

MEETING  
CALIFORNIA AIR RESOURCES BOARD

HEARING ROOM  
2020 L STREET  
SACRAMENTO, CALIFORNIA

THURSDAY, JANUARY 13, 1994

9:40 A. M.

Nadine J. Parks  
Shorthand Reporter

INDEX, continued. . .

PAGEAGENDA ITEMS:

94-1-1	Public Hearing to Consider Adoption of Emission Control Regulations for Off-Highway Recreational Vehicles and <u>Engines</u>	
	Introductory Remarks by Chairwoman Schafer	35
	<u>Staff Presentation:</u>	
	Jim Boyd Executive Officer	37
	Charles Emmett Staff Off-Road Controls Section, MSD	38
	Jackie Lourenco Manager Off-Road Controls Section, MSD	56
	Questions/Comments	58
	<u>PUBLIC COMMENT:</u>	
	Charles Fain National Golf Car Manufacturers Association	69
	Questions/Comments	79
	Kathleen Hunt Wolf Citizen	99
	Questions/Comments	101
	J. C. Delaney Motorcycle Industry Council	110
	Questions/Comments	118
	Luncheon Recess	125

INDEX, continued. . . . PAGE

AGENDA ITEMS:

94-1-1

Afternoon Session 126

FURTHER PUBLIC COMMENT:

Curtis Schmidler  
Yamaha Motor Corporation 126

Questions/Comments 128

Brian Gill  
Honda Motor Company, Ltd. 137

Questions/Comments 147

(Direction to Staff) 158

Ken Bush  
American Suzuki Motor Corporation 158

Questions/Comments 162

Entry of Written Comments into Record

Jackie Lourenco  
Mobile Source Division 162

Summation by  
Jim Boyd 164

Questions/Comments 165

Statement by Board Member Edgerton 166

Questions/Comments 167

Closing of Record on item 94-1-1  
to await 15-day notice of public  
availability 179

Motion by Riordan to Approve  
Resolution 94-1 180

INDEX, continued. . .	<u>PAGE</u>
<u>AGENDA ITEMS:</u>	
94-1-1 Discussion	181
Motion to Amend Main Motion	181
Discussion	182
Motion to Amend Main Motion by Riordan	182
Discussion	182
Discussion re load limit amendment by Lagarias	194
Load limit amendment withdrawn by Lagarias	197
Discussion re extension of time amendment by Lagarias	197
Discussion re exemption of 50cc and below engines	201
Discussion re golf carts	205
Roll Call Vote on Lagarias' amendment re golf carts	210, 211
Roll Call Vote on Lagarias' amendment re exemption for 50cc and below engines	211, 212
Roll Call Vote on Lagarias' amendment re extension of time	213
Roll Call Vote re reporting requirements by Lagarias	214, 215
Further Discussion	215
Board Action re Riordan's Amendment	216

INDEX, continued. . . PAGE

AGENDA ITEMS:

94-1-1	Roll Call Vote re Adoption of Resolution 94-1, as amended	216, 217
94-1-2	<u>Continued to February Meeting</u>	217
94-1-3	<u>Research Proposals</u>	
	Board Action by Roll Call Vote	220
	Adjournment	221
	Certificate of Reporter	222

1 Governor's budget as it relates to the Air Resources Board.  
2 And we expect that to be -- we're reprinting those right  
3 now, and we expect to be able to distribute those to you in  
4 the immediate future.

5 With that, Madam Chair, that concludes my rather  
6 brief remarks highlighting the budget. The good news is  
7 that it's a level budget in these economic times, and it  
8 does reflect the Governor's commitment to trying to meet the  
9 goals and objectives of the California air pollution control  
10 program.

11 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
12 Boyd. Were there any questions from any of the Board  
13 members on the budget?

14 I just want to reemphasize that, given the mandate  
15 that the Governor has given us through his challenges in the  
16 "State of the State" message and the means by which he is  
17 equipping us to undertake those mandates, I think that I'm  
18 justified in saying that we are on a course that is steady  
19 as she goes, and we have a lot of work in front of us.

20 And, again, thank you very much for your attention  
21 to these preliminary matters.

22 Now, we will begin the first regulatory item on  
23 the agenda, as I said earlier, 94-1-1, the public hearing to  
24 consider the adoption of emission control regulations for  
25 off-highway recreational vehicles and engines.

1           If anyone has come in since we began the session,  
2 I'd like to remind those of you in the audience who are here  
3 and would like to present testimony to the Board on any of  
4 today's agenda items, to please sign up with the Board  
5 Secretary. And if you have a written statement, we'd would  
6 appreciate having 20 copies provided to the Board Secretary.

7           The 1998 California Clean Air Act directs the Air  
8 Resources Board to regulate emissions from off-road vehicles  
9 and other mobile sources.

10           To comply with these requirements, before us for  
11 consideration today are proposed control measures to limit  
12 emissions from off-highway recreational vehicle engines.  
13 The proposal specifically covers off-road motorcycles, all-  
14 terrain vehicles, golf carts, go-karts, and other off-  
15 highway vehicles.

16           Now, these sources may sound like they would be  
17 insignificant contributors to the ambient air quality  
18 problem. But because they are totally uncontrolled, while  
19 on-road vehicles are well-controlled, they have become  
20 significant.

21           The proposed standards will reduce, by the year  
22 2010, statewide hydrocarbon plus oxides of nitrogen  
23 emissions from off-road recreational vehicles by about 39  
24 tons per day. This represents an 80 percent reduction from  
25 their current emission levels. To put this in perspective,

1 the emission reductions from off-road recreational vehicles  
2 is equivalent to roughly 20 percent of the reductions that  
3 we'll realize from the entire LEV program.

4 With that, I'd like to ask Mr. Boyd to please  
5 present this item to the Board, with the help of the staff,  
6 of course. Mr. Boyd.

7 MR. BOYD: Thank you, Chairwoman Schafer and  
8 members of the Board. Good morning, and welcome to our  
9 first regulatory review of this new calendar year.

10 As indicated, the proposal before you is the third  
11 off-road regulatory item which you will have considered down  
12 through the past couple of years. In December, 1990, your  
13 board set standards for utility engines. In January, 1992,  
14 your Board set standards for heavy-duty farm and  
15 construction equipment.

16 Today's item covers off-highway vehicles and off-  
17 road motorcycles.

18 The development of the proposal that's before you  
19 now has proceeded over a period of, frankly, several years,  
20 and the staff has made considerable and innumerable efforts  
21 to involve the impacted parties, the regulated community, as  
22 well as to the extent possible the users of this type of  
23 equipment.

24 Numerous public workshops and individual  
25 manufacturer meetings have been held over this period of



1 time, and four different and distinct mailouts of draft  
2 proposals to the affected public have been made over this  
3 period of time.

4 The proposal we have before you today reflects a  
5 tremendous amount of input from the industry and the public.  
6 And although it's quite apparent from the material -- the  
7 written material we've received and the testimony you will  
8 hear that there are some significant disagreements, there is  
9 no doubt that a considerable period of time and effort has  
10 been invested, as is usually our practice, in trying to  
11 resolve this issue.

12 The Board may recall that some of these issues  
13 actually were brought before it in some of these previous  
14 items that I've mentioned. And we delayed consideration of  
15 them because of concerns of the industry at that time. So,  
16 in some cases, there's been a number of years invested, and  
17 I think some of that detail will come out later.

18 With that, I would like to turn the presentation  
19 over to the staff and specifically to Mr. Charles Emmett of  
20 our Mobile Source Division, who will give you the detailed  
21 overview, and present to you the details of the staff's  
22 recommendations.

23 Mr. Emmett, if you would, please.

24 MR. EMMETT: Thank you, Mr. Boyd.

25 Chairwoman Schafer and members of the Board, good

1 morning. Today, I will present the staff's proposal for the  
2 control of emissions from off-highway recreational vehicles.

3 I will begin by providing a brief background of  
4 this proposal, including a description of the vehicles  
5 covered and their associated emissions inventory, followed  
6 by the regulatory proposal, issues of controversy, and  
7 expected emission reductions.

8 Due to the severity of the State's air pollution  
9 problem, the California Legislature enacted the California  
10 Clean Air Act in 1988. This Act established the guidelines  
11 to achieve the State ambient air quality standards at the  
12 earliest practical date.

13 Due to the increasing significance of the off-  
14 highway mobile source emissions inventory, the California  
15 Clean Air Act specifically mandated the Air Resources Board  
16 to adopt emission control regulations for construction and  
17 farm equipment, utility engines, off-highway motorcycles,  
18 locomotives, marine vessels, and other off-highway vehicles.

19 To date, the Air Resources Board has adopted  
20 emission control regulations for utility equipment under 25  
21 horsepower and heavy-duty diesel engines 175 horsepower and  
22 greater.

23 The proposal that will be presented before you  
24 today represents another step toward achieving emission  
25 reductions from unregulated off -- off-road mobile sources.

1           In May, 1992, the staff presented a control plan  
2 to the Board for other off-highway vehicles. Upon  
3 consideration, the Board concluded that the vehicles and  
4 equipment in this off-highway category contribute  
5 significantly to California's emission inventory, and that  
6 controlling the emissions from these vehicles is feasible  
7 and necessary in order to help accomplish the goals set by  
8 the Legislature.

9           Because of the large diversity of equipment within  
10 the off-highway vehicle category, the Board directed the  
11 staff to divide the category into three separate  
12 subcategories -- preempted farm and construction equipment,  
13 off-highway utility equipment, and off-highway recreational  
14 vehicles. The latter category is the focus of this  
15 proposal.

16           The Board also directed the staff to develop  
17 emission standards for these vehicles based on the most  
18 technologically advanced, but currently available, engines  
19 of similar design, function, and use.

20           Included in the off-highway recreational vehicle  
21 category are off-road motorcycles, all-terrain vehicles,  
22 golf carts, go-karts, and specialty vehicles.

23           Specialty vehicles include but are not limited to  
24 applications such as carrying passengers, hauling light  
25 loads, groundskeeping and maintenance. These vehicles are

1 used in such places as resorts, hotels, and airports.

2           Shown here is the 1987 statewide population of  
3 off-highway recreational vehicles. Of primary concern are  
4 the competition off-road motorcycles and all-terrain  
5 vehicles, which account for more than half of the total  
6 inventory.

7           This concern is based not only on their large  
8 population, but more importantly on their disproportionately  
9 large contribution to the hydrocarbon emission inventory.

10           Off-highway recreational vehicles are estimated to  
11 contribute a total of 49 tons per day of combined  
12 hydrocarbons plus oxides of nitrogen. Competition vehicles  
13 are the largest contributor of emissions, primarily  
14 hydrocarbons. This is due to -- to the almost exclusive use  
15 of two-stroke engines in these vehicles, which may be up to  
16 20 times dirtier than similar four-stroke engines.

17           Staff's regulatory proposal for 1997 and later  
18 off-road motorcycles and all-terrain vehicles was developed  
19 through a cooperative effort with industry and patterned  
20 after regulations previously adopted by the Board for other  
21 on- and off-highway vehicles.

22           Staff is proposing emission standards, test  
23 procedures, certification requirements, recall provisions,  
24 labeling requirements, replacement engine standards, and new  
25 Department of Motor Vehicle registration requirements.

1 (Thereupon, Supervisor Wieder entered the  
2 hearing room and took her place with the Board.)

3 MR. EMMETT: Staff is proposing an off-road  
4 corporate average hydrocarbon standard of 1.2 grams per  
5 kilometer, a carbon monoxide standard of 15 grams per  
6 kilometer, and a requirement of no crankcase emissions from  
7 vehicles produced for sale in California after December  
8 31st, 1996.

9 Staff is proposing the use of the current on-road  
10 motorcycle test cycle and procedures for certifying both  
11 off-road motorcycles and all-terrain vehicles.

12 Manufacturers, such as Yamaha and Honda, have  
13 performed limited testing using the chassis dynamometer for  
14 all-terrain vehicles. However, it is staff's understanding  
15 that some manufacturers do not presently possess the  
16 necessary equipment or capability of performing these tests.

17 Thus, staff is proposing that manufacturers be  
18 given the option to use the steady-state utility engine test  
19 cycle to certify their vehicles. This option would be  
20 allowed only if the manufacturer can provide data indicating  
21 that the utility engine test cycle and applicable standards  
22 is at least as stringent as the motorcycle test cycle and  
23 standard. Staff has offered to work with industry in the  
24 coming months to develop an equivalent demonstration method.

25 Manufacturers will be required to certify their

1 vehicles for sale in California. Certification requirements  
2 will be similar to certification requirements currently in  
3 effect for other on -- on-road vehicles, with the exception  
4 that the submissions of durability data will not be  
5 required. Instead, manufacturers will be subject to an in-  
6 use compliance testing and be required to recall their  
7 vehicles if they do not meet the applicable standards for  
8 their useful life.

9 As part of the certification process, all  
10 California certified vehicles will be required to be  
11 equipped with an emission control label, which will include  
12 tune-up, fuel, and lubrication specifications to ensure  
13 proper maintenance and operation by the consumer.

14 To ensure the continued use of emission-controlled  
15 engines in these vehicles, staff is proposing that all  
16 replacement engines conform to emission standards. There  
17 are no restrictions on replacement parts for uncontrolled  
18 engines.

19 Currently, off-highway vehicles must be registered  
20 with the Department of Motor Vehicles to be legal for use in  
21 California. The Department of Motor Vehicles currently  
22 allows both competition and noncompetition off-highway  
23 motorcycles and all-terrain vehicles to be registered as  
24 long as they are equipped with appropriate safety equipment.

25 This procedure allows the unrestricted use of

1 vehicles that were designed and marketed for exclusive use  
2 in competition events to be used anywhere within California.

3 In cooperation with the Department of Motor  
4 Vehicles, staff is proposing that only California certified  
5 noncompetition vehicles be able to obtain an off-highway  
6 vehicle permit or green sticker. This green sticker will  
7 allow owners to legally ride their vehicles off of the  
8 highway in California.

9 Competition vehicles would be restricted to their  
10 intended use in closed-course competition and racing events  
11 only.

12 Although staff has successfully reached agreement  
13 with industry on the majority of this proposal as it relates  
14 to off-road motorcycles and all-terrain vehicles, there are  
15 a few issues of controversy that remain.

16 One such issue involves staff's inventory  
17 assessment, which is addressed in the staff report. Should  
18 industry raise this issue here today, staff is prepared to  
19 discuss the issue in further detail.

20 Other issues include the denial of a 90cc  
21 exemption and the definition of competition vehicles.

22 Manufacturers have requested that all off-road  
23 motorcycles and all-terrain vehicles less than 90cc be  
24 exempt from staff's regulatory proposal. They have stated  
25 that there's a strong need to provide small, light-weight,

1 two-stroke off-road motorcycles and all-terrain vehicles  
2 with adequate performance capabilities for use by younger  
3 riders and small adults who would otherwise feel  
4 uncomfortable on the larger vehicles.

5           According to the Consumer Product Safety  
6 Commission agreement with the manufacturers, all-terrain  
7 vehicles that are sold to children under the age of 16 are  
8 limited to engine displacements (sic) 90 cubic centimeters  
9 or less.

10           Manufacturers argue this agreement prevents them  
11 from substituting four-stroke engines for their two-stroke  
12 engines because four-stroke engines would be less powerful,  
13 heavier, and more expensive, thereby discouraging the entry-  
14 level off-road motorcycle and all-terrain vehicle  
15 enthusiasts from continuing in the sport.

16           Staff believes the 90cc exemption is unnecessary  
17 and will undermine the very premise of the proposed  
18 regulations, which is to restrict the dirtier engines to  
19 competition use only.

20           The staff believes the added size, weight, and  
21 performance difference of a similarly sized four-stroke  
22 engine would not change the appeal of the product. It  
23 should be noted that a leading off-road motorcycle and all-  
24 terrain vehicle manufacturer currently produces an all-  
25 terrain vehicle equipped with a 90cc four-stroke engine.



1           By allowing a 90cc exemption, staff estimates that  
2 a five tons per day hydrocarbon plus oxides of nitrogen  
3 benefit, or about 15 percent of the total emission reduction  
4 from this category, would be lost.

5           Manufacturers have recently requested that the  
6 exemption only apply to vehicles with engines less than 50cc  
7 as long as a similar on-road exemption remains in place, and  
8 that the implementation of the emissions standards for  
9 engines 50 to 90cc be delayed three years.

10           Three tons per day hydrocarbon plus oxides of  
11 nitrogen benefit, which is about 10 percent of the benefit  
12 from this category, would be lost in this case.

13           Under staff's definition of competition vehicles,  
14 the proposed regulations would not be applicable to those  
15 recreational vehicles that are operated exclusively off of  
16 the highways on closed courses in organized racing and  
17 competition events.

18           Manufacturers oppose this definition primarily  
19 because of the words, "that are operated exclusively."

20           Manufacturers take the position that they should  
21 not be held responsible as to how these vehicles are  
22 ultimately used by the purchaser. They prefer to have the  
23 definition use the words, "that are designed exclusively  
24 for."

25           Staff strongly opposes this alternate, because a

1 strict interpretation of such a definition would remove the  
2 Air Resources Board's authority to regulate any and all  
3 vehicles a manufacturer chooses to design as a competition  
4 vehicle.

5 In theory, for a -- a manufacturer could claim  
6 that it has designed its entire product line for competition  
7 purposes and consequently be exempt from the Air Resources  
8 Board's regulatory control based simply on the  
9 manufacturer's assertions (sic).

10 This is exactly the situation today, where most  
11 off-road motorcycles are marketed as competition, but are  
12 used primarily recreational vehicles. For these reasons,  
13 staff is compelled to retain the definition of competition  
14 vehicles as it has proposed.

15 Staff has estimated the adoption of this proposal  
16 will eliminate over 30 tons per day of combined hydrocarbons  
17 plus oxides of nitrogen emissions by the year 2010. These  
18 emission reductions come almost exclusively from replacing  
19 the existing two-stroke engines with cleaner four-stroke  
20 designs.

21 Staff has estimated the cost of this proposal to  
22 be between \$25 and \$250 per vehicle. This large  
23 differential is because some four-stroke vehicles nearly  
24 meet the proposed standards at this time and will require  
25 only minor engine modification to comply with the proposed

1 standards.

2           However, other vehicles will likely be -- have  
3 difficulty utilizing four-stroke engines in place of their  
4 present two-stroke engines at a cost of up to \$250 per  
5 vehicle.

6           By dividing this cost by the estimated vehicle  
7 lifetime emission reductions associated with this proposal,  
8 staff estimates a cost-effectiveness of between 3 and 35  
9 cents per pound of hydrocarbons reduced. This cost is well  
10 below many previously approved emission control regulations,  
11 which run, on average, from two to five dollars per pound of  
12 emissions reduced.

13           Staff is also proposing emission control  
14 regulations for new golf carts operating in federal ozone  
15 nonattainment areas. These regulations consist of new  
16 exhaust emission standards, along with certification and  
17 replacement engine restrictions.

18           The staff proposes that beginning January 1st,  
19 1997, golf carts produced for use in federal ozone  
20 nonattainment areas of California meet a zero emission  
21 exhaust standard for all criteria pollutants.

22           The technology to meet a zero emission requirement  
23 is currently available, as evidenced by California's  
24 existing golf cart fleet, which is composed of approximately  
25 60 percent electric vehicles.

1 Staff believes that the golf cart manufacturers  
2 will need little or no leadtime, since compliance requires  
3 no new technology and complying electric golf carts are  
4 already being produced.

5 The 1997 implementation date was developed to  
6 provide golf courses and other users adequate time to  
7 prepare the phase-in of electric vehicles into their  
8 facilities.

9 To certify golf carts for sale in California,  
10 manufacturers would only need to submit a certification  
11 application containing descriptions of the vehicles and  
12 their projected sales.

13 To ensure that owners of gasoline golf carts do  
14 not continue to purchase new nonzero-emission engines, which  
15 would undermine the zero-emission requirement, staff is  
16 proposing that -- that all new replacement engines conform  
17 to the zero-emission standard.

18 This proposal does not restrict the purchase of  
19 any replacement parts for the remaining gasoline golf carts.  
20 Thus, a golf course may choose to maintain, repair, and  
21 operate gasoline golf carts well beyond the 1997  
22 implementation date until their engines are no longer  
23 repairable or rebuildable and need to be replaced.

24 The golf cart manufacturers' main concern is one  
25 of equitable treatment. Specifically, they contend that

1 since their engines are similar to those used in utility  
2 equipment and specialty vehicles, that they should be  
3 allowed to comply with the same standards.

4           However, the staff's proposal is based on the  
5 technology feasible (sic) and cost-effective controls for  
6 each source. The technology for electric golf carts was  
7 clearly proven. The same could not be said for utility  
8 equipment and specialty vehicles. Specifically, because the  
9 heavier load requirements and unique usage patterns  
10 associated with utility equipment and specialty vehicles, a  
11 zero-emission or electric vehicle requirement would not  
12 currently be technologically feasible or cost-effective for  
13 those vehicles.

14           Manufacturers were also concerned that the staff  
15 overestimated the impact of golf cart emissions.  
16 Manufacturers believe that only 14,000 gasoline golf carts  
17 operate in the State; whereas, staff's estimate, based on an  
18 Air Resources Board contracted study, is 40,000.

19           Additionally, the Golf Cart Manufacturer's  
20 Association's study believes the staff's estimate of the  
21 per-engine emissions is too high.

22           The staff's estimate included exhaust,  
23 evaporative, running losses, and spillage on a typical in-  
24 use golf cart engine, while the manufacturers' estimate  
25 includes only exhaust emissions from a new golf cart engine.

1           Finally, the manufacturers believe the cost of  
2 constructing the charging facility at golf courses would  
3 range from \$300,000 to \$1 million, compared to staff's  
4 \$100,000 estimate.

5           The staff was able to substantiate its cart barn  
6 cost estimate by contacting a local golf course in Southern  
7 California, Whispering Lakes, which currently (sic) had a  
8 golf cart barn constructed.

9           The staff's estimate was based on a barn capable  
10 of accommodating 60 golf carts. Whispering Lakes' barn is  
11 capable of storing 120 golf carts. With the necessary  
12 wiring and charging equipment included, the total cost of  
13 the cart barn was \$150,000, which is in line with staff's  
14 \$100,000 estimate.

15           The proposed regulations for golf carts are  
16 expected to achieve a benefit to the State's air quality  
17 through the elimination of exhaust, evaporative, and  
18 spillage emissions associated with these vehicles.

19           Staff estimates a reduction of approximately 9  
20 tons per day of combined hydrocarbons and oxides of nitrogen  
21 from the baseline inventory by the year 2010. This is based  
22 on the assumption that all golf courses will have been  
23 converted to an all-electric fleet by that year.

24           Staff has estimated the cost of compliance to  
25 those golf courses which do not currently have electric

1 vehicles or an existing cart barn to be \$167 per vehicle.  
2 For those golf courses which currently have an existing cart  
3 barn or a partial electric fleet, this cost would be  
4 substantially lower. Using this cost figure, the cost-  
5 effectiveness of this proposal would be 34 cents per pound  
6 of combined hydrocarbons and oxides of nitrogen reduced.

7 Staff is proposing emission control regulations  
8 for noncompetition go-karts and specialty vehicles which are  
9 the same as those previously adopted for utility engines  
10 less than 25 horsepower. The proposed regulations include  
11 new emission standards, test procedures, certification,  
12 labeling, and required -- and a replacement engine  
13 requirement. Competition go-karts would be exempt from this  
14 emission standard.

15 Staff is proposing that all new specialty vehicles  
16 equipped with engines under 25 horsepower, produced on or  
17 after January 1, 1995, comply with the utility engine  
18 emission standards and implementation schedules previously  
19 adopted by the Board.

20 This schedule calls for a two-tier approach with  
21 ground level standards being introduced in 1995, and a more  
22 stringent second-tier standard becoming effective in 1999.

23 Because engines used in specialty vehicles are  
24 very similar, if not identical, to those used in utility  
25 equipment, it is anticipated that manufacturers will employ

1 similar emission control technology for compliance.

2           Although it is recognized that these vehicles have  
3 been given a relatively short leadtime, this time coincides  
4 with the implementation schedule of the utility engine  
5 regulations.

6           The staff believes that the additional time is not  
7 necessary since, in most cases, the same manufacturer --  
8 manufacturer produces both specialty vehicles and utility  
9 equipment engines which have previously been regulated and  
10 therefore can utilize the same emission control strategies.

11           Beginning in 1997, go-kart and specialty vehicle  
12 emission -- go-kart and specialty vehicle engines greater  
13 than or equal to 25 horsepower will be required to meet the  
14 Tier Two utility engine emission standard.

15           These vehicles are typically equipped with 500 to  
16 200 -- 2,000 cubic centimeter multicylinder engines.  
17 Because of their size and complexity, these engines can be  
18 used -- can use the more advanced emission control  
19 technology similar to those (sic) used in on-road  
20 applications such as catalytic converters and fuel  
21 injection.

22           For specialty vehicles and go-karts, staff is  
23 proposing the previously adopted utility equipment emission  
24 test cycle. This test cycle consists of a 6-mode steady-  
25 state test, which combines various speed and load



1 combinations that may be encountered during normal operation  
2 of these vehicles.

3 This test cycle has been widely accepted by  
4 industry and is considered the most appropriate cycle to  
5 use. Specialty vehicles and go-karts will also be required  
6 to be equipped with an emission control label and must be  
7 certified for sale in California.

8 Finally, staff is proposing that all replacement  
9 engines conform to the applicable current year emission  
10 standards. There are no restrictions on replacement parts  
11 for uncontrolled engines.

12 With the implementation of this regulation, staff  
13 expects over a 30 percent reduction in hydrocarbons plus  
14 oxides if nitrogen emissions by the year 2010.

15 Because the majority of these vehicles utilize  
16 engines which are identical to those engines used in the  
17 previously regulated utility engine category, most of the --  
18 of the design and engineering has already been successfully  
19 completed. In fact, a few manufacturers who supply engines  
20 for these vehicles have already met the requirements and  
21 have presently certified their engines for sale.

22 Staff expects that these vehicles will need to  
23 utilize basic emission reduction techniques, such as  
24 improved carburetion and ignition systems, along with new  
25 combustion chamber designs and cooling system improvements,

1 to meet the proposed standards.

2 Consistent with the previous cost estimates for  
3 utility equipment, the cost of these improvements is  
4 estimated to be \$66 to \$100 per engine. Staff estimates  
5 that the cost-effectiveness of this proposal is between 18  
6 and 27 cents per pound of combined hydrocarbons and oxides  
7 of nitrogen reduced.

8 Staff has estimated the potential reduction to the  
9 off-highway recreational vehicle emission inventory with the  
10 implementation of the proposed emission control regulation.  
11 Current estimates indicate an 81 percent reduction in the  
12 combined hydrocarbons and oxides of nitrogen emissions from  
13 the present levels by the year 2010.

14 This amounts to a reduction of roughly 40 tons per  
15 day of combined hydrocarbons and oxides of nitrogen.

16 In addition, the cost of complying with this  
17 proposed regulation compares well with the cost of similar  
18 previously regulated on- and off-highway vehicles.

19 In order to satisfy Section 43013 of the Health  
20 and Safety Code, staff evaluated the impact of this proposal  
21 on the State economy. Overall, the impact of the proposed  
22 regulations on the California economy with respect to  
23 output, employment, income, and inflation appears to be  
24 minor.

25 With regard to the individual segments of the

1 economy, some segments will be affected negatively, while  
2 others will be affected positively.

3 In conclusion, staff believes that the off-highway  
4 recreational vehicles are a significant source of emissions  
5 in California. Controlling emissions from these vehicles is  
6 technologically feasible, cost-effective, and necessary for  
7 California to meet its clean air goals.

8 I would now like to turn the presentation over to  
9 Jackie Lourenco, and she will enter some additional comments  
10 into the record.

11 CHAIRWOMAN SCHAFFER: Thank you, Mr. Emmett. Go  
12 ahead, Ms. Lourenco.

13 MS. LOURENCO: Thank you. What I'd like to do  
14 right now is let you know that there have been some  
15 continuation of discussions between the staff and the  
16 industry since the notice was originally sent out. As a  
17 result of those -- those discussions, the staff would like  
18 to introduce additional changes to its original proposal.

19 The Board has been given copies of those changes,  
20 and there certainly were this morning copies of the changes  
21 on the back table outside.

22 So, I'd like to summarize very briefly the  
23 proposed changes.

24 First off, we are proposing to redefine golf cart,  
25 off-road motorcycle, and ATV to make them more consistent

1 with the California Vehicle Code and the American National  
2 Standards definitions.

3           The other thing is just a clarification to the  
4 all-terrain vehicle equivalent hydrocarbon standard, and  
5 adding language to say that it applies to -- excuse me --  
6 that it may be applied as a corporate average standard.  
7 Again, this makes it similar to the primary standard.

8           Another change is to revise the requirement for  
9 the special character in the vehicle identification number  
10 for complying vehicles. Originally, we had proposed  
11 inserting an "N" in the 12th character of the VIN. And what  
12 we're changing now is, basically, we're proposing that a  
13 special character be used for the noncomplying competition  
14 vehicles. What this does is it provides industry a savings,  
15 because fewer vehicles have to have the special VIN. And  
16 this change, coupled with the requirement for the California  
17 emissions control label, will still provide us the same kind  
18 of assurances of our original proposal -- that only  
19 complying vehicles will be registered through DMV.

20           Finally, there are numerous nonsubstantive  
21 changes. Those are to the recall provisions and in the test  
22 procedures, and those are simply to clarify originally  
23 proposed language.

24           Those are all the changes I have. And now we'll  
25 certainly open it up to any questions that you have.

1 CHAIRWOMAN SCHAFER: Do any of the Board members  
2 have questions of the staff on the presentation?

3 DR. WORTMAN: Yes.

4 CHAIRWOMAN SCHAFER: Let me start with Mr.  
5 Lagarias.

6 MR. LAGARIAS: No, not me.

7 CHAIRWOMAN SCHAFER: Oh, I'm sorry. Beg your  
8 pardon. Dr. Wortman.

9 DR. WORTMAN: Several. What is the CO burden for  
10 the State?

11 I have a table somewhere, but I forgot.

12 MR. CACKETTE: I don't have a specific number, but  
13 it's on the order of 10,000 tons per year -- or per day.  
14 Per day.

15 DR. WORTMAN: Okay. How about HC?

16 MR. CACKETTE: It's on the order of 3,000 or so,  
17 and the same for Nox, another 3,000 or maybe 4,000, in that  
18 range, for the statewide basis. 40 percent of that,  
19 typically, is the South Coast Air Basin.

20 DR. WORTMAN: This is just to put the numbers in  
21 perspective, that 42 tons of CO out of 10,000 is a small  
22 number. Not to in any way take away from what we're about  
23 to do, but it is a small number.

24 However, I have a more fundamental problem here,  
25 in that the calculations, which can be performed easily

1 using the numbers we have here, are not consistent. If I  
2 take the burden for CO from off-road vehicles, which is  
3 about 85,000 pounds per day and 365 days, I get 30 million  
4 pounds of CO per year.

5 And if I take the number of vehicles, about  
6 200,000 -- 200 hours, say 10 horsepower per vehicle, I get  
7 three times 10 to the 9 pounds per year. And this works out  
8 that CO is roughly one percent of the exhaust.

9 I do not have an ARB regulation nine significant  
10 figure calculator, so this is all rounded off.

11 (Laughter.)

12 DR. WORTMAN: If we look at the new regulations  
13 that we are proposing, 100 grams per horsepower hour and,  
14 again, reasonable air/fuel ratios, I get 1.4 percent CO.  
15 Are we going in the right direction or is there something  
16 wrong with the numbers here?

17 These are elementary arithmetical operations  
18 without the benefit of the calculator even. Mr. Cross and I  
19 can discuss it later. But it appears that the numbers are  
20 inconsistent.

21 Another thing is 40 times 40 days a year? I watch  
22 these people go out when they go with their off-road  
23 vehicles. It's mainly on big weekends, not so much small  
24 weekends. But the one thing that I really would question is  
25 60 miles a day. Has anyone tried an ATV for 60 miles?

1 (Laughter.)

2 DR. WORTMAN: We must have Rambos out there.

3 (Laughter.)

4 DR. WORTMAN: But the other number given by the  
5 industry I think is also nonsense.

6 CHAIRWOMAN SCHAFER: Okay. Thank you, Dr.  
7 Wortman. Dr. Boston, I understand you had a question.

8 DR. BOSTON: Yeah, I have a simple question after  
9 that. Could someone explain to me what a 90cc vehicle looks  
10 like? Is that like a Moped, or is that like a small  
11 motorcycle?

12 MR. CROSS: It's a small motorcycle.

13 DR. BOSTON: Small motorcycle.

14 MR. CROSS: Yeah, or a small ATV. In other words,  
15 the -- okay. It sounds like we have a picture up there  
16 which can be passed over to you.

17 But the smaller adult or large kid version of an  
18 ATV or an off-road motorcycle would typically be 90cc.

19 DR. BOSTON: How many horsepower is that usually?

20 MR. CROSS: I'm guessing it's -- for a two-stroke,  
21 it's probably 12 to 14, depending on how highly tuned the  
22 engine is. For a four-stroke, it probably drops down to  
23 about 8 or 9.

24 DR. BOSTON: Well under the 25 horsepower.

25 MR. CROSS: Oh, yeah.

1 DR. BOSTON: Okay. Thank you.

2 CHAIRWOMAN SCHAFFER: Unfortunately, the one I have  
3 in my hand (speaking of brochure) is one of the "Big Boys,"  
4 as one of them is called here. I'll have to look for one of  
5 the smaller ones in a second.

6 MR. CARTER: Ms. Schaffer, I have a picture here if  
7 you'd like to see it.

8 CHAIRWOMAN SCHAFFER: Why don't you bring it up and  
9 share it with the members. I think that probably is useful.  
10 It's an important issue, and I think they ought to have a  
11 good picture of what we're talking about.

12 I'd like to welcome Supervisor Wieder, who made an  
13 heroic effort to be here this morning, and spent several  
14 hours in the air trying to get into Sacramento. I admire  
15 your determination and courage.

16 SUPERVISOR WIEDER: And the pilot's.

17 CHAIRWOMAN SCHAFFER: Did you have a comment on the  
18 presentation, please?

19 SUPERVISOR WIEDER: I have. Thank you, Madam  
20 Chairman. Yes, I have a question.

21 Did I understand you to say that 10,000 carts,  
22 gasoline carts -- there are 10,000 gasoline driven carts --  
23 golf carts in the State now? Is that what you said?

24 MR. EMMETT: There's 40,000 currently in the  
25 State.



1 SUPERVISOR WIEDER: Gasoline?

2 MR. EMMETT: Gasoline.

3 SUPERVISOR WIEDER: What was the 10,000 figure?

4 MR. EMMETT: I don't think there was.

5 SUPERVISOR WIEDER: Yes, there was. I wrote it  
6 down.

7 SUPERVISOR RIORDAN: Was that industry's?

8 MR. EMMETT: Industry's was 14,000.

9 SUPERVISOR RIORDAN: 14, okay.

10 SUPERVISOR WIEDER: Then the next question is,  
11 what is the difference in price in the purchase of a  
12 gasoline driven golf cart versus an electric?

13 MR. EMMETT: Our research indicates that it's --  
14 for an electric vehicle, it can be more, as well as for some  
15 vehicles -- I believe Columbia Power Cars sells their  
16 electric vehicle \$300 cheaper than the gasoline-powered one.

17 SUPERVISOR WIEDER: That's one manufacturer.

18 MR. EMMETT: Right.

19 SUPERVISOR WIEDER: So, in other words, it is  
20 possible to be able to spend less and improving the air as  
21 well at the same time.

22 MR. EMMETT: For that one manufacturer. Others,  
23 we don't have the information.

24 SUPERVISOR WIEDER: It's possible, then. Because  
25 what I'm coming to is that -- how cost-effective is it to,

1 you know -- weighing the cost of cleaning up the air as  
2 against having it cost more to do so? But if what you say  
3 is so, then there's -- it's possible to be able to do both,  
4 clean up the air and save money.

5 MR. EMMETT: Sure.

6 SUPERVISOR WIEDER: Okay.

7 CHAIRWOMAN SCHAFFER: Thank you, Supervisor Wieder.

8 Any other questions of the staff on the  
9 presentation?

10 I just had one myself. I noted in your  
11 presentation, Mr. Emmett, that you took note of a leading  
12 off-road motorcycle/ATV manufacturer is already producing an  
13 ATV equipped with a 90cc four-stroke engine. Are you free  
14 to mention who that is, and do you have any idea of what  
15 kind of market they have in California? Or in the United  
16 States, for that matter.

17 MR. EMMETT: I believe that manufacturer was  
18 Honda, and their market share is fairly high within the off-  
19 highway recreational vehicle category.

20 CHAIRWOMAN SCHAFFER: Okay.

21 DR. WORTMAN: One more --

22 CHAIRWOMAN SCHAFFER: Dr. Wortman.

23 DR. WORTMAN: -- question. The tests which you're  
24 proposing to perform are road tests essentially? The tests  
25 are used for road-going motorcycles. Do you think that's

1 realistic for off-road vehicles struggling to go up and down  
2 hills?

3 MR. CROSS: We struggled with that a lot. And I  
4 think the decision which was made was that the cost of  
5 developing a specialized, quote, "off-road cycle," which  
6 represented the broad range of conditions which off-road  
7 vehicles experience, wasn't justified given the impact of  
8 the regulation.

9 In other words, we felt that the benefits of  
10 bringing them in under a controlled program, where they  
11 would at least be doing reasonable emissions calibrations,  
12 would produce a far greater benefit than the additional  
13 increment of going from the procedure, on-road procedure, to  
14 going into a special off-road procedure would produce.

15 So, we didn't feel it was cost-effective to  
16 develop a special test cycle.

17 DR. WORTMAN: I think that's giving them a break,  
18 a considerable break. I have a vehicle which is fairly old,  
19 20-years old, and I can smell what happens when it's  
20 struggling and when it's just running on the highway.

21 MR. CROSS: We would concur, I think, more so if  
22 it was -- if the industry was likely to stay with a two-  
23 stroke engine. But the emission reduction associated with  
24 the likely transition from the two-strokes to the four-  
25 strokes is so great that, when you look at the difference

1 between a four-stroke certified on the on-road cycle versus  
2 certified on a specialized off-road cycle, it's not so much.

3 DR. WORTMAN: Okay. Later, I would like to return  
4 to the CO problems here. I haven't had any briefings on  
5 this.

6 MR. CROSS: Happy to. We can discuss it. When  
7 those numbers come up, I think it's easier if you and I just  
8 look at them together.

9 DR. WORTMAN: Quietly.

10 MR. CROSS: Yeah.

11 DR. WORTMAN: In the back room.

12 MR. LAGARIAS: Madam Chair?

13 CHAIRWOMAN SCHAFFER: Mr. Lagarias.

14 MR. LAGARIAS: You make a point that the utility  
15 engine regulation is already on the books for utility  
16 engines and that these regulations proposed are comparable  
17 to those already established for utility engines.

18 Is this correct?

19 MR. CROSS: For the specialty vehicles, yes,  
20 that's correct. They're identical. For the under 25  
21 horsepower.

22 MR. LAGARIAS: Wouldn't it be simpler just to  
23 specify that this regulation that exists for utility engines  
24 would also apply to these applications as well?

25 MR. CROSS: That's essentially what we're

1 proposing.

2 MR. LAGARIAS: But it would seem to me it would be  
3 simpler than just trying to make a special case for these  
4 applications.

5 MR. CROSS: Yeah. That's what the regs do. In  
6 other words, the regs refer to the utility engine  
7 regulations and say, use -- that's what we're applying.  
8 And, in fact, in many cases, they'll probably be the same  
9 engines.

10 But when the original utility engine regulations  
11 were considered by you, these vehicles weren't included.

12 MR. LAGARIAS: I recognize that. All I'm  
13 suggesting is that why don't we just say these vehicles have  
14 to meet the utility engine standards, period?

15 MR. CROSS: That's essentially what we're  
16 proposing.

17 MR. LAGARIAS: It seems like a round-about way of  
18 doing it.

19 Thank you.

20 CHAIRWOMAN SCHAFFER: If there are -- oh, excuse  
21 me. Mayor Hilligoss.

22 MAYOR HILLIGOSS: I had one question. Do the  
23 manufacturers of golf carts, do they manufacture both the  
24 gas and the electric, or will some of the manufacturers go  
25 out of business here in California?

1 CHAIRWOMAN SCHAFFER: Did the staff examine that  
2 question?

3 MR. CARTER: No. Essentially, every golf cart  
4 manufacturer that we're aware of manufactures both electric  
5 and gasoline.

6 MAYOR HILLIGOSS: Thank you.

7 CHAIRWOMAN SCHAFFER: Yes, Supervisor Wieder.

8 SUPERVISOR WIEDER: That begs the next question,  
9 then, that you just brought up, which is where I was coming  
10 from. With what I was told before, it would seem to me that  
11 we would be encouraging golf cart manufacturers to be able  
12 to produce at less cost and help clean up the air. So, why  
13 is there controversy?

14 MR. CARTER: Well, I think the cost varies between  
15 manufacturers.

16 SUPERVISOR WIEDER: I know. But in the  
17 competitive world of the marketplace, it would seem to me  
18 that the other manufacturers would see the writing on the  
19 wall.

20 MR. CARTER: I'm sorry. Would you repeat that?

21 CHAIRWOMAN SCHAFFER: I think that was a comment  
22 rather than a question.

23 SUPERVISOR WIEDER: Yeah, an observation. Thank  
24 you.

25 CHAIRWOMAN SCHAFFER: An observation, yes.

1           Were there any more questions or observations from  
2 the Board?

3           DR. WORTMAN: One more.

4           CHAIRWOMAN SCHAFFER: One more. Dr. Wortman.

5           DR. WORTMAN: What is the typical cost of a golf  
6 cart? I don't play golf.

7           SUPERVISOR WIEDER: I think it's about 700.

8           MR. CARTER: About thirty-three, thirty-four  
9 hundred dollars.

10          DR. WORTMAN: And what range is it? What's low,  
11 what's high?

12          MR. EMMETT: Probably three to four thousand  
13 dollars is a typical golf cart.

14          SUPERVISOR WIEDER: Well, what's the low and  
15 what's the high?

16          MR. EMMETT: Three thousand dollars would be low,  
17 four thousand high.

18          MR. LAGARIAS: What's the rental cost of a golf  
19 cart, 15 to \$25 a round?

20          SUPERVISOR WIEDER: Ten, fifteen.

21          (Laughter.)

22          MR. LAGARIAS: That's all right. The point I'm  
23 making is that if there's -- these costs can be absorbed  
24 very quickly in rental charges.

25          MR. CARTER: It would depend on the actual course

1 where you could rent a cart for a lot less money.

2 (Thereupon, the reporter requested Mr. Carter  
3 to speak into the microphone.)

4 MR. CARTER: I'm sorry. It depends on the course.  
5 At a public course you could rent carts for 10 to \$15.  
6 perhaps.

7 But -- thank you. (Thanking Mr. Valdez for  
8 turning on the microphone.)

9 But at private courses, it would be far more money  
10 to rent a cart.

11 MR. LAGARIAS: Well, I'm sure \$10 will not go far  
12 at Pebble Beach.

13 MR. CARTER: That's correct.

14 (Laughter.)

15 CHAIRWOMAN SCHAFFER: All right. At this point, I  
16 would like to invite the first witness to come to the  
17 podium. We have several witnesses today. The first who is  
18 signed up for this is Mr. Charles Fain, the National Golf  
19 Car Manufacturers Association.

20 Mr. Fain, please come forward. We welcome you and  
21 having your testimony here this morning.

22 MR. FAIN: Thank you, and good morning, Madam  
23 Chairwoman, CARB Board, and the staff.

24 First off, I'd like to tell you a little bit about  
25 myself. I'm Vice-President of Engineering for Club Car,



1 Incorporated, located in Augusta, Georgia. I'm also  
2 Chairman of the National Golf Car Manufacturers Association  
3 Engineering Committee.

4 I have a degree in mechanical engineering  
5 technology from South Georgia Tech, and spent 15 years in  
6 the lawn and garden industry prior to going to Club Car in  
7 1990.

8 I'm honored to have the opportunity to speak to  
9 you this morning, especially, Madam Chairwoman, this being  
10 your first public hearing, and also to speak to the rest of  
11 the Board members and the staff on behalf of the National  
12 Golf Car Manufacturers Association.

13 The National Golf Car Manufacturers Association is  
14 a national trade association comprised of original equipment  
15 manufacturers of golf cars manufactured and sold in the  
16 United States.

17 Association members account for in excess of 95  
18 percent of all golf cars manufactured and distributed within  
19 the State of California. We, as an association, have been  
20 working with CARB staff for several years to develop a fair  
21 and uniform emissions standard to achieve the Clean Air Act  
22 that the federal mandates require.

23 Prior to the time the National Golf Car  
24 Manufacturers Association became the representative of the  
25 golf car manufacturers in regards to this issue, there were

1 independent discussions between CARB and the manufacturers.  
2 Those discussions and comments did not reflect the position  
3 of the National Golf Car Manufacturers Association or its  
4 present members.

5 NGCMA recognizes that CARB staff perceives that  
6 the NGCMA has been inconsistent with its direction. We are  
7 confident this perception is due to those earlier  
8 discussions with one or possibly more individual  
9 manufacturers.

10 The National Golf Car Manufacturers Association  
11 has remained consistent throughout these negotiations,  
12 beginning with its petition in 1991.

13 We have consistently pursued achieving a gasoline-  
14 powered golf car regulation that is similar to the current  
15 lawn and garden regulation in Tier One and Tier Two.

16 In November, 1991, NGCMA petitioned CARB to  
17 regulate golf cars by the same standard used for lawn and  
18 garden regulation. The premise behind this request was  
19 simple. Similar engines should be similarly regulated.

20 Lawn and garden equipment utilizes the same basic  
21 engines as golf cars, except that golf cars emit fewer  
22 pollutants over a comparable time period, because they do  
23 not idle.

24 Subsequently, CARB staff represented to NGCMA that  
25 they would recommend to this Board that golf cars be

1 entitled to meet the first tier emission standards similar  
2 to the lawn and garden requirements.

3 Based on that representation, the golf car  
4 industry spent in excess of \$3 million to research and  
5 develop gasoline-powered golf cars that would meet the  
6 reduced emission standards.

7 However, abruptly, CARB staff recanted this  
8 representation in August, 1992, originally proposing that by  
9 January 1, 1995, all golf cars operating in federal ozone  
10 nonattainment areas must be electrically powered. Only  
11 after NGCMA filed its position statement dated August 3,  
12 1993, strenuously objecting to this proposal did CARB staff  
13 relent somewhat and revise the cut-off date to January 1,  
14 1997.

15 No additional time period has been allowed for  
16 replacement engines as in the lawn and garden regulation.  
17 Thus, the CARB proposal gives California golf courses and  
18 fleet operators of gasoline-powered golf cars less than 36  
19 months to plan for and raise significant capital for  
20 conversion to battery-powered golf car fleets and  
21 construction of storage facilities. This is in contrast to  
22 the eight years given landscapers and homeowners for  
23 lawnmowers at a substantially less significant capital  
24 outlay.

25 Intensifying the problem, the underlying pollution

1 (sic) and emissions data allegedly supporting this proposal  
2 completely disregards extensive industry data and  
3 contradicts some EPA findings.

4 Furthermore, NGCMA was led to believe from the  
5 April 1, 1992 workshop that off-highway recreational  
6 vehicles would meet a new standard similar to the lawn and  
7 garden regulation for engines under 25 horsepower produced  
8 on or after January 1, 1996.

9 The term, "specialty vehicle," as the light  
10 utility vehicle is now named, did not appear or have a  
11 definition until Mailout No. 93-08, dated March 11, 1993.  
12 In the current proposed regulation, the effectivity (sic)  
13 date to regulate emissions for specialty vehicles is January  
14 1, 1995.

15 This will allow industry less than one year to  
16 prepare operating procedures, establish our quality check  
17 points, and have vehicles submitted for CARB to certify.

18 The 12-month time frame does not allow industry  
19 sufficient time to make these operational procedure changes,  
20 nor does it comply with California law requiring a minimum  
21 two-year period between the time a regulation is approved  
22 and when it becomes effective.

23 Also, in the current regulation, Article 3 of that  
24 mailout on off-highway recreational vehicles and engines  
25 states:

1            "This article shall be applicable to new  
2            specialty vehicle engines under 25 horsepower  
3            produced on or after January 1, 1995, and all  
4            other off-highway recreational vehicles and  
5            engines used in such vehicles produced on or  
6            after January 1, 1997, for sale, lease, use, and  
7            introduction into commerce in California."

8            Why? We don't understand why similar engines are not  
9            regulated in a similar manner.

10           Also, Mailout 93-54, page 3, Section C, sets forth  
11           estimated emissions inventories showing the total California  
12           golf car population to be 40,000 units. A previous EPA  
13           study estimates the gasoline-powered golf car national  
14           population at 122,670 units.

15           If California has 40,000 gasoline golf cars, this  
16           represents an incredible 33 percent of the total U.S.  
17           gasoline golf car population; whereas, California's golf  
18           course population is only 6 percent of U.S. golf cars.

19           Industry estimates a total combined golf car fleet  
20           in California of gas and electric cars of 40,000. The total  
21           combined golf car fleet in California of 40,000 units is  
22           broken down into 14,000 gasoline golf cars and 26,000  
23           electric golf cars.

24           This is known due to a confidential industry  
25           survey conducted by the Association of seven discrete

1 manufacturers completed in the winter of 91-92. Therefore,  
2 we submit that the gasoline golf car population in  
3 California is approximately one-third of the 40,000 units  
4 being estimated by CARB staff. That being true, the  
5 estimated 1992 statewide baseline emissions contribution of  
6 hydrocarbons, carbon monoxide, and oxides of nitrogen for  
7 golf cars spelled out in Mailout 93-54, at the most, can  
8 only be one-third of the numbers reported.

9           The National Golf Car Manufacturers Association,  
10 in an attempt to work closely with CARB staff in developing  
11 a fair and uniform emissions standard for gasoline-powered  
12 golf cars, conducted an emissions survey of its engines.  
13 I'd like to share that information with you to contrast it  
14 with the tons per day estimated in Mailout 93-54.

15           Hydrocarbons: CARB estimate, 8.9 tons per day;  
16 industry estimate, .15 tons per day, or 300 pounds per day.

17           Carbon monoxide: CARB estimate, 38.5 tons per  
18 day; industry estimate, 6.17 tons per day.

19           Oxides of nitrogen: CARB estimate, .2 tons per  
20 day or 400 pounds; industry estimate, 120 pounds per day.

21           These numbers are based on every car, all 14,000  
22 gasoline golf cars in the State of California, running more  
23 than one round per day. That's also in the attainment and  
24 the nonattainment areas.

25           We believe our numbers to be correct based on the

1 technology changes to gasoline-powered golf cars in recent  
2 years to improve the emissions output level of our products.

3 CARB staff may not have had the latest design of  
4 engines in their evaluation and may have possibly included a  
5 higher population of two-cycle engines. These two-cycle  
6 engines have now become virtually extinct in the golf car  
7 market.

8 This industry information should clearly show the  
9 CARB Board that the golf car manufacturers in the United  
10 States have taken a proactive stance at substantially  
11 reducing the emissions of gasoline-powered golf cars. This  
12 was done based on the understanding that we would have the  
13 opportunity to meet a Tier One and Tier Two emissions  
14 regulation similar to the lawn and garden regulation.

15 I'd now like to turn your attention to the primary  
16 concern of the National Golf Car Manufacturers Association  
17 as it relates to this proposed regulation.

18 The most harrowing effect of the regulation is the  
19 immediate adverse economic impact on California golf course  
20 operators. Based on a 1993 National Club Association club  
21 operation survey, golf car revenues contribute 4 percent of  
22 all revenues of the average private golf club in the Western  
23 United States.

24 Based upon the average private golf and country  
25 club revenues of \$5,031,000, this 4 percent of revenues

1 attributable to golf cars is an average of \$201,240.

2           Conversely, golf car operations represent 2  
3 percent of the average program and support expense of  
4 \$4,721,000, yielding an average annual expense of \$94,420.

5           The assumed average operating margin thereby  
6 attributable to the typical golf club is \$106,820. This  
7 average 2 percent margin will come under extreme pressure  
8 when converting to an electric fleet.

9           In a National Golf Foundation published report on  
10 golf car economics, the stated differential and operating  
11 cost between electric-powered and gasoline-powered golf cars  
12 is 88 percents per round.

13           If a typical private club in California has a  
14 fleet of 64 golf cars operating at an estimated average of  
15 417 average rounds per year, this will increase operating  
16 cost by \$23,508, reducing the average profit to \$106,000 --  
17 of \$106,820 to \$83,312. This represents a decrease in  
18 margin of 22 percent.

19           If we use the same calculation for all 14,000  
20 gasoline-powered golf cars in the State of California, this  
21 would represent an increase in operational expense to  
22 California golf courses of \$5,142,368. If the California  
23 golf car population is 40,000 units, as estimated by CARB,  
24 the additional operating expense annually for California  
25 golf courses is \$14,692,480. This is a significant never-



1 ending financial impact on the California golf industry.

2 This monetary contribution is in jeopardy and  
3 capital expenditures become significant when one considers  
4 that electric golf cars should not be stored beside gasoline  
5 golf cars because of fire hazard considerations.

6 Thus, to build a new or modify an existing golf  
7 car facility to accommodate recharging electric golf cars  
8 and buy or allocate property on which to place the storage,  
9 which, by the way, may be at a premium next to a golf  
10 course, will cost the average golf course operator between  
11 300,000 and \$1 million, or between \$63.6 million and \$341  
12 million in aggregate capital expenditures for the golf  
13 course industry in California.

14 How ironic indeed if environmentally friendly golf  
15 courses are run out of business because of an ill-conceived  
16 regulation only to be replaced by less environmentally  
17 friendly commercial activities.

18 The National Golf Car Manufacturers Association  
19 has submitted many written documents to CARB in the last few  
20 years relative to this subject, and this oral presentation  
21 is not intended to supersede any of those positions or  
22 comments.

23 It was not my intention today to cover every  
24 detail of our communications with CARB, but to restate our  
25 overall position, as an industry, and the basic reason for

1 that position.

2 It's up to you to decide what is the right thing  
3 to do for the State of California and the California golf  
4 industry.

5 Thanks for your time and attention, and I'll be  
6 happy to answer any questions the Board or staff may have.

7 CHAIRWOMAN SCHAFFER: Thank you very much for your  
8 testimony, Mr. Fain. I had a couple of questions.

9 When the staff made its presentation, they  
10 referred to a figure of about 60 percent -- and I've  
11 forgotten whether it was statewide or nationwide -- of the  
12 golf cart population is electric. Is that about right?

13 MR. CARTER: It's statewide, 60 percent.

14 CHAIRWOMAN SCHAFFER: Statewide, 60 percent.

15 MR. FAIN: Statewide. I think our figures show  
16 that that's pretty close. We estimate it's about 65  
17 electric, and about 35 percent gasoline.

18 CHAIRWOMAN SCHAFFER: Part of your presentation is  
19 based on a concern of the additional cost associated with  
20 operating an all-electric golf-cart fleet. The fact that 60  
21 percent are now electric suggests to me that there are some  
22 economic reasons why a golf course may want to run an  
23 electric fleet, even though you cited some higher expense  
24 associated with that.

25 Could you comment on why they may see some

1 advantage in operating an all-electric fleet independent of  
2 this regulation?

3 MR. FAIN: Well, I think it's not because of the  
4 cost involved, but because for many years, gasoline-powered  
5 golf cars were either two-cycle or very inefficient and  
6 really did produce some fairly high emissions levels, so the  
7 cars smelled.

8 So, electric cars were perceived to be the higher  
9 quality vehicles. So, many of your clubs bought electric  
10 cars for that reason, not because of the cost involved in  
11 operating, but because of the perception of the quality of  
12 the product.

13 It's only been in the last, I guess, four, or  
14 five, six years that the industry, as a whole, has started  
15 to change its position with gasoline products, make them  
16 more efficient, cleaner operating, eliminating two-cycle  
17 engines to have a cleaner vehicle.

18 CHAIRWOMAN SCHAFFER: So, some of that \$3 million  
19 investment that you were talking about having been made is  
20 probably finding its way into benefits in gasoline-powered  
21 carts that are sold elsewhere in the country?

22 MR. FAIN: That's correct, yes.

23 CHAIRWOMAN SCHAFFER: Can you give me some idea  
24 what the relative electric versus gas population is outside  
25 of California? Is it higher or lower?

1 MR. FAIN: I think it's probably slightly higher,  
2 probably somewhere in the 55, 45 range maybe.

3 CHAIRWOMAN SCHAFFER: 55, 45 percent electric?

4 MR. FAIN: 55 percent electric, 45 percent gas.

5 CHAIRWOMAN SCHAFFER: Okay.

6 MR. FAIN: And, ironically, the growing -- fast-  
7 growing segment of the market today is in the gasoline  
8 product, not in the electric, because of the improvements  
9 that have been made in recent years.

10 Also, if I might mention --

11 CHAIRWOMAN SCHAFFER: Sure.

12 MR. FAIN: -- the staff mentioned the technology  
13 is available. While we all do build electric golf cars,  
14 there is applications where electric golf cars are not  
15 suitable for that application because of very hilly terrain.

16 We have a test that is a nation -- an industry  
17 test, where we discharge the batteries in the car at a given  
18 rate to determine the amount of driving time the car has.  
19 A 75 amp discharge rate will bring the batteries down to  
20 31.5 volts, which is basically about 80 percent of the  
21 battery capacity.

22 At that point, the car gets very slow in some  
23 applications. It won't even climb the hills.

24 If you put an electric golf car on a --  
25 approximately a 20 percent grade, it's going to draw

1 somewhere in the neighborhood of 150 to maybe 160 amps on  
2 that grade. So, you can see that, if we have batteries that  
3 run an hour and a half now, and you run it on a hilly  
4 terrain, you're probably not going to make two rounds, where  
5 you have gas cars that you can make unlimited numbers of  
6 rounds. You probably won't get two rounds out of the car,  
7 an electric car.

8 So, there's going to be some locations that have  
9 gas cars today that are probably going to have to buy more  
10 cars than they have, simply because they won't be able to  
11 achieve the number of rounds required.

12 CHAIRWOMAN SCHAFER: Are there any other questions  
13 from Board members for Mr. Fain?

14 SUPERVISOR RIORDAN: Madam Chair.

15 CHAIRWOMAN SCHAFER: Yes, Supervisor Riordan.

16 SUPERVISOR RIORDAN: If I might, just for me to  
17 get a feel of the organization that you represent. How many  
18 of that organization produce solely the gasoline-powered  
19 golf cart versus how many would be electric golf carts?

20 MR. FAIN: There's not any members -- we represent  
21 all but one of the golf car manufacturers in the United  
22 States. There's not a manufacturer that produces only  
23 gasoline cars. There is one manufacturer, I believe, that  
24 today only produces electric, but they are -- they've  
25 already announced they're coming out with a gasoline car as

1 well.

2 SUPERVISOR RIORDAN: So, essentially, you  
3 represent both, and not any one produces just one --

4 MR. FAIN: That's correct.

5 SUPERVISOR RIORDAN: -- in gasoline. Any that  
6 just produce electric?

7 MR. FAIN: No.

8 SUPERVISOR RIORDAN: No. So, it's a balance.

9 MR. FAIN: Only the one that they're designing and  
10 announcing that they're going to produce a gasoline vehicle.  
11 So, all of our association members, either today or very  
12 soon, will produce both gas and electric.

13 SUPERVISOR RIORDAN: Thank you.

14 DR. WORTMAN: Madam Chair?

15 CHAIRWOMAN SCHAFFER: Yes, Dr. Wortman.

16 DR. WORTMAN: Did I hear you say that golf carts  
17 do not idle?

18 MR. FAIN: They do not idle. They only run about  
19 30 minutes in an average of four to four-and-a-half hour  
20 round of golf.

21 DR. WORTMAN: But they idle while people are  
22 playing?

23 MR. FAIN: No. The engine starts everytime you  
24 depress the accelerator pedal.

25 DR. WORTMAN: Well, that should add to emissions.

1           However, on your estimates of hydrocarbons, CARB  
2 appears to be high by a factor of 60; on monoxide, factor of  
3 6; and on oxides of nitrogen, a factor of 3.

4           Did Mr. Cross slip up on his nine significant  
5 figure calculator or you have some other numbers for it?

6           MR. CROSS: We do disagree on a few of the  
7 numbers.

8           DR. WORTMAN: By a factor of 60?

9           MR. CROSS: Maybe not the whole factor of 60. A  
10 factor of 2 comes out of the industry's exclusion of evap  
11 and running loss emissions completely. There is also a  
12 difference, as he noted, in terms of the assumed population  
13 of two strokes. The staff believes that about a quarter of  
14 the gas cars out there are still two-stroke; whereas, the  
15 industry claims that none of them are.

16           They also -- the industry used, in our view, a  
17 clean -- essentially what would have been a certified engine  
18 to establish their exhaust baseline; whereas, we used in-use  
19 type engines which were deteriorated and represented  
20 emissions increases that were associated with them.

21           I expect that if we -- that if we wrangled over  
22 these, we would be able to close the gap, but I don't think  
23 it would close entirely, because we do feel that all of  
24 these issues are important.

25           DR. WORTMAN: Did you run tests on those engines?

1 MR. CROSS: Similar engines, yeah. Not the --

2 DR. WORTMAN: Not the dyno tests?

3 MR. CROSS: -- exact engines, no. No, not the  
4 exact engines, no, but that type of engine, yes, with dyno  
5 tests.

6 DR. WORTMAN: Did you run tests on your engines?

7 MR. FAIN: Yes, we did. The test information that  
8 was supplied to our association to put together our numbers,  
9 while not all members of the association had that  
10 information, the ones that did, there's was ran on the dyno  
11 to the, I believe, J-1088 standards that was required in the  
12 lawn and garden regulation.

13 MR. CROSS: Yeah, they're essentially engines that  
14 were being developed, as I understand it, to be certified as  
15 utility engines.

16 MR. FAIN: That's incorrect. They are engines  
17 that are actively being produced today in our golf cars that  
18 already meet the lawn and garden regulation. And the  
19 engines that we use in our utility units -- now being called  
20 specialty vehicles -- do use the same engines. But that's  
21 not the reason that it was done.

22 We changed the timing, the carburetion, the  
23 intake, the exhaust on our engines for golf cars, because we  
24 were led to believe we would be given the opportunity -- at  
25 a minimum -- to meet the lawn and garden regulation in Tier



1 One.

2 DR. WORTMAN: The factor of 6 is puzzling. A  
3 factor of 60 is astonishing.

4 MR. CROSS: Yes, we disagree.

5 DR. WORTMAN: I notice.

6 MR. LAGARIAS: Madam Chair?

7 CHAIRWOMAN SCHAFER: Yes, Mr. Lagarias.

8 MR. LAGARIAS: Mr. Fain, as I understand your  
9 position of the Golf Car Manufacturers Association, is that  
10 you feel that you should be regulated by the lawn and garden  
11 engine regulation for Tier One, and I assume Tier Two?

12 MR. FAIN: Well, let me -- let me speak a little  
13 differently than that. We've gone on record with CARB staff  
14 stating that we realize California has a unique pollution  
15 problem.

16 What we're asking for -- because we have spent  
17 significant money here to develop our cars to the point they  
18 are, and the electric car is not usable in every application  
19 that it's going to be put into --

20 MR. LAGARIAS: I hear that.

21 MR. FAIN: -- we would like to have additional  
22 time, if it's going to be a Tier Two -- a total  
23 electrification, which staff has said that that was their  
24 direction -- we want to be able to do the best job we can.  
25 And the way that it's being presented today, we don't feel

1 that we have the opportunity to do that.

2 We have completed a tremendous amount of work  
3 within our industry to reduce emissions. We can do more to  
4 reduce emissions. I think all of us by now are certainly  
5 investigating, if we haven't already implemented, a propane  
6 conversion as well as natural gas and other alternate fuel  
7 sources.

8 But the electric golf car is not the total answer.  
9 It's not the promised land that you're trying to get to,  
10 because it's not ready to be put in every application. It  
11 needs more technological advances to be able to make it  
12 climb some of the hills that golf cars are put into today,  
13 and safely descend those hills, where the cars that are  
14 built today, you're not going to get two full rounds.

15 MR. LAGARIAS: Well, let me put it simpler. Are  
16 you willing to meet the Tier One lawn and garden  
17 regulations?

18 MR. FAIN: Yes, sir.

19 MR. LAGARIAS: All right. Have you made an  
20 estimate of what -- I'm talking to the staff -- of what  
21 meeting the Tier One regulations would mean in terms of  
22 emission reductions?

23 MR. CROSS: In terms of increase if we --

24 MR. LAGARIAS: No, not in terms of increase -- of  
25 decrease from where we are now.

1 MR. CROSS: The exhaust is cut in about half. The  
2 other --

3 MR. LAGARIAS: The other is 60. Is that 30 times  
4 or is that about 3 times, using Dr. Wortman's numbers?

5 MR. CROSS: The exhaust -- well, exhaust is half  
6 of the emissions. So, it would be the -- it'd be a quarter  
7 of the total emissions, in other words, because the evap and  
8 refueling is unaffected. So, what's the total --

9 MR. LAGARIAS: Well, aren't changes coming about  
10 in evap and refueling?

11 MR. CROSS: Nope, no requirements to the end, not  
12 on utility and not on anything that we proposed here.

13 MR. LAGARIAS: Thank you.

14 MR. CROSS: So, it's one and a half --

15 MR. CACKETTE: (Interjecting) Mr. Lagarias, in  
16 other words, just to be clear on that, the benefit would be  
17 one-quarter of the -- if we went to zero-emission vehicles.

18 CHAIRWOMAN SCHAFFER: 10 tons versus 40.

19 MR. CACKETTE: Not to the --

20 CHAIRWOMAN SCHAFFER: Oh, I'm sorry. I'm sorry.

21 MR. CACKETTE: -- total, but --

22 CHAIRWOMAN SCHAFFER: That's the whole category.

23 MR. CACKETTE: -- for this category.

24 CHAIRWOMAN SCHAFFER: Excuse me, for this category.

25 MR. CACKETTE: Is it nine? Nine, so it would be

1 the reduction --

2 MR. LAGARIAS: Well, how would you address --

3 (Thereupon, both Mr. Lagarias and Mr. Cackette  
4 spoke simultaneously, which made it impossible  
5 for the reporter to capture either person's  
6 comments accurately.)

7 MR. LAGARIAS: You say you're going to zero-  
8 emission vehicles. How would you answer the comment that  
9 electric vehicles aren't applicable in certain golf cart  
10 conditions?

11 MR. CROSS: We surveyed --

12 MR. CACKETTE: We surveyed the courses. But go  
13 ahead, Bob.

14 MR. CROSS: We surveyed courses all over the  
15 State, when the industry raised this argument previously, to  
16 ascertain whether or not that was an issue or not. And we  
17 were unable to find a course which responded that gasoline  
18 golf carts were essential for them to be able to deal with  
19 their terrain.

20 MR. LAGARIAS: How about the comment that was  
21 made, not that they were essential, but they weren't as  
22 available throughout the day? Electric cars would not be  
23 available because of the running down of the batteries?

24 MR. CACKETTE: Well, I think, also, in this time  
25 frame, we're going to see significant advancements in

1 batteries as a result of the zero-emission vehicle  
2 requirements, also. So, the performance of these carts in  
3 1997 will be superior to what existing carts are today,  
4 electric carts are today.

5 The batteries we see being developed, both  
6 lead/acid and otherwise, have higher power densities as well  
7 as higher energy densities, which means they can go farther  
8 on a given battery and they've got more power spurts.

9 MR. CROSS: We called 19 courses, or 22 courses  
10 total. And of those, 19 were electric. And of the total, 8  
11 characterized themselves as being hilly. So, there are  
12 already a significant number of courses which characterize  
13 themselves as being hilly, which are already electric.

14 MR. LAGARIAS: I hear you.

15 CHAIRWOMAN SCHAFFER: I'd like to give Mr. Fain an  
16 opportunity to comment on that one --

17 MR. FAIN: Yes, I'd like to.

18 CHAIRWOMAN SCHAFFER: -- on the electric, since I  
19 see you anticipating your comment.

20 MR. FAIN: Well, there's been several comments  
21 made here that brings thoughts to mind.

22 Number one, let's talk about the battery  
23 technology for a moment. I think everybody's reading about  
24 everything they can get their hands on these days of what  
25 the automobile industry's doing with batteries.

1           We've dealt with batteries a lot longer than they  
2 have in this type of environment. We don't see anything on  
3 the horizon that's going to be economically feasible to put  
4 in a golf car.

5           If we go with some of the new battery technologies  
6 that are being developed today and put them in a golf car,  
7 the batteries will cost more than the entire golf car does  
8 today. So, I don't see that as anything on the horizon  
9 that's going to be anything to help in any way.

10           I also submit, on a golf course, determining  
11 whether they're hilly or not, a golf course will take  
12 whatever you want to give them. They don't know whether  
13 their course is hilly, or flat, or in what respect when it  
14 comes to the car being able to perform on that golf course.  
15 They don't have the understanding of what it takes to make  
16 that car go around that course day in and day out, all day,  
17 for their requirements.

18           CHAIRWOMAN SCHAFFER: Are there any other questions  
19 from Board members on Mr. Fain's testimony?

20           SUPERVISOR WIEDER: Madam Chair?

21           CHAIRWOMAN SCHAFFER: Yes, Supervisor Wieder.

22           SUPERVISOR WIEDER: On your comment, has there not  
23 been -- to the staff, has there not been any tests done,  
24 other than calling 19 golf courses and saying, "Are you  
25 hilly or not hilly?" to verify what the speaker has just

1 said?

2 I mean, from what he has said, what you have  
3 learned was not based allegedly on any really substantive  
4 knowledge.

5 MR. CROSS: Well, I think the point is that when  
6 we were originally hit with this argument, we thought, oh,  
7 jeez, there's really a significant issue out here. And we  
8 did what we could to survey people in the industry, users of  
9 this equipment, to try and ascertain whether or not there  
10 was a problem or not. And we were unable to find the  
11 problem that he alludes to.

12 SUPERVISOR WIEDER: I know, but you're exactly  
13 saying -- or I think it's a problem. If there's no  
14 experience or knowledge about what can be delivered or what  
15 can be operated without doing a test run, you know, you're  
16 making decisions based on limited knowledge.

17 MR. CROSS: But the golf courses that have all of  
18 the electric carts, they're certainly all testing them  
19 everyday. I guess that was -- we felt that that was the  
20 acid test, was go to the user and say, "User, is this a  
21 problem or not?"

22 And we were unable to find someone who said there  
23 was a problem.

24 SUPERVISOR WIEDER: You know, just from a personal  
25 observation, I'm sure I heard you say 10,000, because I

1 wrote it down, but I have played golf on and off for over 20  
2 years, and I don't think I have ever been in a gas-driven  
3 golf cart in Southern California.

4 So, my assumption was that that 10,000 figure, as  
5 I understood it, was that there are only 10,000 gas-driven  
6 golf carts out of 40,000. How significant is the issue? I  
7 guess I heard it wrong.

8 MR. CROSS: There are several courses that are gas  
9 in Southern California. I think that Southern California is  
10 moving out of gas more quickly than the rest of the State  
11 is.

12 But there are -- you know, there are courses there  
13 that are, even as we speak, changing from gas to electric in  
14 Southern California.

15 SUPERVISOR WIEDER: Well, 20 years ago, I didn't  
16 find it so.

17 CHAIRWOMAN SCHAFER: Anymore questions from a  
18 member of the Board for Mr. Fain?

19 MR. LAGARIAS: Just one.

20 CHAIRWOMAN SCHAFER: Mr. Lagarias.

21 MR. LAGARIAS: I'd like to ask the staff -- I'm  
22 going to reverse the question.

23 Since the utility engines -- the lawn and garden  
24 engines have to meet Tier One standards and the golf carts  
25 now, you're saying, don't have -- have to go to zero



1 emissions, because they can do it, why shouldn't the lawn  
2 and garden engines have to meet zero emissions?

3 MR. CROSS: Thank you. In fact, we did develop a  
4 proposal to include specialty vehicles in the zero-emission  
5 requirement for this category. And there are specialty  
6 vehicles, like little vehicles running around factories and  
7 things, that are electric.

8 And our view was, gosh, if we can do it with golf  
9 carts, why not do it with these other vehicles? In fact,  
10 there are some specialty vehicles on golf courses that are  
11 electric.

12 The problem with the specialty vehicle category is  
13 that the loads that they're required to carry and the  
14 distances that some of them are required to drive on a daily  
15 basis exceed what a golf cart is typically asked to drive.  
16 So, we were unable to make the showing that the specialty  
17 vehicle category could be a zero-emission category. And  
18 that's why they're split out.

19 So, we went down the path you've described. We  
20 were unable to make the technical showing that the range and  
21 the power of the vehicles in a zero-emission configuration  
22 was sufficient for the job they had to do. So, we proposed  
23 tailpipe standards.

24 DR. BOSTON: Madam Chair?

25 CHAIRWOMAN SCHAFER: Yes, Dr. Boston.

1 DR. BOSTON: I'm not very sympathetic to this  
2 issue. I try to get all my patients to park the golf cart  
3 and walk anyhow.

4 (Laughter.)

5 DR. BOSTON: I would like to ask Mr. Fain if the  
6 golf courses are really in a financial bind because of this  
7 minor difference it would cost to rent an electric cart  
8 versus a gasoline cart.

9 Don't you think they would just pass that slight  
10 increase on to the customer, the golfer? They've always  
11 done that in the past, I've noticed.

12 MR. FAIN: Well, I don't know. I think you're  
13 talking about different levels of golf courses. You have  
14 public courses, municipal courses, and private courses, and  
15 they charge anywhere from \$25 for a round of golf to \$150  
16 for a round of golf.

17 The ones that you really need to be most concerned  
18 about are the ones that charge \$25 right now, and a very  
19 small part of that -- or a smaller part of that is for the  
20 golf car. And if they could charge \$5.00 more, they'd  
21 certainly charge \$30 a round and make \$5.00 more a day if  
22 their golfers were willing to pay that to play golf.

23 DR. BOSTON: I think you used the figure 88 cents  
24 per round was the difference, which doesn't seem very  
25 significant.

1 MR. FAIN: 88 cents per round --

2 DR. BOSTON: For the electric cart versus the  
3 gasoline cart. I thought that was your figure.

4 MR. FAIN: 88 cents is per round.

5 DR. BOSTON: Right. So, they've got --

6 MR. FAIN: You're saying, will the golfer pay that  
7 88 cents?

8 DR. BOSTON: Right.

9 MR. FAIN: My answer to you is, if they would pay  
10 that 88 cents, the golf courses would be charging them for  
11 it today, because they're going to do everything they can to  
12 increase their revenues as much as possible.

13 DR. BOSTON: I assure you, they will. They will  
14 add it on.

15 MR. FAIN: I agree with you. They probably will.  
16 But how many golfers might they lose? I mean, those are  
17 questions you don't have answers to.

18 MR. BOYD: Madam Chair?

19 CHAIRWOMAN SCHAFFER: I'm sorry. Mr. Boyd.

20 MR. BOYD: Well, I hate to make an anecdotal  
21 observation, but there have been several of them today. I'm  
22 sorry Harriett's gone. Oh, no, Harriett, you're there.

23 As a golfer for over 40 years --

24 SUPERVISOR WIEDER: You're older than I am.

25 MR. BOYD: -- and recognizing --

1 (Laughter.)

2 MR. BOYD: -- that -- oh, yes, definitely.

3 (Laughter.)

4 MR. BOYD: And recognizing that if there's  
5 anyplace that the free market works, to me, it's in the golf  
6 course business. I have a little trouble with it. I mean  
7 you have to make reservations half the time so far in -- I  
8 mean the supply and demand here is there aren't enough golf  
9 courses to meet the demand on average. And we all pay what  
10 we have to pay, and you have to wait in line usually to play  
11 golf, et cetera, et cetera.

12 So, I have a hard time accepting, on average,  
13 let's say the idea that this cost increment is going to run  
14 anybody out of the golf course business. But that is just  
15 an anecdotal observation and not a scientific one.

16 CHAIRWOMAN SCHAFER: Thank you very much, Mr.  
17 Boyd. Mr. Fain, I really appreciate your testimony here  
18 this morning. Since you were able to give the entire  
19 statement, I think we've had an opportunity to spend a fair  
20 amount of time. I also read these comments before your  
21 presentation this morning. And I think it was lucid and  
22 illuminated the concerns of your organization.

23 And I appreciate those comments very much.

24 MR. FAIN: Might I make one more comment before I  
25 leave?

1 CHAIRWOMAN SCHAFFER: All right.

2 MR. FAIN: And that is relative to the cost issue  
3 we're discussing, because the 88 cents is only a portion of  
4 the cost. The cost to convert from gasoline storage  
5 facilities to electric storage facilities also has got to be  
6 part of that cost structure.

7 CHAIRWOMAN SCHAFFER: I understand. I had one  
8 short question on that. When you made those cost estimates,  
9 did you factor in land cost? You made the point that land  
10 may not be available. Or is that just the structure cost?

11 MR. FAIN: On the high end, the million dollars,  
12 it does include land cost of 300,000.

13 CHAIRWOMAN SCHAFFER: Okay. That's what I thought.  
14 Okay. Thank you very much.

15 Just so the other witnesses who plan to give  
16 testimony this morning are aware, we expect to be breaking  
17 at 12:30 for an executive session to hear a legal matter.

18 We will also take the opportunity to have lunch at  
19 that time. With the approval of the court reporter, I'd  
20 like to try to proceed right through to 12:30 at this time,  
21 and I'd like, therefore, to call up the next witness listed,  
22 Kathleen Hunt Wolf.

23 (Thereupon, there was a pause in the  
24 proceedings while the reporter replenished  
25 her stenograph paper.)

1 CHAIRWOMAN SCHAFER: If you'd wait a minute,  
2 please, Ms. Wolf, until the paper has been changed in the  
3 reporter's documentation machine.

4 Ms. Wolf, welcome to the Air Resources Board, and  
5 you may please proceed.

6 MS. WOLF: Thank you, Ms. Schafer and members of  
7 the Board.

8 I am a person recovering from a cold. I'm an  
9 independent consultant on certification matters to several  
10 small motorcycle manufacturers. I am also one of your  
11 citizens, and I'm extremely concerned, because all of the  
12 underlying premises upon which the proposed regulations are  
13 constructed are clearly erroneous. I am sure you are aware  
14 of the growing resentment against government and the lack of  
15 trust which many people feel.

16 When you put in place regulations which damage  
17 small business and for which the rationale is misleading,  
18 you risk increasing this disaffection.

19 All of us have been willing to cooperate with the  
20 Board and with the staff when regulations are sensible and  
21 can be shown to be necessary. This set of regulations will  
22 be burdensome, and it absolutely will not achieve the  
23 projected reductions in admissions of hydrocarbons and CO in  
24 the nonattainment areas because these motorcycles are not  
25 ridden in the nonattainment areas.

1           There are not as many off-road motorcycles being  
2 used in California as the State staff hypothesizes. I have  
3 four off-road motorcycles in my garage in Claremont,  
4 California. We are committed motorcyclists. None of these  
5 motorcycles has been ridden in a nonattainment area, and  
6 none of them have ever been ridden anything like the number  
7 of miles per year which appear in the staff figures.

8           For regulation of off-road motorcycle emissions,  
9 it simply does not make sense to proceed as though the  
10 motorcycles are used where they are registered. They are  
11 not.

12           A very substantial amount of use of these  
13 motorcycles is outside the State of California all together.  
14 Again, the stated reduction in emissions in nonattainment  
15 areas will not be achieved. Therefore, all of the cost  
16 analyses are also wrong. Bad regulation, with its attendant  
17 bureaucracy, is much more damaging to California citizens  
18 and to its small businesses than no regulation at all.

19           If you are going to go ahead with these  
20 regulations, you should be aware that the burden falls  
21 unevenly upon the small and large manufacturers. And I  
22 think, at the very least, you ought to give the small  
23 manufacturers an additional three to five years to meet  
24 these regulations or, alternatively, partial exemption from  
25 these requirements.

1 said, we used a more conservative approach and assumed 40  
2 instead of 46.

3 And it is true that the three hours per day and  
4 the 20 miles per hour were our estimates, but we thought  
5 those were rather conservative as well.

6 MR. CROSS: I think Mike's also making the point  
7 that if you use the industry's data on miles per day and  
8 days ridden, you're going to come up with about half of the  
9 staff's estimate rather than the 317, which the industry is  
10 also citing there. So, the numbers didn't add up that we  
11 got from them.

12 MR. LAGARIAS: All right. But you're focusing on  
13 the 37 rather than the 1200, which would be the product of  
14 the average miles and the days ridden that the industry  
15 proposed.

16 MR. CROSS: Right. Right.

17 CHAIRWOMAN SCHAFFER: Dr. Wortman.

18 DR. WORTMAN: I also have problems with the  
19 staff's premise. First of all, the spelling on page 17. If  
20 that's what you think premise is, then I think we have a  
21 problem here.

22 MR. CROSS: We corrected it in a number of other  
23 places. That one must have slipped by.

24 DR. WORTMAN: You didn't catch it on page 17, last  
25 paragraph, second line.



1 MR. CROSS: Okay.

2 DR. WORTMAN: Anyway, I don't believe the 40 or  
3 the 46 figure. Most people go riding on weekends. Almost  
4 every weekend?

5 MR. CROSS: No, that'd be every other weekend, two  
6 days. That's days, not weekends.

7 DR. WORTMAN: You believe that?

8 MR. CROSS: No, no, no.

9 DR. WORTMAN: I see them --

10 MR. CROSS: What I'm saying is that you said that  
11 they go typically on big weekends. Well, if it's a two- or  
12 a three-day weekend, then --

13 DR. WORTMAN: How many of those do we have a year?  
14 Five? Four? This sounds high. Now, the industry obviously  
15 padded it to get 46 days, because this shows high usage and,  
16 therefore, there are many people involved.

17 I don't believe that. I don't believe the 40  
18 either. People just don't go out that often. On normal  
19 weekends, you don't see them towing vehicles out of town  
20 that often. And 60 miles on that kind of terrain takes a  
21 Rambo.

22 MS. WOLF: Exactly. It can't be done.

23 MR. LAGARIAS: And does that assume that all the  
24 vehicles are running at 46 days for 30 miles?

25 MS. WOLF: I'm two people. I have four.

1 MR. LAGARIAS: Yes.

2 MS. WOLF: They can't be.

3 MR. CROSS: But then there are numbers of people  
4 that I've -- at least when I've gone on outings, where  
5 people bring their friends and the vehicle runs all day.  
6 So, it goes both ways.

7 In other words, there are less vehicles than there  
8 are people, and the vehicle is ridden by multiple people for  
9 fun.

10 MS. WOLF: May I say one last thing, and then I'll  
11 stop?

12 CHAIRWOMAN SCHAFFER: Yes, certainly. Please, Ms.  
13 Wolf, thank you.

14 MS. WOLF: Yes, I do not have figures. As I said  
15 at the beginning, most of what I come to say I come to say  
16 as a citizen. And I think that you ought to be very careful  
17 about what the citizen, who does not believe these numbers,  
18 as I do not, will think about your regulations.

19 Because when I describe it to people not in any  
20 way connected with the motorcycle industry, but who are  
21 motorcyclists, they say -- this is very impolite -- "It's a  
22 lie." Watch out for that. It's important.

23 And that's all I have to say.

24 CHAIRWOMAN SCHAFFER: Thank you very much, Ms.  
25 Wolf.

1 MR. CROSS: Are these -- are the motorcycle  
2 manufacturers that you listed -- Husqvarna and some of those  
3 are primarily two-stroke, right?

4 MS. WOLF: No, they are not.

5 MR. CROSS: Well, Ducatti isn't. But the off-  
6 highway ones --

7 MS. WOLF: Those are on the street. For  
8 Husqvarna, the numbers are more four-stroke than two-stroke.

9 MR. CROSS: Okay. So that's changed over the  
10 years.

11 MS. WOLF: Although they are very small.

12 MR. CROSS: Let me -- the direct question is,  
13 several of those manufacturers rung in my mind as  
14 manufacturers which produce a lot of competition  
15 motorcycles, real competition motorcycles, which are used in  
16 competition events. Now, is that true, or am I --

17 MS. WOLF: It is not so true as it was, I believe.  
18 Husqvarna, which was bought by Cagiva -- when Cagiva was  
19 operating, they were more competition than Husqvarna has  
20 been recently, which has changed a great deal.

21 MR. CROSS: So, Husqvarna, for example, has gone--  
22 has evolved from its original line of purely competition  
23 motorcycles or purely two-stroke --

24 MS. WOLF: Yes.

25 MR. CROSS: -- competition-type motorcycles to now

1 have a line of four-stroke motorcycles as well.

2 MS. WOLF: Yes, yes.

3 MR. CROSS: Would those motorcycles have trouble  
4 complying with the proposed standards, the four-stroke  
5 Husqvarnas?

6 MS. WOLF: Being so small, what I am being told --  
7 and this is only the beginning -- is that they cannot yet  
8 tell, but that they are working on it. So, today, I don't  
9 know.

10 CHAIRWOMAN SCHAFFER: Dr. Wortman?

11 DR. WORTMAN: On these mileages that we were  
12 given, I certainly don't believe the 60. It just can't  
13 happen. Do you believe seven miles per day? Because 46  
14 days and 310 or so miles is about seven miles a day. Does  
15 that sound right to go out somewhere, an enormous distance,  
16 for seven miles?

17 MS. WOLF: I think 46 days is completely wrong.

18 DR. WORTMAN: Oh, I know it's wrong.

19 MS. WOLF: And so, therefore, that skews the seven  
20 miles a day. No, I don't think seven miles a day is  
21 correct. But I can tell you that in the last six years, I  
22 have ridden in Baja, in Arizona, in Colorado, never in  
23 California. So, that's four. And that's only me. For a  
24 lot of people I know, it is the same.

25 DR. WORTMAN: Do you believe the 310 miles?

1 MS. WOLF: Perhaps.

2 DR. WORTMAN: You do? That's worse than my  
3 Pantera.

4 MS. WOLF: Oh, you mean 310 miles --

5 DR. WORTMAN: A year. Even my Pantera can  
6 struggle up to 500.

7 MS. WOLF: Well, I only rode once last year. So,  
8 I'm probably 20 miles in one year. How does it work out  
9 across the board? I don't know.

10 MR. LAGARIAS: Ms. Wolf, while we're arguing  
11 statistics, and data, and analysis, I think you should be  
12 aware we are sensitive to the economics, to the impact on  
13 people. We're trying to meet our air quality standards, but  
14 we are not ignoring the issues that you are raising.

15 MS. WOLF: I understand that you are trying to  
16 improve air quality standards. God knows I appreciate that,  
17 and I understand that.

18 What I am saying is, I do not believe that these  
19 regulations will achieve the reductions. That's the problem  
20 I have.

21 MR. LAGARIAS: Thank you.

22 CHAIRWOMAN SCHAFER: Thank you very much, Ms.  
23 Wolf. The next witness who's requested an opportunity to  
24 testify is J. C. Delaney with the Motorcycle Industry  
25 Council. Mr. Delaney, you may please come forward.

1 Good afternoon. Welcome to the Air Resources  
2 Board.

3 MR. DELANEY: Thank you. My name is J. C.  
4 Delaney. I'm the Director of Technical Programs for the  
5 Motorcycle Industry Council. MIC is a nonprofit national  
6 trade association representing approximately 125 members who  
7 are manufacturers and distributors of motorcycles, ATVs,  
8 motorcycle and ATV parts and accessories, and members of  
9 allied trades.

10 Firstly, I want to assure the Board and staff that  
11 our member motorcycle and ATV manufacturers continue in  
12 their willingness to work with the Board in the development  
13 of mutually acceptable regulations.

14 Several workshops between CARB staff and the  
15 industry have already been held, and we do look forward to  
16 continuing the dialogue. MIC does, however, still have  
17 several areas of disagreement with the proposed regulations.

18 The first of these is the alternative  
19 certification testing of all-terrain vehicles. Staff has  
20 already mentioned their willingness to work with us further  
21 on this.

22 The proposed regulations allow certification of  
23 ATVs using the ULG test procedures to, quote, "equivalent  
24 standards." Due to different engine loading characteristics  
25 between the two test procedures, preliminary testing by

1 manufacturers has shown no true correlation between them.

2           Some manufacturers have also indicated that there  
3 are some repeatability problems when using the federal test  
4 procedure.

5           For these reasons, rather than attempting to show  
6 equivalency, MIC advocates that development of specific  
7 standards for ATVs, using the steady state, J-1088, test  
8 procedures. Again, MIC member companies are more than  
9 willing to work with CARB staff in the mutual development of  
10 acceptable standards.

11           Staff also indicated during their presentation  
12 this morning that industry was asking for a complete  
13 exemption for vehicles with engine displacements under 90cc.  
14 This is not completely the case.

15           We do strongly feel that those off-road  
16 motorcycles and all-terrain vehicles with engines less than  
17 50cc should be exempt from regulation. The small  
18 displacement machines under 50cc are currently exempt from  
19 on-highway emissions rules in California and the federal  
20 level. We feel that this should also be the case for off-  
21 road.

22           Because of the very small size and light weight of  
23 these machines -- and there was a picture circulated that  
24 everyone can see they are quite small in size and quite  
25 light weight -- fitting them with larger emission-controlled

1 engines is not practical.

2           Additionally, many, if not most, of the 50cc off-  
3 road motorcycles cannot attain even the modest speeds  
4 required by the Class One federal test procedure. These  
5 machines are, for the most part, intended for use by  
6 children who are learning to ride, and are typically  
7 operated at slow speeds on level ground.

8           It is important that these small entry-level  
9 motorcycles and ATVs that are used by children and small  
10 adults continue to be light weight, easily handled, and  
11 economically priced.

12           Pertaining to the 50 through 90cc machines, we are  
13 not asking for an exemption. We are asking that an  
14 extension of the compliance date be granted for those off-  
15 road motorcycles and all-terrain vehicles with engines less  
16 than or equal to 90cc until December 31st, 1999. This will  
17 allow manufacturers to develop small, light weight emission-  
18 controlled motorcycles with adequate performance  
19 capabilities for use by youngsters learning to ride and  
20 small adults, who'd be otherwise uncomfortable with bigger  
21 machines.

22           We've been working with CARB staff in earlier  
23 workshops. And until March of this -- of 1993, industry had  
24 relied on the staff's indication that these small  
25 motorcycles and ATVs would be exempt from emission



1 requirements; that is, the under 90.

2           Consequently, virtually no development of  
3 alternative power sources for them has been done yet. Many  
4 of these smaller machines use the engines as a chassis  
5 structural member, and to redesign and redevelop them will  
6 entail a complete reengineering of the engine, frame, or  
7 both to incorporate a new emission-controlled engines.

8           These machines are important to us, in that they  
9 are typically the machines that introduce new users to the  
10 sport, thus perpetuating the market for the larger machines.  
11 Extending the compliance date for machines with engines less  
12 than or equal to 90cc will allow the manufacturers the  
13 necessary leadtime to develop the new emission-controlled  
14 engines.

15           Emphasizing the importance of the machine, it  
16 should be noted that under the requirements of the consent  
17 decree signed by the ATV manufacturers and distributors and  
18 the U.S. Consumer Product Safety Commission, or CPSC, ATV  
19 manufacturer/distributors are precluded from marketing ATVs  
20 with engines larger than 90cc for use by children under  
21 16-years old. Children under 12 years of age may only ride  
22 ATVs with engines under 70cc. Since many, if not most,  
23 entry level riders fall into these age groups, again, this  
24 segment of the market is very important, as is providing  
25 them with machines of adequate performance to allow the

1 learning of skills required to transition into the larger  
2 machines.

3 Another point of contention between MIC and the  
4 proposed regulations are a couple of the definitions.

5 Staff has defined competition vehicles as those  
6 used exclusively for competition. While MIC's member  
7 companies manufacture motorcycles for exclusive competition  
8 use, they've got no control over the actual usage by the  
9 ultimate purchaser. We continue to object to any definition  
10 based on a vehicle's use. Competition vehicles should be  
11 defined as those manufactured and marketed exclusively for  
12 closed-course competition use.

13 Also, the definitions for both ATV and off-road  
14 motorcycle include a sentence to the effect that an ATV or  
15 off-road motorcycle that is not used exclusively for  
16 competition is not defined as a competition vehicle. We  
17 feel this is unnecessary, since a competition vehicle  
18 definition is already included in the proposed regulations.  
19 There's really no need to define what is not a competition  
20 vehicle.

21 We understand that -- and staff has confirmed this  
22 morning that they intend to use the American National  
23 Standards Institute, or ANSI, definition of ATVs. But we do  
24 object to their addition of load weight limits to that  
25 definition.

1           The pure ANSI definition does not mention load  
2 limits. We feel that such limits may prove design  
3 restrictive as the larger ATVs are already very near the  
4 load carrying capacity in the definition presented by staff  
5 this morning.

6           We understand that staff's intention in adding the  
7 load limits was to preclude redefinition of specialty  
8 vehicles as ATVs. The very design specific aspects of the  
9 ANSI definition -- astride seating, four wheels only, and  
10 handlebar steering -- make this very unlikely. Certainly no  
11 currently marketed specialty vehicle fulfills all three of  
12 those criteria.

13           On the subject of vehicle identification numbers -  
14 - and Ms. Lourenco expounded on that a bit this morning.  
15 It's been agreed by industry and staff that, with the  
16 Department of Motor Vehicle's cooperation, a system should  
17 be initiated to preclude registration for recreational use -  
18 -which is commonly called a green sticker registration -- of  
19 motorcycles intended for closed-course competition use.

20           Preventing closed-course machine registration for  
21 recreational use will effectively remove a significant  
22 number of currently manufactured two-stroke off-highway  
23 motorcycles from eligibility for registration. This has the  
24 effect of removing the most significant emission  
25 contributors from eligibility for registration for

1 recreational use.

2           And as we work with the staff, in view of the  
3 smaller numbers of actual models and type of -- excuse me --  
4 actual models of competition motorcycles and ATVs and their  
5 somewhat lower sales volume in the recreational category --  
6 a volume that, by the way, is anticipated to decline  
7 significantly once regulations are effective, also -- it's  
8 more cost-effective for industry to code the vehicle  
9 identification numbers of competition machines rather than  
10 recreational off-road motorcycles and ATVs as was proposed  
11 in the original mailout.

12           And my understanding is that it's been modified  
13 somewhat to incorporate that. So, what I'm basically saying  
14 is that, at this point, industry agrees with CARB staff on  
15 the vehicle identification number methodology.

16           The end result of VIN coding the competition  
17 machines will be the same. It will achieve CARB staff's of  
18 precluding registration of competition motorcycles and ATVs  
19 for recreational use within California.

20           One additional benefit that CARB didn't mention --  
21 or excuse me -- the staff did not mention is that it would  
22 be of benefit to DMV during the incorporation of the system  
23 is that some owners have their dual purpose motorcycles,  
24 those that are capable of being operated both on- and off-  
25 highway. As their machines get older, they tend to register

1 them for off-road use only, the reason being that the on-  
2 road registration costs are significantly higher than the  
3 off-road green sticker registration costs. And by coding  
4 only the competition vehicles, it precludes some confusion  
5 at the DMV registration desk when they try to get a green  
6 sticker for their dual purpose bike.

7 Another area of disagreement pertains to  
8 certification testing. The proposed regulations require  
9 that all vehicles undergo a minimum of two tests for  
10 certification. We do question the need for this, because  
11 other equipment classifications, including existing on-road  
12 vehicles, require only one test for certification purposes.

13  
14 The additional testing costs and time requirements  
15 are an unnecessary burden to the manufacturers and will  
16 serve no useful purpose.

17 We also continue to object to any reporting of  
18 competition vehicle sales. The VIN code procedures or  
19 provisions of the proposed regulations, with which we've  
20 already said we agree, provide a means for precluding the  
21 registration of competition vehicles for registration -- or  
22 for recreational use, making their registration for  
23 recreational use illegal and should also negate any need for  
24 reporting sales of the competition vehicles.

25 In summary or in closing, I want to assure the

1 Board, as well as the staff, that our member motorcycle and  
2 ATV manufacturers and distributor members continue in their  
3 willingness to work with the staff and the Board for the  
4 development of mutually acceptable regulations. That  
5 concludes my statement.

6 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
7 Delaney. Do any of the Board members have a question for  
8 the witness?

9 Yes, Mr. Lagarias.

10 MR. LAGARIAS: I'd like ask the staff, regarding  
11 certification testing, the basis for wanting two  
12 certification tests.

13 MR. CROSS: In most kinds of like on-road vehicle  
14 certification, for example, they do a durability test on the  
15 vehicle, which gives you multiple data points, and then  
16 there's a single test on the data vehicle (sic). So, you  
17 have -- but you have multiple pieces of data which tell you  
18 what the emissions characteristics of the vehicle are.

19 On the utility engine standards, there's a single  
20 test, but there's also a quality auditing requirement. So,  
21 we have the certification test, and then we have tests from  
22 production engines which supplement it, which give us some  
23 confidence that the data are good.

24 In the motorcycle situation, there's nothing other  
25 than the certification test required. So, essentially, what

1 we're doing is asking them to repeat the certification test  
2 just to make sure it's a good test, so to give us some  
3 certainty that it's not a -- that there wasn't some problem  
4 with the test or that it's not a spurious data point, if you  
5 will.

6 MR. LAGARIAS: Well, wouldn't they repeat it  
7 anyway if it were -- if it failed, let's say?

8 MR. CROSS: Oh, yeah. If they failed, they would  
9 repeat it, but the point is that they could submit data from  
10 a passing test without backing it up with a replicate. And  
11 I guess our feeling is that the amount of data that we're  
12 asking for in the first place is minimal. We're not asking  
13 them for quality audit. We're not asking them for a  
14 durability test. We're not asking for other kinds of data  
15 which we would normally use to determine that the cert data  
16 are good. So, we feel like two tests isn't too much to ask.

17 MR. LAGARIAS: All right. And what about the  
18 reporting of competition vehicle sales? Does the VIN  
19 requirements meet that?

20 MR. TERRIS: What we're trying to do there is  
21 we're not requiring vehicles that are clearly competition  
22 vehicles be reported. There's an issue out there that  
23 vehicles that are designed as competition vehicles are being  
24 actually used for recreational purposes, which would fall  
25 outside of our definition of competition.

1           And so, therefore, what we're trying to do is get  
2 information to make a determination as to what is really a  
3 competition vehicle, what is being used exclusively for  
4 competition purposes out there.

5           MR. LAGARIAS: Well, your definition of a  
6 competition vehicle, does that meet the requirement?

7           MR. TERRIS: I'm not sure if I understand your  
8 question.

9           MR. LAGARIAS: Well, earlier under "definitions,"  
10 CARB is recommending that the --

11          MR. CROSS: Oh, this is the used by versus the  
12 manufactured by?

13          MS. LOURENCO: That's correct.

14          MR. TERRIS: What we're trying to do there is to  
15 clarify what the legislative mandate was. The Legislature  
16 basically said that we cannot regulate racing vehicles. It  
17 does not provide a definition of what is really a racing  
18 competition vehicle.

19          So, what we've attempted to do is to fashion a  
20 definition that is consistent with the Federal Clean Air  
21 Act, which basically has, "used solely for competition  
22 purposes," and also square it with the Vehicle Code, which  
23 basically makes an exemption from registration requirements  
24 for vehicles used exclusively for competition purposes.

25          MR. LAGARIAS: Well, if that is adopted, what is



1 the need of reporting competition vehicle sales?

2 MR. TERRIS: Because what we've done is, we're not  
3 attempting to regulate these designed for competition.  
4 We're trying to work with industry in the next couple of  
5 years to determine what exactly is a competition vehicle out  
6 there that is being used exclusively for it. So, we need  
7 this data to make these determinations.

8 MR. CARTER: If I may, we're assuming that the DMV  
9 registration process will work and will solve the problem  
10 that we're talking about here.

11 What this reporting will do is that it will give  
12 us assurance in the next two years and coming years that  
13 that is indeed working. We'll be able to hopefully track  
14 the number of competition vehicles that are marketed and  
15 sold as competition vehicles. And then, if the DMV process  
16 works as planned, those numbers should start dropping.

17 And that's essentially the reason why we're asking  
18 for this reporting.

19 MR. LAGARIAS: Thank you.

20 CHAIRWOMAN SCHAFFER: Are there any other questions  
21 from Board members?

22 Dr. Wortman?

23 DR. WORTMAN: I'm not sure that I agree with that.  
24 There may be reasons for manufacturers not reporting the  
25 number of competition machines that they have sold.

1 International automobile racing figures are never given.  
2 You have to guess how well the manufacturer is doing in  
3 pushing these vehicles.

4 MR. CROSS: The purpose of the staff proposal is  
5 to essentially move the competition vehicles from the  
6 current situation, which is many of them are used as  
7 recreational vehicles, to competition vehicles being  
8 exclusively used for racing events. And if we track the  
9 numbers of at least California sales of competition  
10 vehicles, what you should see is a decline in the sales.

11 DR. WORTMAN: But then you're asking for  
12 information that some companies may not wish to give you,  
13 because that gives their competitors an edge.

14 MR. CROSS: But, see, they're only -- okay. I see  
15 what you're saying.

16 MR. TERRIS: The information would be trade secret  
17 confidential, which they could request that not be released  
18 to other parties other than ARB.

19 MR. LAGARIAS: Won't that really sort itself out,  
20 those people that are making the most effective competition  
21 vehicle will get the higher sales and those that --

22 MR. CROSS: Our concern is -- we're not trying to  
23 mess with the marketplace of true competition vehicles used  
24 in competition. Essentially, we're just trying to verify  
25 that the vehicles that are being used by the average -- by

1 the motorcyclists for recreation that are really competition  
2 vehicles are phasing out as a function of this regulation.

3 So, that's the purpose.

4 MR. LAGARIAS: I don't see the necessity for  
5 requiring. Asking for it may be appropriate. But requiring  
6 it -- I go up to a stoplight and there's a Honda next to me,  
7 and it zooms. It's a competition vehicle when it takes off.  
8 And yet it isn't reported like that.

9 (Laughter.)

10 CHAIRWOMAN SCHAFER: Are there any other --

11 MR. DELANEY: Madam Chair, if I can amplify on  
12 that a little bit?

13 CHAIRWOMAN SCHAFER: Yes, Mr. Delaney. Go ahead.

14 MR. DELANEY: Not necessarily Mr. Lagarias'  
15 comment, but the comments of Mr. Cross.

16 (Laughter.)

17 MR. DELANEY: As it stands today, a number of  
18 vehicles marketed and manufactured for competition purposes  
19 are, in fact, registered for recreational use. What we've  
20 done here and are working with CARB staff is agree to put a  
21 method to preclude that from happening in the future once  
22 regulations are in effect.

23 And, again, we don't see the need for reporting,  
24 because regulations will be in effect to preclude the  
25 further registration of those vehicles.

1 CHAIRWOMAN SCHAFFER: I had one question for the  
2 staff. We have a communication from -- DMV I guess it is --  
3 yes, that this registration, the VIN registration is not  
4 going to pose a particular additional burden to them.

5 I assume that's true with both the alternative and  
6 the original proposal?

7 MR. CROSS: That's correct. And we are going to  
8 enter that correspondence into the record later on.

9 CHAIRWOMAN SCHAFFER: Okay. Thank very much.

10 All right. I think that if all of the Board's  
11 questions have been responded to, I'd like to thank Mr.  
12 Delaney for your presentation this afternoon, and give an  
13 assessment of where I think we are.

14 We have three more witnesses who have signed up  
15 for the opportunity to testify and answer questions this  
16 afternoon.

17 I regret to say that we won't be able to take that  
18 testimony up now until about 1:30. We expect to be back  
19 here promptly at 1:30.

20 You are certainly welcome, if that is inconvenient  
21 for your schedule, to leave with us, so that we can look at  
22 it, any written testimony that you may want to offer if  
23 there's a scheduling problem.

24 If there are no other comments from the staff on  
25 how we're going to proceed and no questions for the staff on

1 the regulation at this time, we'll recess for lunch and we  
2 will back here promptly at 1:30.

3 Thank you very much.

4 (Thereupon, the luncheon recess was taken.)

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AFTERNOON SESSION

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1  
2  
3 CHAIRWOMAN SCHAFFER: The afternoon session of the  
4 California Air Resources Board hearing is in order. I'd  
5 like to welcome Board member Lynne Edgerton, a new Board  
6 member appointed by the Governor also on the 19th of  
7 November.

8 This is Lynne's first Board meeting, as it is  
9 mine, and we welcome you, Lynne, and appreciate your  
10 endurance in terms of making the meeting, even though the  
11 weather was all stacked against you.

12 In resuming this hearing, I'd like to invite the  
13 next witness who has signed up to give testimony this  
14 afternoon, Mr. Curtis Schmidler of the Yamaha Motor  
15 Corporation. Is Mr. Schmidler here, please?

16 Good afternoon. I'm sorry to keep you waiting.  
17 Welcome to the Air Resources Board.

18 MR. SCHMIDLER: Thank you.

19 Good afternoon. My name is Curtis Schmidler, and  
20 I'm here today to represent Yamaha Motor Corporation, USA.

21 I need to reinforce a few items previously  
22 presented by Mr. J. C. Delaney of the Motorcycle Industry  
23 Council.

24 First, what we feel is an urgent need for a three-  
25 year extension in the proposed under 90cc engines. Those

1 regulations are intended to eliminate two-stroke engine use  
2 in off-highway motorcycles and all-terrain vehicles.

3 We are particularly concerned about this issue.  
4 Of the two-stroke motorcycles that we market, three are less  
5 than 90cc. We have no four-stroke motorcycle engines  
6 available at the present time.

7 Yamaha needs sufficient leadtime to design,  
8 develop, and build new four-stroke engines that will be  
9 required to support our entry level off-highway motorcycles.

10 Item 2, the equal importance of an alternative SAE  
11 J-1088 bench test procedure or bench test method for off-  
12 highway/all-terrain vehicle engines. Our motor sports test  
13 engineers tell us that they are unable to modify our  
14 existing motorcycle chassis dynamometers in order to use  
15 them with four-wheel all-terrain vehicles.

16 Item 3, Yamaha's willing -- in fact, we're  
17 committed to work with the ARB staff to help develop an  
18 equivalent J-1088 bench test procedure. This would be an  
19 alternative for the proposed chassis dynamometer test. This  
20 would provide an equivalent emission reduction for all-  
21 terrain vehicles only to the proposed 1.2 grams of  
22 hydrocarbon and 15 grams of CO per kilometer.

23 Fourth and last, we believe that the VIN coding of  
24 competition motorcycles is the least complex and the most  
25 cost-beneficial method to achieve ARB's stated goal.

1 Thank you for this opportunity to voice our Yamaha  
2 concerns. If there are any questions, I'd be happy to try  
3 to address them.

4 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
5 Schmidler. Any questions from the Board of this witness?  
6 Any questions for the staff on the points that were raised?

7 Thank you. Oh, Andrew.

8 DR. WORTMAN: Just one question.

9 CHAIRWOMAN SCHAFFER: Excuse me, Dr. Wortman.

10 DR. WORTMAN: You object to the test procedure.  
11 What would you propose?

12 MR. SCHMIDLER: To the -- what we're looking for  
13 is to develop a J-1088 bench test procedure. The numbers  
14 aren't in place now. I think we've agreed that this is  
15 something that we will work on and we're certainly committed  
16 to work with.

17 What was originally proposed was that we could  
18 take one wheel off of an all-terrain vehicle and run them on  
19 a motorcycle dynamometer, chassis dynamometer. In fact, at  
20 least in our case, that's impossible. So, we need a bench  
21 test methodology and an equivalent standard or standard  
22 numbers that we can test to.

23 CHAIRWOMAN SCHAFFER: Bob, do you have some  
24 comments on that?

25 MR. CROSS: Yeah. The existing staff proposal



1 before you has the flexibility in it to allow what they're  
2 suggesting. In other words, we realize that most -- we felt  
3 that most motorcycle manufacturers, in fact, would have  
4 dynos which would accept vehicles with slave wheels or  
5 vehicles minus a wheel on the existing two-wheel dyno.

6 But if there were ones that couldn't accommodate  
7 it, we felt that if they did the testing, back-to-back  
8 testing on the chassis procedure and the engine procedure  
9 using a two-wheel motorcycle with roughly the right engine  
10 in it to establish the appropriate levels, that we could go  
11 ahead and work with the industry.

12 The problem was that we didn't have sufficient  
13 data from industry coming to you with this proposal to put  
14 standards forth. And so, what we're suggesting is we'll  
15 work with the industry to develop, quote, "equivalent  
16 standards," if they're willing to do the testing.

17 DR. WORTMAN: Are there equivalent standards? How  
18 are you going to do it?

19 MR. CROSS: They basically would be doing back-to-  
20 back -- they would be doing back-to-back tests of the same  
21 engine, if you will, on the chassis dyno and on the engine  
22 dyno on the two different procedures.

23 DR. WORTMAN: I thought they were objecting to a  
24 chassis dyno.

25 MR. CROSS: But they can do it with a two-wheel

1 vehicle, like a motorcycle with a similar engine.

2 DR. WORTMAN: Similar.

3 MR. CROSS: Yeah, not the same, but similar.

4 CHAIRWOMAN SCHAFFER: And my question for Mr. Cross  
5 is that you can do that within the ambit of the regulation  
6 we're considering now?

7 MR. CROSS: The regulation we're considering  
8 before you now has sufficient latitude to allow this.

9 CHAIRWOMAN SCHAFFER: Thank you.

10 Any other questions from the Board for the  
11 witness?

12 MS. EDGERTON: I'd like to ask Mr. Schmidler a  
13 question. Mr. Schmidler, thank you for coming this morning.

14 You say you have no four-stroke engines at all in  
15 your sales?

16 MR. SCHMIDLER: In the under 90cc, and the off-  
17 road under 90cc engines, the small entry-level motorcycles,  
18 at the present time, we do not have any.

19 MS. EDGERTON: Do you have -- so, you do have  
20 four-stroke engines in your regular-sized --

21 MR. SCHMIDLER: In larger products, yes.

22 MS. EDGERTON: Uh-huh. What's the difficulty in  
23 making the change?

24 MR. SCHMIDLER: Well, the difficulty is that up  
25 until March of 1993, like other manufacturers, we were under

1 the impression that under 90cc products would be exempted  
2 from this regulatory process.

3 This impression was based on previous meetings  
4 with ARB staff. There was a change in direction on or about  
5 April of 1993. That is -- that's less than a year ago.  
6 And, of course, it takes considerable time to design,  
7 develop, and build completely new engines and new products.

8 So, it's a matter of timing. It's not a matter of  
9 we're saying, please, just drop this and forget about it.  
10 We're saying, give us enough leadtime to do it.

11 MS. EDGERTON: Well, have you -- can you tell me  
12 what you think would be sufficient leadtime?

13 MR. SCHMIDLER: Yes. We think a three-year  
14 extension to the proposed 1997 regulation is required in  
15 order to do it, and to do it right, to do it economically,  
16 and to keep the cost of the product down where it's still  
17 affordable.

18 Anytime you go into a crash engine development  
19 program one or two things happens. Either you make mistakes  
20 or you push the cost out of sight. So, it takes time to  
21 develop new engines. And until last March or April, we had  
22 no reason to think that we even needed to do this.

23 MS. EDGERTON: Did you start at that time to work  
24 on a 90cc engine?

25 MR. SCHMIDLER: Not really, because at that time

1 it was still maybe we were going to, maybe we were not. And  
2 by about September, it became very clear, I think, to  
3 everyone involved that ARB staff was very determined to go  
4 ahead in this direction regardless of our screams of  
5 protest, for the lack of a better word.

6 And, at that time, yes, we started a program. But  
7 that's a fairly lengthy program.

8 MS. EDGERTON: So, you have a program underway.

9 MR. SCHMIDLER: Oh, certainly. This is not like  
10 building a lawnmower, where you take an off-the-shelf engine  
11 and put it in a frame.

12 Many times in motor sports vehicles the engine is  
13 part of the frame itself. It's actually a support member.  
14 So, the engines are custom-designed and built specifically  
15 for a product. That's a lengthy and very, very costly  
16 process.

17 MS. EDGERTON: Thank you.

18 MR. SCHMIDLER: Thank you.

19 DR. WORTMAN: Just one more. What is the next  
20 largest size engine you have, four-stroke?

21 MR. SCHMIDLER: We have one all-terrain vehicle  
22 with an 80cc four-stroke. In motorcycles, the smallest  
23 four-stroke engine we have at the present time is 124cc.

24 DR. WORTMAN: So, you have a running 80cc engine.  
25 You're not that far off, are you?

1 MR. SCHMIDLER: In an all-terrain vehicle. But  
2 gear box, clutch, everything involved --

3 DR. WORTMAN: We're talking about engines. You  
4 only talked about engines so far. It sounds very close to  
5 me.

6 MR. SCHMIDLER: I wish it were.

7 DR. WORTMAN: You mean the 80cc versus 90?

8 MR. SCHMIDLER: I wish that we could simply take  
9 that engine and put it in a motorcycle. It would make  
10 everyone's job a lot easier.

11 MS. EDGERTON: Mr. Schmidler, I have one more  
12 question. How many vehicles do you sell under 90cc in  
13 California?

14 MR. SCHMIDLER: I don't have that --

15 MS. EDGERTON: Per year.

16 MR. SCHMIDLER: -- figure with me. I'm sorry, but  
17 I work in the technical end of the business. I could  
18 certainly get it, but I don't have it with me.

19 MS. EDGERTON: Well, I'd appreciate it, sir, if  
20 you would provide it for the record.

21 MR. SCHMIDLER: I certainly will.

2 MS. EDGERTON: Thank you.

23 CHAIRWOMAN SCHAFFER: Yes, Mayor Hilligoss.

24 MAYOR HILLIGOSS: Yes. I wanted to ask -- I  
25 thought I understood from the former -- Mr. Delaney, that it

1 was not possible to put a four-stroke engine in one of the  
2 smaller units under 90cc.

3 MR. SCHMIDLER: I think that was a  
4 misunderstanding.

5 MAYOR HILLIGOSS: Because it was too heavy?

6 MR. SCHMIDLER: If I'm not mistaken, one of our  
7 Yamaha competitors does have a four-stroke model at the  
8 present time.

9 MAYOR HILLIGOSS: So, it is possible.

10 MR. SCHMIDLER: But there is some loss of  
11 performance and some additional weight. And then, the very  
12 small models, very entry-level models that typically  
13 motorcycle enthusiasts would buy for their children to start  
14 learning on, you give up -- give up some performance, and  
15 you gain weight. So, there are certainly some downsides,  
16 too.

17 MS. EDGERTON: I see.

18 MR. SCHMIDLER: Typically, a two-stroke engine  
19 will put out far, far more horsepower per cubic inch of  
20 displacement, or per pound of weight than a comparable four-  
21 stroke.

22 MAYOR HILLIGOSS: Okay. Thank you.

23 I wanted to ask the staff, what happened in March  
24 and April that you changed plans?

25 MR. CROSS: Yeah. I think the staff needs to

1 acknowledge that we did change direction. And the reason  
2 for that was because we started looking at the emission  
3 inventory numbers associated with this portion of the off-  
4 highway class.

5 Do we have an overhead or something on that, or do  
6 we want to put it up now or hold it till later?

7 Yeah, the numbers -- basically, the numbers  
8 associated with it were -- if you look, we can see that the  
9 50cc exemption would move the benefit of the staff proposal  
10 or the emission level resulting after the staff proposal  
11 from 4 tons up to 7 tons per day. So, there would be a  
12 three-ton loss in the proposed benefit.

13 And if it was a 90cc break exemption, it would be  
14 the difference between 4 and 9 tons per day. And, as we  
15 said earlier in the staff presentation, that's a five-ton  
16 loss.

17 So, it was the concern about basically giving up a  
18 significant amount of benefit in the proposal, which drove  
19 the staff towards this change in direction. And the  
20 discussion which went on between industry and the staff  
21 during that time period was essentially between an exemption  
22 or no exemption.

23 In other words, I don't think the issue of  
24 leadtime to bring engines into compliance was really  
25 discussed. In other words, they raised the arguments of

1 inadequate performance, and cost, and all that and,  
2 basically, we're suggesting that the choice here was between  
3 exemption or no exemption, not between exemption and, for  
4 example, more leadtime.

5 But anyway, the increase in emissions explains why  
6 we changed direction.

7 MAYOR HILLIGOSS: Thank you.

8 CHAIRWOMAN SCHAFFER: I guess I have a follow-on  
9 question. I don't know whether you can calculate or even  
10 estimate this on such short notice. But what are the  
11 implications of an extension of three years, or two years,  
12 or one year on the emission benefits? Is there a way that  
13 we can tell that now?

14 MR. CROSS: Oh, I think over the long term it's  
15 not that much, because, basically, you turn the -- you know,  
16 it delays the turnover of the fleet, if you will, by one  
17 year.

18 So, while I can't give you an exact number,  
19 essentially what it means is that the fully turned-over  
20 benefit would occur in however many years later than it  
21 would otherwise occur. But then, over the long term, when  
22 it stabilizes out, you get the full benefit.

23 CHAIRWOMAN SCHAFFER: Okay. Mr. Schmidler, I  
24 understand your proposal is that the extension be given for  
25 all vehicles under 90cc, including 50cc and below?



1 MR. SCHMIDLER: Yes, that's what we would like to  
2 see.

3 CHAIRWOMAN SCHAFFER: Okay. Any other questions  
4 from the Board members?

5 Okay. Thank you very much --

6 MR. SCHMIDLER: Thank you.

7 CHAIRWOMAN SCHAFFER: -- for your participation  
8 this afternoon.

9 The next witness who has expressed an interest in  
10 testifying is Mr. Brian Gill of Honda. Is he still here?

11 Mr. Gill, please come forward.

12 Good afternoon.

13 MR. GILL: Good afternoon, Chairwoman Schaffer,  
14 Board. My name is Brian Gill. I'm the Certification  
15 Manager of American Honda Motor Company here to present the  
16 comments of Honda Motor Company, Limited on the proposed  
17 regulation.

18 I'd like to say that we appreciate the opportunity  
19 to comment on the proposal, and we support the comments  
20 previously made by the Motorcycle Industry Council, and we  
21 would like to thank the staff for their efforts during the  
22 development of the proposal.

23 Our data show that approximately 21,500 off-road  
24 motorcycles and ATVs were sold in California in the 1992  
25 calendar year.

1 About half of these, we understand, were equipped  
2 with four-stroke engines. Approximately 1300 motorcycles  
3 with engines of less than 50cc were sold, and about 1,000  
4 motorcycles and 920 ATVs with engines of larger than 50cc  
5 and less than 90cc were sold.

6 The rest were larger displacement motorcycles and  
7 ATVs and vehicles manufactured for use in competition.

8 From these numbers, we think it's clear that this  
9 source is not a major contribution to air pollution. The  
10 main effectiveness of the proposal would be the elimination  
11 of two-stroke engine vehicles, as was the case with the on-  
12 road regulation adopted some years ago.

13 I'd like to make the following specific comments  
14 on the proposal:

15 With regard to optional standards for ATVs, Honda  
16 needs the option to use the test procedure for utility and  
17 lawn and garden equipment engines, which is proposed in the  
18 regulation.

19 That test procedure is referred to as SAE J-1088,  
20 which is used for certifying our ATV engines.

21 Our facility for testing according to the federal  
22 test procedure, FTP, has been optimized for two-wheeled  
23 motorcycles and cannot accommodate an ATV even if one rear  
24 wheel is removed.

25 The reason for this, if I could explain, is that

1 with the motorcycle dynamometer, the air-cooling fan is  
2 located directly in line with the engine of a two-wheel  
3 motorcycle. And when you try to test an ATV on it, you have  
4 to move the motorcycle over to one side so that the one  
5 wheel will turn the dynamometer roller. This means that the  
6 air flow is on the tire rather than on the engine. And for  
7 those reasons it's not appropriate to use that equipment for  
8 this kind of test.

9           Also, the removal of one wheel or the canting of  
10 the motorcycle causes the wheel, which is driving the  
11 dynamometer, to slip. So, for these reasons, at least in  
12 our experience, it isn't possible to use them for a  
13 reproducible test of an ATV. In the proposal, engines  
14 tested under the SAE J-1088 procedure must comply with  
15 exhaust emission standards equivalent to the standard for  
16 vehicles tested under the FTP.

17           No explanation of how this equivalency will be  
18 determined has been provided in the proposal, and our  
19 understanding is rather vague. However, as we understand  
20 it, the proposal seems to be impractical and might result in  
21 different manufacturers certifying to different standards  
22 for the same category of vehicle.

23           We very strongly believe that the ARB must adopt a  
24 single specific numerical standard as has been done for all  
25 other mobile sources controlled by the ARB for these engines

1 tested according to this procedure.

2           And we would like to propose the following  
3 standards: For engines of less than 225cc displacement  
4 would be 300 grams per bhp/hour for CO; and HC plus NOx of  
5 12 grams per bhp/hour. And for engines of 225cc and  
6 greater, a CO of 300 grams per brake horsepower hour and an  
7 HC plus NOx of 10 grams per brake horsepower hour.

8           With regard to exemptions, we don't agree with the  
9 ARB staff that exemptions are unnecessary or that they will  
10 undermine the regulations. We believe that off-road  
11 motorcycles should not be treated more severely than on-  
12 road; therefore, we request that exemption should be granted  
13 for motorcycles with engines of less than 50cc displacement  
14 as it is allowed for on-road motorcycles.

15           Also, we ask the Board to allow an exemption for  
16 vehicles with engines of less than 90cc displacement until  
17 the year 2000. This will allow manufacturers time to  
18 develop replacement products for this category.

19           In Honda's case, it takes three years from the  
20 design concept to the showroom floor. And if we replace the  
21 engine of a two-stroke powered motorcycle with a four-stroke  
22 powered engine -- four-stroke engine that is -- this engine  
23 is heavier. Its center of gravity is higher. And this  
24 affects the performance and handling of the product.

25           So, it isn't easy to just put another engine in

1 the frame previously used for a two-stroke engine without  
2 causing some adverse effect as a salable product.

3           These small displacement vehicles represent the  
4 means by which manufacturers introduce new riders to the  
5 sport. They accumulate less miles per year while being used  
6 on fewer days per year than larger displacement enthusiast  
7 machines; so, we think their contribution will not be great  
8 and perhaps not as great as was shown in the charts.

9           With regard to the useful-life proposal, the  
10 proposed five years or 10,000 kilometers useful life we  
11 believe is too much for this type of product. It is similar  
12 to the useful life requirement adopted for on-road  
13 motorcycles, but it is not appropriate for vehicles used  
14 off-road.

15           This is because the conditions of use for on-road  
16 vehicles are relatively stable and those for off--road use  
17 are highly diversified. The operation of a vehicle in  
18 traffic results in a degree of similarity in vehicle speed,  
19 acceleration, et cetera, while off-road use has no similar  
20 limits.

21           Additionally, a certain level of operator  
22 performance is implied for on-road driving, which is absent  
23 in off-road use.

24           These differences in usage mean that it's  
25 impossible for the manufacturer to guarantee the performance

1 of the product used off-road to the same degree as he can  
2 for the product used on-road, even if they're manufactured  
3 to the same specifications. Also, we believe that vehicle  
4 usage will vary according to the enthusiasm of the owner and  
5 will decrease year by year.

6 Therefore, we would like to propose that useful  
7 life be defined as -- for machines 280cc or greater, a  
8 period of two years or 4,000 kilometers, or a time of use of  
9 200 hours, whichever occurs first; for 170cc to 279cc, two  
10 years/2400 kilometers, or 200 hours; and for 91cc to 169 cc,  
11 two years/1600 kilometers, or 200 hours.

12 With regard to emissions testing, the staff has  
13 proposed a requirement for each vehicle or engine to be  
14 tested twice for certification. This is not required for  
15 any other class of vehicles or engines controlled by ARB and  
16 is not necessary for this class.

17 There is no emissions benefit from the additional  
18 testing burden. All it does is to increase costs and reduce  
19 test facility availability.

20 The ARB staff does have the authority to request  
21 an additional confirmatory test if they think it necessary.  
22 But it seems to us that there is no need to require this on  
23 every certification program.

24 I could say that we are certifying vehicles to  
25 ARB's ULG regulation, and we are requested frequently to

1 perform an additional test on those engines for confirmatory  
2 purposes, and only one test is required for those engines.

3 So, we would like to request that the Board change  
4 this to require only one certification test.

5 With regard to the ATV definition, we think that  
6 the payload limit is not appropriate for these vehicles. We  
7 believe that this is design restrictive, and that the load  
8 capacity does not matter as long as the standards are met.

9 There should be no limit of the load capacity of  
10 these vehicles.

11 We think that the definition should follow the  
12 ANSI's definition. And without reading it, the important  
13 part of it is that it stresses four low-pressure tires --  
14 not four or more -- and it does not include a load limit.  
15 Otherwise, the words are similar to those proposed by the  
16 staff.

17 With regard to the definition of competition in  
18 racing vehicles, US EPA has defined competition and racing  
19 vehicles. And their definition, which reads, ". . .any  
20 off-road motorcycle or ATV designed and marked solely for  
21 use in closed-course competition events," is a competition  
22 or racing vehicle. We believe that this is appropriate for  
23 this category of vehicles. And we'd like to mention that  
24 this regulation, the proposal, is addressed to  
25 manufacturers' requirements for certification, not for end-

1 use enforcement.

2 With regard to the off-road motorcycle definition,  
3 the definition for an off-road motorcycle should be  
4 consistent with the existing California Vehicle Code  
5 definition, which reads as follows:

6 "Off-Road Motorcycle: Any vehicle as  
7 described in the California Motor Vehicle Code,  
8 Section 400, having an internal combustion engine  
9 and which is not primarily designed for use on  
10 freeways, highways, and surfaced streets."

11 Additionally, the staff's definition of an off-road  
12 motorcycle and all-terrain vehicle includes the sentence:

13 "An off-road motorcycle or ATV that is  
14 not used exclusively in competition or racing  
15 events in a closed course is not a competition  
16 racing vehicle for the purposes of these  
17 regulations."

18 As other witnesses have testified, the use of this product  
19 cannot be controlled by the manufacturer. And we believe  
20 that the sentence should be deleted from the regulation for  
21 the reasons mentioned before; that is, the regulation is for  
22 the certification of products and not an end-use enforcement  
23 regulation.

24 With regard to the VIN, I think -- perhaps I  
25 should read this. I don't think we have a problem with it



1 anymore, but the definition of the VIN, as mentioned in the  
2 proposal, incorporates several parts of the Code of Federal  
3 Regulations. Part 567 of those regulations contains the  
4 NHTSA certification requirements, which include specific  
5 labeling requirements.

6 We believe that these may have been incorporated  
7 by mistake, and that ARB needs only a specific means of  
8 preventing the licensing of competition vehicles. We  
9 suggest that a specific requirement be adopted to identify  
10 the noncompliant (sic) competition off-road motorcycles and  
11 ATVs as opposed to identifying the complying vehicles. This  
12 will be more economical, since there are less models to  
13 change and it will have the same effect.

14 With regard to the standards, the ARB staff is  
15 proposing that we be allowed to establish a corporate  
16 average, and we would like to propose that the standards  
17 should be applied as a corporate average regardless of which  
18 test procedure is used to determine compliance.

19 The ARB should allow a corporate average of the  
20 vehicles tested on the FTP and on the vehicles tested using  
21 the SAE J-1088 test procedure. And that, for the latter,  
22 the HC plus Nox values should be averaged.

23 With regard to total test distance, this is  
24 defined as the distance the vehicle should be driven to  
25 stabilize emissions. We would like to request that the ARB

1 add the words, "... as determined by the manufacturer" in  
2 order to clarify the responsibility for that determination.

3 With regard to reporting the sales of competition  
4 vehicles, the staff report indicates that true competition  
5 off-road motorcycles, ATVs, and go-karts are exempt from  
6 these standards.

7 These vehicles are exempt and reporting should not  
8 be required. This reporting would provide no emissions  
9 benefit, but would cause manufacturers and the ARB staff,  
10 and we suspect DMV, additional workload. And we request  
11 that that proposal be deleted.

12 With regard to the cost-effectiveness of the  
13 proposal, staff estimates that the cost of improvements to  
14 meet the proposed standards for off-road motorcycles would  
15 be approximately \$25 per engine. We find that this is  
16 fairly close for small engines. However, we estimate an  
17 increase of \$150 at retail for larger engines, which will  
18 need air injection, which they do not have now.

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

23 Also, the number of days used per year and the  
24 mileage accumulated will decrease year by year as it does  
25 with other classes of vehicles. So, we find that it is not

1 really reasonable to simply multiply the numbers as is done  
2 in the staff report.

3           These factors result in some decrease in the cost-  
4 effectiveness of the proposal, and this would be offset to  
5 some degree by the changes recommended above. And the ones  
6 that I was specifically referring to there are standards to  
7 be specified for the J-1088 test procedure, single-emissions  
8 test for certification purposes, exemption for 50ccs and  
9 less displacement motorcycles, extension of leadtime for the  
10 90cc motorcycles, VIN identification for competition only  
11 motorcycles, and deletion of the reporting requirement.

12           Thank you for your attention. I'd be pleased to  
13 try and answer any questions.

14           CHAIRWOMAN SCHAFFER: Thank you, Mr. Gill. Are  
15 there any questions from Board members for the witness?

16           Dr. Wortman.

17           DR. WORTMAN: Indeed, several. As far as the fan  
18 not being aligned correctly with the ATV, you could use a  
19 deflector. You could put a crate to deflect the flow. It  
20 would have the same effect. So, that's not really a very  
21 big objection.

22           MR. GILL: I don't know that, sir. I'm not a  
23 testing expert. But that is one of the reasons set forth.  
24 Also, that the loading of a single tire, where the vehicle  
25 was intended to drive two, will cause some torque reaction

1 which will lift that tire and cause it to slip. Those two  
2 things are cited by our test engineers. I don't have any  
3 better information.

4 DR. WORTMAN: How much would you have to lift the  
5 wheel? I think it's so little, that the angle you will  
6 impose on the tire driving the dynamometer is negligible.  
7 Tires do not respond to a few degree tilt.

8 Anyway, your proposal for 300 gram per horsepower  
9 hour CO, Mr. Cross and I just went through an exercise where  
10 we agreed that the staff proposal of around 100 is roughly  
11 where we are at present. Why should we go to anything  
12 higher?

13 We agree on those numbers, right? We agree.

14 MR. CROSS: Yes.

15 DR. WORTMAN: Fine. So, that I don't think is  
16 reasonable.

17 On your small vehicles, you mentioned that a four-  
18 stroke engine will have a higher CG than a two-stroke. What  
19 is the weight of machines you're talking about? Roughly.

20 MR. GILL: 200 pounds.

21 DR. WORTMAN: And the rider is about 120.

22 MR. GILL: Maybe.

23 DR. WORTMAN: So, the CG is dominated by the CG of  
24 the rider, not the engine. So, that's a negligible effect,  
25 right?

1 MR. GILL: The standards I quoted are the  
2 standards for the ULG engines, the utility lawn and garden  
3 engines.

4 DR. WORTMAN: But the vehicle that you mentioned,  
5 that the CG will go up if you go to a four-stroke engine,  
6 agreed. You probably have to go to overhead valves and it  
7 will go up.

8 But the CG is dominated by the CG of the rider.  
9 So, this is a negligible effect.

10 Now, the most interesting --

11 MR. GILL: I don't have the expertise to argue  
12 that, sir, but --

13 DR. WORTMAN: Trust me.

14 MR. GILL: -- you know, when they test them, they  
15 do -- when the experts test them for magazines, they cite  
16 such matters -- wheel sizes, and engine relations, and  
17 centers of gravity.

18 DR. WORTMAN: Trust me. As part of engineering,  
19 they teach you how to multiply masses and moment arms, and  
20 it all comes out.

21 Now, on your vehicles, 91 to 169cc, you quote a  
22 life of 1600 kilometers, page 3.

23 MR. GILL: Yes, sir.

24 DR. WORTMAN: How much is a vehicle like that?  
25 Roughly.

1 MR. GILL: Sir, this is not intended to be the  
2 life of the vehicle. This is the warranted life of its  
3 emissions performance.

4 DR. WORTMAN: Okay. So, the engine will not  
5 deteriorate for 1600 kilometers, or not significantly.

6 MR. GILL: We believe that we could warrant its  
7 emissions to comply with the standard for that period, but  
8 not longer than that.

9 DR. WORTMAN: What is the cost of such a vehicle?  
10 Approximately.

11 MR. GILL: I would venture two or three thousand  
12 dollars.

13 DR. WORTMAN: You mean \$2.00 per kilometer before  
14 deterioration sets in?

15 MR. GILL: Well, of course, it's deteriorating.  
16 They use it very hard.

17 DR. WORTMAN: That's another point. I'm coming to  
18 that. It seems to me that people who are willing to pay  
19 \$2.00 per kilometer for useful life of an engine or life in  
20 terms of good performance do not care about cost.

21 MR. GILL: No, sir. That's not what --

22 DR. WORTMAN: This makes my Pantera look like a  
23 very reasonable vehicle.

24 MR. GILL: It is a reasonable vehicle.

25 DR. WORTMAN: It is? I'll show you some bills and

1 we will discuss that. I don't think so.

2 MR. GILL: I'm not saying that the vehicles will  
3 be unusable or will perform poorly. Only that we feel that  
4 we cannot guarantee its emissions performance for the kinds  
5 of periods that the staff is proposing, and that this seems  
6 to be reasonable to us. Anyway, considering the usage of  
7 these vehicles, which we have not considered up to now, as  
8 related to compliance with exhaust emission standards, we  
9 have no basis -- you have no basis. This is our best guess  
10 as to how long we could guarantee exhaust emissions  
11 performance.

12 DR. WORTMAN: You see, this reinforces my  
13 argument, which I tried on Mr. Cross earlier, that the very  
14 easy motorcycle test, road-going motorcycle test for these  
15 vehicles is meaningless. They should be given a stiffer  
16 test, because they're misused all the time, obviously. No?  
17 No. Okay.

18 CHAIRWOMAN SCHAFFER: Thank you, Dr. Wortman. Are  
19 there any other questions from Board members?

20 Yes, Mr. Lagarias.

21 MR. LAGARIAS: Mr. Gill, you say -- you're  
22 differentiating between the useful life and the actual life  
23 of a vehicle. How long would you say the actual life would  
24 be?

25 MR. GILL: I believe that the registration data

1 shows that 50 percent of the vehicles are still registered  
2 for use at five years.

3 MR. CROSS: That's correct. We have the table in  
4 front of us.

5 MR. LAGARIAS: Then, that would mean, from your  
6 data, that for two of those five years, the vehicles you  
7 would produce would meet the emission standards we are  
8 proposing, and that for three of those five years we have no  
9 record, other than you'd indicate they won't be meeting the  
10 emission standards.

11 That's the assessment one could make. Is the  
12 deterioration that fast in the emission performance that you  
13 can't meet the standards beyond two years?

14 MR. GILL: We don't know that for certain. We  
15 just don't have the experience. We have experience with on-  
16 road motorcycles, and they perform well. We're being  
17 required now to guarantee, to warrant the performance of  
18 these vehicles under penalty of recall.

19 MR. LAGARIAS: Are you aware that for motor  
20 vehicles the warranty we require is 100,000 miles.

21 MR. GILL: I know that very well. Yes, sir. And  
22 the building of those vehicles, as you know, has become  
23 very, very technologically enhanced. And these are not as  
24 technologically advanced as those.

25 MR. LAGARIAS: I'm aware of that. But if it has a



1 200-hour life at three hours a day -- a 200-hour useful  
2 life at three hours a day, driving it for 300 -- three hours  
3 a day, that means 33 days a year is what you would expect  
4 the vehicle to be used?

5 MR. GILL: No, sir. Really, all I mean is that if  
6 an emissions test were performed under either the FTP or the  
7 SAE J-1088 procedure, that vehicle would have to comply with  
8 the emission standard whether or not it had been maintained  
9 or however hard it had been driven. That is the warranted  
10 period.

11 So, that's what we're concerned about.

12 MR. LAGARIAS: I'm aware of that. But you're  
13 indicating that it applies over two years or 4,000  
14 kilometers, or 200 hours. Well, if it's for two years at  
15 200 hours, that would be 100 hours a year. And I'm trying  
16 to translate that into how many days a year the other data  
17 we heard would come out from this figure. And it looks like  
18 it's about 33 days a year that one would anticipate,  
19 assuming one drove for 200 hours.

20 MR. GILL: I have a feeling that you're  
21 misunderstanding, sir, that the vehicle won't fall apart in  
22 that time.

23 MR. LAGARIAS: I'm quite aware. I understand that  
24 we're not talking about the life of the vehicle, but the  
25 useful life of the emission equipment.

1 MR. GILL: Yes, sir, and the potential lack of  
2 maintenance, and also the conditions and the modes of use to  
3 which these kind of vehicles are subjected is so different  
4 than even Panteras. We can't reliably say today that it  
5 will be able to perform for the kind of periods that are  
6 proposed. That's all.

7 MR. LAGARIAS: Are you satisfied with the changes  
8 that the staff has recommended for the VIN definition?

9 MR. GILL: Yes, sir.

10 MR. LAGARIAS: And you don't like the idea of  
11 reporting sales of competition vehicles?

12 MR. GILL: No, sir.

13 MR. LAGARIAS: Would you be willing too volunteer  
14 that information so that we can have an assessment of how  
15 well the VIN performance data are tracking?

16 MR. GILL: Yes, I think we could do that. Yes.

17 MR. LAGARIAS: Thank you.

18 MR. GILL: Totally as an alternative to reporting.

19 MR. LAGARIAS: Thank you.

20 CHAIRWOMAN SCHAFFER: Mayor Hilligoss.

21 MAYOR HILLIGOSS: I was just wanting to ask the  
22 staff to explain why it says here you're proposing a  
23 requirement for each vehicle or engine to be tested twice  
24 for certification. Why?

25 MR. CROSS: That was the same issue that was

1 discussed earlier. It was basically to give us some  
2 reasonable confidence of the data. In other words,  
3 replicate tests are very often used to make sure that the  
4 first test was good, if you will.

5           MAYOR HILLIGOSS: That's the one for the  
6 motorcycle that you were talking about.

7           MR. CROSS: Yeah.

8           MAYOR HILLIGOSS: Okay.

9           CHAIRWOMAN SCHAFER: Yes. Ms. Edgerton.

10           MS. EDGERTON: Referring to your numbers about the  
11 numbers of motorcycles and ATVs sold in California, can you  
12 tell me how many of them were produced and sold by Honda?

13           MR. GILL: I'm sorry, I can't. I'm not sure what  
14 our market share is in California.

15           MS. EDGERTON: So, it's difficult for us to  
16 understand to what extent you might be affected.

17           MR. GILL: We will be very largely affected.

18           MS. EDGERTON: Only if you sell a large number of  
19 motorcycles and ATVs in California, right?

20           MR. GILL: We do.

21           MS. EDGERTON: But you don't know --

22           MR. GILL: Perhaps 30 percent or more.

23           MS. EDGERTON: So, you think maybe it's 300  
24 motorcycles and 300 ATVs with a markup of what?

25           MR. GILL: I'm sorry?

1 MS. EDGERTON: I'm just curious as to, you know,  
2 if it's 300 motorcycles and 300 ATVs, if you have a third of  
3 each of those markets, what do they sell for? \$3,000 each.

4 MR. GILL: Well, the price varies considerably  
5 from the smaller ones to the largest ones, which are  
6 probably 600cc, which may be like -- I don't know how much  
7 those cost. Four, five thousand dollars, six thousand  
8 dollars.

9 MS. EDGERTON: Well, I'm talking about the ones  
10 between the 50cc and the 90cc, which are the ones you're  
11 asking for an exemption.

12 MR. GILL: That's right. Yes, yeah.

13 MS. EDGERTON: So, I'm sorry. I'm sure I didn't--

14 MR. GILL: The numbers are not large in that area.  
15 It's just that, if a manufacturer does not have an offering  
16 in that area, then, whichever I buy first, as a new  
17 customer, I might stay with that. But if I bought a Honda  
18 first, then the possibility exists that I would stay with a  
19 Honda.

20 If there are no Hondas available in the  
21 classification that I want to buy, then I'll buy somebody  
22 else's. And the likelihood is that brand -- anyway, you  
23 would continue to buy the same manufacturer's product.

24 MS. EDGERTON: So, if I understand you, there's  
25 really not very much money involved. You're not very

1 affected financially in that respect.

2 MR. GILL: Not by the specific --

3 (Thereupon, both Mr. Gill and Ms. Edgerton  
4 spoke simultaneously, which was unable to be  
5 captured by the reporter.)

6 MS. EDGERTON: Not by the specific -- thank you.

7 MR. GILL: Not by the small number of vehicles,  
8 but by our exposure in that area of the market and by --  
9 there's a word I can't think of --

10 MR. KENNY: Customer loyalty.

11 MR. GILL: Loyalty, customer loyalty, thank you.  
12 Customer loyalty, that's established very early, I think.  
13 Honda knows that very well.

14 MS. EDGERTON: I guess I had one other question.  
15 In reading the material and reviewing this whole issue, it  
16 was -- is my understanding correct that most of the market,  
17 most of the riders that you sell to in this category are  
18 young people, teenagers?

19 MR. GILL: The people who use the motorcycles are  
20 mainly novice riders.

21 MS. EDGERTON: And when you say young people, what  
22 age do you mean?

23 MR. GILL: Teenagers.

24 MS. EDGERTON: Thank you.

25 MR. GILL: I'm sorry. I don't know further.

1 MS. EDGERTON: Thank you.

2 CHAIRWOMAN SCHAFER: Are there any other questions  
3 for the witness from the Board members? Thank you very  
4 much, Mr. Gill, for your presentation this afternoon.

5 MR. GILL: Thank you.

6 DR. WORTMAN: I have some advice for Mr. Kenny, to  
7 put into the record the calculations that I showed to Mr.  
8 Cross on carbon monoxide levels.

9 CHAIRWOMAN SCHAFER: Very good. That will be  
10 done. Thank you.

11 The last witness who has requested an opportunity  
12 to appear this afternoon is Mr. Ken Bush of Suzuki. Is he  
13 still here?

14 Good afternoon, Mr. Bush, and welcome to ARB.

15 MR. BUSH: Good afternoon, Chairwoman Schafer and  
16 members of the Board. My name is Ken Bush. I'm the  
17 Regulations Manager for American Suzuki Motor Corporation.

18 First of all, I'd like to thank the ARB staff for  
19 their willingness to work with manufacturers to develop the  
20 proposed regulations for off-road motorcycles and ATVs.

21 Suzuki supports the MIC comments which were  
22 presented earlier. And we'd like to focus our comments on  
23 one issue that's of particular concern to us, and that is  
24 the issue of an exemption for models less than 50cc and a  
25 compliance exemption for 50 to 90cc models.

1 With regard to the less than 50cc models, I think  
2 we're talking only about off-road motorcycles here. I'm not  
3 aware of any manufacturer that produces a less than 50cc  
4 ATV.

5 It's my understanding that Suzuki, Yamaha, and  
6 Honda each have one model in this category. They're all  
7 equipped with two-stroke engines.

8 In the case of Suzuki, our model in this category  
9 is the JR-50. It's a small, two-stroke, off-road  
10 motorcycle. It has a weight of about 80 pounds. It has a  
11 maximum rider weight of 65 pounds. It's relatively  
12 inexpensive, and it's designed specifically as a training  
13 machine for children.

14 It has a single-speed transmission, automatic  
15 clutch, and it's delivered from the dealer with a power  
16 reduction plate in the exhaust system to limit maximum  
17 speed.

18 I think there are some fundamental differences  
19 between these less than 50cc models and larger off-road  
20 motorcycles and ATVs. First of all, the number of sales is  
21 very small. In the case of Suzuki, we sold only slightly  
22 more than 100 JR-50s statewide last year.

23 Usage is also quite different for these models.  
24 As I mentioned previously, with the power reduction plate  
25 installed, maximum speed's limited to only 15 miles per

1 hour.

2           As the young rider gains some skill and  
3 experience, the plate can be removed, and then the maximum  
4 speed becomes approximately 30 miles per hour. This speed  
5 is still less than some of the speeds that are achieved  
6 during the test cycle that we would have to use for  
7 emissions testing.

8           The point is that these models are typically  
9 operated at much slower speeds than other off-road  
10 motorcycles. Also, the number of hours of operation or  
11 miles of operation are much less. We believe that allowing  
12 an exemption for a small number of these small off-road  
13 motorcycles would have virtually no effect on air quality in  
14 California, particularly in the nonattainment areas.

15           Earlier, the staff showed a slide that attempted  
16 to assess the impact of an exemption for under 50cc models.  
17 I think that their estimate was grossly overstated. I don't  
18 know what kind of assumptions they made, but if they made  
19 the same assumptions they made for other off-road models, I  
20 think -- as I said, the usage is different. And I think  
21 2400 miles per year for these small vehicles is a little bit  
22 out of line.

23           If you decide today to adopt emission requirements  
24 for these less than 50cc motorcycles, it would mean that  
25 manufacturers would have to do research and development for



1 new four-stroke engines that aren't currently being used in  
2 that size. We'd have to do research and development for new  
3 frames to put the engines in.

4           There's testing involved. We would have to  
5 purchase new tooling, et cetera. Because of the high cost  
6 of doing all this and the low number of sales of these small  
7 machines. adoption of emission requirements would likely  
8 force Suzuki to just simply drop the JR-50 from the  
9 California market. We don't want to do that. We think it  
10 would be unfortunate if ARB regulations significantly  
11 affected the availability and affordability of these  
12 training machines for kids.

13           With regard to the compliance extension for 50 to  
14 90cc models, we have many of the same concerns that we have  
15 for the 50cc model. Some of the others have talked about  
16 some of their concerns.

17           In spite of our concerns, we're willing to begin  
18 development of new four-stroke 50 to 90cc models. But we,  
19 too, need additional leadtime, and we request that you grant  
20 an additional three years.

21           That concludes my comments. If you have any  
22 questions, I'd be happy to answer them.

23           CHAIRWOMAN SCHAFER: Thank you very much, Mr.  
24 Bush. Are there any questions from members of the Board to  
25 the witness?

1 Thank you. I guess I'd like to just follow up on  
2 the question that Mr. Lagarias asked Mr. Gill. If we did  
3 not require the reporting requirement associated with  
4 competition vehicles, would Suzuki be willing to provide  
5 that to us for purposes of -- you know, voluntarily for  
6 purposes of assessing our regulation?

7 MR. BUSH: We would.

8 CHAIRWOMAN SCHAFER: Thank you very much.

9 I think, with the advice of the Board Secretary,  
10 that's the last witness on the regulation today. I'd like  
11 to thank you, Mr. Bush, and others who have chosen to  
12 participate.

13 I'd like to now turn to the staff and offer them  
14 the opportunity to comment on the presentations that have  
15 been made here this morning, to summarize any written  
16 comments that we may have received that were not already  
17 aired by individuals that were unable to testify at the  
18 hearing, and also invite the staff to make further comments,  
19 if they have them, on the presentations that were made here  
20 this afternoon. Mr. Boyd?

21 MR. BOYD: I think Ms. Lourenco will enter into  
22 the record additional written comments, and I'll defer to  
23 her for that.

24 MS. LOURENCO: Okay. There were three written  
25 comments presented to us today that weren't verbalized. The

1 first one is a memorandum dated January 11th, '94, from  
2 Carole Bedwell, Chief of the Program and Policy  
3 Administration from the Department of Motor Vehicles.

4 Basically, she outlines the procedures for off-  
5 road vehicles to be registered in the State, and says that  
6 changes in line with our proposal could be made, and the  
7 impact on DMV would be minimal. And, also, that she  
8 certainly offers her staff time to work with us to get the  
9 programming and everything that needs to be done completed  
10 before the implementation of our regulations.

11 The second letter is from the Manufacturers of  
12 Emission Controls Association. And the association fully  
13 supports the staff's proposal as well as the conclusions  
14 that we have made regarding catalyst technology.

15 The last item is a letter from Fred Rice. He is a  
16 resident of Catalina Island down in Southern California.  
17 His letter -- he voiced concerns about the possibility of  
18 converting the gasoline golf carts that he owns and uses to  
19 get to and from town, having those converted over to  
20 electric.

21 What I did, I had a phone conversation with him a  
22 week or so ago and assured him that the rule applied only to  
23 golf carts as produced of January 1, '94. And so, they  
24 certainly wouldn't affect the one that he has, and that rule  
25 is directed mainly at the golf carts that are used on golf

1 courses. So, again, he would not be affected. And he  
2 seemed very pleased by my response.

3 So, those are the three that I have.

4 CHAIRWOMAN SCHAFFER: Okay. Thank you, Ms.  
5 Lourenco.

6 Mr. Boyd, I'd like to invite the staff now to make  
7 any further comments that would help clarify these issues or  
8 resolve remaining questions that have been brought up.

9 MR. BOYD: Thank you. I'd just like to make one  
10 or two comments. I would observe and I would say, granted,  
11 there are some disagreements on the data. But, nonetheless,  
12 I would like to point out the cost-effectiveness of this  
13 strategy.

14 It's so positive and it's so dramatic that,  
15 frankly, if we halved the values and we gave everyone the  
16 benefit of the doubt in doing so, this is still one of the  
17 most cost-effective strategies possible. I mean the cost  
18 per ton of reducing these pollutants pales in significance  
19 to the cost per ton that we've had to deal with in other  
20 motor vehicle strategies, and certainly that the districts  
21 have to deal with in dealing with stationary sources.

22 So, I'd just like you to keep that in mind as we  
23 think about some of the arguments that have been made about  
24 exempting or accepting some of these categories, or that  
25 this is an insignificant amount of pollution. This is a

1 fairly significant amount of pollution in the context of the  
2 small amounts that we historically have been forced at the  
3 local and State level to pursue just to try to come to grips  
4 with California's problem.

5 The other thing is just to remind you again of the  
6 chart that did go up on the Board a while ago of the  
7 emissions -- the consequences of the various cc categories,  
8 and the fact that those are fairly significant.

9 I would venture to say that the number of off-road  
10 vehicle sin these smaller categories is significantly more  
11 than the number of on-road vehicles. These are fairly small  
12 sizes, and I don't think you'd find much of that on-road.  
13 But off-road, they're popular, reasonably popular sizes, and  
14 I'm sure, thus, that's why there is a significant emissions  
15 cost or figure attributed to them. And arguments about  
16 equity and what have you, to me, paled a little bit when you  
17 realize that this off-road application is so much more  
18 significant than on-road.

19 With that, I would ask if the staff wanted to  
20 comment on anything else, or whether that concludes our  
21 presentation.

22 CHAIRWOMAN SCHAFFER: I think we have an additional  
23 from Supervisor Wieder.

24 SUPERVISOR WIEDER: Yes. Mr. Boyd, are you saying  
25 that the requests for exemption don't justify the means,

1 that the overall picture is so beneficial that exemptions  
2 are not warranted?

3 MR. BOYD: I'm saying to please keep that in mind  
4 as you debate the requests that have been made to you; that  
5 the emissions consequences I feel are reasonably  
6 significant, and I just would want to make that point.

7 We didn't frivolously recommend control of these  
8 small engine sizes. We did it, as Mr. Cross said much  
9 earlier in the day, in consideration of the fairly  
10 significant amount of emissions that we feel are  
11 attributable to these categories.

12 CHAIRWOMAN SCHAFFER: Any other questions from  
13 Board members? Ms. Edgerton.

14 (Thereupon, a short discussion was held off the  
15 record.)

16 Ms. Edgerton: Thank you for providing that  
17 information.

18 The other point that I'm mindful of is that the  
19 California Clean Air Act specifically requires the Air  
20 Resources Board to consider measures to remove and reduce  
21 emissions from off-highway vehicles and motorcycles, because  
22 of their recognition of the contribution to the overall air  
23 pollution problem.

24 And I think it's important for all of us to bear  
25 that in mind as we discuss the relative effect of any of

1 these sources of emissions.

2 Thank you.

3 CHAIRWOMAN SCHAFFER: I have just a question for  
4 staff. I want to clarify this emission benefit issue here  
5 with respect to the exemption and extension that have been  
6 requested here this morning.

7 If I understand the chart that was put up before,  
8 Mr. Cross, the exemption for 50cc engines and below is  
9 associated with a 10 percent, roughly, loss of benefit?

10 MR. CROSS: Right. Three tons per day.

11 CHAIRWOMAN SCHAFFER: Three tons per day.

12 MR. CROSS: Right.

13 CHAIRWOMAN SCHAFFER: Okay. And --

14 MR. CROSS: And if you raise the cut to 90cc, it  
15 jumps up to five tons per day.

16 CHAIRWOMAN SCHAFFER: But that's no longer the gist  
17 of the request that we're hearing this morning. They are  
18 merely asking for an extension --

19 MR. CROSS: Right. Right.

20 CHAIRWOMAN SCHAFFER: -- for that. And could you  
21 characterize the emission benefit degradation, if you'll  
22 pardon the word.

23 MR. CROSS: If there's an extension?

24 CHAIRWOMAN SCHAFFER: If you extend it.

25 MR. CROSS: Yeah, I probably didn't state it

1 clearly enough. Essentially, the extension for the couple  
2 of years that they don't comply pushes off the date where  
3 you attain the full benefit of the staff proposal.

4 So, what I'm saying is, if, for example, the full  
5 fleet -- hypothetically, if the fleet fully turned over and  
6 produced the full benefit in 2010 under the staff proposal,  
7 and you exempted these 50 to 90cc vehicles for three years,  
8 then you'd be giving up that benefit till 2013, if you will.

9 In other words, the difference between 50 and 90,  
10 which is a couple tons per day.

11 CHAIRWOMAN SCHAFFER: For that period of time.

12 MR. CROSS: Right. Then you would get it.

13 MR. CACKETTE: Another way of looking at it is for  
14 however many years that you extent the exemption, you will  
15 be getting five tons per day more pollution, if it's at the  
16 90cc level, for those, let's say, three years, which is what  
17 the industry -- and since the vehicles in the smaller end  
18 maybe have a five-year lifetime, that means that, then,  
19 they'll be -- the next year, we'll have four tons more, and  
20 the next year we'll have three tons more, and the next year  
21 we'll have two tons more. And, eventually, five years  
22 later, there'll be no effect. So, that's kind of, I think,  
23 the simplest way of characterizing it.

24 CHAIRWOMAN SCHAFFER: And other implication I have  
25 heard from at least one witness here -- and it may be true



1 of others -- is that if we don't exempt the 50cc, in effect,  
2 the sales in California will dry up. And, ironically, I  
3 guess in a way, you'd get more benefit. Because it looks as  
4 though the difference between the 50 and the 50 to the 90 is  
5 only two tons a day. I'm just having a hard time seeing how  
6 we can have so much benefit with so few vehicles being sold.

7 MR. CACKETTE: Well, I think the reason for that  
8 is to remember that the engine source that we're talking  
9 about on the existing vehicles is a two-stroke, which puts  
10 out about 20 times as much hydrocarbons per mile as a  
11 comparable four-stroke. And the strategy is to switch from  
12 two-stroke to four-stroke.

13 So, even though the numbers may be small, like Ms.  
14 Edgerton said, it's a thousand sales of one manufacturer,  
15 500 sales. They have a hugely disproportionate impact when  
16 they have two-stroke engines in them. And they have very  
17 relatively minor impact when they have four-strokes. So,  
18 you get a big benefit even from the small number of  
19 vehicles.

20 Or put the other way, you have a fairly large  
21 environmental impact from a small number of vehicles if they  
22 are permanently exempted.

23 I think the distinction here in terms of benefits  
24 is extension versus permanent exemption. The one, two,  
25 three-year type extensions have dramatically less impact,

1 because everything ultimately gets cleaned up, compared to  
2 leaving the category like under 50 uncontrolled forever.

3 MR. LAGARIAS: But that's incremental. Everytime  
4 a year goes by, let's say you replace 10 percent of the  
5 population; the next year, another 10 percent. So, instead  
6 of from the year 2010, you're not going to no control at  
7 all, but you've got 85 percent of the control that you'd get  
8 in the year 2013 as each five percent of the population  
9 turns over.

10 MR. CACKETTE: But if a permanent exemption, the  
11 50cc and below, for example, loses three tons, you lose  
12 three tons forever.

13 MR. LAGARIAS: You don't --

14 MR. CACKETTE: That's 10 percent of the benefit.

15 MR. LAGARIAS: You don't lose it. You just  
16 haven't got it.

17 MR. CACKETTE: Yeah, relative to the staff's  
18 proposal, that's true. You end up with a regulation that's  
19 90 percent as effective as what was proposed.

20 MR. LAGARIAS: Madam Chair, I'd like to ask Mr.  
21 Cross, when we were having the hearings on utility engines,  
22 we heard a lot of discussion on the development or  
23 improvement on two-cycle engines. They were looking at  
24 carburetors for the first time and design.

25 Wasn't there some evidence that the emissions from

1 two-cycle engines were going down?

2 MR. CROSS: Yes. There were two-cycle engine  
3 standards established at the utility hearings. But they  
4 were established at a somewhat higher level, if you'll  
5 recall, for hand-held equipment.

6 MR. LAGARIAS: But the point was that the two-  
7 cycle emission technology has been improving over the years  
8 as far as emissions are going. It's never going to meet the  
9 ultimate in performance.

10 MR. CROSS: They are controllable, yes. There are  
11 things you can do to two-cycle engines to bring their  
12 emissions down. And, hypothetically, I think you could  
13 bring a two-cycle engine down to comply with the standards  
14 that the staff has proposed. We just don't anticipate that  
15 the manufacturers will do it.

16 MR. LAGARIAS: Well, the figure of 37 tons per  
17 day, was that based on two-cycle engine technology of today?

18 MR. CROSS: Yes.

19 MR. LAGARIAS: Then it doesn't -- in the year  
20 2010, assuming that we did not outlaw two-cycle engines --

21 MR. CROSS: We're not proposing to outlaw two-  
22 cycle engines.

23 MR. LAGARIAS: I know that. Assuming that no  
24 technology improvement -- that technology improvement would  
25 occur for two-cycle engines as well --

1           MR. CROSS: We would get the same result, because  
2 the two-cycle engines -- the same result in terms of  
3 emissions benefit as the staff proposal, because the two-  
4 cycle engines used in noncompetition applications would have  
5 to meet the same standards as the four-cycle engines. So,  
6 you'd get the same in-use emissions.

7           It's just the distance they have to go in terms of  
8 technological development to bring an engine that's way up  
9 here down to our standards is much further --

10          MR. LAGARIAS: Forget about the standards. Forget  
11 about the standards. We're talking about reductions in  
12 technology from two-cycle engines. Tom?

13          MR. CACKETTE: Well, I think that in these low-  
14 cost motorcycles, that there's not any incentive or reason  
15 for these engines to evolve from an environmental standpoint  
16 towards a lower emission level.

17          In other words, what's happening in the utility  
18 engines is, because of the standards, the utility lawn and  
19 garden standards, manufacturers are spending money on  
20 lawnmowers and weed whips, and they're putting better  
21 carburetion and they're doing things to change the designs  
22 that will reduce emissions.

23          But without the standard, that wouldn't happen.  
24 And there's nothing happening evolutionary in the technology  
25 that would automatically, in the absence of regulations,

1 cause the two-strokes -- small two-stroke engines to get a  
2 whole bunch cleaner.

3 So, the estimate that we provide in 2010 we think  
4 is true. Basically, the engine in the 2000s, in a 50 or  
5 90cc engine is not going to be a whole bunch different  
6 emissionwise than one today.

7 They're not going from carburetors to fuel  
8 injection, for example, because those kind of evolutions  
9 that we're seeing in cars aren't happening in these  
10 motorcycles.

11 MR. LAGARIAS: But the evolution in two-cycle  
12 engines certainly could anticipate improvement in emission  
13 reductions regardless of whether or not there are standards  
14 or not.

15 MR. CACKETTE: We don't project that that will  
16 happen, and we don't see it.

17 MR. LAGARIAS: I know you don't project it, and  
18 you don't foresee it. What I'm trying to say is that  
19 without -- if you anticipated technology improvements in  
20 two-cycle engines, the forecasts of what we would see in  
21 2010 would be substantially lower than the 37 tons per day  
22 you're proposing now.

23 MR. CACKETTE: If one projected that, yes. But  
24 when we look at what's going on with two-cycle engines, the  
25 kind of things that you see in two-cycle engines are things

1 like they've put a catalyst on it, or they've evolved to  
2 Wurbel (phonetic) technology, stuff that's -- fuel  
3 injection, for example, which is a real big step. And on  
4 these low-cost small engines, it's unlikely that that will  
5 evolve due to market forces.

6 MR. LAGARIAS: You have no faith in the technology  
7 of the year 2000?

8 MR. CACKETTE: I don't think it's changed much in  
9 the last 20 years.

10 MR. CROSS: The pressure on the two-cycle engine  
11 is towards performance anyway. That's why they're used  
12 primarily in competition applications. And the things that  
13 one would do to, quote, "clean up" the two-cycle engine  
14 generally are things that are going to sacrifice some  
15 performance.

16 So, in an unregulated environment, what you're  
17 going to see is the two-cycle engine continuing to evolve as  
18 a lightweight, high-performance package, which may or may  
19 not improve its emissions absent regulations.

20 And that's why the staff assumed no change.

21 MR. LAGARIAS: You're focusing on the high-  
22 performance two-cycle engine and not the greater application  
23 of the two-cycle engine.

24 MR. CROSS: But in the motorcycle category, that's  
25 precisely where they're ending up.

1 MR. LAGARIAS: One last point. Tell me about this  
2 under 50cc field. What's that in? How many cycles is that?

3 MR. CROSS: That's predominantly two cycle. And  
4 that's a cost issue. Can I -- also, when we were talking  
5 about the sales of the under 50cc versus under 90cc, I think  
6 one witness led us to believe that -- I think it cited a  
7 hundred unit sales statewide. And the number that we used  
8 for our estimate was about 1200 units, which was provided by  
9 the Industry Council.

10 And for the 90cc break, it was around 1900 units.  
11 So, actually, in terms of units used in our estimate, which  
12 we got from the industry, it was 1900 for 90cc break and  
13 around 1200 for 50cc break.

14 MR. LAGARIAS: Thank you.

15 CHAIRWOMAN SCHAFFER: Okay. Supervisor Riordan.

16 SUPERVISOR RIORDAN: Yes. Madam Chairman, I have,  
17 I guess, a lot of support for the staff recommendation. And  
18 I'm not sure that the Board has finished its discussion.  
19 But I have long had an interest in looking at this off-road  
20 vehicle issue, because I suspect I represent and serve an  
21 area that has many, many of them. And it has always been my  
22 concern.

23 So, while I understand some of the efforts to make  
24 some amendments and changes by those who testified, I also  
25 believe that what is proposed is a very important piece of a

1 larger effort to establish clean air in California.

2 And I would, if there is no further discussion, be  
3 happy to move --

4 MR. LAGARIAS: We haven't closed the meeting yet.

5 SUPERVISOR RIORDAN: Right. So --

6 CHAIRWOMAN SCHAFER: Are there any other questions  
7 or discussion from any member of the Board? Yes, Mayor  
8 Hilligoss.

9 MAYOR HILLIGOSS: I was just going to say that if  
10 there would be any way for us to give them another two years  
11 or so, because of the change just this year, just this fall.

12 They thought that they would be exempt under 90cc  
13 until what, March or April?

14 And, then, finally in September -- so, I was  
15 wondering if there is support for giving them -- maybe not  
16 three years, but some extension.

17 CHAIRWOMAN SCHAFER: We'll have a motion on this,  
18 and we can proceed based on the motion. But I want to make  
19 sure we have all the discussion over with so that I can  
20 close the record, and then we can proceed the motion.

21 MS. EDGERTON: I'd just like to make one comment,  
22 and that is that our obligation is to try to achieve an  
23 overall five percent per year reduction in carbon monoxide  
24 and ozone precursor emissions. And so, if we postpone this,  
25 then we will not have on an annual basis these contributions



1 in emissions reductions for the five percent per year that  
2 the Legislature has asked us to achieve.

3 So, that seems to be one of the effects. And if I  
4 understand the staff correctly, that seems to be a very  
5 concrete effect of extending the exemption beyond the three  
6 years they already -- that the staff has proposed for a  
7 leadtime to six years.

8 CHAIRWOMAN SCHAFFER: Could I get staff comment on  
9 that observation?

10 I want to make sure I understand --

11 MS. EDGERTON: Is that correct?

12 CHAIRWOMAN SCHAFFER: I want to make sure I  
13 understand how this regulation fits in with that  
14 requirement.

15 MR. BOYD: It's just another one of the stepping  
16 stones along the path. And I think the point is well made.  
17 There's no question that anything we lose -- and I'm not  
18 arguing one side or the other. This is just a fact.  
19 Anything we lose here, then, we will have to, you know, move  
20 to Column B and take it out somewhere else. To the extent  
21 that we forego emission reductions for any given strategy,  
22 we have to add it to the menu of reductions that we have to  
23 get -- that either we or local districts have to get  
24 somewhere else.

25 So, it's just a statement of -- true statement of

1 fact.

2 CHAIRWOMAN SCHAFFER: I guess I'm asking for some  
3 indication of significance.

4 MR. BOYD: Well, it's not, as indicated by a  
5 postponement, it's not a make or break situation. It's a  
6 delay over a series of years of the magnitude that Mr. Cross  
7 indicated. But it's in the context of the fact that we've  
8 already had to report to the Legislature -- I mean, this  
9 Board has already had to report to the Legislature that we  
10 didn't make it; that we did fall short of the five percent.

11 And we forecast falling short unless we make some  
12 dramatic improvements along the line.

13 CHAIRWOMAN SCHAFFER: Okay. Thank you.

14 MR. BOYD: So, we are delinquent.

15 CHAIRWOMAN SCHAFFER: Thank you. If that concludes  
16 the comments and questions for the staff, I --

17 MR. BOYD: Excuse me. I thought of one additional  
18 comment. It builds on something that you've already asked a  
19 couple of witnesses.

20 We approached the Industry Council, the Motorcycle  
21 Industry Council, on this question of would they  
22 voluntarily, as an association, provide the sales data  
23 versus the regulatory mandate. And I know not all the  
24 witnesses had a chance to respond to that, but the Industry  
25 Council, if I'm correct -- I asked the staff to talk to

1 them, and they said that, yes, that they would do it  
2 voluntarily.

3 So, I'd just add that to your body of knowledge.

4 CHAIRWOMAN SCHAFER: I understand. And I  
5 understand that's with the caveat of the protection of  
6 confidentiality in the commercial sense with which that's  
7 offered.

8 Okay. I would like to now close the record on  
9 this agenda item. I'd like to also note, however, that the  
10 record will be reopened when the 15-day notice of public  
11 availability is issued.

12 Written or oral comments received after this  
13 hearing date, but not before the 15-day notice is issued,  
14 will not be accepted as part of the official record on this  
15 agenda item. As part of the record on this agenda item --  
16 I'm sorry.

17 When the record is reopened for a 15-day comment  
18 period, the public may submit written comments on the  
19 proposed which will be considered and responded to in the  
20 final statement of reasons for this regulation.

21 At this time, I think it also is an opportunity to  
22 remind the Board members of the policy concerning ex parte  
23 communications. While we may communicate off the record  
24 with outside persons regarding rulemaking, we must disclose  
25 the names of our contacts and the nature of the contents on

1 the record. This requirement applies specifically to  
2 communications which take place after notice of the Board  
3 hearings has been published.

4 If there are any communications which anyone would  
5 like to disclose, now is the time to do so.

6 Hearing none, I'd like to pause for a moment to  
7 give the Board members an opportunity to review the  
8 resolution which has been placed in front of us and is  
9 available for reading.

10 (Thereupon, there was a brief pause in  
11 the proceedings.)

12 CHAIRWOMAN SCHAFFER: The Board has before it  
13 Resolution No. 94-1, which contains the staff  
14 recommendations, which we have reviewed.

15 Do I have a motion and a second to adopt the staff  
16 proposal or an alternate motion, if appropriate?

17 SUPERVISOR RIORDAN: Madam Chair, if I might, I'd  
18 like make a motion to --

19 CHAIRWOMAN SCHAFFER: Supervisor Riordan.

20 SUPERVISOR RIORDAN: -- approve -- I'd like to  
21 move that we approve this Resolution 94-1 that's before us  
22 now.

23 MS. EDGERTON: I'll second it.

24 CHAIRWOMAN SCHAFFER: Is there any discussion?

25 MR. LAGARIAS: Madam Chair?

1 CHAIRWOMAN SCHAFER: It's been seconded by Ms.  
2 Edgerton. Yes, okay, Jack, go ahead. Mr. Lagarias.

3 MR. LAGARIAS: I have some reservations about this  
4 proposal, and I'd like to bring them up.

5 First of all, I'm not certain we're discussing the  
6 right issue. In fact, I think it would have been more  
7 appropriate for this meeting if we had been discussing  
8 mufflers rather than emissions. Because the noise from  
9 mufflers has been more of a problem than the emissions from  
10 these vehicles.

11 SUPERVISOR RIORDAN: Very good point, Mr.  
12 Lagarias.

13 MR. LAGARIAS: Specifically, I'd like to suggest  
14 we consider that we remove the requirement -- that reporting  
15 of the sales be deleted in favor of a voluntary gathering of  
16 information from the competition vehicle manufacturers.

17 I think the discussion of load limits definition  
18 is not appropriate. I think it's covered very well by the  
19 original definition. And I suggest that we delete that load  
20 limits requirement.

21 I'm in agreement that the -- or I suggest that we  
22 extend the compliance date for the more than 90cc -- equal  
23 or less than 90cc engines be extended to '99 to give the  
24 manufacturers -- 1999 -- appropriate time.

25 And I feel that the under 50cc engine is not that

1 big a problem, and I would recommend that we exempt engines  
2 under 50cc, in part because the data we've heard today on  
3 how many vehicles there are, how often they're used, what  
4 mileage they make is quite contradictory. And I'm not  
5 comfortable that the magnitude of this problem is as great  
6 as the staff is presented, nor as small as the industry has  
7 claimed.

8 I think it's somewhere substantially less than  
9 that.

10 And, as for golf carts, I think there are cases  
11 where zero-emission, battery-operated vehicles are not  
12 appropriate. And I would like to see that the golf carts  
13 use -- be required to meet the same engine specifications as  
14 lawn and garden utility Tier One regulations would apply,  
15 since they are essentially the same engines, and for the  
16 same time period.

17 Now, those are my principal concerns.

18 SUPERVISOR WIEDER: Are you amending that?

19 MAYOR HILLIGOSS: I'll second that.

20 MR. LAGARIAS: That's an amendment.

21 CHAIRWOMAN SCHAFFER: Is there any discussion on  
22 the proposal?

23 SUPERVISOR RIORDAN: I think Mr. Lagarias -- I  
24 certainly can understand the voluntary information, and I  
25 should have thought to make that a part of the motion,

1 because that clearly is the better way to resolve the  
2 problem.

3 I think I would want to ask -- on the golf cart  
4 issue, again, we're just extending the time, correct? In a  
5 sense -- no, Mr. Cross?

6 MR. LAGARIAS: No.

7 MAYOR HILLIGOSS: No.

8 SUPERVISOR WIEDER: We're putting them on the same  
9 level as the --

10 MR. LAGARIAS: They're using the same engine  
11 currently as the lawn and garden people, and we've got a  
12 regulation for lawn and garden people, the tractor --  
13 cutting of grass, for example -- has to meet a certain  
14 requirement. And it may be on the same golf course. Why  
15 shouldn't the golf cart have the same requirement?

16 SUPERVISOR RIORDAN: I think what I was asking  
17 was, it's just extending the time to where you can achieve  
18 some of the corrections --

19 MR. CROSS: If the staff -- if we hear Mr.  
20 Lagarias' amendment correctly, he's suggesting that the Tier  
21 One standards be an option, if you will, for certification  
22 of golf cars indefinitely.

23 So, essentially, the electric -- the staff's  
24 proposal is a zero-emission proposal, which would produce an  
25 all-electric fleet in nonattainment areas. And,

1 essentially, the result of the proposed amendment would be,  
2 essentially, the status quo with the gas cars meeting the  
3 utility standards.

4 In other words, the status quo in terms of mix of  
5 gas and electric.

6 SUPERVISOR WIEDER: Except that the reasons would  
7 be very justifiable.

8 MR. CROSS: I'm not addressing the reasons. I'm  
9 just --

10 MR. LAGARIAS: Let me make it quite --

11 SUPERVISOR RIORDAN: No, he's just -- I'm just  
12 asking for the results.

13 MR. CROSS: That's what I heard. And I want to  
14 make sure.

15 MR. LAGARIAS: Let me make it quite clear. I'm  
16 very much in favor of a zero-emission golf cart, and I would  
17 like to see it in every place where it is truly applicable.  
18 And I think the pressures are there. It's a type of  
19 activity that lends itself to a zero-emission application.  
20 But I'm just -- don't want to mandate these things when  
21 there are other ways of getting at that.

22 We've got engines that we're mandating. If  
23 they're going to use those engines, I think they should be  
24 allowed to have that privilege.

25 CHAIRWOMAN SCHAFFER: Could I ask counsel to repeat



1 the modifications to the staff proposal in the order in  
2 which they have been made?

3 MR. KENNY: The original staff proposal, as I  
4 heard it, was adoption of the resolution. The modifications  
5 that were proposed -- excuse me.

6 (Thereupon, Mr. Kenny flipped the switch to  
7 turn on his microphone.)

8 MR. KENNY: The original motion by Supervisor  
9 Riordan and seconded by Ms. Edgerton was adoption of the  
10 resolution, as proposed. There was at least a caveat  
11 provided by Supervisor Riordan, to the extent that there  
12 would be a modification to the original proposal to reflect  
13 the reporting of competition numbers on a voluntary basis as  
14 opposed to a mandatory basis.

15 That particular amendment was not seconded, but --  
16 so, that is an open question at the moment.

17 The proposal made by Mr. Lagarias, as seconded by  
18 Mayor Hilligoss, would have modified the proposal to reflect  
19 that the competition reporting requirement would become  
20 voluntary; that the load limits in the ATV definition would  
21 be deleted; that the less than or equal to 90cc requirement  
22 would be delayed until 1999; that the less than 50cc would  
23 be exempted from regulation; and that with regard to golf  
24 carts, that the staff proposal, as it results in a zero-  
25 emission vehicle for golf carts at a particular time frame,

1 would not be accepted but that, instead, the utility engine  
2 regulation, as it currently exists, would be the basis for  
3 the regulation of golf carts.

4 CHAIRWOMAN SCHAFFER: Okay. I'd like some advice  
5 from counsel on proceeding, because I'd like to try to  
6 divide these questions.

7 MR. KENNY: I think what we have right now are  
8 basically three questions before the Board. We have the  
9 initial motion by Supervisor Riordan that was seconded by  
10 Ms. Edgerton, which is simply an adoption of the proposal  
11 without modifications.

12 So, there is one question pending there.

13 There is a question with regard to that same  
14 motion as modified by Supervisor Riordan, but not seconded  
15 by anyone, with regard to whether or not the competition  
16 reporting should be allowed as an amendment to the original  
17 motion by Supervisor Riordan.

18 And then, thirdly, we have a motion by Mr.  
19 Lagarias, as seconded by Mayor Hilligoss, which provided for  
20 substantial modifications to the staff proposal, completely  
21 different from the original proposal that was offered.

22 I think the most appropriate way to deal with that  
23 would be to, first of all, determine whether or not the  
24 amendment to Supervisor Riordan's proposal, which was to  
25 adopt the staff proposal, allowing for voluntary reporting

1 of competition numbers, is going to be seconded. If not,  
2 you can then delete that particular aspect. If it is, then  
3 you're down to two questions and you can then debate the two  
4 questions.

5 CHAIRWOMAN SCHAFFER: I'd like to second, if I'm  
6 allowed to, that motion as you just stated it.

7 Can this be amended?

8 MR. KENNY: To the extent -- there's still a  
9 question now. To the extent that Ms. Edgerton seconded the  
10 original proposal, that is still a question before the Board  
11 if she does not wish to withdraw her second or she does not  
12 wish to agree to the amendment as proposed by Supervisor  
13 Riordan.

14 So, that question will still exist on the table.  
15 To the extent that there is a second on that, then there's  
16 that question there, and then there's the third question by  
17 Mr. Lagarias.

18 It's quite a --

19 SUPERVISOR WIEDER: Point of information.

20 CHAIRWOMAN SCHAFFER: Yes, ma'am.

21 SUPERVISOR WIEDER: Is the problem that the  
22 amendment that Mr. Lagarias has offered and that has been  
23 seconded is more of a substitute motion? Does it change the  
24 intent of the motion? And if that's so, why can't he not  
25 then -- why don't you advise him to make this a substitute

1 motion, and then act on it that way?

2 MR. LAGARIAS: No, I accept the motion that  
3 Supervisor Riordan has presented with the suggested  
4 amendments.

5 So, I suggest we vote on our amendments first.

6 MS. EDGERTON: Well, in my case --

7 SUPERVISOR WIEDER: Then what's the problem?

8 MS. EDGERTON: In my case, I don't accept them as  
9 friendly amendments.

10 MR. LAGARIAS: I know that.

11 MS. EDGERTON: Yeah, so --

12 MR. LAGARIAS: So we bring it up for a vote.

13 MR. KENNY: I think what we need to do is I think  
14 we need to address --

15 MS. EDGERTON: Although I accept you as a friend.  
16 It's not personal.

17 MR. LAGARIAS: Quite all right.

18 (Laughter.)

19 CHAIRWOMAN SCHAFFER: Please remember that the  
20 court reporter needs to get down what the statements of the  
21 Board members are. So, we need to slow down our rpm here.

22 MR. KENNY: I think what we need to do is to  
23 ensure that we have basically a precise understanding of  
24 each of the motions that's before the Board. And to the  
25 extent that we have a motion that has been raised by

1 Supervisor Riordan and that has been seconded by Ms.  
2 Edgerton, that is a question that is before the Board with  
3 regard to the adoption of the resolution without any  
4 modifications.

5 That is the question number one that's before this  
6 Board.

7 CHAIRWOMAN SCHAFFER: And that takes precedence  
8 over the other two --

9 MR. LAGARIAS: No.

10 MR. KENNY: Not necessarily.

11 (Thereupon, several members of the Board  
12 spoke simultaneously, and the reporter was  
13 unable to decipher what was said.)

14 MR. KENNY: There is also the question that has  
15 been raised with regard to the modification of her own  
16 motion by Supervisor Riordan that allowed for the voluntary  
17 reporting of the competition numbers. That was basically an  
18 issue that -- I have not heard a second on that. So, that's  
19 still open. If there was one, I missed that.

20 MR. LAGARIAS: I second it.

21 MR. KENNY: Okay. Then, there's a question there  
22 and there's Mr. Lagarias' motion with regard to substantial  
23 modifications to the proposal as offered by the staff.

24 SUPERVISOR WIEDER: Okay. Point of information  
25 again. I think you're making it much more complex, if I

1 might suggest. And I think it is, from where I come from.

2 Supervisor Riordan's attempt at a motion was to  
3 amend the staff recommendation that's before us to include  
4 the voluntary business. That's the way I heard it. And  
5 then, if that's so, then Mr. Lagarias wanted to, I guess,  
6 amend it even further from the staff recommendation.

7 So, what we have before us is kind of an unfolding  
8 back. We have to first act on Mr. Lagarias' amendment to  
9 her amendment of the original staff action.

10 MR. KENNY: Well, I would respectfully disagree to  
11 the extent that I think we need to make sure that we clearly  
12 understand the precise issues that are before the Board.  
13 And to the extent that there was a motion made by Supervisor  
14 Riordan, which was seconded by Ms. Edgerton, there is at  
15 least a question with regard to that before the Board.

16 There was then an amendment to that potential  
17 issue that is also is a question before the Board, and that  
18 was the amendment by Supervisor Riordan with regard to the  
19 competition reporting. And then, lastly, there was a  
20 substantial amendment. And so, there are really three  
21 issues which are all pending before the Board in terms of  
22 resolution.

23 SUPERVISOR WIEDER: Wait a minute. Excuse me.  
24 It's my understanding -- and let me turn to Supervisor  
25 Riordan and ask her. When you made your comments, did you

1 not incorporate in the original action amending what the  
2 staff had by the voluntary?

3 SUPERVISOR RIORDAN: No, I didn't.

4 SUPERVISOR WIEDER: Okay. I apologize.

5 SUPERVISOR RIORDAN: Mr. Lagarias raised it in one  
6 of his amendments, and it was something that I should have  
7 included. It would be very simple if the seconder would  
8 accept my amendment or clarification, and then it would get  
9 very simple, and then we can get to Mr. Lagarias' rather  
10 substantive amendments which are pending.

11 MS. EDGERTON: I just have a point of information  
12 then about your -- your amendment, because it's possible  
13 that it's something that I would be comfortable with.

14 If I understand it right, the VIN number would  
15 still be on, so that would be a way of knowing which  
16 competition vehicles were actually sold. No? That's a  
17 question.

18 MR. BOYD: What's being offered is that, instead  
19 of regulatorily requiring the industry to report their sales  
20 of these competition vehicles, that in order to verify that  
21 the DMV VIN number process gives us that kind of data, that  
22 instead of regulatorily requiring it, that the industry be  
23 asked to volunteer, which they have basically volunteered to  
24 give us that information in confidence for a period of years  
25 so we can ascertain that the DMV system truly works, and

1 then that that data is available to us through that other  
2 system.

3 And, frankly, the staff is quite willing to accept  
4 that. That will work fine for us. It's a friendly  
5 amendment.

6 MS. EDGERTON: I'd be comfortable accepting that  
7 if we could say how long that interim provision of voluntary  
8 data would apply, some date certain, say two years, three  
9 years. For three years. Then, I would be very comfortable  
10 with your motion.

11 (Laughter.)

12 MR. KENNY: Excuse me. But I'm trying to  
13 understand. What we have right now is a mandatory  
14 requirement in the regulation which is proposed that would  
15 require the manufacturers to provide that competition  
16 information.

17 If, in fact, that requirement is deleted and we  
18 simply have the good faith of the manufacturers to rely upon  
19 that they will voluntarily provide that information, I'm not  
20 sure how we can tie a time frame to that, unless you were to  
21 come back at some future point and to reimpose the  
22 regulatory requirement.

23 MS. EDGERTON: I suppose my thought was that if,  
24 for some reason, there should be a change of heart in terms  
25 of voluntary provision of data --



1 MR. KENNY: I think you would then need to modify  
2 the regulation.

3 MS. EDGERTON: Then you would need to modify the  
4 regulation. But I would state that, of course, it's very  
5 difficult to know -- have the information. We have to get  
6 it one way or the other. But I'm agreeable to give it a try  
7 if that's what you'd like to do.

8 CHAIRWOMAN SCHAFFER: So the second is withdrawn?

9 MR. KENNY: What would happen is -- yes, the  
10 second would actually apply to the amendment as made by  
11 Supervisor Riordan, so you now have only two motions before  
12 you, and those would be the two alternatives that have been  
13 proposed -- Supervisor Riordan's proposal, as amended, to  
14 allow for voluntary reporting of the competition  
15 information, and Mr. Lagarias' proposal as enunciated  
16 earlier.

17 CHAIRWOMAN SCHAFFER: Is there any discussion on  
18 Mr. Lagarias' proposal?

19 MR. LAGARIAS: I'd like to suggest, since there  
20 will be discussion, that we break it up into its individual  
21 parts and vote on each part separately, if you would.

22 The first one I had was to remove the staff  
23 definition requiring the addition of load weight limits in  
24 their definition for ATVs. Because the definition for ATV  
25 already covers that.

1 CHAIRWOMAN SCHAFER: Do we need to have an  
2 additional statement? Because, as I understand, he proposed  
3 it en bloc.

4 MS. EDGERTON: Madam Chairwoman, are you planning  
5 on having sort of a pro -- pro and con, or how are you  
6 planning on --

7 CHAIRWOMAN SCHAFER: We can go through each of the  
8 items individually and discuss them to the extent that the  
9 Board members would like to discuss them further.

10 The first one is the load limit, which you propose  
11 to be deleted.

12 SUPERVISOR WIEDER: I support it. I don't need to  
13 second it anymore, do I?

14 MAYOR HILLIGOSS: Did we want to vote?

15 CHAIRWOMAN SCHAFER: I'm not proposing them for  
16 voting yet. I'm proposing them for discussion.

17 SUPERVISOR WIEDER: You want to take a straw vote?

18 CHAIRWOMAN SCHAFER: Mr. Boyd would like to say  
19 something. I'll give him the opportunity to do that.

20 MR. BOYD: Two of Mr. Lagarias' suggestions we've  
21 not had any discussion of, and we'd like to have the  
22 opportunity to enter into the record, at least for your  
23 benefit, before you do take an action.

24 MR. LAGARIAS: That's why I'm breaking them up  
25 into individual parts.

1 MR. BOYD: Some of the environmental consequences.  
2 The load limit issue was not one that we had discussed at  
3 all before. So, it has a fairly significant consequence. I  
4 think the staff would like to react to that for your  
5 information.

6 MR. CACKETTE: Yeah, we didn't -- we did a poor  
7 job of saying what that was. I don't think we said it at  
8 all. So, it's a pretty poor job.

9 The load limit definition was an attempt to divide  
10 the specialty vehicle category -- the kind of golf carts  
11 that really aren't used for golfing, that are used for  
12 pulling stuff around -- from the ATVs.

13 And I think the impact of eliminating it is that  
14 the specialty vehicles could then certify to the ATV  
15 standards, which are less stringent, and we're trying to  
16 apply to these specialty off-road, pseudo golf-cart type  
17 vehicles.

18 So, that's why it was there, was to try to break  
19 them into appropriate categories and put the appropriate  
20 emission standard to each category. It wasn't a trivial  
21 definition like I think it came across.

22 CHAIRWOMAN SCHAFFER: Yes, Supervisor Wieder.

23 MR. CACKETTE: And it has the impact of about  
24 something under one ton per day of doing that.

25 SUPERVISOR WIEDER: You mentioned -- and you can

1 correct me -- did you say that the thrust of this was really  
2 based on those golf carts that are used other than on golf  
3 courses and, if that's so, then, are we not penalizing the  
4 whole industry?

5 MR. CACKETTE: No. What we did was -- there are  
6 vehicles that kind of look like golf carts; they're four-  
7 wheel drive. And some of them end up being for like lawn  
8 care, those kind of things. We call those specialties. And  
9 then, real golf carts were golf carts.

10 So, we split them up and we also split those  
11 specialty ones up from motorcycles. And the way that we did  
12 that for four-wheel vehicles was we had this load limit  
13 applied which separates an ATV four-wheel vehicle in our  
14 definition from a thing with a little bed on it that runs  
15 around and hauls plants around in some park and puts, you  
16 know, so you can plant trees or things.

17 And we didn't treat that category as electric,  
18 because we didn't think it could be electrified, because it  
19 had such different usage patterns.

20 So, that's where the definition came in. I know  
21 in our presentation, it sounded like it was some unnecessary  
22 addition to the --

23 MR. LAGARIAS: Well, the testimony we heard today  
24 about ATVs was that it has a very specific design  
25 specification. It requires astride seating, four wheels

1 only, and handlebar steering. Does that apply the type of  
2 vehicle that you're talking about, these specialty vehicles?

3 MR. CROSS: We have a picture we can show you, Mr.  
4 Lagarias.

5 MR. LAGARIAS: Well, I don't want to see a  
6 picture. I know it's worth a thousand words.

7 MR. CROSS: We have a picture of a vehicle which  
8 looks very much like an ATV recreational vehicle, except  
9 it's bigger, and it has a bed on it like a little pickup.  
10 And the person sits astride of it and steers handlebars.

11 MR. LAGARIAS: Okay. You've made your case. I  
12 withdraw that.

13 CHAIRWOMAN SCHAFFER: The next item of discussion  
14 regards the delay until, as I understand, 1999 for smaller  
15 than 90cc.

16 MAYOR HILLIGOSS: 50 to 90 cc engines.

17 MR. LAGARIAS: Madam Chair, what's the issue at  
18 hand? I'm sorry.

19 CHAIRWOMAN SCHAFFER: We're going on to your next  
20 segment of your proposed amendment dealing with the delay  
21 for a 90cc and smaller engine.

22 MR. LAGARIAS: Well, the current proposal, I  
23 believe, is '97 for compliance. And this is '94 now. I  
24 don't think that's an unreasonable request to give a little  
25 more time to make sure we bring these engines into the fold.

1 CHAIRWOMAN SCHAFFER: Is there any other  
2 discussion?

3 MAYOR HILLIGOSS: This is 50 to 90cc that you're  
4 talking about, right?

5 MR. LAGARIAS: Yes.

6 MAYOR HILLIGOSS: Right.

7 CHAIRWOMAN SCHAFFER: Ms. Edgerton?

8 MS. EDGERTON: Yes, it seems to me, and I'm always  
9 going to return to the legislative mandate that I'm asked to  
10 apply, and that is to achieve the maximum degree of  
11 emissions possible from vehicular and other mobile sources  
12 in order to accomplish the attainment of State standards at  
13 the earliest possible date.

14 Now, I know the standards that we're asked to  
15 apply are also whether the control measures are necessary,  
16 cost-effective, and technologically feasible.

17 Now, in this case, I haven't heard and am not  
18 aware of any reason -- any technological infeasibility  
19 argument that has been made. I believe they've suggested  
20 that, in fact, there is a -- there are four-stroke engines  
21 in the 80cc category.

22 And there are existing engines in that way. So,  
23 technological feasibility is not -- not the question here.  
24 And I am mindful of our obligation to meet this legislative  
25 goal. So, I guess my sense is that three years was

1 basically what one of the gentlemen testified as what was  
2 required for -- three to five years for product development.

3           These products are already -- they already exist  
4 in some of the competitors. So, I have difficulty -- I  
5 would have difficulty sitting before the Legislature and  
6 explaining why a three-year period, phase-in for these  
7 improvements was -- why something more than that was  
8 required.

9           So, I would have to say that, in terms of meeting  
10 my obligation under the law, I think I would have to support  
11 the -- the staff report.

12           MR. LAGARIAS: Well, my reasoning is primarily  
13 economic. There are a lot of things that are  
14 technologically feasible. But the matter of bringing them  
15 into the market, recognizing the leadtimes that are required  
16 to make these changes are always a matter of judgment and  
17 resources you commit to this sort of thing.

18           And I just feel that -- I certainly agree that  
19 objectives of meeting our Clean Air Act requirements is  
20 paramount. But trying to balance that with technical and  
21 economic considerations means to me that, for the issue at  
22 hand, a two-year extension is not unreasonable.

23           CHAIRWOMAN SCHAFFER: I had one point I wanted to  
24 clarify. As I originally made a note on your proposal, it  
25 applied to -- the delay applied to 90cc and below. I've

1 heard some other discussion about 50 to 90. How did that  
2 come into play in the proposal?

3 MR. LAGARIAS: Well, it's 90 and below. We're  
4 going to handle the 50 separately. But if the 50 were  
5 exempted --

6 CHAIRWOMAN SCHAFFER: So, this would be 90 and  
7 below, the extension for 90 and below.

8 This is important for those of us that may or may  
9 not want to agree with the exemption for 50.

10 MR. BOYD: Because Mr. Lagarias talked about  
11 exempting 50 and below entirely, we concluded, therefore --  
12 I think many of us concluded that this other recommendation  
13 was just the 90 to 50 level.

14 CHAIRWOMAN SCHAFFER: I'd like to -- all right.  
15 I'd like to clarify that, because it's important for those  
16 of us who may want to grant an extension, but are not  
17 willing to exempt those below 50.

18 MAYOR HILLIGOSS: That's fine.

19 CHAIRWOMAN SCHAFFER: So, I will restate it. The  
20 delay would be for those which are 90 and below to 1999, and  
21 if the other amendment is accepted, it would turn out to be  
22 50 to 90. All right.

23 And on the next item is the 50cc and below as an  
24 exemption.

25 Mr. Lagarias?



1 MR. LAGARIAS: Well, it's a small engine. It has  
2 limited use. The information we've heard is that it is  
3 primarily for off-the-road vehicles, which means children or  
4 youngsters running it without a muffler --

5 (Laughter.)

6 SUPERVISOR RIORDAN: And kicking up lots of dust.

7 MR. LAGARIAS: And I don't see that as a major  
8 contribution to the air pollution issue.

9 CHAIRWOMAN SCHAFFER: My comment is that it does  
10 look like a major contribution, given the emission inventory  
11 calculations that were presented to us today, a fairly  
12 significant one I think.

13 Seven tons per day and a 10 percent loss of  
14 benefit of the regulation overall.

15 MR. LAGARIAS: No, actually, if there were no  
16 exemptions, there'd be four tons per day, the goal; if there  
17 are -- if there is an exemption, it would be three tons per  
18 day, not seven tons per day.

19 MR. CACKETTE: It was the loss of benefit.  
20 Overall, the whole package of everything is about 40 tons  
21 per day of ozone precursor benefit. The loss of the 50cc  
22 and below exemption, a permanent exemption, is about three  
23 tons per day. But that is about, you know, roughly 10  
24 percent of the benefit.

25 So, those are the statistics that the staff has

1 the most confidence in.

2 MR. LAGARIAS: And, as I indicated at the very  
3 beginning, my sense of the statistics of the amount of  
4 emission reductions we're going to get from this program  
5 does not agree with your projected figures. I don't think  
6 we see three tons a day there.

7 MS. EDGERTON: Well, with all due respect, though,  
8 I will state for the record that the figure that the staff  
9 used of the number under 90cc motorcycles, which was what,  
10 around 1950? 1,950 --

11 MR. CROSS: Yeah. About 2,000.

12 MS. EDGERTON: -- motorcycles? About 2,000 in  
13 use?

14 MR. CROSS: Well, no, no. Under 90 is about 2,000  
15 and under 50 is about 1200.

16 MS. EDGERTON: Are they additive, cumulative, or--

17 MR. CROSS: In other words, the -- yes.

18 MS. EDGERTON: So, it's 2,000 --

19 MR. CROSS: 0 to 50 is about 1200, 50 to 90 is  
20 about 800.

21 MS. EDGERTON: Well, we know that those are -- I  
22 mean, today's record has indicated that those are at least  
23 correct, in that --

24 MR. CROSS: That's annual sales.

25 ///

1 (Thereupon, a short discussion was held off the  
2 record.)

3 MR. CROSS: That may be the industrywide sales as  
4 opposed to --

5 MS. EDGERTON: He said Yamaha. I beg your pardon.  
6 He said Yamaha. Under --

7 MR. LAGARIAS: Suzuki said they had 100 vehicles  
8 under 50cc.

9 MR. CROSS: The data which we provided are '92  
10 numbers for the industry. It could have changed --

11 MS. EDGERTON: It could have changed.

12 MR. CROSS: -- in terms of the balance. But the  
13 number -- the roughly 2,000 per year is the Motorcycle  
14 Industry Council, which puts the -- which sums the input  
15 from the manufacturers.

16 MS. EDGERTON: And all I'm saying is that, from  
17 what we've been provided today, it is at least that much,  
18 because Yamaha did that much last year.

19 So, your estimate is at least correct on that  
20 point.

21 The other thing I'd just like to say for the --  
22 for all of my colleagues here is that, in my -- my comments  
23 have nothing to do with the noise made by these vehicles and  
24 are solely and quite seriously directed toward the emissions  
25 reductions likely to be achieved under the program.

1 CHAIRWOMAN SCHAFFER: Thank you, Ms. Edgerton.  
2 Yes, Supervisor Riordan.

3 SUPERVISOR RIORDAN: I would echo the comments  
4 that have just been made. I tend to believe that our staff  
5 is rather conservative with the estimate of the numbers that  
6 we're talking about. I really do believe that.

7 So, I do think, again, it's a part, a cumulative  
8 sort of score, if you will, of -- if you continue to exempt  
9 or change, it's just a longer period of time until we can  
10 achieve our goals as set forth by the Legislature and the  
11 Administration. And I think it's very important that we  
12 kind of keep on track.

13 CHAIRWOMAN SCHAFFER: Mr. Lagarias, did you have  
14 anything further to say about the exemption for the 50cc and  
15 below?

16 MR. LAGARIAS: No.

17 CHAIRWOMAN SCHAFFER: Okay. Finally, the last  
18 point that you were proposing for amendment was with respect  
19 to the electric golf carts.

20 MR. LAGARIAS: Well, instead of requiring the golf  
21 carts to have to go to zero emissions in all cases; that in  
22 the case where they use gasoline-powered engines, those  
23 engines must meet the Tier One standards for garden and  
24 utility engines, which we adopted -- I believe it was last  
25 year -- which call for substantial reductions.

1 CHAIRWOMAN SCHAFFER: Any further discussion on  
2 that?

3 MS. EDGERTON: Well, I would have to indicate that  
4 it would seem that if -- that this is the one -- this is a  
5 key opportunity for emissions reductions for the Air Board  
6 and is fully consistent with the low-emission vehicle  
7 program's identification of zero-emission vehicles as a key  
8 goal for us to achieve.

9 And I would be -- I would urge my colleagues to  
10 reconsider his motion in that light.

11 MR. BOYD: Madam Chair, might we ask Mr. Lagarias  
12 a question?

13 CHAIRWOMAN SCHAFFER: Mr. Boyd.

14 MR. BOYD: There is a little confusion on our  
15 part, Jack. I've heard two things. One, seeing equity with  
16 the small utility engine lawn and garden regulation that we  
17 already passed. On other occasions, I've heard a concern  
18 about perhaps the nongas golf carts can't handle some hilly  
19 terrain.

20 If the latter was your concern, we could probably  
21 work out some approach to solve that problem for those  
22 particular golf courses. If the former is your concern,  
23 just you want equity between the various categories, then  
24 I'd have to point out, yes, the staff saw this as a unique  
25 niche of vehicles that were far more eligible for full

1 electrification and the cost of the other approach -- your  
2 recommended approach, if it's equity with the small utility  
3 engines' use in other applications, that's about a six-ton  
4 per day hydrocarbon and ozone precursor cost. And that  
5 concerns us.

6 MR. LAGARIAS: Well, both of my concerns still  
7 apply. I don't believe in mandating a technology. I don't  
8 believe that's the purpose of our Board. Our Board is  
9 concerned with adopting regulations and then challenging the  
10 industry to meet those regulations.

11 In this case, we have adopted a regulation for  
12 engines for garden utility engines, which are the identical  
13 engines which could go into a golf cart, then we're -- are  
14 we going to suggest, "You can't put that in a golf cart.  
15 You can put that in something else, but not in a golf cart."

16 I don't think that's what our intent should be.  
17 Certainly, we're looking at reducing emissions, and that's  
18 why we set the standards for utility engines and pushed them  
19 very hard in the process.

20 But I'm just not in favor of mandating something  
21 that is not essential.

22 SUPERVISOR WIEDER: Madam Chairman?

23 CHAIRWOMAN SCHAFFER: Yes, Supervisor Wieder.

24 SUPERVISOR WIEDER: I would like to totally  
25 support Jack's frame of reference and where he's coming from

1 on that. Are you suggesting, Mr. Boyd, then, that -- since  
2 this seems to be such an attractive niche to achieve  
3 reductions, should not then -- if you follow that line of  
4 reasoning -- should not then we go to the comparable engines  
5 that are not in golf carts and change the rules there?

6 MR. LAGARIAS: They've tried that.

7 MR. BOYD: Well, I mean, as explained earlier, we  
8 certainly considered that in the beginning. Because, as the  
9 statute requires, we need to go to the best technology  
10 feasible. But it was deemed not feasible for all the  
11 applications to which these various pieces of equipment were  
12 applied.

13 So, we did not do it there. We felt -- we feel  
14 that; in this application, what we're recommending is  
15 feasible.

16 SUPERVISOR WIEDER: Well, you can get at it,  
17 because there's less complexity and probably less numbers.  
18 Whereas, with all the other products, it's difficult.

19 MR. BOYD: It's the usage. It's the type of usage  
20 that is utilized for this kind -- this piece of equipment.  
21 It's not as severe, in spite of the hilliness of some golf  
22 courses, as the uses to which many of these other small  
23 utility engines that we discussed in the previous hearing  
24 were applied to.

25 Now, we were dealing with golf carts in that

1 setting, and deferred it for future review because of the  
2 concerns. And the consequence of that future -- of delaying  
3 that review is the recommendation that we bring you today.  
4 We looked into the technology specifically. We looked into  
5 the service and application. And it brought forth the  
6 recommendation that you have before you today.

7 MR. LAGARIAS: Well, certainly, I'm in favor of  
8 zero-emission golf carts. I think the very type of activity  
9 that it involves would recommend that. And I would  
10 encourage and do everything that we could do to encourage  
11 the use of electric golf carts. I just don't want to  
12 mandate it.

13 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
14 Lagarias. I think it's important that we proceed to a vote,  
15 because one of our members has to leave, perhaps others.  
16 So, I'd like some assistance from counsel on -- shall we  
17 work on these from the last one back up to the first one?

18 MR. KENNY: I think that it might be the easiest  
19 way to go, and probably the one with the most clarity  
20 associated with it.

21 CHAIRWOMAN SCHAFFER: That occurred to me, too.  
22 All right. On the amendment with respect to golf carts,  
23 would you, Counsel, state that for us?

24 MR. KENNY: With regard to the golf carts, as I  
25 understand the proposal made by Mr. Lagarias and seconded by



1 Mayor Hilligoss, the staff proposal would be for the use of  
2 electric vehicles on a specified date.

3 Mr. Lagarias' modification to that, actually is an  
4 alternative, and his alternative is that the utility engine  
5 regulations, as adopted in 1990, would be used as the basis  
6 for the golf cart compliance, and that would be pursuant to  
7 the Tier One standards in those regulations.

8 MR. TERRIS: Well, I'd like to just try to clarify  
9 one thing. Mr. Lagarias raised the question of equity with  
10 the utility standards.

11 The utility standards have two tiers to them.

12 MR. LAGARIAS: This is Tier One.

13 MR. TERRIS: And are you saying that just Tier One  
14 would apply to golf carts and Tier Two would not?

15 MR. LAGARIAS: That's all we had discussion on,  
16 and Tier One is all we've brought to date today (sic).

17 (Thereupon, several members and the staff spoke  
18 simultaneously, prompting the reporter to ask that  
19 only one person speak at a time.)

20 MR. TERRIS: In 1999, the utility regulations have  
21 a second tier to them, which are more stringent than the  
22 first tier.

23 MR. LAGARIAS: I think we'd have to bring that up  
24 separately. I'm not prepared to recommend that at this  
25 time.

1 CHAIRWOMAN SCHAFFER: All right. Let me make sure  
2 I understand. A no vote on this, then, would be an  
3 affirmation of the staff's proposal --

4 MR. LAGARIAS: That's right.

5 CHAIRWOMAN SCHAFFER: -- on golf carts.

6 MR. KENNY: Correct.

7 CHAIRWOMAN SCHAFFER: May I ask for the roll to be  
8 called?

9 MS. HUTCHENS: Edgerton?

10 SUPERVISOR WIEDER: Excuse me. We're on  
11 Lagarias', aren't we?

12 CHAIRWOMAN SCHAFFER: We're on Lagarias, the golf  
13 carts portion of his amendment.

14 MS. EDGERTON: No.

15 MS. HUTCHENS: Edgerton?

16 MS. EDGERTON: No.

17 MS. HUTCHENS: Hilligoss?

18 MAYOR HILLIGOSS: Aye.

19 MS. HUTCHENS: Lagarias?

20 MR. LAGARIAS: Aye.

21 MS. HUTCHENS: Riordan?

22 SUPERVISOR RIORDAN: No.

23 MS. HUTCHENS: Wieder?

24 SUPERVISOR WIEDER: Yes.

25 MS. HUTCHENS: Wortman?

1 DR. WORTMAN: No.

2 MS. HUTCHENS: Chairwoman Schafer.

3 CHAIRWOMAN SCHAFER: No.

4 MS. HUTCHENS: Doesn't pass 3 to 4.

5 CHAIRWOMAN SCHAFER: Moving on to the next, I'd  
6 like to ask counsel to state that portion of the amendment.

7 MR. KENNY: The next portion of Mr. Lagarias'  
8 amendment had to do with the motorcycles and ATVs. And his  
9 amendment, as it relates to those, was to -- would you like  
10 me simply to break it down by its parts, or would you like  
11 me to go through all four of those parts that he had?

12 CHAIRWOMAN SCHAFER: No, no. I just want to be  
13 able to vote on the 50cc or below exemption.

14 MR. KENNY: Oh, Mr. Lagarias' motion there and  
15 seconded was to exempt the less than 50 cc category of  
16 motorcycles and ATVs.

17 CHAIRWOMAN SCHAFER: And I understand that a no  
18 vote in that case would be an affirmation of the staff  
19 recommendation?

20 MR. KENNY: That's correct.

21 CHAIRWOMAN SCHAFER: Would you please call the  
22 roll.

23 MS. HUTCHENS: Edgerton?

24 MS. EDGERTON: No.

25 MS. HUTCHENS: Hilligoss?

1 MAYOR HILLIGOSS: Aye.

2 MS. HUTCHENS: Lagarias?

3 MR. LAGARIAS: Aye.

4 MS. HUTCHENS: Riordan?

5 SUPERVISOR RIORDAN: No.

6 MS. HUTCHENS: Wieder?

7 SUPERVISOR WIEDER: Aye.

8 MS. HUTCHENS: Wortman?

9 DR. WORTMAN: No.

10 MS. HUTCHENS: Chairwoman Schafer?

11 CHAIRWOMAN SCHAFFER: No.

12 Next, on the delay for the implementation of the  
13 90cc and below -- excuse me. We need a break here with our  
14 court reporter.

15 (Thereupon, there was a pause in the  
16 proceedings to allow the court reporter  
17 to replenish her stenograph paper.)

18 CHAIRWOMAN SCHAFFER: Let me restate the vote, the  
19 third vote that will be taken. Counsel, would you please  
20 state the proposal by Mr. Lagarias.

21 MR. KENNY: The aspect of the motion that was made  
22 by Mr. Lagarias is that, for 90cc and under, compliance  
23 would be extended until 1999.

24 CHAIRWOMAN SCHAFFER: A no vote would affirm the  
25 staff's proposal, a yes vote would extend the compliance

1 deadline for two years; is that correct?

2 MR. KENNY: That is correct.

3 CHAIRWOMAN SCHAFFER: Call the roll, please.

4 MS. HUTCHENS: Edgerton?

5 MS. EDGERTON: No.

6 MS. HUTCHENS: Hilligoss?

7 MAYOR HILLIGOSS: Aye.

8 MS. HUTCHENS: Lagarias?

9 MR. LAGARIAS: Aye.

10 MS. HUTCHENS: Riordan?

11 SUPERVISOR RIORDAN: No.

12 MS. HUTCHENS: Wieder?

13 SUPERVISOR WIEDER: Aye.

14 MS. HUTCHENS: Wortman?

15 DR. WORTMAN: No.

16 MS. HUTCHENS: Madam Chair?

17 CHAIRWOMAN SCHAFFER: Aye.

18 MS. HUTCHENS: Passes 4 to 3.

19 CHAIRWOMAN SCHAFFER: Mr. Lagarias, you withdrew  
20 the load limit proposal? So, we will not be voting on that.

21 MR. KENNY: That's correct. The load limit  
22 proposal was withdrawn, and then there is the competition  
23 reporting requirement, which is also outstanding.

24 For the sake of clarification, also, we still have  
25 the two outstanding motions in their entirety, which have

1 not yet been resolved, but we can clean that up at the end  
2 of this.

3 CHAIRWOMAN SCHAFFER: All right. The next vote  
4 that we'll need to take, Counsel, would you please state  
5 that for us.

6 MR. KENNY: The final aspect of Mr. Lagarias'  
7 motion had to do with deleting the mandatory requirement for  
8 reporting of competition vehicles, and would instead request  
9 that the manufacturers provide voluntary information on  
10 that. A yes vote on that would delete the mandatory  
11 requirement; a no vote would maintain the mandatory  
12 requirement.

13 CHAIRWOMAN SCHAFFER: Would you please call the  
14 roll.

15 MS. HUTCHENS: Edgerton?

16 MS. EDGERTON: A yes vote deletes the mandatory  
17 requirement?

18 MR. KENNY: That's correct.

19 MS. EDGERTON: No.

20 MS. HUTCHENS: Hilligoss?

21 MAYOR HILLIGOSS: Aye.

22 MS. HUTCHENS: Lagarias?

23 MR. LAGARIAS: Aye.

24 MS. HUTCHENS: Riordan?

25 SUPERVISOR RIORDAN: Let me be sure I understand.

1 I think it's doing the same thing that I proposed.

2 MR. KENNY: That's correct.

3 MAYOR HILLIGOSS: That's right. It is.

4 SUPERVISOR RIORDAN: Then I have to vote aye to be  
5 consistent.

6 MS. HUTCHENS: Wieder?

7 SUPERVISOR WIEDER: Aye.

8 MS. HUTCHENS: Wortman?

9 DR. WORTMAN: Aye.

10 MS. HUTCHENS: Madam Chairwoman?

11 CHAIRWOMAN SCHAFER: Aye.

12 MS. HUTCHENS: Passes 6-1.

13 MS. EDGERTON: I'd like to reverse my vote to aye  
14 to make it unanimous, please.

15 MS. HUTCHENS: So noted.

16 MS. EDGERTON: Thank you.

17 CHAIRWOMAN SCHAFER: Finally, Counsel, could you  
18 state the next and, I presume, last vote we'll be required  
19 to take. Next to the last.

20 MR. KENNY: There are really two motions which are  
21 still before the Board. I mean, the votes that have just  
22 basically been utilized were used for clarification purposes  
23 on Mr. Lagarias's motion.

24 Mr. Lagarias' motion in its entirety still stands,  
25 which would be the motion to modify the staff proposal with

1 the number of modifications as he suggested.

2 CHAIRWOMAN SCHAFFER: May we dispense with that  
3 without a roll call vote?

4 MR. KENNY: I think you could very easily.

5 CHAIRWOMAN SCHAFFER: All right. Well, I propose  
6 that we do that.

7 MR. KENNY: The other motion that stays on the  
8 table is Supervisor Riordan's proposal to modify the staff  
9 proposal to delete the competition requirement, which was  
10 also an aspect of Mr. Lagarias' motion, which was just  
11 discussed.

12 And so, I think you could also dispense with that  
13 without a roll call vote if you chose to do so.

14 CHAIRWOMAN SCHAFFER: So proposed.

15 All in favor, say aye?

16 (Ayes.)

17 CHAIRWOMAN SCHAFFER: All right. Finally, is there  
18 a need to take a vote on the proposal, as amended?

19 MR. KENNY: I think you have a resolution, which  
20 is still before you, which is 94-1, and I think it would be  
21 beneficial to do that.

22 CHAIRWOMAN SCHAFFER: All right. I would ask the  
23 roll to be called on adopting the resolution, as amended.

24 MS. HUTCHENS: Edgerton?

25 MS. EDGERTON: Aye.



1 MS. HUTCHENS: Hilligoss?

2 MAYOR HILLIGOSS: Aye.

3 MS. HUTCHENS: Lagarias?

4 MR. LAGARIAS: Aye.

5 MS. HUTCHENS: Riordan?

6 SUPERVISOR RIORDAN: Aye.

7 MS. HUTCHENS: Wieder?

8 SUPERVISOR WIEDER: Aye.

9 MS. HUTCHENS: Wortman?

10 DR. WORTMAN: Aye.

11 MS. HUTCHENS: Chairwoman Schafer?

12 CHAIRWOMAN SCHAFER: Aye.

13 MS. HUTCHENS: Passes 7-0.

14 CHAIRWOMAN SCHAFER: I'd like to note that there  
15 is a 15-day comment period for this item as I mentioned  
16 earlier.

17 I'd like also to propose a movement of the  
18 original next order of business, which is to consider a  
19 status report on the State's efforts to meet the Clean Air  
20 Act, to our February meeting. If there's any objection to  
21 that, we can change that. But I think it's an information  
22 item, and I think it can hold.

23 That will give us an opportunity to move to the  
24 next item. Yes, we will break, and take up Item 94-1-3  
25 within five minutes.