

State of California
AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking.
Including Summary of Comments and Agency Response

PUBLIC HEARING TO CONSIDER THE ADOPTION OF EMISSION CONTROL REGULATIONS FOR
OFF-HIGHWAY RECREATIONAL VEHICLES AND ENGINES.

Public Hearing Date: January 13, 1994
Agenda Item No: 94-1-1

1. GENERAL

The Staff Report: Initial Statement of Reasons for Proposed Rulemaking ("staff report"), which was available for public inspection November 24, 1993, is incorporated by reference herein.

Following a public hearing on January 13, 1994, the Air Resources Board (ARB) by Resolution 94-1 approved emission control regulations for off-highway recreational vehicles and engines. Resolution 94-1 is attached hereto and incorporated by reference herein. The ARB approved the regulatory language as proposed, with minor modifications. The provisions include emission standards and enforcement procedures for the off-highway recreational vehicle category. The proposed regulations require off-road motorcycles, all-terrain vehicles (ATV), specialty vehicles, and go-karts to use existing emission control technology and engine modifications similar to those used for other on- and off-road engines. In addition, golf carts produced after December 31, 1996 in federal ozone non-attainment areas in the state will be required to meet a zero emission standard (i.e., electric).

The ARB enforcement provisions for these vehicles and engines include test procedures, certification procedures, labeling and registration requirements, warranty and recall provisions. New section 2414 incorporates by reference the warranty and recall provisions that presently apply to on-road vehicles and off-road engines such as utility and lawn and garden engines. The recall provisions, set forth in Title 13, CCR, Chapter 2, Articles 2.1 - 2.3, have been amended to specifically include off-road motorcycles and ATVs under their coverage. The recall procedures that apply to the off-road motorcycles and ATVs and the enforcement procedures (defect warranty requirements and compliance and quality-audit testing) that apply to specialty vehicles are enforcement measures intended to insure that emission standards continue to be met by production engines after they are supplied to the end user and placed in-use. The California Legislature specifically directed California to adopt regulations for off-highway vehicles and to consider improvements in emission system durability and in-use performance. (See Health and Safety Code sections 43000.5(c), 43013(b), and 43018(c)(2).)

At the hearing, after review and consideration of comments presented, the Board approved modifications to the regulations that were initially proposed by staff and noticed on November 26, 1993. These modifications were made available to the public for comment in the "Notice of Availability of Modified Text", Mailout 94-13, on March 22, 1994, which is included herewith and incorporated by reference herein. The modifications set forth in the above "Notice of Availability of Modified Text" are summarized below.

(1) Applicability: Section 2410(a)(1) was modified to clarify that only new vehicles are included in this regulation. Section 2410(a)(2) was modified to refer to the proper location of the applicable standards within Title 13 of the CCR.

(2) Definitions: Section 2411(a)(1), (a)(13), and (a)(17) of Title 13 and the corresponding definitions contained in the "California Exhaust Emission Standards and Test Procedures for 1997 and Later Off-Highway Recreational Vehicles and Engines" (Off-Highway Test Procedures), which incorporates and modifies subparts E and F of Title 40, section 86.401-78 of the Code of Federal Regulations, have been modified to better conform to the existing definitions for ATVs, golf carts, and off-road motorcycles, which are found in the California Vehicle Code and the International Standard Organization Document ISO 3779-1977(E). Section 2411(a)(22) and the corresponding definition contained in the Off-Highway Test Procedures, which amends section 86.401-78 of the Code of Federal Regulations, were modified to reference the appropriate section of the Code of Federal Regulations contained in the definition. The definition of "Total Test Distance" found in section 86.401-78 of the Code of Federal Regulations was modified to allow the appropriate test distance to be determined by the manufacturer.

(3) Emission Standards: Sections 2412(b) and (f) of Title 13 and the corresponding amendments to section 86.410-90 of the federal test procedures contained in the Off-Highway Test Procedures were modified to include changes concerning the implementation date of emission control regulations for off-road motorcycles and ATVs equipped with engines having a displacement of 90 cubic centimeters (cc) or less. Section 2412(c) was modified to include by reference Subparts E and F of Title 40, Code of Federal Regulations. Section 2412(g) was modified to ensure that identical engines which are used in a variety of on- and off-road vehicles and equipment are not subject to multiple certification standards and test procedures.

(4) Emission Control Labels: Section 2413(b) was modified to reflect that the implementation date of the incorporated provisions label specifications was delayed to 1995.

(5) In-Use Vehicle Enforcement Test Procedures: Section 2138(b)(6) was modified to require that all scheduled maintenance shall be performed during the testing of off-road motorcycles and ATVs. Section 2139(f) was modified to ensure that the same emission standard and test cycle used for original certification by the manufacturer is used for in-use compliance testing.

(6) Test Procedures: Section 86.408-78(b) of the incorporated Off-Highway Test Procedures was modified to delete golf carts from the testing requirements outlined in this section.

Section 2412(b) incorporates by reference the "California Exhaust Emission Standards and Test Procedures for 1995 and Later Utility and Lawn and Garden Equipment Engines" (Utility Test Procedures), adopted March 20, 1992, and last amended on April 8, 1993. The incorporated Utility Test Procedures are identified by title and date in the regulation and were so identified in the informative digest of the notice of proposed action. The Utility Test Procedures were available in the context of the subject rulemaking in the manner provided in Government Code section 11346.7(a), and continue to be available upon request from the ARB. The incorporated test procedures have been, and continue to be, reasonably available to the affected public from a commonly know source.

Section 2412(c)(1) incorporates by reference Off-Highway Test Procedures, adopted November 23, 1994, and subparts E and F, Title 40, Code of Federal Regulations, adopted January 5, 1977, and amended thereafter. The incorporated test procedures are identified by title and date in the regulation and were so identified in the informative digest of the notice of proposed action or in the Notice of Availability of Modified Text. The Off-Highway Test Procedures and federal test procedures were available in the context of the subject rulemaking in the manner provided in Government Code sections 11346.7(a) and 11346.8. The Code of Federal Regulations are published by the Office of the Federal Register, National Archives and Records Administration. The Off-Highway Test Procedures continue to be available upon request from the ARB. Thus, both the Off-Highway Test Procedures and federal test procedures are reasonably available to the affected public from commonly know sources.

Section 2413(a) incorporates by reference Title 13, CCR, Chapter 1, Article 2, section 1965, and the incorporated "California Motor Vehicle Emission Control Label Specifications" (Label Specifications), adopted March, 1978, and last amended on July 12, 1991. Section 2413(b) incorporates Title 13, CCR, Chapter 9, Article 1, section 2404, "Emission Control Labels - 1995 and Later Utility and Lawn and Garden Equipment Engines." Sections 1965 and 2404 and the Label Specifications were identified by title and date in the regulation and were so identified in the informative digest of the proposed action. The text of the incorporated provisions were made available in the context of the subject rulemaking in the manner provided in Government Code section 11346.7(a). As stated above, section 1965 is set forth in full as part of the California Code of Regulations, published by Barclays Law Publishers, and the Label Specifications are available from the ARB on request. Accordingly, the documents have been, and continue to be reasonably available to the affected public from commonly known sources.

Section 2414(a) incorporates by reference Title 13, CCR, Chapter 2, Articles 2.1 through 2.3, sections 2111-2140, and the incorporated Appendix A, "California In-Use Vehicle Emission-Related Recall Procedures, Enforcement Test Procedures, and Failure Reporting Procedures for 1982 and Subsequent

Model-Year Passenger Cars, Light-Duty Trucks, Medium-Duty Vehicles, Heavy-Duty Vehicles and Engines, and Motorcycles" (Recall Procedures). The recall procedures were adopted by the ARB in 1982 and last amended in 1991. The incorporated procedures were identified by title and date in the regulation and were so identified in the informative digest of the proposed action and in the Notice of Availability of Modified Text. The text of the Recall Procedures were made available in the context of the subject rulemaking in the manner provided in Government Code Section 11346.7(a). As stated above, the Recall Procedures are set forth in full as part of the California Code of regulations, published by Barclays Law Publishers, and therefore is reasonably available to the affected public from a commonly known source.

Section 2414(b) incorporates by reference Title 13, CCR, Chapter 9, Article 1, section 2405, "Defects Warranty Requirements for 1995 and Later Utility and Lawn and Garden Equipment Engines"; section 2406, "Emission Control System Warranty Requirement"; and section 2407 "New Engine Compliance and Quality-Audit Testing--New Utility and Lawn and Garden Equipment Engine Selection, Evaluation, and Enforcement Action" (referred to in their entirety as enforcement procedures). The sections were adopted by the ARB in 1992 and last amended in 1994. The incorporated procedures were identified by title and date in the regulation and were so identified in the informative digest of the proposed action. The text of the enforcement procedures were made available in the context of the subject rulemaking in the manner provided in Government Code Section 11346.7(a). As stated above, the enforcement procedures are set forth in full as part of the California Code of Regulations, published by Barclays Law Publishers, and therefore is reasonably available to the affected public from a commonly known source.

The Utility and Off-Highway Procedures, the federal test procedures, incorporated within the Off-Highway Test Procedures, and the Label Specifications are incorporated by reference because it would be impractical to print them in the CCR. Existing administrative practice by the ARB has been to have test procedures of the type found in the Utility, Off-Highway, and federal test procedures incorporated by reference rather than printed in the CCR. These procedures are highly complex and technical documents. They include "nuts and bolts" engineering protocols and have a very limited audience. Because the ARB has never printed test procedures in the CCR, the affected public is accustomed to the incorporation format utilized in section 2412 and 2413(a). ARB test procedures as a whole are extensive and it would be both cumbersome and expensive to print such lengthy, technically complex procedures with a limited audience in the CCR. Furthermore, printing portions of the ARB test procedures in the CCR when the bulk of the procedures are incorporated by reference would be unnecessarily confusing to the affected public.

The ARB has determined that this regulatory action does not impose a mandate on local agencies or school districts.

In the Notice of Proposed Rulemaking, Mail-out # 93-54, the ARB pursuant to Government Code Section 11346.53 declared that the proposed regulation may have a short term adverse economic impact on California businesses (such as golf courses). Accordingly, it solicited proposed alternatives from

interested parties that would lessen any adverse economic impact on California businesses. As discussed in the Summary of Comments and Agency Responses below, the Board has not found any suggested alternative to be more effective in carrying out the purposes for which the regulations and test procedures were proposed or which would be as effective and less burdensome to affected private persons or to small businesses than the adopted regulations and procedures.

2. SUMMARY OF COMMENTS AND AGENCY RESPONSE

Prior to the public hearing on January 13, 1994, the ARB received written comments from engine and equipment manufacturers, engine and equipment associations, and others. The list of commentators' names is attached hereto as Appendix A.

At the public hearing, oral testimony was presented by the National Golf Car Manufacturers Association (NGCMA), The Motorcycle Industry Council (MIC), several engine manufacturers, and a private citizen. Please refer to appendix B for a complete list of oral commentators.

During the 30-day comment period, comments were received from MIC and Kubota Corporation. The MIC's comments included one minor editorial change. Kubota's comments were not directed at the modified text. A summary of these comments and the agency responses thereto are set forth in the following text.

At the ARB hearing, the staff was complimented on, among other things, how well it worked with the industry, and how the standards, while technology forcing for some vehicles, are nevertheless achievable. A list of commentators to this proposal are contained in Appendix C.

TABLE OF TOPICS ADDRESS IN COMMENTS:

A. GOLF CART and SPECIALTY VEHICLE ISSUES

	Page
I. Uniformity	7
II. Population	8
III. Emissions Inventory	9
IV. Cost	10
V. Technical Feasibility	11
VI. Other Comments	12

B. OFF-ROAD MOTORCYCLE AND ALL-TERRAIN VEHICLE ISSUES

I. Definitions	13
II. Inventory	14
III. Usage	15
IV. Engine Testing Issues and Emission Standards	16
V. Small Displacement Engine Exemption	18
VI. Lead Time	19
VII. Useful Life	20
VIII. Certification Issues	21
IX. Labeling Issues	22
X. Competition Reporting	22
XI. Cost Effectiveness	23
XII. Other Comments	24

GOLF CART and SPECIALTY VEHICLE ISSUES

I. UNIFORMITY

1. Comment: The National Golf Car Manufacturers Association (NGCMA) reiterated that they have consistently pursued achieving a gasoline-powered golf cart regulation which is similar to the current lawn and garden equipment regulations. The NGCMA contends that lawn and garden equipment utilizes the same basic engines as golf cars, and therefore, petitioned the ARB to regulate golf cars to the same standards. The premise behind this request was simple; similar engines should be similarly regulated. (NGCMA)

Agency Response: The staff recognizes that some engines used in golf cars are very similar if not identical to those used in lawn and garden equipment. However, the engines are used in different applications, and those applications have different performance requirements. The California Clean Air Act directed the ARB to develop emission standards for off-road vehicles based upon the most feasible technology available. Since approximately 50 percent of all golf carts presently in-use are electric, the ARB believes undisputedly that the technology is available and feasible for all golf cart uses.

2. Comment: The off-highway regulations do not allow for additional time to replace pre-1997 golf cars with uncontrolled engines. This is in contrast to the time provided in the utility and lawn and garden regulation for the use of uncontrolled engine replacements. Thus, the ARB proposal provides California golf courses and fleet operators of gasoline-powered golf cars less than 36 months to plan for and raise the capital for conversion to battery-powered golf cart fleets and construction of storage facilities. (NGCMA)

Agency Response: The regulation only pertains to the purchase of new golf carts and does not require golf courses to replace any of their existing gasoline-powered golf carts. Unlike utility equipment which may require frequent engine replacements for commercial use, the majority of golf cars are leased and complete engine replacements are rare. This regulation allows facilities continued use of their existing gasoline-powered golf carts until the engines are no longer repairable or when it becomes cost effective to replace the golf carts with new vehicles. Because the regulation does not require facilities to remove their existing gasoline-powered golf carts by 1997, the staff maintains that a three year lead time is sufficient for facilities to prepare themselves for a gradual conversion to electric vehicles. In addition, many of the golf courses currently have storage facilities which eliminates some of the major costs involved in the conversion.

3. Comment: The specialty vehicle manufacturers will have less than one year to prepare operating procedures, establish quality check points, and have vehicles submitted to the ARB for certification. (NGCMA)

Agency Response: The specialty vehicles in question were originally covered under the ARB's utility and lawn and garden regulation which was adopted in December 1990. The ARB initially decided to consider regulating specialty vehicles under the utility and lawn and garden category because such vehicles use substantially similar engines as the utility equipment. However, at the urging of specialty vehicle manufacturers and because specialty may be used for multiple purposes, the ARB reconsidered its decision and reclassified specialty vehicles under the off-highway recreational vehicle classification. Despite the reclassification, the engines have the same emissions characteristics and the need for control as utility and lawn and garden engines. (See Staff Report and the Initial Statement of Reasons for Consideration of California Exhaust Emission Standards and Test Procedures for 1995 and later Utility and Lawn and Garden Equipment.)

In the present rulemaking, the ARB approved regulations for the specialty vehicles under 25 horsepower that parallel the utility and lawn and garden engine regulations. Thus specialty vehicles under 25 horsepower have been given the same implementation date, emission requirements, and enforcement procedures -- including engine labels, warranty requirements and compliance and quality audit testing -- that apply to utility and lawn and garden equipment. The warranting of defects and compliance and quality-audit testing are the enforcement provisions that assure that production-line specialty vehicles will continue to meet the adopted emission standards. These enforcement measures are identical to those that have been adopted for utility and lawn and garden engines. The specialty vehicle industry, which is closely related to the utility engine industry, is familiar with the adopted enforcement provisions.

The specialty vehicle manufacturers, many of whom also are manufacturers of utility and lawn and garden equipment, have been on notice since 1990 that these regulations were going to be applied to specialty vehicles. Thus, specialty vehicle manufacturers have had over 4 years to prepare for and certify their vehicles for the California market. In addition, manufacturers of the larger specialty vehicles have been provided supplemental lead time.

II. POPULATION

4. Comment: Industry estimated the total California golf cart population to be 40,000 -- 14,000 gasoline golf cars and 26,000 electric golf cars. A previous EPA study estimates the national gasoline-powered golf cart population to be 122,670 units. If California has 40,000 gasoline golf cars, this represents an incredible 33 percent of the total U.S. gasoline golf cart population. Industry has estimated that California's golf cart population is only 6 percent of the U.S. golf cars. Given that the population of gasoline golf cars is one-third that of staff's estimates, the

baseline emission inventory can be only one-third of the reported amount estimated by staff. (NGCMA)

Agency Response: The staff report included a 1990 population estimate of 40,000 gasoline-powered golf cars in California. This estimate was provided by Power Systems Research Inc. and was developed by checking sales records, user survey, dealer surveys, etc. Power Systems Research Inc. has provided valuable and reliable inventory information in the past for other off-highway regulatory purposes and the ARB considers this to be the best data available. As with other emission sources, the staff revises the emission inventories as new, more appropriate data are available. Staff was directed to review the manufacturers population data and revise the inventory in the future. In addition, even if the staff has overestimated the population of golf cars by a factor of 2, the emissions associated with those vehicles would still be considered significant and cost effective for the implementation of the adopted regulations.

III. EMISSIONS INVENTORY

5. Comment: A survey conducted by the NGCMA estimated the emissions from the California based gasoline-powered golf cart engines. The survey concluded that, on a statewide basis, golf cars emit 0.15 tons per day of hydrocarbons, 6.17 tons per day of carbon monoxide, and 0.06 tons per day of oxides of nitrogen. This contrasts sharply with the inventory estimates contained in the staff report. The NGCMA believes their numbers to be correct based on the technology changes to gasoline-powered golf cars in recent years which improved the emission characteristics of their products. The NGCMA believes the ARB may not have utilized the latest design of engines in their evaluation and therefore may have included a higher population of two-cycle engines. These two-cycle engines have now become virtually extinct in the golf cart market. (NGCMA)

Agency Response: The staff based its population information on the best available data (please refer to agency response to Comment 4). In addition, the NGCMA used emission factors derived from a new golf cart equipped with the latest designed engine. In doing so, the NGCMA failed to account for the older vehicles in the current fleet that may be equipped with less advanced engine designs and subject to emissions deterioration through normal use. The inventory estimates contained in the staff report were derived utilizing emission factors and other test data from a variety of in-use engines. This allowed staff to account for the varying emission levels associated with in-use engines and the different engine types (2 and 4-stroke) which are included in the current golf cart fleet. Furthermore, the NGCMA's emissions inventory failed to account for emissions associated with start-up, evaporative, or spillage losses which accounts for over three tons per day of hydrocarbon emissions.

Staff believes the discrepancy between the emission inventory contained in the staff report (mailout 93-58) and those reported by industry may also be a result of population discrepancy. See agency response to comment 4.

IV. COST

6. Comment: To build a new or modify an existing golf cart facility to accommodate recharging electric golf cars and buy or allocate property on which to place the storage facility will cost the average golf course operator between \$300,000 and \$1 million dollars. (NGCMA)

Agency Response: Staff agrees that there will be a substantial cost to golf courses which do not currently have storage facilities. However, surveys conducted by staff indicate that most golf courses, whether they are currently using gasoline-powered or all-electric golf cars, have existing storage facilities. For those golf courses with existing storage facilities, battery charging equipment and electrical service would be needed. However, for those golf courses which do not have storage facilities, staff estimates that a more reasonable building cost of \$100,000 to \$150,000 is more likely. In addition, industry has calculated the worst case cost of retrofitting an entire golf course to all electric to be \$1 million. Even using this upper bound cost estimate, the adopted regulations would only result in an increased cost of \$0.88 per round of golf. Staff believes this cost would be passed on to the consumer in its entirety, resulting in a net cost of zero to the golf course.

7. Comment: Capital expenditures become significant when one considers that electric golf cars should not be stored in the same enclosure as gasoline golf cars due to a possible fire hazard. (NGCMA)

Agency Response: Staff knows of no reason, including safety concerns, which would prohibit the storage of gasoline and electric golf cars in a properly built and ventilated storage area. In fact, a survey conducted by NGCMA indicated that 34 percent of the golf courses surveyed currently operate a mixed gasoline and electric golf cart fleet.

8. Comment: The most harrowing effect of the regulation is the immediate adverse economic impact on California golf course operators. Based on a 1993 National Club Association survey, golf cart revenues contributed 4 percent and have annual operating costs of approximately 2 percent of all revenues of the average private golf club in the Western United States. In a National Golf foundation published report on golf cart economics, the stated differential and operating cost between electric-powered and gasoline-powered golf cars is 88 cents per round. If a typical private club in California has a fleet of 64 golf cars operating at an estimated average of 417 rounds per year, this will increase operating cost by \$23,508, reducing the average profit of \$106,820 to \$83,312. This represents a decrease in the golf cart rental profit margin of 22 percent. (NGCMA)

Agency Response: Staff believes that the increase of \$0.88 per round of golf will be passed on in its entirety to the consumer resulting in a zero net cost to the business. Using an estimated average rental fee of \$18.00 from a typical private club in California and industry's expected increase of \$0.88 per round for electric golf carts, staff estimated an increase in the cost of a round of golf to be less than 5 percent.

Finally, to the extent that the utility engine regulations represent the most cost-effective controls for that type of equipment has no dispositive bearing on the cost-effectiveness of the golf cart standards and regulations. The former was based on the cost and application of that equipment and the golf cart regulations were separately based on the special considerations of golf cars.

V. TECHNICAL FEASIBILITY

9. Comment: While all golf cart manufacturers build electric golf cars, there are applications where electric golf cars are not suitable for that application because of very hilly terrain. Additional technological advances need to be achieved before golf cars can operate in all areas. Presently, golf cars cannot complete two rounds of golf on a single charge using current battery technology, and manufacturers do not see any new battery technology on the horizon that is economically feasible to put in a golf car. (NGCMA)

Agency Response: Staff does not believe this to be a problem. Golf courses known to be hilly or very hilly presently use all electric golf cart fleets and report no problems with the cars ability to climb or descend hills or to complete two full rounds of golf with a single charge. Thus, staff does not foresee the need for new battery technology.

10. Comment: The manufacturers have completed a tremendous amount of work on new engine technology to reduce emissions. Manufacturers have expended resources on developing propane conversion kits and natural gas and other alternate fuel engines. (NGCMA)

Agency Response: As with other regulatory control measures, staff typically develops emission standards based upon the most advanced, yet cost effective technology. For golf cars, a zero emission standard is not only cost effective (see comment 8), it does not necessarily require "advanced" technologies, (i.e., the technology currently exists). In addition, while it is known that properly maintained alternate fueled engines generally emit less pollution than the current gasoline engines, they are, nevertheless, more polluting than an equivalent electric vehicle.

11. Comment: Kubota Corporation has expressed some concern with the level of stringency of the incorporated Lawn and Garden and Utility emissions regulations as they pertain to specialty vehicles. They have requested that they not be precluded from progress discussions as they relate to meeting the adopted standards. (Kubota Corporation)

Agency Response: The staff will be holding meetings in the near future to discuss the progress of manufacturers meeting the standards applicable to specialty vehicles.

VI. OTHER COMMENTS

12. Comment: How ironic it will be if environmentally friendly golf courses are run out of business because of an ill-conceived regulation only to be replaced by less environmentally friendly commercial activities. (NGCMA)

Agency Response: Staff has calculated the cost effectiveness of this proposal for golf cars to be \$0.34 per pound for all hydrocarbons reduced. This compares favorably with the average cost of \$2.00 to \$3.00 per pound of other previously adopted emission control proposals. Staff believes that due to the cost and lead time provided, no golf course should be forced out of business due to the adopted regulations.

13. Comment: We do not object to regulation of specialty vehicle engines, however, we believe that they properly belong in the off-highway industrial equipment sub-category the ARB intends to address with separate regulations in the near term. (Kubota Corporation)

Agency Response: At this time, the staff does not have any short term agenda to regulate off-highway industrial equipment. Because the engines used in specialty vehicles are similar to those used in other equipment covered in this regulation, they have been included in this package.

OFF-ROAD MOTORCYCLE & ALL-TERRAIN VEHICLE ISSUES

I. DEFINITIONS

14. Comment: Staff has defined competition vehicles as those used exclusively for competition. While MIC's member companies manufacture motorcycles for exclusive competition use, they have no control over the actual usage by the ultimate purchaser. The MIC continues to object to any definition based on a vehicle's use. Competition vehicles should be defined as those designed, manufactured and marketed exclusively for closed-course competition use. (MIC, Honda)

15. Comment: The definition for both off-road motorcycle and all-terrain vehicles includes a sentence to the effect that an off-road motorcycle or all-terrain vehicle that is not used exclusively for competition is not defined as a competition vehicle. The manufacturers believe this is unnecessary, since a competition vehicle definition is already included in the proposed regulations. There is really no need to define what is not a competition vehicle. (MIC, Honda)

Agency Response: The staff concedes that the ARB has no authority to regulate vehicles used exclusively for competition purposes (i.e., racing vehicles); however, the staff opposes the use of industry's proposed language which includes the words "designed and marketed" in the definition of competition vehicles. A strict interpretation of such a definition would remove the ARB's authority to regulate any and all vehicles a manufacturer chooses to "design" as a competition vehicle regardless of its actual use. In theory, a manufacturer could claim that it has designed its entire product line for competition purposes and consequently be exempt from the ARB's emission control regulations.

The ARB has no intent on regulating, banning, or restricting in any way the legitimate manufacturing, sale, and use of competition (racing) vehicles. However, similar to on-highway vehicles, automobile manufacturers are prohibited from selling non-certified Indy race cars for use on the highway. Although these vehicles are "designed and marketed" for competition purposes, if they are not used strictly for this purpose, they are subject to the ARB's emission control regulations. Similarly, the definitions for competition off-road motorcycles and ATVs have been drafted to prevent manufacturers from selling vehicles expressly made for "competition/racing" purposes to members of the general public who intend to utilize their vehicle for non-competition/racing purposes. This follows closely with the Legislative findings and declarations contained in Part 5, Chapter 1, Section 43000.5 of the California Air Pollution Control Laws which states that regulations will be distributed equitably between both on- and off-road vehicles. Moreover, the ARB definition is consistent with the definition of nonroad engines in the federal Clean Air Act, which excludes vehicles "used solely for competition."

16. Comment: The definition of an off-road motorcycle should be consistent with the existing California Vehicle Code definition. (Honda)

Agency Response: The ARB tries to utilize existing definitions wherever possible. However, because the current off-road motorcycle definition contained in the California Vehicle Code was not adequate for emission control purposes, it was necessary to develop a new definition.

17. Comment: We object to staff's addition of load weight limits to the American National Standards Institute's definition of an ATV. It is our understanding that staff's intention in adding the load limits was to preclude redefinition of specialty vehicles as ATVs. The very design specific aspects of the American National Standards Institute definition will make this very unlikely. We feel that such limits may prove design restrictive in that larger ATVs are already very near the load carrying capacity set forth in the definition presented by staff at the hearing. (MIC, Honda)

Agency Response: Staff developed their emission standard and test cycle for ATVs based on their usage (i.e., primarily for recreational purposes). Staff utilized the existing American National Standards Institute definition with the addition of a 350 pound payload limit for ATVs. Because specialty vehicles are similar, if not identical, to many of the engine families that are covered by the utility and lawn and garden regulations, the Board adopted similar standards for the specialty vehicle classification. These standards are different from the standards that have been adopted for ATVs. Accordingly, since the specialty vehicle standard is more stringent than that which has been adopted for ATVs, staff found it necessary to include a load limit in its definition of ATVs to distinguish such vehicles from specialty vehicles and the special applications that these vehicles perform. The load requirement will maintain a clear line between ATVs, designed for recreational uses, and specialty vehicles that perform high load functions. Staff believes that any vehicle designed to carry more than 350 pounds will be utilized in a specialty vehicle capacity rather than a recreational capacity and therefore should be subject to the specialty vehicle emission standards.

II. INVENTORY

18. Comment: There are not as many off-road motorcycles being used in California as the staff hypothesizes. Because of the limited population of these vehicles, we think it is clear that this source is not a major contributor of air pollution. The main effectiveness of the proposal would be the elimination of vehicles equipped with two-stroke engines, as was the case with the on-road regulation adopted some years ago. (Honda, Kathleen Hunt Wolf)

Agency Response: The California Health and Safety Code states that the attainment and maintenance of the state air quality standards will necessitate the achievement of substantial reductions in new vehicle emissions in conjunction with improvements in the durability of vehicle

emissions systems. This statute also requires that the burden for achieving needed reductions in vehicle emissions be distributed equitably among various classes of vehicles, included both on- and off-road vehicles. The off-road motorcycle and ATV population estimates are based on information directly supplied to the ARB by the motorcycle industry. This information was verified by cross checking similar data provided by the California Department of Motor Vehicles. Because the information from these two sources correlated well over the last eight years, it was determined to be the best available and most accurate information. Although the population of these vehicles may be small compared to other sources, some of these vehicles emit over 100 times the amount of hydrocarbons as a passenger vehicle on a gram per mile basis. For this reason, staff considers these vehicles to be a significant source of emissions.

Contrary to industry's belief, the purpose of the proposal should not be limited to the elimination of two-stroke engines. Rather, its overall purpose is to maximize the emissions reductions from both 2- and 4-stroke engines in these types of vehicles in the most cost-effective manner. Staff does however, acknowledge that the implementation of these regulations will most likely cause the conversion of many 2-stroke powered vehicles to the cleaner 4-stroke versions.

19. Comment: For regulation of off-road motorcycle emissions, it simply does not make sense to proceed as though the motorcycles are used where they are registered. They are not. (Kathleen Hunt Wolf)

Agency Response: For this regulatory effort, the staff did not assume that off-road motorcycles or ATVs were used where they are registered. Although it is true that some vehicles are primarily used in remote or attainment areas, there are many off-road vehicles which are used in parks found in or near major non-attainment areas. For this reason, staff believes that these vehicles represent a significant emission impact and therefore warrant regulatory control.

III. USAGE

20. Comment: The small displacement vehicle (<90cc) is the introductory vehicle used by the industry to attract new riders to the sport. They accumulate less miles per year while being used on fewer days per year than the larger displacement vehicles. Because of this, we think the contribution of these vehicles will not be as great as was indicated by staff. Staff's estimate of 2400 miles per year for these small vehicles is a little bit out of line. (Suzuki, Honda)

Agency Response: Staff agrees that the smaller displacement vehicles may be used less than the larger displacement vehicles. However, because the majority of these smaller vehicles are equipped with the higher emitting two-stroke engines, their emissions contributions remain significant.

21. Comment: The staff's estimate of annual miles driven does not consider the differences in performance and terrain which limit average speed to well under 20 miles per hour for small displacement vehicles. (Honda)

22. Comment: The number of days used per year and the mileage accumulated will decrease year by year as it does with other classes of vehicles. So we find that it is not reasonable to estimate the annual miles driven as done in the staff report. (Honda)

Agency Response: Staff recognizes that some vehicles may be ridden at speeds less than 20 miles per hour, but other vehicles are ridden at well over 60 miles per hour in some areas. The number of days ridden per year will likewise vary. Staff used the Motorcycle Industry Council's estimate of the average days ridden per year in its analysis. Staff believes that the estimates set forth in the staff report are the best information available.

IV. ENGINE TESTING ISSUES and EMISSION STANDARDS

23. Comment: Our motor sports test engineers tell us that they are unable to modify our existing motorcycle chassis dynamometers in order to use them with four-wheel ATVs. (Yamaha)

24. Comment: Our testing facility has been optimized for two-wheeled motorcycles and cannot accommodate an ATV even if one rear wheel is removed. For this reason, Honda needs the option to use the test procedure for utility equipment engines, which is proposed in the regulation. (Honda)

Agency Response: Recognizing that certain manufacturers were unable to test ATVs using their existing chassis dynamometers and equipment, the regulations allow manufacturers to use a steady-state engine dynamometer test as an alternate certification procedure. This test cycle is identical to that used by manufacturers to certify their utility equipment engines.

25. Comment: We believe that the ARB must adopt a single specific numerical standard for ATVs, using the steady-state SAE J-1088 test procedure. (MIC, Honda)

26. Comment: For ATV engines less than 225cc we propose a standard using the J-1088 test of 300 grams per brake-horsepower hour for CO; and 12 grams per brake-horsepower hour for combined HC + NOx. For ATV engines 225cc and greater we propose a standard using the J-1088 test of 300 grams per brake-horsepower hour for CO; and 10 grams per brake horsepower hour for combined HC + NOx. (Honda)

27. Comment: We are committed to work with the ARB staff to help develop a steady-state emission standard utilizing the SAE J-1088 procedure which is equivalent to the proposed emission standard which utilizes a chassis dynamometer. This standard would be an alternative for the proposed chassis dynamometer test. This would provide an equivalent emission standard for

ATVs as the proposed 1.2 grams of hydrocarbon and 15 grams of CO per kilometer. (Yamaha)

Agency Response: The ARB is currently working with industry to develop a single appropriate standard to be used in conjunction with the SAE J-1088 test cycle for ATVs. If and when such a standard can be correlated to the utility and lawn and garden standards that have been established using the J-1088 test procedure, the standard will be applicable to all ATVs electing to use it for certification.

28. Comment: The proposed regulations allow certification of ATVs using the utility engine test procedures. Due to different engine loading characteristics between the two test procedures, preliminary testing by manufacturers has shown no true correlation between them. (MIC)

29. Comment: Engines tested under the SAE J-1088 procedure must comply with exhaust emission standards equivalent to the standard for vehicles tested under the Federal Test Procedure. No explanation of how this equivalency will be determined has been provided in the proposal, and our understanding shows that it might result in different manufacturers certifying to different standards for the same category of vehicles. (Honda)

Agency Response: See response to comments 25-27. This alternate test procedure was suggested by industry during the early part of the rulemaking effort as a possible solution to reduce the cost of testing for some manufactures. Although staff was hesitant to include this in the formal proposal due to suspected correlation problems, we did so in hopes of reducing manufacturers' costs. As mentioned at the ARB hearing, the staff will be working with manufacturers in the upcoming months to further study and develop an appropriate correlation between the two test cycles. All manufacturers will be required to certify to the same standard.

30. Comment: The ARB staff proposed that manufacturers be allowed to establish a corporate average only for vehicles utilizing the motorcycle chassis Federal Test Procedure. The ARB should also allow manufacturers to average the vehicles tested on the motorcycle chassis Federal Test Procedure together with the vehicles tested using the SAE J-1088 engine test procedure. And that, for the latter, the HC plus NOx values should be averaged. (Honda)

Agency Response: Manufacturers have the option to include the ATVs in the corporate average standard if they are tested using the Federal Test Procedure. Because there was not enough testing information available on ATVs using the J-1088 test cycle, it was not possible to determine if a corporate average using two distinct test cycles was appropriate. In addition, staff believes that because this test cycle was proposed as an option to ease industry's concerns regarding testing complexity, there is no need to provide manufacturers with a corporate average option.

31. Comment: Some manufactures have indicated that there are some repeatability problems with using the federal test procedure. (MIC)

Agency Response: The federal test procedure has been utilized for similar vehicles for over 15 years. Staff does not believe these vehicles will have any problems utilizing the current federal test procedure.

32. Comment: Many, if not most, of the 50cc off-road motorcycles cannot attain even the modest speeds required by the Class-One Federal Test Procedure. These machines are, for the most part, intended for use by children who are learning to ride, and are typically operated at slow speeds on level ground. (MIC)

33. Comment: The maximum speed of our under 50cc vehicle is approximately 30 miles per hour. This speed is less than some of the speeds that are achieved during the test cycle that we would have to use for emissions testing. (Suzuki)

Agency Response: Staff does not believe this to be a problem. This situation is similar to that found in all areas of on- and off-road certification. Those engines or vehicles which are not capable of attaining the prescribed test speeds, will be tested at the maximum speeds they can attain.

V. SMALL DISPLACEMENT ENGINE EXEMPTION

34. Comment: The staff report indicated that industry was asking for a complete exemption for vehicles with engine displacements under 90cc. Industry is now asking that vehicles equipped with engines under 50cc be exempt and for vehicles equipped with engines between 50cc and 90cc be granted an additional 3-year leadtime. (MIC)

Agency Response: At the time the staff proposal was published, staff had received several letters from the MIC as well as individual manufacturers requesting a complete exemption for vehicles with engines under 90cc. The industry's proposal changed as indicated above prior to the hearing.

35. Comment: We strongly feel that those off-road motorcycles and ATVs with engines less than 50cc should be exempt from regulation. The small displacement machines under 50cc are currently exempt from on-highway emissions rules in California and at the federal level. (MIC, Honda)

36. Comment: There are some fundamental differences between the less than 50cc models and the larger off-road motorcycles and ATVs. One issue that is of particular concern to Suzuki is the issue of an exemption for models less than 50cc and a delay in the implementation of the regulations for the 50 to 90cc models. (Suzuki)

37. Comment: We believe that allowing an exemption for a small number of the smaller off-road motorcycles would have virtually no effect on air quality in California, particularly in the non-attainment areas. (Suzuki)

38. Comment: It is important that the small entry-level motorcycles and ATVs that are used by children and small adults continue to be light weight, easy to handle, and economically priced. These machines are important to us, in that they are typically the machines that introduce new users to the sport, thus perpetuating the market for the larger machines. Because of the very small size and light weight of these machines, fitting them with larger emission controlled engines is not practical. (MIC)

39. Comment: As of March 1993, industry had relied on the staff's indication that motorcycles and ATVs under 90cc would be exempt from emission requirements. Consequently, virtually no development of alternative power sources for them has been done. Many of these smaller machines use the engines as a chassis structural member, and to redesign and redevelop them will entail a complete reengineering of the engine, frame, or both to incorporate a new emission-controlled engines. (MIC)

Agency Response: As stated in the staff report, the staff believes the 90cc exemption is unnecessary and will undermine one of the main purposes of the proposed regulations: to control the higher emitting 2-stroke engines. The majority of the under 90cc engines used in these vehicles are 2-stroke designs, which can produce up to 20 times the hydrocarbon emissions as an equivalent 4-stroke engine. Industry has further demonstrated that they are capable of producing a marketable vehicle equipped with small 4-stroke engines. However, staff acknowledges that there are differences between off-road motorcycles equipped with engines having a smaller displacement and those equipped with larger engines. For this reason, the ARB recognized that manufacturers may require additional lead time to insure compliance with the proposed standards. The ARB has provided manufacturers with an additional 2-year leadtime for vehicles equipped with engines 90cc or less. In addition, the industry has been afforded the flexibility of a corporate average hydrocarbon standard for those vehicles certified using the Federal Motorcycle Test Procedure and applicable standard.

VI. LEAD TIME

40. Comment: If you are going to go ahead with these regulations, you should be aware that the burden falls unevenly upon the small and large manufacturers. And I think, at the very least, you ought to give the small manufacturers an additional three to five years to meet these regulations or, alternatively, partial exemption from these requirements. (Kathleen Hunt Wolf)

Agency Response: The ARB concluded this regulation did not place undue hardship or economic strain on industry, as a whole, or specifically on small business. This regulation has provided manufactures with three years of lead time to comply with the standards and other regulatory requirements. Moreover, most vehicles equipped with 4-stroke engines will require little technological development to comply with the proposed standards, and thus, the three years staff provided is sufficient. No evidence was presented by the commenter which indicated any inequitable burden upon small manufacturers as a result of staff's proposal. In addition, granting

additional leadtime for small volume manufacturers would provide an unfair economic advantage over the larger manufacturers.

41. Comment: We are asking that an extension be granted for those off-road motorcycle and ATVs with engines between 50 and 90cc. This will allow manufacturers to develop small, light weight emission-controlled motorcycles with adequate performance capabilities for use by youngsters learning to ride and small adults, who would be otherwise uncomfortable with bigger machines. (MIC, Yamaha, Honda, Suzuki)

Agency Response: The ARB granted manufacturers a two-year extension for vehicles equipped with engines 90cc or less. Regulations for these vehicles will begin January 1, 1999. (See response to comments 36-40.)

VII. USEFUL LIFE

42. Comment: We believe the proposed five years or 10,000 kilometers useful life is too much for this type of product. It is similar to the useful life requirement adopted for on-road motorcycles. Differences in the usage between on- and off-road motorcycles make it impossible for the manufacturer to guarantee the performance of the product used off-road, even if they are manufactured to the same specifications. We propose that useful life be defined as 2 years or 4,000 kilometers, or 200 hours whichever occurs first for vehicles with engines 280cc and greater; 2 years or 2,400 kilometers, or 200 hours whichever occurs first for vehicles with engines 170cc to 279cc; and 2 years or 1,600 kilometers, or 200 hours whichever occurs first for vehicles with engines 91cc to 169cc. (Honda)

Agency Response: California Health and Safety Code sections 43000.5 and 43018 require that the burden for achieving the needed reductions in vehicle emissions should be distributed equitably among both on- and off-road vehicles. This includes a need for substantial improvements in emissions levels and in-use performance and durability of emission systems. For other on- and off-road vehicles, manufacturers are required to do extensive testing of their vehicles in order to prove durability of their product and ensure that engine characteristics are substantially the same as certified engines and that emission levels of assembly line engines, on average, do not exceed those of the certified engine. However, because this type of testing is expensive, the staff opted to use only the existing recall regulations in conjunction with an appropriate useful life as an enforcement measure. During workshops and meetings with industry, industry spokespersons concurred that the adopted recall regulations were appropriate enforcement measures for the off-road motorcycle and ATV industry.

The recall provisions require a manufacturer to recall and repair a class or category of vehicles if information exists showing that a substantial number of such vehicles exceed the applicable emission standards on average or contain a failure in an emission-related component, which, if undetected, would result in such vehicles not being able to meet the applicable emission standards on average over their defined useful life. Nearly the entire off-road motorcycle and ATV industry is familiar with the recall provisions as

they apply to off-road motorcycles due to the fact that most produce on-road motorcycles which are currently subject to these procedures.

Like current on-road motor vehicles, manufacturers are responsible for ensuring their vehicles conform to the applicable emission standard over the useful life of the vehicle. The useful life period for off-road motorcycles and ATVs is based on the average life of the vehicle or engine. Information provided by industry indicates that over 50 percent of the vehicles are still in use after 5 years. Thus, the ARB believes that the 5 year/10,000 kilometer useful life period is appropriate for these vehicles. Under the recall provision, a manufacturer may be responsible for the recall and repair of an engine class if evidence exists that vehicles within the class have common failings of their emission control systems.

VIII. CERTIFICATION ISSUES

43. Comment: Another area of disagreement pertains to certification testing. The proposed regulations require that all ATVs and off-road motorcycles undergo a minimum of two tests for certification. This is not required for any other class of vehicles or engines controlled by the ARB and is not necessary for this class. The additional testing costs and time requirements are an unnecessary burden to the manufacturers and will serve no useful purpose. So, we would like to request that the ARB change this to require only one certification test. (MIC, Honda)

44. Comment: The staff does have the authority to request an additional confirmatory test if they think it necessary. But it seems to us that there is no need to require this on every engine certification. (Honda)

Agency Response: Although it is true that other vehicles may not be required to perform two separate certification tests, they are however, required to do durability and quality audit testing which is much more involved and expensive. Durability is to insure compliance with the standards throughout the average life of the vehicle or engine. Quality audit testing is used to ensure that the emissions characteristics of the engines on the production line are identical to those of the certified engine. However, because durability and quality audit testing are extremely expensive for the manufacturers, staff decided to eliminate this requirement for off-road motorcycles and ATVs in favor of performing two certification tests for each engine family. The ARB determined that a second certification test was necessary to ensure that the prototypes conform to the adopted standards. Such a test would help ensure the accuracy of the initial test and provide confidence that the tests are representative of all the engines produced.

45. Comment: We would like to request that the ARB add the words "...as determined by the manufacturer..." to the definition of test distance in order to clarify the responsibility for that determination. (Honda)

Agency Response: Staff incorporated this addition in the Notice of Availability of Modified Text. See Off-Highway Test Procedures, section 86.402-78, Definitions.

IX. LABELING ISSUES

46. Comment: We suggest that a specific requirement be adopted to identify the non-certified off-road motorcycles and ATVs as opposed to identifying the complying vehicles. This will be more economical, since there are less models to change and it will have the same effect. (Yamaha, Honda)

Agency Response: Staff originally proposed labeling only the competition vehicles. However, because of intense industry opposition concerning our legal authority to regulate competition vehicles in any way, this method was abandoned. In addition, because manufacturers will be producing non-competition vehicles for other states and countries which do not conform to California standards, it is important that we be able to distinguish between not only competition vehicles, but also non-certified models. Because of this, industry agreed to reserve certain alphanumeric characters in the eighth position of the VIN code for certified vehicles. In the Notice of Availability of Modified Text, the regulations were modified to reflect this agreement.

47. Comment: The definition of the Vehicle Identification Number incorporates several parts of the Code of Federal Regulations, which include specific labeling requirements. We believe that these may have been incorporated by mistake. (Honda)

Agency Response: Upon review, staff found that one part listed in the definition of the Vehicle Identification Number was included unnecessarily and deleted the reference in the Notice of Availability of Modified Text.

X. COMPETITION REPORTING

48. Comment: Industry objected to any provision requiring the reporting of competition vehicle sales. The Vehicle Identification Number code provisions of the proposed regulations, to which the industry has agreed to implement, should provide a means for precluding the registration of competition vehicles and should negate any need for reporting sales of the competition vehicles. This reporting would provide no emission benefit, and cause additional work for manufacturers, the ARB, and the Department of Motor Vehicles. We request this proposal be deleted. (MIC, Honda)

Agency Response: Although the new registration procedure may eliminate owners of competition vehicles from receiving valid vehicle registrations, it is not known whether this new procedure will effectively control the majority of the vehicles which are purchased ostensibly for competition purposes but are actually used for recreational purposes. By requiring manufacturers to provide sales data on the number of competition vehicles sold in California, staff wanted to be able to estimate the effectiveness of this regulation and suggest further improvements if necessary. However, at the February 13, 1994 meeting, the ARB decided that the requirement for competition sales data was unnecessary in that industry had agreed to release it voluntarily.

XI. COST EFFECTIVENESS

49. Comment: Staff estimated that the cost of improvements to meet the proposed standards for off-road motorcycles would be approximately \$25 per engine. We find that this is fairly close for small engines. However, we estimate an increase of \$150 at retail for larger engines, which will need air injection. (Honda)

Agency Response: Because the cost to comply with the regulations varies depending on the engine type and the needed technology, staff estimated the cost of compliance of this regulation to be between \$25 and \$250. Honda's cost of \$150 for the larger engines falls well within staff's estimate and therefore validates staff's cost effectiveness estimates.

50. Comment: Staff may have overestimated the inventory of the vehicles that would result in some decrease in the cost-effectiveness of this proposal. This could be offset to some degree by mandating a specific standard to the ATVs using the SAE J-1088 test procedure, exempting vehicles less than 50cc, extending the lead time for vehicles under 90cc, requiring vehicle identification numbers only on competition vehicles, and the deletion of the competition reporting requirement. (Honda)

Agency Response: The ARB has attempted to address each of the concerns raised by the commenter. It has provided industry with the flexibility of using a single standard using the J-1088 test procedure for ATVs if such a standard can be correlated to the utility engine standard (see Agency Response to Comments 25-27); it has provided additional leadtime to motorcycles and ATVs using engines under 90cc (see Agency Response to Comments 35-39); it has provided a less burdensome approach for using VIN numbers on noncompetition vehicles (see Agency Response to Comment 46); and it has deleted the reporting requirement for competition vehicles (see Agency Response to Comment 48).

51. Comment: This set of regulations will be burdensome, and it absolutely will not achieve the projected reductions in emissions of hydrocarbons and CO in the non-attainment areas because these motorcycles are not ridden in the non-attainment areas. A very substantial amount of the use of these motorcycles is outside the State of California altogether. Again, the

stated reduction in emissions in non-attainment areas will not be achieved. Therefore, all of the cost analyses is wrong. (Kathleen Hunt Wolf)

Agency Response: Although it is true that some vehicles are primarily used in remote or attainment areas, there are many off-road vehicles which are used in parks found in or near major non-attainment areas. For this reason, staff believes that these vehicles represent a significant emission impact and therefore warrant regulatory control.

The ARB utilized the best available information in assessing the impact of these vehicles and therefore does not believe it has overestimated the inventory. However, even if staff overestimated the impact of these vehicles by a factor of 4, the cost effectiveness would still be well below that of other previously adopted regulations for other on- and off-road vehicles, making this a highly cost-effective regulation. See agency responses to comments 18 and 19.

52. Comment: If you adopt emission requirements for motorcycles less than 50cc, it would mean that manufacturers would have to do research and development for new four-stroke engines and frames along with purchasing new tooling. Because of this high cost of tooling, Suzuki would likely drop the smaller vehicles from the California market. (Suzuki)

Agency Response: Staff acknowledges that manufacturers will need to do some product research and development to meet the proposed regulations. We also recognize that because of the associated costs and the small sales volume of some engines, some manufacturers may choose to retire certain vehicles from the California market. However, outside of this isolated comment, manufacturers, as a whole, have not indicated that they will be unable to provide a full range of products to the California market. The modified regulations have provided tow additions years of leadtime for motorcycle and ATVs under 90cc. See Agency Response to Comments 35-39.

XII. OTHER COMMENTS

53. Comment: I am one of your citizens, and I'm extremely concerned, because all of the underlying premises upon which the proposed regulations are constructed are clearly erroneous. (Kathleen Hunt Wolf)

Agency Response: The regulations which were adopted represent over four years worth of work by staff in conjunction with the affected industries and interested parties. These regulations were based on the best available information at the time as well as on sound engineering practices. Staff does not believe the proposed regulations are constructed on any erroneous premises.

54. Comment: I am sure you are aware of the growing resentment against government and the lack of trust which many people feel. When you put in place regulations which damage small business and for which the rationale is misleading, you risk increasing this disaffection. Bad regulation, with its attendant bureaucracy, is much more damaging to California citizens and to

its small businesses than no regulation at all. (Kathleen Hunt Wolf)

Agency Response: The ARB is endeavoring to fulfil the statutory mission entrusted to it by Congress and the California Legislature. That mission is to attain and thereafter maintain the national and state ambient air quality standards. To that end, the ARB has adopted stringent regulations to obtain emission reductions from most sources throughout the state, including the sources directly affected by this rulemaking. In adopting these regulations, the ARB is required to consider the economic effects of the regulations and whether they will have significant adverse affects on California industry and particularly small businesses. The ARB concluded that the instant regulations would not cause significant hardship or economic strain on the affected industry or small businesses.

55. Comment: Emphasizing the importance of the machine, it should be noted that under the requirements of the consent decree signed by the ATV manufacturers and distributors and the U.S. Consumer Product Safety Commission, ATV manufacturer/distributors are precluded from marketing ATVs with engines larger than 90cc for use by children under 16-years old. Children under 12 years of age may only ride ATVs with engines under 70cc. Since many, if not most, entry level riders fall into these age groups, this segment of the market is very important. It is also important that these vehicles provide adequate performance to allow the learning skills required to transition into the larger machines. (MIC)

Agency Response: Staff is not recommending manufacturers supply vehicles equipped with larger engines to children of any age. It is the intent of these regulations to reduce the emissions of engines used in ATVs so that California can attempt to meet attainment for clean air as mandated by federal and state law. Such regulations must be technologically feasible within the timeframe required for compliance. To that end, the ARB in adopting the regulations provided the manufacturers of small engines with two years of additional leadtime for compliance. See response to comments 35-39.

APPENDIX A

LIST OF PARTIES WHO SUBMITTED WRITTEN COMMENTS

Fred Rice, Citizen
National Golf Car Manufacturers Association (NGCMA)
Motorcycle Industry Council (MIC)
Yamaha Motor Corporation
Honda Motor Corporation
Suzuki Motor Corporation
Kubota Corporation
Carole Bedwell, Chief, Program and Policy Administration, DMV

APPENDIX B

**LIST OF PEOPLE WHO PROVIDED ORAL TESTIMONY AT THE JANUARY 13, 1994
BOARD HEARING**

Charles Fain, National Golf Car Manufacturers Association (NGCMA)
Kathleen Hunt Wolf, Citizen
J. C. DeLaney, Motorcycle Industry Council (MIC)
Curtis Schmidler, Yamaha Motor Corporation
Brian Gill, Honda Motor Corporation
Ken Bush, Suzuki Motor Corporation

APPENDIX C

LIST OF PARTIES WHO COMMENTED ON THE 30-DAY NOTICE

Motorcycle Industry Council
Kubota Corporation