MEETING

BEFORE THE

CALIFORNIA AIR RESOURCES BOARD

SCIENTIFIC REVIEW PANEL ON TOXIC AIR CONTAMINANTS

SOUTH SAN FRANCISCO CONFERENCE CENTER

255 SOUTH AIRPORT BOULEVARD

SOUTH SAN FRANCISCO, CALIFORNIA

THURSDAY, JUNE 19, 1997

10:00 A.M.

Vicki L. Medeiros, C.S.R.
License No. 7871

MEMBERS PRESENT

Dr. James Pitts, Chairman
Dr. John Froines
Dr. Gary Friedman
Dr. Craig Byus
Dr. Stanton Glantz
Dr. James N. Seiber

I N D E X
--o0o--

--o0o--

P R O C E E D I N G S

--o0o--

DR. PITTS: Good morning. My name is Jim Pitts, and I Chair the Scientific Review Panel, and many or most of you look familiar.

I am sorry about the delay. I hoped Jim Seiber would be here, but I can assure you I got up this morning on a simple flight from Orange County, it was about 45 minutes, and talk about overbooking. It was quite a thrill.

I understand why he might be late. We appreciate your patience, all of you, and we will proceed to move along at this time.

I think all of you are familiar, or should be with Professor Glantz, Dr. Froines, Dr. Friedman and Dr. Craig Byus.

I have a bit of interesting information. This handsome gentleman over here is featured in an article on Partners in Health, and Dr. Friedman is right there in the photograph.

We appreciate it. After you have done such great job here of joining us, you are all very busy people. This is another example.

DR. FRIEDMAN: That is PR, and don't take it too seriously.

DR. GLANTZ: Are you on the cover of Sports

Illustrated?

DR. PITTS: I did want to take this occasion to, while we are at it, in which to, just as Chair, I want to express my appreciation to the Panel Members, including Peter, who is in a major conference a couple thousand miles away, couldn't make it, but had tried and put input into this particular agenda, and Jim Seiber, when he arrives.

All the others here, I want to thank the Panel Members for their efforts. As you may or may not recognize, there is a considerable amount of effort that goes into this entire process and interacting.

It is a challenge. I like to do fine stress, and positive stress and negative stress.

They are all very busy people, and you are faced with stacks of material to review, which they do, and they have done a great job, and I appreciate that.

I would also like to thank Bill Lockett, who is the Liaison, who has been very effective communing with our Panel and our Panel Members, and not only the Chair but all the Members, and the various members of the DPR, and the ARB, and Peter Mathews for assisting us with the administrative matters.

I would like to congratulate you. While we are passing out awards, OEHHA for bringing us today the packet on Environmental Tobacco Smoke Health Effects of Exposure to

Environmental Tobacco Smoke.

This has been a monumental challenge, scientifically, and it has certainly taken major efforts on the part of scientists and administrative staff to put this on the table today at this time.

I think we certainly want to express our appreciation to all of the people that are involved, and I know Lauren and other members of staff, and the rest of you all, we do appreciate it very much.

Who is the first person who would like to speak today?

Let me, before you go, I should -- you're right. I should announce, we have a new member appointed to the Panel. Dr. Paul Bloch, who is on the faculty of UC San Francisco, and he was appointed by the Senate Rules.

He also is several thousand miles away. This is avoiding conference time, this time of year, and he is also fly fishing too, but you have to assume it is work.

We look forward to him, and we are forwarding documents to him, and we look forward to him showing us in the next meeting, and we keep him active, I assure you, during the summer.

DR. VANCE: Can we turn it on Peter?

I'm Dr. Bill Vance, and I am Deputy Director for Scientific Affairs in the Office of Environmental Health

Hazard Assessment.

We are very happy to be here this morning to present to you the documents on Environmental Tobacco Smoke and the health assessments of the substance.

The work followed a February 1992 memo, it was actually a joint memo from Jan Sharkles, then the Chairwoman of the Air Resources Board, and Dr. Steven Book, then the Interim Director of the Office of Environmental Health Hazards Assessment.

The memo was to Jim Strough, the Secretary for Environmental Protection. This memo outlined the scope of the document before you today.

The memo also outlined the process for the public, scientific and SRP Review. Although ETS the health assessments of ETS, was not entered in the 1807 Toxic Air Contaminant Process, it has paralleled the process, including your involvement and review today.

This slide is a very brief summary of the process that we have followed since 1992 in the chronology of the development of the various documents that make up this one that is here today.

In October 1992, we convened jointly with the Air Resources Board, a two-day workshop to look at the scope and the issues.

Between 1994 and 1996, we developed six different

chapters on Environmental Tobacco Smoke.

Each chapter was treated separately, so that each one entered a public comment period between 45 and 60 days, to include a public workshop.

These six chapters were eventually rolled into, I believe we are now at eight chapters, one of those simply being an introduction, into the document that is here today.

In February 1997, we released the final public review and comments draft on the Internet, as well as the Air Board printed up a number of copies and made those available to the public.

Our public comment period closed on May 5. We received comments postmarked as late May 20, and between May 20 and January 10, Lauren Zeise and her crew were able to respond and summarize to a tremendous number of comments and to prepare what we call Appendix B, the response to comments, and the summary of those comments.

We have also in that time received comments from several members of the SRP and have responded to those comments.

Today is the meeting for your review. We look forward to hearing your comments today.

It is my pleasure now to introduce Dr. Lauren Zeise, the Chief of the Reproductive and Cancer Hazard Assessment Section in our office, and the Project Officer

with overall responsibility for the contents of the report.

It is because of her personal dedication to the project and the dedication of her colleagues and staff that we are here this morning to present the health assessment on Environmental Tobacco Smoke.

DR. PITTS: May I ask a quick question?

Let me see if I have the numbers right. Do they sum up to something like in that period six public workshops over that time, one public forum, and six public comment periods?

DR. VANCE: Yes.

DR. PITTS: Well, I think that sort of summarizes the material.

DR. VANCE: Six for the chapters, and seven for the document that is before you today.

DR. PITTS: Thank you very much.

DR. GLANTZ: To follow-up on that, would you say that it would be fair to say that this report has been the subject of more workshops, and more public comment periods than anything else we have ever seen?

Is that an accurate statement?

DR. VANCE: My history on the documents that have been brought before this Panel is limited, but I will tell you that we have bent over backwards to make this an open public process with ample opportunity for everyone's input.

DR. PITTS: Lauren.

DR. ZEISE: Before I give my presentation, I would like to introduce the other members of the ETS team with us here today.

To my immediate right is Amy Dunn, who has over the past five years or so dedicated a good part of her professional life to the development of this document and really needs to be acknowledged, and also Dr. Jim Donald, who coordinated a lot of the efforts around the developmental and reproductive toxic sections of the document.

DR. PITTS: Welcome and thank you.

DR. ZEISE: Okay. What I thought we would do today is to provide a brief overview of the report, Appendix B, the response to comments and the comment summaries, as well as the revisions document.

In addition, there is a document that was passed out today, a handout on comments received to date from the SRP on the revisions to the final draft document and on the Appendix B.

That was passed out to the Committee and handouts were available to the public, and can also have additional copies made for anyone else who would like to see that document.

As Dr. Pitts and Dr. Glantz and Dr. Vance have pointed out, there has been an extensive review of the

individual chapters of this document.

Each document after being released was subject to a comment period, a workshop, close of the public comment period, about 45 to 60 days later, depending on when the document was released.

Comments were reviewed, and the document was revised. Now the review resulted in a variety of end points being identified as causes associated with Environmental Tobacco Smoke, and this included the developmental effects of low birth weights, sudden infant death syndrome, respiratory effects in children, and there are a number identified, acute lower respiratory tract infections, asthma induction and exacerbation, chronic respiratory symptoms, middle ear infections.

With respect to carcinogenic effects, the document reviewed studies published after the rather extensive review by the Environmental Protection Agency, but we also want to acknowledge in our documents additional comprehensive review with respect to this effect by the National Academy of Sciences and by the Surgeon General's Office.

These studies do not conflict with those earlier findings. We also found causal evidence for nasal sinus cancers.

With respect to cardiovascular effects, there is considerable evidence for heart disease mortality, and after

we released this document there was a very large heart disease study that confirmed what we have identified as a causal association.

There are a number of other end points for which there is some very suggestive evidence of a causal association.

For developmental effects, spontaneous abortion and adverse impact on cognition and behavior.

However, additional research is needed to confirm whether or not these suggestions in effect are fact.

In addition for respiratory effects exacerbations of cystic fibrosis and a decrease in pulmonary function.

We reviewed the evidence in response to public comments that were available on asthma exacerbation in adults and have actually changed our conclusion on that end point.

With respect to carcinogenic effects, there is considerable suggestive evidence for cervical cancer.

If we just focus on the end point for which there is a causal association and consider the degree to which the population in California might be impacted, we see that the impact appears to be considerable, with a large number of cases of chronic respiratory effects occurring as well as acute respiratory effects, as well as mortality, or SIDS, lung cancer and cardiovascular disease.

So, the impact is considerable. These are annual

impact figures on the slide.

For comparison with the EPA document, and with other figures or reports, we see that the annual impact in the US is also very sizable.

I will briefly go through the various chapters. With respect to exposure measurement prevalence, the Environmental Tobacco Smoke is a complex mixture with toxic constituents and there are about 50 Proposition 65 carcinogens, and there are Twelve air toxic contaminants that have already been identified by this Committee, six reproductive and developmental toxins, and there are irritants and systemic toxins, and also there are a number of other agents for which there is suggestions of reproductive toxins and carcinogenicity.

The chapter on overuse, some of the issues with respect to exposure ascertainment, and epidemiological studies, and issues regarding questionnaires and surveys, how measurements of constituents are made, issues related to personal monitoring to identify exposure of cases or identify exposure in epidemiological studies and biomarkers, the exposure in California has been decreasing with respect to ETS, and the report reviews some recent reviews on this issue.

It reviews the prevalence trends in the general population and notes that for certain subpopulation, in fact,

exposure to tobacco smoke may, in fact, be on the rise, so that for certain subpopulations, one would not want to apply the general prevalence trends to characterize their exposures.

With respect to developmental effects and ETS exposure, there are prenatal manifestations which include low birth weight, which may compromise high risk infants.

Further research is needed to understand the role of Environmental Tobacco Smoke and spontaneous abortion and it is unclear whether ETS impacts utero, tube or other birth defects.

With respect to postnatal manifestations, postnatal ETS exposure is an independent risk factor for SIDS, the evidence suggests that ETS may impact neuropsychological development, and there is little or no evidence that ETS has any significance on height growth in children.

I think the information on reproductive, male and female reproductive effects can be characterized as being extremely limited.

ETS female reproduction tobacco smoke appears to be antiesterogenic. The impact of ETS on female fertility are not well studied so not much can be made from the information available there.

Possible ETS association with early menopausal identified but no conclusion could be reached with the type

of data available.

With respect to male reproduction, there is basically an absence of any information.

Respiratory effects and ETS exposure was reviewed at length in the EPA document. California reviewed the evidence and found acute effects in children for asthma exacerbation, lower respiratory track illness and middle ear infection.

Acute effects in adults are eye and nasal irritations and odor annoyance, and as we indicated earlier there is some evidence for exacerbation of adult asthma, but at this point the evidence is inclusive.

With respect to chronic effects in children, asthma induction and exacerbation, some evidence for impact on lung growth, and development and exacerbation on cystic fibrosis, in adults it may contribute with other insults to chronic respiratory impairment, which may effect that subpopulation in an adverse way.

With respect to cancer, as the earlier authoritative reviews did establish an effect in lung cancer and the recent studies provide additional evidence for that effect, with respect to nasal sinus cancer, a causal association with ETS exposure is identified.

A further study is needed to really establish the magnitude of the impact.

Cervical cancer, the epidemiological and biochemical evidence are suggestive of an effect, and since this report was released, there are additional studies that also provide suggestive evidence.

With respect to other cancers, recent suggestive studies on breast cancer indicate the need for considerable further investigations, perhaps ascertain a susceptible subpopulation.

There is insufficient evidence to draw any conclusion for stomach, brain, bladder, leukemia, childhood cancers.

For ETS in cardiovascular effects, there is increased risk of coronary heart disease mortality in nonsmokers exposed to spousal ETS, and clinical studies indicate ETS exposures cause a variety of effects related to coronary heart disease.

At this point I would like to acknowledge the many people that were involved in the development of this document.

Authors Anna Wu, who is not here with us today, Lynn Haroun, David Ting, Michael Lipsett, Gayle Windham and Kirsten Waller, they were the primary authors of this document.

In addition, a large number of staff in OEHHA have contributed substantially to this document, I won't enumerate

their names here. They are identified on the acknowledgment page, but it was a real team effort, and I want to thank you everyone involved in the effort.

I will go through briefly, the Appendix B. In fact, I will highlight some of the comments and the issues that we received from the public.

I wanted to note that we did receive considerable comment. There were basically 35 different submissions from individuals or institutions.

Phillip Morris submitted comments as an institution but also included its supported comments from a variety of individuals.

They were extensive, and many of these submissions were made with attachments. We basically had a lot of comments from these different groups.

Tobacco institutes commented as an institution, but also there were individuals who submitted comments, similarly RJ Reynolds.

From the general public, we have a host of comments as well. Some of which may have been sponsored elsewhere, but it was not identified in the submissions by the commentors.

We thank all of the commentors, because I think we really were able to look over these comments, review our previous conclusions with respect to the Environmental

Tobacco Smoke with respect to the large load of information of that submitted.

In some cases these comments did result in changes to the document and improvements to the document.

DR. FROINES: Could you describe how they came into the last vote, just for the record?

DR. ZEISE: The public comment period closed May 5, and what that meant was that the document the postage was required to be postmarked by May 5.

We did receive a variety of comments one to two weeks after the close of the comment period.

The post mark date on the submissions were May 5.

DR. VANCE: We checked very closely.

DR. ZEISE: Okay.

DR. GLANTZ: Was the postmark a postal cancellation or was it a postage meter?

DR. ZEISE: Postage meter.

DR. FRIEDMAN: Tell us again the magnitude of comments in here.

Looks like three feet.

DR. ZEISE: Some of those were published articles that were submitted, I tell you that was extremely helpful because we did not have to go and dig out the public articles out of the literature.

If you remove those, maybe it was more like this.

DR. FRIEDMAN: For the record, it looks like you are holding two to three feet.

DR. PITTS: For the record, approximately a meter.

DR. ZEISE: Let me review the types of comments received.

They were extensive, so some of these types of comments received may not be reflected on the slide.

You do have the response to comment document where we went through the comments received and detailed them, at least summarized them.

A large proportion of the comments dealt with specific details regarding the way that we recorded and evaluated the studies.

Another set of comments dealt with the adequacy of the development of the document and the public comment process.

Another set of comments dealt with the adequacy of Appendix A, and I think at this point we feel pretty comfortable saying that if you group Appendix A and B together, we believe we have addressed all of the major comments received.

We also received a variety of comments on the objectivity of the document, issues were raised regarding our weight of evidence, and how conclusions were reached.

In this regard, there were some commentors felt

that you really could not use epidemiological research to get at some of the health effects that we were reviewing.

So that was a major comment in that regard by others. Another comment regarding the weight of evidence was with respect to the way that the META analysis information was being used in terms of reaching a conclusion regarding a health end point and it's relationship with ETS exposure.

There was also comments submitted regarding an attributable risk calculations and a variety of a comments on recent literature which was basically we tough point that we had to call an end to whether or not we were going to continue to review and release the document.

Very, very recent papers are not included, but they are discussed in the Appendix B document.

We received a variety of citations that really were directed at ancillary issues. Also, another large amount of submissions that were information about what we call the gray literature, either meeting proceedings or abstracts.

So, we reviewed all of the comments at length, and you have the document. We have made revisions to the final draft, which I will briefly characterize.

You do have the document where we indicate all the specific revisions that were made. We basically made additions to clarify points.

In addition, some details were provided and we

basically extended some of the discussions to include some of those details.

With respect to consideration of new issues, the attributable risk calculations, there were a series of comments on that, and we have included a section on attributable risk.

Also an additional new information with respect to misclassification, and we have provided greater discussion on misclassification, you can find this in the document.

There also is a change in conclusion as we noted earlier, asthma exacerbation in adults, we now know the evidence is somewhat suggestive. We basically are identifying it, it is inconclusive in the document overall.

Thank you, and I look forward to your questions.

DR. PITTS: Before we open it to questions, I welcome Jim Seiber who has made through the many perils of travel these days, right?

We appreciate your showing up and look forward to your comments.

DR. SEIBER: It is called the Bay Bridge here.

DR. PITTS: Yes, and you also missed the fact that, for the record, I did want to mention I thank all the Panel Members, including yourself, for all of your efforts for the last year.

It has been a very active and interesting year, and

I deeply appreciate it.

Okay. Questions?

Let's go to the lead persons. Again, for those are not familiar with the process, the key players in this entire evaluation are the lead persons that are appointed from the SRP, this forum, and interact with the staff on the various aspects of the science involved in the generation of these documents.

I have Dr. Byus and Dr. Friedman as the two leads. It is up to you two. The ball is both of your court.

DR. FRIEDMAN: I think that I am correct in saying that Craig is the main lead for the document, and I agreed to take the lead on the lung cancer.

DR. PITTS: Fair enough.

DR. BYUS: I would like to make a brief comment about how it was an extremely well written document.

This was on all grounds.

I have been on many grand review panels and NIH and many risk health assessments documents here on this Committee, and I can say this is definitely is one of the best documents that I have ever read.

It is very clearly written and described the way that it was approached very carefully. You chose the words carefully, and the ideas are brought out in a simple matter rather than overly complex, and the document does not ramble

around, and it is quite to the point, and it is a pleasure to read, even though it is quite long.

I spent, since I was out of town when I just got this last revision, I have read most of the Appendix B responses. I have not read every single one. I have read almost every one.

I do agree with everything that you have said, and there is nothing of substance that is actually new. I spent a lot of time reading responses and comments, and I think you did outstanding job, and I could not have done a better job.

It is very important issue as well. I commend you for bringing it even further up to date with additions of the several new articles which are very important.

So, I'm sure its status is the best thing out there now on ETS, and you should be very proud.

DR. ZEISE: Thank you.

DR. FRIEDMAN: I would second Dr. Byus's comments and commend the group on what a fine job they did.

In looking at the responses to comments, I tried to pay particular attention to those that I heard brought up at the February meeting, because they sounded plausible when they were presented, and you dealt with them well.

I personally have always been concerned about the question of confounding by actual smoking among supposed never smokers before exposure and I didn't feel that you

brought in a lot of new discussion, but I thought it would be good to summarize this and in this additional handout I think that out you did a nice job in expressing your overall view of this issue.

I appreciate that you added that.

DR. PITTS: Thank you.

Dr. Froines. We will go alphabetically.

DR. FROINES: No comment.

DR. PITTS: No comments. Okay.

Dr. Glantz, I would expect a possible comment from this source.

DR. GLANTZ: I also think you have done a superb job.

This is now the definitive document on the subject, and I think it will stand as such for a long time.

You should be very proud. I know that you people worked very hard dealing with this.

I do have a couple of minor things, because I am compulsive. In looking at this thin handout here, the response to the comments from myself and Gary, I notice that you randomized the order of the responses in order to confuse me.

There were few things that I suggested on the attachment one, most of which dealt with minor wording changes, I presume that you did all of those.

DR. ZEISE: Yes.

The things that we would like to change, we discussed in the handout.

DR. GLANTZ: Okay. Would it be accurate to say that there were a couple of places I suggested changing a few words, and I assume that you are going to make all those other changes?

DR. ZEISE: Yes.

DR. GLANTZ: And there were just a couple of things in the response to comments in Appendix B that I wanted to bring up.

On in page 4, this is of Appendix B, and since this is the response to comments I do not know how crucial this is in here, but I would like to point it out for the record, in the bottom paragraph, you have a statement here that animal models specifically designed to study ETS have only been recently developed, and the models in many of the older publication are questionable now, I suggest that you take that out.

I don't think that is correct to say there are newer models, but I think that the old one's were okay.

If you go to page 10, at the top, the response to comment number 8, where the comment was that the final draft does not meet the RAC recommendation and that uncertainty should be recorded.

But I think you have dealt very well with uncertainties by reporting confidence throughout the report.

I would just change the response and say we did deal with uncertainties. We were compulsive about it actually.

If you go to page 14, right before where it says Tobacco Institute, the last one, 2, 3, 4, 5 lines, I did not quite understand what you were trying to say there.

DR. ZEISE: It had to deal with the issue of latency tendency period for lung cancer, that exposure way, in the past decade are of relevance.

The issue of using a Z factor today, based on today's prevalence, needs to be carefully thought about with respect to lung cancer.

DR. GLANTZ: You may want to add a sentence to that.

I mean I agree with you, but that was not clear.

Then on page 17, at the bottom, there are several places in Appendix B where you refer to the Kawachi study, and it has now been added to the document, so throughout the appendix when you refer to the Kawachi study, and also the Cardinas study, which has also been added, just add a sentence that says this is added to the document, because I think that shows responsiveness.

I'm just -- I'm just thumbing through here. I

will be very quick, Jim.

There are a couple of quick items.

DR. FROINES: While he's looking, I did have a question for this that is minor on page 2-18.

DR. ZEISE: 2-18.

DR. FROINES: Yes, section 2.4.5.

It is just a minor point, and it is really for me, not necessarily. I found that first paragraph on 4-aminobiphenyl, I was not sure what was the conclusion I was to draw from that, in terms of how one views the issue of 4-aminobiphenyl.

DR. ZEISE: Let me review this, it has been a while.

DR. FROINES: I think it is an interesting compound, important compound.

DR. ZEISE: Very much so.

In fact, we looked at the variations of pharmacokinetic analysis of DNA adduct formation across individuals in the population you see a considerable spread for some populations depending on the study.

DR. FROINES: That is why I was not clear this covered everything on the subject.

DR. ZEISE: Why don't we look at that in this regard with respect to subpopulation issue in particular, and I think Dr. Friedman mentioned the cigarette smoking the

other day.

We will look with respect to that issue.

DR. FROINES: The way that it is written in terms as to what this one should include.

DR. SEIBER: Go to page 81.

DR. ZEISE: I think Amy has something to say.

DR. DUNN: The main point that was intended to be made with that section is that with respect to, often the argument is made that because you do not see the same levels of coatening in nonsmokers as you would expect, given what appears to be the effect level in nonsmokers compared to smokers, in comparing the bimarker coatening levels you do not see the effect, or you don't see the levels of coatening that you would expect, but if you look at formula biphenyl you see that there are much higher exposures to formula biphenyl to nonsmokers than in the mainstream smoke.

So that in comparison for the different bimarkers, you can't linear correlate with coatening.

I think that is the main thing.

DR. FROINES: I may want to look at that and make sure it is clear.

That was clearer than I think this is.

DR. SEIBER: Okay. On page 81, and 82 and 86, there are things that you say you added text to the report, and it did not appear in the June 6 document.

So you should make sure that you add it. You had the June 6 document with all the changes in response to comments, those, at least when I read it, in Appendix B to be specific, you didn't actually say that you added it, but I don't think that you included it in the other document.

DR. ZEISE: In the revisions document. Okay.

DR. SEIBER: I thought you would just make sure.

I thought what you said was fine.

Then if you go to page 150, and actually there are several commentors that made the point that the Schwartz Lung Cancer Study should be included, is there any reason not to include it the document?

DR. ZEISE: If you would like we could add, you already asked for the Cardinas Studies to be added, if you would like we could add the study.

DR. SEIBER: Will adding those change the conclusion of the report at all?

DR. ZEISE: No, and we discussed that in Appendix B.

DR. SEIBER: In fact you have, and I think you should take the material from Appendix B where you discuss the Schwartz and the other reports, and move them into the document with appropriate editing for flow and stuff.

DR. ZEISE: I think that what we would like to do is to do editions, basically stay on the discussion somewhat

and just be more careful with the wording for the main document, a bit more editing.

DR. SEIBER: Again several commentors suggested that, and it seemed reasonable to me.

On page 156, the bottom of, the commentor talks about a couple of new cervical cancer studies.

The same comment applies here, why is it hard to add those into the document?

For points of completeness and responsiveness.

DR. ZEISE: We can add them.

DR. SEIBER: Will you.

DR. GLANTZ: Will it change the conclusions at all?

DR. ZEISE: No.

DR. GLANTZ: I think that for completeness I would make sure that in Appendix B, you make sure that it is added to the main document.

On page 175, the last response, you say we have it remains debatable whether using nonsmokers not exposed to ETS is the correct baseline for such comparisons.

Actually I think that is a good idea, one of the strains in the recent breast cancers studies and the Kawachi Heart Disease Study was they had nonexposed, nonsmokers as their control group.

I think it is clear that using nonexposed,

nonsmokers is the best control group. I think that sentence should be taken out.

Is that okay.

DR. ZEISE: We will replace that with another sentence.

DR. GLANTZ: I think that was too strong. Some of the things several people raised the same issue, and we have already dealt with.

At the bottom of page 195, where you talk about the limitations in the Layard Study, the second to last paragraph, the last full paragraph, I can't recall; is that information in the main document?

DR. DUNN: Yes.

That information is in the document.

DR. GLANTZ: Okay.

On page 205, you are responding to comment number two there, this refers to the sentence that I asked you to take out about oxidant gases, the oxidants of cigarette smoke.

My reading of the evidence on why ETS effects vascular function has to do with interfering with the nitric oxide. I think this is --

I think that the commentor is right when he says it is not likely oxidant gas exposure from passive smoking is causing these vascular effects, but that is not what people

think any more, that is what people thought awhile ago.

You need to change the response.

DR. ZEISE: Okay.

DR. GLANTZ: That is it.

DR. ZEISE: Thank you I appreciate the careful read.

DR. PITTS: Okay. Dr. Seiber.

DR. SEIBER: I will not repeat again what a great document it is, it really is good, and I showed it to the a few colleagues who said the same thing.

From an academic point of view, there are a number of researchers who will be very happy to see, if nothing else the literature.

DR. BYUS: Maybe you could add a preface to the fact document commenting what a great job they have done.

DR. SEIBER: I have one.

DR. GLANTZ: Can I say one thing for the record?

Several of the commentors complained that this document was not up to the standards of the RAC Report, and since you were the Chairman of the RAC Report Committee, I can ask that you to address that in a generic criticism, whether you think it was up to the standards.

DR. SEIBER: You took the words right out of my mouth.

DR. PITTS: That happens.

DR. SEIBER: One of the comments were the RAC recommendations followed, and of course, I did not go recommendation by recommendation, and furthermore, it is an interesting point that I don't know that there is any requirement that the RAC recommendations be followed, because the Calderon bill did not say that we needed to go backwards in time. It did not give a time table for implementation.

I believe Dr. Becker is leading an implementation group to see that this happens. I guess the philosophical question would be.

Does it matter?

Secondly, a more general question, or answer, would be yes, I think so, and certainly, with regard to peer review, and public comment, involvement of parties and sufficient hearings.

But that is only one of many, many, recommendations. I guess to be specific on recommendations, I did not go back and check each recommendation against what is in the record.

DR. GLANTZ: Would you say it is up to the standards that the Committee was hoping to see.

DR. SEIBER: Certainly as far as good science, sound science, it is an extremely extensive review of the scientific literature, nothing was left out.

There is no last minute pieces of information that

I can judge, and I think that I pick it up in your comments as well.

In that regard, I think if you track the general recommendation of the record, I would say that it followed the recommendations.

DR. PITTS: I just have a couple.

DR. SEIBER: Go ahead, Jim.

DR. PITTS: I thought you were done.

Continue.

DR. SEIBER: One question that occurred to me when I read the report and comments and so forth, we may get to it when we talk about our recommendations, the sentence in the Executive Summary, under General Findings, pretty much summarizes it and it says, ETS is an important source of exposure to toxic air contaminants indoors.

So, my question, fairly obvious, does that mean that it is not important outdoors, is there data, is there either exposure measurements, or health studies that were conducted on exposures of people who got their primary ETS exposure out of doors?

DR. ZEISE: As you know, epidemiologically, it is very difficult to study Environmental Tobacco Smoke because of the many sources.

There are a variety of studies that looked at exposure at work. The extent to which the exposure occurred

outdoors at work, we would have to look at that specific issue.

There are certainly exposure studies that look at measuring exposure outdoors.

DR. SEIBER: Can you venture an opinion on -- well, let me ask you this way, did you mean to exclude outdoor exposures in most of the conclusions and summary of the document?

DR. ZEISE: We did not mean to exclude it, but we did not address it specifically.

DR. GLANTZ: This is a point that I missed.

Is it better to just delete the word indoors right there.

DR. SEIBER: Partly it is a lack of knowledge on my part.

I can see where most of the epidemiology was probably on people who got the primary, if not sole exposure indoors.

Yet, we have all been in situations where we were around ETS out of doors. I don't know how important it is in some occupations I expect it could be important.

For me it is kind of a question that dangles there and is not addressed in the report.

DR. GLANTZ: I think that there is not much evidence in looking at outdoor exposure, but I think that the

document would be clearer to delete the word indoors.

It is not like most indoor exposure comes from ETS, but outdoors there are other things, if you look at the total burden of toxics chemicals, and we will get to this when you get to the findings that ETS is major source of exposure when you compare it to outdoor exposures of stationary sources.

Why not delete the word indoors. Are you happy with that?

DR. SEIBER: I don't know about that, I do not know if there is data to support the deletion.

Can we really say it is an important of exposure to TAC's, air contaminants outdoors, and you would have to look at the relative amounts of the different sources.

I see Peggy Jenkins coming up, and she may have some data.

DR. ZEISE: Peggy has done considerable work on this with respect to the exposure part of the problem, so I would like to introduce Dr. Peggy Jenkins from the Air Resources Board.

DR. JENKINS: Thank you.

Actually, I was just pointing out some numbers that are in the report, from an old activity pattern survey that is addressed in the ETS document.

We did look at, from our survey research in the late 80's, the percent of exposure, the number of minutes per

day, to which people were exposed to ETS in all different locations.

DR. DUNN: Page 2-40.

DR. JENKINS: Based on our data back in the late 80's, you can see even then there was about Twelve or 13 percent outdoor exposure for females, and 16 to 24 percent exposure was for males.

That was across their the day, it included work place, we did not break it down work versus home.

This kind of information is in the report. The difficulty is, of course, over time with the rules changes, and the fact that people are now stepping outdoors more to do their smoking, I would say, just offhand, probably the percentage of exposure, relatively speaking, has gone up outdoors and down indoors.

But I do not know of any current data that are looking at that. I do not know if that directly.

DR. SEIBER: I saw the pie charts, but that does not really talk quantitatively, and I could not tell whether that was important for a concentration point of view or not.

DR. JENKINS: That does not allow you to calculate.

DR. SEIBER: That is a good question that you raised whether it has gone up and down.

DR. GLANTZ: Getting back to deleting the word indoors, I think that would be clearer actually, because we

are saying it is an important source of exposure period.

We are not saying it is an important source indoors and outdoors, just that it is an important source.

DR. SEIBER: An alternate would be to say that ETS is a source of exposure to toxic air contaminants indoors and outdoors and add something on particularly the data with regard to indoor, so we don't leave it out, but I do not know whether simply deleting the word indoors would be scientific, whether we could defend that.

We are still on the executive summary, this is the first sentence under general findings on page ES-1.

DR. GLANTZ: I do not want to delete the word indoors.

It is very important source for a lot of people it is the main source of toxic exposure, that would be misleading, if you wanted to add something to the end, and say something like perhaps out doors, or a parenthetical statement that says there is not adequate data to assess outdoor smoke.

DR. SEIBER: I would prefer that. I would leave the sentence as is and add a statement that, either it could be, or there is inadequate data, or something, so we do not address outdoor exposure.

DR. PITTS: I think we can certainly do that.

It seems to me that in making the point that the

major source is indoors, that is probably where you find it most of the time.

If there is exposure, and that seems to be one of the major concerns, I don't understand all of the biochemical technology, and so forth, and so on, and the toxicology, but it is important with the children at the high levels.

You have to think not only the actual concentration. Why don't we leave it indoors and add a qualifications statement or something like that.

DR. SEIBER: Something that addresses outdoors.

I saw that you are going to bring the report back to SRP.

Is that correct?

DR. GLANTZ: This is it.

DR. PITTS: The second sentence, the exposure in the home.

DR. GLANTZ: How about adding a sentence or a parenthetical statement that says, there is also some exposure outdoors.

DR. ZEISE: That we can do.

DR. GLANTZ: And.

DR. SEIBER: And your pie charts tend to support that, so you have some data.

DR. PITTS: Fine.

DR. SEIBER: On the same line, and I do not want to

beat it over the head, is there a good definition of indoor versus outdoor, suppose you are sitting in the car with the windows down, is that indoor or outdoor?

DR. PITTS: When it rains, do you get wet?

I'm on the experimental list. You can model it. I just stick my hands out.

DR. SEIBER: It seems like not a very important point, but the law 1807 specifically talks about outdoor, seems to make some kind of discrimination between indoor versus outdoor, and this is a more general question for me.

DR. GLANTZ: Well, I think you are beating a little bit of a dead horse here.

The clarification that you suggest is fine, but to get into a debate of what indoors means in this context is silly.

DR. SEIBER: I am happy to leave it in this source, but I think that we need to talk about it at some point.

It has been a poorly defined point in a number of our debates.

DR. FROINES: I agree, I think that there are a lot of complex issues that we are talking about right now.

I will give you an example. Formula biphenyl is a habit. It is a very important carcinogen primarily because of cigarette smoking as was said earlier it is not know to be admitted in California according to the ARB, but we know in

fact that it is admitted in California because we are having this discussion.

So, the question is an interesting question do we now take up formula biphenyl as a toxic air contaminant in the outdoor air because of its emission from the Environmental Tobacco Smoke.

We are bordering on tricky questions that we have to address at some point. For the sake of time and effort, it is time to move ahead.

DR. SEIBER: I am happy to move ahead.

I think that we all know that it is in the home, and parental smoking, is the major source of children and infants are indoors most of the time.

I am happy with that.

DR. PITTS: It is just a general question.

Whether you develop a risk assessments document and then apparently you are discussing the risk assessments of the entire individual, that implies indoors and outdoors, and for example, it seems to me, we already faced this some years ago, and Peggy Jenkins, I want to thank her again for the excellent work that you and your group and your contractors have done and the others that are working on indoor air pollution and establishing exposure levels characterizing these mixtures, very complex mixtures, and we are talking ETS and other factors, we are talking about a complex mixture.

We have a document that used to exist in 1992 that came out of formaldehyde, and the exposure flying over the whole state might be four or five PPB's or something of that order.

The highest level ever seen, identified as the worst smog attack in history, where the ozone level was 450 parts per billion, and the highest level identified by Dr. Froines, by Dr. Kazan was about 80 PPB.

Well if you look indoors, and for an example a real concern would be the new schools, the temporary housing, the mobile homes, that we use to house children, under the new Governor's program we need more school rooms, then you look at the paneling, you look at the indoor concentration, and they do not drop to zero in a short period of time, and you really have a case where we did talk about indoor, it wasn't a major source, certainly again for children, so this is not a special case here.

It is subject that we could bring up in terms of more general, did you have any other comments.

DR. SEIBER: I think you mean for formaldehyde and that sort of thing.

DR. PITTS: Are there any other comments?

DR. SEIBER: The point is you cannot separate indoor versus outdoor because there are gray areas where we all live in both environments, so I find it rather artificial

that we have had to make those kind of distinctions.

DR. PITTS: We did the document here.

Do you have any other questions?

DR. SEIBER: It just a general comment, and I don't think it is question that requires any change.

That is the title of the second chapter has the word prevalence in it. Prevalence is more of a medical incident type of thing, and I do not want to use the word prevalence when we talk about chemical concentrations, where we really need the concentration data.

I was thumbing through here and prevalence seemed to refer to the percentage of people who were in different situations.

That is okay in that case. That is all, Jim.

DR. PITTS: Okay. I have a couple of comments as Chair, maybe put a little more perspective.

Peggy, could you tell us roughly how many compounds, toxic compounds, have we in this Panel over the past Twelve years in existence, identified as toxic contaminants.

How many of those are found in ETS?

DR. ZEISE: Twelve, I believe there are twelve.

DR. PITTS: Okay. Twelve.

That is a very interesting point. When we talked about the tobacco company being a complex mixture, that would

very obviously be in the concentrations.

DR. ZEISE: I should say there are a number of additional chemicals listed under Proposition 65.

DR. PITTS: Yes, that must be up to 30.

DR. ZEISE: Over 50.

DR. PITTS: That is good to have on the report.

From a perspective point of view on this, when was the last risk assessment published of this nature, and by what agency or group, was the EPA, what were the dates of those?

In other words, is this a very timely document, that is updating, making it over some period of years, bringing a real update to this whole field?

DR. ZEISE: The EPA document was published in 1992.

They focused on the respiratory impact although they did review some information on cardiovascular effect.

It basically made remarks on that regard, and did not make remarks with regard to SIDS, but basically it focused on the respiratory outcomes.

The Surgeon General's report was in 1986 and the NRC report was 1986 as well.

DR. PITTS: Okay. Good.

One last comment that you should be sure to have on the record, and you mentioned going back to the 1992, the

original agreement set up between the Air Resources Board and that was the Department of Health Services, DHS, in a year or two, with the health group that was set up between the Air Resources Board basically, and the OEHHA on the basis from the letter from this Panel suggesting that it would be useful to have ETS reviewed, and there was agreement that it would be carried out.

I thought it was clear that in the agreement, is it not a typical 1807 tack, that in that the results of our discussion today, or whatever action will be taken in a risk assessments side, as far as Air Resources Board is concerned they have no legal requirement or mandate, to take risk management action, that is not their purview or responsibility.

Am I right?

DR. VANCE: I will defer to the Air Board.

DR. PITTS: Well, I think that is important because for everyone with 1807, would you, I think I might be correct on that, but I would like it from the bias.

EXECUTIVE OFFICER KENNY: My name is Mike Kenny, Executive Officer from the Air Resources Board.

There is a letter that was sent to you, Dr. Pitts, in 1992, it was distributed among the members of the SRP, and what it did was it eliminated the review of the ETS, going to an 1807 like process.

It was agreed at that time that ETS would not go into the formal 1807 process, so therefore it would not come to the Air Resource Boards for formal identification as a TAC.

That was the original agreement that we arrived at.

DR. GLANTZ: Does that mean when we take action on this report that it will be the final action?

EXECUTIVE OFFICER KENNY: It does not have to be.

Whether or not there is an appropriate informational item it should be presented to the Air Resources Board with regard to ETS.

It does seem to me that it would be appropriate for this particular information that has been conveyed to you today, if approved by you, to be presented to the Board at one of the meetings, so that the Air Resources Board can hear this information, and also so that we have the appropriate risk managers at the Federal or State level to hear the information and take the information and use it as appropriate.

DR. GLANTZ: But what would happen, if that were to be the case, I'm not, I don't have a problem with what you are suggesting, but I want to make sure we understand the procedure.

Basically, we would, if we approve this document

today, the document is then finished in terms of the content, there would be no further changes to the document by anybody else.

EXECUTIVE OFFICER KENNY: That's correct.

DR. GLANTZ: You would take the final document as approved by us to the ARB and present it to them, and whoever else you have there, as an informational item.

ARB may make a statement or might not, but the document itself, if we walk out of here with an approved document, it is then done.

EXECUTIVE OFFICER KENNY: That's correct.

DR. FROINES: I think that is good idea.

This is an extraordinary document. I think that it represents the state of the art to call it to the attention to the ARB is a good idea.

DR. PITTS: We appreciate those comments and that is a very thoughtful and useful suggestion.

DR. GLANTZ: Given that we have a rancorous discussion about lead, which we will get to I'm sure, I'm not trying to give the Chairman a stroke here, I think for the record, it would be worth pointing out that there appears to be a consensus between the Panel and the ARB management on how to move this report forward.

DR. PITTS: The ETS.

DR. GLANTZ: Yes.

DR. PITTS: We appreciate the suggestion and it is an important one and we will look forward to, actually as I understand, you may want an informal presentation, and should they like an informal presentation, I'm sure I could speak for the Panel that we will be happy to informally with a clear understanding that there are no risk management implications to the ARB if you would like to do so.

EXECUTIVE OFFICER KENNY: We will look at the schedules and try to schedule an informational hearing with the Board as soon as we possibly could do that.

The idea then is that SRP would be present as well as the ARB representatives.

DR. PITTS: The operational informational hearing and we would refer to it then.

DR. FROINES: I need to ask a question. This is really a question for Peggy Jenkins, my question is would you agree then that the issue of outdoor Environmental Tobacco Smoke is one that needs further quantitative evaluation at this time to look at dose related exposure.

EXECUTIVE OFFICER KENNY: I would defer to Peggy on that because I don't have the background to answer that question.

DR. SEIBER: I can see one place we might get into that and you brought it up yourself. Twelve of these chemicals in this complex mixture are already TACs.

But presumably there are others in there that ones that we should be concerned about that are not TACs yet, and maybe they are not even on the federal TACs list.

We might want to look at those because we are prioritizing any way, and make sure that the priority list that OEHHA is working up might consider those.

I have gone back to see if some are on the candidate or priority list. That is something to be aware of.

DR. FROINES: My question was really, I was just wondering she thought or others thought that it would be good to get some investigators, academic, governmental, or what have you, to collect some further information on outdoor exposures, because, my guess is that there are still dose related issues that are unknown.

That would be a signal to academic investigators to take it up as an issue.

DR. JENKINS: I'm not sure I have the knowledge of the piece of a puzzle. My group handled the public phone call complaints regarding increased exposure in doorways and in areas where smokers congregate outside in either work places or public buildings.

In the state we have made a great step forward that other states haven't yet made, in terms of having our workplace regulations in place that do prohibit smoking in

most work places.

I do personally believe some of the problem has moved to the outdoors, so I think that additional information on the relative exposures would be useful, and along those lines we really do not know, we know that people are exposed, but we do not know the degree of exposure, how much are they really inhaling.

We know it irritates them, but whether those exposures are high enough concentrations, or long enough across a day, and across a lifetime to have an impact is questionable.

There are various sort of regulations that are being put into place and policies with the state.

I know that with state buildings there is a requirement that smokers are supposed to smoke a certain distance from the entry way so that people can go in and out without being impacted.

I do not believe that is true in most of the private sector buildings. Additional information would be very useful, it is not good to move the problem from one location to another, I think, fortunately in our state, the exposures have gone down somewhat, but it has not gone away.

DR. PITTS: On that line it seems that this is an important question and worthwhile question, do you know of any research that is going on, well planned, well

characterized, and well conducted research that could address the issue, because this might we will be something that will be worth commenting on, that the Panel will be in support of.

DR. JENKINS: I'm not aware, but probably Dr. Glantz is more current on who is doing what at right at this time than I am.

DR. GLANTZ: I was looking at something, I am sorry. What was the question?

DR. PITTS: Is there any research currently being conducted that would actually give some numbers, that might respond to the point.

What we were discussing what the outdoor versus the indoor under a variety of conditions, something that would well characterize the study and so forth.

DR. GLANTZ: I am not aware of any, but it is not something that I have much thought about, but I think that it is actually something that is worth looking at, this might yet end up back in the ARB lap.

Because, when people do walk through these smoking walls that occur outside the buildings you do get a blast of exposure for a short time, but people can get heavy doses.

It is an interesting question and somebody ought to study that. Right now Stanford is doing a lot of exposure studies.

DR. ZEISE: I think Cathy Hammond is.

DR. GLANTZ: Right, at UCB.

DR. PITTS: Just checking with the liaison man here.

DR. FROINES: May I ask a technical question.

DR. PITTS: If there are no comments, Craig turn the program over.

DR. FROINES: There is a lot of negative views to this new data and there are a small number of subjects, and a lack of consideration of dietary factors, and I suspect there are also some responsive issues that I wouldn't put in there.

DR. ZEISE: Charter 2.

DR. FROINES: Is it is minor and we have a huge agenda.

DR. PITTS: Okay. Lets move on.

DR. BYUS: I tried to get most of the comments, and I did not get most of the comments.

There are a few of them that are not included in here, and if we go over that right now and hopefully accept the findings.

I will just tell you what to combine with other people. There are a few wording things that I will not go into, I will talk to you later.

One of them, find 1, ETS, we should say that

Environmental Tobacco Smoke in the first findings so not to confuse them.

The other question was on number 7, that is, do we want to say the final sentence says, recent epidemiological studies now have demonstrated that postnatal ETS exposure is an independent cause of SIDS, and is it really or a risk factor.

One of the commentors suggested not to use the word cause, since we do not know what the cause of SIDS is.

It seems that it would be better to put it down as a risk factor. If we use the word causally associated, that is different than the word cause.

DR. GLANTZ: Why don't we just say that, or change it to say instead of, is an independent cause of SIDS, say it is causally associated with SIDS.

Is that okay?

DR. FRIEDMAN: What is the difference?

DR. GLANTZ: It makes him happy.

DR. BYUS: Thank you.

DR. FROINES: I think that my question for Gary as a matter of epidemiology is; what is the appropriate scientific finding?

DR. FRIEDMAN: I do not know that literature well enough to say whether I would conclude it was causal.

I know that they put in the report that it was now

distinguishable in prenatal exposure, but I do not know that it has been shown that it is not confounded with some other causal factor for SIDS, and that is why smoking seems associated.

So I think that, if one can say that, that it is causal, but if you can't distinguish it from other causal factors with SIDS then I think that I would feel more comfortable with saying that it was associated.

DR. GLANTZ: I think that the report has done a nice job of showing that you can distinguish it.

There is some pretty good literature out there now, especially in a couple of recent studies.

In fact, in talking to the people at the EPA they are now saying, they said the more recent data were available when they did their report they would have used causal.

Okay. Well leave it as is. That causally associated did not mean the same thing as independent cause.

DR. FRIEDMAN: It does to me.

DR. BYUS: Okay. Sorry. Leave it as it is then. All right.

DR. FROINES: I think that the important issue which is scientific, this is the findings of scientific review panel, this is not the findings of the state, and so this panel as a matter of science has to draw that conclusion, and the view the epidemiology statistics needed

to draw that conclusion.

DR. GLANTZ: I think that the evidence is there to say causal.

DR. FRIEDMAN: I can't contradict that because I do not know the evidence.

DR. GLANTZ: I am comfortable with that.

DR. BYUS: I really wasn't, but the evidence was there to causal association, but semantically they did not know what the cause of SIDS was.

DR. FRIEDMAN: That is the way that the tobacco companies have been arguing, that we do not really know the cause of lung cancer, therefore smoking is not associated.

So, there are always multiple causes, if something could be an independent cause, which is causally associated with.

DR. BYUS: Fine, leave it.

DR. FROINES: I am raising this about this issue, but also as a generic issue. The findings of the SRP need to be scientific findings that we feel comfortable with as scientist, and that we then say that.

We can't simply say we affirm what OEHHA has said. We have found, as a scientific body, this is the case.

DR. GLANTZ: This is the literature that I have been following closely, and I am very comfortable with the statement.

DR. FROINES: That we are confident in our findings.

DR. GLANTZ: The issue of confounding and the effects of interutero exposure are important and confounding factors at the time that the EPA looked at this, but since then there have been two or three big, well done studies published, and carefully controlled for those effects.

That combined with the earlier evidence is what supports this statement.

DR. FRIEDMAN: And they control further potential compounding socioeconomic status?

DR. GLANTZ: Yes there were two really big studies one was done at UCSD and one was from England.

DR. BYUS: Okay. I agree with you, it was semantic, it was not a scientific difference.

DR. SEIBER: I'm interested in this number 7, because somebody brought up earlier whether there were risk management consequences, or things that could be done, or things that could lower the risk.

Since it says in number 7, prenatal or postnatal ETS exposure and it does not say what the sources are from prenatal to maternal active smoking before birth, which makes a lot of sense.

There are situations, I'm guessing, I think there are, where children are cared for postnatal by care

providers, and that might in fact be a type of risk management that could take place at least an informational item for people that care for young children there should not be smoking in and around where the kids are.

DR. GLANTZ: In fact, the current DHS can anti smoking advertising campaign highlights SIDS and infants, basically saying don't smoke around them and don't let other people smoke around them.

DR. BYUS: Sure. The other main comment that I received from most people was concerning Tables 1 and 2, that is shown under comment 18.

The current, what we were attempting to do was to provide some perspective on the risk of Environmental Tobacco Smoke compared to the other compounds in the studies from the past.

In an attempt to do that Environmental Tobacco Smoke for example has been added the bottom of the Table 2 Cancer Potency Table.

Unfortunately, the way that it is done is in a different number and a different unit of anything above it.

So really it can not be added easily to that Table. In addition to the cardiovascular unit risk Table, Table 1, as well.

What we are trying to do is to provide some perspective on what it's potency was. What I believe Dr.

Glantz has come up with, somewhere here, is another Table, which I believe you have a copy of.

Do you have a copy of the estimated cancer causes lifetime ambient, the Death Table, how many deaths in the State of California, do you have that?

And even though that is not complete in the sense that there are missing numbers that need to be added, I think that it does provide a perspective of where ETS fits in, certainly for cancer.

As to the other compounds I think that we can replace Table 1 and 2 with this kind of Table, that would be a good idea, so that is what I am suggesting.

DR. FRIEDMAN: What would you say about ETS on these Tables?

DR. GLANTZ: Let me talk to that, I do not know which staff person, is there some staff person here, who whoever put this Table together with great hysteria, okay, no one will cuff to it.

Here is what the suggestion was. When I looked at the findings, when I saw them a couple of days ago, I had the exactly the same reaction to Tables 1 and 2 that Craig did.

If you recall, when you deal with tables, the reason we created those tables was to show the relative toxicity of the different THC's that we have dealt with.

It was unit risk for everything else and total life

time risk for ETS, so it was apples and oranges.

I suggested was that the staff go back to the earlier reports that we have approved, and for most of them there is an estimate of the population disease burden in terms of the number of cancer cases.

The thing that you have got is what could be put together out of the existing reports. Some of them are old.

That means that the actual cancer burden is probably lower than stated in the reports because regulatory actions have been taken subsequent to the reports.

The point is that the typical numbers are around a thousand cancer cases with fewer or somewhere between 30 and 4,000 cancer cases per lifetime exposure for the State of California.

If you take the deaths from the ETS that are in the first Table in the report and add them up there are confidential intervals and I added them up and it is 55 hundred a year give or take a two.

Is that right Lauren? You are scowling.

DR. ZEISE: Sorry, are you just looking at cancer deaths or cancer in addition to all deaths.

DR. GLANTZ: Cancer all deaths.

DR. ZEISE: I would think it would be about that.

DR. GLANTZ: That gives you an apples and apples kind of combination and comparison here, but the question I

had with the Table, this is cancer, don't go away.

But when you say for example, acetaldehyde on this Table, the number that we approved in 1993, is 288 cancer cases per lifetime exposure for 30 million California population.

We are still not comparing apples and apples right, because that is over a 70 year period, right, so the correct comparative number for ETS is something like 55 hundred times 70.

DR. ZEISE: Right for lung cancer it would be 25,000, for lung alone.

DR. BYUS: I meant for lung and not for cardiovascular.

DR. ZEISE: For cardiovascular vascular it would be much larger.

DR. GLANTZ: All right.

I think what we need -- the other question that I had when we talk about cancer cases.

Are those cancer deaths or cancer cases?

DR. ZEISE: Cancer deaths.

DR. GLANTZ: I suggest what we do with this Table is we change the heading to be estimated fatalities, or estimated deaths, per lifetime exposure.

Then we could simply add ETS with whatever the countable number is, and we can leave it to Lauren to figure

that out.

I would not just look at cancer, but I would look at them all, which I guess you have an estimate for lung cancer, for SIDS, and for heart disease, and nasal cancer you could not get a number, so those are the fatal end points that you might put numbers to.

DR. ZEISE: I think that would be in of the order of 300,000.

DR. FRIEDMAN: One thing that is not clear to me, it talks about cases, with the changed deaths per 30 million exposed, and I know that California has about 30 million people.

Not all 30 million people are necessarily exposed to each of these, or to ETS. Are these the number of deaths that will occur in the California population of 30 million given the exposure we have, or are you saying if 30 million people were all exposed to this, this is how many deaths we would have.

DR. GLANTZ: I think it means, that is another thing that we would probably be clearer in this Table.

What these estimates are for the things that are on the Table, is the number of deaths estimated for the California population.

The assumption is always that everybody is exposed to the average ambient level. You get a unit risk times the

ambient exposure, times the population, and that is where these numbers come from.

DR. FRIEDMAN: I think that it would be clearer then to say expected number of deaths in California, not talk about per 30 million.

DR. GLANTZ: I agree with that. I think that what we should with this Table is to get rid of all of the per 30 million exposed, and then change the headline to be estimated fatalities in California, and maybe put a footnote on it explaining, because you want this to make sense to normal human beings.

DR. FROINES: I think that someone ought to look at this Carbon Tetrachloride number in here too.

DR. FROINES: I think I can't imagine.

DR. GLANTZ: You were here when we voted for that. I think the other thing that should be added to this table, another footnote that should be added, is to point out, these are all estimates from earlier reports, some of these impacts will, or are most likely going to be for these compounds are probably going to be less than was estimated at the time because of control measures that have been put in place since then.

I don't think though, and I talked with Lauren briefly about this yesterday, I don't think that it is worth the trouble to go back and update the estimates.

I think that the point that the findings makes is that ETS is bigger than these are. By stating to the extent the exposure to the other compounds have been reduced, that difference widens, and it is not worth staff time to see it how much it widens.

DR. FROINES: I am not convinced that you shouldn't just publish the numbers on ETS by themselves.

There are so many questions about this that this gets us into, we are going to have take this up and look at the accuracy of these numbers, if, and how they should be presented, if we do this.

I think we are potentially in a can of worms if we use these numbers. I think it useful to have numbers like this, I think that it is useful to discuss them, but, you know, this is not trivial because some newspaper reporter is going to go pick up this list and then we will have to have a whole discussion about it.

The question is whether we want to get into this, these numbers, or whether we are talking about ETS, and let it stand on its own.

DR. GLANTZ: Do you think that it would make sense then for finding 18, to delete everything to delete the first part, and just simply say the public health impacts of ETS exceed those from all other prior compounds identified as toxic air contaminants to date by this panel combined.

What it says it will not present with this table.

DR. FROINES: That is okay.

What we don't want, we want to be careful not to make the other air contaminants look diminimous somehow.

DR. GLANTZ: Do you think that we should let them do the finding of that new number?

DR. FROINES: I think to say this is an important public health problem is correct, but when you get into starting to make it in comparison to other things, then we get into all the problems of comparative risk assessments which we know are difficult and complicated.

DR. GLANTZ: Okay. What do people want to do?

DR. FRIEDMAN: May I ask a question?

DR. PITTS: Yes.

DR. FRIEDMAN: These numbers that you came up with, are they per year, or did you estimate a lifetime risk?

DR. GLANTZ: The ETS numbers.

DR. ZEISE: The ETS are annual figures for ETS exposed individuals. We did take a certain average estimate of exposure, we basically used a prevalence and attributable risk formulation to come up with the figures.

DR. FRIEDMAN: I am just a little concerned, did you look at certain age groups, I remember that with lead I think that it was, that you talked about men 40 to 59 or something, did you do that with ETS too?

DR. ZEISE: With ETS we looked at the individual end point and based it on what was relevant for the particular end point.

For example, for birth weight, and estimated prevalence we looked at the exposure to, the pregnant women exposed to ETS.

DR. FRIEDMAN: I am just a little worried about the casual multiplying by 70. You have to do each one of these carefully and maybe it would be an actuarial.

DR. GLANTZ: In the interest of time we should delete 18, it is just a can of worms.

DR. GLANTZ: There are too many complicated issues, it is not that important a point. Table 1 and 2 get deleted too.

DR. PITTS: Now, before we delete it let the discussion go on.

DR. SEIBER: May I ask a question. How would Table 1 have come out, I am not quite ready to delete it because I don't know what the numbers are I guess, you have got an XX in my version, and then a ten to the minus X in another place there.

I wonder, what are the numbers. Do we know?

DR. PITTS: I think, Lauren, you should come up.

This is an important point, I am not ready to delete Table 2 either.

Let's talk about it, because what people would like to know, we have a unit risk here, how in terms of micro grams or cubic meters.

DR. ZEISE: I was just wondering if I could have a copy of the findings.

DR. PITTS: I think that would help, I think that is one of the most sensible things I have heard 30 seconds.

DR. GLANTZ: Here is the problem with Table 1 and Table 2, the way that we have done most compounds where we did not have a huge amount of epidemiological data that we have on ETS, there was a unit risk was estimated and an average ambient exposure was estimated, and then that was used to come up with the body count.

With second hand smoke there is so much epidemiological evidence that you don't have to do that, you simply look you look at whether people were exposed or not, and get a relative risk, and then combine that with prevalence and attributable risk calculation ion order to come up with the health impact.

The problem, so that there is -- if you look through this whole report, they never compute a unit risk, and it is not really even necessary or appropriate to do so.

The problem that you have, if you look at Table 2 is that everything else is listed in order of unit risk.

I don't think that the data exists, nor is it

really necessary to go get it.

DR. PITTS: For ETS.

DR. GLANTZ: For ETS.

DR. PITTS: How do you answer the question, for atmospheric chemists, where would you place ETS in terms of unit risk to cancer, let's just take cancer, let's not get it all mixed up with, that is another risk, say cardiovascular, where would it fall in terms of cancer, just a rough estimate, is it ten to minus one, three, five, seven I think that is a legitimate question to ask.

If you cannot answer in that term, just focus on the one question, cancer potency and you notice that we have, when we have these numbers, these are, make very clear that these are conservative, and the risk is a wide range risk.

Could you answer that for me? Where would you put it, if I is the ask that simple question, cancer potency risk, and I will ask that same question for complex emission diesel results too, now there is another complex mixture, how do you treat these?

DR. ZEISE: I think that if you look at unit risk, and you want to compare it on the basis of individual compounds in the mixture like chloroform you could do that, but it is difficult, what are you going to use as the measure exposure in terms of units.

DR. PITTS: Exactly, that is what I am getting at,

that is precisely my point.

There is a big difference between a complex mixture and Benzopyrene or Formaldehyde and so they have to be treated in somewhat of a different manner and that is precisely what I am concerned about.

DR. ZEISE: One possibility would be to look at it in terms of sort of a range of risks, lifetime risk, and compare that with a lifetime risks for the others, and not express it as a body count, but in terms of the theoretical risk estimate, and see how they stack up to look at overall impact.

That could be done with this based on the cardiovascular mortality estimates, and the lung cancer, if you wanted a ranking with respect to others.

DR. PITTS: What do the toxicologists here think about that.

I'm just raising it in as a private citizen, and I am curious.

DR. GLANTZ: That is what we tried to do with this thing.

DR. PITTS: I do not like this.

DR. GLANTZ: I think that the basic problem with this Table is that it is an apples and oranges comparison.

I think to do it, this was put together, actually I suggested doing it in the first place because we have done it

for everything else, and now I regret having done it.

The harder we try to make this work, the more confusing it gets. I think that the best thing to do is, it is clear that when you look at the lifetime exposure numbers, that ETS is a very serious compound, and the efforts to try to fit it in to exactly the kind of paragon we used before when we were dealing with these other compounds, which were pure compounds, where we were developing, the whole effort was directed at unit risks.

It just will create more confusion to try to do this, and raise more questions than it will answer.

I think that we can say based on what is before us, it is very serious thing, but I think we are going to create huge problems.

I really regret having suggested this, it is turning in a big mess.

DR. FRIEDMAN: It would be useful to have the point 18, that it causes a lot of deaths, and it is much greater than these other things everyone is so worried about in the environment.

DR. GLANTZ: I think that can be said simply based on what is in this report, and all of the other reports that we have done, without including the Tables.

I would have finding 18, if you want to keep it, just take the last part of it, and just say the public health

impacts of ETS exceed those of all other prior compounds identified as toxic contaminants to date by this panel.

That is a well justified clear statement, if you want to say that, now John is sighing. If the Panel does not want to say anything.

DR. FROINES: There is a dose response relationship that we are concerned about. When you say that, you are making some assumptions that may or may not be, let me finish. Al Smith, in his environmental perspective article on arsenic compared the relative compared the risk of radon, Environmental Tobacco Smoke, and arsenic, in drinking water, based on the Taiwanese data and showed that the three actually are comparable.

That is arsenic in drinking water was comparable to Environmental Tobacco Smoke. So that one has to be careful when you start to make those comments that you are talking about apples and apples, and oranges and oranges, and you have normalized to the degree that you can.

That is my only concern. I worry about when you do that you start to make other things diminimous. I don't think that for example, if you die, for you to die is by no means diminimous in this state.

These are matters of real concern and the danger of, it depends on how you make the phrase that compares.

DR. PITTS: And it depends on whether you are

talking about hot spots. You are sitting next door to a chromium plate, you have a real problem, and smoking might not, or Environmental Tobacco Smoke for the workers might not be a big deal.

Why don't we just say that you have to be very careful about this. I have one suggestion, would it be possible that over lunch perhaps, or in some other way, that you the leads could get together and decide and come back to the Panel as a whole with a suggestion as to how you would like to handle this.

You have heard the rates of perspective and the idea in which to move this along and then we will come back to discuss it.

DR. GLANTZ: Let's take a vote and get a sense of the vote, keep this or dump it. If people, if the consensus is to dump it, we do not have to deal with it over lunch.

DR. FRIEDMAN: I feel it needs more work. Maybe we could do it over lunch.

I would hate to delay the whole thing of getting our findings out but I think that it is an important enough issue that maybe we could approve everything and just work on 18 before the next meeting.

DR. GLANTZ: I think we need to bring it to closure today.

DR. PITTS: I did not suggest that we were not

going to bring it to closure, I suggested to get together, the three of you, because I think that Gary has a very good point.

It is a bottom line. It is really a serious problem, and it is serious relative to other compounds.

A general statement is way to sum this up. Perhaps that is what you are trying to say.

DR. GLANTZ: Okay.

DR. PITTS: Now, why don't we decide to go ahead and approve the findings with the subject to be discussed and the last point to be brought up, is that appropriate, is there any objection to that?

DR. SEIBER: Don't we approve them all at once.

DR. PITTS: If could we go ahead, if we are ready to, to formalize whatever motion I will hear, formalize that motion, subject to the fact that we will, will in fact look at this perspective of number 18 and then bring that back after lunch, and that could be handled at that time and not let it hold up the entire document.

MR. LOCKETT: That is fine.

DR. PITTS: Is that okay with the Panel?

DR. SEIBER: I'm not sure what we gain, are we going to vote again after lunch? Why don't we just wait?

DR. GLANTZ: Let's get it over with. Do everything with 18, and 18 will take 30 seconds after lunch.

DR. PITTS: I'm waiting for a motion.

DR. BYUS: We have the, we have not quite finished here.

DR. SEIBER: We have not gotten our comments in.

DR. PITTS: Go ahead. We will leave 18 over lunch, you can like it or not. The last thing, and they are other people that have additional comments.

The last question is on page 4, we conclude by saying based on the available evidence ETS should be identified as a toxic contaminant.

Since the Board is not going to identify it as a toxic air contaminant, maybe we should change that to say, based on the available evidence we have concluded that ETS is a toxic air contaminant.

Would that be acceptable to everyone?

DR. PITTS: Yes.

DR. BYUS: It is a toxic air contaminant and everyone agrees that it is.

DR. SEIBER: Is that little T, little C, or is that big.

DR. BYUS: Little T.

DR. PITTS: As printed. Toxics air contaminants, period.

DR. SEIBER: You are not implying anything legal.

DR. PITTS: Right, air born toxic chemical. I hate

to see it get it legally bound up with an identification process.

DR. GLANTZ: Let's just leave it, is a toxic air contaminant.

DR. PITTS: What would anyone else like. Around the table, let's do it.

DR. FRIEDMAN: I'm satisfied.

DR. PITTS: With toxic air contaminant in small print.

DR. FROINES: Yes.

DR. GLANTZ: Yes.

DR. PITTS: Is that satisfied.

DR. SEIBER: Any other choices. I'm afraid that people are going to confuse it with big TAC.

DR. GLANTZ: I think that the record is there is a transcript of this meeting, the ARB has made their position very clear, and I think it is clear.

DR. SEIBER: That is all right with me. If you are sure we have clarified it.

DR. BYUS: We are not done.

Do you have any other comments?

DR. SEIBER: Yes I apologize, but I got here late, and these are not major things, but under number 17, where you are giving numbers there, the numbers of children and so forth, in most cases you give ranges, but in two cases you

gave the absolute numbers, and I wondered why that was.

For example 360 deaths from lung cancer is an absolute number, 120 deaths from SIDS, yet all the others were range.

I was just questioning, are those not subject to ranges, is there some reason why those are not ranges, and the others are?

DR. FRIEDMAN: Can I ask who writes these findings?

DR. GLANTZ: I think these numbers, Lauren you should, like sit there. These numbers correspond to a Table in the document.

DR. FROINES: I think that the answer to that question is that the lead person who works with Bill Lockett and the ARB to develop the findings.

DR. FRIEDMAN: And who actually writes them? The three people.

DR. FROINES: The lead person has the primary responsibility for putting together the draft, and the staff helps that process.

DR. FRIEDMAN: Maybe we should be asking Craig why is there is not a range.

DR. BYUS: It was taken out of the Table where there was no range, that is the answer. We can fix that.

DR. SEIBER: If there isn't any, then it is fine.

DR. GLANTZ: Lauren wants to say something.

DR. ZEISE: Basically the ranges were taken from a range of maximum likelihood estimates.

Basically where they come from is a range of maximum likelihood estimates of relative risk from which attributable risks and calculated in the EPA report.

So these numbers correspond to numbers, the ranges here correspond to numbers out of the EPA report, for lung cancer there was a META analysis and there was a point value for that, that is associated with best value.

DR. FRIEDMAN: Wasn't there confidence levels around that?

DR. ZEISE: Yes, but basically just put in the corresponding numbers that the EPA reported in their document.

The ranges don't, that are given here, don't reflect a confidence interval, but reflect a range of maximum likelihood from different studies.

DR. GLANTZ: That is all explained in detail in some detail in the document itself.

DR. SEIBER: So what you are saying is that there is a single study there, and these others are from several studies.

DR. ZEISE: Basically.

DR. FRIEDMAN: Well, Jim would it satisfy you then,

where there is single number to say approximately; maybe that would work?

DR. SEIBER: Yes, because I think that it is kind of misleading to say 120 it sounds like we really know what we are talking about, and we don't.

DR. PITTS: Plus or minus. There speaks another environmental chemist.

DR. SEIBER: That will be fine. The only other comment that I have, and seems to me you have caught all these, but the faxed version I got yesterday I circled several places where it said parental smoking, mothers, you know, it kind of blamed it all on the parents, and I took some exception to that because I think it doesn't matter who the smoker is.

DR. PITTS: You mean as a parent.

DR. SEIBER: It could be a grandparent, or the brother, or sister, and I think we caught most of those.

I don't know whether you did it on purpose or --

DR. PITTS: Okay.

DR. BYUS: Any one with any other comments on the findings? Okay, if not, I move that we accept the findings, conditional to the conclusion on the newly written point 18, and the report.

DR. PITTS: Second to the motion.

DR. FRIEDMAN: Second.

DR. PITTS: Any further discussion? All those in favor raise your hands, signify by saying aye, any opposed, and then the motion is passed, and it should be noted for the record that it was passed unanimously for the entire packet.

Take a deep breath all of you. As a reward for this, we are going to take a 5 minute break, and we would like to take a shift in the agenda to bring one administrative matter up, which is 6, and then bring it up to number two.

We are fortunate to have Mike Kenny here, the Executive Officer of ARB, and he is under a real time schedule and he has graciously agreed to move his schedule back and we appreciate that.

Let's take a five minute break, and then we will hear the lead situation and we will go to lunch after that.

I do promise the Panel, even though we are in San Francisco, it will not be October 31, but lunch occurred at three o'clock or something like that, and it ultimately delegated on the part of the Panel and was totally justified. Totally justified.

(Thereupon a brief recess was taken.)

DR. PITTS: We will proceed with this administrative item, and we have other items in terms of future agendas at the end of the program for today.

This we are bringing up now and Michael Kenny is

here now the Executive Officer of the ARB. Let me just a second, give a quick background, sort of state where we are for the audience.

Actually in terms of the lead document, the Air Resources Board passed a resolution concerning the newer toxicity concerning uncertainties in terms of the impacts of lead on children, and others, and passed this at a Board meeting on April 24.

We do not need the details now, as a result of that, the concern was that they recommended to vote to put the information in as a preface to the risk assessments document that the Panel had approved at the previous October 31 meeting.

At any rate, this is a matter of some concern because it was mixing risk assessment which was scientific management by adding a preface and that changed in the sense it was actually not based on the science side of the question, but had more of a management side, it was not appropriate from the respect of scientific testing.

Then on the twenty-third I wrote a letter to John Dunlap, the Chair,, and indicated beware of the SRP involved the ARB's recent discussion and action on lead on April 24 will meet with a great deal of interest and concern.

The May 20 meeting of the SRP and the attached resolution was passed unanimously. We look forward to

hearing what actions the ARB will take in response to our resolution, this letter was May 23, as always I am available for discussion concerning this or other matters concerning SRP et cetera, et cetera.

Now specifically, done again very quickly for the background, the actual resolutions that were passed on May 20, basically said the following, resolve that the ARB should take action to remove it's preface adopted in the April 24, 1997 Board meeting, from the staff report, slash, executive summary, proposed identification of inorganic and toxic air contaminants, March 1997.

Two, if ARB decides to keep the preface in the staff report executive summary, the SRP finds that this ARB modified document is seriously deficient and maybe there is another resolution indicating how this should have been handled.

That is basically the situation. There have been, I should add, several series of discussions, informal discussions, on this matter.

Where there were discussions back and forth with a number between SRP members and me myself as Chair, I had discussions with a number of individuals in the ARB, with the Chairman with others in the administrative post, and we kicked this back and forth, what was involved here in the discussions, and actually were I must say not of a rancorous

nature, in deference of my friend over here, and the only stroke that I was concerned about, or am concerned about, is my lousy backhand, which is terrible.

So, that is not the issue. I'm pleased that, one of the key points that I made, or should make as Chair, is the Panel decision, the Panel has to make the decision and we interacted as Chair, or the part of intermediary to this matter.

It seemed very important to have something as a panel in writing specifying what actions the ARB were planning to take in addressing this resolution that we formally passed, as a formal resolution.

We hoped to have that so that we would have a basis that would be unambiguous basis for discussion at this time.

For a variety of reasons that has not occurred, but we are fortunate to have you here today to discuss with us what the possibilities exist for working out this situation.

I would point out that is what we will do in just a moment. I would note for the record, yesterday as Chair, I received a copy of a letter from my Ron Sher, the Senate to John Dunlap, in which he makes a series of, expresses his concerns about this problem, and this is going forward to Chairman done lap who happens to be in Italy right now and communications maybe somewhat difficult.

I hope they are over some Chianti in any case. I

have been authorized to give the letters or copies to the Panel, and to yourself, and as I indicated, I prefer that until Chairman Dunlap reads this, and the ARB has their opportunity to make their comments, I would like the Panel to keep it in a confidential nature between the Panel and that is up to you and the ARB how they want to handle this.

I wanted to be sure and there is not an infinite time limit on the confidentiality but until John Dunlap gets a chance to read it and interact with you and then of course it is an open topic.

EXECUTIVE OFFICER KENNY: I appreciate that very much, thank you Dr. Pitts and Members of the Panel. What I wanted to do was go through a little bit of where we want to be, and hopefully we can reach a mutual resolution of this issue.

We have had a long history of working very well with the SRP, and the Panel and the ARB interaction has always been very positive and very good.

It is unfortunate the April 24 meeting led to a misperception with regard to what the Air Resources Board was trying to do on that day.

The ARB was not trying to change the risk assessments that had been approved by this panel. That risk assessment is a final document, that risk assessment is a stand alone document.

The Air Resources Board was simply trying to reflect, in the staff report aspect of what was being presented to it on that particular day, what it's feelings were with regard to information that had been presented to you during the dynamic of the hearing through witness testimony.

That is why you have the see the preface that you have before you today. Again I want to reiterate, that preface was not designed by the Board to modify the SRP findings, the SRP documents, or the SRP resolution in any fashion.

What we really have is a situation in which there are two documents that we are referring to here, there is the SRP executive summary and attendant documents, parts A, B, and C, there is also an initial statement of reason, which is an executive summary which is produced by the staff for the Boards review as we go through our administrative law process in terms of getting any regulation approved by the Office of Administrative Law.

If you look at those executive summaries, the one approved by the SRP, and the one that was approved by the ARB, they are substantially similar, however, they are still distinct documents.

In terms of the documents themselves and where the preface lies, the preface is only applicable to the ARB

document, it is not applicable to the SRP document, and it is not intended that preface would be part of the SRP document.

I think that what that does is that it makes it very clear that in fact we really have to distinction bodies, the SRP and the Air Resources Board, each of them has a role under the law that they need to play, and each of them reach the conclusion with regard to the role that they have the obligation to play.

That is what we are trying to do with these documents. If you look at the documents, actually I have two copies of them here, they are not final documents, but you can see that one document is an SRP version and it says very clearly on it that it is an SRP version, and one document says that it is an Air Resources Board version.

They are not just substantially disimilar, but again they are two distinct documents and they were prepared basically, historically as two distinct documents.

I think that is where the resolution lies for this dispute. There is a follow-up here, we have learned something very important with regard to the necessity for communication and the effort to avoid misperception with regard to what is happening in terms of the interplay between the SRP and the Air Resources Board.

It is important for us to acknowledge that there was no design to change the SRP findings. I think will see

for the future an effort made to ensure that that kind of misperception does not exist.

If you have any questions I will happy to address those.

DR. PITTS: Okay. Open to the Panel. One point, I think if you, somewhere I have this, if you open up the September 1996 Brown documents, and that came to us in October 31, when we acted on that, and that is where we made clarifications on that document, was it not true that the title page of that document had a different statement than the cover.

EXECUTIVE OFFICER KENNY: I think that was true.

DR. PITTS: The title page actually said it was an executive summary, and when you open it up, the title page said staff records executive summary, and struck me, as I mentioned to Genevieve that may have been a possible source of confusion.

EXECUTIVE OFFICER KENNY: I think that is true.

DR. PITTS: I think that is what actually happened, that is worth noting, and then when it came to the final document, the March document, objection.

It is open to the Panel. It is your ball game.

Who would like to start. I will go around clockwise and ad hoc digital manner.

I will not say Twelve clock, you cannot say Twelve

o'clock high any more with a digital watch. Shoot.

DR. SEIBER: I appreciate Mr. Kenny being here to try to clarify this and I personally hope we can lay it to rest.

Could you explain a little bit more how the preface would be placed, now I understand the Red document, and we will just refer to it them as Red and Tan for simplicity here, and what kind of language would be around the preface that constitutes the resolution passed by the Board.

EXECUTIVE OFFICER KENNY: What you would do is you would have the preface as adopted by the ARB on the inside of the Red document the inside cover there.

I think it is important to also acknowledge that because that Red document also does contain the findings of the SRP as they were adopted in September or October, that in fact we would have to put some language with that, that makes it very clear that the preface is limited to the Air Resources Board and the preface is not designed to modify or change in any way the findings of the SRP.

DR. PITTS: Okay. Stan,.

DR. GLANTZ: I will pass for now.

DR. PITTS: You are passing? Do you know there is a term for somebody that falters, that checks, and then comes back and raises, that is called sand bagging, and I saw that happen to somebody once in the war and it was not a good move

for someone of friendly fire.

I would like to here, since you commented this morning at some length, I gather you have a number of people here, why don't you come and tell us what your impression of this. On the record and.

DR. GLANTZ: I was trying to be moderate.

DR. PITTS: You are to be congratulated on that.

DR. GLANTZ: Okay. I have, I think there are a couple of different issues here. The first one is the issue of the Board coming in and sort of messing with the science as certified by the SRP.

We are at least moving in the right direction on that. I think that you are now recognizing that that should not happen.

Isn't that true?

EXECUTIVE OFFICER KENNY: We have always recognized that. I don't think that the Board intended to mess with the science.

DR. GLANTZ: Okay. The intention, I think there is an agreement on the intention. The second issue is whether in fact the statements made in the preface are correct scientifically, which to me is the more important point.

I was not at the last SRP meeting, but I am pretty sure that it was made pretty clear that this body thought they were not correct.

I read the stuff, and I thought that they were not correct. The lead industry when they came in and made the presentation, I have not read the entire transcript of the ARB meeting, but I looked at pieces of it.

The way that it was presented was very misleading and it was my impression that the ARB was under the impression that they were being presented with new information that had not been presented to this Committee.

That is not true, the arguments that the Lead Industry brought before you, before the Board, were things that had been discussed ad nauseum before this Committee.

If ETS set the record for the amount of workshops, and discussions, and public comment periods, my guess is that lead came in second.

So, I am very troubled, I think that ARB made a mistake, a scientific mistake in adopting that preface, and it is very troubling to me that having had the SRP point that out, because the ARB are not scientists as we are, they do not plow through the stuff months and years as we did.

I am very troubled that they will not just say oops, and remove it. I think that the ARB has the prerogative, and I don't think that anyone on this Committee will disagree, has the prerogative to say what it wants, whether it makes sense or not, but I would hope that given that this Committee has stated in very, very, strong terms

that the statements were made by the ARB are simply not correct as a matter of science, that they would just remove them.

I think that you would have the ARB in a much stronger position to defend it's action on a scientific basis.

Having said that, it is my view that the SRP has made it's views on this exceptionally clear, and to the point that the States Senate is now concerned about this.

This has really gone from being an issue of science, which is what this Committee deals with, to a political problem.

What I would personally like to see is to have us reiterate our view that that preface contains statements that are not defendable from a scientific point of view.

We want to make it very clear that our report is approved by this Committee should stand as it was, or send it back to us.

At that point my personal preference is to then having made that statement again very clearly is to advise the ARB that we think that they should reconsider that preface but then to go leave it as an issue the between Administration and the legislator and let us get back to worrying about science.

That is my personal view, I think this is consuming

a huge amount of effort. I do not understand why the Board does not simply recognize that they got a little bit bamboozled at that hearing.

That is what I was going to be moderate about. That is sort of my personal view.

I never have to take this up again.

EXECUTIVE OFFICER KENNY: If I could respond. I think that what the Board was really trying to do was reflect in what they thought was a reasonable fashion the nature of the debate going on the day that they identified lead as a toxic air contaminant.

I think that the Board was also trying to make it very clear that the identification phase was coming to an end that day and the Board was going to identify lead, but at the same time they were trying to acknowledge that there was going to be a subsequent phase to this process, and they were trying to provide for some recognition of this issue that had been raised in the context of that hearing.

I really think that the effort here was done by the Board in substantial good faith. They went out of their way in fact, in response to a direct request to even modify the SRP findings, to say no, that was an inappropriate action to take.

I understand what you are saying. I think there is simply, I think that the Board was really trying to do the

right thing on this.

DR. FROINES: I want to make a comment. I think that we have come to a place where SRP and the Board are now in a confrontational place with respect to each other.

I think that is a very bad place to be, and I think we should back away. Nothing will be served by the current circumstances.

I think that we need to put this behind us. I think we need not to get into this situation again, where there is the real tension as shown by these letters in the Wall Street Journal.

I wanted to make one comment about what you said, it is not appropriate for the Air Resources Board to consider that what is going on at that hearing, and I have read the transcripts, and I have read the transcripts from the Irvine meeting, there was no debate going on.

Those were your words. There should not be a debate going on.

It is not a debate between the Lead Industries Association and this Panel. It is not a debate.

The Board is to hear our findings, the Board may then hear from the Lead Industry Association has to say, and I think that is terrific, but it is not a debate, nor should it be, nor was it intended to by the Legislature that it be.

That is where the problem comes from. The problem

is that what you have is an industry representative in a Committee coming up with language that doesn't form the basis for the preface.

Is that going to happen with diesel, is that going to happen with ETS, is that going to happen with any other chemical.

I think that there is a process question that says, you can't have, whether it be the NRBC, the Lead Industries Association, or any other interested party serving in a committee that comes up with a preface that seems to counter the findings of this Panel.

That is the problem. The problem, you can take this and put one, and one, and one, in another, and that is fine, that deals with the procedural issue.

There is a very deep problem that emerged, and you actually contribute to it when you say there is a debate going on.

There was no debate and as I say there shouldn't be a debate. That's the issue.

We have to step back, and say okay, we made a mistake, and we are not going to have that kind of interference again.

I do not think it is good.

EXECUTIVE OFFICER KENNY: Let me more precisely state what I want to say, which is that there was a debate

going on to the extent that the Board was engaged in determining whether or not it was going to identify lead as a toxic air contaminant.

It was hearing testimony with regard to that effect. There was no debate with regard to the SRP findings.

The SRP findings basically were final on the date that this Board made a determination that those findings were approved.

So, I'm not trying to say that that kind of debate was being engaged in. What I am trying to point out though is that the Board was engaged in it's statutory obligations to make a determination as to whether or not to identify this particular compound.

During the context of that is when the testimony was occurring. The Board was really trying to do was to simply provide for a bridge or a transition of the risk management phase.

I think that you are right about this not occurring in the future, for the very simple reason, one of the things that we have learned from this is that when we have a document that reflects efforts by the SRP, also by the Environmental Health Hazards Assessment, and by the Air Resources Board, that it makes sense to make sure that the document is very clearly articulated as to whom it belongs.

And that is I think really where some of the crux of this issue is at also. I think for the future you will not see this kind of a blended situation.

You are going to see documents that are very specifically identified as being completed documents and final documents in terms of what the SRP does with them, and then a separate and secondary ARB approach in terms of how the initial statement of reasons is done.

I think that is a major resolution in terms of assuring that misperceptions don't reoccur.

DR. FROINES: I personally think that we should then back away from this as a confrontation, and assume that everyone is working on the long term goal of improving the air quality of California, and that we put this behind us.

That is what I would favor. I think others would favor that.

I think it is important that we are clear with each other and express our concerns and then move on, and I think that will be for the best for everyone in the long term.

DR. GLANTZ: That is what I was trying to say, too. I think that this has been beaten very hard.

To reiterate what John said, you need to know and be very clear that we do not believe that any new information was presented to the ARB at that meeting, they claimed it was new information, but believe me, I went to enough workshops,

and read enough public comments, I promise you, there was nothing new there nothing that this Committee had not considered in great depth.

The net result is that you have the ARB making a statement which I would say, and if anyone here disagrees with me, that is not justified by the science.

I do not think it is good policy, that is a fact. My advise to you is that I think one of the things, one of the hallmarks of this entire process until lead came along, was the lack of political meddling, and lobbyist, and all of that other kind of stuff.

Industry was in here representing their view, putting in their comments, and defending their point of view.

We did not see the heavy politicization of the whole process that occurred in the lead document.

I think it should reflect very well on the ARB and on the administration and the Deukmejian administration before them, which is how long I have been on here, that these decisions have been made based on the best available science, not some compromise made in some meeting because the right people showed up and yelled and screamed and jumped up and down.

I would strongly urge the ARB to reconsider what that preface says. It is your right, I think that there is a

consensus among this panel, you have the prerogative to say that the Moon is made of green cheese in your document if you want, but I think that it is a very bad move, I think that it reflects very poorly on the Board.

I would urge you to reconsider it. Having said that, I agree with John, I think that we have made our point about as loudly and clearly as we can.

You need to decide how you want to respond to it. I think that if indeed there is a separate document that is the SRP document, that does not include the preface, and where it is clear if you choose to continue the preface, if you make it very clear that the SRP doesn't agree you, I think that is a reasonable resolution to the current situation.

From the point of view of the Panel. From my point of view as a member of Panel.

I don't think it is good resolution from the point of view of science to have the ARB putting something out there where it's primary scientific advisory committee on the subject is telling you that it is wrong.

As I say if you go back and look at the transcripts of the meetings we had on it, and I think there are transcripts of the public workshops too, and of the public comments, you will see that the issues that they raised have been beaten into the ground and addressed and readdressed.

I frankly think you guys got a little bit bamboozled by that, and you should fix it. That is my personal advise to you. I think from the point of view of the Panel, we need to actually see the final, final documents, but it sounds to me like the integrity of what we have done is going to be maintained, and you are just choosing to ignore some of it, that is your prerogative, my kids ignore me all the time.

I agree with John, I think this has gone, I think the point has been made, and I would hope that we can move back to the very kind of positive working relationship that we have historically had between this Committee and the Board.

DR. FROINES: I think it is very important for us to have a positive working relationship with the Board.

I think it is crucial, otherwise we can't get anything done. We are on the record, and I think we should now move ahead, and I think we are probably ready.

DR. PITTS: Okay. Craig.

DR. BYUS: I agree. I really do think that this is the preface to risk management, but I think you have made a big mistake, I think preface is bad.

It not well written, and it does not reflect what the science says in the document, it is full of uncertainties, there are a large number of uncertainties,

which is not the case.

In fact there are less uncertainties with lead than there are with most of the other documents that we have prepared.

The uncertainty level is not very large, you are saying it is considerable, that is the crux, if you are going to use that preface as a bridge to your risk management then I think we do have a real problem.

We have a problem here, because you would not really be following what it we suggest scientifically.

You don't have to I suppose, you always have in the past it seems. There is where the real problem lies.

If you are going to use the preface to lead you on your risk management then I think that we have a great new problem and maybe we will never be able to work together again, I don't know.

DR. PITTS: Will the preface as it was written then be in this identification of the statement of rulemaking.

EXECUTIVE OFFICER KENNY: Yes, it would be in the initial statement of rulemaking.

DR. PITTS: The resolution was the same as the preface, will the resolution and the preface both be in the initial statement.

EXECUTIVE OFFICER KENNY: Yes, the initial statement of reasons is required by the Administrative

Procedures Act and the resolution is necessary for rulemaking also.

DR. PITTS: So they will both be in there, would that at all confuse anybody who might pick that up and say we have a preface that says this, and now we have a resolution that says this.

I'm a little bit dense on this, but it strikes me that there might be some confusion.

EXECUTIVE OFFICER KENNY: Well, I hope there is no confusion I mean essentially what we are trying to do.

DR. PITTS: To the reader. They will pick it up and say here is a preface, will that be the preface then to the executive summary?

EXECUTIVE OFFICER KENNY: Yes.

DR. PITTS: The Panel is aware that the executive summary will also appear in this initial statement.

EXECUTIVE OFFICER KENNY: That is the same document.

DR. PITTS: So it will be there.

EXECUTIVE OFFICER KENNY: The other thing too, in terms of the resolution, the resolution is essentially is a series of findings that our Board makes at the time that they do the adoption and a large number of those findings are put in there for legal reasons in order to provide protection to the Board this particular one is not necessarily legally, but

was put there as a statement by the Board.

DR. BYUS: I believe that the Panel was very clear in the findings of Lead in the air not be allowed to go up above what it is now, we were all in total agreement on that.

EXECUTIVE OFFICER KENNY: I don't think.

DR. BYUS: There was no, or virtually no uncertainty in that statement.

EXECUTIVE OFFICER KENNY: That was what we thought. I don't think that the Board disagrees with that.

There was no uncertainty in that statement. It still bothers me.

I'm still not sure what we should do, I'm not sure whether we shouldn't amend our findings and keep the preface in there anywhere, to counter it, or say something about that, or make a stronger statement.

I don't know, I'm less, I'm sort of, don't know what to do here.

DR. SEIBER: I'm sorry, Stan was not at the last meeting when we spent quite a bit of time, I don't remember how much, but it is in the transcript, we discussed a lot of the things that he brought up, and I think we left that meeting with kind of a sense of where we were at as a Panel.

We all have our personal opinions about the substance of the paragraph, and I will be very candid about that.

I do not necessarily feel, and Dr. Wiche is not here, but if it came to a vote about the wording in the preface, that we would all be in consensus.

I don't think that we need to bring it up now, I think the important thing is that the Board recognizes our concern.

They have offered, what I consider to be, a situation that we ought to take a serious look at, and in the spirit of what Dr. Glantz made the comment of backing away from the precipice, this is a reasonable way to go.

Certainly our message got across and Mr. Kenny said that several times that it will not happen again, and the Board feels that they got the message.

In that regard we have succeeded in one of our principal objectives.

DR. GLANTZ: Well I think just to follow up to Craig's comment, I think that the preface, if it is a bridge to risk management, is going to confuse matters, and make it harder for you to do a good job on risk management.

That is not our problem, that is your problem. I also think that, we have this letter from Senator Sher, and they are going to be watching us, and that is not our problem either.

I think that this meeting, the views of the Panel, are being reiterated fairly clearly, and I hope this will be

carried back to the appropriate people at ARB, and that they will rethink how much they want to cling to the preface which is at issue here, given that we have now told them at the very least they got a little bit snookered.

At that point I think it is becomes other peoples problem. If you deal with it, if you take what we have said here, and the Board reconsiders what is written there, I think that would be the best possible outcome.

That will lead you to the best regulations based on the best science. If not, I think that you will have other people to battle with about it.

I think Jim, that if they are willing to separate the two documents, and make it clear that we did not approve of the preface, in terms of the integrity of this Panel, and in terms of our position of what we have said being clearly represented on the record, and in the document, I think that is reasonable.

I think at that point if they persist with it they are going to have other problems that are not caused directly by us.

That is a different fight for different people, that is politics, and we should get back to worrying about the science.

DR. PITTS: Okay.

DR. SEIBER: Well, are we headed, we do not have to

the take a vote on this or anything.

DR. PITTS: We have to take a vote. We have to take formal action.

DR. FRIEDMAN: I have nothing to add.

DR. PITTS: I was just asking if you had more to add.

DR. SEIBER: A motion is needed if we have to vote.

DR. PITTS: Yes, I will make just one administrative comment. Whether or not there is motion or a vote. That is fine.

I ask, would the sense then be, the fact that if they intended to keep the preface, this is my point, we made a resolution, so we have to at least address it, what we intend to do with the resolution, to be structurally sound.

The resolution if the ARB decides to keep the preface in the staff report executive summary in for the identification inorganic lead and the toxic air contaminant of March of 1997, the SRP finds this ARB modified document for lead to become seriously deficient.

I am not trying to put a spin on it, but I think that I heard that it is going to be kept in there; is that what I heard you say?

EXECUTIVE OFFICER KENNY: That is correct, we are going to keep it in the ARB document.

DR. PITTS: Fine, then my question is, I have five

people sitting here on the Panel, how do you then intend to handle the question; does that make it seriously deficient?

If it does not make it seriously deficient then do you want a statement in any sense or form, that is what I would like to discuss.

EXECUTIVE OFFICER KENNY: If I could make a comment. With regard to the resolution, it was my sense that the SRP primary concern was, at least in the resolution language, that there was a sense that the ARB had modified the SRP's findings, and so I took that resolution as really reflecting upon the SRP findings in the SRP documentation, what we were trying to do in terms of crafting this approach was really separated out and make it very clear that there is no preface on the SRP documentation or on the SRP summaries, the preface only exists with regard to the ARB document.

DR. FROINES: What I think the problem is and Craig said it best, and I think Stan said it, and we said it at the last meeting, the problem is that the preface does appear to be a contradiction of the findings of the Panel, because the Panel said this, and the industry said this, and the preface does not say what the industry says, but it says more like it than what we said.

So, how do you interpret that, you interpret it like somebody, that in fact there is a contradiction that we have. It is a problem.

I think it is problem that is personal at some level, but we feel that the Board rejected this Panels findings.

That is what is sticking in everybody's craw, I think. Everyone wants to move on.

The emotional part is that it still looks to me, I don't know if the word snookered is the right word, but I think that it is a decision that the Board made that contradict our findings.

Everyone is uncomfortable with that. It is not like, as though anyone wants to go to war, everyone wants it to go away if it can.

DR. GLANTZ: I don't see what formal action is necessary by the Panel at this point. The resolution, I was not here when it was passed, but the resolution, as Jim read it, says that it was prospective decision, if that stuff stays in there that it is the panel's view that the report is seriously deficient.

DR. PITTS: To clarify it, that in fact, that report is seriously deficient.

DR. GLANTZ: So I do not see that there is a need for any more voting on our part. I think what you need to be aware of is that you are moving forward with a document which this Panel, if it were brought to us for a vote, would say it is seriously deficient.

AB 1807 says you are supposed to make decisions based on the best available science as certified by this Panel.

That is what you are clinging to and I think that at that point Mr. Sher and his pals will read this transcript, look at the document and deal with it.

We have made our views as clear as we possibly can. Maybe I'm missing something.

I don't see the need for further action. We have made the Panels view very clear, as clear as it possibly can be.

If you move forward and use the document as you have currently constructed it for risk assessment purposes regardless of whether it is a Brown cover or a Red cover, there are statements in there that were dated by this Panel, presented vociferously by the Lead Industry and rejected by this Panel and the Panel has said that those statements are incorrect and not justified by good science, and if it was in the report with our name on it as opposed to your Red report, we would say that it was seriously deficient.

I don't understand why the Board would want us to move forward with that record, but I think that beyond that I do not know what else to do.

We have made our views clear. It unfortunate that this situation evolved the way it did.

It is there. We have done what we can do and let's move on now. Other people will continue this discussion in other venues though if it is not fixed.

DR. FROINES: Yes, that can happen.

DR. GLANTZ: And I rather it didn't, frankly.

DR. FROINES: I do think that we have made, we have now aired it. We have made our statement.

I think we have to move on. We can't, or we have to resign, or something like that.

I don't think we should do that, because then we have a good Panel that will not do their work anymore and I'll have appoint a whole bunch of new people and we will never get anything done.

DR. PITTS: Okay.

DR. FRIEDMAN: I'm confused about the document. When we talk about a report being seriously deficient or not, we are talking about the OEHHA ARB report; is that correct?

This Red document that they created, do we comment on what the ARB said about it being seriously deficient.

DR. GLANTZ: This is the first time that anyone can remember that where the ARB did something like this, and took and adopted statements and modified the scientific findings, even indirectly.

DR. FRIEDMAN: Is that put out to be OEHHA and ARB statement or is that their own separate.

DR. GLANTZ: Now it is reconstructed as their own separate document.

DR. FRIEDMAN: That is not something that we are is our purview to declare as seriously deficient.

DR. GLANTZ: It unclear I think the statement has been made.

DR. FROINES: We do not have any legal jurisdiction?

DR. GLANTZ: The intent is very clear and I think that is important.

DR. SEIBER: If I remember right, and it is hard to remember the exact wording, but I think the real concern was that a preface was being added to our document, words to that effect.

Now, Mr. Kenny is making it clear to us, or at least to me, that that preface is not being added to our document, our document, which I believe was Brown, remains.

I'm a little worried about us walking away and not saying anything and letting our previous resolution stand.

It appears that Mr. Kenny has made an important clarification that we need to take that into consideration, and I think that Dr. Friedman has probably expressed it better, we do not want to be in the position of saying that the, now the Red document is deficient because I don't know that that is what we intended by that resolution.

DR. BYUS: The point that I made last time is not that they put a preface on anybody's document, the point is what does it say, what does the preface say in whoever's document it is.

What does it say, what are the words, what does it mean, that's the important point, not what document it is on, or whether there is a preface or not, etcetera.

What does it mean, and what will happen in the future based on what you said in that preface. That is when we have some responsibility to deal with in whatever legalistic manner, or whatever, and maybe there is nothing we can do.

That is the point. The language of this preface is not good. It is not well done.

DR. FRIEDMAN: Haven't we made clear though at a previous meeting and at this meeting that we totally disagree with it.

DR. GLANTZ: Can I make a motion if you want the motion.

DR. PITTS: Yes.

DR. GLANTZ: I move that having expressed it's views that the preface is added is misleading scientifically and could lead to risk management which not based on the best available science, that we now close this discussion.

I think the message has been transmitted. I think

in terms of something being added to the document that represents this Panel, that problem has been solved.

I would like to move for closure. I think we have said what we have to say on this.

I urge the ARB to reconsider the preface.

DR. FRIEDMAN: That's a long motion.

DR. PITTS: Put that in a somewhat shorter frame work.

DR. GLANTZ: Okay, well, I will try again. Basically, I will say that the SRP reiterates its view that the preface added by the ARB does not represent new information or the best available science, and the SRP again urges the ARB to remove it, and that be the end of this issue before this Committee.

DR. FRIEDMAN: Second.

DR. PITTS: Any further discussion.

DR. SEIBER: Could you reread the words.

DR. PITTS: What he said. Could you do that.

DR. PITTS: I have that the SRP reiterates it's view that the preface added misleading, does not represent the best science.

DR. FROINES: He said it better the second time.

Can you read it?

DR. PITTS: Thank you.

(Thereupon the record was read.)

DR. PITTS: Is there a second to the motion?

DR. SEIBER: Can we discuss the wording.

DR. PITTS: We need the second.

DR. FROINES: I just wanted to raise one thing, I think Mr. Kenny has been very forthcoming today. I think we appreciate that.

I wanted to say that maybe he has an opportunity to say something further before we proceed.

EXECUTIVE OFFICER KENNY: I appreciate the spirit in which the debate is going on right now. I was looking at the potential resolution before you and that was the one with regard to the Red document and the Tan document.

Again, the clear design here was really to make it very clear that there was no intent on the part of the Air Resources Board when it adopted this preface to any way modify anything that the SRP had done.

The ARB did view what the SRP had done as a stand alone final document. Now at the same time, I am not in a position to tell that you that the ARB is going to remove that preface from it's own document.

The ARB did adopt that particular language. The ARB when it adopted it was comfortable with that language.

Your views have been and will continue to be conveyed to them. I believe that that preface will remain in the ARB document.

I did not want there to be any kind of misunderstanding here.

DR. GLANTZ: If I could just add one thing, you might want to suggest to the ARB, we go through this whole big long process to approve these documents.

We do have a procedure in place which is used from time to time to take into account new information and modify the documents accordingly.

You actually saw it happen here in the ETS document where one of the end points was removed in response to public comments.

You might want to go back to the ARB and point out that maybe they have some new information from this Panel that they might want to consider.

I think we have reached a status on this and we should just allow the ARB to move forward now however it chooses and let them continue to survey in other forums to the extent that that is appropriate or necessary.

DR. SEIBER: I would like to offer alternative wording to the resolution it is really a modification that ramps off of what you have already proposed.

DR. PITTS: Sure go ahead.

DR. SEIBER: The SRP reiterates it's view that the preface added by the Air Resources Board does not represent new information, and may be subject to misinterpretations,

and is separate and distinct from the scientific findings of the Scientific Review Panel.

DR. GLANTZ: I don't like it. Because I think it is misleading.

I realized poor you and Pete were sort of sandbagged a little bit at the meeting. I think that of all of the compounds that we have dealt with the only one with the level of certainly of harm is higher than lead is secondhand smoke.

To put forward a statement saying that there are substantial uncertainties or whatever, is not true.

DR. FROINES: Stan, you are the one who is arguing to put it aside. The problem that we have is going back forth between the principle and the process.

We need a way to.

DR. GLANTZ: I think we want to make it clear, -- I would be happy with your rewording if you added a phrase in there to say that we don't think that it represents the best available science.

I don't think that it does, it is contradictory to some of the findings of the Panel.

DR. SEIBER: I see your point Stan, but here is my problem with that. We debated a lot about what where this preface would go, we did not really sit here and debate the words in the preface itself.

I think that we had to have a whole separate discussion on the wording is it really a departure from the sciences available maybe it is, maybe it isn't.

That is not what we debated we debated where the preface was going to go way more than we did.

DR. BYUS: I was concerned whether the preface existed or not, or where it went. I said, it is what the preface says that is the key thing, not where it is.

DR. FROINES: The problem with the preface was not the preface per se, it was the preface in the context of the process, that is what happened.

It is appearance that we are concerned about, not the specific language. It was the appearance that the preface, --

EXECUTIVE OFFICER KENNY: To extent that the appearance was the issue and appears to continue to be the issue, what we have tried to do is craft a resolution that addresses that appearance, and we tried to do that really in two ways, one, with the specific documents that are in issue, and two, with the recognition that we do not want to see this happen again.

So for the future we have a process that goes forward so that we don't see it happen again.

DR. BYUS: Let me ask you this, does the Board intend to let lead air concentrations go up in the State of

California?

EXECUTIVE OFFICER KENNY: No.

DR. BYUS: Are you sure about this?

EXECUTIVE OFFICER KENNY: I am sure as I can be as staff member of the ARB, but I cannot speak for the Board, but that is my opinion.

DR. BYUS: My opinion, is the key point.

DR. FROINES: There is another point which is we currently have a national ambient lead air standard 1.5 micro gram per cubic meter, which should not continue, but that is a risk management issue and I don't think that we should necessarily get into that get into that.

I think that the 1.5 micro gram standard is terrible, but that is the next stage of the process. We should not be holding their feet to the fire.

DR. FRIEDMAN: I would like to call the question.

DR. PITTS: Is there further discussion?

DR. GLANTZ: He proposed an amendment essentially, I don't know why, so the thing is to vote.

DR. PITTS: Now, I think then, okay, perhaps I could make a quick comment as Chair while we are commenting.

It seems to me that the preface, or resolution, is in fact seriously flawed and has a major problem when the preface said low levels of lead.

The report clearly defines low, as I understand,

and maybe I am wrong, but my understanding was ARB actually scored a magnificent triumph going to catalyst cars, low leaded gasoline, in fact low, in the context, and I think maybe this is what the Board meant, that low in the context of use meant.01 to.06 current ambient levels, and it did not apply, this is my biggest concern, both in the resolution and the preface.

I think that the preface is one issue, but the resolution could come back to haunt you also, because low could be interpreted as, and I heard that it has been, and currently in your hot spots for example, it has happened.

Low is considered, does it meet the Federal Air Quality Standard of 1.5 micro gram, because that is a very important point, and that is the point, I think one of the key issues in this whole thing.

I will be a lot happier if it is possible for the Board to insert into that resolution, and if it is going to be a preface or whatever the Panel decides, insert after low, be interpreted as.06 micro grams per cubic meter which would clarify that issue which would indicate that again the point was made that we respectfully did not want the see the lead levels rise.

Would that be possible?

EXECUTIVE OFFICER KENNY: I think in direct response to that, the answer is generally yes, in terms of

the specific mechanisms by which they do that, we have to work on that a little longer.

DR. PITTS: Might that be something that you would be prepared to do?

EXECUTIVE OFFICER KENNY: Yes, because I think that is what the Board did. I think that when the Board is referring to low, they were referring to the low that you are talking about, they were not referring to the other types of higher levels.

What we have to do is figure out the mechanism.

DR. PITTS: If I hear, does that not make some of you happier about the action for the sake of the ARB resolution, that if that were in there I think that would make it clarifying.

DR. SEIBER: I don't have a problem, I still think we are hung up on some really fine things here.

DR. PITTS: You think that definition of low whether it is 1.5.

DR. SEIBER: No, that is the way we heard it when we were there, for me that is not a problem that is what we meant.

DR. PITTS: What about somebody reading that, these are sent all over the world.

DR. SEIBER: Nothing wrong if you want the exact number added, that is the fine, if you can figure out a way

to do that.

DR. PITTS: I'm not saying what I want, I am just suggesting that might be a good idea. I was curious if the Panel thought it was a good idea or not or whether the ARB, it might at least help clarify this issue because this will go outside of the State of California and other people weren't present at that ARB meeting.

EXECUTIVE OFFICER KENNY: Dr. Pitts, I do think that the Board really was referring to the low levels in the context basically of all of the information that the Board heard that day, and in the context of the discussions that occurred, the levels were basically in the.01 to.06 range, they were not at the higher levels.

DR. PITTS: Fine, if that is the case.

DR. FROINES: I don't know how.

DR. PITTS: I am just saying that when they have low, in the preface, you put in parentheses you put.01 to.06.

DR. FROINES: If I could say that the data is uncertain at low levels, it does not say what the low levels are.

DR. PITTS: In this case what was implied by low in the whole discussion with the document.

EXECUTIVE OFFICER KENNY: The Board has basically met, and adopted the resolution, and adopted the specific language in that resolution, so it is very difficult to

change that resolution.

In terms of the preface itself, there is not a reason why we cannot in the context of the language that is in the preface, provide some context for that that particular word means.

DR. PITTS: Thank you.

EXECUTIVE OFFICER KENNY: We will look to doing that.

DR. GLANTZ: The other part that I object to is the statement about uncertainty because I think there is relatively little uncertainty. But any way, that is why I don't like it.

Where do we go with this thing? Do we need to have a formal motion, can we communicate without it, what do you want Mr. Chairman?

My personal preference is rather than having Jim and I get into an argument about a formal motion, I think that we have transmitted the message, and I personally would just assume to see both motions withdrawn.

The transcript is there, and people who are interested in this will read it, and move on, unless the Chair thinks we need formal action.

DR. FROINES: I want to make a technical point. Which is at.06 micro grams per cubic meter of air, you take 20 cubic meters of air per day for a person that breathes.

That gives you a daily lead value of 1.2 micro grams. The current proposition 65 standard is .5 micro grams per day.

In other words at .06 you could be exposed to more than double the current proposition 65 level. I don't want us to be in the position where the Board is saying there are scientific uncertainty in the health effects information at levels that are more than twice the existing proposition 65 standards.

Where is consistency within this state when we start to do that. That is crazy.

This is why I am going crazy, you are saying the current proposition standard is .5 micro grams per day and what you are saying is that 1.2 micro grams per day has associated scientific uncertainties.

That is why I am concerned about putting this low lead level in because if you put in .01 you have to go do the numbers on this, you can not do it as a policy issue. This is a scientific matter.

DR. SEIBER: John, is that .5 micro grams per kilogram, what is the basis.

DR. FROINES: Per person.

DR. SEIBER: Doesn't matter how big they are.

DR. FROINES: It is not a good standard.

DR. GLANTZ: That is.

DR. SEIBER: That is strange. I don't like that standard.

DR. FROINES: That's not the points.

DR. GLANTZ: I want to come back to the question. By separating the documents, the objection that the Panel had that the ARB was messing with our document, that has been fixed.

That issue has been clarified, and we are told that that will not be a future problem. I think we made it very clear again that we don't think that the preface was good science.

It is on the record, it is in the transcript. I think that is adequate.

If need be, we can pass a resolution, and Jim and I can argue and find the proper wording. I don't think any resolution is necessary, I think that the record is there.

I think if the ARB chooses to ignore what this panel said, other people will deal with the problem.

I think we have discharged our responsibility in terms of putting forward the science and defending the science.

DR. FROINES: I think the only issue with the resolution, and I agree with you on that, is because we have some other resolutions that we didn't last time.

The intent is for clarification purposes and I can

live with either one of those two statements.

I think that we need some clarification from the Panel, otherwise we are left kind of hanging.

DR. GLANTZ: Since I don't like this change, should we just vote on whether to amend it.

DR. SEIBER: How about if we caucus over the language and bring a resolution back, just the two of us.

DR. GLANTZ: Okay. Before that, I think there was there was a caucus during the break about the last sentence in 18.

DR. FRIEDMAN: We could deal with that quickly now.

DR. BYUS: Before you do that, some people in the audience don't know what 18 is.

DR. FRIEDMAN: There are requests to, we were talking about number 18, and people did not have it in front of them I'll just read that to them, it says that ETS should be added to the list of a substances for which cancer and non cancer guidance values have been reviewed and approved by the Scientific Review Panel, plus ETS should be included as indicated in Tables 1 and 2 in the attached, as can be seen from the Tables the public health impacts of ETS exceed those of all other prior compounds identified as toxic air contaminants to date by this Panel, and in parentheses it may it exceed that combined, question mark.

So that was 18 and what I am proposing and the three of us, Craig and Stan were supposed to talk about it over lunch, but we quickly talked about it at the break, is that we completely drop 18 and at the end of 17 which goes into all the deaths that could be caused, we just say, thus ETS has a major public health impact, period, and leave it at that.

We propose that.

DR. PITTS: How did the Panel feel about this, other members, Jim, are you in agreement with that?

DR. SEIBER: I'm sorry.

DR. GLANTZ: Just say yes.

DR. SEIBER: I think I do.

DR. FRIEDMAN: We drop 18 and add to 17, thus has a major public health impact, period.

DR. GLANTZ: So moved.

DR. SEIBER: Seconds.

DR. PITTS: All in favor, okay. For the record. Dr. Froines left for a moment and did not vote.

Absent for the vote. Yes, it is quarter of two. How about reconvening at quarter to three.

Then we will go to item three of the agenda, I mean item two.

DR. PITTS: John, would you vote?

Put it unanimous.

(Thereupon the lunch recess was taken.)

A F T E R N O O N S E S S I O N

--o0o--

DR. PITTS: Shall we reconvene. Given the certain constraints on time that we have, I have talked to Peter Venturini with him about the possibility of perhaps deferring item 2, the presentation on air monitoring and analysis programs for toxic air contaminants perhaps about excluding that program.

I can assure you that there is great interest on our part. But my interest is personal, as a matter of fact, I had the opportunity to visit the laboratories there, and the upper division, and the technical support, and it was a very impressive set up, and people, and the facilities, and what you are doing is first class.

I had hoped that, we would like to have enough time to really open this up. It is essential if you are talking about exposure, part A, and 18, it is exposure it is critical to the risk assessments and validity of these programs and the actual risk management programs depend on this.

What is your feeling?

MR. VENTURINI: For the record my name is Peter Venturini I am Chief of Stationary Source Division at the Air Resources Board.

From our perspective we would concur and be more than happy to come back to the next meeting with the

presentation rather than going through it quickly.

We really have a really good story to tell you and we would like to be able to tell you the whole story, not an abstract of the story.

We would be more than happy to come back to the next meeting and present it to you.

DR. PITTS: I appreciate that very much, I apologize for having this take place, but it happens fairly frequently, and still your team had an interesting chance to see what goes on in one of these meetings, so it is somewhat educational, amusing, and so in that respect it may not have been a total loss.

Also I think you can see the critical role played by monitoring analysis programs, reliability and relevance.

Collecting the data, that is just absolutely critical, programs across the spectrum of Cal EPA, the pesticides, the ARB, and we would appreciate that.

Jim, you had your had up.

DR. SEIBER: Just a quick comment. I am looking forward to the presentation.

I just wanted to put in my druthers that it include, and I think that it probably will, and you have got it, how do you monitor for toxic air contaminants, the criteria, and all of the other is interesting too, but we are particularly interested in the toxic air contaminant aspect.

MR. VENTURINI: The focus is toxic air contaminants.

DR. PITTS: All right. We will move on to the next item on the agenda which would be risk assessment by the division of pesticide research.

DR. PITTS: Oh, before we do. Sit down gentlemen. Let's decide what happened at lunch time on the item that you were debating.

DR. GLANTZ: Well, he had a BLT and I had a chicken sandwich, and we both had French fries, but I don't think that there is an agreement on the motion.

So what I would suggest is that we vote on Jim's motion as an amendment to my motion and I personally will vote against it and then vote on my motion.

DR. PITTS: Well then, is there, we are going to vote on your motion?

DR. SEIBER: My suggested language is as follows. The SRP reiterates it's view that the preface added by Air Resources Board to the document, and then we will name the document and get the exact title of it so we will call it ABC for now, does not represent new information and is separate and distinct from the scientific findings of the SRP, and the document, X Y Z and we will get the title of that document, I am referring to the Red and Tan documents, but I do not have their exact titles.

DR. GLANTZ: I think that we want to say that we don't, I think that the preface as it is worded does not represent good science. It suggests that there is a lot more uncertainty than there really is.

The low is undefined. I could go with that, but I want to say that we don't think that the preface they wrote is good science.

DR. PITTS: Do you have a problem with that Jim?

DR. SEIBER: I guess I do because I am not sure that the Panel really has adequately discussed, or debated, the science and the words in the preface.

We all kind of have our feelings, but we have to look at the exact words and see what is wrong with them and we have to quantify them.

Stan may be right. I just don't think we have had that discussion on the words in the preface itself.

DR. PITTS: What is your pleasure gentlemen?

DR. FRIEDMAN: I was very satisfied today that we expressed our views, they are in the record, and I don't feel we need a motion.

We don't need to pass a resolution.

DR. PITTS: Okay. That is a third alternative. How do you feel about that Stan?

DR. GLANTZ: I could live with that too. I thought you wanted a motion. I go with whatever the sense of the

Panel is.

DR. PITTS: John, how about you?

DR. FROINES: Earlier I thought we needed a motion because we needed to clarify our original motion from last meeting.

If nobody feels that is an issue, I certainly don't feel that we necessarily need to.

DR. BYUS: Well, I think that it is an issue, I really do. The least that we should do is Stan's motion saying that the science included in the preface is not correct.

I believe that. I don't think there is too much doubt about that in my mind, the way that it is written.

The least I would do is Stan's motion.

DR. GLANTZ: I'm happy with that. What do you think Jim?

DR. PITTS: I agree with Craig.

DR. GLANTZ: Then we need a motion.

DR. PITTS: Well, I will not vote. You are the Panel.

DR. FRIEDMAN: Are we coat voting on the two?

DR. GLANTZ: The procedure would be parliamentary procedure, he has offered an amendment to my motion, which I do not like.

So you can either vote his amendment up or down,

and then we vote on my motion.

DR. PITTS: All right. How about a vote on the amendment, all of those in favor, raise your hands. Those opposed. Okay.

Now, we are now back to your statement. So will you read it for the Court Reporter so that we have it very clearly.

Read it out your head into her. It is in a heap of paper, basically the motion is as it was made back in the transcript.

Basically what it says, is that we appreciate the documents that are now separated, but think that the preface that the ARB has adopted, does not represent good science, basically, it was worded more artfully and we should use the previous.

DR. PITTS: We agreed that we can go back and we can retract that motion, all those in favor say aye, opposed. Okay.

The vote is one, two, three, four five ayes.

DR. PITTS: Okay, it is passed.

DR. GLANTZ: I hope not to discuss it until next meeting.

DR. PITTS: That was part of this motion that we put an end to this discussion.

DR. PITTS: We just put an end to the discussion.

DR. FROINES: Next time you guys go out and have something worked out at lunch time and we will send a mediator, or an arbitrator.

DR. GLANTZ: Well actually we didn't discuss it, we agreed that we both wanted French fries. After dealing with heart disease this morning.

We had a very friendly lunch.

DR. PITTS: The next item is update on the Pesticide Risk Assessments Program, criteria for examples of pesticide monitoring in outdoor and indoor air relevant to AB 1807 and other Department of Pesticides Regulation Programs, DPR staff.

Let me just give a little background for the Panel, they were not at that meeting Monday there were just the two of us.

Why don't you, Jim, give a quick rundown on the meeting with the DPR on Monday. We are raising an issue, I think the key to what we were discussing earlier, the Panel, I think that the key here revolves around the letter and who has applied or not applied by a different process in the generation of risk assessments for pesticides.

We run across very diametrically different approaches in this letter to me as Chair, which was May 20, addressed to, forwarded to all Panel Members, this points out that basically that, the bottom line basically says that the

law refers to toxicity and only in conjunction with exposure.

Two major tenets of the field of toxicology are that the dose makes the poison and that toxicity is not an intrinsic property of a chemical, both of these facts require that an organism be exposed to a chemical before toxicity can be expressed, therefore without exposure there is no toxicity. DPR will continue to take this approach with respect to evaluation of pesticides as toxic air contaminants.

We hope that SRP will work with DPR through the toxic air contaminant process consistent with the existing laws and regulations.

The letter starts out actually by saying, I hope to resolve an apparent misconception held by some members of the SRP panel, at the March 19 1997 meeting of the SRP.

There is a very important issue here and I have talked to the Panel Members, and they feel that it is important too that we get clear where we are coming from relative to the infamous input from this, from this action signed by Jean-Mari Peltier, this was the letter that we got, I don't know if all of you can read that, and you have, there is another page.

You can all read that, and you might want to push that up a bit, too. Their position is that they advocate

solely on the basis of toxicity.

I think actually that we come more from a perspective of an 1807 process. Here is the section of the code, and the director responsibility, and then the next over head and read this.

This is the section that relates to risk or harm, amount of emission, manner of usage, persistence in the atmosphere it sounds very much like part A of 1807, very much like that.

Although the law does not specifically mention toxicity, oncogenicity, carcinogenicity, these are all provided for, shall evaluate the health effects which poses a present hazard, and then the bottom paragraph and this is the bottom line here, this is the approach that is taken.

I would like to see, as we ask on Monday, perhaps we could discuss this approach. Any comments on the part of the Panel as to this approach.

How you feel about this approach that is clearly specified by DPR, who are in charge of risk assessments under 1807, but it is a different approach than 1807 has been using for ten years.

Comments?

DR. FROINES: I have a couple of comments. The law does say, as I read it, amount, or potential amount of emissions, so, the potential amount of emissions is left out

of that, but that is okay because it seems to me that in the part A process of AB 1807 process that ARB goes through and makes an estimate of what air born concentrations actually exist.

Presumably those are not that list of five bullets is not inconsistent with that, with what happens in part A.

This is sort of a question, the part of the, there is a science issue and a policy issue it seems to me.

The policy issue is that DPR, I think, has made a decision to approach this issue on a quantitative basis as a policy decision.

DR. SANDERS: So that is true.

DR. FROINES: Then there is the second issue, which I take as a scientific issue, which is that when we are measuring the amount of benzine in the ambient air, or as a result of hot spots, those are two kinds of determination which people make.

Where as at another level there are differences when pesticides are applied, but they are applied on a certain time period, and it may not be applied for a period time after that.

So there is a scientific issue about the differences between ambient concentrations, and pesticide concentrations.

Those raise scientific questions, where it is a

little harder for DPR to approach it in the traditional 1807 process, if I make myself clear.

Where the 1807 and the DPR determination are most similar is around the 25 88 process and pesticide applications, because at some level, 25 88 is hot spots, but it is possible pesticides are even more intermittent in some ways.

There are two questions for us, one is to discuss the policy considerations that DPR has made, and the second is what are the scientific differences that make assessments of air born pesticide concentrations more complicated than the traditional 1807 ambient concentration, that is my sense of the issue.

DR. SANDERS: I am John Sanders, Chief of The Environmental Monitoring and Pest Management and this is Kevin Kelly who is one of our staff scientist and assists me.

I think that you have listed out the issues as you see them. I am a little bit at a handicap because I am not familiar with how ARB is doing the part A or the hot spot program, but I think there is a policy issue as well as a scientific issue, and we welcome that discussion, especially the scientific issues.

DR. FROINES: Do you think what I said was okay, Jim, in terms of the facts that they are complicated issues

about pesticides.

DR. SEIBER: Yes. I agree that it is a special case for two reasons, one of which is that what you mentioned about the intermittent use and the intermittent exposure, but secondly, pesticides are toxic inherently, I think that we can all buy that immediately, that they would not be good if they weren't bad.

You know they are toxic to begin with, the question is whether there is risk for people that live nearby, or furtherer away from where they are used.

You need to combine that to make that judgment, you need both the toxicity information as well as the exposure.

That is not that different from what we have always done, it is more a question of approach, how do you approach it.

We all know that need both of them for risk to occur. I guess that I would take exception to that one statement that toxicity is not an intrinsic property of a chemical.

I think they probably meant the risk is not an intrinsic property of a chemical. I believe that toxicity, if you measure the L D 50 of benzine in Russia five years ago, it ought to be the same as what you get tomorrow in the United States, as long as you use the same species of animals and the same administration, etcetera, and so in a way it is

an intrinsic, it is locked up in the molecular structure, the compounds, the toxicity, it flows from the structure, it is an intrinsic factor, the properties, so that is a misstatement.

You need them both. We are going to have a problem with pesticides, as John has already referred to it.

We don't have an ongoing monitoring data. We don't have a bunch of stations out there collecting pesticide exposure information, we have to go out and measure it every time we want to consider a given pesticide, and that ain't so easy.

I had a few others things to say, I don't know, are you going to make a presentation John?

DR. SANDERS: Fine.

DR. PITTS: Let's kick this around a bit more.

DR. SANDERS: This is what the Panel wants to talk about, and this is fair game, I mean, it is time to talk about it.

DR. SEIBER: Let me make a few other comments about pesticides, first of all I think that we got a sense on Monday, and at some of our other meetings, that even though only one chemical has made it through this Panel for consideration that was ethyl perithesis that in fact the spirit of AB 1807 is in fact being played out by DPR and ARB, and they have to collaborate on this.

ARB does part of it an DPR does part of it. We all understand that.

For example, Typtelon was suspended which was one of the most extreme actions you could take for pesticides for a couple years until they figured out how to lower the exposures.

When we read the reports we find that they changed the formulation, they did a whole bunch of things to reduce emissions, to reduce exposure.

I don't think the Panel should feel that since only one chemical has come here that there hasn't been some playing out of the 1807 process.

I don't think that the story has been told and maybe we can fault DPR for not putting it all into one story.

Here is what we have done because 1807 exists and because it is part of the process. I would like to see that story told better.

Having said that, I think we are having a hard time between the Panel and the DPR figuring out where are the real problems. I think that we all agree, we want to focus on the real problems.

Ethyl bromide has surfaced, is one that seems to be a problem, it is very volatile, it gets in the air, there is no question about it, it's vapor pressure is high, and it is

toxic, and it is used around where people live.

We need to make a real effort to pick out the potentially bad actors, and there are 400 and some pesticides registered in the State of California, and most of them are not a problem with respect to toxic air contaminants.

So, those are just two rambling comments about pesticides as toxic air contaminants.

DR. PITTS: Any comments?

DR. GLANTZ: Well, I continue to be extremely frustrated with the whole pesticides thing. I, some years ago, longer ago than I care to remember, I was sort of the liaison person with Food and Ag, as it was at that time, trying to move this.

I think we got no where. I really think it just isn't working.

They may have done some things independently, that were good things, but I think 1807 process has as outlined, as I understand, the law, and we have implemented it working with ARB, despite the bump in the road that we hit with lead, which hopefully is behind us now, has gone pretty well, with pesticides, basically again, except for ethyl perithium, they will nothing has happened.

I was under the impression that when Chief Peltier was here a couple of meetings ago that we were beginning to move towards some sort of commonality of view, but when I got

this letter I thought that we are just back to the bad old days.

I'm very pessimistic about this. What my feeling, and I sent Jim a letter about this, but I thought it was sent to the committee.

DR. PITTS: They did not send it out.

DR. GLANTZ: I know, it turns out that it was faxed to the wrong place and it ultimately got there by snail mail.

We should just admit that it is not working and send a letter to the Governor and the Legislator and say that the pesticides provisions of AB 1807 have basically had no effect over the life of the Bill, and that people should know that, and either repeal them, or change the way that it works.

What I think should be happening, and Jim and I are working on this prioritization scheme that we may or may not get to talk about today, but I would like to see pesticides thrown in the same bin with everything else and have the hazard identification phase done by OEHHA and ARB, exactly the same procedures as everything else, because I don't think it is working with DPR, just like it didn't work with Food and Agriculture.

I'm very discouraged by this letter, and to me it is just something that isn't working. To have ten or eight

years ago, we got one thing through. That is my view.

DR. BYUS: I'm puzzled. I was kind of optimistic in the recent meetings with DPR because I thought things were moving forward, but I am a little discouraged by the letter as well.

Toxicity is an intrinsic property of a chemical especially when exposure assessments is so difficult for the pesticides, it makes it more important that you consider the chemical toxicity, inherent toxicity, separate from it's exposure characteristics.

If the exposure characteristics were very well defined, and we had a lot of data on it, and a lot of good information, you might be able to do risk assessments this way.

Without that really good exposure information, and a lot of it, it makes it very difficult to do. Am I wrong here.

It will make it very hard to do, how are you going to know exactly without the base of knowledge about the chemical, and of the pesticides, to start with?

DR. SANDERS: Well, we take the exposure information that we have and we put that together with the toxicity and then come up with risk.

I'm curious about your interpretation of the letter. If we don't have exposure, then how do you see it

working?

DR. SEIBER: You have got to have exposure.

DR. BYUS: More exposure, better data.

DR. SANDERS: Okay, so you are saying that we do not have enough exposure data to satisfy you, is that what you are saying.

DR. SEIBER: Let me interject. They have collected exposure data for I think 20, I don't know how many pesticides now.

DR. SANDERS: I have it as part of my presentation proceedings, about that number.

DR. SEIBER: Lynn Baker is in the back, you wrote an article that details all of the exposure information.

For the one's that were on the list for potential TAC consideration, they went out, and at great expense, developed the information.

It may be not as complete, or geographically spread out, or whatever as we might like, but at least it is data.

DR. SANDERS: I guess, part of the problem here is, let me do a little historical, I see where you are coming from, is that for the first eight years or so, we felt that we would have two separate programs.

Right now we have risk assessments that come out due to the SB 950, which is the Birth Defects Act, where pesticide manufacturers are required to submit data on 200

active ingredients that are considered the most concern, and since then that has been amended to include health studies on all of them.

So we have that coming along, and the risk assessments are starting to come out of that now, the data submitted from most of them is coming out.

That is a separate process, we thought 1807 was going to be a somewhat similar, and we have a different process for that.

So, basically although we had candidates, and we had ARB go out and collect the monitoring data, we didn't have risk assessments for those same compounds.

As part of my presentation, I will show you the number of compounds that we do have monitoring data for, and we do have risk assessments completed for, and close to completion, and therefor we believe that we are going to start presenting more reports to you, hopefully three this year, and three next year.

DR. SEIBER: I would hate to see us get caught up on this letter, I would like to hear John's presentation, see where they are at, and what they have got, and what they are planning to do in the next six months, or twelve months, or whatever time period.

I'm not ready to give up.

DR. PITTS: Who said.

DR. SEIBER: On using the 1807 process, which I think is what Stan said, that it just ain't working, I'm not convinced it's not working and that it won't work.

DR. PITTS: I guess, any other comments on that?

DR. FROINES: I think, just one comment, I think Jim, by the way is very correct, that number two is not correct, that really it should say that risk is not an intrinsic property of the chemical and that raises a serious question.

One of the fundamental questions is that we know that the Clean Air Acts Amendments of 1990, Congress established 189 hazardous air pollutants.

There are problems with that as we all know and we do not need to necessarily review that, but they did, and lo and behold the world did not come to an end.

Dow and DuPont did not start to lose money. There wasn't a significant economic impact, or social impact, or scientific impact whatsoever.

Then, what is happening is ARB is going to collect exposure data on those 189 hazards and collect information on toxicity to develop the models for risk assessments.

It seems that one could take a series of 20 pesticides and then go collect exposure data and collect toxicity data and it would not have any more negative impact than 189 TACs.

DR. SEIBER: Some of them are in the list, there are some pesticides in there.

DR. FROINES: I am addressing the policy issue, it seems that there is no particular downside of taking 20 of the most important pesticides and saying these are toxic air contaminants, now we will do an exposure, toxicity, and risk evaluation.

It seems to me that it there doesn't need, I do not know what the intrinsic reason is for a difference in policy between ARB and DPR.

DR. PITTS: That raises an interesting question. 189 TAC's. Doesn't the 1983 ARB Board itself declare these 189 TAC's were in fact TAC's and was that not.

DR. SEIBER: You mean 1993.

DR. PITTS: Well it seems like 1983 today. If that is the case then if methyl bromide is in fact on that list, they are TAC's.

DR. SANDERS: That one has already been adopted by us also. 35 pesticides are TAC's.

DR. PITTS: Now the question is, how do we handled TAC's, how do we handle the 35, that is the question, the similar question arises for the other compounds that now have become TAC's.

DR. FROINES: We have a strange contradiction don't we, and we have 34 TAcs.

DR. PITTS: And this says it is not.

DR. FROINES: Do we need this as a policy formulation?

DR. PITTS: That is why I brought it up, is it a logical formulation of policy when they are already declared toxic air contaminants? How do you reconcile that?

DR. SANDERS: We have taken a certain approach because of the resources that we have, and the concerns that we already have about tea loan and methyl bromide we have already taken extensive action on reducing exposures to those already, just not through the 1807 process.

DR. PITTS: In the case of Delta, we have a risk assessment that came out January 10 this year, and when you look at the risk assessments and Panel Members examined this and this is the difference between 1807 and your processing.

This is basically, the specific for this applies only to this specific situation. It was a situation in certain fields, risk assessments, but that risk assessment applied only for those conditions.

DR. SANDERS: I'm not familiar with that risk assessment.

DR. FROINES: Tea loan when it came back on.

DR. FROINES: But you have now anther specificity, was part of the agreement that DPR made with Delta.

DR. FROINES: That criteria was based on the

decision to reduce exposure and in agreement with the farmers.

DR. SANDERS: Their restrictions on it's use, the caps on the actual use of it, as part of the conditions.

I guess we have taken a different perspective in the sense that we do not feel that we can take action on a compound that we are concerned about so that we do not wait for the 1807 process.

That does not mean in some sense that we couldn't already bring it forward to the Panel, we can do that.

We have already taken action on some of these that we do have concerns on. We are not taking action on all the 34 compounds at one time, but we do have some compounds, like tea loan, methyl bromide, that we are going forward with and controlling.

DR. PITTS: Okay.

DR. SEIBER: I was hoping to see part of the presentation.

DR. SANDERS: Okay we just have a very brief overhead but it touches on a little bit of this in the sense that it shows the compounds that we monitored for whether we had a risk assessment.

Go to the next one. These are some compounds in various states of the process. An RCD is a risk characterization document contains the exposure assessment as

well as the risk assessment.

Those that we have RCD's completed. You can see a list, we have monitoring data, available monitoring data requested from the Air Resources Board, and we have some that we have not requested the data yet.

Those in the green have TACs, and they have been adopted as TACs by the Department of Regulation.

This is the list of compounds that we do not have the CD completed yet, we have monitoring data available from the Air Resources Board, and the main reason that we have such a long list of compounds is because we didn't merge the two process, one being the risk assessment process with the monitoring request and that is what we are doing now, and leads us to believe that we can bring more pesticides before you.

The green have TACs.

DR. PITTS: Didn't methanol perathion come before the Panel five years ago.

DR. SANDERS: Yes, I think two or three years ago.

DR. PITTS: Did anything happen?

DR. SANDERS: We were planning to bring it to you at the end of the year. The risk characterization document contains both the exposure assessment as well as the risk assessment, these are compounds that we requested from ARB monitoring data.

Next. Here we are looking at the summary of the data that the Air Resources Board has collected for us, we have two types of concentration data, what we derive exposure from.

There is ambient, or community air, where they take the samples. We give them a recommendation, I have an example, we tell them which counties has the high use season, pesticide use for a particular pesticide is intermittent, generally speaking.

Again we have data and TACs, cap tan, tea loan.

DR. SEIBER: John, I hope that is a mistake .016 on your second highest positive for chemo.

DR. SANDERS: That is.

DR. SEIBER: That is below the MDL.

DR. SANDERS: John, I'm sure that is an error. It is per parts per trillion.

For example T loan, that would be three.5 parts per billion. Next.

DR. FROINES: One question. Who does this, this is ARB?

DR. SANDERS: Air Resources Board is mandated by law to collect the data for us.

DR. PITTS: Did the ARB report these in that form to you?

DR. SANDERS: Lynn Baker is here from the Board.

MR. BAKER: We submit reports to DPR on each pesticide in a summary form with a table such as this one with a maximum value, the number of samples, at each of the ambient monitoring sites, as well as the actual raw data.

A table like this could be extracted from the summary tables from our reports.

DR. SANDERS: What was your question Dr. Pitts.

DR. PITTS: I bring this up so periodically, do you mean it was 3.5, basically four eighths parts per billion.

MR. BAKER: We usually report the data in micrograms per cubic meter.

DR. PITTS: I like that. This way you have four significant figures, you would be lucky to measure that as three, or four, or two.

MR. BAKER: We report to the number significantly bigger so we have the least significant figure.

DR. PITTS: You don't mean that these are significant figures significant figures. Measure back in the parts per quadrillion range is pretty impressive.

MR. BAKER: We usually only have two significant figures.

DR. PITTS: Good that is why I asked the question. I think that it is really important if you wanted to, and I should point this out again, you really ought to sit down and decide what your accuracy is and what your proceedings are.

They are very different and really the numbers that you put on there are very important to convey important information as to what you think the reliability of the data is.

In some cases nitric acid one PPB or two PPB, either one, they both give you numbers, it is somewhere around there, if you are within a half of a PPB by conventional methods, you are not in bad shape.

Your precision will be a lot better. You make a point of going back through these and decide how the methods actually work.

DR. SANDERS: Again this is the ambient monitoring that the ARB has done. This is where they take samples like at schools, or fire stations, and they are not necessarily related to any application, but they are in an area where there is high use.

DR. PITTS: MITC is that methyl isocyanate that damn soda, that was the damn sodium spill in Sacramento.

DR. SANDERS: Dunsmir.

DR. PITTS: Is that the fields data.

MR. BAKER: The maximum was Kern County around the soil fumigation.

DR. PITTS: After the spill, in Dunsmir after the spill down wind. You have a report.

MR. BAKER: I don't remember the numbers.

DR. PITTS: That is the fumigation fields.

MR. KELLY: The monitors are set up in an area where the application is being made but no applications being made for at least half a mile.

DR. PITTS: Half a mile away. That is good information.

DR. PITTS: So you are getting 6DDB, 7DDB of methyl isocyanate half a mile away. Or whatever.

Okay, just so we get it clear, all right.

DR. PITTS: It does goes to exposure which is the heart of what we were talking about even in the letter.

MR. KELLY: They were at least a mile away.

DR. SANDERS: The data is not put in full context because I'm just giving you the maximum positive that we got.

They had different averaging times, the samples were two, or four, or six hours, that is a lot of information and it is something that is pretty simplified just to give you a feel for things.

It is not in full context, remember that. Next. This is application site monitoring.

This is where they are at in the actual field application, so you would expect higher levels.

Offhand Lynn, what are the distances from where the monitors are in the field.

MR. BAKER: Where the ambient sites are a half mile to a mile, these are generally 10 to 20 meters from the edge of the fields, typically all four sides of a field.

DR. PITTS: That methyl bromide they pick, what is the methyl bromide.

MR. BAKER: The samples are collected to go.

DR. PITTS: What the methyl bromide, I want to see that. So, that is now, that is that looks like 9 tenth of the part per million as an ambient concentration.

MR. BAKER: Hot spot. These samples are four hours in duration versus the 20 hour samples.

DR. PITTS: So you do not know what the peak was?

MR. BAKER: That is correct, that is 900 thousand parts per trillion average over four hours.

DR. SANDERS: Our current target is the 24 hour weighted samples.

DR. FROINES: I want to comment here, there are so many important scientific issues that we need to talk about, and one of the process questions seems to me to be, what are we all about in here?

Because when we think about ARB, and we think about ambient monitoring, it is like pack years, you measure chronic cumulative exposure, so many pack years, you have been smoking for four years, you smoke so much a day, you get so many packages.

We think of say cancer as a phenomena which is based on cumulative exposure, but neurotoxicity, reproductive toxicity, and a whole host of other toxicities are not necessarily best characterized by cumulative dose models, that the time course of exposure becomes quite crucial, so, when we talk about what 1807 is all about, we have historically thought about it as this ambient issue, but that is a very narrow view of toxicity and exposure and pesticide becomes the particular case in point, I think, in that the distribution of exposures may be very important for methyl bromide because methyl bromide is a very powerful neurotoxin and the question is you may not have a significant ambient concentration but you may have some peak values that may be quite important in terms of toxicity to the public, not just to the workers.

That raises important questions about how are we going to really look at the issue of exposure and toxicity for these compounds as opposed to looking at it in the traditional monitoring sense because monitoring doesn't necessarily tell you everything that you need to know about toxicity and exposure, these are scientific questions, these are not in any way meant to be criticisms.

They are meant to be things that we have to consider, I think we still need to figure out what is 1807 of toxic air contaminants all about with respect to pesticides

as a matter of science.

DR. PITTS: To follow that up.

DR. FROINES: Non linear thinking.

DR. PITTS: I will follow that up, I have a couple of over heads. This is the study of what you are talking about, is time concentration profiles for toxins and this is actually done in the DPR study.

Time concentration profiles, I wanted you to notice the units on the study. Understand this is the time concentration for methyl bromide for a residential home following structural fumigation, it was started six hours after it was declared safe for reentry, using an a grater tube. These units are parts per million, not billion, and it has been declared safe so presumably one can go in there and you wind up with closing the windows and it builds up to 25 PPM and you open a garage door and you wind up with a rather interesting exposure scenario there, for with one to be involved.

I would call this acute and very different than what you are dealing with, with the typical air born half a mile away.

These are important because the problem here, and I have one more, there are very good conclusions from this to support the piece of work by DPR this is a very important paper.

You have changed the regulations based on these studies, we are not averaging the 24 or 48 and then this is certainly the bottom line you are now going to be involved there is going to be a comparative study of charcoal methyl bromide study.

DR. SANDERS: John I do not know if FDIR is going to be involved we are going to check out the charcoal.

DR. PITTS: Too bad you do not have the old reference.

DR. FROINES: The important thing is toxicity is also time dependent. We tend to look at 1807 too simply.

DR. SANDERS: We welcome a full discussion, there are a lot of issues to discuss.

DR. PITTS: Another issue that we have to discuss is when use the methyl bromide, did I mention this to you, but if you use methyl bromide which is widely used as a fumigator, one man takes it is safe alternative, and that has toxicity that is even more lethal that methyl bromide and hydrolyze and you get chloride. There is not in a drager tube but how the air leaves the home.

DR. SANDERS: I am not familiar with the aeration procedures.

DR. PITTS: You declare on which it is used in place of methyl bromide. How does one define safe.

We saw exposure being so important and if you do

not know how to measure it, do you define exposure in terms of how long you have windows open.

DR. SANDERS: I'm not familiar with the aeration procedures, I would have to find out. I know in methyl bromide they did use tracers.

DR. PITTS: That is sensitive to 5 PPM. Go ahead.

DR. SANDERS: That was our presentation.

DR. PITTS: Any questions by the Panel?

DR. FRIEDMAN: I may be confused, but the letter says without exposure, but you have shown there is a lot of exposure.

DR. SANDERS: There may be a miscommunication. I think we took your comments to mean that we did not need any exposure data to proceed with 1807, and our position is that we do need exposure, but what I am hearing today is that you want more exposure data to go with what we have.

DR. FRIEDMAN: It sounds like you already have some.

DR. SANDERS: We do. We do not have the risk characterization document to go with it and the ARB has parts A, B and C, and we have part A, and C, but not B the health part.

That is why we have not gone forward on those because we do not have the risk assessments part.

DR. FROINES: I think, unless I am mistaken, SRP

here has taken the position that we they will establish a quantitative exposure value which will be sufficient to define a compound as a toxic air contaminant and if they don't reach that threshold then it won't necessarily be defined as a toxic air contaminant.

That is not the 1807 process, the 1807 process does not establish a quantitative basis for the determination of substances of toxic air contaminant data based to exposure.

DR. SANDERS: We have a disagreement there.

DR. FROINES: That is the issue.

DR. BYUS: It is a crucial issue because of the exposure, the difficulties of getting the exposure, and time dependency, and where you get it, and the averaging that you go through, the modeling makes what you are trying to do even more difficult for us.

DR. SANDERS: I think there are all kinds of scientific issues that you can talk about that give you input that are valid things.

All the way from the monitoring data and there are a lot of issues around that, it could be improved, and of course depending on the resources that you have and how much data you collect.

DR. PITTS: Are there any other comments? If not. I thank you very much for showing up and we hope to continue this dialogue.

The Panel is certainly interested in and receiving your questions that you may have and then the dialogue if you would like to see us, what information we could provide you from A, from the process and B, our view of the science, which is much more fun.

One of the things that I am interested in and I'm not a toxicologist, but my understanding is that when in the methyl bromide case, when you take 200 MPPB per 24 hours and then we said that is for one hour, then you say concentration times time is a constant, and then you say for one hour 21 times 24, maybe 5 PPM and that is viewed.

Then if the concentration were not to the first power, say it were to the second or fourth power then you would have C to the fourth times time. This linear assumption is not correct.

As I understand there has been some work in the report that says that methyl bromide that is C to the fourth times time from their analysis and you have that data also and that is an interesting point and I would like to see work done with some characterization and you people to get agreement on whether it is C times T, or C times C squared, or C cubed.

Maybe is it C to the third. See the inaccuracies, if it is to a higher power we cannot go linearly to the C T function.

That is an important aspect. Okay.

DR. GLANTZ: I have one other thing now that Jim came back, Jim and I have been working with ARB on prioritizing scheme for the Haps, which we may or may not get to today, but I think that the overall approach that has been developed is pretty reasonable.

In the process of doing that several of the chemicals on the list that got skipped over were pesticides, and the reason that they were skipped over is that they were pesticides, and that is under DPR.

Now that Jim is back, I realize that you guys have not seen this prioritizing, but do you think it would make sense to try to integrate the pesticide compounds with the stuff that is going on in the other prioritization process to make sure they are focusing on the right things, or do you think that makes sense.

DR. SEIBER: Chemicals are chemicals. If we agree that these four criteria are important for all of the other TACs, they should be is same for pesticides.

In that regard I would be very tempted to see if it fits and merge the two maybe that way.

I think the problem, and John explained it to me once, they have gone through a number of what you might call back of the envelope assessments, and they are way off the chart, there is not enough exposure for most of the

pesticides, the vapor pressures are way too low.

You will not get in the traditional sense the kind of effects that you get with the Benzene because they do not fall in the category.

I know we are all kind of frustrated with the process, but we have to understand what we are dealing with.

DR. SANDERS: That is another issue we have to talk about. We have the regulation in place and very few of these pesticides today would have a chance of becoming a TAC based on the current regulations.

DR. FROINES: There is a process question on how to proceed to deal with some of the scientific issues and the process and I think Stan is right we need some way to move ahead.

I have to go.

DR. PITTS: Okay. Thank you very much. All right. The next item on the agenda is the prioritizations on the TAC identifications and the summaries, and that is ARB staff.

MS. SHIROMA: Good afternoon, we have two very short presentations for you, the first one is on our toxic air contaminant identification list summaries and we have Michelle Houghton here, she is an air pollution specialist who has been with the branch for a number of years.

We brought a document and you can see how thick it

is, we sent everyone a copy in April of the latest version and we getting ready to finalize the document.

Michelle has a very short presentation to give you today an overview, and then after that we will talk about this prioritization work that Dr. Glantz mentioned.

DR. GLANTZ: This gets the award of thickest document.

MS. HOUGHTON: Good afternoon. In the next few slides I will be providing you with a brief overview of the Toxic Air Contaminant Identification List Summaries Report.

This is designed to be California specific and a non regulatory informational document for the chemicals listed on the identification list.

As you will hear in the next item, the report is used as a primary source for prioritizing substances for entering into the toxic air contaminant identification program.

This slide summarizes the type of information included in the report for each substantial. As you can see physical properties, sources and emissions, ambient concentrations, indoor sources, atmospheric persistence, AB 25 88 or toxic hot spot risk assessment information, and health effects, are included in the report.

Information for several of these sections was provided by Department of Pesticide Regulations and the

Office of Environmental Health Hazard Assessments.

I would like to briefly summarize for you the changes we plan to make after today's meeting. In early May the proposition 65 list of chemicals known to the state to cause cancer, or reproductive toxicity, the new list will replace the list the September 1996 list in appendix F, and individual summaries will reflect the new listing.

The U.S. EPA Air Risk Information Support Center is working on a similar report to ours entitled Health Effects Notebook for Hazardous Air Pollutants, a public review draft of this document was published in December of 1994, and has been a valuable resource for our report.

We are in contact with you US EPA and will be adding any new information on hazardous toxicities to report to the final release of our report.

DR. PITTS: Let me ask, did you say that the basically 94 is, was the data in the report from 94 EPA, up to then it was the data, is 1994 data in the report.

MS. HOUGHTON: Now, yes.

DR. PITTS: Do they update that data regularly, is there an updating process for that data.

MS. HOUGHTON: They have not released us another draft yet.

DR. PITTS: Is there a draft in process.

MS. SHIROMA: Yes.

DR. PITTS: I presume when the draft comes in then your information will be updated.

MS. SHIROMA: That is next slide.

DR. PITTS: I set it up. That is question that would be asked.

MS. HOUGHTON: To make this document more user friendly, we have added some cross referencing tools.

We are planning to release the final report if September of this year, and we will have it available on CD ROM, the ARB Health Page, and in a hard copy format.

We are also planning to review an update for the report in approximately two years. Thank you for your interest and we will answer any questions that you have.

DR. PITTS: You did, you were brief. An on point. I want to congratulate you on that document. From what I have seen, it is impressive and again it is a landmark source of information.

It will be used widely, not only in regulatory agencies in California but widely on the world wide basis.

It is remarkable. Will EPA use it also as a reference source.

MS. SHIROMA: They have been asking for it regularly.

DR. PITTS: That is neat, they have it on the on the record, that is harmonization, right, Jim, let the record

know that Jim nodded his head, I used the word harmonization and he nodded yes.

DR. SEIBER: Yes.

DR. PITTS: These are not just California documents or highly restrict to locals, but a broad scale summary of how many compounds are there total.

MS. SHIROMA: 244, minus acetone, 243.

DR. PITTS: That is fine. Are there any questions or comments?

DR. SEIBER: I had a question, when I read over the summary presentation, you said that there would be some contact made with the local air districts as part of the prioritization scheme and I wondered how you were doing that and what kind of input that you were receiving and not about the specific chemicals and.

MS. SHIROMA: We cover that with in our next presentation Jackie Johnson.

DR. PITTS: I thought you were done, the lights were on.

MS. SHIROMA: Shall we go to the next presentation?

MS. SHIROMA: Our next presentation is by Jackie Johnson also with my branch, she will provide an update on the TCID list prioritization and the list update. Jackie has been an air pollution specialist with the Board since 1993,

and recently worked on lead, and now on the list of prioritization.

DR. GLANTZ: Are there like special service medals for working on lead?

MS. SHIROMA: There ought to be.

MS. JOHNSON: I am here today to present to you the results of our work to prioritize the substances on the AB 1807 Toxic Air Contaminant list or TAC identification list and our proposed update to the list.

We update the TAC identification list periodically, we believe it is appropriate to reorganize the list this year for the following three reasons.

First to better reflect what we know about the 189 federal hazardous air pollutants identified as TACs in 1993.

Second to note which TACs have health values under development as part of the SB 1731 risk assessments guidelines.

And lastly to reflect the substance nominated for review as a result of our prioritization work. We are proposing that the TAC identification list be reorganized into six categories. This overhead shows the first three categories. These three categories are basically addressing the TAC that have been identified through AB 1807 or by virtue of being listed as a federal hazardous air pollutant.

DR. PITTS: With this list now, cover methyl

bromide.

MS. JOHNSON: Yes.

DR. PITTS: That is important.

DR. PITTS: If methyl bromide is on that list, for example, who would do the evaluation of that, is that by you people, or DPR, or both of you in conjunction, or all three?

MS. SHIROMA: Generally it is a partnership the DPR is the lead, and you see the Roman numeral there methyl bromide is in two A.

It is a HAP, it has been identified as a TAC, and it is in the review process for health values, it is in the OEHHA 1731 Health Value Report.

There is an acute health value there that will come to the SRP. DPR is the lead in the risk assessments effort.

DR. PITTS: But the actual and critical point is the actual health value, whatever, that what would you call that.

MS. SHIROMA: In this case it is called REL.

DR. PITTS: You would develop the REL. I wonder what Stan was suggesting 40 minutes ago, are they involved with the pesticides at this stage?

MS. SHIROMA: DPR has the lead on pesticides. They have consulted with OEHHA. There is a health value for the acute one hour exposure, this is a reference exposure level for air exposure.

DR. PITTS: What is that referring to? I'm trying to get it clear in my mind, what numbers you are talking about REL for and where they came. And use methyl bromide as an example.

DR. VANCE: This particular chemical, there was a joint working group between OEHHA and DPR to develop an acute reference exposure level and we were looking at it for community exposures, it is not just an occupational exposure, in acute we usually look at one hour to one day.

DR. PITTS: Okay. How you are defining it is right, one hour to one day.

DR. VANCE: One hour to one day would constitute an acute reference exposure level.

DR. PITTS: Do you have a number for that methyl bromide?

DR. VANCE: We have a draft number, we are revisiting it because of the issue that you raised earlier, what was the exponent to C by T.

DR. PITTS: Let me know when I hear about the exponent.

DR. SEIBER: While you are there Bill, could you give us update on the chronic, is that undergoing the same process?

DR. VANCE: I'm not knowledgeable, I'm not positive about the chronic.

DR. SEIBER: Not the same work group, they were not addressing chronic and acute.

DR. VANCE: To best of my knowledge it was just the acute value.

MS. SHIROMA: Okay, go to the next slide.

MS. JOHNSON: This overhead shows the last three categories, category four and five contain substances that have not been identified as TACs in the AB 1807 process.

As a result of our evaluation, we proposed to nominate the substances shown on this overhead for an AB 1807 or SB 1731 review.

These substances are listed in category 2 B and 4 B of our update to the TAC identification list.

Substances that are federal hazardous air pollutants identified as TACs by the Board in 1993 are indicated by an asterick.

We plan to next hold a public comment period on the proposed changes to this Toxic Air Contaminant Identification List.

This will allow public comment on our revised list and on the substances nominated for review.

After the public comment we plan to return to the SRP this Fall with a draft TAC identification list and those substances selected for an AB 1807 or SB 1731 review.

We then will consider comments from the SRP and

take a revised list to the Board for their approval by the end of this year.

That concludes my presentation and if there are any questions, I will be glad to answer them.

DR. PITTS: That is very interesting work. This is a very important study that you are putting together and the formats are widely used.

I saw a hand over there.

DR. SEIBER: The 14, is that tentatively identified, or is that definitely identified on that last list.

MS. SHIROMA: Tentatively nominated.

DR. SEIBER: I want to use the right terminology. It may be of interest to the other Panel Members that was distilled out of a much longer list, and there was a lot of work.

You would not know that seeing that short list, but there was a tremendous amount of work, and effort, and thought, that went into distilling those out.

That is important to note. The question that I have is where will we get the exposure information or are you even worried about that at this point in time because I do not think any of those are being monitored or maybe I am mistaken.

MS. SHIROMA: One of the criteria is that we have

emissions information and/or monitoring information for those substances.

So, they have either, and in some cases we may need more information before we put them into the review process.

Right now they are in the nominated bend. You also asked about our discussion with the districts. We sent them a copy of the original list, and asked for their comments on this.

We received the feedback from them which helped us in fine tuning this proposal. The list that you see that, each of you should have a copy of this, this is our proposed update for this list and it will go out for public comment and as we have throughout the years we will take the list to the Board for approval.

DR. PITTS: Good. Good, it was probably passed out in the midst of all this stuff. Okay.

DR. SEIBER: I have a comment about where we are going, I am sorry we did not have time for Peters presentation, but in addition to needing more ambient information, what we really need is personnel.

What are people actually exposed to, and I know we have debated this before having people carry around little air samplers with them as they go through their normal activities.

Have you given any thought to that? Would this be

a good list to start thinking about getting more individuals specific exposure information on?

MR. VENTURINI: I think that the question is very important question. What was going through my mind is a recollection, for follow-up for you, because I think there is some work that has been done, or is ongoing to take a look at personal exposure, but the synapsis are not working.

We will get back to you on that. Just one other point, it is unfortunate that you did not hear the toxics monitoring presentation because part of our whole program is trying to anticipate as much as we can on the additional substances.

We need to start to collect the ambient data or more importantly develop analytical techniques to measure some of these.

That is part of our process to anticipate what we may need, but do not hold me to this but I think there is something like 60 substances that we are now monitoring, do not hold me to that, but there are a number, but part of this process is going to help us to decide where we need to focus down the road further and maybe develop analytical techniques and start looking look for some of these substances.

DR. PITTS: Don't you operate 700 monitoring stations?

MR. VENTURINI: Twenty some sites for toxics.

DR. PITTS: Overall like on the Mexican Boarder, it is a huge number of monitoring stations and they specialize and convention in the laboratory.

MR. VENTURINI: Yes.

DR. PITTS: That is something. I'm glad we did hold off on the presentation because I would like that full blown.

This is the foundation for our interest in ensuring that we have in fact come into the presentation prepared for what we are hearing as a background.

Is there some action that you would like the Panel take. We have a member that has to leave shortly.

Do you have any other more questions, tell me what the action is?

MR. VENTURINI: We would like at this point, if the Panel does not have any immediate comments we would like to put this out for public review and comment and we would also welcome comment from individual members of the Panel and we will bring this back to you in September outlying what the comments were, and any adjustments to this, and then we will kind of finalize it and take on it to our Board to let them know here is the latest update to the list of substances.

DR. PITTS: Panel Members how do you feel?

DR. BYUS: Fine.

DR. PITTS: I hear unanimous, the comments at the

moment is that this is first class and we appreciate all of the efforts, it is staggering, it sure looked staggering four years ago didn't it, in 1993 when you came in there to present your less than 100, infamous 189, and we all sort of oh, my gosh, and started talking priorities, but it is a real pleasure to see that between the three of you groups, and Cal EPA, and OEHHA, and ARB, and DPR, you came up with an impressive array.

MR. VENTURINI: I would like to express from our perspective the help and support and work with Dr. Glantz and Dr. Seiber in putting this together and the prioritization that went into developing this.

It was very helpful to us, and we appreciate that.

DR. PITTS: So does the rest of the Panel. We do appreciate that.

DR. SEIBER: Just as we talked about harmonization briefly a few minutes ago, the Federal EPA has the same list, and they have to decide which are important and which one's aren't. They have a prioritization scheme in mind.

So I don't know if you have done it already, but one thing I would like to hear at some future date is how the efforts in California compare with what is happening at the federal level and they do not have to be the same because some chemicals are more important in California than in Massachusetts.

Do you want to comment on that now.

MS. SHIROMA: Yes, we are aware of their effort and we are doing a comparison, and again as you say, in some cases some of these are not admitted in California, and some cases yes, they are, at this point we are pretty consistent, and when we come back, we will provide you with more information on that.

This is another case where we are working with the subcommittee and the SRP has really helped us out.

DR. PITTS: Thank you very much. Then I guess that brings us to the last item and that is the future meetings.

Bill Lockett, do you have anything that you want to say any, guidance that you would like to give us at this stage to the game, other than the way to the airport, just a mindless end of the day comment.

What would you like us.

MR. LOCKETT: Well one of the things you put over was the presentation by MLD and TSD.

DR. PITTS: That will be a big one.

We are going to set it aside, for the record let's put that right up on the top of the next meeting, and it might well be diesel on the top, and this number two.

MR. LOCKETT: I gather you want some more dialogue with DPR and that is an item you may want to put on the agenda.

My sense is given the calendar that we are aware of so far, and the timing of the diesel exhaust document, wanting that to be first, late September, first half of October is the target area for the next meeting.

We are trying to gather the data from the Panel Members to see which date will work for all of you.

DR. PITTS: Fine, any comments?

If not, do I here a motion to adjourn?

DR. GLANTZ: Yes.

DR. SEIBER: Second.

DR. PITTS: Thank you for the Panel Members, and the audience and the participants who made the presentations today.

Thank you.

(Thereupon the Scientific Review Panel meeting was adjourned at 4:30 p.m.)

CERTIFICATE OF SHORTHAND REPORTER

I, VICKI L. MEDEIROS, a Certified Shorthand Reporter of the State of California, do hereby certify:

That I am a disinterested person herein; that the foregoing hearing was reported in shorthand by me, Vicki L. Medeiros, a Certified Shorthand Reporter of the State of California, and thereafter transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said hearing nor in any way interested in the outcome of said hearing.

IN WITNESS WHEREOF, I have hereunto set my hand this twenty-seventh day of June, 1997.

VICKI L. MEDEIROS
Certified Shorthand Reporter
License No. 7871