

MEETING  
BEFORE THE  
CALIFORNIA AIR RESOURCES BOARD

ORIGINAL

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

THURSDAY, JUNE 9, 1994

9:45 A. M.

Nadine J. Parks  
Shorthand Reporter

Shorthand Reporter

MEMBERS PRESENT

Jacqueline Schafer, Chairwoman

Brian Bilbray  
Eugene Boston, M. D.  
Joseph C. Calhoun  
M. Patricia Hilligoss  
Lynne T. Edgerton  
John Lagarias  
Jack C. Parnell  
Barbara Riordan  
Doug Vagim  
Harriett Wieder

Staff:

Jim Boyd, Executive Officer  
Tom Cackette, Chief Deputy Executive Officer  
Mike Scheible, Deputy Executive Officer  
Catherine Witherspoon, Assistant Executive Officer  
Mike Kenny, Chief Counsel

Peter Venturini, Chief, Stationary Source Division  
Don Ames, Assistant Chief, SSD  
Ron Friesen, Assistant Chief, SSD  
Dean Simeroth, Chief, Criteria Pollutants Branch, SSD  
Bob Fletcher, Chief, Toxic Air Contaminant Control  
Branch, SSD  
Tom Jennings, Staff Counsel

John Holmes, Ph.D., Chief, Research Division  
Bob Barham, Assistant Chief, RD  
Manjit Ahuja, Manager, Emissions Control Technology  
Research Section, RD  
Ralph Propper, Staff, Emissions Control Technology  
Helene Margolis, Research Division

Anne Geraghty, Manager, Transportation Strategies Group  
Elizabeth Miller, Staff, Transportation Strategies Group  
Leslie Krinsk, Staff Counsel

//  
//  
//

SECRET

Others Present:

Research Screening Committee Members:

Harold Cota, Ph.D.  
Jane Hall, Ph.D.  
Alan Lloyd, Ph.D.  
O. Clifton Taylor, Ph.D.  
Melvin Zeldin

Dr. John Peters  
USC School of Medicine

Patricia Hutchens, Board Secretary  
Jude Lounsbury, Past Board Secretary, Retired  
Wendy Pendleton, Secretary  
Bill Valdez, Administrative Services Division

## I N D E X

	<u>PAGE</u>
Proceedings	1
Call to Order and Roll Call	1
<u>Agenda Items:</u>	
94-6-1 <u>Public Meeting to Consider an Update on the Status of the Implementation of California's Phase 2 Reformulated Gasoline Regulations</u>	
Introductory Remarks by Chairwoman Schafer	2
<u>Staff Presentation:</u>	
Jim Boyd Executive Officer	6
Dean Simeroth Chief Criteria Pollutants Branch Stationary Source Division	8
Questions/Comments	24
<u>PUBLIC COMMENTS:</u>	
Doug Youngblood Texaco	25
Questions/Comments	29
94-6-2 <u>Public Hearing to Consider Amendments to California Phase 2 Reformulated Gasoline Regulations, Including Amendments Providing for the Use of a Predictive Model</u>	
Introductory Remarks by Chairman Schafer	39
<u>Staff Presentation:</u>	
Jim Boyd Executive Officer	40

INDEX, continued. . .

PAGE

AGENDA ITEMS:

94-6-2	Bob Fletcher Chief, Toxic Air Contaminant Control Branch Stationary Source Division	44
--------	--	----

	Questions/Comments	59
--	--------------------	----

PUBLIC COMMENTS:

	Mike Kulakowski WSPA	75
--	-------------------------	----

	Questions/Comments	78
--	--------------------	----

	Nancy Homeister AAMA	82
--	-------------------------	----

	Questions/Comments	84
--	--------------------	----

	Jerry Horn Chevron USA Products Company	86
--	--	----

	Questions/Comments	90
--	--------------------	----

	Alan Lippincott ARCO	92
--	-------------------------	----

	Questions/Comments	95
--	--------------------	----

	Dennis Lamb Unocal	97
--	-----------------------	----

	Questions/Comments	109
--	--------------------	-----

	Doug Youngblood Texaco	112
--	---------------------------	-----

	Chuck Morgan Mobil Oil	117
--	---------------------------	-----

	Questions/Comments	121
--	--------------------	-----

	Tom Eizember Exxon	123
--	-----------------------	-----

	Tom Eizember Exxon	123
--	-----------------------	-----

## INDEX, continued.

PAGEAGENDA ITEMS:

94-6-2	Questions/Comments	130
	Michael Bird, Ph.D. Exxon	134
	Questions/Comments	137
	Duane Bordvick Tosco	141
	Summary of Written Comments and Entry into Record by	
	Don Ames Assistant Chief Stationary Source Division	145
	Closing Comments by Mr. Boyd	146
	Closing of Record to Await Notice of 15-day Comment Period	148
	Luncheon Recess	148
	Afternoon Session	149
94-6-3	Public Meeting to Consider a Draft Report: "Planned Air Pollution Research: 1994 Update," and Joint Meeting of the Research Screening <u>Committee and Air Resources Board</u>	
	Introductory Remarks by Chairwoman Schafer	149
	Jim Boyd Executive Officer	150
	Dr. Alan Lloyd Acting Chairman Research Screening Committee	154

1 MR. LAGARIAS: I'm not sure of that.

2 (Laughter.)

3 SUPERVISOR BILBRAY: It's a lot easier on your  
4 plumbing.

5 CHAIRWOMAN SCHAFER: Are there any other questions  
6 for the staff on this presentation at this time?

7 If not, I thank you very much.

8 At this point, if there are any written  
9 submissions associated with this item, I would invite the  
10 staff to summarize those for those individuals who might not  
11 have been able to testify on this.

12 MR. BOYD: There were no written comments.

13 CHAIRWOMAN SCHAFER: No written, okay. Mr. Boyd,  
14 does the staff have further comments on this item?

15 MR. BOYD: No, Madam Chair. I believe that  
16 concludes this item.

17 CHAIRWOMAN SCHAFER: Okay. The second agenda item  
18 this morning -- and the staff is free at this point, while  
19 I'm talking, to change places to do this -- is Item Number  
20 94-6-2. I'd like to take this occasion to remind those of  
21 you in the audience who would like to testify on this item  
22 to please sign up with the Board Secretary.

23 The second item this morning is, as I mentioned,  
24 94-66-2, a public hearing to consider amendments to the

25 California Phase 2 reformulated gasoline regulations and gasoline regul

1 including amendments providing for the use of a predictive  
2 model.

3 In addition, as was discussed in association with  
4 the previous item, the staff has proposed several other  
5 modifications to the regulations that will facilitate the  
6 implementation.

7 Today's proposal is an important part of our  
8 continuing effort to ensure a smooth transition from  
9 conventional gasoline to reformulated gasoline. These  
10 amendments will provide additional flexibility to  
11 California's refiners in the production of reformulated  
12 gasoline with no loss in environmental benefits.

13 Today's proposal appears to be a win-win situation  
14 and was produced, I understand, through an extremely  
15 cooperative work effort between the Board staff and the  
16 industry experts.

17 At this point, Mr. Boyd, if the staff is prepared  
18 to discuss this item, I'd like you to introduce it and begin  
19 the staff presentation.

20 MR. BOYD: Thank you, Madam Chairwoman.

21 I'll just start out by providing you some  
22 background on the amendments that are before you, and then  
23 Bob Fletcher of the Stationary Source Division will present  
24 to you the detailed presentation leading up to the  
25 amendments that are proposed.



1           Of course, as discussed in the very last item, the  
2 Board indeed did approve the reformulated gasoline  
3 regulations in November of 1991, and these regulations, of  
4 course, established the very comprehensive set of  
5 specifications for gasoline that we have discussed and  
6 established the performance standard concept.

7           During the development of these reformulated  
8 gasoline regulations, producers of gasoline requested that  
9 the ARB develop a so-called, quote, "predictive model," end  
10 quote, that could be used to establish equivalent  
11 reformulated gasoline formulations.

12           The staff and the Board recognized the merits of  
13 this suggestion and committed to develop a predictive model  
14 subsequent to the close of that November, '91 public  
15 hearing. And, as the Chairwoman indicated, since that time,  
16 we have worked closely and cooperatively with  
17 representatives of the oil industry and, most specifically,  
18 their organization, the Western States Petroleum  
19 Association, to indeed develop this predictive model.

20           We conducted, in the course of this work, four  
21 public workshops, have held innumerable individual meetings  
22 with representatives from both the auto and oil industries.

23           The development of the model has involved very  
24 complex statistical analyses of a very extensive database of  
25 over 7,000 vehicle tests, which is, to say the least, a rather

1 quite extensive and helpful database for us to have.

2 We've evaluated, in effect, really a number of  
3 different models before coming up to our recommended  
4 approach, and have made numerous modifications to the same  
5 prior to presenting this model to you today.

6 Based on this continuous and continuing evaluation  
7 of the model, and based on even more recent discussions,  
8 ongoing discussions with the representatives of the  
9 industries I mentioned, we are even today proposing several  
10 additional modifications to the model, which the staff will  
11 enumerate in their presentation.

12 Throughout all of this process, we have again, as  
13 I say, greatly appreciated the comments made by the industry  
14 representatives. And, again, I would like to thank them for  
15 their efforts. There were major decision points in this  
16 process that involved both we and the oil industry. One of  
17 the major concerns, of course, has been and is timeliness --  
18 the sooner the better is always the case in an effort like  
19 this. The sooner the tool was developed, the sooner the  
20 refiners could use it, and the sooner they would have major  
21 answers to questions that could affect capital decisions as  
22 well as eventually will affect, we think, the cost of  
23 producing the fuel and, thus, the price to the consumers.

24 And I'm happy to say that -- almost without exception  
25 -- there was consensus on all the decision points, if you

1 one of which was to continue to work to refine the model and  
2 have a model everyone agreed with rather than worry about  
3 the initial deadline that was established without knowledge  
4 of what this issue was that we were getting into. There was  
5 almost unanimous agreement that, at that point in time, the  
6 model needed to be developed even more extensively to be  
7 satisfactory for everyone's consideration, so that the  
8 "time" decision was made; i.e. put more time into this.

9 And I must say that there were a lot of demands on  
10 the oil industry during this period of time. Because while  
11 we were developing California reformulated gasoline and our  
12 predictive model, the Federal Government is promulgating  
13 federal reformulated gasoline regulations, and also wanting  
14 to develop their own model. And they had a very short time  
15 line and resources -- particularly the oil companies' -- was  
16 devoted to that for a while. So, we had a little hiatus  
17 there.

18 So, there were only so many people that could do  
19 so much work, and it affected both parties. But I'm very  
20 pleased with the outcome that we bring before you today.  
21 And, as I say, this is extremely dynamic. We're changing it  
22 virtually as we're bringing it to you with, we believe, the  
23 consensus of the industry.

24 The amendments that we are proposing do provide  
25 the additional flexibility to producers of gasoline, we believe

1 believe, without sacrificing at all the emissions benefits  
2 that we're striving for or the enforceability of the  
3 regulations that are naturally a key ingredient to the  
4 criteria that we, as regulators, must use in dealing with  
5 regulations.

6 So, I think it's a win-win situation for all. The  
7 additional flexibility, as I said before, will allow  
8 producers to make, we believe, more gasoline at hopefully  
9 lower cost. We expect, in turn, this will lower the  
10 expected cost to consumers and, of course, the additional  
11 volume will help to ensure production of gasoline in  
12 quantities necessary to meet the demand.

13 With that introduction, now, I'd like to turn the  
14 presentation over to Bob Fletcher, a member of the  
15 Stationary Source Division, to present our staff proposal  
16 regarding the amendments to the regulations. Bob?

17 MR. FLETCHER: Thank you, Mr. Boyd. Good morning.

18 CHAIRWOMAN SCHAFER: Bob, is your mike on?

19 MR. FLETCHER: Good morning, Chairwoman Schafer --

20 CHAIRWOMAN SCHAFER: That's better.

21 MR. FLETCHER: I've got it now, I think -- and  
22 members of the Board.

23 Before I begin my presentation, I'd just like to  
24 acknowledge one of my key staff people that is not here  
25 today. Dan Donohue has been instrumental in the

1 development of this. And for the last three weeks, he's had  
2 the fortune, or misfortune, of being on jury duty. So, he  
3 has worked for the last six months very diligently on this  
4 and is going to miss the climax. So, I wanted to  
5 acknowledge his efforts in this process.

6 My presentation today will provide an overview of  
7 our proposed amendments. I'll begin by discussing the  
8 purpose of the amendments, followed by a discussion of the  
9 public process we used to develop the amendments.

10 I'll send discuss in more detail the California  
11 predictive model and the other amendments we are proposing.

12 Next, I'll identify and discuss the impacts,  
13 identify our proposed modification, and then summarize and  
14 present you our recommendation.

15 We are proposing two sets of amendments today.  
16 First, we are proposing to add an option to the Phase 2  
17 regulations to allow the use of a predictive model to  
18 evaluate and approve alternative Phase 2 gasoline  
19 formulations.

20 Second, we are proposing several -- proposing to  
21 modify several sections of the Phase 2 regulations to  
22 facilitate the implementation of the regulations.

23 The proposed amendments are designed to provide  
24 additional flexibility without sacrificing either the  
25 environmental benefits or the enforceability of the regulations.

1 regulations. By allowing refiners to optimize their  
2 refinery operations through the use of a predictive model,  
3 the proposed amendments should result in a lower cost to  
4 produce gasoline and an increased supply of gasoline.

5 By allowing distributors and marketers a small  
6 amount of time to meet the Phase 2 limits, we expect to ease  
7 the transition to Phase 2 gasoline. And by improving the  
8 record keeping and reporting requirements, the proposed  
9 amendments should make it easier to comply with the Phase 2  
10 regulations.

11 And the net effect of this is to -- we hope -- to  
12 lower the cost to produce gasoline and to help ensure that  
13 there's an adequate supply of gasoline available.

14 As Mr. Boyd mentioned, we developed the proposed  
15 California predictive model and the other amendments through  
16 an extensive public process. This process began with our  
17 commitment at the November, '91 hearing to develop a  
18 predictive model by the spring of '92. Oops, I'm ahead of  
19 myself here.

20 However, we soon recognized that no off-the-shelf  
21 model could be used. In addition, several critical studies  
22 were ongoing and were not expected to be available until  
23 1993. We also recognized that there were a number of  
24 complex issues that must be addressed if we were to obtain a  
25 model that would meet industry needs, yet still retain the

1 enforceability and flexibility -- enforceability and  
2 environmental benefits that we desire.

3           Consequently, we reached a general consensus with  
4 the Western States Petroleum Association that we should  
5 continue to cooperatively work on the model and integrate in  
6 the new studies as they became available.

7           As Mr. Boyd mentioned, over the last several  
8 years, we have had an active public participation in the  
9 development of the California predictive model and the other  
10 amendments.

11           We have had several workshops and have met  
12 extensively with new WSPA subcommittees, one for the  
13 predictive model and one for implementation issues.

14           In addition, we have had numerous individual  
15 meetings and discussions with industry representatives. As  
16 a result of these interactions, we believe that we have  
17 reached a general consensus on virtually every major issue  
18 raised during the development process.

19           I'd first like to talk a little bit about the  
20 California predictive model, and then I'll talk about the  
21 other amendments.

22           The California predictive model is used to  
23 determine how the change in fuel properties affect change in  
24 emissions. In form, it is a set of three equations, one  
25 each for hydrocarbon, oxides of nitrogen, and what we refer to as lead.

1 to as potency weighted toxics.

2           There are four toxics considered in this potency-  
3 weighted equation -- benzene, 1,3-butadiene, formaldehyde,  
4 and acetaldehyde. These are the four toxics that we  
5 typically associate with exhaust and evap emissions from  
6 motor vehicles.

7           CHAIRWOMAN SCHAFFER: Excuse me, Mr. Fletcher.  
8 Would you please repeat those four?

9           MR. FLETCHER: Certainly. Benzene, 1,3-butadiene,  
10 formaldehyde, and acetaldehyde.

11           CHAIRWOMAN SCHAFFER: Thank you.

12           MR. FLETCHER: The predictive model is designed to  
13 provide additional flexibility to refiners in producing  
14 gasoline. As such, it should allow refiners to optimize  
15 their individual refinery configurations to produce the  
16 desired amount of gasoline at the least cost.

17           The following series of slides will provide a  
18 simple example of how a refiner may use the predictive model  
19 to take advantage of an individual refinery configuration.

20           To begin the example, I'd like to first briefly  
21 review the Phase 2 specifications and properties.

22           This slide lists the eight fuel properties and the  
23 values of the flat, averaging, and cap limits as defined in  
24 the Phase 2 regulations.

25           A refiner now may choose to meet either a flat



1 limit, which applies to each gallon of gasoline sold, or an  
2 averaging limit. The averaging limit must be met over a  
3 plus or minus 90-day averaging period.

4 The refiners have the flexibility to choose a flat  
5 limit for one property -- say sulfur -- and an averaging  
6 limit for another -- say aromatic hydrocarbons.

7 In no case may a refiner exceed the cap limit.

8 As you can see on this slide, the two highlighted  
9 properties reflect a simple example of how a refiner may use  
10 a predictive model. In this example, the refiner wants to  
11 take advantage of their capability to produce low-sulfur  
12 fuels by producing a 5 ppm sulfur -- by meeting a 5 ppm  
13 sulfur limit instead of -- as opposed to the Phase 2  
14 averaging limit of 30 ppm. So, you can see in that second  
15 and third column there, under "Alternative Phase 2 RFG,"  
16 there is a 5 there. It's a little hard to read. And then  
17 the Phase 2 specification is 30.

18 So, they're choosing to lower their sulfur  
19 content. And, in general, the equations show that reducing  
20 the sulfur content of the fuel will reduce the emissions of  
21 all of the three criteria -- the potency-weighted toxics,  
22 the oxides of nitrogen, and the hydrocarbons.

23 And, in turn, the refiner is then going to choose  
24 to increase the averaging limit for the 90 percent

25 distillation temperature from 200 and -- to 200 -- to 295 and

1 degrees (sic). So that they're lowering sulfur; in  
2 exchange, they're increasing the T90.

3 So, that's kind of a simple example of how we  
4 would expect this model to work. We don't expect there to  
5 be large changes in the properties and the refiners always  
6 have to operate within the cap limit. In no case can they  
7 ever propose a fuel property that would exceed the cap  
8 limit.

9 The next few slides discuss some of the key  
10 elements of the predictive model. These include the  
11 development of the database and a discussion of the  
12 statistical approach we use to analyze the data in the  
13 database.

14 During the development process, we identified and  
15 resolved a number of technical and other issues. As I  
16 mentioned, we have reached a consensus with the WSPA working  
17 group on virtually all of these issues and we will highlight  
18 these major areas of consensus. Finally, we will discuss  
19 several issues that some individual refiners may raise.

20 For the California predictive model, we've  
21 assembled an extremely large database of emission tests.  
22 The data were obtained from 20 individual studies designed  
23 to conduct -- or conducted to investigate the effect that a  
24 change in fuel properties may have on emissions.

25 The database consists of data from over 7,700 oil burner flame

1 individual vehicle tests and it represents about \$50 million  
2 in emission test costs. Most of the vehicle tests were done  
3 on vehicles newer than 1984; therefore, we only considered  
4 these vehicles in developing the predictive model.

5           The procedure we used to develop the California  
6 predictive model is a standard statistical approach that is  
7 part of the SAS Institute's computer programming package.  
8 We used this approach because we believe that it represents  
9 the most scientifically defensible analysis of the data. We  
10 are not planning on presenting a detailed discussion of the  
11 technical details on this approach; however, we do have  
12 Steve Brisby and Kevin Cleary of our staff and Dr. David  
13 Rocke, our statistical consultant from the University of  
14 California at Davis, here to answer any technical questions  
15 you may have about that approach.

16           I'd like to mention that the final version of our  
17 California predictive model does represent a number of  
18 different versions. In fact, we tend to call the latest  
19 version of the California predictive model the CARB 8  
20 version, which indicates that that's the eighth major  
21 revision of the model that we've gone through in developing  
22 this final proposal.

23           We did analyze some alternatives to the California  
24 predictive model. We analyzed a different approach at the  
25 request of WSPA, which we refer to as a hybrid approach.

1 And then we also analyzed the US EPA complex model that is  
2 part of their reformulated gasoline regulations.

3 However, we didn't select any of these other  
4 approaches. In general, we found the other approaches use  
5 assumptions and methods that we did not think were  
6 scientifically justifiable, and believe that our method does  
7 represent the best justified approach to developing the  
8 model.

9 However, the analysis of these other alternative  
10 models did lead to some modifications and some of the  
11 changes that we ultimately made in our California predictive  
12 model, and we felt that it was a very worthwhile exercise to  
13 go through and look at these other approaches.

14 As I mentioned, we have reached consensus in a  
15 number of these major issues. The development process was  
16 an iterative process and, you know, through the workshops  
17 and meetings, the number of issues regarding the  
18 construction, performance, and implementation of the model  
19 were raised. As Mr. Boyd mentioned, we've had an excellent  
20 working relationship with the oil industry and the auto  
21 industry in the development of these models, and we have  
22 been able to reach consensus on virtually every major issue.

23 Relative to the data base, we have reached a  
24 consensus on the data that should be included in the  
25 database and, similarly, the data that should be excluded

1 from the database, the use of data from only post-1984,  
2 excluding the ozone-forming potential as a required criteria  
3 for acceptance, and the treatment of data from high-emitting  
4 vehicles.

5 Relative to the statistical analysis, we have  
6 reached a consensus with WSPA on the statistical approach  
7 that we believe is the most scientifically defensible, while  
8 still providing the necessary flexibility to the industry.

9 Relative to the other areas, we have reached a  
10 consensus with WSPA to exclude a requirement to assess an  
11 alternative fuel's impact on carbon monoxide, primarily  
12 because we expect other programs to be effective in reducing  
13 carbon monoxide emissions, and we expect the State to be in  
14 attainment -- most of the State to be in attainment in the  
15 near future.

16 We have also reached consensus on the frequency  
17 with which the refiners may use the model and allowing the  
18 refiners to use the model throughout the year.

19 Although we came to agreement with industry on the  
20 most important issues, there were a few other issues that  
21 were raised that we are not incorporating into the  
22 predictive model. The current model does not allow the RVP  
23 to vary. Several refiners have requested we consider  
24 providing a limited range in the predictive model for the

25 (RVP). For example, the RVP could be varied down to 6.8 psi and

1 We are not proposing to allow the RVP to vary from the  
2 present requirement of 7.0 for several reasons.

3 One, the low RVP database is not as robust as the  
4 other fuel properties; therefore, we have somewhat less  
5 confidence in these RVP responses. A fixed RVP value limits  
6 the effects of these responses. Second, we are not  
7 convinced that there will be any driveability or safety  
8 problems associated with the use of lower RVP fuels. We do  
9 understand that the American Petroleum Institute is  
10 investigating the safety issue and expected to complete  
11 their work later this year.

12 We are also not proposing to include a special  
13 predictive model that could be used by small refiners. As  
14 you know, the small refiners do not have to meet some of the  
15 specifications in the first two years of the regulations.  
16 At this time, we do not believe that there is a fair and  
17 equitable way to establish the small refiners' baseline  
18 properties, which would be the critical requirement in  
19 developing a special model for the small refiners.

20 Finally, several refiners have requested that we  
21 allow a limited averaging option for the first year of the  
22 regulation. This would involve the change in the RVP cap.  
23 In this hearing, we cannot make a change to the RVP

24 specification as the hearing notice does not indicate that

25 this will be considered. We are, however, working with the

1 industry -- the refiners and the pipeline operators -- to  
2 investigate options to improve the flexibility in meeting  
3 the RVP specifications.

4 In addition to the predictive model, we are  
5 proposing to make several other changes to the Phase 2  
6 regulation. The purpose of these amendments is to ease the  
7 transition to Phase 2 gasoline and to provide additional  
8 flexibility relative to the record keeping and reporting  
9 requirements.

10 We are proposing that the Board modify the dates  
11 when various gasoline distribution facilities must comply  
12 with the cap limits in the Phase 2 regulations.

13 Currently, the Phase 2 regulation requires that  
14 all gasoline leaving the refineries must meet the flat and  
15 averaging limits on March 1st. All fuel leaving the  
16 terminals, bulk plants, and service stations -- as  
17 represented by the yellow arrows on that slide -- must meet  
18 the specifications on April 1st, 1996.

19 We are proposing a change that would require all  
20 gasoline leaving the terminals -- as represented by the  
21 yellow arrows there -- to meet the specifications on April  
22 15th, an increase of about two weeks.

23 In addition, we are proposing a change that would  
24 allow gasoline leaving the bulk plants and the service  
25 stations to comply starting June 1st, an extension of about

1 two months. And that's represented by the sort of purple  
2 arrows.

3 We believe that these changes will ease the  
4 initial transition to Phase 2 gasoline and represent a more  
5 natural turnover of the inventories.

6 We are also proposing four additional minor  
7 amendments. These amendments address the frequency that a  
8 refiner may select the various compliance options -- the  
9 flexibility to report estimated volumes of fuel in the  
10 averaging option, the record keeping requirements related to  
11 the sale of fuel at out-of-state terminals, and the number  
12 of significant figures reported for the aromatic hydrocarbon  
13 limits.

14 We do not believe there will be any significant  
15 increase in emissions due to the use of the predictive  
16 model. As for the other amendments, very small increases in  
17 emissions could result during the phase-in period. However,  
18 we believe this increase will be insignificant, since all  
19 gasoline leaving the refineries will have to meet the Phase  
20 2 gasoline limits beginning March 1, 1996.

21 To the extent that the predictive model reduces  
22 operating costs, the cost to businesses and consumers should  
23 be reduced.

24 Since the release of the staff report and the  
25 proposed amendments, we have continued to work with WSPA and



1 others in assessing the proposed amendments. As a result,  
2 we have identified several additional areas that we believe  
3 will improve the predictive model and the ability of the  
4 refiners to routinely comply with the Phase 2 regulation.

5 I'd point out that the modifications that we're  
6 going to be making are essentially all at the request of the  
7 industry.

8 Consequently, we are proposing several amendments.  
9 In our original proposal for the predictive model, we  
10 included a term for each of the Phase 2 fuel properties in  
11 the equations. We are now proposing to include only the  
12 significant term in the toxics equations. This will tend to  
13 simplify the number of terms in the equations without making  
14 any substantial change in the results.

15 We are also proposing to adjust the hydrocarbon  
16 equation to account for the lack of data at low values of  
17 T50 and T90. We believe that these modifications will  
18 simplify the equation somewhat without significantly  
19 affecting the results.

20 We are proposing to allow the refiners some  
21 additional flexibility with the averaging option in the  
22 first two years of the regulation. Basically, a producer  
23 would be allowed three extensions on the 90-day averaging  
24 period a year up to 10 days for each extension. We believe

25 this flexibility is appropriate during the period of time

1 that the refiners are learning how to blend the fuel to  
2 simultaneously meet all of the Phase 2 specifications.

3 We are also proposing a minor amendment not shown  
4 on the slide that would extend a refiner's ability to enter  
5 into enforcement protocols concerning the notification  
6 requirements of the predictive model. This amendment  
7 essentially extends the flexibility they have under the  
8 existing averaging option to the averaging option under the  
9 predictive model.

10 In summary, the proposed amendments are designed  
11 to provide additional flexibility to gasoline producers,  
12 distributors, and marketers. We expect this additional  
13 flexibility will allow producers to produce more gasoline at  
14 a lower cost. This should lower the expected cost to  
15 consumers and help to ensure that the producers are ready to  
16 produce Phase 2 fuel on time and in sufficient quantities.

17 When developing these amendments, we were careful  
18 to preserve the environmental benefits of the Phase 2  
19 regulations without sacrificing the enforceability of the  
20 regulations.

21 Finally, the proposed amendments represent a  
22 consensus with WSPA on virtually all major issues.

23 To end the presentation, we recommend that the  
24 Board adopt our proposed amendments to the Phase 2  
25 regulations with our proposed modifications.

1 Thank you.

2 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
3 Fletcher.

4 At this point, I'd like to invite members of the  
5 Board to address questions, if they have them, to the staff  
6 concerning this modification to our regulation.

7 Yes, Mr. Calhoun.

8 MR. CALHOUN: Bob, you mentioned the fact that one  
9 of your additional amendments that has been proposed  
10 concerns simplifying the HC and Nox integrating. Would you  
11 care to elaborate on that a little more?

12 MR. FLETCHER: Certainly. In the development of  
13 the equations, you end up generating curves. And we call  
14 them "smiles" and "frowns," because essentially you end up  
15 with a response that, as the value increases, you get a  
16 response that tends to curve up at the lower end. And the  
17 data that is available to develop the model tends to be  
18 concentrated more on the upper end of the data than the  
19 lower end of the data.

20 So, what we have essentially done is taken --  
21 taken a statistical approach that tends to look at where the  
22 minimum in this curve occurs and then linearize that.

23 So, for instance, at T50, that linearization  
24 occurs at about 180 degrees. So, instead of showing an  
25 increase in hydrocarbon emissions at low levels of T50,

1 which we don't believe the data in that range show, we  
2 essentially just flatten the response. And, so, we've done  
3 that for T50, we've done that for T90, and then we've done  
4 that for oxygen.

5 We have a couple of charts that we could show you  
6 that would help clarify.

7 MR. CALHOUN: Yeah, I guess I'd like to see that.

8 MR. FLETCHER: Okay. What you will see is the  
9 results of the -- what we call the composite model. And it  
10 will show the effect of varying T50 as the function of the  
11 percent change in VOC emissions.

12 So you can sort of see there is a line there that  
13 curves up at about the 180 degree range. The data that we  
14 have is generally in about 175 up to 220. The current  
15 average gasoline for California is about 210 degrees for  
16 T50. So that, as we go down to these lower levels of T50,  
17 we find that there's not as much data; that the data do  
18 justify this curvature in the upper end of the curve. But  
19 because it's a squared term, you naturally get a parabola.  
20 So, what we're doing is going in and -- as this -- since  
21 this is a composite, you don't see a straight line going  
22 over from the 180, because it includes the effects of a  
23 different class of vehicles.

24 But it does take away that curvature at the top.

25 It's what we call linearization. And it's an extrapolation.

1 technique that EPA has also used in parts of their complex  
2 model. This is -- as I mentioned, when we were doing the  
3 analysis of the different alternative models, there were a  
4 couple techniques that we came up with that we thought were  
5 appropriate to apply into the California predictive model.  
6 This is one of them.

7 MR. CALHOUN: I think Mr. Boyd mentioned during  
8 his presentation that we expect to get the same overall  
9 emission benefit by the use of the predictive model that you  
10 would get if we were not using it. Does our confidence  
11 level change as a result of these changes we're making now  
12 in terms of the emission benefits?

13 MR. FLETCHER: No, not at all. I think that what,  
14 you know, if you see that we're -- we would be tending to  
15 show an increase in hydrocarbon emissions here that we don't  
16 think is reflective of what would happen if an actual fuel  
17 were blended. I mean, these are pretty low levels of T50 to  
18 begin with, and there's not a high probability that there'll  
19 be a lot of fuels blended in the 170 to 160 degree range to  
20 begin with.

21 But even if they were, we would expect that we  
22 would see either flat or slightly lower -- we would see  
23 slightly greater emission benefits as we went down. So,  
24 this is a situation where we think it may show benefits that  
25 we wouldn't -- that are not real.

1 MR. CALHOUN: I have another question relative to  
2 the driveability, but I'll wait until after we hear some of  
3 the industry's testimony to bring that up.

4 MR. FLETCHER: Okay.

5 CHAIRWOMAN SCHAFFER: Okay. Thank you.

6 MR. LAGARIAS: Madam Chair?

7 CHAIRWOMAN SCHAFFER: Yes, Mr. Lagarias.

8 MR. LAGARIAS: Mr. Fletcher, in your discussion of  
9 the amendments, you referred to the amendments as lowering  
10 the cost to produce gasoline. You're not meaning to  
11 indicate that the cost of reformulated gasoline will be less  
12 expensive than our current gasoline, but rather that the  
13 projected increase in the cost will not be as great as you  
14 originally thought; is this correct?

15 MR. FLETCHER: That's exactly correct.

16 MR. LAGARIAS: Thank you. Have you made a  
17 comparison of the predictive model that you've developed  
18 with the hybrid model and the EPA complex model to see how  
19 they compare in assessment of the results?

20 MR. FLETCHER: We have. We've looked at a couple  
21 different ways to make that comparison. For the comparison  
22 between the EPA -- or between the hybrid approach and the  
23 California predictive model, it's fairly straightforward,  
24 because you can take our baseline Phase 1 fuel and compare  
25 that to a Phase 2 fuel, and then look at what the percent

1 difference is for hydrocarbons, Nox, and potency-weighted  
2 toxics.

3           When we do that, we find that there are  
4 differences in the responses, as you would expect, because  
5 the approaches differ. But we also found that the  
6 differences are not substantially different. One may  
7 predict a 10 percent increase in the -- or 10 percent  
8 decrease in hydrocarbons from Phase 1 to Phase 2 fuels. The  
9 hybrid approach may predict 8 percent. So, we got a lot of  
10 comfort from the fact that those two models were predicting  
11 roughly the same on the Phase 1 to Phase 2 fuels. When you  
12 look at the EPA complex model, it's a little more difficult,  
13 because the fundamental basis of that model is different  
14 than our two.

15           So, you have to go through and you have to figure  
16 out what a fuel would be that would pass EPA's complex model  
17 and then insert that fuel into our model to draw the  
18 comparisons. But even when we did that, we found that those  
19 models still were pretty close.

20           So, that's one simple approach. When you look at  
21 a more complex approach, where you actually try to predict  
22 the results of tests that have been done already with the  
23 three models to see how well they compare, what we found is

24 that, typically, the California predictive model would predict  
25 predict those fuels a little bit better than either the other

1 hybrid or the EPA complex model.

2 And the difference -- there are some fundamental  
3 differences in the hybrid approach and the EPA complex  
4 approach relative to how they handle, statistically, the  
5 data. And that, I think, is accounting for one of the  
6 differences.

7 The EPA complex model is also based on a different  
8 database than ours. It includes about 25 percent fewer data  
9 points than the ARB complex model. So, that would also be  
10 one of the differences between the EPA complex model and our  
11 model.

12 The other thing I was going to mention about the  
13 hybrid model and the EPA complex model is they both tend to  
14 preexclude terms that we believe may be statistically  
15 significant. And they've done that based on what they  
16 consider to be an engineering judgment that the studies that  
17 have been done don't justify including those terms. And  
18 we've taken the approach that we believe that we ought to  
19 let the data say which terms are significant. So, we've  
20 included those terms and then let the model work to decide  
21 which terms are significant. So the fact that there are  
22 some terms in our model that aren't in either of those two  
23 models I think also accounts for these -- these differences  
24 in the models.

25 MR. LAGARIAS: None of the models use reactivity



1 adjustment factors, do they?

2 MR. FLETCHER: That's correct.

3 MR. LAGARIAS: And is that because you are using  
4 the RAFs for a comparison with alternate fuels rather than  
5 within the gasoline itself?

6 MR. FLETCHER: I think that's one major reason.  
7 The other major reason that we did not include the ozone-  
8 forming potential in our model is because the database was  
9 not quite as robust as we would have liked to have had it.

10 MR. LAGARIAS: And one last question. You are  
11 going to investigate the options of meeting the RVP  
12 requirements?

13 MR. FLETCHER: I think we'll continue our  
14 discussion with the refiners to look at ways to make the  
15 transition easy. And I think the RVP is one of their -- one  
16 of their concerns. So, we will be working with those folks  
17 and the pipeline operators to --

18 MR. LAGARIAS: Thank you.

19 MR. FLETCHER: -- to do that.

20 CHAIRWOMAN SCHAFER: Thank you.

21 SUPERVISOR VAGIM: Madam Chair?

22 CHAIRWOMAN SCHAFER: Yes, Supervisor Vagim.

23 SUPERVISOR VAGIM: On the end product, small user,  
24 what is the process that they would go through to get an

25 exemption if, indeed, their tanks were still half full?

1 MR. FLETCHER: Tom, do you want to answer that?  
2 There is a provision, and Tom can go into more detail on it,  
3 but there's a provision that allows the small user to make  
4 an affirmative defense that they have not received any  
5 supplies of fuel since the date that they would have had to  
6 have been in compliance. And there is a process outlined in  
7 the regulation. Tom can elaborate on that.

8 MR. JENNINGS: Yes. This new language would be in  
9 Section 2261(a)(2). And, essentially, if a retail operator  
10 or bulk user can demonstrate by an affirmative defense that  
11 the reason they are exceeding the cap limits after June 1st  
12 was due to supplies of gasoline from bulk facilities before  
13 June 1st or from terminals before April 15th, then they  
14 would not be liable for violations of the regulation.

15 SUPERVISOR VAGIM: How about the nonretail user,  
16 the person who has a bulk tank on a ranch or a farm?

17 SUPERVISOR VAGIM: The regulations specifically  
18 would apply both to the retail outlet or to bulk consumer  
19 purchaser facilities.

20 SUPERVISOR VAGIM: And they can pursue the  
21 exemption also?

22 MR. JENNINGS: That's correct. It expressly  
23 applies to end users that are not retail outlets as well as  
24 retail outlets.

25 SUPERVISOR VAGIM: And part of that process would

1 be what? A history of use? I mean, you're going to have to  
2 differentiate between someone literally dragging their feet  
3 versus someone who actually just didn't use the fuel that  
4 they bought a month and a half ago or two months ago, or  
5 whatever that date.

6 MR. JENNINGS: They would document it essentially  
7 by maintaining the receipts for the deliveries that they  
8 receive. And if their last delivery came from a terminal  
9 that was not required to deliver Phase 2 gasoline and,  
10 therefore, didn't have Phase 2 gasoline available, that  
11 would provide an adequate defense.

12 SUPERVISOR VAGIM: Very good. Thank you, Madam  
13 Chair.

14 CHAIRWOMAN SCHAFFER: Mr. Parnell.

15 MR. PARNELL: There's probably a whole lot about  
16 this I don't understand. But let me take a run. It seems  
17 to me that reformulated gasoline, as we see it and as we  
18 envision it, is going to be -- it'll be required to meet a  
19 certain set of standards; however, those standards will  
20 basically be -- will be performance-based. That is, that  
21 they have to be emissions standards; is that -- that's  
22 relatively correct? I probably said that inartfully.

23 It seems to me, because of the variability of the  
24 way various refineries may produce this fuel, there is a  
25 point of compliance that will be measured. But once this called

1 gets in the process and we start shipping fuel the way we  
2 ship fuel, these fuels then -- because of the variability  
3 that we -- and I compliment you for having worked with  
4 industry to allow that variability. It seems to me that  
5 once these fuels start to be shipped, that there is a  
6 potential for them to become polluted, mixed with each  
7 other, and then, therefore, out of compliance unless they're  
8 totally separate.

9 Do I miss something, or --

10 MR. JENNINGS: No. I think you identified an  
11 important aspect of these regulations. And the term we use  
12 to describe what you're talking about, I think, is  
13 commingling; that you have commingling of different batches  
14 of gasoline.

15 Because that happens and because we did not want  
16 to restrict the fungibility of gasoline and the ability to  
17 mix batches, what we did is set two different kinds of  
18 limits. We set these flat and averaging or designated  
19 alternative limit standards that apply to gasoline when it's  
20 coming out of the refinery or coming out of an import  
21 facility. Then we applied cap limits or established cap  
22 limits that are less stringent than the flat limits or  
23 designated alternative limit standards.

24 And the cap standards apply throughout the  
25 distribution system. So that once the cap limits are in

1 effect, every gallon of gasoline at a service station or at  
2 other facilities would have to meet all of the cap limits.  
3 And one of the things the predictive model does is allow  
4 variations of the parameters as long as the parameters stay  
5 within the cap limits.

6 And the same thing with the averaging. You can  
7 have batches that are higher than the designated alternative  
8 limit averaging standard as long as it doesn't exceed the  
9 cap limit.

10 MR. PARNELL: The bottom line, staff is  
11 comfortable that the pipeline and the storage facilities,  
12 the infrastructure that's out there is adequate, under your  
13 scenario that you understand and I don't is adequate.

14 MR. FLETCHER: Yes. And I think the primary  
15 enforcement still occurs at the refinery. And they will --  
16 you know, one of the statements you mentioned was that the  
17 standards are performance-based. They're actually  
18 specifications on the fuel so that they will have a sulfur  
19 limit and they will tell us what that sulfur limit should  
20 be, either through the predictive model, or under the  
21 averaging option, or the flat option. So, our enforcement  
22 people will know when they go to that refinery, what  
23 concentrations the fuel should have in it of those  
24 properties.

25 So, certainly, the refinery enforcement is going

1 to be a key aspect of the enforcement of the Phase 2  
2 regulations.

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

5 MS. EDGERTON: Yes. Ms. Edgerton.

6 MS. EDGERTON: This brought up an interesting  
7 question on the enforcement. From the chart that was up  
8 there, it looked like there were several points of  
9 enforceability. Could you -- and I think that picks up a  
10 little bit on what Mr. Parnell was saying -- the difficulty  
11 of enforcing this.

12 Could you just spend a minute -- it sounded like  
13 what you just spoke to was enforceability at the point of  
14 production.

15 MR. FLETCHER: Right.

16 MS. EDGERTON: Obviously, there are a couple of  
17 other points.

18 MR. FLETCHER: If you recall the one chart that I  
19 had up on the Phase 2 specifications that had the flat,  
20 average, and cap limits, that third column is the limit that  
21 applies at the terminals, and at the service stations, and  
22 at the bulk plants. That's what we call a cap limit. It's  
23 higher than either the flat limit or the averaging limit,  
24 and no gallon of gasoline anywhere in the distribution can  
25 exceed that limit.

1           So, you know, when we talk about the flat and  
2 average limits being the primary enforcement mechanism at  
3 the refinery, we also refer to these cap limits as being the  
4 values that would be enforced at the terminals, and the  
5 service stations, and the bulk plants.

6           MR. SCHEIBLE: And neither the predictive model  
7 nor the averaging provision of the reg allow anyone to  
8 legally produce fuel for sale in California that exceeds any  
9 cap. Therefore, if the cap for sulfur is 80 parts per  
10 million and you've put together any combination of legal  
11 fuels, they have to come in at 80 or under, because it was  
12 never legal to produce fuel above that amount.

13           CHAIRWOMAN SCHAFFER: Dr. Boston.

14           DR. BOSTON: That still confuses me a little bit,  
15 also. If a certain refiner makes a fuel that meets certain  
16 emission standards -- and let's say he has a cap of sulfur  
17 of 5 and a hydrocarbon of X -- and then another refiner has  
18 made gasoline that also meets the emission standards, but  
19 with a slightly different variation of the different  
20 elements. And then you mix them. Couldn't that change the  
21 emission profile?

22           MR. FLETCHER: It could. Certainly, when you  
23 commingle the fuels, you will end up with a different blend  
24 of fuel properties. And one of the -- you know, one of the  
25 beliefs that we've had all along that's pretty much been hat-

1 borne out by the final model is that you can't vary the  
2 specifications all that much and lose the benefits. There  
3 will be some fuel blends that may be, quote, "dirtier" than  
4 other fuel blends. But you also may end up commingling  
5 fuels that will be cleaner than what you should have.

6 So, if somebody's blending a fuel that's very low  
7 sulfur and they put that out into a blend that is higher  
8 sulfur, you're going to end up with a lower net sulfur which  
9 -- as I mentioned earlier, the more you reduce the sulfur,  
10 you get benefits on Nox, hydrocarbons, and potency-weighted  
11 toxics.

12 So, it's very difficult to go through the analysis  
13 of all the universe of different fuels that could be out  
14 there. But we believe that, on average, that we will not be  
15 foregoing any of the benefits of the regulation; that we've  
16 set the caps tight enough.

17 For example, the sulfur cap on 80 ppm is still,  
18 what, four times less than what the current cap is on sulfur  
19 content. So, we have reduced the caps from what the current  
20 available fuel properties can go up to.

21 DR. BOSTON: Could a particular car then have a  
22 driveability problem, depending on what blend he got out of  
23 which station?

24 MR. FLETCHER: It's always possible that a  
25 particular vehicle may have a driveability problem with a



1 particular blend of gasoline. And that's a function of the,  
2 you know -- how well that particular car is tuned. You  
3 know, is it operating the way it's supposed to be operating?

4 I think that we certainly do not expect to see any  
5 driveability problems. Many of the fuel properties that  
6 were -- that are part of the Phase 2 regulations have been  
7 introduced and are in effect now.

8 The only difference is that we haven't put them  
9 all together in one fuel blend. There are fuels out there  
10 now that have no sulfur in them.

11 There are fuels out there -- we just finished our  
12 wintertime oxygenate program. So, there are fuels out there  
13 that have had oxygen in them. You know, the individual  
14 refineries have different fuel properties now. So, the  
15 vehicles have essentially been introduced to a wide array of  
16 properties that fall within our range. They just haven't  
17 necessarily been put all of the specs at once (sic).

18 MR. JENNINGS: Dr. Boston, if I could provide a  
19 little additional analysis. As I think I understood your  
20 first question, it was whether you could have circumstances  
21 where you have two legal fuels that, when commingled, you  
22 would end up with an exceedance of the cap.

23 And I'll start out with a shot at answering this,  
24 but the technical people --

25 DR. BOSTON: No. That wasn't it.

1 MR. JENNINGS: That wasn't it?

2 DR. BOSTON: No.

3 MR. JENNINGS: Then I'll stop.

4 DR. BOSTON: Okay.

5 MR. FLETCHER: The other thing Dean just reminded  
6 me is that one of the -- one of the values that we've used  
7 to kind of indicate driveability is what we call a  
8 driveability index. And it's a function of the distillation  
9 temperatures.

10 We have two of those distillation temperatures  
11 specified in the regulation; that is, T50 and T90. The  
12 third distillation temperature that's part of that equation  
13 is the 10 percent distillation point, which is close to  
14 being set by the RVP. They're not exactly correlated, but  
15 it's close.

16 And in the fuel blends that we've run through, we  
17 have some -- some experience with low driveability fuels  
18 that we haven't had any problems with. And we think that  
19 the fuels that we're producing will meet those sorts of  
20 indices.

21 CHAIRWOMAN SCHAFFER: Are there any other questions  
22 at this point from Board members for the staff?

23 If not -- and I know we'll probably have some  
24 later on as a result of testimony -- I'd like to begin the  
25 public testimony portion of our consideration of this.

1 regulation this morning. In the order in which you  
2 requested an opportunity to appear, I'd like to invite Mr.  
3 Kulakowski from WSPA to step forward.

4 Yes. And if you'll hold a moment for your  
5 testimony, we'll have a change of tape for the official  
6 reporter.

7 (Thereupon, there was a pause in the  
8 proceedings to allow the reporter to  
9 replenish her stenograph paper.)

10 CHAIRWOMAN SCHAFER: You may proceed.

11 MR. KULAKOWSKI: Madam Chair, members of the  
12 Board, good morning. My name is Mike Kulakowski. I'm a  
13 staff engineer with Texaco Refining and Marketing, but I'm  
14 here today representing the Western States Petroleum  
15 Association, which is also known as WSPA.

16 WSPA is a trade association whose 30-plus members  
17 conduct the majority of the production, refining, and  
18 marketing of petroleum and petroleum products in California  
19 and the rest of the Western States.

20 We appreciate the opportunity to comment on the  
21 proposed amendments to the Phase 2 gasoline program. I will  
22 begin with our comments on the predictive model and then  
23 address the modifications to the averaging compliance  
24 option.

25 I'd like to start out by recognizing the efforts

1 and cooperation of the staff in the development of the  
2 proposal that you have before you today. Staff has had  
3 countless meetings and conversations with WSPA and have  
4 listened to all of and incorporated many of our ideas.

5 For example, staff went to great lengths to  
6 develop a model based on the hybrid approach similar to that  
7 used by EPA at our request, and willingly shared draft  
8 models as work in progress with our members to minimize  
9 feedback time.

10 WSPA's approach in the development of the  
11 predictive model has been that the final model must address  
12 three issues to be acceptable. First, it could not reduce  
13 the enforceability of the regulations; second, it had to  
14 ensure the emission benefits of the Phase 2 program; and,  
15 finally, it had to provide flexibility to gasoline  
16 producers.

17 We believe that the model being proposed by the  
18 staff today addresses these three issues with positive  
19 results. WSPA believes that the flexibility of the  
20 predictive model will enhance the success of the  
21 implementation of the Phase 2 gasoline program. The model  
22 will allow gasoline producers to tailor gasoline  
23 formulations to their specific operations. Refiners can  
24 relax specifications that would otherwise cause operational  
25 problems while ensuring equivalent emissions.

1 This should manifest itself in better ability to  
2 deliver product day to day. To the extent that producers  
3 use the model to increase the oxygen content or the T90 and  
4 aromatic content of gasoline, potential production volume  
5 for any given refinery may increase.

6 Finally, since refiners will be free to optimize  
7 emissions equivalent formulations to their operations,  
8 there's a good possibility that production costs will drop.

9 WSPA has reached a consensus that we can support  
10 the model being proposed by staff today as being an  
11 appropriate tool for the certification of alternative Phase  
12 2 specification sets. While we have a consensus, some  
13 individual companies still believe that there should be  
14 additional minor changes to improve flexibility further.

15 Regarding the clarifications and modifications to  
16 the averaging compliance option, WSPA believes that  
17 averaging is essential to the successful implementation of  
18 the Phase 2 program. We further believe the proposed  
19 changes are required for the averaging protocol to be  
20 useful.

21 We will continue to work with staff on the  
22 averaging and enforcement program to help ensure the success  
23 of the Phase 2 program.

24 WSPA supports the proposal to allow for limited  
25 extensions to the 90-day offset period. Changing the length

1 of the offset period will not change the value of the  
2 average standard and will thus have no impact on the  
3 environmental benefits of the program.

4           However, we believe that the increased flexibility  
5 offered by these extensions may prove invaluable to refiners  
6 to address minor operational problems.

7           Thank you. That concludes my prepared comments,  
8 and I'd be happy to answer questions.

9           CHAIRWOMAN SCHAFFER: Very good. I appreciate the  
10 vote of confidence among the WSPA members.

11           Are there any questions for Mr. Kulakowski from  
12 the members of the Board at this time?

13           Yes, Ms. Edgerton.

14           MS. EDGERTON: I apologize. I didn't get a copy  
15 of your material until it just came before us. But I notice  
16 here it's a June 8th dated later from Gina Grey?

17           MR. KULAKOWSKI: Yes.

18           MS. EDGERTON: With an attachment. On the third  
19 paragraph of the first page, you appear to question whether  
20 we have provided sufficient notice to act on this today.  
21 I'd just like for you to let me know what your purpose is  
22 here.

23           MR. KULAKOWSKI: I'll be perfectly honest. The  
24 first sentence was put in by WSPA's attorneys.

25           (Laughter.)

1 MR. KULAKOWSKI: Basically, what we believe in  
2 that case is that we always hope and request that we get  
3 adequate notice of changes. In this case, the changes that  
4 are being proposed today -- that staff has just proposed in  
5 their presentation -- are all based on a model that was  
6 adequately noticed. I mean the base model, which they're  
7 making some minor modifications to, was adequately noticed.  
8 So, we think that the changes that are being proposed today  
9 are appropriate to address in a 15-day package.

10 But we always hope -- hope that the Board gives  
11 adequate notice on other major changes.

12 MS. EDGERTON: So, if I understand you correctly,  
13 you're not challenging the noticing?

14 MR. KULAKOWSKI: I think we're protecting or  
15 calling into -- I mean -- staff's giggling because I think  
16 we've had some issue on this in some previous rulemakings,  
17 where we didn't think adequate notice was provided. But we  
18 are not questioning the authority to propose and adopt the  
19 proposed changes today.

20 MS. EDGERTON: Thank you. How do I just verify  
21 with staff that that's their understanding? Is that your  
22 understanding that there's no issue here? Because it's my  
23 understanding that part of the reason why we were being  
24 asked to make some additional changes is to enhance the  
25 flexibility for the industry.

1           And I'm a little -- I'm a little concerned if the  
2 industry is putting in something here saying that they might  
3 challenge that. Is that -- that's not what is happening  
4 then?

5           MR. KENNY: I think, basically, what they're doing  
6 is they're doing an historical thing. As Mr. Kulakowski  
7 said, historically, they've had concerns about the manner in  
8 which we've adopted 15-day change requirements -- 15-day  
9 changes. And I think they're just simply referencing that  
10 again at this point. It has been sort of an ongoing matter  
11 of dispute. But it is legal under the Administrative  
12 Procedures Act, and we continue to do it, and we continue to  
13 be successful at doing it.

14           MS. EDGERTON: Thank you.

15           CHAIRWOMAN SCHAFFER: Are there any other questions  
16 for this witness? Yes, Mr. Calhoun.

17           MR. CALHOUN: I think, Mike, you mentioned  
18 something to the effect that there need to be some  
19 additional changes to the averaging concept. And one of the  
20 items I think that you've expressed some concern about is  
21 the RVP. And given the fact that there's some kind of  
22 tolerance that has to be allowed during the enforcement  
23 purposes (sic), do you feel very strongly that there's  
24 anything needed beyond that as far as the RVP is concerned?

25           MR. KULAKOWSKI: Well, I'll answer your question.



1 on two levels. First, the overall averaging and enforcement  
2 of the regulations, as they're currently written, I view it  
3 kind of like a walk through a museum. You can just walk  
4 through the glance at the pictures and enjoy yourself, or  
5 you can critically evaluate each individual work.

6 And, as we, you know, critically evaluate the  
7 averaging and the averaging protocol that's already been  
8 written and try to figure out how to apply it, we think that  
9 there may be some time off in the future where we may want  
10 to address some future changes, much like the ones that are  
11 being seen today, minor changes.

12 On the topic of RVP specifically, individual  
13 companies will be addressing that today. WSPA, as a trade  
14 association, is not going to address that particular issue  
15 today. But you will hear about it in following testimony.

16 MR. CALHOUN: I'm sure we will.

17 CHAIRWOMAN SCHAFFER: Any other questions from  
18 Board members for this witness?

19 If not, thank you very much for your presentation  
20 this morning, Mr. Kulakowski.

21 MR. KULAKOWSKI: Thank you.

22 CHAIRWOMAN SCHAFFER: I'd like to see if the  
23 representative from the AAMA is in the audience at this  
24 point. Nancy Homeister?

25 Good morning.

1 MS. HOMEISTER: Good morning. My name is Nancy  
2 Homeister. I work for Ford Motor Company, but I'm here  
3 today on behalf of the American Automobile Manufacturers  
4 Association who represents Chrysler, Ford, and General  
5 Motors.

6 We would like to thank the California Air  
7 Resources Board for this opportunity to comment on the  
8 California Phase 2 gasoline predictive model.

9 We have analyzed the predictive model and compared  
10 the model's predictions to auto/oil results. Our conclusion  
11 from this analysis is that the model adequately represents  
12 the effects of changes in fuel parameters and vehicle  
13 emissions.

14 As the attached chart shows, which I believe you  
15 have separately, of 29 fuels tested, the majority of the  
16 model predictions are within 3 percent of the actual  
17 auto/oil results and nearly all within 10 percent.

18 We do, however, have two observations. First, the  
19 model predictions for Nox and VOC emissions are better than  
20 those for toxics. This may, however, be largely  
21 attributable to the wide variability in the toxics emissions  
22 data that were used in the development of the model.

23 Second, our tests of the model used the same fuel

24 and emissions data that were used in the construction of the  
25 model and, thus, our analysis does not provide an

1 independent check on the model. But, as the Air Resources  
2 Board staff had noted in the staff report, robust data sets  
3 do not at this time exist, which are separate from that that  
4 was used in the model.

5 We appreciate the efforts of the Air Resources  
6 Board staff has put into the development of this model.  
7 They have worked closely with both the oil and automotive  
8 industries and, from our viewpoint, have been receptive to  
9 the comments made by both.

10 The comments we made regarding an earlier version  
11 of the model during the February workshop appear to have  
12 been largely resolved in this more recent version. The  
13 model itself appears to be superior to the EPA's complex  
14 model.

15 It is critical, with a model as complex as the  
16 California Phase 2 gasoline predictive model, that the Air  
17 Resources Board provide a means to update this model as  
18 additional robust test data become available or as our  
19 understanding of the relationship between fuel parameters  
20 and exhaust emissions improves.

21 The staff has indicated their intention to  
22 incorporate future test results into the model, and we would  
23 ask that the Air Resources Board direct staff to develop a

24 mechanism to update the model, as needed, to ensure the best

25 possible predictions of real world behavior.

1 That concludes our prepared statement, and I'd be  
2 willing to take questions.

3 CHAIRWOMAN SCHAFFER: Thank you. Are there any  
4 questions from Board members for Ms. Homeister?

5 MR. CALHOUN: Yes, I'd like to ask one.

6 CHAIRWOMAN SCHAFFER: Yes, Mr. Calhoun.

7 MR. CALHOUN: What specifically do you have in  
8 mind in terms of directing the staff to setting up a  
9 mechanism for having the staff to update the model? You got  
10 any recommendations or anything specific?

11 MS. HOMEISTER: Not specific recommendations.  
12 They do make comment in the staff report that, as data  
13 becomes available. Right now, as the auto/oil program  
14 proceeds, data may arise in the future. We don't have any  
15 set ideas, but to have flexibility to incorporate as data  
16 does come up.

17 MR. CALHOUN: Staff, do you want to comment on it?

18 MR. FLETCHER: Sure. I think that in the staff  
19 report, we needed to address the question of how to update  
20 the model. And, certainly, as new data become available, we  
21 would be evaluating the model responses. And any updates --  
22 I think the process that we would use would be similar to  
23 the one we used here. We would have to go through a full  
24 public process. We would workshop any new changes that we  
25 had to the model.

1           We would have to evaluate the environmental and  
2 economic impacts of any changes to the model that we would  
3 make. We know the refiners are very concerned about any  
4 changes that would be made to the model; that, you know,  
5 they're planning on proceeding in a certain approach. And  
6 if new data become available, that says they ought to  
7 proceed in a different approach, that could be very, very  
8 disturbing.

9           So, we would want to make sure that we had an open  
10 public process with any changes, and that we would have to  
11 evaluate the economic impact that would have on any of the  
12 refiners' operations. But I think we would want to continue  
13 to evaluate any new data as it became available.

14           MR. CALHOUN: Okay. All right.

15           CHAIRWOMAN SCHAFFER: Ms. Edgerton?

16           MS. EDGERTON: I want to thank you for your  
17 compliment to the Air Resources Board for having developed a  
18 model that's superior to that of the United States  
19 Environmental Protection Agency, and I would like to ask  
20 whether you have initiated any conversation with the US EPA  
21 to see whether they might have an interest in using our  
22 model or --

23           (Laughter.)

24           MS. HOMEISTER: I'm not aware of any such discussion of any  
25 discussion.           25           discussing the model, as well as the model.

1 MS. EDGERTON: Thank you.

2 CHAIRWOMAN SCHAFFER: It does occur to me that the  
3 models certainly deal with totally different sets of  
4 regulations, and I think that probably accounts for the lack  
5 of applicability one to the other in any event.

6 Are there any more questions from Board members  
7 for Ms. Homeister?

8 If that's the case, thank you very much. I  
9 appreciate your presentation this morning.

10 I'd like now to recognize, if he's in the room,  
11 Mr. Jerry Horn, representing Chevron. Good morning.

12 MR. HORN: Good morning, Madam Chair, members of  
13 the Board. My name is Jerry Horn. I'm a staff planner in  
14 the Chevron USA Products Company Strategic Planning and  
15 Business Evaluation Group.

16 Chevron appreciates the opportunity to comment on  
17 the proposed amendments to the Phase 2 gasoline regulations.

18 Let me begin my comments by stating that Chevron  
19 supports the comments offered earlier today by the Western  
20 States Petroleum Association. In particular, I'd like to  
21 reemphasize the efforts and cooperation of your staff in the  
22 development of the model.

23 Having been personally involved from the beginning  
24 of this effort, I firmly believe that your staff should be  
25 recognized for its willingness to work cooperatively on this

1 issue, to consider and adopt many ideas that were offered  
2 during the many meetings which were held with industry, and  
3 to provide the models to us on a realtime basis in order to  
4 help streamline the feedback process.

5 We believe the model recommended for adoption by  
6 your staff today will most likely be a model which does  
7 provide some incremental flexibility to producers of Phase 2  
8 gasoline formulations. This will certainly help sustain  
9 production.

10 Speaking of flexibility, we believe the lessons  
11 learned and the knowledge gained during the development of  
12 the predictive model could potentially applied to another  
13 certification tool that's available within the regulations.  
14 That's the vehicle test option.

15 We believe the vehicle test option is real  
16 impractical to use given its current incarnation. An option  
17 that would be less onerous and less costly could stimulate  
18 research into new and innovative fuel formulations that  
19 really couldn't otherwise be certified under the  
20 regulations.

21 Our research staff in Richmond is currently  
22 evaluating the test option to see how it can be made more  
23 useful for certification purposes. We are willing to work  
24 with staff to develop acceptable modifications and hope that  
25 the cooperative approach that was demonstrated during the

1 predictive model development can be carried over into  
2 modification of the vehicle test option.

3 As Chairwoman Schafer noted in this morning's  
4 introduction, the events associated with the relatively  
5 recent introduction of low-aromatics diesel here in  
6 California and the low-sulfur diesel nationwide has made us  
7 realize that there still are a lot of implementation  
8 issues, including materials compatibility, which need to be  
9 addressed prior to the March, 1996 deadline.

10 We certainly urge the State to take the steps  
11 necessary to maximize the probability of a smooth transition  
12 to Phase 2 gasoline.

13 We were particularly pleased to hear this morning  
14 that the broad-based advisory committee, which was described  
15 in Secretary Strock's letter to Senator Kelly back in April,  
16 will be springing into action quite soon. We believe this  
17 committee will play an important role as the transition to  
18 Phase 2 comes in.

19 The drive to a smooth transition to Phase 2  
20 gasoline is certainly admirable given the huge stakes at  
21 play. However, this drive to the fuel of the future should  
22 not go down a road that compromises the environmental  
23 benefits of the regulation.

24 Phase 2 gasoline will provide substantial benefits  
25 for vehicles on the road as staff noted earlier today.



1 Chevron does not desire to see these benefits reduced.

2           The proposed compliance date extension to June 1  
3 at service stations during the transition period in 1996 is  
4 certainly one of the items that will help smooth the  
5 transition. However, unfortunately, during this short time  
6 period, this could also lead potentially to increased  
7 cheating and thus reduce the benefits of the regulation to  
8 some extent.

9           We recognize that CARB staff has stated that the  
10 compliance division will make every reasonable attempt to  
11 prohibit the sale of illegal gasoline during this transition  
12 period. These are definitely good intentions, but we think  
13 that CARB needs to develop a mechanism to specifically  
14 identify and take action against the illegitimate movement  
15 of gasoline by tank truck or rail into the State during this  
16 transition period.

17           One final issue: The existence of the RVP box  
18 created by the 7.0 psi RVP limit by CARB on the high end and  
19 the 6.6 psi minimum under the EPA simple model for fuels in  
20 Southern California has been discussed or mentioned as a  
21 potential problem. At this point, Chevron's not convinced  
22 that there is a real problem here.

23           The applicability of the 6.6 minimum is not clear  
24 from reading the federal reformulated gasoline regulations  
25 or looking at the draft direct final rulemaking when EPA was

1 considering this issue.

2 Perhaps when EPA issues the RFG Q & A document, as  
3 it's called, the box issue will be clarified. We just are  
4 not sure that the box is even defined at this point. And  
5 until it becomes clear that the box is a real issue, Chevron  
6 doesn't think it's wise to devote a lot of staff resources  
7 to fix the problem. When it comes a problem, that's when  
8 they need to deal with it.

9 However, if there does come a need to deal with  
10 the problem, again, we don't want to see solutions offered  
11 that could compromise the environmental benefits of the  
12 regulation.

13 It was mentioned this morning that RVP averaging  
14 with a change in the compliance cap was mentioned as a  
15 temporary basis. Chevron would view this as harming the  
16 environmental benefits of the regulation, so we would not  
17 support that.

18 I'd be pleased to answer any questions you may  
19 have.

20 CHAIRWOMAN SCHAFER: Yes. Supervisor Wieder.  
21 Thank you.

22 SUPERVISOR WIEDER: Yes, I'd like to have staff  
23 respond to Mr. Horn's recommendation to avoid cheating in  
24 this transition period, other than the intent for good will.

25 MR. SIMEROFF: Supervisor Wieder, we're trying to understand

1 work with the oil companies to identify how we can more  
2 effectively enforce regulation against this specific issue.  
3 And we'll be doing that actively working with them as part  
4 of the advisory committee as mentioned earlier.

5 SUPERVISOR WIEDER: Well, they were very specific  
6 in the correspondence I have from them in front of me. I'm  
7 not sure I heard you say it, Mr. Horn, but that any tank  
8 truck that comes into California during that period be held  
9 to the same accountability as any other importer. I mean,  
10 how do you respond to that?

11 MR. BOYD: Supervisor Wieder, let me interject and  
12 just say that the witness brings up a good point, but one  
13 that we're quite aware of. And you have my assurance that  
14 our compliance division and our enforcement program will  
15 strive to assure that we meet that level of responsibility.

16 SUPERVISOR WIEDER: Yeah, but do you think that  
17 accountability should be equal as any other? Are you  
18 agreeing with that?

19 MR. BOYD: I'm agreeing with that.

20 SUPERVISOR WIEDER: Okay. Thank you.

21 CHAIRWOMAN SCHAFFER: Are there any other questions  
22 for Mr. Horn from Board members? Mr. Calhoun?

23 MR. CALHOUN: Mr. Horn, I don't think I heard our  
24 staff mention anything about averaging RVP. I'd have ~~mentioned~~  
25 brought that up, because I know that's an issue that some of

1 your fellow competitors would probably like to see happen.

2 MR. HORN: Oh, I'm sure they would. Again, it was  
3 mentioned. It's not one of the things that staff was  
4 recommending. But they did note that it was an issue that  
5 would be discussed, and it has been discussed in meetings  
6 with various industry companies. And I just wanted to  
7 register our point on the issue.

8 MR. CALHOUN: All right. Okay. Thank you.

9 MR. BOYD: Mr. Calhoun, the staff did mention its  
10 reasons for not wanting to do it, and I'm glad to see  
11 Chevron added to the list of people who don't want to do it  
12 either. So, you'll hear more, I'm sure.

13 CHAIRWOMAN SCHAFFER: Any more questions for this  
14 witness from Board members at this time?

15 If not, I want to thank you, Mr. Horn, for your  
16 presentation this morning.

17 MR. HORN: Thank you.

18 CHAIRWOMAN SCHAFFER: I'd next like to recognize  
19 Mr. Alan Lippincott, if he's here at this time, from ARCO.

20 Good morning.

21 MR. LIPPINCOTT: Madam Chair and Board members,  
22 good morning. My name is Alan Lippincott. I'm an engineer  
23 in the Fuels Development Group of the ARCO Products Company.

24 ARCO is a major marketer of gasoline and other petroleum  
25 products in California and in other Western States.

1 ARCO's been proud to supply clean-burning  
2 reformulated gasoline to California for the past five years.  
3 We appreciate the opportunity to testify today.

4 First, ARCO joins in support of the current  
5 version of CARB's predictive model. CARB staff and industry  
6 have worked as a team in developing this model. By holding  
7 RVP constant at 7.0, CARB has functionally addressed most of  
8 our prior concerns.

9 We now believe that the constant RVP model should  
10 enhance refining flexibility while maintaining the emission  
11 benefits of California Phase 2 reformulated gasoline.

12 A delicate balance now exists between flexibility  
13 and air quality. ARCO is concerned, however, with a recent  
14 proposal which could jeopardize the delicate balance and  
15 undermine the emission benefits of Phase 2 gasoline. This  
16 RVP averaging proposal is the focus of our testimony today.

17 The RVP averaging proposal would relax the Phase 2  
18 regulations to allow refinery production to average about  
19 6.9 psi, with a batch maximum of 7.1. Since the existing  
20 regulations require all gasoline to be below 7.0, the  
21 proposal would result in an increase in the average RVP of  
22 Phase 2 gasoline.

23 Of course, emissions would increase along with the  
24 RVP. The proposal was made in part to address concerns  
25 about the narrow RVP operating range allowable to California

1 refiners using the EPA simple model in 1996 and 1997.

2 Now, common carrier pipeline companies are  
3 expected to establish a maximum RVP of about 6.9 to ensure  
4 compliance with the Phase 2 maximum 7.0. Although the Phase  
5 2 regulations do not establish an RVP minimum, a practical  
6 minimum exists because Phase 2 gasoline will have to be  
7 certified under both the CARB and the EPA models.

8 The EPA complex model has a minimum RVP of 6.4,  
9 which should provide an ample operating range of 6.4 to 6.9  
10 for refiners.

11 The concern and the rub pertains to the EPA simple  
12 model. During those two years, '96 and '97 only, EPA allows  
13 refiners to use a simple model which has a minimum RVP of  
14 6.6.

15 Some refiners who plan to use a simple model are  
16 concerned that this will provide an unduly narrow operating  
17 range of 6.6 to 6.9 psi. Recognizing this potential interim  
18 bottleneck, EPA has proposed to use the simple model minimum  
19 RVP -- or to reduce the simple model minimum RVP to coincide  
20 with the complex model minimum of 6.4.

21 Now, for federal reformulated gasoline, there is  
22 some concern about driveability with an RVP down at 6.4.  
23 However, there's virtually no concern in California, because

24 the Phase 2 gasoline distillation temperature specifications  
25 will ensure superior driveability. Thus, EPA will likely  
the EPA will likely

1 make the RVP minimum for California 6.4 for both models.

2 And this would alleviate any concerns with the  
3 simple model in California. We, therefore, believe that it  
4 is premature for CARB to consider higher emissions options  
5 for expanding the RVP operating range.

6 In summary, CARB staff has developed a good  
7 predictive model which will enhance refining flexibility.  
8 But CARB must now hold the course in implementing the Phase  
9 2 regulations by rejecting the recent RVP averaging  
10 proposal.

11 We must ensure that the pursuit of further  
12 flexibility does not erode our hard-sought successes in air  
13 quality.

14 Thank you. And I would be pleased to answer any  
15 questions which the Board might have.

16 CHAIRWOMAN SCHAFER: Very good. Thank you very  
17 much. Are there any questions for Mr. Lippincott?

18 MR. CALHOUN: I think you mentioned, Mr.  
19 Lippincott, that you were not aware of any RVP problems --  
20 not RVP problems, but driveability problems in California.  
21 That's using a fuel of what RVP range? You said minimum --

22 MR. LIPPINCOTT: That would be in the range of 7.0  
23 or -- say in the range of 6.7 to 7.0, which we're likely to  
24 be seeing.

25 And the main reason for that, I think, as I was

1 mentioned earlier by CARB staff, is that the Phase 2  
2 specifications firmly limit T50 and T90, which are big  
3 contributors. And, of course, RVP is closely related to  
4 T10, which is another factor.

5 So, we feel that there are adequate assurances to  
6 protect driveability in California.

7 MR. CALHOUN: All right. Thank you.

8 CHAIRWOMAN SCHAFER: Any other questions for Mr.  
9 Lippincott from members of the Board?

10 If not, I want to thank you very much for your  
11 appearance this morning. And I would like now to recognize  
12 Mr. Dennis Lamb of Unocal. Are you in the room, please?

13 Before you begin, Mr. Lamb, because I'm going to  
14 wish you a good afternoon instead of a good morning, I just  
15 want to note that we are upon the noon hour. The Board  
16 intends to continue pursuing this item until we break at one  
17 o'clock.

18 So, I'm hoping that we will be able to get through  
19 all of our witnesses in the next hour. That's my goal, for  
20 those of you who have signed up on this item.

21 If not, we will have to break, come back, and take  
22 this item up in the afternoon. And it will not be the first  
23 item in the afternoon because of the schedules of some  
24 members of our Research Advisory panel.

25 So, with that warning of how we plan to proceed,



1 I'd like to invite you, Mr. Lamb, to please proceed.

2 MR. LAMB: I just adjusted my watch to the  
3 appropriate time. Good afternoon, Chairwoman Schafer,  
4 members of the Board. My name is Dennis Lamb. I'm Manager  
5 of Fuels Planning at Unocal.

6 Unocal has always been a strong advocate of a  
7 predictive model and the economic flexibility potential of  
8 that concept. In June of 1991, we shared with staff the  
9 vehicle testing research we completed and the predictive  
10 model we developed to produce and test reformulated  
11 gasoline. That research has become the single largest  
12 independently developed body of data in CARB's predictive  
13 model. It represents almost 10 percent of the 7,700 fuel  
14 tests incorporated into the model.

15 At the November, 1991 adoption hearing, I  
16 encouraged the Board to hold staff to its commitment of  
17 developing a model by April, 1992, by asking that the  
18 compliance date for Phase 2 gasoline be in lockstep with the  
19 promulgation of the model.

20 That would have been April, 1996, based on the  
21 staff commitment.

22 The Board accepted the staff commitment, changed  
23 the effective date by three months, and provided four years'  
24 leadtime for us, but it did not tie that date to certain date of  
25 promulgation of the model. In fact, the model was promulgated in 1996.

1           Unfortunately, it is now June, 1994, and any  
 2 opportunity to save capital investment has expired. We are  
 3 now in the process of building facilities that it now  
 4 appears could have been less expensive if the model was  
 5 promulgated earlier.

6           Fortunately, however, there is still time to  
 7 benefit from operational savings. Also, the delay did allow  
 8 the model to become more robust.

9           We now know, for instance, that the T90  
 10 specification was not only very expensive, but it was set  
 11 too low. The time delay allowed the model to incorporate  
 12 that knowledge.

13           As we learned from the EPA model development  
 14 effort, the increased opportunity for dialogue and  
 15 investigation was important. We learned that the reactivity  
 16 and CO components were unnecessary and that Tech 3 and Tech  
 17 4 vehicle classifications were the appropriate surrogate for  
 18 the in-use fleet. We very much appreciate the communication  
 19 provided by CARB staff as this project went into high gear.  
 20 We think it has provided a better product.

21           Unocal participated in the WSPA effort and we  
 22 concur with the written and oral comments provided here  
 23 today by WSPA.

24           At long last, we are poised to have a fuel  
 25 certification model that could be the single most important

1 tool for a smooth transition to Phase 2 gasoline.

2 While we have yet to see a final model or have the  
3 opportunity to analyze the final product, we have analyzed  
4 previous versions of the model and the model in the staff  
5 proposal.

6 With each model revision, outstanding issues have  
7 been resolved. As the staff claims, the various versions of  
8 the models all predict very nearly the same.

9 We have been concerned that some predictions were  
10 an artifact of the mathematical construction of the model  
11 rather than real emission effects. We have been encouraged  
12 that staff has investigated technically appropriate methods  
13 for correcting such effects and are proposing them here  
14 today.

15 However, Unocal remains concerned about the RVP  
16 effects in the model and the concept of fixing the RVP term  
17 at 7.0 psi when virtually no fuel is expected to be at that  
18 level. I will speak further about RVP in my implementation  
19 comments.

20 Unocal encourages the Board to take action today on  
21 adoption of the predictive model. We expect that a 15-day  
22 comment period will be necessary. However, adoption today  
23 will move one more critical element of the implementation  
24 towards certainty and the ability to more accurately project  
25 Phase 2 production volumes.

1 Now, let me move to the implementation issues.  
2 CARB, the California Energy Commission, and the individual  
3 members of the industry have just completed a round of  
4 discussions regarding EPA reformulated and Phase 2  
5 implementation.

6 We have been very encouraged by staff's  
7 understanding of the significance of some of the barriers to  
8 implementation that was built into the original regulation.  
9 the changes being proposed today will keep an industry,  
10 which deals daily with upsets and dislocation without impact  
11 on supply, somewhat more restricted, but still nimble in  
12 1996.

13 But I would like to mention a couple of issues  
14 that are not in my prepared remarks, but are serious  
15 challenges to a successful implementation and introduction  
16 on schedule.

17 One is, in Unocal's case at least, we have a  
18 couple "at least" lawsuits involving the permits and the  
19 CEQA process involved in our refinery construction. Those  
20 are serious challenges and do offer a significant roadblock  
21 if they were to delay any further our activities.

22 And then, secondly, another issue that has come up  
23 recently that hasn't been mentioned is the EPA proposal for  
24 the renewable oxygen requirements. That could make a  
25 substantial impact on a successful implementation.

1 particularly since our reading of the recently proposed  
2 Federal Implementation Plan -- that would include Sacramento  
3 as a severe area in order to give it more time to comply --  
4 would have the probably unintended result of throwing it  
5 into the renewable oxygen program if it is promulgated,  
6 since it would have to adopt federal reformulated gasoline  
7 requirements one year after the promulgation of the FIP,  
8 which would declare it a severe area.

9           Those were a couple of things that are serious  
10 implements to a smooth transition. We'll have to see how  
11 those unfold down the road.

12           We do agree with the proposal to smooth out the  
13 transition period by allowing longer periods of time to turn  
14 inventories at terminals and service stations. That  
15 proposal is a valuable lesson from the diesel introduction.

16           We are, however, very concerned that there will be  
17 significant financial incentive for unscrupulous operators  
18 to cheat and that, during this transition period, they will  
19 be particularly difficult to catch.

20           The price differential between Phase 2 gasoline  
21 and conventional gasoline in neighboring states will provide  
22 the incentive. The inability to easily distinguish between  
23 Phase 2 and other gasoline during the transition is a major  
24 opportunity for such operators. One truckload at just a 12  
25 cent gallon differential is over a thousand dollars extra per

1 profit.

2 EPA had proposed that conventional gasoline  
3 contain a marker that could easily be detected at the  
4 service station with field tests. Because their original  
5 candidate marker failed to work, they have announced that a  
6 rule on the marker will not be ready for our RFG  
7 introduction in 1995.

8 Informally, they have asked industry if a marker  
9 is needed at all. Without a marker that can be easily  
10 detected at the service station, cheating will be much more  
11 difficult to detect.

12 We have discussed these concerns with your staff.  
13 Resources may be thin for adequate enforcement, but a smooth  
14 transition should not become the opportunity of the year for  
15 the unscrupulous.

16 Staff has asked for comment on their proposal to  
17 allow importers of California gasoline that was produced in  
18 California and provided at some location in another state to  
19 avoid the compliance testing demonstrations. Specifically,  
20 they asked for comment on whether additional safeguards,  
21 such as reporting requirements, are necessary to assure that  
22 cargo truck imports of noncomplying gasoline are deterred.  
23 Unocal would encourage a simple reporting requirement that  
24 any such importer be registered in a special category and  
25 provide advance notice of product source and destination.

1 Individual protocols could be established for  
2 continuing operations.

3 Now, up to this point, we've been in agreement  
4 with the staff's model proposals. However, we are currently  
5 faced with an implementation issue that is not being  
6 addressed. Now, those comments are not exactly right, I  
7 guess, because you've been -- heard a lot about a proposal  
8 and you haven't heard the proposal.

9 But due to an unusual combination of federal and  
10 California rules, practices of pipeline operators, concerns  
11 from auto makers, and an area of unexplored emission  
12 effects, we may not be able to comply with a portion of the  
13 RVP regulation.

14 I will illustrate the problem and suggest  
15 solution. But before doing so, I want to make it clear that  
16 I am not seeking any action from you today, other than a  
17 resolution to give staff six months to examine this issue  
18 and return to this Board with a recommendation.

19 I also want to make it clear that we are not  
20 recommending a change to the predictive model. RVP in the  
21 model would remain fixed at 7 pounds per square inch. As  
22 you're well aware, CARB Phase 2 specifications include an  
23 RVP maximum of 7 pounds per square inch. There is no  
24 averaging provision.

25 It is the practice of the common carrier pipelines

1 in California to establish a shipping specification one  
2 pound per square inch lower than the regulatory standard.  
3 This effectively lowers the standard from 7 to 6.9.

4 Gasoline producers find that RVP variability  
5 results not only from different blending practices, but also  
6 from test measurements. If a company has excellent control  
7 of blending variability and doesn't have its own terminal  
8 vapor recovery adjustments to consider, it could then just  
9 consider testing variability in its own lab.

10 The American Society of Testing Methods provides a  
11 guideline for such variability. Within the same lab, that  
12 variability is called repeatability. And for RVP, it is  
13 two-tenths of a pound per square inch.

14 Now, if I account for test variability, I must  
15 target RVP production at 6.7 to provide upper and lower  
16 control limits of plus and minus two-tenths without  
17 exceeding the pipeline specification.

18 The upper control limit becomes 6.9 and the lower  
19 range of variability, or lower control limit, is 6.5.

20 There are several problems with RVP results in  
21 that range. Those Board members who remember my testimony  
22 at the November, 1991 hearing will find that nothing has  
23 happened to diminish those concerns. In fact, we now have  
24 both the auto makers and CARB staff expressing the same  
25 concerns.



1           The first concern is the fact that there is very  
2 little vehicle emission data in the low RVP range. There is  
3 a consensus that, at some point, as RVP goes down, emissions  
4 turn back up.

5           There is some suggestion by staff that in exhaust  
6 emissions, this happens at about 7.4 psi. And, as RVP is  
7 lowered, the benefits from evaporative emissions diminish.

8           Auto driveability is affected at some point. Cars  
9 are harder starting and hesitate. Auto makers have voiced  
10 their concern to EPA for RVP levels below 6.6. There's also  
11 a safety consideration. Very low RVP and low temperatures  
12 in April and October could combine to provide explosive  
13 mixtures in fuel tanks.

14           As recently as the April 22 -- April 22nd, 1994  
15 staff report, the staff states that -- and I quote -- "A  
16 value of less than 7.00 pounds psi could adversely affect  
17 driveability and increase the explosivity potential of the  
18 fuel." Page 7.

19           Since these very low RVPs have not been researched  
20 sufficiently, the American Petroleum Institute has initiated  
21 a testing program to investigate this potential problem.

22           Since adoption of Phase 2 gasoline, EPA has  
23 finalized their own reformulated gasoline rule. That rule

24 includes a provision that for the first time places a direct time  
25 regulatory minimum RVP requirement on all reformulated and all refo

1 conventional gasoline. The minimum is 6.6 pounds per square  
2 inch.

3 As you can now see, if we must meet both a 6.9  
4 maximum and a 6.6 minimum, we no longer have the operating  
5 range to accommodate even typical test variability in  
6 refinery laboratories.

7 Targeting 6.75, halfway between the max and the  
8 min, only evens out the chances that we will violate them  
9 both. API and Unocal have discussed this issue with EPA,  
10 who (sic) is considering some technical corrections to the  
11 final rule.

12 EPA drafted a proposal to reduce the minimum RVP  
13 to 6.4. In a letter dated only four days after that draft  
14 was circulated, the American Automobile Manufacturers  
15 Association objected to such an approach, among other  
16 things.

17 In a conference call with AAMA on June 2nd, I and  
18 several other industry representatives were able to resolve  
19 all of our issues with AAMA, except the RVP minimum.

20 In November, 1991, Unocal suggested that the  
21 industry be allowed to average RVP. Today, we are again  
22 suggesting RVP averaging in a way that will not impact  
23 expected emission reductions, but as a tool or increased  
24 flexibility and as a way out of the box we are in.

25 Even if EPA increases the operating envelope of operating

1 lowering the RVP minimums, the lower range falls into the  
2 unknown driveability and explosivity realm. And you may not  
3 want us to produce at those low levels.

4 In addition, the RVP the vehicles get at service  
5 stations will be even lower as the fuels evaporate  
6 downstream. This would result in very low six-pound range  
7 fuels being delivered to vehicles at service stations.

8 Our proposal is to average RVP. Keep the flat  
9 limit at 7 pounds, but establish the averaging level at 6.90  
10 with a 7.1 cap.

11 Averaging at 6.9 will allow industry to target a  
12 6.9 level with plus or minus two-tenths, while maintaining  
13 RVP within the originally expected range.

14 This proposal could provide pipeline companies  
15 some comfort in raising their specification to the cap of  
16 7.1, knowing that they will have an average 6.9 fuel, will  
17 have room for vapor recovery activity, and still would  
18 average below the flat limit.

19 In the final statement of reasons for the Phase 2  
20 rule, the staff responded to Mobil Oil's suggestion that a 7  
21 psi maximum would result in 6.6 to 6.7 RVP production with  
22 this statement. And, again, I quote.

23 "An RVP limit of 6 psi is needed to achieve  
24 the required hot soak, diurnal, and running loss

25 emission reductions. We do not believe that a...

1 limit of 7 psi will require refiners to blend  
2 their gasoline to levels of 6.6 or 6.7. The new  
3 automated test instruments that are currently  
4 being used have greater precision than the older  
5 Reid method. The use of these instruments will  
6 enable refiners to blend gasoline closer to the  
7 actual regulatory limit."

8 In my mind, to be closer to 7 than 6.7, we would have to be  
9 at least 6.85. In calculating the credit for RVP  
10 reductions, the staff determined the grams per mile  
11 emissions at 7.0, not 6.9 or 6.7. That's the technical  
12 support document, Appendix 13.

13 An average RVP of 6.9 would, therefore, appear to  
14 be consistent with the RVP anticipated by staff.

15 There's one additional reason to adopt an  
16 averaging specification. At the November, 1991 hearing, I  
17 predicted that the CARB Phase 2 specifications would exceed  
18 any standard EPA might set for federal reformulated gasoline  
19 for the year 2000. I was wrong.

20 CARB Phase 2 gasoline specifications entered into  
21 the EPA certification model, which is the only way to  
22 determine compliance, will not meet the year 2000  
23 requirement for VOC reductions. However, entering 6.9 psi  
24 for RVP will make CARB Phase 2 qualify in the year 2000.  
25 And, certainly, CARB Phase 2 gasoline will be a qualifying

1 product under the year 2000 standard, because we don't  
2 expect any average gasoline to be above 7 and probably not  
3 above 6.9.

4 Although Unocal has been discussing this issue for  
5 some time, we do not feel that it has received the  
6 examination appropriate to the situation. We therefore  
7 respectfully request that the Board adopt the following  
8 resolution:

9 Be it resolved that the Board directs the  
10 Executive Officer to work with industry and  
11 other interested parties to reexamine RVP  
12 averaging, and to schedule a rulemaking hearing  
13 no later than January, 1995, for the Board to  
14 consider adoption of any recommendation that may  
15 be developed that would provide industry  
16 additional flexibility while preserving emission  
17 reductions.

18 I'd be pleased to answer any questions you might have.

19 SUPERVISOR RIORDAN: Thank you, Mr. Lamb. Let me  
20 call first on the staff, if there is any response to your  
21 comments in your presentation, and then we'll open it up to  
22 Board members for questions.

23 MR. SIMEROTH: Supervisor Riordan, I'd like to  
24 start off by saying that we've been working with the  
25 pipeline companies -- in particular, Santa Fe Pacific

1 Pipeline, which is the major distributor in California.  
2 They've agreed not to set the 6.9, but set it at 7.0, which  
3 would be consistent with our standard.

4 So, Unocal would not be targeting the 6.9. It  
5 would be targeting the 7.0. So, that's one-tenth back.

6 MR. LAMB: We would be targeting what?

7 MR. SIMEROTH: 7.0, not the 6.9. The pipeline has  
8 agreed not to set a 6.9; they'll set a 7.0 as their  
9 requirement for receiving gasoline.

10 MR. LAMB: That's good news.

11 MR. SIMEROTH: Yes. And we'll be working with the  
12 other smaller pipelines to get a similar type agreement.  
13 And, if not, then we'll certainly be alerting the Board to  
14 that result.

15 So, I think that's part of the thing. In terms of  
16 the -- when the regulation was originally adopted, we were  
17 expecting the average gasoline to be 6.8 in production. I  
18 realize the technical support document used 7.0 for  
19 calculating benefits, but that's for doing a cost-  
20 effectiveness calculation for the report.

21 SUPERVISOR RIORDAN: Any other comments by staff?

22 Let me then open it up to the Board. Are there any  
23 questions that any of the Board members have? Mr. Calhoun,  
24 for our witness.

25 MR. CALHOUN: Mr. Lamb, incidentally, I remember

1 your 1991 testimony.

2 MR. LAMB: I remember yours, too, Joe.

3 (Laughter.)

4 MR. CALHOUN: I think you mentioned on page 9 of  
5 your statement, "In a conference call with AAMA on June 2, I  
6 and several other industry representatives were able to  
7 resolve all our issues with AA<A, except the RVP minimum."

8 And why were you not able to resolve the -- where  
9 is the difference now between you and AAMA on the RVP issue?

10

11 MR. LAMB: I think the testimony that you heard  
12 from ARCO was true to the extent that I don't believe  
13 there's an AAMA concern, particularly in California.

14 But this is a national issue, and there is a  
15 concern across the nation that they're in the same box for  
16 slightly different reasons. Pipeline companies in the rest  
17 of the country are -- let's put it -- much, much more  
18 conservative in some cases than how we operate in  
19 California, only because of the distrust of the EPA  
20 enforcement mechanism.

21 And, so, they've essentially put them in the same  
22 box. This regulation applies nationwide. So, I think  
23 that's the source of their real objection, is the fact that  
24 moving from 6.6 down to 6.4 would apply nationwide. And I'm

25 computing myself in their place. I believe that's accurate

1 based on my conversations with Walt Crutcher (phonetic), for  
2 instance, and others.

3 MR. CALHOUN: Were there any comments relative to  
4 driveability?

5 MR. LAMB: Well, that is their concern. And  
6 that's why I say I don't think it's a California concern. I  
7 think it's a nationwide concern. But it is in the way of  
8 getting an EPA favorable ruling, because the rule is final.  
9 And in a direct final, when they put that out -- within a  
10 couple weeks we hope -- if there's any controversy at all,  
11 that will be yanked. And the change will not be made. So,  
12 it has to be a totally uncontroversial proposal.

13 MR. CALHOUN: All right. Thank you.

14 SUPERVISOR RIORDAN: Are there any other Board  
15 member questions? Seeing none, then, Mr. Lamb, we'd like to  
16 thank you very much for your testimony. And let me call on  
17 Mr. Doug Youngblood next from Texaco to provide testimony on  
18 this item.

19 MR. YOUNGBLOOD: Thank you again. My name is  
20 Douglas Youngblood, General Manager of Environmental Health  
21 and Safety with Texaco Refining and Marketing.

22 And I'd like to comment on the proposed amendment.  
23 Just very briefly, because of the timing, I do want to again  
24 compliment the staff on working with industry. It was very  
25 encouraging effort, in that not only did we get frequent



1 constant interface and frequent response from the staff, but  
2 we also had the benefit of an accelerated activity,  
3 particularly over the past six months.

4 First, regarding the predictive model, Texaco  
5 strongly supports the adoption of the flexible predictive  
6 model. Meeting the Phase 2 gasoline requirements on a day-  
7 to-day basis presents a high operating challenge unlike any  
8 other the industry has faced. We're trying to meet eight  
9 specifications that are all mandated, and it's a much more  
10 difficult challenge than we've had in the past in making  
11 gasoline.

12 We believe that the predictive model can increase  
13 flexibility in the production of Phase 2 gasoline. We  
14 believe that this flexibility will manifest itself in lower  
15 cost, increased production capability, and reduce supply  
16 disruptions. And I'll talk a little bit about that issue a  
17 little later.

18 We have met with staff on our own and through WSPA  
19 several times during the development of the model and have  
20 evaluated all models supplied to date and as they apply to  
21 our specific refineries. We can endorse the CARB 8 model  
22 that the staff proposed today with one caveat. We have not  
23 received that final model and will evaluate it as soon as we

24 do. However, the reason we feel we can endorse it is

25 because we've evaluated all the models up to date which

1 contain most of the characteristics of the final model being  
2 proposed. We know, basically, what the final model changes  
3 are, and we anticipate that it will be fully acceptable to  
4 us. If we do have any comments relative to the final model,  
5 we can provide those in the 15-day package.

6 Next, I would like to address the issue related to  
7 averaging protocol in the Phase 2 regulations. We have  
8 shared with staff a statistical analysis indicating that  
9 averaging is essential -- and I want to understand  
10 "essential" -- in the success of the Phase 2 program. And  
11 let me digress a minute and explain what we did.

12 We basically took all the streams that into  
13 gasoline blending, simulated how they would blended in  
14 gasoline operations -- not how they are done today, but with  
15 a more sophisticated blending characteristic. So, we saw  
16 the variability of these streams as they were coming into  
17 the blending, simulated the final gasoline blends, and did  
18 the averaging protocol, where we looked over a period of 270  
19 days and basically averaged gasoline during that period.

20 Through that averaging protocol, we could see the  
21 benefits of averaging versus meeting a per gallon spec. And  
22 that's why I say it's essential to combine the flexibility  
23 of the model with the averaging protocol being provided by  
24 the staff.

25 Finally, I'd like to address the RVP enforcement

1 issue, which has been discussed quite a bit this morning or  
2 this afternoon.

3 You are aware that the Phase 2 rule imposes a 7  
4 pound limit on RVP and that the EPA, for the South Coast and  
5 San Diego through 1997, imposed a 6.6 pound minimum. And  
6 there was a discussion on whether that would be dropped to  
7 6.4. But Denny Lamb made a good point that that will only  
8 be dropped if there's no controversy. And right now there  
9 is a controversy on that issue with the autos objecting.

10 Further, you've heard that driveability, which is  
11 the automobile industry's concern, is really not a problem  
12 in California. To explain that a little further, the  
13 specifications on CARB 2 gasoline actually have the 90 -- 50  
14 percent distillation point and 90 percent distillation  
15 point, lighter than most gasolines in the rest of the United  
16 States.

17 The driveability index is primarily -- the biggest  
18 factor affecting it is the 50 percent boiling point of  
19 gasoline. So, that's why California would not necessarily  
20 have a driveability problem with CARB 2 gasoline, where they  
21 may be concerned for that with lower RVP fuels elsewhere.

22 But that doesn't mean that EPA is going to drop  
23 that 6.6 pound limit. Right now, the reading is they may  
24 not, because they do have this controversy. have this

25 In looking at our averaging model and looking at

1 blending gasoline over a long period of time, that model not  
2 only allows us to look at how the averaging protocols work,  
3 but we can look at every blend of gasoline and determine how  
4 many would exceed the specifications.

5 And what we found out, with a 6.6 to 7 pound  
6 range, with a well-controlled gasoline blending operation, a  
7 little over 20 percent of the blends would be off spec.

8 That means you could not ship that gasoline, and  
9 there would not necessarily be an easy way to correct it.  
10 The concern we're expressing is not only a concern of  
11 blending gasoline, but supply disruptions that could be  
12 created for this.

13 So, we think this is a serious matter from more  
14 than one perspective. We're not proposing a specific  
15 solution today. All we're asking is the Board basically  
16 instruct the staff to take a serious look at this issue, get  
17 the input from industry, and report back to you in a

18 reasonable length of time on this issue, because it could  
19 create a significant supply disruption problem in the  
20 marketplace, and it really needs to be addressed, because  
21 that's one of the concerns I know that the Board has vis-a-  
22 vis the diesel experience.

23 That's really -- I think I'll stop for brevity,

24 because you have quite a bit to cover. I think that issue

25 there, though, is a very key issue that you should take care of.

1 under serious consideration, because we've done some  
2 simulation work with what we thought was good blending. We  
3 see a problem there created by this, and we think it needs  
4 to be addressed.

5 We're not proposing a solution, because we think  
6 it really needs to be looked at thoroughly. And we think,  
7 though, that a solution might be possible without  
8 jeopardizing emissions and while still assuring supply for  
9 the customer.

10 So, that's all the comments I have. If there are  
11 any questions, I'd be glad to answer them.

12 CHAIRWOMAN SCHAFER: Are there any questions for  
13 Mr. Youngblood? Any comments from staff. Counsel, did you  
14 have a comment? Okay. If we're all set, then, thank you  
15 very much. I appreciate your additional testimony this  
16 morning.

17 At this point, I'd like to recognize Mr. Chuck  
18 Morgan of the Mobil Corporation. Mr. Morgan?

19 MR. MORGAN: Good afternoon. My name is Chuck  
20 Morgan. I'm Manager of Environmental Affairs on the West  
21 Coast for Mobil Oil.

22 First of all, I'd like to add my appreciation to  
23 the staff for their cooperation in dealing with Mobil and

24 WSPA on working through the myriad of complex details  
25 involved in the predictive model and the averaging protocol.

1 We trust that this same spirit will carry forward in dealing  
2 with the remaining implementation issues for Phase 2  
3 gasoline.

4 Mobil also supports the predictive model and the  
5 associated implementation rules that are being proposed by  
6 CARB.

7 This proposal will provide us also with a workable  
8 flexibility option for meeting the stringent CARB Phase 2  
9 requirements. The model should also enable us to assure  
10 more rateable and reliable supply of Phase 2 gasoline  
11 without any degradation of the air quality benefits.

12 While the model may not be perfect in every  
13 regard, we believe it is a reasonable reflection of the test  
14 data and contains many of the elements that we thought are  
15 important.

16 Therefore, again, we urge its adoption.  
17 Furthermore, we recommend the use of the adopted model be  
18 held fixed without the threat of a continuous stream of  
19 changes based on just small additional test data.

20 Obviously, if there's some earthshaking finding  
21 that substantially would change the relationship between  
22 emissions and fuel parameters, then a change could be  
23 considered. But we would really not like to see a lot of  
24 changes in the predictive model in the near term. The

25 prospect of potential future changes would increase the

1 uncertainty of complying with Phase 2 requirements and risk  
2 compliance delays.

3 In terms of Phase 2 implementation, Mobil is also  
4 concerned about the potential lack of RVP operating  
5 flexibility, at least we've come across one contentious  
6 issue. And we would support further work to at least look  
7 into this, including at least considering RVP averaging.

8 Again, we don't know, necessarily, what the  
9 solution to this is. But we'd at least like to get some  
10 recognition that there is a potential problem, and that more  
11 work is appropriate.

12 We would, however, agree with the staff that use  
13 of the predictive model should not be used to generate RVP  
14 credits, because we question the RVP emission effects  
15 predicted by the proposed model. We're also pleased with  
16 the proposed changes to the averaging protocol. These  
17 changes, combined with the reasonable enforcement approach,  
18 should also make this a workable flexibility option for us.

19 We again trust that the compliance division will  
20 be responsive to our concerns about enforcement and will  
21 cooperate with industry to develop an approach that will  
22 avoid limiting the flexibility of this option, while still  
23 maintaining enforceability.

24 In regard to any vehicle and fuel compatibility  
25 concerns, we're pleased that CARB is going to take the lead on

1 leadership role in investigating these issues in advance of  
2 the introduction of Phase 2. And, if we are asked, Mobil  
3 would be pleased to contribute its expertise in this area.

4 I'm going to keep my comments somewhat brief,  
5 because they're basically supportive of WSPA, and they run  
6 parallel with a lot of the other comments. So, I'll just go  
7 to my final point. We urge CARB to clarify as soon as  
8 possible the variance protocol to assure the facilities do  
9 not use CARB's delay on the predictive model or any other  
10 changes in the rule as an excuse or justification for  
11 missing the deadline.

12 Liberal granting of variances will create business  
13 uncertainty and disrupt compliance. Therefore, any  
14 variances in our view should be limited to unexpected events  
15 beyond the control of the applicant and should include a  
16 mitigation fee large enough to discourage noncompliance.

17 In conclusion, Mobil's committed to meeting the  
18 requirements of Phase 2 gasoline. We appreciate the  
19 flexibility afforded by the predictive model and the  
20 averaging protocol to help assure a smooth transition to  
21 Phase 2 gasoline. We urge the Board again to adopt it and  
22 the averaging proposals, and to assure that an appropriate  
23 mitigation fee will be assessed for noncomplying gasoline.

24 During rule development in 1991, we challenged the  
25 cost-effectiveness of some of the provisions of the Phase 2



1 specification package. However, since adoption, we've  
2 committed substantial resources toward complying with the  
3 rule and now are supporting CARB's objective of an orderly  
4 and smooth transition to Phase 2 gasoline.

5 Thank you.

6 MR. LAGARIAS: Madam Chair?

7 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
8 Morgan. Mr. Lagarias?

9 MR. LAGARIAS: Mr. Morgan, you've voiced concern  
10 about the predictive model and any changes to it in the  
11 future. Since the model has a strong database now and any  
12 other tests would only serve to add to our state of  
13 knowledge in the model and its robustness, and since the  
14 staff has said that, if any changes were to be proposed,  
15 they would come back to the Board for a hearing, at which  
16 time these changes to the model would be presented.  
17 Wouldn't that satisfy your concerns about the predictive  
18 model and possible changes in the future?

19 MR. MORGAN: Yes, assuming that that process would  
20 mean that the change would have to be substantial before  
21 they would take that initiative.

22 MR. LAGARIAS: Well, let's ask the staff. Are you  
23 going to come back everytime there's a little blip in the  
24 model?

25 (Laughter.)

1 MR. VENTURINI: No.

2 MR. JENNINGS: No.

3 MR. LAGARIAS: Well, I guess the reading is in  
4 what constitutes substantial. And I think that the staff  
5 doesn't do any more Mickey Mouse work than you would want to  
6 see.

7 MR. MORGAN: That's encouraging to hear.

8 (Laughter.)

9 CHAIRWOMAN SCHAFFER: Perhaps even more important  
10 is who gets to decide.

11 (Laughter.)

12 CHAIRWOMAN SCHAFFER: Any other questions for Mr.  
13 Morgan at this point?

14 MR. MORGAN: Thank you.

15 CHAIRWOMAN SCHAFFER: If not, thank you very much  
16 for your presentation this morning.

17 MR. PARNELL: I'm sorry.

18 CHAIRWOMAN SCHAFFER: Oh, I'm sorry. Mr. Parnell,  
19 I beg your pardon. No. I'm sure he'd be happy to --

20 MR. MORGAN: Oh, I'm sorry.

21 CHAIRWOMAN SCHAFFER: I'm sorry.

22 MR. PARNELL: No. This wasn't a question. It was  
23 only a statement. It was relative to what -- the  
24 conversation that had gone on -- I think industry -- your  
25 point is well taken -- at least with me, and I'm sure the

1 rest -- that industry can abide by regulations as long as  
2 they understand them and as long as they know that they're  
3 not going to change from day to day. And that's the  
4 concern, and I -- or I read that as being the concern, and I  
5 think -- I hope that what I see, and I think, through having  
6 talked with staff, that it is fully their intent to only  
7 come back with substantive change, because they understand  
8 this as well.

9 So, thank you for making the point. And,  
10 hopefully, my comments clarified and, if not, I'm sorry.

11 (Laughter.)

12 CHAIRWOMAN SCHAFER: Thank you very much, Mr.  
13 Morgan. At this point, I'd like to recognize -- there are  
14 two witnesses from the Exxon organization, and you may have  
15 a preference in which order you'd like to testify. Mr.  
16 Eizember and Dr. Bird.

17 MR. EIZEMBER: Yes. I'm Mr. Eizember.

18 CHAIRWOMAN SCHAFER: Mr. Eizember, certainly.

19 MR. EIZEMBER: I have some viewgraphs. So, if we  
20 could have the lights lowered, please.

21 Good afternoon, Madam Chair and members of the  
22 Board. And we'd like to thank you for this opportunity  
23 here. My name is Tom Eizember, and I am presenting these  
24 comments on the proposed predictive model on behalf of Exxon  
25 Companies USA.

1 The first slide.

2 We don't seem to have the first slide. Could I  
3 ask for some audio/video assistance over here?

4 MS. HUTCHENS: He is not here right now.

5 MR. EIZEMBER: Then, let me just continue. You  
6 have copies of my slides in front of you or you should have.  
7 If you could just go ahead and turn to those, I will work  
8 off of those.

9 The first slide shows two statements --

10 (Thereupon, the computer-assisted slide projector  
11 was adjusted by Mr. Valdez.)

12 MR. EIZEMBER: Okay. The first slide shows two  
13 statements which were taken from the announcement for this  
14 meeting. The first statement basically references the fact  
15 that the predictive model and the averaging are proposed to  
16 provide flexibility and, at the same time, not sacrifice  
17 emissions benefits or enforceability.

18 The second statement expresses the expectation  
19 that has been enumerated a number of times today; that the  
20 flexibility will reduce production cost and minimize the  
21 potential for supply disruptions.

22 We don't believe that the predictive model is  
23 going to fulfill this expectation. The flexibility of the

24 proposed model is severely limited, particularly by two

25 policy decisions. And, as a result, the final model we do the final

1 not believe will provide any meaningful flexibility.

2 Attempts to change these decisions have been  
3 unsuccessful, and we'd appeal to the Board to reconsider the  
4 position on these two issues. I'm going to use an example  
5 to demonstrate this limited flexibility. This slide shows  
6 the basis for that example.

7 I'd like to compare the flexibility that's  
8 provided by the CARB 8B predictive model to the EPA complex  
9 model. The EPA model is the result of an extensive  
10 development effort between industry and government. It  
11 represents a valuable benchmark.

12 As mentioned, there may be some differences in  
13 vehicle population and emissions inventory in California, a  
14 different basis than the EPA model. However, we don't think  
15 there's a logical basis for dramatic differences between the  
16 models.

17 Any substantial differences ought to be understood  
18 and rationally justified.

19 I'd like to contrast the relative flexibility  
20 between the two models using an example fuel. That fuel is  
21 shown on the right-hand column of this chart. For this  
22 example fuel, we've reduced RVP, benzene, and sulfur in  
23 excess of the required reductions under the Phase 2 flat  
24 specifications.

25 We've chosen these three changes because they may

1 present reasonable alternatives to generate emissions  
2 offsets that we can use to allow modifications in the other  
3 specifications.

4           Putting the numbers for this example fuel into the  
5 models, we can then calculate allowable revisions to the T90  
6 and the olefin specs, while maintaining the emissions  
7 benefit of the CARB Phase 2 specifications.

8           T90 was chosen for this example, because the low  
9 Phase 2 specification level is likely to force a substantial  
10 reduction in gasoline producibility. T90, of course, is the  
11 temperature at which 90 percent of the gasoline is  
12 evaporated.

13           To reduce this temperature from the current level  
14 of about 330 degrees to the Phase 2 specification of 300  
15 degrees requires us to remove the heavy portion of gasoline  
16 from the current gasoline production into other fuel  
17 products.

18           Meaningful flexibility in adjusting the T90 spec  
19 would help meet the expectation of reducing the potential  
20 for gasoline supply disruptions. The olefin spec is  
21 included in this example because a number of analyses show  
22 that it's a high-cost step relative to its emissions  
23 benefits.

24           The next slide shows the allowable changes in the  
25 T90 and olefin specifications that we get from using the we get

1 models. Notice that in the right-hand column, the EPA model  
2 allows a 30-degree increase in T90 and more than a 2 percent  
3 increase in olefins, all while maintaining the emissions  
4 performance of the Phase 2 fuel.

5 The T90 change from the EPA model would  
6 essentially eliminate the producibility impact of the Phase  
7 2 T90 specification in this example.

8 Next, looking at olefins, we see that the EPA  
9 model allows an increase from 6 to about 8 percent. That's  
10 a reduction of about 50 percent of the severity of the Phase  
11 2 specification. Again, the EPA model assessment is that  
12 both of these changes could be made while maintaining the  
13 emissions benefit of the CARB Phase 2 specs.

14 Unfortunately, the Air Resources Board model only  
15 allows about 20 percent of the revision of the EPA model.  
16 The T90 and olefin changes allowed in the ARB model are  
17 pretty small compared to the base severity of the Phase 2  
18 specifications. And, as a result, we don't believe that  
19 this model will really provide a meaningful improvement in  
20 gasoline production cost or supply availability.

21 Is there a justifiable reason that the ARB model  
22 is more restrictive than the EPA model? We don't think --  
23 we don't think so.

24 Most of the reduced flexibility of the EPA model  
25 is a direct result of two policy decisions. First, the CARB

1 model excludes the effect of evaporative emissions.  
2 Evaporative emissions make up a substantial portion of  
3 automotive emissions -- half or more, depending on your  
4 assumptions.

5 The EPA model gives significant consideration to  
6 evaporative emissions. By excluding evaporative emissions  
7 from consideration, the CARB model excludes an area of large  
8 potential flexibility. We've objected to excluding the  
9 evaporative emissions in the past, and we have yet to see a  
10 justifiable argument for this exclusion.

11 Secondly, the ARB model uses potency weighting  
12 factors to determine toxics equivalency, unlike the EPA  
13 model, which uses mass toxics.

14 The potency-weighting factors used by the Air  
15 Resources Board have been questioned by industry, especially  
16 the very high emphasis on 1,3-butadiene, which is one of the  
17 four toxics. We've objected to this toxics-weighting  
18 decision in discussions with the administration, when it  
19 became apparent that the staff was unwilling to change the  
20 position on potency weighting.

21 Mike Bird from Exxon Biomedical Sciences will be  
22 entering some additional information on toxics potency  
23 weighting, particularly around 1,3-butadiene.

24 These policy decisions on evaporative emissions  
25 and toxics weighting severely limit the flexibility of the



1 ARB model, and they are going to prevent it from fulfilling  
2 your expectations.

3 The bottom of this chart shows a number of minor  
4 issues in the area of modeling technology. And, in fact,  
5 those issues are addressed by some of the changes that were  
6 proposed this morning -- this morning by Mr. Fletcher, so I  
7 won't say anymore about them.

8 In summary, then, on the last page -- first of  
9 all, as everybody else has done, I would like to recognize  
10 that this modeling effort represents a very substantial  
11 effort by the ARB staff, by WSPA, and by industry to get  
12 where we have gotten today.

13 That effort needs to be recognized and it needs to  
14 be commended. We're very appreciative of the serious  
15 consideration that the ARB staff has given to WSPA's  
16 suggestions.

17 However, the staff has maintained that decisions  
18 on toxics weighting and evaporative emissions are policy  
19 issues and they're not in a position to consider changes in  
20 these areas.

21 As a result of this position, the flexibility of  
22 the model is significantly limited, and we believe that it  
23 will not meet your expectations for a meaningful reduction  
24 in Phase 2 gasoline production costs or reduction in the  
25 potential for supply disruptions for supply disruptions.

1 Thank you.

2 CHAIRWOMAN SCHAFFER: Thank you. Thank you, Mr.  
3 Eizember. Are there any questions the Board members have  
4 for this witness before Dr. Bird makes his presentation?

5 MR. LAGARIAS: I have a couple.

6 CHAIRWOMAN SCHAFFER: Yes, Mr. Lagarias.

7 MR. LAGARIAS: I was surprised at your comments.  
8 I thought we were going to have a love-in today. Everybody  
9 else was all for the model and, then, here you show up.

10 (Laughter.)

11 MR. EIZEMBER: It wouldn't be any fun if we all  
12 thought the same, now, would it?

13 MR. LAGARIAS: That's right. Now, as I recall --  
14 and the staff will have to correct me on that -- when we had  
15 the discussions on setting the specifications, the T90 level  
16 was originally proposed at 290 degrees and we raised it to  
17 300; was that correct?

18 MR. FLETCHER: I believe that's correct.

19 MR. LAGARIAS: And you're saying that there's not  
20 the flexibility that would occur if it went to 330 degrees  
21 for the T90 level? That's what you're showing --

22 MR. EIZEMBER: I'm not suggesting that you raise  
23 the specification in the flat specs from 300 --

24 MR. LAGARIAS: You're just saying that the --

25 MR. EIZEMBER: -- to 330 degrees. -- to 330 degrees.

1 MR. LAGARIAS: -- predictive model that EPA has is  
2 different from the one that we're currently using.

3 MR. EIZEMBER: Yes. I'm suggesting that the  
4 example fuel that I used would allow us to offset the  
5 emissions increase from raising T90 from 300 to 330 by the  
6 other changes that I showed you, but the CARB model will  
7 not. And that's a reflection of a substantial limitation in  
8 flexibility. But the EPA model still predicted -- I'm  
9 sorry-- still predicted no emissions benefits changes.

10 MR. LAGARIAS: Are you saying that the EPA model  
11 includes evaporative emissions and that the CARB model does  
12 not, but the CARB model proposed the 7.0 flat limit for the  
13 Reid vapor pressure because -- primarily to control the  
14 evaporative emissions. Is this correct?

15 But it took no credit for it.

16 MR. VENTURINI: Correct, Mr. Lagarias.

17 MR. LAGARIAS: How's that?

18 MR. SIMEROTH: That's correct, Mr. Lagarias.

19 MR. LAGARIAS: All right. And on the toxicity  
20 potency weight factors, you're saying that they're wrong; is  
21 this what you're -- or they differ?

22 MR. EIZEMBER: We're saying, in particular, the  
23 very strong emphasis on 1,3-butadiene, nearly 10 times the

24 toxicity potency of benzene, which is the weighting given to the weight  
25 factor in the CARB model, is incorrect. And we have some other things that we have

1 information on the 1,3-butadiene that we'll be presenting  
2 next.

3 MR. LAGARIAS: Isn't that a discussion that should  
4 be with the Research Screening Committee (sic) on Toxic  
5 Emissions rather than on the predictive model? Because we  
6 can only go with what potency factors are given -- are  
7 developed by the Scientific Advisory Committee on Toxics.

8 MR. EIZEMBER: I'm sorry. I can't answer that.

9 MR. LAGARIAS: Do you want to comment, Peter?

10 MR. VENTURINI: Yes, Mr. Lagarias, I'd be pleased  
11 to.

12 You're absolutely correct. The establishment of  
13 the potency values for the individual toxic air contaminants  
14 are a separate process that involves the Office of  
15 Environmental Health Hazard Assessment and the Scientific  
16 Review Panel, and ultimately the identification of a  
17 compound by the Board.

18 These compounds that are mentioned in the  
19 testimony have had potency values established through that  
20 process.

21 Furthermore, several years ago, there was  
22 established a process -- formal process, whereby any  
23 individual who would like to have additional consideration  
24 of an established potency value, a process has been  
25 established for them to do that, which would be basically a

1 request to have the potency value reconsidered.

2 The studies would have to be provided. It would  
3 have to be peer-reviewed studies basically. That  
4 information would be reviewed by the Office of Environmental  
5 Health Hazard Assessment, consideration by the Scientific  
6 Review Panel. So, it's basically a very different process  
7 to reconsider any established potency values.

8 MR. LAGARIAS: Thank you.

9 CHAIRWOMAN SCHAFFER: Yes, Mr. Calhoun.

10 MR. CALHOUN: I think you also mentioned that the  
11 expected flexibility that others have testified to here  
12 isn't going to exist as far as Exxon is concerned. And is  
13 there something unique about Exxon that would not allow  
14 Exxon to have the same flexibility of the other companies?

15 MR. EIZEMBER: I can't speak for the positions of  
16 the other companies. But I can say that in our looking at  
17 it, we do not believe that you're going to see a substantial  
18 benefit from this predictive model. Yet we see continuing  
19 references to statements that the model is going to reduce  
20 supply disruptions and it is going to reduce production  
21 cost.

22 And we're concerned that the -- that an  
23 expectation may be raised that will not, in fact, occur.

24 MR. CALHOUN: I have no further questions.

25 CHAIRWOMAN SCHAFFER: Are there any other questions of any kind?

1 for this witness? If you'd like to defer now to Dr. Bird,  
2 I'd be happy to take that testimony. I also would like to  
3 remind you that the Board expects to break at about one  
4 o'clock, so I'd appreciate the opportunity. We have one  
5 more witness after Dr. Bird.

6 MR. EIZEMBER: Yes, thank you.

7 CHAIRWOMAN SCHAFER: Thank you.

8 DR. BIRD: Thank you, Madam Chair. I'm in a  
9 little bit of a quandary with regard to the process that's  
10 just been outlined, because I do want to address the cancer  
11 potency for butadiene.

12 However, I also noted that a comment was made that  
13 reliance was on peer-reviewed data. And my testimony  
14 reflects some data which has been generated in the last year  
15 and which is just coming to the fore. So, I don't know  
16 whether you will consider it worthwhile if I spend just a  
17 very few minutes indicating that the cancer potency could  
18 and should be changed.

19 If that is appropriate, then I'll be happy to do  
20 that in a minimum of time.

21 CHAIRWOMAN SCHAFER: Yes. I think the point that  
22 was made is only that there are forums -- different forums,  
23 other than this particular one, to address that issue, and  
24 always, you know, are not in a position to consider a change to

25 this regulation in the absence of the process that would be required

1 lead us to a consideration of a change in these health  
2 effects that you're about to discuss.

3 DR. BIRD: Well, in that case, then, if I may,  
4 I'll proceed. I will be as brief as I possibly without  
5 being a disservice to the science or yourselves.

6 My name is Michael Bird. I'm a toxicologist with  
7 Exxon Biomedical in New Jersey, and that is Exxon's central  
8 health research. I've been connected with butadiene  
9 toxicology for about the last ten years, and I just really  
10 want to briefly describe some of the reasons why we think  
11 the cancer potency factor should now be adjusted.

12 Some time ago, the Office of Environmental Health  
13 Hazard Assessment and CARB have based the cancer potency for  
14 butadiene on cancer data generated from experimental  
15 animals, particularly the mouse. And, particularly, they  
16 chose the lung tumor as an end point.

17 And this new data which I referred, now indicates  
18 more strongly than ever that the mouse is, in fact, an  
19 outlier. It doesn't reflect the human situation. And, in  
20 fact, the rat cancer model would be much more appropriate;  
21 even that, they're requiring some adjustment.

22 As I say, more data is coming out. Much of it  
23 will be in peer review, even this year. And early next

24 year, there will be an international symposium reflecting  
25 that data.

1           That is the synopsis of my presentation. But I  
2 just very briefly want to indicate that the basis for the  
3 cancer potency was animal data, which showed an extremely  
4 strong and potent response in the mouse of quite low  
5 exposures -- 6 parts per million of butadiene -- cancer of  
6 the lung, cancer of liver, and also leukemia. But in the  
7 rat, by contrast, to exposures of a thousand ppm, you had a  
8 very weak cancer response.

9           There's also been extensive human epidemiology, or  
10 population studies. And they have been -- overall, indicate  
11 no cancer, but possibly some indications of some activity in  
12 the subgroups. And further studies are in progress to  
13 elucidate that.

14           On my next slide, I show an extensive program of  
15 industry research which has been conducted over the last  
16 four- or five-year period, not only the human epidemiology  
17 studies, which will be reported later this year, of some  
18 18,000 workers, but also animal mechanistic studies and risk  
19 assessment studies.

20           And I want to just very briefly cover the animal  
21 mechanistic studies.

22           In my next slide, you will see that in the mouse,  
23 as I've mentioned, there is a very potent leukemic response.  
24 There are also other tumors being formed. We believe that's  
25 due to the formation of a particular metabolite called



1 diepoxide (sic). We also find it very different in bone  
2 marrow in the mouse compared to the rat or man. So, this  
3 slide really just summarizes my premise that the mouse is an  
4 outlier and doesn't reflect human experience.

5 In my next slide -- recognizing that I'm going  
6 rather fast -- and perhaps people are required to be  
7 chemists to look at this. But, basically, on the left-hand  
8 side, you have the species exposed to butadiene. That  
9 butadiene gets transformed into a monoepoxide (sic). That's  
10 indicated in red, because that is carcinogenic. In the  
11 mouse, that stays around quite a long time. But in the rat  
12 and man, that's quickly cleared as those rate constants  
13 indicate.

14 In the mouse, that goes on to a diepoxide, that  
15 red upper structure, which is highly carcinogenic. In rat  
16 and man, that structure is not formed. So, there is a clear  
17 species difference in the way that butadiene is metabolized.

18 For timing purposes, Tom, I'd like to skip the  
19 next slide and go straight on to the one which shows a  
20 schematic of how we generate blood, all of us, in our bone  
21 marrow. And what I'll be indicating on this slide is the  
22 fact that just a very few cells in the bone marrow on the  
23 left-hand side of the picture there generate all the various  
24 different blood types that we have circulating around. And  
25 what we have found is that when we treat butadiene -- give cat butadiene

1 butadiene to mouse bone marrow, we find a very specific  
2 effect in the next slide -- Tom -- which shows that a very  
3 specific pathway is affected for the mouse, giving rise to  
4 leukemia in the mouse.

5 When we treat human cells and rat cells with  
6 butadiene, we don't get the same effect at all. We get no  
7 effect. So, what we're suggesting is that leukemia is very  
8 much a mouse specific effect.

9 Now, in my next slide -- and I'm very nearly at  
10 the end -- I just want to indicate that if you can start to  
11 exclude various tumor types from the cancer potency factor,  
12 it can have dramatic implications. And what the industry is  
13 suggesting to CARB and requesting is that we base the cancer  
14 potency on levels of the metabolites, which we can now  
15 measure very successfully in the blood. And that  
16 information wasn't available to CARB just a few years ago  
17 when the initial cancer potency factors were set.

18 This data, as I say, will be available later this  
19 year. And what we're really requesting is due consideration  
20 of that data.

21 And my final slide, I'd just like to summarize and  
22 say that we believe, from an extensive program of toxicology  
23 studies, that the mouse is an inappropriate species to model  
24 the human health effects of butadiene, because we know  
25 the differences in metabolism, and because we know differences

1 in bone marrow effects. We believe the rat data is much  
2 more useful, but even that requires mechanistic adjustments.

3 We're going to have a lot more data available.  
4 It's going to be presented at a peer-reviewed symposium  
5 supported by WHO, and IARC, and other bodies, including the  
6 EPA.

7 And we really would request perhaps the  
8 opportunity to meet with the appropriate office to discuss  
9 these cancer potency factors.

10 Thank you.

11 CHAIRWOMAN SCHAFFER: Thank you very much, Dr.  
12 Bird. Just so that the Board members understand how I  
13 intend to proceed, I do intend to give Mr. Bordvick an  
14 opportunity to testify before we break.

15 Mr. Lagarias.

16 MR. LAGARIAS: I would defer to Dr. Boston first,  
17 because he's more knowledgeable.

18 CHAIRWOMAN SCHAFFER: Dr. Boston.

19 DR. BOSTON: Thank you. That's very interesting  
20 testimony, Dr. Bird. I find it extremely stimulating. I  
21 remember when butadiene was declared a toxic air  
22 contaminant, there was very compelling testimony at that  
23 time that it was extremely carcinogenic.

24 And I believe the EPA had already declared it as a  
25 toxic air contaminant. And the Board at that time also

1 raised grave concerns about comparing humans to laboratory  
2 animals, and we still do. And we always question that when  
3 the issue comes up. But the testimony that we've had in the  
4 past has always been to the effect that some comparisons  
5 could be made.

6 And your testimony now shows us otherwise. It's  
7 extremely interesting to us. But we're not really able to  
8 change the fact that that has been declared a toxic air  
9 contaminant and been graded at this point at this hearing.  
10 That will have to go back through another review process as  
11 staff indicated.

12 So, thank you for your testimony, and it was very  
13 interesting.

14 MR. BOYD: Dr. Boston, if I might just volunteer  
15 that staff, after this item is concluded, can talk to the  
16 representatives of Exxon and explain to them the process  
17 that will need to be followed to provide their data to the  
18 risk assessors. And we'll be glad to do that.

19 DR. BIRD: Well, perhaps at least I've achieved  
20 the purpose of showing that perhaps the cancer potency  
21 factor might well be adjusted and that could influence the  
22 model proposed.

23 MR. LAGARIAS: Dr. Bird, I agree with Dr. Boston  
24 that the -- the question of animal tests and human tests is  
25 one that's always a subject of concern. But I think the

1 right area for this is to present this information to the  
2 Office of Environmental Health Hazard Assessment to go  
3 through this toxic screening process.

4 And we have one other concern. We have adopted  
5 the EPA's standards of what are health hazard air  
6 pollutants. So, we have to comply, too, with what the  
7 Federal Government says about these. But whether the  
8 potency figures can be changed, I think, is certainly a  
9 subject that should be addressed if there are new data.

10 DR. BIRD: Thank you. And the EPA have also  
11 indicated their willingness to meet again on this and look  
12 at the potency factors, too.

13 Thank you.

14 CHAIRWOMAN SCHAFFER: Thank you very much. Are  
15 there other questions from members of the Board at this  
16 time? If not, I'd like to now call Mr. Duane Bordvick to  
17 the podium, representing Tosco Refining Company, Vice  
18 President, Environmental and External Affairs.

19 Good afternoon.

20 MR. BORDVICK: You said half my presentation  
21 already. You have to say last but best, but that's all  
22 right.

23 (Laughter.)

24 MR. BORDVICK: Thank you for giving me the  
25 opportunity to talk before the break. Talk before the break.

1 I am Duane Bordvick. I am with Tosco Refining  
2 Company. Some of you may not be familiar with Tosco. We do  
3 own and operate a single refinery in California in the San  
4 Francisco Bay Area, and produce about 10 percent of  
5 California's automotive fuels for sale to independent  
6 marketers in the State.

7 I'm going to paraphrase my statement. I have  
8 submitted some written comments as well. You can put Tosco  
9 down in the support column for the action today. That's  
10 probably the summation of my comments.

11 We support the improvements and flexibility in the  
12 regulation, support the comments made by WSPA. I would like  
13 to underscore that the importance of flexibility, which is  
14 the theme today, is certainly an important -- for Tosco, an  
15 independent refiner, but I think it's important for the  
16 whole industry and certainly important for the State as  
17 well.

18 I think there's been a lot of good work done here  
19 today. And even though I would like to see action taken  
20 today to adopt the predictive model and the other proposed  
21 changes, I would add what others have said and encourage  
22 that we not stop here.

23 I think it's really important that we try to  
24 squeeze every last drop of flexibility we can from the  
25 program. I think it's going to be very important for the very important

1 success of implementation. I think it's important to the  
2 industry in California. I think it's important to the  
3 citizens of California that we do that.

4 And we certainly are willing to continue to work  
5 with the Air Resources Board. And they probably haven't --  
6 are not tired of hearing the congratulations on the good  
7 work they've done. So, I'll add my congratulations and  
8 appreciation as well today. We would be glad to continue  
9 to work with them to -- we're very interested in RVP. We  
10 think that that is worth continuing to look at; that it  
11 offers some promise of increasing some flexibility  
12 significantly.

13 And we would not like to dismiss it at this time.  
14 We are not interested at all in relaxing the standard. We  
15 are not interested in reducing the ability to enforce the  
16 standard. We recognize that these flexibilities that are  
17 being added add to the burden somewhat to the industry and  
18 add to the burden to the Air Resources Board as well.

19 And I want to recognize that. I appreciate that  
20 they're willing to help us by increasing flexibility, and  
21 perhaps a little more record keeping needs to be done, a  
22 little more records need to be reviewed. But I think it's  
23 well worth it. It's very cost-effective.

24 So, there's some other things that we'd be glad  
25 to talk to the Air Resources Board about, and they're

1 addressed in my written comments to you. I won't go into  
2 them now. And I'll look forward to continuing to work with  
3 the staff on implementation of the regulation.

4 We are still very concerned about the smooth  
5 implementation of the regulation. We are still -- remember  
6 very well the experience in diesel. I would not stand here  
7 and say that I expect there will be no problems in  
8 implementation. I hope there will be no problems.

9 Tosco, like everyone else, is going forward with  
10 the projects. We're on schedule. We anticipate that  
11 everything will go smoothly. But this is a very complex  
12 regulation, and we would -- it would be a mistake not to  
13 anticipate some problems and to be ready to deal with them,  
14 even if that is with a variance procedure, which Tosco  
15 supports, has always supported a variance procedure.

16 With that -- I hear some chuckles. You didn't  
17 think I'd use the "v" word, did you?

18 (Laughter.)

19 MR. BORDVICK: But we do support the variance  
20 procedure, and we support a fair procedure, and we think  
21 there is a good procedure in place now.

22 And we think it's -- the Air Resources Board has  
23 the ability to use that fairly. And we look forward -- if  
24 that becomes necessary, and we hope it doesn't become  
25 necessary -- particularly for us -- that the variance



1 procedure is there to fix whatever problems may occur.

2 So, I thank you for your time.

3 CHAIRWOMAN SCHAFFER: Thank you very much, Mr.  
4 Bordvick. Are there any questions from members of the Board  
5 for Mr. Bordvick this morning?

6 Thank you very much --

7 MR. BORDVICK: You're welcome.

8 CHAIRWOMAN SCHAFFER: -- for your patience. I  
9 appreciate it, but then you got the chance to have the last  
10 word.

11 MR. BORDVICK: Right.

12 CHAIRWOMAN SCHAFFER: So, that's an advantage,  
13 also.

14 At this point, I'd like to ask the staff if they  
15 have any written comments that they would like to summarize  
16 to be entered into the record at this time.

17 MR. AMES: Yes, Madam Chairwoman. I have two  
18 letters to enter into the record. The first is a letter  
19 from CIOMA, the California Independent Oil Marketers  
20 Association. The first point CIOMA makes is that they  
21 strongly support the proposed phase-in schedule for  
22 reformulated gasoline throughout the market.

23 Secondly, they do express several concerns that  
24 center around the formation of a task force, issues such as  
25 performance in vehicles and so forth. And the bottom line.

1 of their letter is that the task force should act now to  
2 resolve these potential problems with CIOMA's participation.  
3 So, that summarizes the CIOMA letter.

4 CHAIRWOMAN SCHAFFER: Thank you.

5 MR. AMES: Secondly, we have a letter from Toyota.  
6 And Toyota strongly supports the Phase 2 regulation,  
7 including the cap, averaging, and flat limits. Secondly,  
8 they support the predictive model proposal. And especially  
9 emphasize that the cap standard should remain in place.

10 So, that summarizes the two letters today.

11 CHAIRWOMAN SCHAFFER: Very good. Thank you.

12 Mr. Boyd, does the staff have any further comment?

13 MR. BOYD: A couple of quick comments just for the  
14 audience here and for the Board's benefit. Staff is quite  
15 willing to continue to work with the industry on the RVP  
16 issue. We heard a lot of concern about it, and there's  
17 certainly a willingness on our part to continue to work with  
18 them. And we'll look to the Board for guidance on that.

19 And I'd just like to say, also, as a way of  
20 assurance -- at least from the staff perspective -- to both  
21 Board members -- at least Mr. Morgan brought the issue up  
22 and both Jack Parnell and Jack Lagarias broached it. We're  
23 certainly of no mind to just change the model willy-nilly  
24 and we recognize the need for stability and consistency over  
25 long periods of time in order to give industry an accurate picture

1 opportunity to take benefit of the investments they make.

2           So, they'd be well thought out proposals before  
3 we'd ever bring them to the Board. And I'm certain you  
4 would hear from other people that there was such a need.

5 But, just on behalf of the staff, I wanted to indicate that  
6 to the Board.

7           And last, but not least, since Duane brought up  
8 the "v" word, the variances are just as much a concern to  
9 the staff as they are to the various members of industry who  
10 expressed concerns about their use and the signals that they  
11 send, or the perceptions that they seem to convey. And,  
12 again, I would just say we believe and we strive to be very  
13 judicious and cautious in the use of variances, and they  
14 have got to meet the criteria in the law. And we recognize  
15 the consequences of them.

16           And I just wanted to assure the audience and the  
17 Board that the same would hold true in the future. And we  
18 recognize the significant investment that is being made in  
19 reformulated gasoline, and recognize how signals are  
20 perceived by some folks. Some of the reactions are relative  
21 to the stock market; so, if you send a signal, there's a  
22 huge shockwave sometimes when you don't anticipate it. And  
23 we would be very judicious in the use of variances, most  
24 certainly.

25 And that concludes my comments.

1 CHAIRWOMAN SCHAFFER: Thank you very much. I'd  
2 like now to close the record on this agenda item. I also,  
3 however, would like to remind everyone that the record will  
4 be reopened when the 15-day notice of public availability is  
5 issued. Written or oral comments received after this  
6 hearing date but before the 15-day notice is issued will not  
7 be accepted as part of the official record on this agenda  
8 item.

9 When the public record is reopened for 15-day  
10 comment period, the public may submit written comments on  
11 the proposed changes, which will be considered and responded  
12 to in the final statement of reasons for the regulation.

13 At this point, I would like to take a break until  
14 this afternoon. We have a meeting with the Research  
15 Screening Committee. I certainly want to give the Board  
16 members the opportunity to review the resolution and to  
17 further discuss it with the staff before we give it our  
18 final consideration.

19 We will do that this afternoon. So, we are taking  
20 a recess now for about an hour, thank you.

21 (Thereupon, the luncheon recess was taken.)

22 ---o0o---