

MEETING  
BEFORE THE  
CALIFORNIA AIR RESOURCES BOARD

HEARING ROOM  
CALIFORNIA AIR RESOURCES BOARD  
2020 L STREET  
SACRAMENTO, CALIFORNIA

THURSDAY, JULY 27, 1995

9:30 A.M.

Nadine J. Parks  
Shorthand Reporter

## MEMBERS PRESENT

John D. Dunlap, III, Chairman  
Eugene A. Boston, M.D.  
Joseph C. Calhoun  
Lynne T. Edgerton  
M. Patricia Hilligoss  
John S. Lagarias  
Barbara Riordan  
James W. Silva  
Doug Vagim

## Staff:

Jim Boyd, Executive Officer  
Tom Cackette, Chief Deputy Executive Officer  
Mike Scheible, Deputy Executive officer  
Mike Kenny, Chief Counsel

Bob Cross, Assistant Division Chief, Mobile  
Source Division  
Susan Huscroft, Chief, On Road Control Regulation  
Branch, MSD  
Bill Lovelace, Manager, Regulatory Strategy  
Section, MSD  
Rose Castro, Manager, Aftermarket Parts Section, MSD  
Jim Ryden, Staff Counsel, Office of Legal Affairs  
Renee Kemena, Staff, Regulatory Strategy Section, MSD

Peter Venturini, Chief, Stationary Source Division  
Don Ames, Assistant Chief, SSD  
Bob Fletcher, Chief, Emissions Assessment Branch, SSD  
Genevieve Shiroma, Chief, Air Quality Measures  
Branch, SSD

Patricia Hutchens, Board Secretary, EO  
Wendy Grandchamp, Secretary, EO  
Bill Valdez, Administrative Services Division

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## P R O C E E D I N G S

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CHAIRMAN DUNLAP: We'll call this, the July meeting of California Air Resources Board, to order.

I've asked that, beginning this month, that we begin with the Pledge of Allegiance, and I'd like to ask Supervisor Silva to please lead us in the pledge. Jim?

SUPERVISOR SILVA: It is an honor to lead Americans in the Pledge of Allegiance to the flag that represents the greatest country that the world has ever known.

(Thereupon, the Pledge of Allegiance to the Flag was led by Supervisor Silva.)

CHAIRMAN DUNLAP: Thank you, Supervisor. I'd like to ask the Board Secretary to please call the roll.

MS. HUTCHENS: Boston?

DR. BOSTON: Here.

MS. HUTCHENS: Calhoun?

MR. CALHOUN: Here.

MS. HUTCHENS: Edgerton?

MS. EDGERTON: Here.

MS. HUTCHENS: Hilligoss?

MAYOR HILLIGOSS: Here.

MS. HUTCHENS: Lagarias?

1 MR. LAGARIAS: Here.

2 MS. HUTCHENS: Parnell?

3 Riordan?

4 SUPERVISOR RIORDAN: Here.

5 MS. HUTCHENS: Roberts?

6 Silva?

7 SUPERVISOR SILVA: Here.

8 MS. HUTCHENS: Vagin?

9 SUPERVISOR VAGIM: Here.

10 MS. HUTCHENS: Chairman Dunlap.

11 CHAIRMAN DUNLAP: Here.

12 Thank you. Before we begin today's meeting, I'd  
13 like to cover a few items, and start off by saying that I'm  
14 pleased to see the McDonald's tray liners that are at each  
15 Board member's place.

16 Mr. Boyd, I'd like for you to give some background  
17 on this project and maybe ask staff to say a few words.

18 MR. BOYD: Thank you, Mr. Chairman. Good morning,  
19 Board members. Good morning to members of the audience. I,  
20 too, am pleased to see the McDonald's tray liners.

21 Something that we don't get an opportunity to bring to the  
22 Board's attention very often is the long-term effort and  
23 investment we've made in education, and we've had a project  
24 going for years with the Department of Education to put air  
25 pollution education in the curriculum of the schools in

1 California. And that's reached a very pleasant climax.

2 This, too, represents our efforts to reach out and  
3 find ways to educate folks because, as I've said before, the  
4 future lies in the hands of the youth, I think, and more  
5 than anything else.

6 So, we are very pleased with the public/private  
7 partnership that we've been able to have in this particular  
8 arena, and I'm very pleased with the work of our Office of  
9 External Affairs. Both Bill Lockett and Clark Brink played  
10 a major role in getting this done, and I'm very happy, as  
11 always, with the work of our graphic artists, Eric Decetis  
12 and Greg Spencer in our Administrative Division, whose  
13 artwork you can recognize here.

14 I'll ask Clark Brink to say a couple words about  
15 the project that led to the creation of these tray liners.  
16 Clark?

17 MR. BRINK: Good morning.

18 Thank you, Mr. Boyd, Chairman Dunlap, and members  
19 of the Board, for this opportunity to briefly summarize the  
20 Air Resources Board/McDonald's air quality education  
21 project.

22 This partnership has been developing ARB  
23 established initial contact with McDonald's Corporation,  
24 based in Oak Brook, Illinois, since the spring of 1993.

25 As you may be aware, McDonald's is the world's



1 largest fast-food provider, with stores in nearly 60  
2 countries worldwide. It's the second most-recognized brand  
3 in the world and continues to grow. They're opening a new  
4 store somewhere in the world every eight and a half hours,  
5 365 days a year.

6 ARB, likewise, is recognized as the world leader  
7 and visionary in our quest for attaining and maintaining  
8 healthful air quality for all Californians. Hence, a  
9 partnership between us potentially appeared to be a natural  
10 fit -- two world leaders working together to promote a  
11 common goal: the health of their clients and our  
12 constituents.

13 Identifying common ground, establishing and  
14 building on mutual trust, developing and refining essential  
15 message and theme, and planning our initial project proved  
16 to be mutually challenging. The fact that this work was  
17 done primarily at the regional level, with California as the  
18 focal point, underscored and highlighted the uniqueness of  
19 our partnership, since most projects of this scope by  
20 McDonald's at their headquarters in Illinois.

21 You have before the first product of our joint  
22 efforts. This tray liner will be distributed statewide  
23 beginning mid-August, a total distribution of over 4.5  
24 million will be distributed. That represents, in other  
25 terms, almost 14 percent of the State's population, or one

1 out of seven Californians.

2           Additionally, our clean air message is being  
3 shared with the public in the middle of the statewide ozone  
4 season.

5           We believe that this represents the single largest  
6 public outreach distribution in the 25-year history of the  
7 Air Resources Board. The primary theme of this two-sided  
8 tray liner revolves around the importance of air quality to  
9 our individual health.

10           Furthermore, it offers suggestions on actions  
11 individuals can take to improve air quality. The reverse  
12 side of the tray liner has several fun word games for  
13 children and adults alike.

14           McDonald's contribution consisted of them paying  
15 for the printing and distribution of this multicolored  
16 project. And, as Mr. Boyd just referenced, the Air  
17 Resources Board was responsible for developing the concept,  
18 the design, and the artwork.

19           As you can see, the Air Resources Board/McDonald's  
20 air quality project represents the promise and mutual value  
21 of public/private partnerships. We believe that this is  
22 only one example of many successful future partnerships, and  
23 we are working diligently to establish and expand upon such  
24 alliances.

25           The development of such relationships can at times

1 be challenging, but yields significant dividends. We invite  
2 you to look for the tray liner locally, and welcome your  
3 suggestions and recommendations on how best to foster  
4 similar outreach efforts.

5 CHAIRMAN DUNLAP: Thank you, Mr. Brink.  
6 Appreciate this fine effort. I must say that I think I'm  
7 the first Board member to finish the word game there.

8 (Laughter.)

9 SUPERVISOR RIORDAN: You got them all?

10 CHAIRMAN DUNLAP: I got them all, it appears, yes.

11 (Laughter.)

12 MR. BRINK: That's reassuring.

13 (Laughter.)

14 CHAIRMAN DUNLAP: Thank you. Any questions of the  
15 External Affairs Office?

16 MR. LAGARIAS: Mr. Chairman?

17 CHAIRMAN DUNLAP: Sure, Mr. Lagarias.

18 MR. LAGARIAS: Clark, I think that's a very fine  
19 presentation. I notice that it's printed on recycled paper.  
20 The footnote says 75 percent post-consumer content. I  
21 understand that. But it says 25 percent preconsumer  
22 content. What's "preconsumer"?

23 MR. BRINK: Preconsumer content would be trimmings  
24 off of virgin paper that they recycle into the paper process  
25 itself.

1 MR. LAGARIAS: Okay. Thank you.

2 CHAIRMAN DUNLAP: Very good. Thanks very much.

3 One other item I'd like to draw the Board's  
4 attention is behind us to the left. It's a little exhibit  
5 outlining the fact that our Public Information Office has  
6 been working with the Bureau of Automotive Repair, BAR, on  
7 its public awareness campaign for Smog Check II, the new I&M  
8 program that is an important part of our SIP. You may have  
9 already heard the radio spots that started in Sacramento,  
10 L.A., San Diego, Fresno, and Bakersfield this week. These  
11 posters, the ones on the wall there, will cover 350  
12 billboards in those same cities, and will also appear in  
13 newspaper ads and in inserts.

14 The campaign will run through mid-November, and  
15 ARB will continue to work with the Bureau on more clean air  
16 messages. And Jerry Martin has been the point person on  
17 that effort. I'd encourage you to walk over there at a  
18 break and take a look at the material.

19 Also -- and the last item for me -- I'd also like  
20 to update everyone on the series of zero-emission vehicle  
21 forums that the staff is currently holding. The last forum  
22 was held two weeks ago in El Monte and focused on electric  
23 vehicle infrastructure.

24 I'm particularly pleased to note that a number of  
25 public citizens are taking advantage of these forums to

1 provide information to the staff. Although I wasn't able to  
2 attend the infrastructure forum, I am told that over 200  
3 people attended and over 40 speakers were heard. A great  
4 deal of progress has been made to address EV infrastructure.  
5 But, as we heard at the forum, there's still much more to  
6 do.

7 One of the highest priorities identified at the  
8 forum was the need to provide training to emergency response  
9 personnel on how to handle EV-related accidents or  
10 incidents. Our staff has already initiated contact with the  
11 State Fire Marshal's Office and the California Energy  
12 Commission to ensure that adequate training will be  
13 available.

14 I will direct the staff to continue to work with  
15 these agencies to ensure that public safety remains a high  
16 priority and a top consideration for us as we develop this  
17 program.

18 I'd also like to commend the staff for the fine  
19 job they are doing in organizing these forums, the series of  
20 forums. A workshop a month is a pretty tough schedule to  
21 keep up, and the staff has really risen to the occasion.

22 The next forum will be held on August 9th and will  
23 focus on a staff proposal to establish new performance-based  
24 standards that will provide a mechanism for extremely low-  
25 emitting vehicles to receive credit towards the zero-

1 emission requirement.

2 If anyone is interested in obtaining a copy of the  
3 staff proposal, they are available on the table outside the  
4 hearing room.

5 Very good. Thank you for your attention on those  
6 items.

7 That brings us to the first agenda item, 95-8-1.  
8 I would like to remind those in the audience, if you'd like  
9 to testify or comment, please see the Board Secretary off to  
10 the left.

11 If you'd like to provide written testimony, we  
12 would like to have 20 copies.

13 This first item is a public hearing to consider  
14 adoption of amendments to the certification procedures for  
15 all on-road motor vehicle retrofits, and to consider  
16 adoption of optional retrofit emission standards for heavy-  
17 duty engines and vehicles.

18 In May, 1992, this Board adopted more stringent  
19 retrofit certification procedures, because surveillance  
20 testing found problems with excessive emissions under the  
21 earlier procedures. Implementation of the new procedures  
22 began with the 1994 model year and did not go as smoothly as  
23 expected.

24 For our consideration today, staff is proposing  
25 regulatory changes to facilitate this certification process.

1 A separate but associated item is the development of mobile  
2 source credit programs.

3 In February of '93, the Board the mobile source  
4 emission reduction credits guidelines to be used by  
5 districts in developing mobile source credit programs.  
6 Then, later in '93, in November, the Board approved  
7 additions to the guidelines that would allow emission  
8 reduction credits to be granted for retrofitting existing  
9 heavy-duty vehicles to low-emission configurations.

10 Today, staff is also proposing regulatory changes  
11 necessary to implement the additional guidelines as modified  
12 and approved by the Board in November.

13 At this point, I'd like to ask Mr. Boyd to please  
14 introduce the item and begin the staff's presentation.

15 Jim?

16 MR. BOYD: Thank you, Mr. Chairman. Well, as  
17 indicated, today we will present proposals to implement  
18 retrofit credit guidelines and to, as we see it, facilitate  
19 certification of retrofit kits under the procedures that, as  
20 indicated, have already been passed and are currently being  
21 phased in.

22 Retrofitting vehicles either to use alternative  
23 fuels or to add emission control devices can, most  
24 certainly, decrease emissions. If the emissions are lower  
25 than required by federal or State law, the extra reduction

1 indeed can be eligible for credit programs.

2           However, there is the potential for retrofits to  
3 increase emissions even beyond the original emission  
4 standards of the vehicle in question. And that's been a  
5 concern of ours for a large number of years.

6           The ARB surveillance testing has found some  
7 problems with excessive emissions from vehicle retrofits.  
8 This is why the durability testing and warranty requirements  
9 that are being phased in now as part of our retrofit  
10 procedures are so very, very important to the future success  
11 of the program.

12           The phase-in of these new procedures has not  
13 proven easy. However it has provided a learning experience  
14 both for the manufacturers, as they have striven to develop  
15 kits that will last the lifetime of the vehicle, and for  
16 your staff as we work to look and define the critical  
17 elements of the durability testing, and work to facilitate  
18 and to streamline and speed up the process.

19           We are proposing amendments which will extend the  
20 phase-in of the new procedures by one year, allow more time  
21 for the manufacturers to complete durability testing, and  
22 allow installers the use of an alternate inspection schedule  
23 for high-volume conversions, such as fleet conversions.

24           Some of the proposed changes will also be  
25 reflected in the earlier alternate fuel or retrofit



1 procedures that I mentioned are being phased in now to  
2 provide continuity and consistency in the program.

3 We're also presenting a proposed alternate  
4 durability test plan. Under this proposed test plan,  
5 retrofits can be certified based on manufacturer derived  
6 deterioration factors and complete durability in use after  
7 certification.

8 This proposal should encourage vehicle retrofits  
9 and hopefully make a wider range of kits available to the  
10 public.

11 In addition to the changes to facilitate  
12 durability testing and certification, we are proposing  
13 changes to the mobile source emission reduction credit  
14 procedures that the Board has established.

15 The creation and use of credit programs provide  
16 voluntary and flexible ways for industry to meet emission  
17 requirements and attain our mutual air quality goals in the  
18 State.

19 The retrofit credit guidelines approved by the  
20 Board in November of 1993 provide direction to the local air  
21 pollution and air quality management districts in making  
22 their credit calculations in their enforcement activities  
23 and credit life determination for purposes of generating  
24 emission reduction credits by retrofitting existing vehicles  
25 to low-emission configurations.

1           The first proposal needed to implement the  
2 retrofit credit guidelines is the adoption of new optional  
3 retrofit emission standards. The standards will be used to  
4 determine how much mobile source emission reduction credits  
5 heavy-duty retrofits should get at all.

6           The proposed standards are very similar to the  
7 heavy-duty bus credit standards adopted by your Board in  
8 July of 1993, and also are similar to the optional low-  
9 emission standards for new heavy-duty engines that the Board  
10 adopted here last month.

11           Also, we are proposing amendments to the  
12 California certification and installation procedures for  
13 alternate fuel retrofit systems for motor vehicles certified  
14 for 1994 and subsequent model years. The amendments  
15 proposed will establish procedures so that systems designed  
16 to retrofit heavy-duty engines to low-emission  
17 configurations could be certified to standards that will  
18 generate emission reduction credits.

19           Heavy-duty vehicle retrofits could also provide  
20 emission reductions needed under the State Implementation  
21 Plan, or SIP. Alternate fuel conversions of heavy-duty  
22 vehicles could be part of the low-emission technology called  
23 for in the SIP. And retrofits of older heavy-duty vehicles  
24 could provide reductions from the existing fleets. And,  
25 quite frankly, I think you know we're depending very heavily

1 on this happening in some parts of the State to a very large  
2 extent, particularly in the Sacramento and Los Angeles  
3 areas.

4 Finally, the staff will propose some changes to  
5 the 1993 and earlier model year retrofit procedures which,  
6 as I indicated earlier, are being phased out. The changes  
7 are proposed to provide consistency with the 1994  
8 procedures. With that, I would now like to introduce the  
9 staff of the Mobile Source Division who will make the  
10 detailed presentation.

11 I would like to call on Ms. Renee Kemena. Ms.  
12 Kemena, if you would, please.

13 MS. KEMENA: Thank you, Mr. Boyd.

14 Mr. Chairman, members of the Board, this  
15 presentation covers staff's proposed amendments too the  
16 retrofit certification procedures and proposed credit  
17 standards for heavy-duty vehicles.

18 Vehicle retrofits typically convert a vehicle that  
19 operates on conventional fuel to operation on an alternative  
20 fuel, such as natural gas, propane, ethanol, methanol, or  
21 alcohol/gasoline blends.

22 The changes proposed today have two main purposes:  
23 to streamline certification of vehicle retrofit systems and  
24 to allow mobile source emission reduction credits for heavy-  
25 duty vehicle retrofits.

1           Before I get further into the presentation, I  
2 wanted to note that there have been some changes to the  
3 staff's proposal since the release of the staff report. A  
4 document showing those additional proposed is available  
5 outside the room and has been distributed to Board members.

6           This slide shows the outline of today's  
7 presentation. I will begin with some background on  
8 retrofits and recent history of the retrofit regulations.  
9 The rest of the presentation is divided into two parts. The  
10 first part includes the changes proposed to streamline  
11 certification for retrofit in all vehicle classes.

12           Kit manufacturers and installers have some  
13 concerns with recently implemented certification procedures.  
14 I will describe the work that has been done to address those  
15 concerns and the regulatory changes under consideration  
16 today to streamline certification.

17           The second part of the presentation covers  
18 proposed changes related to mobile source emission reduction  
19 credits. The credit-related changes include the proposed  
20 credit standards for heavy-duty vehicles and other credit-  
21 related changes to the certification procedures.

22           I will finish with the staff's conclusions and  
23 recommendation for Board action.

24           The background section will define retrofits and  
25 go into some recent history related to the regulation of

1 retrofits. Back in 1989, the ARB staff conducted in-use  
2 testing of vehicle retrofits. This testing showed some  
3 problems with the durability and the installation of some  
4 retrofit systems which led to excessive emissions.

5 Because of those problems, the Board adopted new  
6 retrofit certification procedures in 1992 for phase-in  
7 beginning in 1994.

8 As a separate item in 1993, the Board approved  
9 guidelines for the generation of mobile source emission  
10 reduction credits from vehicle retrofits. At that time, the  
11 Board directed staff to make some regulatory changes needed  
12 to implement portions of the guidelines.

13 Those credit-related changes are part of today's  
14 proposal.

15 Last year, 1994, was the first year for the  
16 implementation of those new retrofit certification  
17 procedures. Now more detail on each of those events will be  
18 provided.

19 The problems with the 1993 and earlier retrofit  
20 certification procedures, as shown through in-use testing,  
21 were excessive emissions from some vehicles, no required  
22 durability testing, and improper installation of some  
23 retrofit systems.

24 The 1994 procedures were adopted by the Board in  
25 its effort to solve those problems. The retrofit

1 certification procedures for 1994 and later model year  
2 vehicles required durability testing and manufacturer and  
3 installer warranties. These requirements help ensure  
4 against excessive emissions from vehicle retrofits.

5 Other requirements under the 1994 retrofit  
6 certification procedures include certification of systems by  
7 engine family and in-use compliance testing. The proposal  
8 that staff is presenting today retains all these important  
9 provisions to protect air quality while streamlining the  
10 certification process.

11 So, there are currently three sets of retrofit  
12 procedures for certification -- the 1994 and later model  
13 year retrofit procedures, the 1993 and earlier procedures  
14 for LPG and natural gas retrofits, and the 1993 and earlier  
15 procedures for alcohol/gasoline retrofits.

16 Those are the three retrofits certification  
17 procedures that would be affected by the staff's proposed  
18 changes. The 1994 procedures, as the arrow shows, are the  
19 main procedures of interest.

20 The industry averaged about three to four-thousand  
21 retrofits per year in the past few years. The number of  
22 retrofits per year dropped to about 1500 in 1994, due in  
23 part to difficulties certifying retrofit systems. I'll  
24 discuss that difficulty further in the presentation.

25 These last few slides have provided some

1 background up to the phase-in of the 1994 procedures.  
2 Manufacturers' and installers' concerns with the  
3 implementation of the new procedures led the staff to bring  
4 these proposal to you today.

5           These proposed changes will do much to streamline  
6 certification.

7           This is the phase-in schedule for the 1994  
8 procedures. Kit manufacturers must complete durability  
9 testing to certify at least 15 percent of their 1994 model  
10 year retrofit kits under the 1994 procedures. The  
11 remaining 85 percent of their 1994 model year kits can be  
12 certified under the 1993 and earlier procedures.

13           For 1995 and 1996 model year vehicle kits, the  
14 percentages that have to be certified under the new  
15 procedures is currently at 55 percent and then 100 percent,  
16 respectively.

17           The phase-in of the 1994 retrofit certification  
18 procedures did not go as smoothly as either ARB or the  
19 industry expected. In fact, manufacturers were unable to  
20 complete kit design and durability testing to certify 15  
21 percent of their kits under the new procedures by the end of  
22 1994.

23           Kit manufacturers and installers expressed  
24 concerns that the expense and time to complete the new  
25 testing would limit the range of kits available. They also

1 expressed concerns with scheduling installation inspections  
2 at the Bureau of Automotive Repair, or BAR, referee  
3 stations.

4 This initial phase-in has been a learning process  
5 for everyone. The ARB staff has worked with manufacturers  
6 and installers to resolve implementation issues. The staff  
7 has continued a dialogue with the retrofit industry to  
8 determine which characteristics are vital to demonstrating  
9 kit performance and how to streamline the certification  
10 process.

11 The ARB staff has already instituted a number of  
12 administrative changes to the retrofit certification  
13 process. Those changes have been primarily technical  
14 clarification and streamlining of the requirements.

15 Significant administrative changes have already  
16 been discussed at meetings and are being instituted. The  
17 administrative changes are not part of this proposal today.  
18 Today's proposal includes regulatory changes for  
19 streamlining certification.

20 Specifics on the administrative changes being  
21 instituted and the proposed regulatory changes under  
22 consideration today will be presented next.

23 This slide shows the administrative changes that  
24 are being instituted. The first is more liberal use of what  
25 are called carry-over and carry-across. Durability test



1 data from one model year can be used and carried over to  
2 subsequent model year vehicles. The data can also be  
3 carried across to other similar engine families; allowing  
4 more liberal use of carry-over and carry-across should make  
5 kits available for more engines.

6 The second administrative changes relates to  
7 deterioration factors, or DFs. DFs are factors that account  
8 for changes in emissions as vehicles age. The  
9 administrative change allows qualified use of conventional  
10 fuel deterioration factors for alternative fuel retrofits/

11 Allowing conventional fuel factors to be used in  
12 specific cases for alternative fuel retrofit kits should  
13 decrease the cost of durability testing.

14 The regulatory changes proposed to streamline  
15 certification include an alternate durability test plan,  
16 alternate installation inspection, and extending the phase-  
17 in of the 1994 procedures.

18 Under the proposed alternate test plan, the  
19 retrofit kit manufacturer would submit proposed  
20 deterioration factors. The retrofit system would be  
21 certified. Durability testing to validate the proposed DFs  
22 would be completed after certification. Thus, vehicle  
23 retrofits could be sold before durability testing was  
24 complete.

25 In-use testing and confirmatory testing would be

1 used to verify a manufacturer's DFs. Retrofit kit  
2 manufacturers are responsible for recalling and fixing the  
3 kits if there are any problems.

4 Manufacturers would sell their retrofit kits, but  
5 must later prove the emissions durability of their systems,  
6 or to quote a past President, "Trust, but verify."

7 By allowing manufacturers to certify and sell  
8 their retrofitted vehicles before completing durability  
9 testing, the alternate test plan would provide manufactures  
10 a quicker return on investment.

11 In addition, purchasers of vehicles of vehicle  
12 retrofits generally want retrofits of new vehicles. The  
13 alternate test plan would allow manufacturers to sell more  
14 current vehicle retrofits. The alternate test plan should  
15 greatly facilitate certification and encourage more  
16 retrofits.

17 The staff believes that the recall requirements  
18 would provide deterrence for most retrofit kit manufacturers  
19 to prevent any significant emissions increase. The staff  
20 further believes that the potential for air quality benefits  
21 from low-emission retrofits outweighs the potential risk.

22 There are three changes from the staff's original  
23 proposal as released in the staff report. First, the  
24 alternate test plan was originally proposed for heavy-duty  
25 vehicles and the heavy- or medium-duty vehicles that were

1 originally certified on an engine dynamometer.

2           Based on discussions with industry, staff extended  
3 the alternate test plan proposal to include light-duty  
4 vehicles and all medium-duty vehicles. Thus, the staff is  
5 proposing the alternate durability test plan for all vehicle  
6 classes.

7           Second, in discussions with industry, the staff  
8 stated that manufacturers would need to validate  
9 deterioration factors within two years. This change would  
10 make the two-year requirement explicitly part of the staff  
11 proposal.

12           And, finally, in December, the Board approved a  
13 change to the 1994 retrofit procedures related to on-board  
14 diagnostic monitoring, or OBD. That change was approved by  
15 the Office of Administrative Law on June 8th, 1995. The new  
16 retrofit procedures have been updated to include that  
17 language.

18           Retrofit kit installers expressed concern about  
19 scheduling installation inspections, particularly for high-  
20 volume retrofits, such as fleet conversions. The ARB staff  
21 has worked with the installers to develop a proposed  
22 alternate installation inspection provision.

23           Under this provision, the installer would only  
24 need to have the first ten vehicles and every tenth vehicle  
25 thereafter inspected.

1           The proposed alternate installation inspection  
2 would be used for high-volume conversions, such as fleet  
3 conversions. It would apply to installations of a single  
4 retrofit kit on vehicles of similar make and model. The  
5 alternate installation inspection should alleviate concerns  
6 about potential problems scheduling inspections for high-  
7 volume conversions.

8           However, as the BAR requested, retrofits would  
9 still need to be taken to a BAR referee station sometime  
10 after release to the customer. In most cases, the staff  
11 anticipates that retrofitted vehicles would be taken to a  
12 BAR referee station for the first smog check.

13           The proposed change to the phase-in schedule would  
14 add a year to the phase-in of the 1994 retrofit  
15 certification procedures. In 1996, the manufacturers would  
16 be required to certify 55 percent of their retrofit kits  
17 under the new procedures.

18           So this gives the manufacturers until the 1997  
19 model year before 100 percent of their kits must comply with  
20 the new procedures.

21           This slide shows several minor proposed changes  
22 related to the streamlining certification. The notes in  
23 parentheses to which classes of vehicles the changes would  
24 apply.

25           The proposed changes include requiring kit

1 manufacturers to provide name and address information about  
2 their facilities, exempting OEMs from submitting duplicative  
3 data for specific types of engine upgrades, removing the  
4 reference to the eight-mode chassis dynamometer test,  
5 because the Society of Automotive Engineers did not develop  
6 such a test, and updating a carry-over/carry-across test  
7 reference.

8           The alternate installation inspection and the  
9 extension of the phase-in of the 1994 procedures would both  
10 need to be reflected in the 1993 and earlier retrofit  
11 certification procedures.

12           Those were the only proposed changes to the 1993  
13 and earlier procedures. The second half of the presentation  
14 covers all the items related to mobile source credits. This  
15 part of the presentation will start with the heavy-duty  
16 credit standards, and then cover changes to the retrofit  
17 certification procedures that relate to credits.

18           The low-emission vehicle standards are the  
19 existing credit standards for light- and medium-duty  
20 vehicles. Light- and medium-duty vehicle retrofits can be  
21 certified to an LEV standard and receive emission reduction  
22 credit.

23           Last month, this Board adopted optional standards  
24 for new heavy-duty vehicles. The standards that the staff  
25 is proposing today for heavy-duty vehicle retrofits are

1 identical to those the Board approved in 1993 as part of the  
2 mobile source credit guidelines.

3 The proposed standards are also similar to credit  
4 standards for new heavy-duty vehicles.

5 Retrofits must be certified to credit standards to  
6 make the emission reductions legally enforceable and more  
7 readily quantifiable. Emission reductions from vehicle  
8 retrofits can be used for mobile source credit programs and  
9 for reductions needed under the State Implementation Plan,  
10 or SIP.

11 The SIP calls for a national 2 gram per brake  
12 horsepower hour NOx standard in 2004. On July 11th, 1995,  
13 heavy-duty engine manufacturers, the U.S. EPA, and the ARB  
14 signed a statement of principles agreeing to set a national  
15 new engine standard comparable to what's called for in the  
16 SIP.

17 For the alternative reductions, the Board directed  
18 staff to pursue other means of achieving reductions.  
19 Retrofits of older heavy-duty vehicles could reduce  
20 emissions from the existing fleet and contribute to the  
21 needed alternative reductions.

22 Heavy-duty vehicles converted to alternative fuels  
23 could introduce low-emission technology into the fleet.  
24 Retrofit technology is available now that may be able to  
25 meet a NOx emissions level as low as 2 grams per brake

1 horsepower hour for the life of the vehicle.

2           The SIP also calls for alternative reductions to  
3 substitute for a California only NOx standard in 2002. An  
4 early California only standard would put California  
5 companies at a competitive disadvantage in the trucking  
6 industry; therefore, the Board directed staff to pursue  
7 alternate reductions.

8           Retrofits could contribute to those alternate  
9 reductions. In addition, the Sacramento Metropolitan Air  
10 Quality Management District included reductions from heavy-  
11 duty vehicle retrofits as part of their district plan SIP  
12 submittal.

13           This slide characterizes the proposed credit  
14 standards. It shows the pollutants for which you could  
15 receive credits. It shows that the first credit standard is  
16 at least 25 percent below the ceiling standard, which is  
17 usually the engine's original certification standard. This  
18 slide also describes additional credit standards.

19           The proposed credit standards are best illustrated  
20 with an example. This slide shows the NOx credit standards  
21 for a 1987 model year heavy-duty diesel engine. The credit  
22 standards are specific to the applicable ceiling standard of  
23 6 grams per brake horsepower hour. And the first credit  
24 standard is 4.5 grams per brake horsepower hour, which is 25  
25 percent below the ceiling standard.

1           Alternate credit standards decrease from that  
2 level to 0.0 in half-gram increments.

3           The proposed changes would define ceiling  
4 standards for those cases where the original certification  
5 level is missing or is not appropriate. Those cases are  
6 listed here.

7           In addition to setting the heavy-duty credit  
8 standards and defining ceiling standards for some cases,  
9 there are a few other credit-related changes. These are  
10 proposed modifications to the retrofit certification  
11 procedures that the Board directed the staff to make when  
12 the Board approved the retrofit credit guidelines.

13           The first change would be that all retrofits for  
14 credit, including 1993 and earlier vehicle retrofits for  
15 credit, would need to use the 1994 certification procedures.

16           The retrofit procedures would be expanded to apply  
17 to conventional fuel retrofits for credit in addition to  
18 alternative fuel retrofits. This change would allow  
19 aftermarket controls, if certified as part of a retrofit  
20 system, to be eligible for credits.

21           The next change would allow light- and medium-duty  
22 vehicles to certify to Tier 1 standards. Currently, the  
23 1994 procedures allow certification only to low-emission  
24 standards.

25           And the last change would apply to dual fuel



1 vehicles retrofitted for credit. This change would make it  
2 explicit that these vehicles have to certify to a standard  
3 no more than one tier above the standard they certify to  
4 when operating on clean fuel.

5 That concludes the proposed changes to streamline  
6 certification and the proposed credit-related changes.

7 The proposed changes should streamline the  
8 certification process, decreasing both the cost and the time  
9 it takes to complete certification. The changes should make  
10 a wider range of kits available soon.

11 The proposed retains the provisions of the 1994  
12 procedures that were added to protect air quality -- the  
13 durability testing, warranties, and in-use testing. Thus,  
14 the procedures would continue to ensure the protection of  
15 air quality through in-use testing and recall provisions.

16 The proposed changes should encourage low-emission  
17 retrofits and also help with emission reductions needed  
18 under the SIP. The proposed changes would allow heavy-duty  
19 vehicle retrofits to generate mobile source emission  
20 reduction credits and facilitate credit generation from  
21 other vehicle retrofits.

22 In conclusion the staff recommends that the Board  
23 adopt the proposed credit standards for heavy-duty vehicle  
24 retrofits, the proposed amendments to the 1994 and  
25 subsequent model year certification procedures, the proposed

1 amendments to the 1993 and earlier model year retrofit  
2 certification procedures, and the related reference changes.

3 At this time, the staff will be happy to answer  
4 any questions that you have.

5 CHAIRMAN DUNLAP: Okay. Thank you.

6 Mr. Boyd, do you have anything to add?

7 MR. BOYD: No, Mr. Chairman.

8 CHAIRMAN DUNLAP: Okay. Any of my colleagues on  
9 the Board have any questions for staff at this point?

10 MR. CALHOUN: Yes, Mr. Chairman.

11 CHAIRMAN DUNLAP: Yes, Mr. Calhoun.

12 MR. CALHOUN: One of the slides that the staff  
13 showed, in effect, said that you'd apply for certification  
14 and complete the certification -- all the certification  
15 requirements after the certification had been granted. And  
16 the staff has had a policy in effect for many years which,  
17 in effect, allowed manufacturers to apply for certification  
18 whenever there was some difficulty, but the certification  
19 was conditional.

20 And I'm just trying to understand what's your  
21 rationale for not imposing a conditional certification in  
22 this case?

23 MR. CROSS: The proposal, as staff has put it  
24 together, retains all of the enforcement provisions that are  
25 in place and that have historically been in place. In other

1 words, should the manufacturer fail to complete the  
2 durability demonstration, for example, or not -- not  
3 demonstrate that the system was as clean as the initial  
4 certification application showed that it was, the staff  
5 would have the authority to recall the systems or to  
6 essentially stop the sale of the systems at the time at  
7 which that was determined.

8           So, essentially, the difference between the way it  
9 has been done, if you will, which is to have an executive  
10 order be given to the manufacturer, which has a list of  
11 conditions, which says if you don't -- don't do certain  
12 things, your certification is revoked.

13           And what the staff is proposing here is that this  
14 executive order would be, quote, "unconditional," in the  
15 sense that it would give the staff more flexibility to  
16 determine how it would do enforcement, if it's necessary,  
17 rather than predetermining at the time the executive order  
18 is issued.

19           MR. CALHOUN: If a conditional certification were  
20 granted, would that impose any additional requirements at  
21 this time on the manufacturers at all?

22           MR. CROSS: Not that I can see. It would change--  
23 essentially, it would determine what the consequences are,  
24 if you will, should the manufacturer fail to complete or  
25 inadequately -- fail to complete its demonstration or not

1 essentially the threat that one uses to induce them to fix  
2 the noncompliance problem.

3 SUPERVISOR SILVA: So, the regulations are  
4 enforced; it's just that they're not out of compliance.  
5 They stick to it pretty tight.

6 MR. CROSS: Yeah, the regulations are enforced.  
7 It's just -- it's almost a semantic issue on this in terms  
8 of -- if you give a conditional executive order, you  
9 essentially tell them what they have to do in their actual  
10 certification document and what happens if they fail to do  
11 it.

12 And so, it's sort of saying, we're giving you the  
13 certification, but you haven't finished what you needed to  
14 do to complete the certification process. And if you fail  
15 to do it, then here are the consequences.

16 The unconditional situation that we're proposing  
17 has the same authority -- in other words, the executive  
18 order that we're issuing conditionally, we're putting in a  
19 bunch of our authority in writing. In the unconditioned  
20 one, we have the same authority, but we have more  
21 flexibility on how we implement it, because we haven't said,  
22 you know, you have to do this, and this, and this, and we'll  
23 do this and this if you don't do it.

24 SUPERVISOR SILVA: I'd really like to see, you  
25 know, this agency cut through the red tape, which they have

1 a very good history on. And I don't believe in a lot of  
2 rules and regulations, but I do feel the ones that are on  
3 the books should be enforced.

4 And what you're saying is that they are.

5 MR. CROSS: They're pretty tight.

6 SUPERVISOR SILVA: Okay.

7 MR. CROSS: They are. It's essentially how much  
8 flexibility you put into the system. And, as you take  
9 flexibility out, you can -- you know, it puts more pressure  
10 on the industry which you're asking to comply, but it also  
11 puts more pressure on us in terms of how you deal with an  
12 enforcement situation should it arise and require some --  
13 some discretionary decisions.

14 In other words, you get borderline cases. And  
15 sometimes, in those cases, you really want to have some  
16 legal room rather than having a hammer absolutely fall at  
17 the moment the executive order says it's supposed to.

18 SUPERVISOR SILVA: Well, the way I understand it  
19 is, we are fair, and I think that's the way it should be.

20 MR. CROSS: We try.

21 SUPERVISOR SILVA: Okay. Thank you.

22 CHAIRMAN DUNLAP: Why don't we -- at this point,  
23 I'll ask my colleagues to hold off. We'll invite the  
24 witnesses to come forward. We have seven. Greg Vlasek from  
25 the California Natural Gas Vehicle Coalition. I'll ask Greg

1 to come forward. John Freel will be next, from WSPA; and  
2 then my favorite, Lauren Dunlap will be here, I guess.  
3 Let's see, hello Lauren.

4 Mr. Vlasek.

5 MR. VLASEK: Good morning, Chairman Dunlap and  
6 members of the Board. I'm Greg Vlasek, Executive Director  
7 of California Natural Gas Vehicle Coalition here in  
8 Sacramento.

9 The proposed amendments to the retrofit  
10 certification regulations for these gaseous fuel retrofit  
11 systems represent the culmination of 18 months of fact-  
12 finding, vehicle testing, and close cooperation between the  
13 retrofit manufacturers, the conversion industry that's based  
14 here in California, and the Air Resources Board staff.

15 I'm very pleased to be here today speaking  
16 strongly in support of these regulatory changes, and to  
17 thank the staff for their diligent, extraordinarily diligent  
18 and cooperative efforts in bringing these regulations before  
19 you today.

20 The conversion industry has come a long way since  
21 the spring of 1992 when the 1994 and later model year  
22 retrofit regulations were adopted. Today, gaseous fuel  
23 retrofit technology is, in most respects, equal to OEM  
24 technology.

25 The open-loop, carbureted systems that created the

1 initial cause for concern by ARB about retrofit emissions  
2 and durability have given way to closed loop, electronically  
3 controlled fuel-injected technologies, a far greater  
4 reliability and potential for long-term emissions benefits.

5           Effecting this change was, I believe, the  
6 underlying goal of the changes to the regulations that were  
7 approved in 1992.

8           What the amendments propose today will do is  
9 recognize the needs and constraints of the retrofit  
10 manufacturing and vehicle conversion industries for what  
11 they are, technically competent, small volume manufacturers.

12           Because it produces thousands and not millions of  
13 units, the industry lacks the sophisticated in-house  
14 emissions laboratories and mileage accumulation test tracks  
15 that OEMs use, and has far fewer sales over which to spread  
16 certification costs.

17           There are three key areas in which the amendments  
18 will reduce the cost of the certification process  
19 substantially without appreciably increasing the risk to air  
20 quality benefits that the 1992 regulation was designed to  
21 ensure.

22           First, discretionary employment of assigned DFs  
23 and emissions data carry-across are widely accepted  
24 practices for OEM certification. We believe it is  
25 reasonable to extend these practices to small volume

1 retrofit certification as well.

2 The alternative test plan provision of the  
3 amendments will allow this, but only when it is technically  
4 warranted.

5 Second, the provision to reduce the number of BAR  
6 inspections required for identical fleet vehicle conversions  
7 is needed and welcome. It will save time and money, but  
8 only for those installers who demonstrate competency with  
9 specified conversion systems.

10 Although many early start-up problems with the BAR  
11 inspection program have been resolved, the requirement that  
12 every single conversion be driven to a BAR referee station  
13 for inspection is unnecessary and burdensome for the  
14 conversion industry, which is operating on slim margins  
15 today.

16 Finally, the amendments allow for additional time  
17 for manufacturers to complete full durability testing of  
18 engine families for which it is required. We think this is  
19 very important to the retrofit manufacturers, because they  
20 require additional time to basically reverse engineer their  
21 products based on the OEM technology.

22 This process is becoming more complicated with  
23 more sophisticated OEM controls, and therefore more time-  
24 consuming. So, they need a longer leadtime not only to  
25 design the system; they also need a longer time in which to



1 prove the durability -- again, because they don't have the  
2 opportunity to do duplicative testing concurrently on  
3 several vehicles on a high-speed test track, and they don't  
4 have the sophisticated laboratory facilities to enable more  
5 rapid testing that the OEMs have.

6 Under the new regulations, manufacturers will have  
7 more latitude to market their conversion systems sooner and  
8 for a greater variety of vehicles. However, they will still  
9 need to prove their products and choose their markets  
10 carefully, because with the greater market opportunity that  
11 the new certification procedure affords, there comes a  
12 substantially greater responsibility and liability for in-  
13 use performance.

14 Nothing in the proposed changes weakens the  
15 warranty, in-use compliance, or recall provisions for these  
16 vehicles.

17 In conclusion, let me again thank the staff for  
18 their continuing cooperation and assistance in enabling this  
19 industry to make contributions to California's air quality  
20 and economy that this industry definitely wants to make.

21 And I'll be happy to take any questions with that.

22 CHAIRMAN DUNLAP: Any questions of Mr. Vlasek?

23 MR. CALHOUN: Yes. Mr. Vlasek, would you care to  
24 respond to the question I asked the staff earlier about the  
25 impact of imposing any conditional certification on a member

1 of your coalition?

2 MR. VLASEK: Well, I don't see that there is a  
3 significant difference in the downside risk, frankly. There  
4 is a risk. There's always a risk when you allow somebody  
5 some latitude upfront. But this is not -- what these  
6 procedures do is not roll back the regulations to what we  
7 had prior to 1994. There's still a substantial amount of  
8 engineering analysis that has to be done. Again, these are  
9 closed-loop systems that do monitor for catalyst  
10 temperature, fuel management, oxygen concentration, and  
11 these are not unsophisticated technologies.

12 So, I think the risk to the people of California  
13 in terms of possibly increasing emissions is far, far less  
14 than it was when this originally came up in 1992. And you  
15 do have the -- as staff stated, you do have the enforcement  
16 options there.

17 I think, if I could make a comparison relative to  
18 a scrappage program where you're basically allowing a  
19 certain increment of emissions reductions or emission  
20 inventory from a system, you have -- once that's allotted  
21 and the vehicle is scrapped, you have no say or control at  
22 all as to whether that is actually achieved.

23 There's nothing you can do after the fact to  
24 enforce that reduction. So, on a scale of risk to the  
25 public, I think these retrofit regulations are more like the

1 OEM-type situation on that scale than towards the more  
2 speculative type of measures, such as scrappage, frankly.

3 CHAIRMAN DUNLAP: Is that it? Ms. Edgerton.

4 MS. EDGERTON: I wanted to follow up a little on  
5 the time for the durability testing. As a practical matter,  
6 how long do you find it takes to do the durability testing.

7 You did comment, and you did address the issue of  
8 why it takes longer now, but how long, as a practical  
9 matter, do most of them take?

10 MR. VLASEK: The experience we've had, with the  
11 limited year and a half of experience with these  
12 regulations, has been that the manufacturers first have to  
13 get their hands on the vehicle for which they intend to  
14 offer their retrofit system for.

15 And then from there, they begin the reverse  
16 engineering process, and the calibration, and everything  
17 that they need to do to make sure that the system will  
18 maintain appropriate emissions levels and also perform well  
19 on the vehicle.

20 That sets them into the model year, well into the  
21 spring of the model year in some cases, when that -- when  
22 they can have their test plan ready to take to the staff.

23 Then they have a situation where they need to  
24 confirm the -- to do their confirmatory durability testing.  
25 What takes an OEM a minimum of four or five months to do on

1 a test track with multiple vehicles going around the track;  
2 and if something happens to one of those vehicles  
3 mechanically that's totally unrelated to the emission  
4 controls system, they have another backup vehicle ready to  
5 go.

6 Well, that's a very expensive process, something  
7 on the order of 150, \$250,000 per vehicle that's going  
8 through that process. These are small -- again, small  
9 manufacturers that really can't afford that kind of testing.

10 So, if they have a failure, or some kind of  
11 problem with the vehicle while it's in the durability  
12 demonstration mode, they have to pretty much start from  
13 scratch.

14 And that's why the industry needs the additional  
15 latitude of the longer period of time going into the second  
16 model year after the -- for the year -- for the  
17 certification that's being sought.

18 MS. EDGERTON: Well, that's helpful, but let's say  
19 that they've got a vehicle -- when would they get it, in  
20 November? You're saying they would get the model year --  
21 the new vehicle, takes a while for them to get that. So,  
22 when -- let's just walk through it.

23 If they get it in November, or they get it in --  
24 when's the earliest they could get it, October?

25 MR. VLASEK: Yeah. Approximately that, and then

1 it depends on the model, too. Some models are released  
2 later in the year.

3 MS. EDGERTON: So, if you get it in October,  
4 you're saying, if I understand you, it might be April before  
5 they'd be able to analyze it and figure out what they need  
6 to do even to retrofit it?

7 MR. VLASEK: That has been the initial experience.  
8 Then again, this is very initial experience with trying to  
9 work through these new -- the regulations as they stand  
10 today.

11 MS. EDGERTON: And then, after that, if they try  
12 to --

13 MR. VLASEK: After that, they could conceivably,  
14 doing a rigorous hundred thousand mile durability cycle,  
15 they could conceivably achieve that or accomplish that  
16 within -- I mean maybe a six-month period. But, you know,  
17 if there's any problems or hitches with anything  
18 mechanically or anything related to the test plan that's  
19 been submitted to ARB, then there's, you know, some period  
20 of time that those things have to be resolved. And it's,  
21 you know, a series of complications and revisions, or  
22 changes, or additional -- having to start over again, which  
23 is the case that one manufacturer had for their 1994  
24 certification, it can extend into two years.

25 That's the reason I think they're -- we've -- that

1 it's been crafted the way that it has.

2 MS. EDGERTON: But I guess the --

3 MR. VLASEK: (Interjecting) It may not take two  
4 years, but it could take more than a year. So, I think a  
5 two-year -- a two-year extension is reasonable.

6 MS. EDGERTON: But one thing I wanted to know is,  
7 by that time, do the converters still want to be converting  
8 that model?

9 MR. VLASEK: It depends. Some -- again, it  
10 depends on the model. Because some engine families change  
11 dramatically from year to year and some don't. Some stay  
12 very much the same.

13 MS. EDGERTON: Okay. Thank you.

14 MR. VLASEK: Some vehicles have almost no changes  
15 for that period of time.

16 CHAIRMAN DUNLAP: Do you have anything else? Mr.  
17 Calhoun?

18 MR. CALHOUN: One last comment, Greg. I don't  
19 want to let you get away without commenting on the remark  
20 you made regarding scrappage. I don't agree with you there.  
21 And I want you to know that.

22 But scrappage is the subject of another hearing,  
23 so we can move on.

24 (Laughter.)

25 CHAIRMAN DUNLAP: Duly noted, Mr. Calhoun. Thank

1 you, Greg, for your time.

2 MR. VLASEK: I believe there -- I know for a fact  
3 there are several manufacturers in the audience. I don't  
4 know whether or not they're planning to testify. But if you  
5 have further technical questions or some clarification that  
6 you don't feel that I've been able to provide -- and that  
7 may very well be -- I think there are a couple of resources  
8 ut there you could search for.

9 CHAIRMAN DUNLAP: Okay. Thank you.

10 Mr. Freel from WSPA? Lauren Dunlap and Stephanie  
11 Williams.

12 Good morning.

13 MR. FREEL: Good morning, Chairman Dunlap, members  
14 of the Board.

15 My name is John Freel. I'm an employee of  
16 Chevron, but I'm commenting on behalf of the Western States  
17 Petroleum Association, or WSPA, today.

18 WSPA would like to comment on three different  
19 aspects of today's proposals. We would like to comment on  
20 the method of calculating credits when heavy-duty engines  
21 are retrofitted to tighter emission standards.

22 We'd also like to comment on some of the changes  
23 to the procedures for certifying alternative fuel retrofit  
24 kits. And, finally, we wish to comment on the treatment of  
25 certain bi-fuel retrofits.

1 First, WSPA supports the proposed method of  
2 calculating emission reduction credits for heavy-duty  
3 retrofits. The staff proposal should ensure that heavy-duty  
4 engines conversion to tighter emission standards will give  
5 the expected emission benefits.

6 The proposal is fuel neutral, and it gives equal  
7 credit for equal emissions reductions. This will give  
8 individual fleet operators flexibility to generate credits  
9 using whatever technology is most cost-effective for them.

10 We believe it will also encourage innovation in  
11 reducing emissions from the existing heavy-duty fleet.

12 WSPA is pleased to endorse the proposed standards  
13 for heavy-duty retrofits, and the proposed basis for  
14 calculating emission reduction credits.

15 Turning to the proposed changes in the procedures  
16 for certification of alternative fuel kits, WSPA recognizes  
17 that the existing procedure for certifying these kits needs  
18 to be made more usable.

19 However, we are concerned that some of the  
20 proposed changes could compromise air quality. As has  
21 already been noted by one of the Board members, one such  
22 change is the inordinately long time allotted to complete  
23 durability testing. Under the ARB proposal, the kid  
24 manufacturer has until the end of 1997 to finish durability  
25 testing on 1996 kits and so on.



1           Conceivably, although the preceding speaker felt  
2 otherwise -- but conceivably, a kit maker could begin  
3 selling a 1996 model year kit in the fall of this year, yet  
4 be allotted until December, 1997, to demonstrate durability,  
5 some 27 months later.

6           WSPA recommends that the obligation to complete  
7 durability testing should be met in the same model year for  
8 which the kit is intended.

9           We have the same concern about implementing the  
10 proposed phase-in schedule. The phase-in requirements could  
11 allow large numbers of retrofits to be certified using the  
12 older and less stringent 1993 procedure. Of course, t he  
13 kit makers are obliged to certify a significant percent of  
14 their kits using the 1994 procedure. But, as in the case of  
15 durability, under the ARB proposal, this obligation to  
16 certify using the new procedure need not be met until the  
17 end of the following calendar year.

18           WSPA recommends that any phase-in requirement to  
19 certify under the new 1994 procedure be met strictly within  
20 the model year in which the obligation is incurred.

21           Allowing kit makers so much time to meet deferred  
22 obligations could also create problems with enforcement.

23           Retrofits should face the same obligations as the  
24 original equipment manufacturers with whom they compete. We  
25 believe this is especially true of durability. Lack of

1 durability was the principal reason the Board strengthened  
2 their retrofit procedures in 1992.

3 WSPA recommends that vehicles converted using a  
4 kit that fails its durability test must absolutely be  
5 recalled, and any benefits associated with uncorrected  
6 retrofits should be disallowed.

7 Our final comments concern certain bi-fuel  
8 conversions. A Tier 1 gasoline vehicle converted to a bi-  
9 fuel TLEV has to meet TLEV standards on the alternative  
10 fuel, but need only meet the original Tier 1 standards on  
11 gasoline.

12 The conversion, therefore, provides no  
13 environmental benefit relative to Tier 1 if it is fueled  
14 with gasoline. To the extent that it is fueled with  
15 gasoline, it is not a TLEV, and it is an alternative fueled  
16 vehicle.

17 WSPA recommends that a bi-fuel TLEV vehicle  
18 operated on gasoline not count as a TLEV or as an  
19 alternative fuel vehicle in CARB programs.

20 We also recommend that such vehicles not receive  
21 full emissions reduction credits or financial incentives.

22 Thank you.

23 CHAIRMAN DUNLAP: Okay. Any questions?

24 MR. CALHOUN: One question.

25 CHAIRMAN DUNLAP: Go ahead.

1           MR. CALHOUN: In the written correspondence that  
2 we received from WSPA, at least on the second page in the  
3 first paragraph, you said, "There is no meaningful  
4 enforcement if a kit maker fails to meet the durability  
5 standard."

6           Would you like to elaborate on that?

7           Then, following your elaboration, I'd like to have  
8 the staff respond to what you have to say.

9           MR. FREEL: It's difficult to respond, Mr.  
10 Calhoun, without citing history of what happened in 1994.  
11 In that year, as you heard in the staff presentation, no  
12 kits -- no kits were certified using the new procedure.  
13 There were quite a few kits certified using the old  
14 procedure; therefore, the percentage requirement in 1994 for  
15 new procedure certified kits, if you will, was not met.

16           And, to my knowledge, there was no enforcement of  
17 that provision. And it is this same flexibility in  
18 enforcement which we find disappointing in the current  
19 proposal.

20           CHAIRMAN DUNLAP: Mr. Cross? You want to talk  
21 about the enforcement question?

22           MR. CROSS: There was -- basically, the reason  
23 this proposal was before you is to adjust the regulations to  
24 reflect the problems that the manufacturers encountered in  
25 1994.

1           In other words, there were problems with  
2 certifying kits in 1994. I think we're all aware of them.  
3 There are kits certified now. So, I think the claim that  
4 the staff was making that the manufacturers will come on  
5 board and do a good job with this has some substantiation.

6           Basically, it was our judgment that with 1994  
7 being the first year and with the problems the manufacturers  
8 were having, the appropriate thing to do bring the issue to  
9 the Board and try and adjust the procedures so that they  
10 would accommodate this industry and yet, at the same time,  
11 end up with good systems when we're all done.

12           CHAIRMAN DUNLAP: It seems to me that the key  
13 element that I'd like you to address is the 27-month window  
14 that he spoke of. Is it possible for us to be able to --  
15 first of all, do you agree with that 27-month time period,  
16 and is it possible for us to determine that there are  
17 problems with these kits through, you know, the process  
18 ahead of time? Or is it always going to be the 27-month  
19 time period?

20           MS. KEMENA: Well, first of all, I'd like to say  
21 that the manufacturers started the process, the  
22 certification process for the 1994 model year kits, and the  
23 first manufacturer, GFI, just recently certified their first  
24 kits under the new procedures in May of this year, which  
25 means it took them 18 months. And they were the first

1 manufacturer to do that.

2 We have a couple other manufacturers that are  
3 about to be certified under the new procedures, but we're  
4 coming up on 20 months.

5 CHAIRMAN DUNLAP: 20 months? Okay.

6 MS. KEMENA: So, that's how long it has taken them  
7 so far. And next year, they're going to be facing the OBD  
8 II requirements and, you know, the whole host of design  
9 challenges that --

10 CHAIRMAN DUNLAP: Right. Right.

11 MS. KEMENA: -- those requirements face.

12 CHAIRMAN DUNLAP: Okay. Thank you.

13 Any other questions for Mr. Freel?

14 Thank you. Lauren Dunlap, followed by Stephanie  
15 Williams and Donel Olson.

16 Good morning, Ms. Dunlap.

17 MS. DUNLAP: Good morning, Chairman Dunlap.

18 (Laughter.)

19 MS. DUNLAP: It sounds kind of strange. Members  
20 of the Board, Southern California Gas Company appreciates  
21 the opportunity to provide some very strong for the  
22 California Air Resources Board's proposed amendments to the  
23 alternate fuel retrofit certification and installation  
24 regulations. The staff proposals reflect significant  
25 cooperative effort over the past several months between ARB

1 staff, retrofit kit manufacturers and installers, as well as  
2 fuel providers, in order to develop amendments that provide  
3 much needed flexibility to make natural gas vehicle  
4 conversions a viable air quality improvement technology.

5 As you know, the gas company has previously  
6 addressed your Board concerning the difficult challenges  
7 raised by these existing regulations. These amendments  
8 today substantially eliminate those challenges.

9 Accordingly, we are pleased to recognize the  
10 efforts of your staff and call for adoption of these  
11 amendments.

12 Specific amendments supported by the gas company  
13 include the extended phase-in schedule that allows more time  
14 for the manufacturers to meet the requirements, the  
15 alternate referee inspection schedule provisions, allowance  
16 of the derived deterioration factors for all vehicle classes  
17 to support certification, followed by validation of these  
18 derived factors within two years, and incorporation of a  
19 methodology to facilitate emission credit generation for the  
20 approved low-emission vehicle conversions.

21 Adoption of these amendments at today's hearing is  
22 critical to the success of the natural gas vehicle  
23 conversion industry, and provides an opportunity for the ARB  
24 to reaffirm its commitment to the successful implementation  
25 of low-emission technology to support air quality

1 improvement goals.

2 Thank you again for your continued support.

3 CHAIRMAN DUNLAP: Thank you. Ms. Edgerton.

4 MS. EDGERTON: Ms. Dunlap, can you tell me how  
5 much -- you may not know this, or you may not even have  
6 these figures. But how much of the delay, for example -- or  
7 time that was taken to certify the first 1994 kits might  
8 have been due to the BAR delays that are now -- I understand  
9 BAR had some significant delays, but they're now through  
10 their bottleneck and they're able to respond better.

11 MS. DUNLAP: I am new at the gas company, and that  
12 was just before my time. Greg, do you have a feel for that?

13 MR. VLASEK: (From the audience) Yeah, early on  
14 in the program --

15 CHAIRMAN DUNLAP: Mr. Vlasek?

16 MR. VLASEK: Yeah.

17 CHAIRMAN DUNLAP: In deference to our court  
18 reporter, would you be so kind to come forward to the  
19 microphone?

20 Thank you. Then we can hear you fine up here.

21 MR. VLASEK: Early in the program, the delay of  
22 getting vehicles inspected was -- in many cases, it was a  
23 month and possibly two months -- because of the fact that  
24 their training -- the scheduling and training was new to the  
25 BAR referee stations. And so, there was just a lot of

1 problems in getting that up and running.

2 But it wasn't an extensive delay in the order of  
3 four to six months, anything like that.

4 MR. CALHOUN: Has that been resolved now for the  
5 most part?

6 MR. VLASEK: For the most part, we understand it's  
7 been resolved. I guess it's partially attributable to lower  
8 numbers of regular gasoline vehicles having to go through  
9 referee stations as a result of changes in the I&M program.  
10 I'm not sure what those are, but I understand that's partly  
11 why the process is working better now.

12 CHAIRMAN DUNLAP: Yes. Okay. Any other questions  
13 for Ms. Dunlap? Okay. Very good. Thank you.

14 Stephanie Williams from CTA, California Trucking  
15 Association. Donel Olson from Vinyard Engine Systems, Inc.,  
16 and then Paul Wuebben from the South Coast District to  
17 follow.

18 Good morning.

19 MS. WILLIAMS: Good morning. My name is Stephanie  
20 Williams, and I'm employed with the California Trucking  
21 Association as manager of research and environmental policy.

22 I'd like to apologize for our addressing you so  
23 late on this issue, but we've been working diligently to  
24 develop a trucking policy that can work towards the  
25 environment and the economy.



1 California registered vehicles must be allowed by  
2 their own State to compete for freight in California.  
3 Without a level playing field for California-based carriers,  
4 environmental regulations do not achieve forecasted benefits  
5 and will actually have a negative impact on the air and the  
6 economy in our State.

7 We've had limited opportunity to review the report  
8 and recommendations. However, our preliminary review  
9 indicates that the proposed regulations may obstruct work  
10 done in our working group with the environmental community  
11 and the local air districts.

12 If you'll turn to the last page of the handout I  
13 provided, this is a flow chart of our plan for complying  
14 with the SIP in the heavy-duty truck area. And retrofit  
15 looks like a promising technology.

16 We're meeting with environmentalists, local air  
17 districts, and industry, and engine manufacturers and  
18 putting together a plan where we can meet the SIP compliance  
19 for 2005.

20 And, as you can see, retrofit and repower are our  
21 proposals through our subcommittees. What we're asking for  
22 today is time to review these retrofit regulations and see  
23 how they affect our industry.

24 Our concern today is the way that we're purchasing  
25 alternative fuel vehicles as an industry. We have -- we've

1 looked at alternative fuels, and currently we're working on  
2 some demonstration projects with the South Coast and the  
3 Sacramento Air District.

4 And to purchase an alternative fuel engine, we  
5 have to modify the engine, which would be looked at as a  
6 retrofit. And we're wondering if these engines will then  
7 have to be certified again by some process and cause cost-  
8 prohibitive methods for complying with the SIP.

9 So, we feel that if this could be delayed and we  
10 could meet with the Air Board to discuss these concerns?

11 CHAIRMAN DUNLAP: Ms. Williams, can I interrupt  
12 for a moment?

13 Mr. Cross, can you comment on that maybe to give  
14 her and us a flavor for that? A likely response, perhaps?

15 MR. LOVELACE: Mr. Chairman, this -- I don't  
16 really understand why this would be a problem. What we're  
17 saying is, this is how one certifies a retrofit. And the  
18 engine manufacturers, the OEMs, the people who build brand  
19 new low-emission engines would go through the same thing  
20 that they do now.

21 We're having no change there. So, all we are  
22 doing with this proposal is saying this is how one certifies  
23 a retrofit. And Ms. Williams is addressing heavy-duties in  
24 particular. This is how you certify a retrofit. And if  
25 it's going to be a low-emission retrofit, these are the

1 standards to which you certify them to.

2 Now, I've been a participant on the working group  
3 that Stephanie just mentioned, and I really don't see how  
4 this could be a hindrance to that effort.

5 CHAIRMAN DUNLAP: Okay.

6 MS. WILLIAMS: What my concern would be --  
7 actually, I can ask them right now.

8 If, for example, in the diesel engine, we purchase  
9 an engine that's certified, and the engine -- then you pick  
10 your chassis.

11 So, the engine is certified different than the  
12 alternative vehicle would have to be certified if I'm  
13 reading these regulations correctly.

14 Would you then buy the alternative fueled engine,  
15 an LNG heavy-duty engine? Because it can't be put into a  
16 traditional chassis, you'd have to modify the chassis, which  
17 means you wouldn't have a warranty on the fueling system.

18 So, would they then have to go through the  
19 alternative -- let's say I'm Company Z, and I buy 100 LNG  
20 heavy-duty diesel vehicles, and I'm attempting to get credit  
21 for that, because the cost is much higher than diesel  
22 engines. I want some type of emission credit.

23 Could I apply for an emission credit if the  
24 fueling system isn't really warrantied or certified; only  
25 the engine is?

1 MR. LOVELACE: If you are -- are you talking about  
2 a brand new engine?

3 MS. WILLIAMS: I'm talking about a brand new  
4 engine that I have to modify the chassis to put the engine  
5 in, hand-made, and a company -- X-company in Modesto,  
6 California may do the modification. Right now, you can't  
7 buy an alternative-fueled vehicle commercially. We have to  
8 modify.

9 But we want credit for using alternative-fueled  
10 vehicles. It's part of, you know, our industry plan. If  
11 you look at the chart on the right-hand side, lower NOx  
12 vehicle acquisition would include liquid natural gas.

13 MR. LOVELACE: You mean the truck companies will  
14 not provide you with a truck equipped with an alternative  
15 fuel engine?

16 MS. WILLIAMS: Exactly.

17 MR. LOVELACE: Freightliner won't do it?

18 MS. WILLIAMS: No, they will not.

19 MR. LOVELACE: Peterbilt?

20 MS. WILLIAMS: We tried. We actually had a  
21 meeting with all engine manufacturers. It's not available  
22 commercially and won't be in the near term. Companies are  
23 purchasing the vehicles, modifying themselves, and running  
24 on some of the alternative fuels in a precommercialization  
25 state. And in the future, it could go in that direction.

1           But in the near term, we'd like emission credits  
2 for running on alternative fuels.

3           MR. CROSS: For heavy-duty engines, the engine is  
4 the certified thing anyway, if you will. In other words,  
5 when you -- when a new truck manufacturer wants to make a  
6 truck, it buys a certified engine from an engine  
7 manufacturer and drops it in whatever chassis which it wants  
8 to.

9           And these regulations don't change that at all.  
10 And so, there's no -- I don't think there's an issue. In  
11 other words, if Mack wants to build a diesel truck, Mack  
12 puts Mack's diesel fuel tank on there and hooks it to the  
13 certified engine and sells it.

14           And similarly, if Mack wanted to build a natural  
15 gas truck, or a propane truck, or whatever else, the engine  
16 is the certified device, not the truck. So, Mack could put  
17 its propane cylinders or whatever on there and hook that to  
18 the engine, and it would be similarly certified.

19           So, I don't think there's an issue here.

20           MS. WILLIAMS: Well, what we have is --

21           MR. CROSS: And one --

22           MS. WILLIAMS: Mack providing an engine, and  
23 Kenworth provided a chassis, and some Company X providing  
24 the fueling system and modifying the chassis to have it run  
25 on alternative fuels.

1           MR. CROSS: I'm saying that all that's fine as  
2 long as -- we have a semantic problem here, because if we're  
3 talking about buying an engine from an engine manufacturer  
4 which is certified on alternate fuel, there's no problem as  
5 I just described.

6           MS. WILLIAMS: Okay.

7           MR. CROSS: If you are buying an engine which is  
8 designed for diesel fuel and somebody's putting a conversion  
9 system on it to make it an alternate fuel engine, they have  
10 to certify it through these procedures.

11           And the engine, not the chassis, but the engine  
12 modification -- in other words, adding the stuff onto it to  
13 make it run on some alternate fuel has to be certified.  
14 But there's -- but that's not a change. That's always been  
15 required in California.

16           And, in fact, the proposal which we have today  
17 essentially simplifies that process by making the  
18 durability demonstration part of that less onerous.

19           MS. WILLIAMS: Uh-huh.

20           MR. CROSS: So, I don't think that anything that's  
21 in this proposal affects the business relationships between  
22 the engine manufacturers and the vehicle manufacturers.

23           CHAIRMAN DUNLAP: So, the answer is that they're  
24 distinct processes, they're separate.

25           MR. CROSS: Yeah.

1 MS. WILLIAMS: We're excluded?

2 MR. CROSS: Well, we haven't affected what's the  
3 fundamental -- you know, what has to certify -- has to be  
4 certified and what doesn't.

5 CHAIRMAN DUNLAP: Okay. Okay. All right. What I  
6 would encourage CTA to do and the staff is to get together.  
7 We're two sophisticated organizations. I appreciate the  
8 need to communicate. I don't think necessarily this Board  
9 policy item is the place to do that. I'd try to improve the  
10 communication. And I duly noted your comment about -- an  
11 apology about getting to us at this late date.

12 Okay. Is there anything else?

13 MS. WILLIAMS: Yes, on the diesel engines that  
14 would be retroed, another part of our plan on the far left-  
15 hand side is the retrofit repower portion, and we're looking  
16 at coating technologies, updating hardware, and technologies  
17 that would bring existing heavy-duty technology to a level  
18 beyond the current standard.

19 What would be the process under these regulations  
20 for getting credit for that?

21 MR. LOVELACE: There are -- there's a particular  
22 section of the regulation that describes obtaining credit  
23 for conventional retrofits. And, yes, that can be done.  
24 The standards that you saw are the -- are the credit  
25 standards, and it's just like any others.

1 MS. WILLIAMS: And so, for a small company to go  
2 through the durability testing, is there going to be some  
3 type of assistance from the ARB to move that along, or --

4 MR. LOVELACE: Well, one of the things that you  
5 mentioned was ceramics, and I happen to know that one, and  
6 it's an Engelhardt, and it's not a small company. And I  
7 don't think they will have any problem doing t hat.

8 But that, again, that is the -- that burden is on  
9 the manufacturer of the retrofit. And it's just like the  
10 system here with the alternative fuels that was just being  
11 discussed.

12 The manufacturer certifies it, and then the  
13 installer of that particular system also has some  
14 liabilities regarding durability and correctness.

15 CHAIRMAN DUNLAP: Good.

16 MR. LOVELACE: So, it's no different than  
17 otherwise. Yes, you can do that with a diesel engine.

18 MS. WILLIAMS: Okay.

19 CHAIRMAN DUNLAP: Okay?

20 MS. WILLIAMS: That's all I have.

21 CHAIRMAN DUNLAP: Thank you.

22 MS. WILLIAMS: Thank you.

23 CHAIRMAN DUNLAP: Donel Olson, Vinyard Engine  
24 Systems, Inc., followed by Paul Wuebben, South Coast  
25 District; Scott Crawford, Antelope Valley Bus, Inc. That's



1 all I have.

2 So, we have three concluding speakers.

3 Good morning.

4 MR. OLSON: Good morning, Mr. Chairman, members of  
5 the Board. Thank you for allowing me to make some general  
6 comments. My name is Don Olson, and my company is Vinyard  
7 Engine Systems, Incorporated, headquartered in San Antonio,  
8 Texas.

9 Our intellectual group there is out -- primarily  
10 the core group is out of Southwest Research Institute, a  
11 company you probably know a little better than engine  
12 systems.

13 We're a relatively new start-up company, two-years  
14 old, that's dedicated to the provision of dedicated  
15 conversions of heavy-duty diesel engines. That's our  
16 business, and that's the way we started this business.  
17 That's the only thing we do in this company.

18 So, we're a user, I guess, of what you've  
19 accomplished here. And my real aim this morning is to  
20 compliment -- first to support and then compliment your  
21 staff on what I think has been a very diligent effort and  
22 not too easy sometimes to bring together this procedure that  
23 you're looking at at the present time.

24 We're certainly in favor of this. I might mention  
25 that we started this company a couple of years ago,

1 intending to make some major sales in California. The  
2 procedures that existed then and subsequently not jut  
3 inhibited, but prohibited us from chasing this market. And  
4 we frankly changed our direction considerably as a result of  
5 that, and then tried to participate in these changes, which  
6 now make it very inducive for us to cater to this market in  
7 California.

8 And we have several sales at the present time and  
9 others coming on. So, we think this is a valuable procedure  
10 to encourage business. And, incidentally, we clean up the  
11 air considerably with our retrofits. I'll mention that we  
12 use lean-burn, state-of-the-art technology, and so on, and  
13 so forth to be sure that emissions are much lower in these  
14 retrofits than those that existed before our retrofits.

15 So, all in all, we're very satisfied with the  
16 regulations.

17 I would like to make one comment in regards to Mr.  
18 Calhoun's question about conditional certification. And in  
19 actual fact, I don't see any difference between conditional  
20 certification and what exists by these present procedures in  
21 terms of the risk that's involved.

22 But there is a business problem, as I see it,  
23 because, of course, making sales is always a very difficult  
24 task in itself, and any fear that you put into your  
25 potential customer inhibits that capture of that sale.

1           And, oh, a conditional certification? Wait a  
2 minute. You know. And so, it brings up that kind of a  
3 question versus no, no, we're certified. It's the same, but  
4 we don't have to explain to them that we can be recalled  
5 and, incidentally, it's just as bad as if it was  
6 conditional, or just as good, depending on your point of  
7 view.

8           But it is an inhibiting factor to a small extent,  
9 I would say, in making it easier to convince users. So,  
10 those are my comments, and I just wanted to again be sure  
11 that the staff received the commendation that they deserve  
12 for the work they've done on this project.

13           CHAIRMAN DUNLAP: Thank you. Appreciate it.

14           Mr. Calhoun, followed by Ms. Edgerton.

15           MR. CALHOUN: Don, you've been around a long time,  
16 a lot longer than I have.

17           MR. OLSON: Oh, I don't know about that.

18           (Laughter.)

19           MR. CALHOUN: And I guess I would agree with you  
20 that the requirements are the same if a conditional EO or  
21 certificate is issued or if no conditions are attached to  
22 it. The requirements are the same.

23           I guess I see a conditional EO as being something  
24 that imposes due diligence on the application to follow up  
25 on all the requirements.

1 I guess the problem I have with it is the ability  
2 of our staff to specify the conditions in order to make this  
3 happen. But it is a concern, and it's something that we all  
4 recognize as a potential problem. And we'll just have --  
5 the Board just has to decide what we want to do about it.

6 I might make one other comment, if I can, about  
7 the time for durability testing. This was a very important  
8 breakthrough for us. Without being able to use assigned  
9 deterioration factors and then prove the durability after  
10 certification, we were stymied in making sales, frankly,  
11 because we couldn't afford to do all of this work in  
12 advance, and then hope we could make sales afterwards.

13 A lot of the durability testing for heavy-duty --  
14 remember, my interest is strictly heavy-duty diesel engine  
15 conversions -- requires the use of the customer's vehicles,  
16 and these vehicles are often a hundred thousand to \$200,000  
17 vehicles to begin with.

18 And so, we're basically monitoring in-use testing  
19 from our customer's operations, normal operations, rather  
20 than doing accelerated testing with these large vehicles.

21 So, we're kind of at the mercy, to some extent, of  
22 his schedule. Now, these users put a hundred thousand miles  
23 on their over-the-road vehicles quite normally, but that's  
24 100,000 miles a year, maybe more, sometimes two or three  
25 hundred thousand miles.

1 But there's a problem of getting those vehicles in  
2 for testing and so on. So, we're kind of at the mercy of  
3 our customer in that regard for stretching the schedule, for  
4 proving the durability over time.

5 MS. EDGERTON: Mr. Olson, could you tell me what  
6 size market you think there is in California for your  
7 retrofits of diesels now?

8 MR. OLSON: Well, we think that market is very  
9 large here in California. But we're a very small company.  
10 We're a small company with very large plans, I might  
11 mention. But we see that, quite easily, the market for our  
12 business could easily be 20 or 30 percent California-related  
13 compared to the rest of the nation. So, it's a large  
14 percentage of our market plans, is the California  
15 conversions.

16 Now, how many is that in numbers? I don't know.  
17 We have aspirations of it being very big. But it may only  
18 be a few hundred vehicles. But these are vehicles that use  
19 a lot of fuel, you know.

20 An over-the-road vehicle uses as much as 20 to 25  
21 times as much fuel as one automobile. So, if I tell you  
22 that we're going to do a hundred, that's really 2500 in  
23 terms of automobiles, you know.

24 So, we're just devoted to heavy-duty vehicles, but  
25 I can't tell you. I'd like it to be a large number, but I

1 can't tell you what that number is, because I don't know at  
2 the present time.

3 A large percentage of our total business, though.

4 MS. EDGERTON: And what's the cost on average?  
5 I'm not trying to get you to give away your price, but  
6 what's your average cost for a retrofit?

7 MR. OLSON: Well, you know, these are dedicated  
8 conversions. These are not bi-fuel conversions. It means  
9 changing the pistons in the engine, removing injection  
10 systems and putting spark plugs in, modifying cylinder  
11 heads, and adding a complete, full electronic control  
12 system.

13 So, it's expensive, but that's only an estimate.

14 (Laughter.)

15 MR. OLSON: We can give you some idea of the  
16 actual cost. For example, we've done a series of -- many  
17 conversions of a Cummins 6B engine. That's about \$8,000 for  
18 the engine conversion at the present time.

19 If you want to place an order for a couple of  
20 hundred, we could probably do it for 5,000. But it's in  
21 that ball park.

22 Now, for larger engines, it might be as much as  
23 \$30,000 an engine for the conversion. So, these conversions  
24 can be very expensive, and we have to prove their cost-  
25 effectiveness for the customer, or he's not interested, of

1 course.

2 The cost-effectiveness comes from the cheaper  
3 fuel, of course. And the more he uses the easier it is to  
4 make that calculation. In a typical over-the-road  
5 application, return on investment can often be as little as  
6 18 months.

7 MS. EDGERTON: Good. And I just had one other  
8 question. If your dreams are realized, will you open a  
9 California office?

10 MR. OLSON: Well, I live in California. And I  
11 have a California -- yes, we have a California --

12 MS. EDGERTON: You already have a California  
13 office.

14 MR. OLSON: Yeah, we have a California office.

15 MS. EDGERTON: Even though you're in San Antone.

16 MR. OLSON: Yes, we intend to expand that. We  
17 have a sales operation here now at the present time, and  
18 intend to expand our operations here. But our intellectuals  
19 are in San Antonio. I want to keep them there until they've  
20 proven their points.

21 MS. EDGERTON: So, how many employees do you have  
22 in California?

23 MR. OLSON: At the present time, we have like two  
24 in California?

25 MS. EDGERTON: Two?

1 MR. OLSON: That's a start, isn't it?

2 MS. EDGERTON: The Governor said he'd make the  
3 jobs one by one. Thank you.

4 MR. CALHOUN: You should also tell Supervisor  
5 Silva that your office is in his district.

6 MR. OLSON: Okay. I'll be seeing you later.

7 CHAIRMAN DUNLAP: Thank you. Appreciate it.

8 All right. Paul Wuebben, South Coast Air  
9 District, and Scott Crawford coming up next.

10 Good morning.

11 MR. WUEBBEN: Good morning, Mr. Chairman and  
12 members of the Board.

13 I am Paul Wuebben, the clean fuels officer with  
14 the South Coast Air Quality Management District. First,  
15 we're here and I'm here to certainly compliment the staff on  
16 this important rulemaking, and we certainly urge that you  
17 adopt it.

18 Just a little background I think would help your  
19 perspective: This is a very important augmentation to  
20 reinforce rules we've adopted. For example, Rule 1309 was a  
21 credit rule which we provided to heavy-duty transit  
22 operators. And that is being utilized to some extent. In  
23 fact, OEM manufacturers are already using that credit  
24 mechanism. Both Detroit Diesel Corporation and Cummins have  
25 certified alternative fuel engines, and those are generating



1 credits. So, this supplements that in a very, very  
2 constructive way.

3 I've also participated and our agency does in the  
4 CTA working group. And I think, for Stephanie's benefit and  
5 the Board's, I think, from our viewpoint, this really is a  
6 constructive step; that it doesn't really detract from  
7 anything that that working group and the alternative fuels  
8 evolution is going go through.

9 What it does, in effect, is remove some barriers  
10 which have existed in the regulatory arena. One thing that  
11 I would like to touch on is that we certainly share the  
12 important goal of ensuring that high-quality retrofits are  
13 actually done, because it's that high quality which is going  
14 to sustain the commercialization of that technology.

15 And so, for that reason, we certainly join in  
16 supporting, as WSPA does, the fuel neutrality of the credit  
17 provisions, and also the extended phase-in -- and especially  
18 important, the alternate inspection procedures for high  
19 volume. We did realize there was some important problems  
20 that MESA, for example, ran into when trying to convert some  
21 postal office vehicles. And that was a very large program  
22 in the South Coast, and now that's, I think, been smoothed  
23 out.

24 There is just one area of concern that I did want  
25 to mention, and that follows, of course, on Mr. Calhoun's

1 concerns about the unqualified certification question for at  
2 least extending the testing period.

3 From our experience in trying to sell credits --  
4 and I've been, in some sense, operating as an arbitrage  
5 agent with the MTA trying to sell emission credits to users.  
6 We find market confidence extremely important in trying to  
7 have a final deal to sell these credits or to provide some  
8 effective real world incentive. And users need confidence  
9 that the systems that they have are going to be durable, in  
10 the sense that they continue operating those vehicles; that  
11 they understand the recall provision.

12 And it seems, from my perspective, at least, that  
13 there is some need to qualify the certification process.  
14 I'm not sure if it's the word, you know, that you want to  
15 put on there of "qualified" certification, or perhaps  
16 "completed durability testing," or "to be," you know,  
17 "completed later," or "pending."

18 But there needs to be some information, I think,  
19 provided to the marketplace that there is some degree of  
20 difference between a certification that has full testing  
21 completed and that which has not had that full testing  
22 performed.

23 So, with that -- that minor modification -- I  
24 think that this provides, you know, a lot of fairness. It  
25 certainly provides some competition between both the OEM

1 manufacturers and the retrofit kit producers. The evolution  
2 of engine systems coming out of Southwest and several others  
3 that are similar have converted vehicles in our South Coast  
4 air and throughout California. I think that's a very  
5 positive competitive effect.

6 But I think that ensuring an adequacy of quality  
7 control is one of your important responsibilities. And so,  
8 with that minor suggestion, I think this is an excellent  
9 package, and we urge your approval.

10 CHAIRMAN DUNLAP: Thank you. Any questions?

11 SUPERVISOR VAGIM: I have a question, Mr.

12 Chairman.

13 CHAIRMAN DUNLAP: Supervisor Vagim.

14 SUPERVISOR VAGIM: Some months ago -- many months  
15 ago, I was called on this issue by someone who was trying to  
16 convert a bunch of L. A. City school buses. Whatever  
17 happened to that? And would this alleviate that problem  
18 that they had?

19 MR. WUEBBEN: This will help alleviate it. I  
20 think, as Stephanie noted, there are some continuing issues  
21 about getting the chassis manufacturers to fully integrate  
22 this kind of technology. But this does help towards that  
23 means.

24 The market for these credits is a fairly immature  
25 market, in all honesty; it hasn't been around very long.

1 This is an early period during which we're going to see an  
2 increase in demand for those credits. We're working with  
3 those school districts.

4 In fact, you see fairly exciting inquiries in the  
5 participation of school districts in those -- in those  
6 alternative fuel programs.

7 So, I think this will just help toward that end.

8 SUPERVISOR VAGIM: Thank you.

9 CHAIRMAN DUNLAP: Thank you. Appreciate your  
10 time, Mr. Wuebben.

11 Those of you that feel a rumble and some  
12 vibration, that is, I guess, some paving work that's being  
13 done above us here. So, there's not an attack on the  
14 building.

15 SUPERVISOR VAGIM: As long as he doesn't come  
16 through this wall.

17 CHAIRMAN DUNLAP: That's right. We're okay.

18 (Laughter.)

19 The last witness we have is Scott Crawford from  
20 Antelope Valley Bus Lines. Is there anyone else that wishes  
21 to speak?

22 Okay. This will be our concluding witness. Good  
23 morning.

24 MR. CRAWFORD: The last one, huh?

25 CHAIRMAN DUNLAP: Yep.

1 MR. CRAWFORD: Good morning, Chairman; good  
2 morning, Board.

3 Being an end-user and been aggressively trying to  
4 obtain emission credits for our endeavors for the last  
5 several years, one of the concerns we have as end-users is  
6 the durability testing, as allowing certification before  
7 durability is proven -- both for the reliability of our  
8 equipment that is operating in a revenue service, and the  
9 issue that hasn't been brought up yet -- and I may be  
10 ignorant in this part -- is that, if all this stuff is for  
11 emission credits, and we're certifying for end-users to  
12 obtain emission credits by retrofitting and using these  
13 technologies, who's going to suffer when it comes to selling  
14 those credits, then it's recalled because it's not working  
15 right?

16 What liability is the manufacturer of the retrofit  
17 kit going to have as far as that's concerned? If the end-  
18 user goes ahead and sells them to X Company -- I like that  
19 name, that terminology, X Company buys in good faith from  
20 the company that's generated these credits through its  
21 practices; they go out, they buy them. Then, all of a  
22 sudden, at the end of the year, that kit is recalled  
23 because, oops, it doesn't work as good as we thought it was,  
24 I'm assuming, therefore, the credits would also be pulled  
25 because it wasn't true reductions.

1           And, so far, that hasn't come up yet. And I think  
2 that's a valid point. How can you certify something with  
3 the promise to test or prove durability down the road?

4           And, in the past, it's been fine, because it's my  
5 impression that CARB certification of a device, basically  
6 all it meant was, yeah, it didn't hurt emissions. It didn't  
7 increase emissions; so, therefore, yeah, we'll certify it.  
8 Go ahead and use it. We're okay.

9           But now we're talking emission credits, and we're  
10 talking trading, and we're talking money. And how is that  
11 going to come back? If Chevron buys from me credits that I  
12 generated by converting buses to alternate fuels, and I buy  
13 from X Company, because he can -- we bought his kit to  
14 retrofit, and also X Company gets pulled, because I guess  
15 that durability didn't work.

16           Now they come back to me, "Well, wait a minute.  
17 We got to pull your kits; so, therefore, you don't get your  
18 credits." Then, Chevron says, "Well, wait a minute."

19           It's a series of problems that, by trading on  
20 emission credits, I think brings this point up, and I  
21 haven't heard any response to that yet.

22           CHAIRMAN DUNLAP: We'll get that addressed by  
23 staff. Did you have anything else?

24           MR. CRAWFORD: That's probably the biggest thing.  
25 Again, I would like to take the opportunity to keep on

1 pushing to try to get the repower issue brought to the  
2 forefront.

3 I think repowering diesel vehicles with cleaner  
4 diesel engines I think is a big issue that still needs to be  
5 settled. It hasn't still come up yet. They've worked on  
6 some regulation addressing repowers, but again it's  
7 basically locking us to alternate fuels.

8 Hopefully, in the future, when we're talking 2  
9 gram diesel engines, that's something we want to shoot for  
10 to clean up the 10-gram engines that we have on the road and  
11 go with the 2 gram engines that are coming up -- hopefully,  
12 the sooner the better -- because I haven't heard yet how  
13 diesel vehicles could really take advantage of going to an  
14 alternate fueled engine.

15 The numbers that we're spouting out about 100,000  
16 miles, 200,000 miles, 300,000 miles a year. Those are  
17 accurate miles. However, that's an over-the-road vehicle.  
18 And you're not going to be running alternate fuels in those  
19 type of vehicles.

20 So, I think you're talking a real limited market  
21 when you contain a retrofit or repower to alternate fuels.  
22 And I'd really like to find out how much -- if every vehicle  
23 that could go to an alternate fuel actually went to an  
24 alternate fuel, how much percentage of NOx reductions are we  
25 really talking? Because we're not talking every -- very

1 small percentage, I feel is actually being able to take  
2 advantage of alternate fuels in the heavy-duty market.

3 CHAIRMAN DUNLAP: Well, the latter question I'd  
4 encourage you to talk to staff about. I don't know if this  
5 is the right forum to cover the emissions inventory or the  
6 potential. But appreciate your comments.

7 Does the Board have any questions of the witness?  
8 If not, I'll ask staff to comment later, in a few minutes,  
9 after we go through the written comments on his question  
10 about durability and that recall provision.

11 Okay. Thank you.

12 All right. That concludes the public testimony  
13 on this Board item. I'd like to have staff at this time  
14 take a couple minutes and cover any of the written comments  
15 the Board has received by individuals that haven't been able  
16 to be here today or haven't testified publicly.

17 MR. LOVELACE: Mr. Chairman, we've received two  
18 letters commenting on the proposal, other than by folks that  
19 testified today.

20 The first was from MECA, the Manufacturers of  
21 Emission Controls Association. They had a two-part letter  
22 generally supporting the proposal. And the substantive  
23 comment that -- MECA notes that the alternative fuel  
24 retrofits for pre-1994 model years have the option of  
25 certifying using the new procedures if they are not



1 certifying for emission reduction credits.

2           If certifying for credit, they must use the 1994  
3 and later procedures. MECA would like to have this option  
4 available for conventional fuel retrofits. Well, there are  
5 procedures already in place for certifying aftermarket  
6 parts, for replacement or add-on devices for conventionally  
7 fueled vehicles.

8           These are the procedures that should be used,  
9 unless they are being used to certify for emission reduction  
10 credits. And they would involve less cost than applying the  
11 procedures that we are discussing today.

12           However, if a manufacturer wished to certify an  
13 aftermarket part by doing all the things required by the  
14 more rigorous 1994 and later retrofit procedure, and for  
15 whatever reason they might want to do so, that the data that  
16 they obtain from going through those procedures would be  
17 more than adequate to certify the devices and aftermarket  
18 part.

19           One other -- one other entity commented, GFI  
20 Control Systems, Incorporated. They support the proposed  
21 amendments and say that it's important that the Board adopt  
22 them, quote, "adopt them in all respects as soon as  
23 possible."

24           CHAIRMAN DUNLAP: Thank you. Okay. I'd like the  
25 staff to succinctly cover that retrofit issue that surfaced

1 with the last witness, and then we'll move on.

2 Mr. Lovelace or Mr. Cross?

3 MS. HUSCROFT: For the record, I'm Sue Huscroft.  
4 I'll address the issue regarding the concern that Mr.  
5 Crawford stated -- if the vehicle should later not meet the  
6 standards that they were certified to. This kind of thing  
7 would be conducted contractually between the kit  
8 manufacturer and the end user. And presumably, in that  
9 contract, they would have spelled out the specific  
10 liabilities.

11 In regard to the vehicles, that does lie with the  
12 kit manufacturer. Should it be discovered that the vehicles  
13 don't meet the standards they were certified to, they would  
14 be recalled and fixed.

15 So, the first remedy is not to revoke credits.  
16 And I think it's true, too, that the local districts would  
17 be -- that administer the programs would want to be  
18 flexible, as we would we; but what we would do is the kit  
19 manufacturer would recall his vehicles and fix them, such  
20 that they do meet the emission standards and the reductions  
21 are obtained.

22 We also think that this liability is large enough  
23 that the manufacturers have every incentive to be confident  
24 in their product before putting it out on the street.

25 CHAIRMAN DUNLAP: Okay.

1 MS. HUSCROFT: Mr. Lovelace will address the  
2 repowering issue.

3 CHAIRMAN DUNLAP: Sure.

4 MR. LOVELACE: Regarding repowering an existing  
5 vehicle with a new diesel engine, that really is beyond the  
6 scope of this particular hearing. However, we have  
7 scheduled for the fall of this year an update to our  
8 guidelines for generating emission reduction credits  
9 specifically directed at heavy-duty vehicles. And Mr.  
10 Crawford's concern will be addressed at that time.

11 CHAIRMAN DUNLAP: Okay. Thank you.

12 Mr. Lagarias.

13 MR. LOVELACE: Mr. Chairman, excuse me. We  
14 received just seconds ago, literally, another comment letter  
15 from MECA. They are addressing generating credits for pre-  
16 1990 gasoline powered light-duty vehicles, and this may be  
17 interesting, but it is -- it really does not address the  
18 body of today's hearing.

19 CHAIRMAN DUNLAP: Okay. Thank you.

20 Mr. Lagarias.

21 MR. LAGARIAS: I'd like to ask the staff about the  
22 comment of Mr. Freel of WSPA, his last comment, a Tier 1  
23 gasoline vehicle converted to a bi-fueled vehicle to meet  
24 TLEV standards. Are there any emission reduction credits or  
25 financial incentives associated with that?

1 MR. LOVELACE: I think that we are pretty much on  
2 the same track with Mr. Freel, in that the emission  
3 reduction credits are granted for those bi-fuel vehicles but  
4 only for the mileage, or fuel use, or whatever that is  
5 monitored by operation as a TLEV.

6 So, I think that we're really on the same beam.  
7 But, again, these are not how credits are developed. These  
8 are standards for certification.

9 MR. LAGARIAS: As I recall, that same issue came  
10 up when we discussed the TLEV and the conversion to bi-  
11 fuels. And that was an issue then.

12 Thank you.

13 CHAIRMAN DUNLAP: Okay. Mr. Boyd, any other staff  
14 comments?

15 MR. BOYD: No, Mr. Chairman, no further comments  
16 at this time.

17 CHAIRMAN DUNLAP: Okay. I will now close the  
18 record on this agenda item; however, the record will be  
19 reopened when the 15-day notice of public availability is  
20 issued. Written or oral comments received after this  
21 hearing date but before the 15-day notice is issued will not  
22 be accepted as part of the official record on this agenda  
23 item.

24 When the record is reopened for 15-day comment  
25 period, the public may submit written comments on the

1 proposed changes which would be considered and responded to  
2 in the final statement of reasons for the regulation.

3 Any ex parte communication the Board members need  
4 to disclose at this time?

5 Ms. Edgerton?

6 MS. EDGERTON: Right before the Board meeting I  
7 met with Jim Green and Lauren Dunlap who mentioned their  
8 support for this.

9 CHAIRMAN DUNLAP: Okay. All right. Now we will  
10 take a moment or two and look at the resolution that is  
11 before us.

12 The Board has before it Resolution No. 95-39,  
13 which contains the staff recommendations. Do I have a  
14 motion and a second to adopt the staff proposal?

15 DR. BOSTON: Mr. Chairman? The last whereas on  
16 the first page of the resolution --

17 CHAIRMAN DUNLAP: Yes.

18 DR. BOSTON: I've read it a couple of times, and  
19 it doesn't seem to read properly to me. I'm wondering if  
20 someone on the staff could read that last paragraph,  
21 particularly the last sentence, where it says, "or to result  
22 in the modified vehicle's emissions continuing to comply  
23 with existing state or federal standards."

24 There must be a typo there someplace, because it  
25 doesn't read correctly.

1           CHAIRMAN DUNLAP: Thank you. Mr. Boyd, are you  
2 tracking this? Or Mr. Kenny?

3           MR. LAGARIAS: He's not here.

4           MR. BOYD: I'm waiting for staff and counsel to  
5 caucus.

6           MR. CALHOUN: Mr. Chairman, may I ask the staff  
7 another question?

8           CHAIRMAN DUNLAP: Sure. Mr. Calhoun.

9           MR. CALHOUN: My concern is the burden for  
10 following through on the certification or seeing to it that  
11 the certification falls upon the staff at this present time.  
12 And I guess I would like to ask the staff if they felt  
13 comfortable at this time in imposing some conditions or if  
14 their preference would be to observe what takes place for  
15 about a year, and then come back and make some kind of  
16 recommendation as to whether or not conditional  
17 certification would be the appropriate thing to do.

18           I don't want to impose some condition on the staff  
19 that the staff does not feel that it would be comfortable to  
20 handle at this point in time; but, nevertheless, I would  
21 like to see that this issue's followed up on.

22           CHAIRMAN DUNLAP: Okay. Mr. Boyd, do you --

23           MR. BOYD: A quick reaction, and then maybe Mr.  
24 Cackette can elaborate.

25           I understand and appreciate in multiple ways what

1 Mr. Calhoun is suggesting and his concern. But by the same  
2 token, from -- not as many years of experience as Mr.  
3 Calhoun has had, but from a lot of years of experience, I  
4 also concur with Mr. Olson's concern about perception and  
5 reality when it comes to the idea that you have a  
6 certificate that's conditioned, when we know that, in  
7 reality, a certification is full of conditions versus having  
8 a certification that says it's conditioned can convey  
9 negative connotations to financiers, or customers, and what  
10 have you.

11 And I think what I would like to do is take Mr.  
12 Calhoun up on the second half of his offer, which is let us  
13 look at this, follow this, and indeed see if remedial action  
14 is required --

15 CHAIRMAN DUNLAP: Okay.

16 MR. BOYD: -- or whether the program works. At  
17 least that's my personal reaction.

18 CHAIRMAN DUNLAP: If it's okay with Mr. Calhoun,  
19 I'd like to ask staff to examine this in the six to nine  
20 month period rather than a full year, if that's okay. Is  
21 that agreeable, Mr. Cackette?

22 Does that give us enough time?

23 MR. CACKETTE: I'm not sure that'll give us enough  
24 time, because we're going to have to see, you know, the  
25 whole process of completing these -- the durability

1 demonstrations is a fairly long one.

2 CHAIRMAN DUNLAP: Okay.

3 MR. CACKETTE: So, I think we might need the full  
4 year.

5 CHAIRMAN DUNLAP: Well, then, what I'll ask then  
6 is we'd like to hear back from staff within a year. And,  
7 Mr. Boyd, I'll defer to you whether it's in a memo form to  
8 the Board members individually or as an individual Board  
9 item, whatever is more appropriate.

10 MR. BOYD: Fine. We'll be glad to.

11 CHAIRMAN DUNLAP: Have we been able to caucus and  
12 figure out that last -- I'll ask legal, then, to run through  
13 the word changes that we would need to make that read --

14 MR. RYDEN: We made a minor edit here, and the  
15 last phrase will read, "any such vehicle pollution control  
16 device, or to result in the modified vehicle's continuing  
17 ability to comply with existing state or federal standards."

18 CHAIRMAN DUNLAP: So, strike "emissions"?

19 MR. RYDEN: Strike "emissions" and insert  
20 "ability" between "continuing" and the word "to," t-o.

21 CHAIRMAN DUNLAP: Okay. Is that acceptable to Dr.  
22 Boston? Of course, he hasn't made a motion yet.

23 DR. BOSTON: I think what you really need to do is  
24 change that "continuing" to "failing to comply with the  
25 existing state and federal standards."



1           The purpose of the paragraph is that there'll be  
2 no changes made to the vehicle that will cause the emissions  
3 to go down (sic), and this sentence doesn't cover that. It  
4 says, "continuing to comply with existing state and federal  
5 standards."

6           CHAIRMAN DUNLAP: Dr. Boston, will you read how  
7 you think it makes the most sense, and we will incorporate  
8 that into your motion that you've yet to make?

9           (Laughter.)

10          DR. BOSTON: I would like to make an editorial  
11 change to the last paragraph, the last three sentences so  
12 that the last three sentences would then read, ". . .the  
13 original design or performance of any such motor vehicle  
14 pollution control device or result in the modified vehicle's  
15 emissions failing to comply with existing state or federal  
16 standards," period.

17          CHAIRMAN DUNLAP: Mr. Kenny.

18          MR. KENNY: May I offer a simpler solution, which  
19 may satisfy your need?

20          DR. BOSTON: Sure.

21          MR. KENNY: That would be to just simply take the  
22 word -- following the word "device" on the second to the  
23 last line --

24          DR. BOSTON: -- put a period?

25          MR. KENNY: -- take out the words "or" and "to"

1 and substitute "must."

2 CHAIRMAN DUNLAP: That seems more efficient.

3 DR. BOSTON: That's fine. Where were you before?

4 CHAIRMAN DUNLAP: Yes. Mr. Boyd, please see to it  
5 that Mr. Kenny does not leave the Board room.

6 (Laughter.)

7 CHAIRMAN DUNLAP: Very well.

8 DR. BOSTON: With that modification, I'd like to  
9 propose the adoption of Resolution 95-39.

10 SUPERVISOR RIORDAN: I'll second.

11 CHAIRMAN DUNLAP: Very well. We have a motion and  
12 a second to approve Resolution No. 95-39, which contains the  
13 staff's recommendations and this modification.

14 Is there any discussion that we need to have?

15 All right. I'll ask the Board Secretary to call  
16 for a vote on the resolution.

17 MS. HUTCHENS: Boston?

18 DR. BOSTON: Yes.

19 MS. HUTCHENS: Calhoun?

20 MR. CALHOUN: Aye.

21 MS. HUTCHENS: Edgerton?

22 MS. EDGERTON: Aye.

23 MS. HUTCHENS: Hilligoss?

24 MAYOR HILLIGOSS: Aye.

25 MS. HUTCHENS: Lagarias?

1 MR. LAGARIAS: Aye.

2 MS. HUTCHENS: Riordan?

3 SUPERVISOR RIORDAN: Aye.

4 MS. HUTCHENS: Silva?

5 SUPERVISOR SILVA: Aye.

6 MS. HUTCHENS: Vagim?

7 SUPERVISOR VAGIM: Aye.

8 MS. HUTCHENS: Chairman Dunlap?

9 CHAIRMAN DUNLAP: Aye.

10 MS. HUTCHENS: Resolution passes 9-0.

11 CHAIRMAN DUNLAP: Very well. Thank you.

12 Thank you, Gene, for your eagle eye.

13 Let's run along to the next item, 95-8-2. I would

14 like to remind those of you in the audience who would like

15 to present testimony to please submit it to the Board

16 Secretary or sign up to comment.

17 This second item is the public meeting to consider

18 an update of California's air toxics program.

19 This is an informational item presenting an

20 overview and update on California's air toxics efforts.

21 Established formally by legislative mandate in 1983, the air

22 toxics program has since become an important cornerstone of

23 this agency's mission to protect the public health.

24 This item was originally scheduled as a prelude

25 for consideration of the annual fee regulation in support of