a VAVR enterprise, shall include the following disclaimer statement conspicuously located: "This voluntary accelerated vehicle retirement enterprise is conducted by a private operator under the auspices of the State of California and your local air pollution control district/air quality management district. It is not conducted by the State of California. State funds are not used for the purchase of vehicles. Your

participation is entirely voluntary. Emission reductions resulting from voluntary accelerated vehicle retirement may or may not result directly in air quality improvements.”

- (1) This disclaimer statement also shall be prominently displayed in any contracts or agreements between a vehicle seller and an enterprise operator relating to the sale of a vehicle into a VAVR enterprise.
- (b) Any enterprise operator requesting the Department of Motor Vehicles to send notices to vehicle owners as prospective VAVR participants pursuant to Health and Safety Code §44013, shall meet the following requirements:
 - (1) Prominently display the disclaimer statement of §2604 (f) in any such notices;
 - (2) Provide the Department of Motor Vehicles with adequate criteria for selecting as notice recipients those registered vehicle owners who own the desired target vehicles. Such criteria may consist of the desired vehicle makes, models, model years, geographical locales, or any other criteria deemed acceptable or necessary by the Department of Motor Vehicles;
- (c) At time of final sale of a vehicle to the VAVR enterprise, the enterprise operator shall verify that the person delivering the vehicle for sale is the legal owner or a legal representative of the legal owner, properly empowered to complete the sale;
 - (1) The enterprise operator shall verify with the Department of Motor Vehicles that no unsatisfied liens are attached to the vehicle;

§2607 Emission Reduction Credits

- (a) Emission reduction credits shall be generated under these regulations for reductions of emissions of NOx, ROG, CO and PM, as provided in this section. The magnitude of the credit for each of these pollutants as generated by the accelerated retirement of an individual vehicle, shall be based on emission reductions calculated according to the following formulae, definitions and data:

$$ExhReduction = [(ER_{retired} \times VMT_{retired}) - (ER_{replacement} \times VMT_{replacement})] \times LIFE_{retired}$$

where:

ExhReduction = total emission reduction for tailpipe emissions (grams/life);

ER_{retired} = the retired vehicle emission rate (grams/mile);

VMT_{retired} = the retired vehicle miles traveled(miles/year);

LIFE_{retired} = the retired vehicle remaining life (years);

ER_{replacement} = the replacement vehicle emission rate (grams/mile);

$VM T_{replacement}$ = the replacement vehicle miles traveled (miles/year);

and:

$EvapReduction =$

$$\begin{aligned} & [(ER_{runloss})_{retired} - (ER_{runloss})_{replacement}] \times VM T_{retired} \\ & + [(ER_{hotsoak})_{retired} - (ER_{hotsoak})_{replacement}] \times Trips_{retired} \\ & + [(ER_{diurnal})_{retired} - (ER_{diurnal})_{replacement}] \times 365days/year \\ & + [(ER_{resting})_{retired} - (ER_{resting})_{replacement}] \times 365days/year \\ & \times Life_{retired} \end{aligned}$$

where:

$EvapReduction$ = total lifetime reduction of evaporative ROG emissions (grams/life);

$ER_{runloss}$ = running loss evaporative emission rate (grams/mile);

$ER_{hotsoak}$ = evaporative emission rate attributed to hot soak after shut down (grams/trip);

$ER_{diurnal}$ = emission rate for evaporative emissions occurring while vehicle is not operating and during periods of ambient temperature increase (grams/day);

$ER_{resting}$ = emission rate for evaporative emissions occurring while vehicle is not operating and during periods of constant or decreasing ambient temperature (grams/day);

$Trips_{retired}$ = number of trips per year expected from retired vehicle;

Evaporative emission reduction calculations shall apply only to ROG emissions.

- (1) The numerical values to be used for the quantities of this section shall be taken from the document entitled "Voluntary Accelerated Vehicle Retirement Program Emission Reduction Calculation Data" incorporated herein by reference;

- (2) The maximum credit amount shall be no greater than the calculated emission reduction on which the credit is based. Districts may apply a discount factor to credits calculated under these regulations, consistent with applicable district and Board credit rules and programs;
- (3) Credit usage shall be in accordance with all federal, state and local laws and regulations in effect at time of usage;

§2608 Records, Auditing and Enforcement

- (a) The following requirements for records, auditing, and enforcement shall be met:
 - (1) An enterprise operator shall retain copies of the following information for a minimum period of 6 years for each vehicle removed from operation for the purpose of generating emission reduction credits:
 - (i) Vehicle Identification Number (VIN);
 - (ii) Vehicle license plate number;
 - (iii) Engine block serial number;
 - (iv) Vehicle model year;
 - (v) Vehicle odometer reading;
 - (vi) Vehicle make and model;
 - (vii) Name, address and phone number of person selling vehicle to the enterprise operator;
 - (viii) Contact name, address and phone number for person or organization purchasing or utilizing emission reduction credit resulting from retirement of vehicle;
 - (ix) The emission reduction amount calculated per this section;
 - (x) Date of purchase of vehicle;
 - (xi) Date of sale of resulting emission reduction credits;
 - (xii) Name and business address of Smog Check referee facility which conducted the vehicle's eligibility inspection;
 - (xiii) Reproductions of vehicle title and registration, as signed-off by seller at time of final sale to the VAVR enterprise;
 - (xiv) Reproduction of the applicable certificate of eligibility;
 - (xv) Reproduction of the applicable Report of Vehicle to be Dismantled and Notice of Acquisition (California Department of Motor Vehicles Registration 42 form);
 - (2) Enterprise operators shall make all records required in this section available to the district for audit upon request;
 - (i) Upon request, the data contained in records required in §2608 (1) (I) through (xii) shall be transmitted to the district in an electronic database format to be determined by mutual agreement between the district and the enterprise operator;
 - (3) The district shall conduct announced and unannounced audits and on-site inspections of VAVR enterprise operators to ensure that enterprises are being operated according to all applicable rules and regulations. The district shall report the results of all such audits and inspections to the

Executive Officer, and shall notify any noncompliant enterprise operator of the nature of the violation and shall initiate any enforcement or remedial action necessary;

- (i) Enterprise operators and their subcontractors shall allow the district to conduct announced and unannounced audits and inspections and shall cooperate fully in such situations;
- (ii) Upon notification by the district that credit miscalculations have erroneously granted a higher credit amount for the retirement of a particular vehicle or vehicles, the person or organization purchasing or utilizing such erroneous credits shall immediately cease using the disputed amount of the credit or credits. The purpose of this subparagraph is to prevent the continuance of excess emissions in the amount of the miscalculated credits.
- (iii) Upon notification by the district that credit miscalculations have erroneously granted a higher credit amount for a particular vehicle or vehicles, the enterprise operator will immediately make available to the person or organization purchasing or utilizing such erroneous credits, additional credits in the amount of the shortfall, prorated over the time period of the usage of the credit shortfall. The purpose of this subparagraph is to provide immediate reductions equal to the excess emissions which have already occurred, in the amount of the miscalculated credits;
- (iv) Violation of any provision of these regulations, including falsification of any information or data shall be grounds for the district or the ARB Executive Officer to revoke any resulting emission reduction credits and also shall make the violator subject to all other applicable penalties described in the California Health and Safety Code;

§2609 Pilot Program

- (a) Plan to Guide Execution of Pilot Program, Assess Results and Formulate Recommendations:
 - (1) The Board will contract with an interested party to conduct a pilot program in the South Coast Air Basin, to be completed no later than two years after adoption of these regulations;
 - (2) The pilot program will be designed to test the efficacy of these regulations with regards to the goals of SIP measure M1 and VAVR-for-credit operations in general;
 - (3) The pilot program will determine a baseline of the current population of vehicles by model year and market value and the current turnover rate of vehicles, and other factors that may be essential to assessing the effectiveness, cost-effectiveness, and market impacts of VAVR enterprises;

- (4) The Board will publish a report at the end of each calendar year for which the pilot program is operated. This report will include:
 - (i) The number of vehicles retired, by model year.
 - (ii) The measured emissions of any retired vehicles tested during the report period;
 - (iii) Costs of the vehicles in terms of amounts paid to sellers, and the cost-effectiveness of voluntary accelerated vehicle retirement expressed in dollars per ton of emissions reduced.
 - (iv) Administrative and testing costs for the program.
 - (v) Assessments of the replacement vehicles or replacement travel by model year or emission levels, as determined from interviews, questionnaires, diaries, analyses of vehicle registrations in the study region, or other methods as appropriate.
 - (vi) Assessments of the net emission benefits of voluntary accelerated vehicle retirement in the year reported, considering the retired vehicles, the replacement vehicles, and other effects of the program on the mix of vehicles and use of vehicles in the geographical area of the program, including in-migration of other vehicles into the area and any tendencies to increased market value of used vehicles and prolonged useful life of existing vehicles, if any.
 - (vii) Assessments of whether the M-1 strategy of the 1994 SIP can reasonably be expected to yield the required emission reductions.
 - (viii) Assessments of typical retired vehicle operating condition, historical mileage, and other relevant vehicle data;

§2610 Procurement of Credits for SIP Measure M1

- (a) TO BE DETERMINED

Appendix B
Staff Discussion

Development of SB 501 Voluntary Accelerated Light-Duty Vehicle Retirement Enterprise Regulations

I. INTRODUCTION AND BACKGROUND

A. Introduction

The Air Resources Board (ARB) staff is proposing regulations governing the operation of voluntary accelerated light-duty vehicle retirement enterprises. Voluntary accelerated vehicle retirement (VAVR) enterprises seek to encourage the early retirement of portions of the older vehicle fleet. By providing owners of eligible vehicles with a monetary incentive to retire their older vehicles sooner than would have occurred naturally, normal fleet turnover is accelerated and vehicle-miles-travelled (VMT) are transferred to newer model-year vehicles using cleaner, more advanced emission control technology. Primary candidate vehicles for VAVR enterprises covered by the draft regulations (attached) are older vehicles that contribute significantly higher emissions relative to newer vehicles meeting more stringent emission standards. In most cases these older vehicles are properly maintained; however, because they use less advanced emission control technology, they emit at levels many times higher than properly maintained newer vehicles with better emission control systems. Emission reduction benefits from VAVR enterprises result when the VMT by the retired vehicle are transferred to a replacement vehicle that is lower-emitting on a gram-per-mile basis than the retired vehicle.

The draft regulations, as proposed, would provide for the implementation of privately-operated VAVR enterprises in the South Coast Air Basin (SCAB) for the purpose of meeting the emission reduction goals of measure M1 in the 1994 State Implementation Plan (SIP) for Ozone Attainment. Measure M1, also referred to as the M1 program, has the potential to provide a portion of the emission reductions necessary for achieving the federal ambient ozone standard in the SCAB. The SCAB, which has an ozone attainment target date of 2010, is the only area in the state designated as a federal extreme ozone non-attainment area.

The draft regulations would also be applicable to other VAVR enterprises operating throughout California. Local air pollution control and air quality management districts (districts) would be required to adhere to all the protocols specified in the regulations when adopting rules governing VAVR enterprises.

The major components of the draft regulations, as well as background information relevant to their development, are presented here.

B. Background

1. 1994 State Implementation Plan for Ozone Attainment

Air quality in California has improved dramatically over the past 25 years, largely due to state and federal initiatives to control pollution from motor vehicles. However, air quality still does not meet health-based ambient air quality standards in several areas of California. Mobile sources are responsible for well over half the ozone-forming emissions that contribute to the air quality problems in these areas of the state. Of these emissions, on-road light-duty vehicles are responsible for a significant portion.

State and federal law require the implementation of emission control strategies to attain the ambient air quality standards as expeditiously as practicable. The 1990 amendments to the federal Clean Air Act (CAA) require attainment of the ozone standard in all areas of California no later than 2010. Under the CAA, states are required to produce a SIP to ensure attainment of the federal standards by specified deadlines.

California's SIP, adopted by the Board in November of 1994, outlines ARB's plans for achieving the federal ozone standard in California's six non-attainment areas. Of these six areas, the SCAB faces the greatest challenges in meeting its clean air goals. To overcome these challenges, the SIP relies on a variety of strategies to achieve the necessary reductions in ozone-forming emissions. It is important to realize that ozone attainment can only be achieved in the SCAB through reductions in emissions from all mobile sources. While some of the SIP measures provide for significantly more emission reductions than others, the implementation of each and every measure is crucial to the efforts for achieving healthful air in the SCAB.

One of the market-based measures contained in the SIP, measure M1, calls for the accelerated voluntary retirement of a large-number of older, higher-emitting vehicles in the SCAB. This measure was developed to help alleviate the significant emissions contributions of vehicles equipped with older, less advanced technology. With the implementation of existing control strategies, light-duty vehicles eight years old and older, for example, will contribute more than half of all light-duty vehicle emissions of reactive organic gases (ROG) in the SCAB in 2010. This will occur because newer model year vehicles will be emitting at the stringent emission levels established by the Low-Emission Vehicle regulations, while remaining older vehicles will still be emitting at rates many times higher. The M1 program, to be implemented from 1999 to 2010 in the SCAB, is intended to encourage the early voluntary retirement of portions of the older vehicle fleet -- that is, it is intended to voluntarily remove from service older vehicles sooner than would have occurred naturally, and to accelerate the overall fleet turnover to newer, lower-emitting models.

Under the M1 program, the emission reduction credits resulting from the early retirement of older vehicles would be eligible for purchase by the State of California for the purpose of retiring the credits toward meeting the clean air goals in the SIP. Measure M1 calls for the reduction of ozone-forming emissions -- ROG and oxides of nitrogen (NOx) -- by 25 tons per day, collectively, in 2010. These emission reductions are essential for ozone attainment in the SCAB.

2. Senate Bill 501 (Calderon)

In October 1995 Governor Wilson signed Senate Bill 501 (SB 501), which, in part, requires ARB to develop and adopt regulations for the implementation of measure M1 in the SCAB. Senate Bill 501 requires these regulations, which are to be adopted by June 30, 1997, to be applicable to other VAVR enterprises operating throughout California as well. This issue is discussed further in the following section entitled "Mobile Source Credit Programs." In addition, SB 501 provides for the funding mechanism, in the form of the High Polluter Repair or Removal Account (HPRRA), necessary for the implementation of measure M1.

Explicit in SB 501 are specific requirements, several of which are presented below, that are to be addressed in the draft regulations:

- The regulations shall provide for the creation, use, and retirement of mobile source emission reduction credits through privately-operated, market-based VAVR enterprises in which enterprise operators purchase and retire eligible vehicles. In the SCAB, the State of California will purchase emission reduction credits and apply those toward the emission reduction goals of SIP measure M1.
- Selling a vehicle to a VAVR enterprise shall be strictly voluntary for the consumer;
- The regulatory design should be sensitive to the concerns of car collectors and to consumers for whom older vehicles provide affordable transportation; and
- The regulatory design should provide for VAVR enterprises that are as seamless as practicable, from the consumer's standpoint, with respect to the Bureau of Automotive Repair's Inspection and Maintenance Program.

3. Mobile Source Credit Programs

Voluntary accelerated vehicle retirement enterprises are just one method of generating mobile source emission reduction credits. Mobile source emission reduction credits are created when reductions from cars, buses, heavy-duty trucks, and other mobile sources exceed the reductions required by federal, state, and local laws. Regardless of whether emission reductions

are generated through VAVR enterprises or through other approved methods, they must meet the following basic criteria in order to qualify for use as mobile source emission reduction credits: 1) the reductions are not required by law, regulation, or contained in a district's air quality plan, i.e., the reductions are surplus; 2) the reductions must be real and quantifiable to an acceptable degree of certainty; and 3) the life of the reductions must be reasonably established and commensurate with the proposed use of the credits.

Currently, several districts have adopted rules governing local VAVR enterprises that generate marketable mobile source emission reduction credits. Generally, the goal of these credit generating programs is to provide businesses and industries with alternative compliance options for meeting emission requirements at a cost lower than that of traditional control strategies. Businesses and industries must still meet all federal, state, and local emissions requirements -- mobile source emission reduction credit programs just provide them with another means for compliance.

An important element of all mobile source credit programs, but specifically VAVR enterprises, is that they are strictly voluntary. Businesses are not required to use mobile source credits to meet their emission reduction requirements, nor are owners of eligible older vehicles required to participate in VAVR enterprises. Eligible vehicle owners only participate in these programs at their discretion. This concept has always been a major principle of all VAVR enterprises in California and would continue to be with the adoption of the draft regulations.

As proposed, the regulations would require district rules, and the VAVR enterprises governed by these rules, to follow all the requirements set forth in the regulations. Districts may either implement these regulations or adopt them as their own. As discussed above, the emission reduction credits generated through these enterprises would be eligible for purchase by businesses and industries seeking alternative compliance options. In the SCAB, these emission reduction credits would also be eligible for purchase by the State of California, using available funds from the HPRRA or other approved sources, for the purpose of retiring the credits toward the emission reduction goals of measure M1. Because SB 501 requires the implementation of measure M1 to incorporate market principles, this means that the State of California may be competing with businesses and industries to purchase available emission reduction credits.

4. Bureau of Automotive Repair's Inspection and Maintenance Program

The SIP relies heavily on the Bureau of Automotive Repair's Inspection and Maintenance Program (commonly referred to as Smog Check II) as a strategy for achieving needed emission reductions throughout California. While they are distinct programs, the relationship between VAVR enterprises governed by ARB's draft regulations and the Smog Check II program is important for two reasons.

First, the emission reductions attributable to VAVR enterprises must be surplus to the reductions to be achieved in the Smog Check II program. The SIP relies on the Smog Check II program as a vital strategy for reducing ozone-forming emissions from the in-use vehicle fleet. These emission reductions, which must be attributed to achieving the mandated Inspection and Maintenance Program's performance standard established by the United States Environmental Protection Agency, are necessary for achieving California's clean air goals. The reductions from the Smog Check II program cannot be used for any other purposes, such as for use as marketable mobile source emission reduction credits or for use in achieving the emission reduction goals of measure M1. This concept is important for all VAVR enterprises in that a portion of the emission reductions achieved from retiring vehicles that have previously failed the Smog Check II test without subsequent repair, or would fail the next scheduled test, must be attributed to that program, rather than to any emission reduction credits generated through VAVR enterprises. The methodology for calculating emission reduction credits resulting from VAVR enterprises, which is presented in the section entitled "§2607: Emission Reduction Credits," is designed to ensure that the emission reductions are surplus to those required under Smog Check II.

Second, BAR is developing its own vehicle retirement option as part of the Smog Check II program. When implemented, this vehicle retirement option is to be offered to owners of vehicles that fail the Smog Check test and are also classified as "gross-polluters." In some cases, these vehicles may cost more to repair than they are worth. This voluntary component of the Smog Check II program is intended to provide owners of eligible vehicles an alternative to making costly vehicle repairs. BAR's vehicle retirement option will not generate any marketable mobile source emission reduction credits -- any emission reductions associated with this option will be attributed to the Smog Check II program performance goals. While BAR's program is distinct from the VAVR enterprises addressed under ARB's draft regulations, SB 501 requires the two programs to appear as seamless as possible to the consumer. Mechanisms have been included in the draft regulations to satisfy this requirement.

II. SUMMARY OF REGULATORY PROPOSAL

Presented here is a summary of the major sections of the draft regulations for Voluntary Accelerated Light-Duty Vehicle Retirement Enterprises developed by ARB staff.

A. §2602: The Districts' Role in Implementing VAVR Enterprises

The staff proposes that local air quality management and air pollution control districts have the direct responsibility for implementing VAVR enterprises. The Health and Safety Code currently provides districts with the authority to adopt mobile source credit programs to be used as a component of their rules, regulations, and credit banking programs. Several districts already have implemented various mobile source credit programs, including VAVR enterprises. It therefore makes practical sense for districts that have such programs to continue performing direct implementation and auditing functions.

As such, districts that currently authorize the generation and use of mobile source emission reduction credits from accelerated vehicle retirement enterprises would be required to adopt ARB's regulations governing VAVR enterprises for use in administering such enterprises. In the absence of such an action, ARB's regulations would automatically take effect in any district that does not conduct its own rulemaking procedure for the purpose of adopting ARB's regulations. Districts, however, that do not authorize the generation and use of mobile source emission reduction credits from accelerated vehicle retirement enterprises would not be required to adopt ARB's regulations. Simply put, any district that authorizes credit generation from VAVR enterprises must use ARB's regulations for implementing such programs. Districts that choose not to authorize VAVR enterprises will not be required to have such programs.

B. §2603: Vehicle Eligibility Requirements

All VAVR enterprises must ensure that they generate real emission reduction credits. This means that the enterprises must a) purchase and retire vehicles that are actually driven in the air district in which the accelerated vehicle enterprise is operated; and b) purchase and retire vehicles that are fully operational and would not otherwise be immediately retired. Additionally, SB 501 requires the VAVR enterprises addressed under the regulations to be as seamless as practicable to BAR's Smog Check II program. One way to provide for "seamlessness" is to require that the pool of candidate vehicles for possible inclusion in VAVR enterprises is the same as the pool of vehicles subject to the biennial Smog Check II program requirements. In recognition of the above issues, ARB staff proposes the following eligibility requirements for all vehicles purchased by enterprise operators for the purposes of generating marketable emission reduction credits:

- 1) An eligible vehicle must be a passenger car or light-duty truck that is subject to the Smog Check II program requirements (except those vehicles that are subject only to change-of-ownership inspections). This eligibility criterion provides "seamlessness" with the Smog Check II program, as required by SB 501. An eligible vehicle also must have been registered with the Department of Motor Vehicles (DMV) for at least 24 consecutive months, prior to the date of sale, to an address in the air district in which the VAVR enterprise is being conducted. The draft regulations do contain a provision that allow an eligible vehicle to have been placed in planned nonoperational status under limited circumstances.

Acceptable evidence of a vehicle's registration history can consist of either:

- 1) confirmation based on DMV records or BAR database records; 2) copies of applicable vehicle documentation (registration certificates) covering the necessary 24 month period, as presented by the vehicle owner; or 3) a copy of the most recent registration certificate in combination with a sworn statement from the vehicle owner, made under penalty of perjury, as to the address to which the vehicle was registered for the portion of the 24 month period not covered by the submitted registration certificate.

- 2) An eligible vehicle must not be flagged as an unrepaired gross-polluter in BAR's Smog Check database. In addition, an eligible vehicle must not be flagged as an unrepaired high-emitter in the database. Because of the uncertainties regarding the future of an unrepaired high-emitter (it is possible that the vehicle will not be repaired once the hardship extension or waiver has expired), these vehicles are ineligible for inclusion in the VAVR enterprises covered under this regulatory proposal.
- 3) An eligible vehicle must be operational and properly equipped (lights, bumpers, doors, etc.) according to the California Vehicle Code.
- 4) Prior to purchase by a VAVR enterprise, candidate vehicles must undergo an inspection at either a BAR Smog Check II Referee Station or another ARB-approved facility. The purpose of this inspection is to verify that a candidate vehicle meets the full functional and equipment eligibility requirements contained in the draft regulations. A certificate of functional and equipment eligibility will be issued to each vehicle owner whose vehicle meets the requirements. The fee for this inspection, not to exceed \$20.00, will be paid by the vehicle owner. At the time of sale, the vehicle owner will relinquish the certificate of functional and equipment eligibility to the VAVR enterprise operator.

C. §2604: VAVR Enterprise Operator Requirements

Section 2604 in the draft regulations addresses issues related to VAVR enterprise operator requirements. Summarized here are the major components of §2604: 1) VAVR Enterprise Operator Criteria; and 2) Generating Emission Reduction Credits.

1. VAVR Enterprise Operator Criteria

The VAVR enterprise operator must meet specific criteria to be eligible to generate emission reduction credits through accelerated vehicle retirement. Implementation of the criteria, presented below, will ensure that vehicles and vehicle components, including hazardous waste materials such as engine oil, transmission fluid, and chlorofluorocarbon cooling agents, are dismantled, destroyed, recovered, and/or recycled in accordance with applicable federal, state, and local laws.

- 1) The VAVR enterprise operator must be an auto dismantler licensed according to the requirements of the California Vehicle Code, applicable business codes, and the California DMV; *OR*
- 2) The enterprise operator must have a binding agreement with an authorized auto dismantler, licensed according to the above criterion, for the purpose of vehicle disposal after purchase.

2. Generating Emission Reduction Credits

Senate Bill 501 authorizes the issuance of emission reduction credits to private entities (eligible VAVR enterprise operators) that purchase and retire vehicles in accordance with the regulations that are ultimately adopted. Senate Bill 501 then authorizes the resale of those credits, either for use in meeting the emission reduction requirements of SIP measure M1 in the SCAB, or for use as mobile source emission reduction credits as currently authorized by the districts and approved by ARB. The credits that the State of California purchases in the SCAB must be retired toward meeting the clean air goals of measure M1.

The following subsections discuss eligibility requirements for generating emission reduction credits, as well as vehicle parts recycling and vehicle disposal requirements. These requirements would ensure that a vehicle will never be driven again, yet they would not hinder the business efforts of auto dismantlers. Furthermore, they would provide for the continued availability of replacement parts for car collectors and for other consumers seeking affordable parts necessary to properly maintain their vehicles.

a. Eligibility for Generating Emission Reduction Credits

For any vehicle purchased by a VAVR enterprise operator, emission reduction credits will only be granted if the vehicle meets the eligibility requirements of §2603 in the draft regulations (summarized here in the section entitled “§2603: Vehicle Eligibility Requirements”) and is permanently destroyed (recycling of vehicle parts and some engine components, which is discussed in subsection b, is allowed). The VAVR enterprise operator will be responsible for confirming that a vehicle meets all the registration requirements through the methods contained in the draft regulations. For purposes of the regulations, a vehicle is considered destroyed when the engine block or crankcase has been rendered permanently nonfunctional (e.g., disfigured, crushed, or melted down) and all appropriate records maintained by the DMV have been modified to reflect that the vehicle is permanently removed from service and that its Vehicle Identification Number (VIN) cannot be reregistered in accordance with DMV regulations, the California Vehicle Code, and the California Health and Safety Code. Emission reduction credits will not be granted if the vehicle is resold to a member of the public or if the engine block or crankcase is not permanently destroyed.

Regarding resale of a vehicle, Health and Safety Code Section 44120(b), as created by SB 501, states that “...No emission reduction credits shall be generated for vehicles that are resold to the public...” Because a vehicle that is resold to the public has the potential for further use and may be driven again, there are no verifiable surplus emission reductions available for use as emission reduction credits.

Regarding the destruction of the engine, SB 501 provides no specific requirements. However, the engine, which is the primary polluting unit of a vehicle, can be thought of as analogous to the vehicle itself. Therefore, unless the engine block or crankcase is permanently

removed from service, there is no assurance that there are verifiable emission reductions. The issue of engine block/crankcase destruction is discussed in further detail in the section entitled “§2605: Offering Vehicles to the Public.”

b. Vehicle Parts Recycling

For any vehicle from which emission reduction credit is generated, participating VAVR enterprise operators may resell any reusable vehicle components and disassembled engine components, excluding those that are prohibited for resale by existing state and federal laws (e.g., catalyts), or those that must be destroyed in order to consider the vehicle permanently nonfunctional as described in subsection a.

c. Vehicle Disposal Requirements

As discussed previously, the staff proposes that the following minimum actions must be performed to permanently destroy all vehicles for which credit is granted, thus ensuring that these vehicles are never driven again:

- 1) The VAVR enterprise operator must destroy the license plates and fulfill applicable California DMV requirements necessary to render the VIN unregistrable. Appropriate DMV procedures for “electronically” retiring a vehicle must be followed.
- 2) Within 30 days of the date of purchase, the VAVR enterprise operator must permanently destroy the engine block or crankcase. As stated above, this issue is further discussed in the section entitled “§2605: Offering Vehicles to the Public.”
- 3) Within 30 days of the date of purchase, the VAVR enterprise operator must destroy the remainder of the vehicle, excluding the vehicle parts and engine components that have been removed for resale.

D. §2605: Offering Vehicles to the Public

Section 2605 in the draft regulations addresses mechanisms to allow members of the public to purchase vehicles that are either scheduled to be purchased by VAVR enterprises or that have already been purchased by VAVR enterprises. These mechanisms, summarized in section 2 below, were developed through the efforts by ARB staff to consider some of the issues important to individuals and groups interested in collecting and preserving certain vehicles, and to consumers for whom older vehicles provide affordable transportation. While the procedures for vehicle parts recycling contained in the draft regulations address the concerns of these segments of the population to some degree, SB 501 contains provisions that specifically direct ARB to consider issues relevant to these groups. These provisions are: 1) Health and Safety Code Section 44100(e)(3), which states that “Participation by the vehicle owner shall be entirely voluntary and the program design should be sensitive to the concerns of car collectors and to

consumers for whom older vehicles provide affordable transportation”; and 2) Health and Safety Code Section 44120(b), which states that early vehicle retirement enterprises implemented through the adopted regulations shall “Set aside and resell to the public any vehicles with special collector interest. . .”

In addition to the above provisions, SB 501 states that the regulations should define the term “collector interest vehicle.” For purposes of this regulation, ARB staff proposes to define a collector interest vehicle as any vehicle purchased by a car collector or car enthusiast primarily for its historic or esthetic value, rather than primarily as a means of transportation. By using this definition, ARB staff is not making a distinction regarding which specific vehicles have collector value and which do not.

1. Public Workshop on August 15, 1996

On August 15, 1996, ARB staff conducted a public workshop to specifically discuss issues important to car collectors and other car enthusiasts. Major concerns raised by these groups included 1) the need to publicly publish lists of vehicles scheduled to be sold to VAVR enterprises; and 2) the need to preserve certain engine blocks and crankcases. ARB staff has responded to the first concern by including in this regulatory proposal a mechanism that will allow members of the public the opportunity to review lists of vehicles scheduled for sale to VAVR enterprises. This mechanism allows members of the public to purchase these vehicles, under certain conditions, prior to their sale to a VAVR enterprise. Regarding the second concern, ARB staff believes the mechanisms in this regulatory proposal for public purchase of vehicles, either before or after sale to a VAVR enterprise, will provide members of the public access to desirable engine blocks and crankcases. The staff also anticipates that members of the public who want to purchase engine blocks or crankcases will negotiate directly with VAVR enterprise operators for the opportunity to purchase them. Under the draft regulations, VAVR enterprise operators will be free to sell any engine block or crankcase; nothing in the draft regulations precludes them from doing this. They will not, however, be able to generate emission reduction credits from any vehicle for which the engine block or crankcase is not permanently destroyed.

At the August workshop, various participants suggested that rather than destroying the engine blocks or crankcases of vehicles for which credit is granted, engines should instead be rendered inoperable by “sanding” or another comparable method (sanding involves injecting sand into two adjacent cylinders and then attempting to restart the engine; when the engine has locked, it is deemed inoperable). Thus, VAVR enterprise operators could make these engines available for sale (and still earn emission reduction credits) as the engines would require a complete rebuild prior to being put back into service. ARB staff disagrees with this concept for two reasons: 1) sanding, or any comparable method, has not been proven to require a complete engine rebuild. It is possible that the engine could be vacuumed and, with minor repair, put back into service; and 2) even if a method for rendering an engine inoperable did require that engine to be completely rebuilt, the older vehicle put back into service with the rebuilt engine would still emit

at a higher level than a newer model-year vehicle using more advanced emission control technology. Allowing that engine back on the road is contrary to the basic principle of an effective VAVR enterprise -- to accelerate fleet turnover to vehicles using cleaner, more advanced technology. Therefore, the draft regulations retain the staff's original proposal (presented at the August 15, 1996 workshop) requiring the engine block or crankcase to be destroyed from each vehicle for which a VAVR enterprise operator generates emission reduction credits.

2. Mechanisms for Vehicle Purchase by the Public

Described here are the two mechanisms in this regulatory proposal that allow members of the public to purchase vehicles that are either scheduled to be purchased by a VAVR enterprise or have already been purchased by a VAVR enterprise.

a. Vehicle Purchase Before Completion of Sale to VAVR Enterprise

The staff proposes that there should be a minimum period of 14 days between the time a vehicle is first offered for sale into a VAVR enterprise (i.e., when a vehicle owner makes initial contact with a VAVR enterprise operator) and the time the sale transaction is completed. This waiting period is intended to serve several purposes. First, it will allow vehicle owners sufficient opportunity to schedule an appointment with a BAR Smog Check II Referee Station, or another ARB approved facility, to undergo the required vehicle functional and equipment eligibility inspection. Each candidate vehicle must undergo this inspection and receive a certificate of functional and equipment eligibility prior to sale to a VAVR enterprise. Second, the VAVR enterprise operator will use this time period to conduct any necessary steps related to the purchase of vehicles for dismantling purposes (e.g., lien checks). Finally, this waiting period will be used to notify interested members of the public, including local car collector organizations, of the vehicles that are scheduled for purchase by VAVR enterprises.

With the vehicle owner's permission, the VAVR enterprise operator will submit a brief description of the vehicle, including the owner's name and a contact phone number, to the local district, which will in turn distribute this description to the public, including local car collector enthusiasts and their organizations, for the purposes of allowing interested members of the public to negotiate directly with the vehicle owner for the purchase of the vehicle before it is sold to the VAVR enterprise. This description must be made available to the public for a minimum of 10 days. The vehicle owner is not under any obligation to sell his/her vehicle to a member of the public that may contact him/her as a result of this process and is free to accept or reject any purchase offer. Additionally, if the vehicle owner denies the VAVR enterprise operator permission to make vehicle and owner information available for distribution, the minimum 14 day waiting period prior to completion of the sale transaction is not required. In this case, the VAVR enterprise operator may immediately purchase any vehicle that has been granted a certificate of functional and equipment eligibility and that has been verified as meeting the vehicle registration requirements.

b. Vehicle Purchase After Completion of Sale to VAVR Enterprise

Once a vehicle has been sold to a VAVR enterprise, the enterprise operator may make that vehicle available for sale to the public, subject to applicable requirements of the DMV and the California Vehicle Code, unless the person selling the vehicle to the VAVR enterprise specifically requests that the vehicle not be resold. Some vehicle owners may wish to sell their vehicles to VAVR enterprises as their personal contribution to improving air quality; these individuals should have control over whether their vehicles are put back into service or not. As stated previously, any vehicle purchased by a VAVR enterprise operator that is subsequently resold is not eligible to earn emission reduction credits.

E. §2607: Emission Reduction Credits

As a supplement to ARB’s customary rule development process, ARB staff invited representatives of various industries, environmental groups, and local governments to participate in a Technical Advisory Group (TAG). The TAG’s sole function was to advise ARB on the appropriate emission reduction calculation methodologies for the purpose of credit generation. The calculation methodologies presented are the result of the concerted efforts of both the TAG and ARB staff.

The emission reduction calculation process is the calculation of the retired vehicle’s emissions over the expected remaining life (expressed in units of mass) minus the replacement vehicle’s emissions over the same time period. The emissions of both the retired vehicle and the replacement vehicle are the product of some measure of each vehicle’s expected emission rate and expected activity level. Assuming the replacement vehicle is cleaner than the retired vehicle, the difference in the emissions can be used as an emission reduction credit.

For exhaust (tailpipe) emissions, the following equation must be used to calculate emission reduction credits. Exhaust emission reduction credits may be generated from reductions in NOx, ROG, carbon monoxide (CO), and particulate matter (PM):

$$ExhReduction = [(ER_{retired} \times VMT_{retired}) - (ER_{replacement} \times VMT_{replacement})] \times LIFE_{retired}$$

where:

ExhReduction = total emission reduction for tailpipe emissions (grams/life);

ER_{retired} = the retired vehicle emission rate (grams/mile);

VMT_{retired} = the retired vehicle miles traveled(miles/year);

LIFE_{retired} = the retired vehicle remaining life (years);

$ER_{replacement}$ = the replacement vehicle emission rate (grams/mile);

$VMT_{replacement}$ = the replacement vehicle miles traveled (miles/year);

For evaporative emissions, the following equation must be used to calculate emission reduction credits. Evaporative emission reduction calculations apply only to ROG emissions:

$$\begin{aligned} \text{EvapReduction} = & \\ & [(ER_{runloss})_{retired} - (ER_{runloss})_{replacement}] \times VMT_{retired} \\ & + [(ER_{hotsoak})_{retired} - (ER_{hotsoak})_{replacement}] \times Trips_{retired} \\ & + [(ER_{diurnal})_{retired} - (ER_{diurnal})_{replacement}] \times 365\text{days/year} \\ & + [(ER_{resting})_{retired} - (ER_{resting})_{replacement}] \times 365\text{days/year} \\ & \times Life_{retired} \end{aligned}$$

where:

$EvapReduction$ = total lifetime reduction of evaporative ROG emissions (grams/life);

$ER_{runloss}$ = running loss evaporative emission rate (grams/mile);

$ER_{hotsoak}$ = evaporative emission rate attributed to hot soak after shut down (grams/trip);

$ER_{diurnal}$ = emission rate for evaporative emissions occurring while vehicle is not operating and during periods of ambient temperature increase (grams/day);

$ER_{resting}$ = emission rate for evaporative emissions occurring while vehicle is not operating and during periods of constant or decreasing ambient temperature (grams/day);

$Trips_{retired}$ = number of trips per year expected from retired vehicle;

The issue of calculating VAVR emission reductions is really comprised of the several more fundamental issues regarding what values to use for each component in the above equations. Presented below are the recommended methods for determining the values of each of

these components. These recommendations follow the direction of Health and Safety Code, Article 10, Section 44101(a), as added by SB 501, which states in part “In all cases, the numerical value of the credits shall reflect the useful life expectancies and the projected in-use emissions of the retired vehicle in a manner consistent with the assumptions used in determining the emissions inventory.” Accordingly, these recommendations incorporate the use of data from ARB’s motor vehicle emission inventory model. This model reflects the appropriate Inspection and Maintenance Program, therefore accounting for the emission reductions required under the Smog Check II program. As discussed previously in the section regarding BAR’s Inspection and Maintenance Program, the recommendations ensure that the reductions achievable through the implementation of VAVR enterprises are surplus to those that must be achieved through Smog Check II. It should be noted that ARB staff continuously evaluates available new emission data and incorporates them into the model when appropriate. As a result, any data resulting from VAVR enterprises will be evaluated for incorporation into the model and therefore into the emission reduction calculation methodologies.

For determining $ER_{retired}$, this regulatory proposal relies on the use of emission inventory modeling estimates, with supplemental testing of select retired vehicles during the pilot program (the pilot program is discussed in the following section), to provide data for model estimate validation and adjustment. Vehicle model-year will be used to correlate inventory model emission rates with individual vehicles. This method provides a reasonable compromise between high test costs and the need for accurate information, and also provides a data smoothing effect that reduces vehicle-to-vehicle uncertainties. In addition, avoiding the use of specific test data for each individual vehicle removes the incentive for tampering with vehicles to artificially increase their emissions in an effort to increase the resulting credit amount.

For determining $VMT_{retired}$, this regulatory proposal relies on the use of inventory model-based average VMT, again correlated by vehicle model year. The emission inventory model’s VMT data are derived from biennial Smog Check odometer readings. While it could be possible to use individual vehicle odometer data directly, the use of average VMT for each model year, as provided by the emission inventory model, again helps smooth the data and reduce vehicle-to-vehicle uncertainties. However, the staff does acknowledge that odometer data or owner surveys also could conceivably be used to obtain values for individual VMT. To determine the optimum approach for long term usage, data from all three methods (emissions inventory model, individual odometer data, and owner surveys) will be collected during the pilot program and inter-compared. If necessary, the regulations or model would be modified.

For determining $ER_{replacement}$, this regulatory proposal relies on the use of inventory model-based emission rate estimates primarily for the same reasons given in the discussion of $ER_{retired}$. However, fleet average emission rates will be used, rather than model-year emission rates, due to the uncertainties in determining the model-year of the replacement vehicle. The staff believes it is not practical to expend the effort and expense that would be necessary to test all replacement vehicles because a retired vehicle’s VMT may be transferred to multiple vehicles and because the replacement vehicles will not be readily available for emissions testing.

For $VMT_{replacement}$, this value is equivalent to the value of $VMT_{retired}$. This method conserves total fleet VMT (assuming importation of replacement vehicles from outside areas) and is consistent with the inputs currently used with the emission inventory model. Another advantage of this method is that it effectively handles the uncertainty surrounding the identity of the replacement vehicle. This approach would later be adjusted by use of reliable owner survey data, where appropriate, taking into account the biases and uncertainties that seem inherent in such surveys.

For the retired vehicle's remaining life, $LIFE_{retired}$ (which will also be the credit life) is equivalent to the average remaining vehicle life by model-year, as obtained from the emission inventory model. Vehicle life in the emissions model is, in turn, based on the DMV registration database. This methodology is consistent with the provisions of Health and Safety Code Section 44101(a). However, survey and other data will be obtained, to the greatest extent possible, and compared with the model results to verify or modify the model as appropriate.

Comprehensive evaporative emission testing is an extremely expensive and time consuming process, thereby making it impractical for application in VAVR enterprises. Therefore, approaches similar to those used for determining the values of the components in the exhaust emission reduction calculation also apply to the components of the evaporative emission reduction calculation. During the pilot program, sample testing will be conducted and the results will be used for model verification or modification as necessary.

For the retired vehicle, the values for running loss, hot soak, diurnal, and resting emission rates are the average values, by model-year, as provided by the emission inventory model. The value used for $Trips_{retired}$ is the average number of trips, again by model-year, as determined by the emission inventory model.

For the replacement vehicle, the values for running loss, hot soak, diurnal, and resting emission rates are the fleet average values, rather than model-year average values, as provided by the emission inventory model. As stated in the previous discussion on the components of the exhaust emission reduction calculation, using the fleet average emission rate is the most practical methodology due to the uncertainties in determining the identity of the replacement vehicle.

F. §2609: Pilot Program

Health and Safety Code Section 44104.5, as created by SB 501, requires the regulations under consideration to provide for the implementation of a two-year pilot program in the SCAB from 1997 to 1999. The purpose of this pilot program, which is provided for in the draft regulations, is to assess the efficacy of the regulations in meeting the emission reduction goals of SIP measure M1 in the SCAB and the efficacy of VAVR programs in general. Data derived from the pilot program will be used to validate the credit calculation methodologies, and if necessary, will be used to modify the regulations or the emission inventory model used as the basis for the calculations.

III. SUMMARY

To summarize, the staff has developed this regulatory proposal to fulfill the mandates of SB 501, which require ARB to develop and adopt regulations for the implementation of SIP measure M1 in the SCAB and other voluntary accelerated vehicle retirement enterprises operating throughout California. The M1 program, to be implemented from 1999 to 2010 in the SCAB, is intended to encourage the early voluntary retirement of portions of the older vehicle fleet and to accelerate the overall fleet turnover to newer, lower-emitting models. The emission reductions resulting from the implementation of the M1 program are eligible for purchase by the State of California for the purpose of retiring the credits towards meeting the clean air goals of the 1994 SIP for Ozone Attainment. The emission reductions resulting from VAVR enterprises conducted in other areas of California are eligible for purchase by businesses and industries for use as mobile source emission reduction credits as currently authorized by the districts and approved by ARB. Emission reductions resulting from VAVR enterprises operating in the SCAB that are not purchased by the State of California are also eligible for use by businesses and industries as mobile source emission reduction credits.