

TELECONFERENCE MEETING  
STATE OF CALIFORNIA  
ENVIRONMENTAL PROTECTION AGENCY  
AIR RESOURCES BOARD  
SCIENTIFIC REVIEW PANEL  
ON TOXIC AIR CONTAMINANTS

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY  
COASTAL HEARING ROOM, 2ND FLOOR  
1001 I STREET  
SACRAMENTO, CALIFORNIA

BERKELEY WAY WEST, #5108  
BERKELEY, CA 94720

UNIVERSITY OF CALIFORNIA, DAVIS  
ONE SHIELDS DRIVE  
DAVIS, CA 95616

USC/NORRIS COMPREHENSIVE CANCER CENTER  
1441 EASTLAKE AVENUE  
LOS ANGELES, CA 90089

UNIVERSITY OF CALIFORNIA, IRVINE  
100 THEORY  
IRVINE, CA 92697

UNIVERSITY OF CALIFORNIA, LOS ANGELES  
650 CHARLES E. YOUNG DRIVE, SOUTH  
LOS ANGELES, CA 90095

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO  
530 PARNASSUS AVENUE  
SAN FRANCISCO, CA 94143

WILLMANNDAMM 4  
10827 BERLIN  
GERMANY

MONDAY, JULY 30, 2018  
9:30 A.M.

JAMES F. PETERS, CSR  
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A P P E A R A N C E S

PANEL MEMBERS:

Michael T. Kleinman, Ph.D., Chairperson  
(via teleconference)

Cort Anastasio, Ph.D.(via teleconference)

Jesús A. Araujo, M.D., Ph.D.(via teleconference)

Paul D. Blanc, M.D.(via teleconference)

Alan R. Buckpitt, Ph.D.(via teleconference)

Stanton A. Glantz, Ph.D.(via teleconference)

Katharine Hammond, Ph.D.(via teleconference)

Joseph R. Landolph, Jr., Ph.D.(via teleconference)

Beate Ritz, M.D., Ph.D., M.P.H.(via teleconference)

REPRESENTING THE AIR RESOURCES BOARD:

Ms. Heather Arias, Community Planning Branch, Office of  
Community Air Protection

Mr. Jim Behrmann, Panel Liaison

Mr. Vernon Hughes, Community Assessment Branch, Office of  
Community Air Protection

Ms. Karen Magliano, Division Chief, Office of Community  
Air Protection

REPRESENTING THE DEPARTMENT OF PESTICIDE REGULATION:

Dr. Shelley DuTeaux, Chief, Human Health Assessment Branch

Dr. Marylou Verder-Carlos, Assistant Director

I N D E X

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Call to Order and Roll Call 1

1. Continuation of the Panel's review of the revised report: "Final Toxic Air Contaminant Evaluation of Chlorpyrifos -- Risk Characterization of Spray Drift, Dietary, and Aggregate Exposures to Residential Bystanders" (July 2018). 3

The Panel reviewed draft versions of the Department of Pesticide Regulation (DPR) report on chlorpyrifos in meetings held December 13, 2017; and on January 23, March 2, and June 12 of 2018. In this meeting the Panel will review and discuss its findings to be sent to the DPR Director pursuant to Food and Agricultural Code section 14023(b). Chlorpyrifos is a chlorinated organophosphorus ester used as an insecticide, acaricide, and miticide. The report will be available at the following DPR web page under the Risk Assessment Documents tab.

2. Review and discussion of the "Draft Community Air Protection Blueprint" and Appendices for the implementation of Assembly Bill 617. 21

The Panel has been briefed on Assembly Bill (AB) 617 and its requirements by California Air Resources Board (CARB) staff during its January 23, 2018 and June 12, 2018 meetings. AB617 requires new community-focused action to reduce air pollution and improve public health in communities that experience disproportionate burdens from exposure to multiple sources of air pollution. The Program includes community-focused emission reduction programs, community air monitoring, and enhanced emissions reporting for criteria pollutants and toxic air contaminants, and the Panel is one of many groups being consulted. In this meeting the Panel will have an opportunity to provide further comments to CARB on the Draft Community Air Protection Blueprint which was released to the public on June 7, just days prior to the Panel's June 12, 2018 meeting. The Draft Blueprint will be revised and presented to the CARB Board at

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its September 2018 meeting. Background information about AB617.	
3. Consideration of administrative matters.	
The Panel may discuss various administrative matters and scheduling of future meetings.	
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1 P R O C E E D I N G S

2 PANEL LIAISON BEHRMANN: Okay. This is Jim and  
3 we're going to begin, as Mike said.

4 Let me do a --

5 CHAIRPERSON KLEINMAN: Okay.

6 PANEL MEMBER HAMMOND: This is Kathy. May I  
7 please ask everyone to mute except when you're talking.

8 PANEL LIAISON BEHRMANN: Okay. This is Jim  
9 Behrmann, the Panel Liaison. And I'm going to begin with  
10 a roll call.

11 First of all, Dr. Anastasio

12 PANEL MEMBER ANASTASIO: Yes, I'm here.

13 PANEL LIAISON BEHRMANN: Dr. Araujo?

14 He's on not yet.

15 Dr. Blanc?

16 PANEL MEMBER BLANC: Yes.

17 PANEL LIAISON BEHRMANN: Dr. Buckpitt?

18 PANEL MEMBER BUCKPITT: I'm here. Good morning.

19 PANEL LIAISON BEHRMANN: Dr. Glantz?

20 PANEL MEMBER GLANTZ: Here.

21 PANEL LIAISON BEHRMANN: Dr. Hammond?

22 PANEL MEMBER HAMMOND: Present. Good morning.

23 PANEL LIAISON BEHRMANN: Dr. Landolph?

24 PANEL MEMBER LANDOLPH: Present. Good morning.

25 PANEL LIAISON BEHRMANN: Dr. Ritz?

1 Dr. Ritz, are you still there?

2 We'll check back with Dr. Ritz.

3 Dr. Kleinman?

4 CHAIRPERSON KLEINMAN: I'm here.

5 PANEL LIAISON BEHRMANN: Okay. Mike, we have  
6 everybody except Dr. Araujo and Dr. Ritz. She was on  
7 earlier, and I presume she'll rejoin us.

8 If you want to go ahead and begin.

9 CHAIRPERSON KLEINMAN: All right. I'm going  
10 to -- I'd like to officially call this meeting to order.  
11 I want to welcome everybody to this meeting of the  
12 Scientific Review Panel on Toxic Air Contaminants. I know  
13 we have attendees in Sacramento and I want to welcome  
14 them. And also, we have people who are presumably  
15 watching the webcast. Because this meeting is also being  
16 held as a teleconference, the Panel members in various  
17 locations, there are some communication issues. And so  
18 just as a reminder, I'd like people on the phone to mute  
19 the phones when they are not speaking. And I think we'll  
20 be able to go ahead.

21 So as an overview of the meeting, we have two  
22 agenda items for today. The first item is the Panel  
23 summarizing its review of the final changes made to the  
24 Department of Pesticide Regulation's final toxic air  
25 contaminant evaluation of chlorpyrifos, which is dated

1 July 2018. And followed by -- followed by the Panel  
2 discussion, it's draft findings on chlorpyrifos.

3 The second agenda item will be a discussion of  
4 the California Air Resources Board's draft community air  
5 protection blueprint, and consideration of comments and  
6 questions by the Panel on the draft blueprint.

7 So the first item on our agenda is to discuss the  
8 final steps in the Panel's consideration of DPR's  
9 evaluation of chlorpyrifos. At its June 12th, 2018  
10 meeting, the Panel discussed a revised evaluation of  
11 chlorpyrifos as a toxic air contaminant. The Panel, at  
12 the end of that meeting, provisionally concluded that with  
13 the incorporation of the final recommendations at DPR --  
14 to DPR's report, we would be able to find that the report  
15 was scientifically sound.

16 And the final evaluation was revised. And as  
17 directed by the Panel, it was sent to myself, as Chairman,  
18 and to Panel Member Stan Glantz for a final review on  
19 behalf of the full Panel. The final evaluation was sent  
20 to the full Panel late last week, and Dr. Veder-Carlos do  
21 you have any additional changes or remarks regarding the  
22 completion of the final evaluation.

23 DPR ASSISTANT DIRECTOR VERDER-CARLOS: We sent  
24 the final toxic air contaminant evaluation of chlorpyrifos  
25 to the Panel on Friday. And we don't have any additional

1 changes. So if the Panel will have a final acceptance of  
2 that document, then we could move forward.

3 PANEL MEMBER GLANTZ: I think we can take the  
4 silence to mean nobody has anything more to add. This is  
5 Stan.

6 I think DPR was quite responsive to the Panel's  
7 comments last time. And then a few additional odds and  
8 ends that Mike and I came up with. So I think it's  
9 finished.

10 CHAIRPERSON KLEINMAN: I agree that the -- after  
11 reviewing the changes, we both felt that the report was  
12 scientifically sound.

13 So with completion of the final evaluation  
14 report, we can turn the Panel's draft findings. And there  
15 should be copies of the draft findings available in the  
16 hearing room in Sacramento. And there should also be a  
17 copy posted on the webpage which is [www.arb.ca.gov/srp/srp](http://www.arb.ca.gov/srp/srp)  
18 meetings, so if anybody does wish to look at those.

19 PANEL MEMBER GLANTZ: They are also up on the  
20 screen now too.

21 CHAIRPERSON KLEINMAN: Right.

22 So I guess we should open this up to discussion.  
23 This initial version of the findings was drafted by me  
24 with the assistance of Dr. Glantz. It was sent to the  
25 full Panel over the weekend for review and discussion at



1 the meeting today. And so I'd like to open it up to ask  
2 Dr. Glantz if he wishes to make any additional comments.

3 PANEL MEMBER GLANTZ: The only thing I would add  
4 is DPR also reviewed -- Mike and I went through a few  
5 iterations on this, and both DPR and OEHHA had an  
6 opportunity to review the drafts that we had prepared as  
7 do Jim Behrmann and the ARB people, and they made a bunch  
8 of, what I thought were, helpful suggestions for  
9 clarifying things.

10 I don't think the substance changed, but I'm  
11 happy with them, and I hope that -- you know, we're  
12 obviously open to any feedback any other members of the  
13 Panel have, but I think they're ready to go.

14 CHAIRPERSON KLEINMAN: All right. Then --

15 PANEL MEMBER HAMMOND: I had a question. And  
16 it -- in the -- let's see, what page am I on? On page two  
17 under point nine, I guess I had difficulty understanding  
18 the sentence -- the last sentence, "However, the same  
19 conclusion is reached when one evaluates AChE inhibition  
20 with an appropriate safety factor to account for  
21 neurotoxicity effects that occur". Is that -- is it -- I  
22 guess I don't understand how if you're looking at AChE  
23 inhibition, you use a safety factor for neurotox. I think  
24 you have to use the neurotoxicity effect -- results.

25 CHAIRPERSON KLEINMAN: We did use the neuro -- or

1 DPR used the neurotoxicity results as its primary  
2 endpoint, and that was the point of departure. What -- I  
3 guess the gist of that sentence was that if one takes into  
4 account that neurotoxicity occurs substantially below the  
5 level at which you get red blood cell cholinesterase  
6 inhibition, that is a cause of concern, if you just use  
7 the cholinesterase inhibition as the point of departure.

8           Therefore, an additional uncertainty factor was  
9 put in. I believe the uncertainty factor was a factor of  
10 three to account for the fact that neurotoxic effects do  
11 occur below the level of ten percent inhibition of red  
12 blood cell cholinesterase.

13           PANEL MEMBER GLANTZ: Which sentence? Could you  
14 point me -- I was fumbling around. Could you point me to  
15 the sentence in question?

16           PANEL MEMBER HAMMOND: Yes. It's on point nine  
17 on the second page, the very last sentence. And what  
18 seems strange to me to say if you evaluated it on the AChE  
19 inhibition, and used an appropriate safety factor for  
20 neurotoxicity. I mean, hypothetically -- I understand it  
21 kind of works in this situation, but I don't think  
22 logically this works.

23           In -- if the neurotoxicity -- if you had done  
24 experiments in animals and found the neurotoxicity  
25 happened at 1,000 times lower than the AChE inhibition,

1 then the neuro -- the developmental factor of three would  
2 not have brought us there. I would say it's kind of  
3 happenstance that that -- that that happened. I just  
4 don't think that that sentence is intrinsically logical.

5 PANEL MEMBER GLANTZ: Well, this is Stan. If the  
6 Panel wanted, I would be perfectly happy to drop that. I  
7 don't think we really need that sentence.

8 PANEL MEMBER HAMMOND: Personally, I agree you  
9 don't need it, and I think it's confusing, and could lead  
10 to some misinterpretations later.

11 PANEL MEMBER ANASTASIO: This is Cort.

12 I thought the uncertainty factor was a factor of  
13 ten. And I thought that was derived from actually animal  
14 data that showed you could have neurotoxicity effects at a  
15 concentration ten times lower than you saw  
16 acetylcholinesterase inhibition. So I don't think it was  
17 happenstance.

18 And also, as we mentioned at the meeting last  
19 time, it's encouraging that the reference concentration  
20 you get for delayed neurotoxicity is essentially the same  
21 that you would get from this idea of using the AChE  
22 inhibition with this additional safety factor.

23 So I think the fact that those two are pretty  
24 similar is actually important. And so personally, I'd  
25 like to keep the sentence in, but I think it could be

1 cleaned up.

2 DR. DuTEAUX: This Shelley DuTeaux. I just  
3 wanted to also clarify something, if I may, for the Panel.  
4 I believe point number nine in the findings --

5 PANEL MEMBER GLANTZ: All right. So this is  
6 Stan. So what about change -- to that point, what about  
7 changing that last sentence to say -- it's always hard to  
8 do this on the phone. But say, "however", and then add,  
9 "even if", and then delete "the same conclusion is reached  
10 when". So the sentence would read, "However, even if one  
11 evaluates AChE inhibition with an appropriate safety  
12 factor, account for neurotoxicity effects to the current  
13 levels substantially below the ten percent AChE inhibition  
14 used in previous assessments, chlorpyrifos would still be  
15 identified as a toxic air contaminant", or would be.

16 PANEL MEMBER HAMMOND: I guess -- this is Kathy.  
17 My concern is -- I know that this works in the tables with  
18 the numbers we've got from these studies. But in a  
19 different pesticide that we're doing at another time, it  
20 might be that that was not true. I don't think that  
21 intrinsically we could expect within it with a different  
22 chemical. It may not be a pesticide, just a different  
23 chemical. That if you evaluated the AChE inhibition and  
24 applied a safety factor to account for neurotoxicity  
25 effects, that that safety factor with two different

1 outcomes that are not dependent on each other, I don't  
2 think there's the safety factor between them that applies  
3 for all chemicals. And I think that's what's implied.

4 DPR ASSISTANT DIRECTOR VERDER-CARLOS: This is  
5 Marylou --

6 CHAIRPERSON KLEINMAN: I kind of agree with the  
7 idea that since we've already put in the findings that  
8 developmental neurotoxicity is the appropriate endpoint  
9 for this insecticide, that it would not hurt to just  
10 eliminate that last sentence.

11 PANEL MEMBER GLANTZ: Yeah. I mean, maybe the  
12 thing to do would be eliminate the previous sentence too,  
13 so that the paragraph would read, "The estimated bystander  
14 exposures to chlorpyrifos are at levels that cause concern  
15 about the associated health risks. DPR regulations state  
16 if the air concentrations of a pesticide are not ten-fold  
17 below the reference concentration, that it's considered a  
18 protective health, the pesticide meets the criteria to be  
19 listed as a toxic air contaminant", period.

20 That's really -- the first part of the paragraph  
21 is really the important part.

22 CHAIRPERSON KLEINMAN: I agree. I think -- so we  
23 can leave out everything after ten percent of the RfC,  
24 right?

25 PANEL MEMBER GLANTZ: So I'd suggest we just end

1 the paragraph after the parenthetical statement.

2 CHAIRPERSON KLEINMAN: Right. Okay.

3 Is that -- did anybody have any objection to  
4 doing that?

5 Okay. Hearing none, I'll accept Stan's and  
6 Kathy's changes to point number nine. We will eliminate  
7 the last little -- eliminate everything after the  
8 parenthetical.

9 Were there comments on any of the other points?

10 PANEL MEMBER RITZ: This is Beate. Actually,  
11 under number eight, maybe there is word missing, "Even if  
12 one limits consideration to the combined...." --  
13 consideration of what? -- "...of toxicity to the combined  
14 inhalation and dermal exposure". That's the rest of the  
15 sentence. So I feel like after consideration there's a  
16 word missing. What are you considering, toxicity?

17 CHAIRPERSON KLEINMAN: We're considering --

18 PANEL MEMBER HAMMOND: I think the word -- I  
19 think word should be "of" not "to". "Even if one limits  
20 consideration..."

21 CHAIRPERSON KLEINMAN: "Of the combined...", yes,  
22 you're right.

23 PANEL MEMBER GLANTZ: I don't think "of" does it  
24 either. I mean, I like.

25 PANEL MEMBER RITZ: No, I agree.

1           PANEL MEMBER GLANTZ: I mean, I think it was -- I  
2 think adding -- I mean, I think the sentence is okay as it  
3 is. But if you want, you could add limits consideration  
4 of toxicity to the combined inhalation and dermal  
5 exposure, or to the effects of combined inhalation and  
6 dermal exposure. That would be -- I think that would be  
7 clearer. That's fine with me.

8           PANEL MEMBER RITZ: Yeah. All of those are  
9 better than what we have I think.

10          CHAIRPERSON KLEINMAN: I will make that change.

11          PANEL MEMBER RITZ: And this is Beate again. So  
12 number seven, moving up, that's the sentence that's --  
13 that's just there by itself right now saying that  
14 acetylcholinesterase inhibition is what is critical for  
15 neurologic function. But that doesn't imply that it's  
16 critical for neurotoxicity during development, right?  
17 Because we're not sure what causes the neurodevelopmental  
18 effects.

19          CHAIRPERSON KLEINMAN: That's true. Actually, I  
20 was thinking that probably should be moved up in the list  
21 into the more descriptive findings and possibly placed  
22 after number one, where it says, "Chlorpyrifos is a widely  
23 used insecticide in California", it could actually be  
24 incorporated into that and say that it is -- that it  
25 causes cholinesterase inhibition and incorporate it to

1 point number one, and eliminate seven, because then the  
2 second one goes into how chlorpyrifos is associated with  
3 developmental neurotoxicity.

4 PANEL MEMBER RITZ: Right, but it also says below  
5 the dose that causes ten percent acetylcholinesterase  
6 inhibition, which again implies that we think even at low  
7 acetylcholinesterase inhibition, it's the inhibition that  
8 causes neurotoxicity, and not something else. I know it's  
9 not meant that way, but it could be read that way.

10 CHAIRPERSON KLEINMAN: The other thing, I did  
11 have a subsequent draft where it specified. But what  
12 we're talking about is red blood cell cholinesterase  
13 inhibition, and not (inaudible). So I think that makes  
14 it -- you know, makes it a little more specific.

15 PANEL MEMBER RITZ: Right. That makes it more  
16 specific, but I think we still want to avoid saying that  
17 acetylcholinesterase inhibition is really what might be  
18 causing this neurodevelopmental delay or defect. It might  
19 be, but we don't know. It could be something else, right?

20 CHAIRPERSON KLEINMAN: How about amending that to  
21 say developmental neurotoxicity may or may not be causally  
22 related to cholinesterase inhibition, but has been  
23 demonstrated to be -- to occur at levels substantially  
24 below those across 10 percent red blood cell  
25 acetylcholinesterase inhibition.



1           PANEL MEMBER RITZ: Yeah, that makes -- that  
2 makes more sense.

3           CHAIRPERSON KLEINMAN: Great. Okay. I think  
4 that covers that base. Any other --

5           PANEL MEMBER GLANTZ: This is Stan. You know, it  
6 might be in looking at this, that if you just went to  
7 number two, and added chlorpyrifos as an organophosphate  
8 insecticide whose exposure is associated with, -- no,  
9 never mind. I'm making it too complicated. I accept the  
10 changes you were just discussing.

11           PANEL MEMBER LANDOLPH: Yeah. Mike, this is Joe.  
12 I accept all the changes. I think they're great. Could  
13 you take a look at number six for me just for a second. I  
14 just have a short editorial comment here. I recommend  
15 after the second line, where it says, "Illness  
16 Surveillance Program", put a period, strike the "and",  
17 capitalize the "Evidence", and start the sentence with  
18 "Evidence". And then say just like you have it,  
19 "...sufficient to indicate that exposure...", and add "to  
20 chlorpyrifos", and then that's done. I just wanted to  
21 shorten the sentence and make it clear. The sentence ran  
22 on too long.

23           CHAIRPERSON KLEINMAN: Okay. So period after  
24 "Program"?

25           PANEL MEMBER LANDOLPH: Yes. Strike the "and",

1 capitalize the "Evidence".

2 CHAIRPERSON KLEINMAN: Okay.

3 PANEL MEMBER LANDOLPH: And then after exposure  
4 just put "exposure to chlorpyrifos", and that's it.

5 PANEL MEMBER RITZ: Actually -- this is Beate --  
6 do we have to say anything whether this exposure is  
7 environmental or occupational? So bystander --

8 CHAIRPERSON KLEINMAN: I think that's a good  
9 point. This is specifically for bystanders.

10 PANEL MEMBER RITZ: Yeah, then we should say  
11 that.

12 CHAIRPERSON KLEINMAN: So "Evidence is sufficient  
13 to indicate that bystander exposure related to the use of  
14 application of chlorpyrifos (inaudible) matter of health  
15 concern".

16 Okay. So let me read that back, Illnesses that  
17 may have been caused by exposures to chlorpyrifos have  
18 been documented in DPR's Pesticide Illness Surveillance  
19 Program. Evidence is sufficient to indicate that  
20 bystander exposures related to related to the use --  
21 related to the application -- related to the application  
22 of chlorpyrifos to crops are a matter of health concern.  
23 I guess it should be, "is a matter of health concern".

24 PANEL MEMBER GLANTZ: Well, didn't you want to  
25 add "to bystanders" at the end of the sentence?

1 CHAIRPERSON KLEINMAN: I indicate that  
2 bystanders -- I'll read that again. "Evidence is  
3 sufficient to indicate that bystander exposure related to  
4 application of chlorpyrifos to crops is a matter of health  
5 concern".

6 PANEL MEMBER GLANTZ: That's fine.

7 PANEL MEMBER RITZ: That's good.

8 PANEL MEMBER LANDOLPH: That's fine.

9 CHAIRPERSON KLEINMAN: Any other comments?

10 PANEL MEMBER LANDOLPH: Point number four, Mike.  
11 Old point number four, could you just substitute  
12 "chlorpyrifos'" in for "its". Just a one-word change.  
13 Chlorpyrifos apostrophe, et cetera.

14 CHAIRPERSON KLEINMAN: So airborne release may  
15 occur through --

16 PANEL MEMBER LANDOLPH: No, the old point number  
17 four.

18 CHAIRPERSON KLEINMAN: Okay. Oh, in its physical  
19 and --

20 PANEL MEMBER LANDOLPH: Yeah, instead of "its",  
21 just put "chlorpyrifos" apostrophe after it.  
22 "Chlorpyrifos physical and chemical properties".

23 CHAIRPERSON KLEINMAN: Very good.

24 Any other comments on the other points?

25 PANEL MEMBER BLANC: Paul Blanc. I have no other

1 comments.

2 PANEL MEMBER ANASTASIO: This is Cort, I think  
3 you did a good job, Mike and Stan. Thank you.

4 CHAIRPERSON KLEINMAN: Hearing no other comments,  
5 I'm going to ask for a motion to accept the findings. And  
6 I'll draft a cover letter to transmit these findings to  
7 the Director of DPR.

8 So if I could have a motion to approve the  
9 findings?

10 PANEL MEMBER ANASTASIO: This is Cort. I move to  
11 approve the findings.

12 PANEL MEMBER LANDOLPH: This is Joe. I second  
13 the motion.

14 PANEL MEMBER RITZ: Me, too.

15 CHAIRPERSON KLEINMAN: Okay. Since we're all on  
16 the phone, Jim, could you just do a roll call vote?

17 PANEL LIAISON BEHRMANN: Sure, I can.

18 CHAIRPERSON KLEINMAN: Actually, I guess let me  
19 ask you, can I have, you know, all who approve please say  
20 so.

21 PANEL MEMBER GLANTZ: Stan approves.

22 PANEL MEMBER RITZ: Beate.

23 PANEL MEMBER LANDOLPH: Joe.

24 PANEL MEMBER HAMMOND: I do too.

25 PANEL MEMBER BLANC: I do.

1 PANEL MEMBER ANASTASIO: I do.

2 CHAIRPERSON KLEINMAN: I didn't hear Kathy,  
3 but --

4 PANEL MEMBER HAMMOND: Yes.

5 CHAIRPERSON KLEINMAN: Are there any opposed?

6 PANEL MEMBER HAMMOND: Kathy approves.

7 CHAIRPERSON KLEINMAN: Kathy, you're on. Okay.

8 PANEL MEMBER ARAUJO: Hello. Can you listen to  
9 me?

10 CHAIRPERSON KLEINMAN: Yes. Jesús, hi.

11 PANEL MEMBER ARAUJO: Yeah, this is Jesús. Hi.  
12 Hello, everybody. I cannot vote on this, just because I  
13 was not listening to -- I was unable to join the  
14 presentation until just like about five minutes ago. I've  
15 been have trouble hearing. I didn't have a good telephone  
16 connection. So we were actually unable to do it, but I  
17 was able to establish it with the computer. So I can hear  
18 now and I can see something on the screen, but I cannot --  
19 could not participate in the previous -- during the  
20 presentation.

21 PANEL MEMBER GLANTZ: This is Stan. So I think  
22 it would be great if we could unanimously approve them.  
23 Maybe, Jim or somebody can email you the final version  
24 with all the little editorial changes, and then we can  
25 hold the vote till -- maybe the final vote until after

1 you've had a chance to look at them, so we can say  
2 everybody agreed.

3 CHAIRPERSON KLEINMAN: This is Mike. Jim, since  
4 everybody has had a chance to review it, approved it, can  
5 we make a -- the final approval to get -- or have Jesús  
6 read the document, provide his vote by email after the  
7 meeting, and then -- yeah, we can -- you know, unless  
8 there are substantive changes based on Jesús --

9 PANEL MEMBER GLANTZ: Well, I'd rather -- This is  
10 Stan. I'd rather get it done at the meeting. So, you  
11 know, I think we're going to be talking about the  
12 community air protection blueprint, and the changes  
13 weren't that extensive. So, Jim, could you just send  
14 Jesús a copy and then we can come back after the other  
15 discussion and close the issue? I don't really think it  
16 makes sense to hold it till after the meeting. We could  
17 get it trouble -- we could get in trouble with the Open  
18 Meetings Act and stuff trying to do that.

19 PANEL MEMBER HAMMOND: I would just say, Jesús,  
20 that we just discussed the findings, and made tweaks on  
21 it, but made no substantial changes on it. We weren't  
22 going over the whole report. And I think hopefully you  
23 can get a copy of the changes to see it. But there ended  
24 up not being very much discussion. Just people pointing  
25 out particular areas they felt needed clarification.

1           PANEL MEMBER ARAUJO: In that case, I don't  
2 really have any observations, you know. I think there was  
3 no changes during the discussion, so agree to moving  
4 forward.

5           CHAIRPERSON KLEINMAN: I think I can summarize  
6 the main gist of the changes. What we agreed was to  
7 modify point number one, where it says, "Chlorpyrifos is a  
8 widely used insecticide in California...", and add in what  
9 was formally point number 7 that chlorpyrifos is an  
10 organophosphate insecticide that inhibits the enzyme  
11 acetylcholinesterase which is critical for neurological  
12 functions.

13           Point number two said that chlorpyrifos exposures  
14 associated with developmental neurotoxicity that has been  
15 Documented in human epidemiological studies and laboratory  
16 animal studies, developmental tox -- neurotoxicity may or  
17 may not be causally associated with cholinesterase  
18 inhibition, but has been demonstrated to occur at levels  
19 substantially below those that cause ten percent red blood  
20 cell acetylcholinesterase inhibition. An endpoint that  
21 was used in previous assessments of chlorpyrifos toxicity.

22           So those two things were changed. And then  
23 point -- the last point was to remove the last two  
24 sentences in finding number nine, and end that finding  
25 with the pesticide meets the criteria to be listed as a

1 toxic air contaminant. It could be less than 10 percent  
2 of the reference concentration period, and the rest of the  
3 descriptive stuff was removed. So those were really the  
4 only major changes other than a little bit of capitalizing  
5 some things, and changing a couple of other wordsmithing,  
6 but no substantive things.

7 So those are the changes, Jesús. If you see  
8 anything that you thought you'd like to comment on?

9 PANEL MEMBER ARAUJO: I'm fine with all those  
10 points. Yes, I don't have any objection.

11 CHAIRPERSON KLEINMAN: All right. So let me ask  
12 again are any opposed to approving the findings?

13 Hearing none, then I think we -- excellent.  
14 Thank you. And I will, as I said, write a cover letter to  
15 the DPR Director and transmit our findings to DPR.

16 PANEL MEMBER GLANTZ: And I think it's worth  
17 pointing out that it was unanimously approved. Just to  
18 get that in the record.

19 CHAIRPERSON KLEINMAN: I will put that in the  
20 letter and add it to -- well, I don't know, the action  
21 findings that we -- yeah, I guess, I could put in a final  
22 statement at the end that these findings were unanimously  
23 approved by the Panel.

24 All right. Any other discussion on chlorpyrifos?

25 And if not, I want to again commend the



1 scientific staff at DPR for a tremendous effort at pulling  
2 together a huge database and then a great job of  
3 synthesizing the scientific information for a very  
4 important report. So on behalf of the Panel, I'd like to  
5 thank (inaudible) for a tremendous job well done.

6 All right. The next item on our agenda is a  
7 Panel discussion and comment on the draft Community Air  
8 Protection Blueprint, which is related to Assembly Bill  
9 617. At our last (inaudible) -- Karen Magliano, Chief of  
10 the Office of Community Air Protection, briefed us on the  
11 progress in implementing AB 617. And at the time of the  
12 June meeting, CARB had just released its draft Community  
13 Air Protection Blueprint describing in more detail how  
14 they proposed to implement the program.

15 The blueprint has been out for public comment  
16 during June and July. And today, as a full Panel, we have  
17 an opportunity to discuss and comment the draft blueprint  
18 as the staff are making their revisions to the blueprint  
19 and preparing to present this to the Board in its  
20 September 2018 meeting.

21 So today, I've asked Ms. Magliano to make some  
22 brief opening remarks, and then we can open up the item  
23 for Panel discussion.

24 So Ms. Magliano, thank you for joining us today.  
25 And I'll turn it over to you.



1           So I think -- I mean, obvious -- I mean, if you  
2 could do that today, that would be great. But if not, I  
3 think we ought to do that sometime soon. I know we're  
4 mentioned in the law --

5           OCAP DIVISION CHIEF MAGLIANO: Um-hmm.

6           PANEL MEMBER GLANTZ: -- but I never totally  
7 understood what our precise role and responsibilities are,  
8 other than just being informed.

9           OCAP DIVISION CHIEF MAGLIANO: Sure. And I will  
10 try and weave that into the quick overview on these  
11 slides. But we had also been talking with Jim about the  
12 potential for another call with the group. So maybe based  
13 on this overview, that can also help us refine additional  
14 discussion, if that's useful.

15           So slide number two just gives a quick overview  
16 of all of the different elements of the program itself.  
17 And part of this is there are statutory requirements for  
18 the California Air Resources Board to really layout the  
19 overall program requirements. And that includes  
20 developing a statewide monitoring plan, as well as a  
21 statewide strategy, which identifies actions that we will  
22 take at CARB, and identifying sort of the process for  
23 developing local community emission reduction programs.

24           And to the point that you just raised, Dr.  
25 Glantz, the statute specifically calls out a role for

1 multiple different stakeholders as we develop both that  
2 statewide strategy, as well as developing the statewide  
3 monitoring plan. And that includes not only the  
4 Scientific Review Panel, but also the Office of  
5 Environmental Health Protection, environmental justice and  
6 other community stakeholders, business and industry  
7 stakeholders, and the local air districts. And so that  
8 has been part of the process that we've been going through  
9 as we do outreach efforts, going and talking with  
10 different groups to have that discuss back and forth to  
11 make sure that we are hearing from everybody that's listed  
12 in that consultation list, and making sure it's really  
13 helping us develop a robust program, which we're  
14 reflecting in the blueprint itself.

15 PANEL MEMBER GLANTZ: So this is Stan again. I  
16 don't mean to quibble, but I mean we're not used to the  
17 SRP being a quote "stakeholder". You know, in my  
18 estimation, stakeholders are different like interested  
19 parties.

20 OCAP DIVISION CHIEF MAGLIANO: Um-hmm.

21 PANEL MEMBER GLANTZ: I mean, we normally have  
22 some sort of formal advisory role that, you know, requires  
23 some kind of action by the Committee. So I think -- I  
24 mean, that gets back to better understanding what our role  
25 is, because it's one thing to be, you know, somebody that

1 you talk to. It's another one, you know -- I mean, as we  
2 just went through with the chlorpyrifos report, I mean,  
3 we're used to taking some kinds of actions or making  
4 formal recommendations. So, you know, are we really just  
5 a stakeholder like any other member of the public or do we  
6 have a more formal role in the process as defined in the  
7 legislation?

8 OCAP DIVISION CHIEF MAGLIANO: I have a copy of  
9 the legislation in front of me, so maybe it would be  
10 helpful to read what the language says, because it  
11 probably is a little bit different than the role that the  
12 SRP has traditionally had in other actions, like the one  
13 that you were just considering before this.

14 So, for example, this is related to development  
15 of the statewide monitoring plan. And it says, "On or  
16 before October 1st, 2018, the State Board...", a.k.a.  
17 CARB, "...shall prepare in consultation with the  
18 Scientific Review Panel, the districts, OEHHA,  
19 environmental justice organizations, affected industries,  
20 and other interested stakeholders, a monitoring plan...",  
21 sort of dot, dot, dot.

22 And then there is similar language in terms of  
23 that same group of organizations, panels, agencies, et  
24 cetera, in terms of putting together the statewide  
25 strategy.

1           PANEL MEMBER GLANTZ:  And again, not to be  
2 difficult, but, you know, consult -- like what is the, "in  
3 consultation with", require the Committee to do?  And what  
4 kind of actions -- I'm not trying to make more work for  
5 the Committee.  But, I mean, normally, when the  
6 Legislature mentions the SRP in legislation, they have in  
7 mind us actually doing something, rather than simply, you  
8 know, being informed.

9           I can't ever remember anything where our role was  
10 to simply be informed, and, you know, kind of chit chat  
11 about things.  Everything, we've ever had to do involved  
12 some kind of formal action at some point.

13           OCAP DIVISION CHIEF MAGLIANO:  Sure.  You know, a  
14 couple of different options.  You know, one, we have, you  
15 know, looked for the opportunity to sit down and talk with  
16 you all.  I did put a slide at the end, and we had had  
17 this at the end of the presentation last time, which teed  
18 up some potential discussion questions that we thought  
19 that the expertise of the SRP would be particularly useful  
20 on.  There is certainly the opportunity, as we go through  
21 this process, if the SRP wanted to have a comment letter  
22 or something like that, or provide any additional specific  
23 written comments to us as part of this process.

24           But you're right, it does not actually call out a  
25 very specific decision-making role or action that the SRP

1 is called upon to do.

2 PANEL LIAISON BEHRMANN: Karen, this is Jim  
3 Behrmann, just to add a brief comment. The Panel's role,  
4 as I read it in the law, is advisory and consultative to  
5 CARB staff. And just picking one example of what is  
6 required in the law, there's provisions in law for toxics  
7 emissions reporting. So there's an exposure component  
8 there, for example. So I think what's envisioned in the  
9 law is the Panel to be consulted about how or in what form  
10 or what additional kinds of emissions reporting you're  
11 going to be required -- or that CARB is going to be  
12 requiring in the implementation of the program, if that  
13 helps at all.

14 OCAP DIVISION CHIEF MAGLIANO: Yeah, I think that  
15 is a good example of one. One of the things we're trying  
16 to do is collect much more granular data that can help us  
17 understand what's going on in these communities, but also  
18 make those connections back to health researchers like all  
19 of you. So sort of going back to, you know, being able to  
20 take advantage of the knowledge and expertise that all of  
21 you have helping us think through what kinds of data would  
22 be most useful to collect as part of this program to make  
23 sure that, one, we really are getting a better  
24 understanding of cumulative air pollution exposure, or can  
25 be collecting data that helps health researchers better

1 understand those connections as well.

2 But, you know, these are just a few of example  
3 questions we had put forward. And I think something that  
4 might be useful for today's discussion is to hear from  
5 you, if you think that there are specific topic areas of  
6 the program where you would also like to be able to weigh  
7 in on.

8 PANEL MEMBER GLANTZ: Yeah, but I think -- just  
9 an -- then I'll stop, you know, harping on this. But I  
10 mean, I think there's a big difference between putting in  
11 public comments on different activities, which is  
12 something that I've done a lot of, both with the federal  
13 government and State government on various issues, where  
14 you're simply, you know, commenting on something that then  
15 the agency, you know, may or may not pay any attention to.

16 And just -- I mean, this is a really -- if that's  
17 all we're doing, it's a really different role for this  
18 Committee than has historically occurred. And, I mean, I  
19 would -- you know, even consultation usually is more  
20 formal, in that the Committee takes -- you know, reviews a  
21 document makes a formal -- takes a formal position or  
22 makes a formal recommendation.

23 So I think it would be worthwhile to actually go  
24 back with the lawyers and clarify precisely what that  
25 means in legal terms just to make sure that the Committee



1 reached its legal obligations under the law.

2           And -- you know, rather than -- I mean, I'm very  
3 interested as an individual researcher. And, in fact, I  
4 was at a meeting on Friday at the UCSF Cancer Center, and  
5 they were talking about ways that the cancer center can  
6 get more engaged in some of the communications you're  
7 talking about. And I gave them all the stuff about this  
8 program and said there could very well be some excellent  
9 opportunities for UC staff to collaborate with CARB on  
10 some of these things.

11           But that -- and I'm encouraging them to do that.  
12 But, I mean, that's a totally different (inaudible) than  
13 the kind of activities this Committee does where we --  
14 where we actually review a document, and then either say,  
15 yes, we agree with it, or no, we don't, and here's what we  
16 think you should do.

17           So I think -- I think getting some, you know,  
18 fairly formal advice on exactly what we're supposed to do  
19 would be very helpful. And, you know, if it's just listen  
20 to you and chit chat, then that's less work than we're  
21 talking about. But I just think it would be very unusual,  
22 given this Committee's reputation with the Legislature,  
23 that they didn't have something more in mind than what  
24 you're saying.

25           CHAIRPERSON KLEINMAN: This is Mike. One of the

1 problems is is that, you know, this is a process in the  
2 state of comment. And I think one of the big decision  
3 points coming up is that the CARB has been given a bunch  
4 of candidate locations, in which the start this process  
5 going in different communities.

6           And they are going to make their recommendations  
7 based on, you know, various considerations. But one place  
8 where this thing could help would be to look at the  
9 various candidate sites on the basis of toxic exposures  
10 and help identify, or at least flag, what we see as the  
11 most compelling (inaudible) areas that would help us get  
12 more health-related data or relevant data so that we  
13 could -- you know, so that this could go into (inaudible)  
14 and might well define or change chronic reference exposure  
15 levels.

16           I can see that -- you know, I can see us being in  
17 line with that. But I'm not sure that that's exactly what  
18 is being envisioned.

19           OCAP DIVISION CHIEF MAGLIANO: This is Karen  
20 again. It is definitely, I think, as we talked about, it  
21 is a little bit different situation than usually what the  
22 SRP is tasked with. But in this case -- and we're happy  
23 to go back and provide some additional clarification to  
24 the group to the extent that that would be helpful. But I  
25 think the intent really is when you do look at the scope

1 of all of the different groups that we're listed in the  
2 legislation, because this is such a brand new program,  
3 wanting to make sure that we were tapping into the breadth  
4 of different groups that really can help guide the  
5 program, provide advice to us to make sure that, you know,  
6 we really are focusing in on what we need to. You know,  
7 and that is everything from emissions data, to health  
8 data, to things of that nature.

9           So, you know, with that perspective, I think  
10 that's where we were sort of laying out some of the key  
11 topic areas. And the questions here is to really just  
12 have that discussion back and forth with this group and  
13 making sure that we were sort of recognizing some of the  
14 input and expertise that you can provide to us.

15           So with that in mind, is it useful to continue to  
16 go through the other couple of slides or do you want to  
17 jump to just sort of asking us some additional questions  
18 about the program, and particularly related to the last  
19 slide on some potential questions that we had teed up for  
20 discussion at the last meeting. And we did have some good  
21 back and forth, and suggestions on that. But now that you  
22 have had a chance to perhaps read through the full  
23 blueprint -- last time, as Dr. Kleinman mentioned, it had  
24 only just come out a few days before, if you have any  
25 additional questions for us, or additional thoughts,

1 related particularly to toxic air contaminants that we  
2 really should be thinking about for inclusion in the  
3 program itself.

4 CHAIRPERSON KLEINMAN: Why don't we (inaudible)  
5 branch out from that.

6 OCAP DIVISION CHIEF MAGLIANO: I didn't quite  
7 catch that. Could you repeat that, Dr. Kleinman.

8 You said jump in?

9 CHAIRPERSON KLEINMAN: Yeah.

10 OCAP DIVISION CHIEF MAGLIANO: Okay.

11 CHAIRPERSON KLEINMAN: I was saying why don't we  
12 just go through the rest of your slides, and then --

13 OCAP DIVISION CHIEF MAGLIANO: Okay. We'll do.  
14 So slide two was really just a quick overview of all of  
15 the different elements of the program. There are many of  
16 them, but they're really designed to work together as part  
17 pat of this community-focused action. So you have  
18 elements related to going into specific communities and  
19 really focusing action down at the community level to help  
20 reduce emissions and exposure, and reduce those  
21 traditional pollution disparities that we've seen in many  
22 of these disadvantaged communities, as well as looking at  
23 making sure that many of the largest industrial facilities  
24 are putting on the most up-to-date pollution controls.

25 And then there are elements related to really

1 collecting better data, more granular data at the  
2 community level. So that includes very focused community  
3 level air quality monitoring, and that might be done by  
4 both the air districts and local community groups, and  
5 then collecting better data on the emissions sources  
6 themselves. And in both of these making sure that we are  
7 making that data more available, more transparent, more  
8 understandable to the community groups. We can usually  
9 really use it to help drive further action in emission  
10 reductions.

11           There are increased penalty provisions that came  
12 as part of the legislation. This is something that had  
13 not been increased for decades and was really important to  
14 make sure that the facilities are following through on the  
15 reductions they're supposed to achieve.

16           And then the last piece of it is really a  
17 hallmark and a central focus of the program. And that is  
18 partnerships with the local community groups themselves,  
19 so that we're working together to be able to develop the  
20 appropriate solutions. And so as part of that, the  
21 Legislature appropriated funding to provide grants to  
22 those local community groups to help build their capacity  
23 and their ability to be partners with us as part of that  
24 program.

25           And so we're just in the process of going through

1 awards for the first round of those grant solicitations.  
2 And there are about 28 different groups across the state.

3 --o0o--

4 OCAP DIVISION CHIEF MAGLIANO: So as you heard,  
5 we released a draft of the blueprint for the program back  
6 in early June. And this is really laying out the broad  
7 requirements for the program itself. So as we've been  
8 talking about, it's putting forward guidance on how you do  
9 sort of effective and well thought out community level  
10 monitoring, to make sure that the data that's collected  
11 can be used to support actions to reduce emissions and  
12 exposure in the communities. And then it's also laying  
13 out requirements for when we're developing a community  
14 emission reduction program, the process and the scope that  
15 local air districts go through working with partners with  
16 the communities on outlining what actions will be taken  
17 from new regulations, to enhanced enforcement, to  
18 incentive programs to help accelerate the penetration of  
19 cleaner technologies, and also new ways to engage with  
20 local land use and transportation agencies, because their  
21 decisions often have large impacts on those communities  
22 themselves.

23 And then as Dr. Kleinman was saying, the other  
24 piece of this is recommending to our board an initial set  
25 of communities that we would begin the program with,



1 partnering with the local community groups to then  
2 implement the program, whether it's monitoring, or the  
3 emission reduction programs, or in many cases we expect  
4 that it will probably be both.

5           The other piece of this is that this is an annual  
6 process. So while we may begin with a smaller number of  
7 initial communities, each year the statute requires us to  
8 go back and continue to recommend additional communities  
9 for consideration over time.

10                           --o0o--

11           OCAP DIVISION CHIEF MAGLIANO: And then the last  
12 slide I just had was the one that we also had at the last  
13 meeting, which does tee up some potential discussion  
14 questions that we thought would be particularly useful  
15 to hear from the SRP on.

16           One of them was, you know, what factors should we  
17 be looking at when we're assessing the cumulative exposure  
18 burden in these different communities. Also, as we're  
19 collecting more air quality monitoring data, collecting  
20 more emissions data for both criteria pollutants and air  
21 toxics, you know, are there specific kinds of compounds  
22 and things like that, that we make sure that we want to  
23 collect information on, so it can support those enhanced  
24 health assessments.

25           And then also effective methods for how we



1 communicate health data back to community members, or as  
2 this group, for example, identifies new compounds that are  
3 now posing health risks, making sure that we are keeping  
4 up to date on that and having that effective  
5 communication.

6           So that was sort of the quick overview. And then  
7 now I will turn it to questions that you all may have or  
8 suggestions.

9           PANEL MEMBER GLANTZ: So this is Stan again. So  
10 I have -- I have two questions related to what you were  
11 just talking about. One is this question of, you know,  
12 what other chemicals should be listed as toxic air  
13 contaminants, which you mentioned? And, I mean, how does  
14 that -- we, years ago, went through a prioritization  
15 process, which had different standards than what you're  
16 talking about. And, I mean, are -- and, I mean, and the  
17 Panel came up with a priority list that then ARB and DPR  
18 have kind of -- have used to guide them.

19           I mean is one role that the panel plays in this  
20 process be coming up with an approving a new  
21 prioritization list of potential TACs that ARB needs to  
22 look at, you know, based on the standards that are  
23 embodied in this law, which are, as I said, different from  
24 the standards that we used way back along -- because I was  
25 actually the lead person on that way back a long time ago.

1 I mean, so is that a way to take one of these questions  
2 and make it more concrete?

3 OCAP DIVISION CHIEF MAGLIANO: I think that can  
4 certainly be one way. You know, as we go into these  
5 communities and collect more monitoring data than we have  
6 in the past potentially on different toxic air  
7 contaminants, as we're looking at the information on the  
8 TACs that are coming from these different emission  
9 sources. I think that could be very useful to have that  
10 better information to then go back and look at those  
11 priority lists again. I think that's a good suggestion.

12 PANEL MEMBER GLANTZ: Yeah, I mean, I think you  
13 could go back and look at the document, the prioritization  
14 documents, we came up with -- this was a long time ago.

15 OCAP DIVISION CHIEF MAGLIANO: Um-hmm.

16 PANEL MEMBER GLANTZ: -- in light of what you  
17 just said. And, I mean, that -- because that list was  
18 officially adopted by the Panel. That might be, you know,  
19 a more formal role that we could play as you collect the  
20 additional emissions data, which would -- could very well  
21 change the prioritization list that we came up with.

22 So -- and then the other question that's related  
23 to that is in terms -- and I'm not the emissions air  
24 quality monitoring person on the Committee. There are  
25 other people that know a lot more than I do. But is that

1 going to be standardized in any way across the different  
2 air districts that would, you know, facilitate the process  
3 you were just talking about?

4           OCAP DIVISION CHIEF MAGLIANO: Yes, in a couple  
5 of different ways. So when we're looking at air quality  
6 monitoring data, one of the things that we have done is  
7 laid out sort of 14 different elements that, as air  
8 districts, are developing their community monitoring sort  
9 of networks that it is a very standardized process that  
10 they go through in terms of making sure that they are sort  
11 of using the right kind of monitoring tool for the  
12 objectives that they want to achieve. You know, making  
13 sure that it's gone through appropriate quality assurance,  
14 for example. Though, recognizing at the same time that in  
15 every community you may be looking at different kinds of  
16 monitoring, depending on your objectives.

17           The other piece of it is trying to collect more  
18 enhanced and standardized emissions data. Traditionally,  
19 in many sources, we've only gotten the data once every  
20 three or four years. And in many cases, air districts use  
21 different methodologies for calculating those emissions.  
22 And we're actually in the process right now of starting to  
23 put together a regulation that, as a first step, will move  
24 us to annual reporting of both criteria and toxic  
25 emissions from many of the largest sources of in the

1 State.

2 But then the next step after that is starting to  
3 look at how we might be able to develop more standardized  
4 procedures for estimating emissions themselves too.

5 PANEL MEMBER GLANTZ: So -- and then I'll try to  
6 be quiet. But those two questions that you just raised, I  
7 mean, those would be things that would certain -- and  
8 again, and this is not my particular area of expertise.  
9 But this is the thing where the Panel has a lot of  
10 expertise and might be in a position to take some formal  
11 position on, you know, the rules that you are developing.  
12 I mean, I'd really be interested in hearing what the Panel  
13 members who actually do know about emissions reporting and  
14 air monitoring have to say about what the Panel might  
15 productively do in this area.

16 PANEL MEMBER HAMMOND: This is Kathy. I think  
17 obviously there's a lot that we could bring to the table  
18 on this. It hasn't been asked at this point. And I'm not  
19 sure, you know, what the plans are at that end. But  
20 definitely, I and others do air monitoring as a major part  
21 of our research, and also trying to evaluate the best ways  
22 to use the air monitoring to best estimate people's  
23 exposures, not just for the purpose of just monitoring,  
24 but for modeling and estimating exposures. But it's not  
25 clear to me exactly what you all have in mind.

1           OCAP DIVISION CHIEF MAGLIANO: And I think part  
2 of this -- and, you know, we're certainly looking at  
3 wanting to continue to engage with the SRP over time is  
4 since we have not selected communities yet, and air  
5 districts have not yet sat down with those community  
6 groups to figure out what kind of monitoring they want to  
7 do, we're still very much in the early stages of getting  
8 an understanding of what kinds of additional air quality  
9 monitoring data is going to be collected. So I think this  
10 is one where we could have some good ongoing engagement as  
11 we get a better understanding of, you know, sort of what  
12 pollution problems different communities are going to be  
13 targeting for doing the air monitoring, coming back to  
14 this group and having a little deeper discussion about  
15 what they're anticipating collecting, and then how we can  
16 make sure that we're making that connection back to data  
17 that would be most useful, not only for driving strategies  
18 to reduce emissions, but also, you know, potentially in  
19 parallel using it to help support a better understanding  
20 of health data and exposure at a community level.

21           PANEL MEMBER LANDOLPH: Oh, Hi, Karen. This is  
22 Joe Landolph. I'm a special appointee of Speaker of the  
23 House Anthony Rendon to the SRP. And I had a couple of  
24 questions. One is are you -- is your group following up  
25 on the Exide plant and all the horrendous arsenic

1 contamination and lead contamination down there in Vernon,  
2 which also abuts onto south L.A. down here, not far from  
3 the health science campus at USC.

4           And the other one is have you done anything about  
5 the Chromium VI, hexavalent chromium, air contamination in  
6 the Speaker's district of Paramount, where they were  
7 having difficulties getting the industrial firms to come  
8 into compliance?

9           OCAP DIVISION CHIEF MAGLIANO: So, yeah, we've  
10 been working closely with both the air district and DTSC  
11 on the Exide issues. Related to Chrome VI, obviously,  
12 there's a lot of monitoring work that's been happening at  
13 the community level. And I know that that is going to  
14 continue. But one of the things that we have also  
15 conclude -- included in our proposed statewide strategy is  
16 to go back and look at the airborne toxic contaminant  
17 control measure that we have for Chrome VI, and look for  
18 ways that we can continue to strengthen that. And that  
19 will help not only the communities in South Coast, but  
20 other communities statewide where we also see these kinds  
21 of operations happening.

22           PANEL MEMBER ANASTASIO: Hi, Karen. This is  
23 Cort. I had a question related to monitors. You know,  
24 I've done some work with various sensors and what's  
25 available. And, you know, from the South Coast and the

1 EPA evaluations, it seems that most monitors are terrible.  
2 And so that's -- you know, kind of the personal sensors  
3 that you can buy relatively cheaply. It seems that that's  
4 going to end up being a real limitation in terms of what  
5 can be measured. Have you guys come up with a list of  
6 pollutants that you think can be reliably measured by  
7 whatever sensors are available?

8 OCAP DIVISION CHIEF MAGLIANO: Sure. So one of  
9 the statutory requirements of the overall monitoring plan  
10 is for us to do an assessment of the capabilities of  
11 different kinds of monitoring technologies, you know. And  
12 that will be everything from low-cost sensors to other,  
13 you know, more research grade type instruments.

14 So we're in the midst of pulling that together.  
15 We're putting together a online resource center, where a  
16 lot of that information will reside, because we know it's  
17 a field that is constantly changing, and we want to make  
18 sure that we keep up to date with that. But you're right,  
19 at this point in time, you know, a lot of the low-cost  
20 sensors primarily are best used for measuring particulate  
21 matter.

22 There obviously is a lot of interest, in many of  
23 these communities, in understanding what's going on with  
24 toxics. And so actually CARB has a contract to see if we  
25 can do some better work to be able to develop some more

1 real-time measurements for toxics air contaminants as  
2 well. But we're also hoping that sort of AB 617 provides  
3 a little extra catalyst to continue to promote and develop  
4 a lot of these more -- I think more rigorous, real-time,  
5 broader suite of measurements that we can really use to  
6 get that more granular data at the community level.

7 PANEL MEMBER ANASTASIO: That's a big challenge.

8 OCAP DIVISION CHIEF MAGLIANO: Um-hmm. Yeah.  
9 I'll also -- go ahead.

10 CHAIRPERSON KLEINMAN: With the more granular  
11 approach, what can come out of it is sort of a qualitative  
12 overview of -- that, you know, the concentrations, for  
13 example, of total hydrocarbons, which can be fairly well  
14 measured, at least at the qualitative sense. And once you  
15 start to see areas where there are peak levels, that's  
16 when, you know, more rigorous real-time monitoring efforts  
17 can be brought to bear to actually get quantitative  
18 information.

19 So I -- you know, I think it's going to be a --  
20 you know, as it sounds, it's a developmental process. The  
21 first step is, you know, try to identify is there a  
22 problem area, and then try to localize the problem and do  
23 that, and see whether that's consistent with emissions  
24 inventories and things like that. So there's a rot of  
25 iteration and reiteration that will have to go on.



1           What I see as important, you know, having sat in  
2 on some of the community discussion, is they have a real  
3 concern about health. And they realize, you know, we've  
4 got emissions problems and exposure problems. What they  
5 really want to know is is, you know, will their health get  
6 better (inaudible).

7           And that's not something that's going to be  
8 easily answered by traditional (inaudible). So at least,  
9 you know, in the short term, what's going to come out of  
10 this are data that can be applied (inaudible). And I  
11 (inaudible) communities and as the State start to develop  
12 (inaudible) information and actually talk about what is  
13 the (inaudible) risk.

14           This is a place where our Panel can really  
15 provide some input, because we -- what we do is we  
16 evaluate, you know, risk assessment (inaudible). And so  
17 at that point, it's going to have to try to identify  
18 what's going on with this (inaudible) community. As the  
19 (inaudible) we could play a role in evaluating the  
20 scientific basis for those exceptions.

21           So I see, you know, down the road, you know,  
22 (inaudible). So we could certainly also, you know, be on  
23 the front end of talking about how do -- you know, what  
24 are good ways to manage the data that's going to come out  
25 of this, even if it's gigabytes of health, you know, data

1 coming in. How is that going to be, you know (inaudible).  
2 There are a lot of pieces to the puzzle, you know, really  
3 need to be evaluated.

4 OCAP DIVISION CHIEF MAGLIANO: And one of the  
5 things that we have included is sort of a baseline  
6 requirement for each community, as the air districts are  
7 developing the emission reduction programs, is at least  
8 pull together sort of what baseline information is  
9 available for that community, recognizing that, you know,  
10 we want to make sure the air districts continue focusing  
11 if on what they do best, which is developing strategies to  
12 reduce emissions, but at the same time, this is an  
13 incredible opportunity to be able to collect data and  
14 share data with health researchers. So sort of in a  
15 parallel effort, we can use that to really enhance our  
16 ability to understand what's going on.

17 And so I think that again goes back to the  
18 benefit of having some ongoing touch bases and coming back  
19 with this group, as Dr. Kleinman was just saying, in terms  
20 of what we're seeing in these communities, and maybe  
21 helping define some very specific topics and questions  
22 where this group would be really beneficial to help us  
23 focus in on.

24 PANEL MEMBER ANASTASIO: Karen, this is Cort  
25 again. Another question is about indoor air. (Inaudible)

1 the document is very focused on outdoor air. Have you  
2 thought about an indoor air component?

3 OCAP DIVISION CHIEF MAGLIANO: Not -- I think the  
4 primary focus to date at least has been on more of the  
5 outdoor air component, but one of the things that we have  
6 included as a potential strategy that air districts should  
7 consider is that, well, obviously we're trying to reduce  
8 pollution at the source to the extent possible. You know,  
9 there may be some cases where mitigation kind of  
10 strategies, in the short-term at least, are appropriate.  
11 And, you know, whether that might be strategies to equip  
12 more homes with air filtration devices, for example.

13 PANEL MEMBER ANASTASIO: Yeah, I just wonder if  
14 there's a real potential to reduce people's exposures by  
15 reducing their personal generation of pollutants inside  
16 the home.

17 OCAP DIVISION CHIEF MAGLIANO: And this may be  
18 another area whereas monitoring devices expand, especially  
19 ones that can capture personal exposure, you know, it may  
20 be over time that that becomes an additional component.  
21 We just want to also make sure that we don't bite off more  
22 than we can chew at the beginning of the program, but  
23 recognizing that there's a lot of different opportunities  
24 here over time that we hope to capitalize on.

25 CHAIRPERSON KLEINMAN: I think to make this data

1 really useful, the State should also have some plan, you  
2 know, for (inaudible), so that something (inaudible)  
3 environment monitoring, to actually acquire these data by,  
4 you know, (inaudible) various models, and include those  
5 models, so that we can get better ways of estimating  
6 (inaudible).

7           So one of the big things that I think the  
8 blueprint really has to improve is a very, you know,  
9 robust (inaudible) data to eventually be brought into play  
10 and put into the blueprint, so that we can, you know -- so  
11 others can access them. And I'm not sure how that would  
12 come about.

13           PANEL MEMBER GLANTZ: So this is Stan, I can tell  
14 Landolph has in mind. I think that's (inaudible)

15           OCAP DIVISION CHIEF MAGLIANO: So it was a little  
16 bit hard to catch all that, but I think, Dr. Kleinman, you  
17 were mentioning just sort of maybe accessibility of the  
18 data and how we make sure that this -- there is a database  
19 out there that researchers also can access, was that it?

20           CHAIRPERSON KLEINMAN: Yeah, that was the gist of  
21 it.

22           OCAP DIVISION CHIEF MAGLIANO: Okay. Yes, I  
23 mean, we fully expect that not only within individual  
24 communities, where there be probably data portals, data  
25 display for this, but we are also tasked at CARB to put

1 together a statewide data portal that will sort of  
2 aggregate all of the air monitoring data that's being  
3 collected as part of this. And I think we see health  
4 researchers as being one key element that we want to be  
5 able to support as part of that process.

6 PANEL MEMBER GLANTZ: Well, this is Stan. You  
7 know, of course, if you're going to do that - which as  
8 speaking as a researcher, I think it's a great idea -  
9 having some kind of standardization of the air monitoring  
10 and emissions reporting across the districts is going to  
11 be important, so you don't have an apples and oranges  
12 problem of trying to assess the -- you know, the impacts  
13 of these new policies on health, particularly in the  
14 communities that you're interested in.

15 Because if you don't have some level of  
16 consistency, then the air monitoring and emissions  
17 reporting data that you're going to use, it's going to  
18 make any kind of meaningful statistical analysis  
19 impossible.

20 OCAP DIVISION CHIEF MAGLIANO: Sure. And that  
21 was -- especially on the emissions' side, that was one of  
22 the key rationales for some of the language that was put  
23 in statute, because several years ago, there was work to  
24 try and better understand the correlation between  
25 greenhouse gas reductions, and criteria toxic reductions

1 at key industrial facilities. But when you start looking  
2 across different air districts, because the methodologies  
3 were very different, it was sometimes very difficult to  
4 then really understand why they were different, what drove  
5 changes. And so, we absolutely agree having some better  
6 standardization of data, as well as documentation on how  
7 it's collected, I think is pretty critically important to  
8 really be able to maximize the effectiveness of this data.

9 CHAIRPERSON KLEINMAN: One of the other -- you  
10 know, your third bullet point on your discussion  
11 questions, what are the most effective methods for  
12 communicating health risks to community members? I think  
13 that really does play into the (inaudible) of the SRP.  
14 And, you know, I think as we get to the point of having  
15 estimates of potential health risks, I think the Committee  
16 would be well placed to review those communications and,  
17 you know, the basis for those communications and provide  
18 some feeling for, you know, how well, you know, is the  
19 science represented, and, you know, to what extent can we  
20 have confidence in those assessments.

21 So I think, you know, I can see our frame a  
22 little from that aspect of it, you know, somewhat more  
23 substantially probably than, you know, in the direct  
24 selection process (inaudible) monitoring.

25 But anything we can do to review how these data

1 are going to, you know, be put together -- and as we see  
2 this, we might be able to come up with some suggestions of  
3 what other data or how it -- should the data be put  
4 together in a way that will help us identify exposures and  
5 potential health risks. I see that as a (inaudible) for  
6 our Panel.

7           OCAP DIVISION CHIEF MAGLIANO: One suggestion I  
8 was going to make is, you know, based on this discussion,  
9 perhaps Jim, and I, and Dr. Kleinman could talk, and  
10 perhaps take these sort of higher level questions and  
11 define some -- perhaps another layer of detail down  
12 some -- with some additional level of specificity to help  
13 guide a future discussion with the SRP, and see if you  
14 have additional suggestions as well, if that would be  
15 useful to the group.

16           PANEL MEMBER ANASTASIO: This is Cort. That  
17 sounds useful to me.

18           CHAIRPERSON KLEINMAN: And also Dr. English  
19 has -- you know, is working on, you know, the State  
20 database for health effects. And it might -- you know, I  
21 think it might be useful for the Panel to get a better  
22 understanding of how that database is put together and  
23 what -- how that can be integrated into the more granular,  
24 you know, air quality data measurements that are going to  
25 come.

1           So perhaps at a future meeting we could have a  
2 presentation from Dr. English on -- and possibly Dr.  
3 Balmes on, you know, what they see in terms of the health  
4 related side of this.

5           OCAP DIVISION CHIEF MAGLIANO: I think that would  
6 helpful. And right, as you know, we've had a number of  
7 discussions sort of along those lines at our consultation  
8 group. So I think there's a lot to draw on that could  
9 also be useful to have that similar discussion here.

10          PANEL MEMBER BUCKPITT: Karen, this is Al  
11 Buckpitt. In reading through the document, one of the  
12 things that sort of put a smile on my face was related to  
13 the issue of petition the EPA for improved locomotive  
14 standards. Do you have a plan B? Do you think you can be  
15 successful in getting the EPA to do anything?

16          OCAP DIVISION CHIEF MAGLIANO: It's a little  
17 difficult right now. That is correct. We do have a  
18 number of different sort of fronts we're working on, you  
19 know, particularly dealing with sources that are primarily  
20 under the jurisdiction of the federal government. In  
21 terms of, you know, actually putting forward standards for  
22 new locomotives, that does fall to U.S. EPA. But we also  
23 have some other strategies that we've included in the  
24 blueprint that are looking at how we may be able to  
25 address locomotive idling, for example, which oftentimes



1 can be a very, you know, near-source exposure issue, as  
2 well as how we may be able to develop some standards that  
3 look at some of remanufactured locomotives as well. So I  
4 think on all of these, it really does take several  
5 different approaches to be able to get at many of these  
6 sources.

7 And, of course, you know, as you know, I think  
8 California is not shying from continuing to push U.S. EPA  
9 and the federal government to really do what they need to  
10 do.

11 And then my last piece would be, of course, you  
12 know, we can also help incentivize the turnover of some of  
13 these, including locomotives. Even though they are quite  
14 expensive, a number of air districts do put some of their  
15 incentive funding to locomotive projects.

16 PANEL MEMBER BUCKPITT: Okay. And that makes  
17 sense too. Thank you.

18 CHAIRPERSON KLEINMAN: Any other comments or  
19 questions from the Panel?

20 Well, hearing none --

21 PANEL MEMBER LANDOLPH: Just a quick one.

22 Hello, Mike, just a quick one for Karen. Is that  
23 okay?

24 Hello?

25 CHAIRPERSON KLEINMAN: Go ahead.

1           PANEL MEMBER LANDOLPH: Oh. Karen, you have a  
2 process laid out where you have communities make  
3 proposals, and they apply for grants to help do  
4 remediation. Who are the members that you use to review  
5 those grants?

6           OCAP DIVISION CHIEF MAGLIANO: So we had put out  
7 a solicitation I think back in February or so, and  
8 received grants from over 60 different organizations. We  
9 pulled together a team of people, both internal and  
10 external, to CARB to review those different applications.  
11 And from that, they recommended a subset of those. I  
12 think, as I'd mentioned earlier, there are about 28  
13 different groups that we are looking at to be able to  
14 provide grants to. And it is a wide range of different  
15 kinds of things they're doing from, you know, fairly small  
16 scale ones to just get out and talk to community members,  
17 up to actually going out and developing their own  
18 community air monitoring networks.

19           PANEL MEMBER LANDOLPH: And does CARB itself  
20 review the grants for merit? Who do you pick to review  
21 the grants?

22           OCAP DIVISION CHIEF MAGLIANO: Yeah. So it did  
23 include staff from CARB. And then we are actually the  
24 ones that administer the grant program, and we'll enter  
25 into the grant agreements with those different groups.

1 PANEL MEMBER LANDOLPH: Thank you.

2 CHAIRPERSON KLEINMAN: Any other questions?

3 Then hearing no further questions, I want to  
4 thank the Panel and the assistance of this meeting. And I  
5 will be -- at the moment, we do not have any pending  
6 documents for Panel review until -- however, I would like  
7 to, as I said, be able to schedule another meeting with  
8 sometime coming up, probably after

9 (Clock goes off in the background.)

10 CHAIRPERSON KLEINMAN: I'd like to try to  
11 schedule another meeting eventually to hear from Dr.  
12 Balmes and Dr. English on the health side of AB 617. And  
13 until then, I hope everybody enjoys the remainder of the  
14 summer.

15 And I'm going to ask for a motion to adjourn.

16 PANEL MEMBER BLANC: This is Paul Blanc here. I  
17 move to adjourn.

18 PANEL MEMBER ANASTASIO: This is Cort. I second.

19 CHAIRPERSON KLEINMAN: Okay. All in favor?

20 (Ayes.)

21 CHAIRPERSON KLEINMAN: Okay. I think that was  
22 unanimous.

23 Anybody opposed?

24 Hearing none, I will declare the meeting  
25 adjourned. Thank you very much.

PANEL LIAISON BEHRMANN: Thank you, everybody.  
(Thereupon the California Air Resources Board,  
Scientific Review Panel adjourned.)

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## 1 C E R T I F I C A T E O F R E P O R T E R

2 I, JAMES F. PETERS, a Certified Shorthand  
3 Reporter of the State of California, do hereby certify:

4 That I am a disinterested person herein; that the  
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15 way interested in the outcome of said meeting.

16 IN WITNESS WHEREOF, I have hereunto set my hand  
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