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MEETING
OF THE
SCIENTIFIC REVIEW PANEL ON TOXIC AIR CONTAMINANTS
CALIFORNIA AIR RESOURCES BOARD

SOUTH SAN FRANCISCO CONFERENCE CENTER
255 SOUTH AIRPORT BOULEVARD
SOUTH SAN FRANCISCO, CALIFORNIA

FRIDAY, JANUARY 12, 2001
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APPEARANCES

MEMBERS PRESENT:

- Dr. John Froines, Chairman
- Dr. Paul D. Blanc
- Dr. Craig Byus
- Dr. Gary Friedman
- Dr. Anthony Fucaloro
- Dr. Stanton Glantz
- Dr. Hanspeter Witschi

REPRESENTING THE CALIFORNIA AIR RESOURCES BOARD:

- Mr. Lyn Baker
- Ms. Janette Brooks
- Mr. Bill Lockett
- Mr. Peter Mathews

REPRESENTING THE OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT:

- Dr. Melanie Marty

REPRESENTING THE DEPARTMENT OF PESTICIDE REGULATION:

- Mr. Paul Gosselin
- Dr. Bruce Johnson
- Dr. Tobi Jones
- Dr. John Sanders

OTHERS:

- Dr. Elinor Fanning

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

2 CHAIRMAN FROINES: We are a half an hour late, but
3 we have a quorum, so I think we should begin. So we'll
4 officially open the meeting.

5 The membership who are currently here are
6 Dr. Friedman, Dr. Witschi, Dr. Fucaloro, Dr. Byus and
7 myself.

8 And so we should proceed from here.

9 The first item on the agenda is the Department of
10 Pesticide Regulation, Air Resources Board response to the
11 panel's recommendation on air monitoring of pesticides.

12 And so I think we should begin with that.

13 I think this issue actually is going to have --
14 it's going to come up again when we talk about
15 prioritization. But why don't we begin at this point.

16 And just to catch up the panel, we sent
17 recommendations to Paul Helliker, who is the director of the
18 Department of Pesticide Regulation, and Mike Kenny, the
19 executive officer of the Air Resources Board, on January
20 5th, 2000.

21 So it's been a year with our recommendations on
22 monitoring, and that follows from the exposure workshop that
23 we held some time earlier. So this is the first opportunity
24 we've had to address those issues.

25 And does everybody have those recommendations?

1 Those recommendations, I think Paul and his
2 colleagues are going to go through.

3 MR. GOSSELIN: Thank you. Want me to get started?

4 CHAIRMAN FROINES: Yeah. I'm stalling slightly,
5 because I really would like to have Stan and Paul here, but
6 why don't we begin.

7 MR. GOSSELIN: Thank you, and happy new year.

8 What we're presenting today is the response to the
9 list of recommendations that came out of the workshop from
10 November of '99.

11 And as Dr. Froines mentioned, it is the
12 discussion, the first part, on the monitoring
13 recommendations, and how we respond to that does directly
14 relate to the second part of the discussion on our overall
15 prioritization on monitoring and initiating risk assessments
16 or TAC documents.

17 So one of the things we've been sort of kind of
18 thinking about is how to make this presentation and keep all
19 these things tied together.

20 We do have in the presentation a sort of a
21 step-forward process based upon the letter that was sent
22 last January, a year ago, and responding directly to that.

23 But we do have some supplemental presentations
24 that do directly relate to both issues, one on a
25 multi-screen monitoring program that we worked on with ARB,

1 and also an example of the modeling approaches we've used
2 for some fumigant pesticides as an example of that approach.

3 So with that, I'll turn it over to John Sanders,
4 who is the branch chief of Environmental Monitoring and Pest
5 Management.

6 We also have Lyn Baker here closely who worked
7 very closely with us on this whole set of recommendations
8 and our monitoring approach.

9 DR. SANDERS: Thank you.

10 We're covering four topics briefly today.

11 We realize that as kind of a starting point that
12 we've been in a move situation over the last month and the
13 holiday, and we also have phone problems, so we haven't
14 necessarily touched base with the panel members as much as
15 we'd like to on some of these topics, but at least we have a
16 starting point here.

17 I'm going to make the presentation on our response
18 to the recommendation on air monitoring.

19 Tobi Jones will do the update on prioritization.

20 Bruce Johnson will do an example of the computer
21 modeling.

22 And then I'll come back and do a brief little bit
23 on Lompoc as an example of multiple pesticide monitoring.

24 CHAIRMAN FROINES: John, question. Does that mean
25 that you're -- that the presentation that we're about to

1 begin is we're combining agenda items 1 and 2?

2 MR. GOSSELIN: Somewhat. But we're making a
3 natural break when we go into the prioritization, agenda
4 item number 2. Dr. Tobi Jones will come up and go through
5 that agenda item. So for the record there will be a break
6 in the presentation.

7 CHAIRMAN FROINES: Okay. Let's just make sure
8 that we make it clear so that we are following the agenda as
9 it's been defined.

10 DR. SANDERS: Next overhead, please.

11 Next one, please. That's just the title.

12 Okay. As a little bit of background, already
13 mentioned that the workshop was in September of '99 and that
14 the panel did produce findings and recommendations in which
15 these recommendation are responding to those findings and
16 recommendations.

17 Question came up, I think one of the previous
18 meetings, about what the law says about monitoring.

19 It's pretty brief. It says, "at the request of
20 the director, the State Air Resources Board shall document
21 the level of airborne emissions."

22 So basically we have a lot of freedom to do
23 different things, but that's kind of the extent of what the
24 law talks about in terms of monitoring.

25 Next overhead, please.

1 One of the recommendations of the panel was that
2 DPR should consider basing exposure assessments for TAC
3 listing documents on application site monitoring results
4 only.

5 And our response to that is that first of all the
6 recommendation requires reliable computer modeling. We do
7 have extensive application site experience air modeling,
8 particularly with for mitigation measures for some of the
9 fumigants. We have more confidence in that type of modeling
10 and we have a little less confidence in the ambient
11 situation, although we have worked with registrants who have
12 done some of that.

13 DPR plans to use application site data and
14 computer modeling to estimate air concentrations.

15 We also plan to compare ambient monitoring to data
16 to computer modeling estimates. So we continue, we plan to
17 continue doing the ambient monitoring as well as the
18 application site monitoring.

19 However, based on the computer models and the
20 actual ambient data, we may supplement the monitoring data
21 with computer modeling.

22 Next overhead, please.

23 CHAIRMAN FROINES: Can we stay with that, because
24 I think that represents a fundamental issue of our -- in
25 terms of our recommendation.

1 And the reason why it's so important is that in
2 your -- and this takes us right into the prioritization --
3 it seems to me that the first question that one can ask is
4 why.

5 The second question, of course, is how.

6 And the third is how much.

7 And fourth is what are the time table.

8 But the first question, it seems to me, is why do
9 we do monitoring. In other words, what purpose does it
10 serve.

11 Now, I'd be interested in learning in terms of the
12 ambient monitoring what the answer to the why question is.
13 What does it -- how does one -- one does ambient monitoring
14 and then one has to decide what use is that data that you
15 collect, what is its value for what purpose. Is it not
16 something we just need to store in some computer database,
17 it's something that presumably one would want to use in
18 some capacity.

19 Now, the second, the application site monitoring,
20 I think the why question is extremely clear, to me anyway,
21 to me, and that is that in terms of your prioritization
22 process you prioritize pesticides for purposes of risk
23 assessment for subsequent designation as TACs.

24 So within your own document on prioritization, you
25 define one goal is for the purpose -- one goal in dealing in

1 prioritization is to address the subsequent -- the risk
2 assessment and subsequent designation of toxic air
3 contaminant.

4 Okay. If one then says we are going to do a risk
5 assessment, then the question is -- and if the designation
6 of a toxic air contaminant is based upon a comparison
7 between the risk and the exposure, which you've -- which is
8 the way you approach it through the MOE, then the question
9 comes is that exposure number becomes one of the fundamental
10 issues in defining that risk assessment and the subsequent
11 designation.

12 So that the exposure monitoring, the answer to the
13 exposure monitoring question for the risk assessment is
14 precisely to determine whether or not a substance should be
15 declared a toxic air contaminant.

16 So that exposure number is central to the entire
17 process, and that's where the recommendation for application
18 site monitoring arose from, that conceptual framework. In
19 other words, this panel thinks that we should see the worst
20 case situation, and that should be the basis we use for
21 designation of a compound as a toxic air contaminant.

22 In other words, to simply take some average
23 ambient value is not -- doesn't fit into the use of the data
24 in the context of risk assessment and designation as a TAC,
25 and therefore the role of application site monitoring

1 presumably is to define a worst case scenario, and to then
2 proceed on the risk assessment on that basis.

3 So that's really where I think we're coming from.

4 And I'm looking at Stan and Craig and others to
5 see if they want to comment on this.

6 And so this recommendation has a deep foundation
7 underlying it.

8 DR. FUCALORO: This is different, DPR works
9 differently than ARB in the fact that it does use exposure
10 data as part of the risk assessment. And I think that's
11 your point in a nutshell.

12 But the computer modeling that you discuss here,
13 is that a ab initio modeling, is it a semi-empirical
14 modeling, what data goes into the modeling? Maybe I need to
15 see what the modeling formula is.

16 Do you use empirical wind velocities, do you use
17 standardization by measuring it against things you actually
18 observed in order to fix parameters, for example?

19 I don't know the answer to that question, those
20 questions.

21 MR. GOSSELIN: Actually we're going to have a
22 somewhat a little bit more detailed discussion on the types
23 of computer modeling that's done and it does utilize some
24 default, some real weather data, some empirical data from
25 the field.

1 But back to Dr. Froines' comment on this point, I
2 tend to agree with the fact about the role of monitoring in
3 our assessments.

4 I think one of the things that when we get into
5 the prioritization scheme that is somewhat of a shift in
6 emphasis on prioritization and getting into defining what
7 criteria we use to initiate documents, that although
8 monitoring data is going to be very important in our
9 assessment, in the past I think we've all had discussions
10 here that it seemed to overshadow or become sort of the
11 predominant factor on whether we should move forward with
12 either going forward with the document or once we go forward
13 with the document whether we should list or not.

14 And I think we've had somewhat of a change in
15 philosophy and emphasis of the empirical data that comes in,
16 because I think we've seen through example that some of the
17 documents that came forward, that empirical data that we
18 used that became very old at the time was based upon the
19 worst case, but as we sat here ten or more years later, did
20 not represent the worst case.

21 So it really made us all struggle about here's
22 material that has a certain tox profile and trying to factor
23 in the exposures with the big question mark, because use
24 practices have changed and uses have changed and there isn't
25 data to match that.

1 And so that's where the application site
2 monitoring and computer modeling is going to help establish
3 some of that worst case scenario and allow us that if use
4 practices do change by the time the document gets done to be
5 able to maybe model up and project what's actually occurring
6 now.

7 CHAIRMAN FROINES: I think that the issue I'm
8 trying to raise is that one needs to establish a framework
9 where one has some sense of the distribution of airborne
10 concentrations, and then one seeks to use, for example, the
11 90th percentile within that distribution as the basis for
12 the risk assessment and subsequent designation.

13 So it's really trying to answer the question how
14 best can you do monitoring to determine a reasonable
15 distribution of air concentrations, and then what is the
16 policy decision that you would then make in terms of which
17 of the percentiles. I mean you could choose the lower ten
18 percent or the 90th percentile or the 50th percentile, and
19 we probably would have opinions about that selection, your
20 worst case probably would be a 90th percentile, 95th
21 percentile value.

22 And so it's an issue in terms of looking at the
23 questions scientifically in terms of variability, the
24 distributional issues become very important, so we need to
25 be able to develop protocols that enable us to develop those

1 distributional frameworks so that we can then make decisions
2 associated with that.

3 Stan.

4 DR. GLANTZ: I missed the beginning of the
5 discussion, and so I apologize, but when we talked about
6 computer modeling at the meeting a few months ago, I had
7 assumed that these models are very well developed and well
8 validated, based on the experience that we had when we were
9 working with ARB and the distribution of the kind of things
10 they were regulating. I mean, I just wanted to make sure
11 that there's nothing about pesticides or pesticidal
12 applications that would be any different than what we dealt
13 with before. Is there?

14 Let me ask it as a question, is there anything
15 about pesticides or pesticidal applications that would be
16 any different than the kind of models we've been used to
17 seeing for some years that ARB has been using?

18 DR. SANDERS: We use similar models or the same
19 models that they do.

20 DR. GLANTZ: So those are pretty well validated
21 models too, aren't they?

22 MR. BAKER: Dr. Glantz, Lyn Baker, from the ARB.
23 I'd like to respond to that also.

24 The models are certainly well validated from other
25 uses, but in this type of a situation where we would be

1 using application site data to back-calculate an emission
2 rate to put into that dispersion model, if we're only using
3 one or two application site studies as the basis for that
4 emission rate, there's tremendous uncertainty and
5 variability in that emission rate term, which is crucial to
6 what the model predicts.

7 CHAIRMAN FROINES: That's precisely my point. My
8 point is precisely that we need to define protocols that
9 enable us to capture the data so we can do what Stan is
10 talking about.

11 DR. GLANTZ: So what you're saying, just so I can
12 understand this, is that if you take the models we looked at
13 before in the context of, say, a point source or something
14 like a smokestack, you knew pretty much what the emission
15 rate was because you could just put a sensor on the
16 smokestack or something, whereas when you're talking about
17 pesticides, what you know is that they put a certain number
18 of pounds per acre on the ground or in the ground or above
19 the ground, but you don't know how that translates into an
20 emission rate as if that pesticide was coming out of a
21 smokestack, which is the variable you need to stick into the
22 model to do the calculations.

23 MR. GOSSELIN: Right.

24 DR. GLANTZ: Is that an accurate statement?

25 MR. GOSSELIN: That's exactly it.

1 The modeling we have done, we've employed the same
2 model that the Air Board and US EPA uses, but then needed to
3 use data to establish an emission factor, how much is the
4 off-gassing rate, and then also factor in the size of the
5 field.

6 And we'll have more detailed technical discussions
7 on it, but I'll tinker with the model to establish that
8 field size almost as a stack, as a point source which does
9 take some manipulation of the model, which we have done for
10 some fumigants.

11 So it can be done, but there are some nuances on
12 changing the model to make it fit, but essentially looking
13 at a field application as a point source and trying to
14 determine the emission rate off of that field and factoring
15 back the size.

16 DR. FUCALORO: Maybe I have it wrong, but wouldn't
17 it be useful to have some data points, monitoring data
18 points to calibrate the model in these particular cases?

19 And I think that goes somewhat to what John was
20 saying.

21 MR. BAKER: In terms of extrapolating this
22 application site data to model a wider area, like what we
23 are proposing to do, you're certainly right, that's why you
24 need the ambient monitoring to compare with the model
25 predictions to know if you're in the right ballpark.

1 CHAIRMAN FROINES: You know, we spend a lot of
2 time down where I am looking at issues of traffic density
3 and what happens on freeways from diesel --

4 DR. FUCALORO: Are you in LA?

5 CHAIRMAN FROINES: And so, you know, we use a
6 Cal-line model when we're dealing with line sources. And so
7 I think that to squash everything into a point source
8 dispersion model may not be the most appropriate approach,
9 and one has to look at that issue, I think, in a more
10 expanded way.

11 Gary.

12 DR. FRIEDMAN: John, I'd just like to clarify
13 something.

14 When you talk about the worst case scenario in
15 these applications, are you talking about workers actually
16 in the fields where they're applied or you talking about
17 people who are nearby in towns, or both?

18 CHAIRMAN FROINES: I think that our jurisdiction,
19 and DPR has jurisdiction for workers, but I don't think
20 that's within the context of this panel, so I think it's
21 really the public exposure as opposed to the occupational
22 exposure.

23 I think that's fair.

24 DR. FRIEDMAN: Who is responsible for the
25 occupational exposure?

1 CHAIRMAN FROINES: DPR.

2 DR. FRIEDMAN: Why is that not within our purview
3 then?

4 CHAIRMAN FROINES: Because we're operating under
5 AB 1807, which deals with public health associated with
6 public exposure to toxic air contaminants. I don't know if
7 we're excluded from dealing with occupational situations.
8 I'm not a lawyer.

9 Bill, are you coming here to -- I thought you were
10 coming here to help.

11 DR. BLANC: Although, just to clarify, or to murky
12 it up, in agriculture specifically, of course, there are
13 situations where the employer-employee relationship is not
14 straightforward and where there are people who in another
15 context we might think of as being employees, but are not
16 covered by the standard Occupational Safety and Health
17 restrictions.

18 One example being migrant workers and their
19 families who live at the edge of a field, so even though
20 we're not directly dealing with exposure scenarios that some
21 of the exposure scenarios on face value would seem to be
22 more relevant to the occupational arena, but in fact would
23 be relevant to public exposure, for example exposure at the
24 edge of a field.

25 Is that a safe thing to say?

1 CHAIRMAN FROINES: I would argue that, Paul, if we
2 had a family living near a field that's being sprayed, that
3 that fits within the jurisdiction of the things --

4 DR. BLANC: That's what I'm trying to say.

5 So that even though one would normally say that's
6 really an occupational issue, what are the exposures very
7 close to the site of application as opposed to drift that's
8 three miles away, and then we in fact we have the example of
9 a school that was on the edge, virtually on the edge, of a
10 field, so that we're not limited in on a worst case
11 scenario by saying the worst case scenario is X meters
12 away.

13 CHAIRMAN FROINES: My aunt in Sonoma lived next
14 door to a field, and they sprayed it very frequently, and
15 they had quite significant exposures, because they were
16 literally absolutely contingent.

17 DR. BYUS: I have a question about the ambient
18 modeling. You're using application data and then you're
19 going to model ambient levels using the computer models?

20 MR. GOSSELIN: Right.

21 DR. BYUS: You're not going to take the ambient
22 levels and go backwards and assume that without application
23 data?

24 MR. GOSSELIN: No.

25 DR. BYUS: We're not going to do that?

1 MR. GOSSELIN: No.

2 DR. BYUS: See, what I'm saying? Which would be
3 worse than what it is you're planning on doing.

4 But I still -- I guess I've said this before, but
5 even the application site data has significant limitations,
6 which you pointed out to us. I mean, it's very limited,
7 maybe because of the way you have to do it and the way you
8 have to obtain the data, it's very much less than the ideal.

9 MR. GOSSELIN: Right.

10 DR. BYUS: That's what I'm saying.

11 But to finish my statement, that's okay, in order
12 to really validate that computer modeling, I'm not sure the
13 application site data as you gather it is going to be
14 sufficient to validate those computer models.

15 I've said this before, the only way I think you're
16 going to validate that computer modeling is to actually do a
17 controlled application site where you generate the -- you
18 set up a field and spray it yourself and collect enough data
19 to validate the computer model.

20 Or you can correct me if I'm wrong.

21 MR. GOSSELIN: Actually the application site
22 monitoring is it's a real world, but it's controlled,
23 because we have people there and the protocols set out and
24 we know what -- it's a real-world situation with either some
25 grower or pest control operator actually doing it, but, you

1 know, there's control set on exactly what the rate was, the
2 acreage and the monitoring. So all things being equal, all
3 that sort of control data is collected and I think --

4 DR. BLANC: Paul, that's actually not precise.
5 That may be true related to the field site application data,
6 but it's not been true for any of the environmental data
7 that you've presented, and your representatives have made
8 clear in the past that in fact you couldn't actually say
9 whether something was being applied at the time that they
10 were monitoring a mile away or two miles away --

11 MR. GOSSELIN: That was for the ambient.

12 DR. BLANC: That's what I'm saying, yeah.

13 And you're -- to validate the models, which would
14 be really used to predict ambient and not the field level,
15 you need to do what Craig is saying.

16 DR. BYUS: What do you think about it? I would
17 ask you that, if it is sufficient, the application site data
18 that's collected now, is it sufficient to validate the
19 computer model?

20 MR. BAKER: I believe that it is. Because they
21 are applications that are conducted with the knowledge of
22 the grower applicator and they know that we're there
23 monitoring around the perimeter of the field.

24 If they don't use the maximum allowed application
25 rate, we can bump up the monitored concentrations by the

1 difference in the ratio and in the monitoring comparison
2 with the model validation where we would compare the ambient
3 measurements with the ambient modeled concentrations.

4 We can put into the model the actual fields that
5 were applied during the monitoring period after -- because
6 after the fact DPR can get that pesticide use information,
7 so we can put in the model the different 10- or 20-acre area
8 sources that are all off-gassing with the worst case
9 emission rate and then predict at the actual points of the
10 monitoring locations of what are the model concentrations
11 and then compare the model predictions with the
12 measurements.

13 DR. GLANTZ: Have you -- I presume you've actually
14 done this at least some number of times. How many times
15 have you -- I have to admit that when we were discussing
16 this before, I actually thought this had already been done.
17 I didn't realize -- I just assumed these were well
18 established, well-validated models.

19 So I have two sort of related questions.

20 One is how many times have you done just that to
21 validate the model in real-world situations?

22 And then the second related question is how much
23 more do you think you'll have to do it, so that you can just
24 say, okay, we believe that this is a well-validated general
25 model that we can just go out and use now and be pretty

1 confident about the results?

2 MR. BAKER: The industrial source complex model,
3 which has been the EPA-approved model for this application,
4 and has now been superseded by a new model called Air Mod,
5 both models have been validated for multiple sources and
6 then compared with concentration measurements downwind.

7 Almost all of those model validation studies have
8 been done with point sources rather than area sources, such
9 as agricultural fields.

10 So very little has been published, and we have
11 done very little actual model validation work with multiple
12 area sources. That's why we don't have that much experience
13 doing this yet.

14 DR. GLANTZ: Have you done any -- because it
15 sounded from what you were saying before like you've at
16 least done this a little bit, talking about area
17 applications of pesticides. I, mean how many experiments
18 have you gone out and done basically what Craig said, where
19 you looked at actual applications to a field, done
20 predictions, looked at what the measurements are and seen
21 how well they agreed?

22 MR. GOSSELIN: With the only real example we have
23 is what we did with methyl bromide where we had, was it 32
24 or 34 controlled application site monitoring studies where
25 we had weather data and all the other data points to fit

1 into the model, and then also coupled with some ambient,
2 historic ambient data that ARB did.

3 Over the last couple years a lot -- and then we
4 did do some follow-up validation on that, and staff are
5 making some adjustments on that approach and kind of a
6 couple of things that did come out.

7 One is the critical nature about making some very
8 explicit decisions about, you know, are you looking at the
9 90 or 95th percentile on the weather factors on the worst
10 case and then trying to factor in some estimate on the
11 number of fields being used in a given area and some of
12 those modeling exercises.

13 We found over the last two years that we're at a
14 point now where this sort of approach is going to be
15 enormously useful as a tool to provide good assessment
16 information, and we're looking to try to take what we learn
17 from this approach and standardize it as a standard type
18 approach where we are going to need some specific data sets
19 on emission factors from the different pesticides and a
20 number of the other factors.

21 But the one thing we did learn is that there is
22 going to be a huge huge limitation and uncertainty if we're
23 only dealing with one or two even under the strictest
24 controlled application site monitoring data sets on the
25 variability as to what may be occurring from plugging in the

1 emission factor.

2 So to kind of sum up is that -- go on, Tony.

3 DR. FUCALORO: I'm just confused. I'm still
4 not -- maybe it's just I haven't followed because I haven't
5 thought about it, frankly, these computer modeling, until
6 what John kind of got me thinking about it. I'm not exactly
7 sure what's the input to the model and what's the output to
8 the model.

9 You say emission factor. I don't know what that
10 means. Do you mean grams per unit time dispersed? I mean,
11 what is the input, what is the output? And I think that's
12 pretty much what I kind of really need to know.

13 MR. BAKER: Just in general, the inputs are
14 emission rates in grams per second per square meters as in
15 this case, since it's not a point square.

16 DR. FUCALORO: Per square meter of application?

17 MR. BAKER: Right. And metrological data.

18 DR. FUCALORO: Which is wind speed?

19 MR. BAKER: Wind speed and atmospheric stability.

20 DR. FUCALORO: And there are no parameters which
21 are indicative of the substance itself?

22 MR. BAKER: No.

23 DR. FUCALORO: In terms of the density or any --
24 not that I don't think that would matter much, but just out
25 of curiosity.

1 MR. BAKER: The output is the concentration at
2 different distances downwind of the source in micrograms per
3 cubic meters.

4 DR. FUCALORO: That doesn't matter. That's true.
5 It's just simply -- there are no factors to calibrate based
6 upon empirical data?

7 MR. BAKER: No.

8 DR. FUCALORO: I just want to --

9 DR. GLANTZ: I just want to go back to the
10 question I had before. I mean, I don't mean to beat a dead
11 horse, but I just want to make sure I understand.

12 I mean, would it be a fair statement, is the
13 following a fair statement, that you have models which you
14 are quite confident in that you would use to estimate
15 off-site exposures if you had accurate metrological data and
16 knew what the emission factor associated with the
17 application of a certain amount of pesticide per acre was?

18 DR. SANDERS: Yes. But the confidence in those
19 predicted concentrations go down as you get farther and
20 farther away from the application site.

21 DR. GLANTZ: Well, sure. That's true, that's
22 implicit in any model.

23 But basically, so the basic model is something
24 that people are satisfied with, and that the problem that
25 you have is just knowing what these emissions factors are,

1 which would allow you to convert putting a pound of
2 pesticide per acre into how much stuff actually is in the
3 air as if that field was a big smokestack?

4 DR. SANDERS: That's correct.

5 CHAIRMAN FROINES: Can I ask a question?

6 DR. GLANTZ: Let me ask one other question.

7 So how hard -- so that's good, because that's
8 closer to what I thought was the case.

9 Now, how hard is it to get that number? I mean,
10 the meteorological data is out there, that's not a problem.

11 How hard is it to get that emission factor for a
12 given pesticide?

13 DR. SANDERS: It's based on back-calculation that
14 we use when we used -- we measure air concentrations --
15 there's two ways of getting it.

16 One, you can measure -- try to estimate it
17 directly from an actual application, which is pretty costly
18 and has been done in a limited sense for some pesticides.

19 But generally what we try to do is we capture air
20 concentrations out from the field and then use the model to
21 back-calculate to an emission factor.

22 DR. GLANTZ: Then, what, so what you're saying --
23 what you're saying --

24 DR. FUCALORO: That's how you calibrate the
25 estimate. That's a calibration. And I mean to say that

1 that's an accurate emission factor is a leap of faith.

2 DR. GLANTZ: In other words, what you would do if
3 we're talking about pesticide A, and you want to use your --
4 the model to, you know, to estimate exposures, off-site
5 exposures, what you would then do is you would go out and
6 apply pesticide A somewhere, where you could measure --
7 where you knew what the meteorology was, and you had a
8 monitoring network, and then you would get the data and then
9 figure out what is the emission factor that gets you the
10 things that you measure.

11 DR. SANDERS: That's correct.

12 DR. GLANTZ: That isn't something that you can
13 measure in a laboratory or the manufacturer tells you?

14 DR. SANDERS: We don't believe so.

15 DR. FUCALORO: No, but there is a plausibility
16 argument one could make. I mean, one knows the vapor
17 pressure of the material, presumably, and also a Henry's law
18 constant if in fact it's dissolved in a liquid; right?

19 MR. BAKER: Yes and no. For methyl bromide what
20 DPR has done a great deal of modeling and monitoring with,
21 it's applied pretty -- with some minor modification -- or
22 minor variability, it's basically injected into the soil.

23 Many of these other pesticides may be applied as
24 an emulsifiable concentrate or by a ground rig or a
25 aircraft. So there's so many differences in application

1 rate and application method that that leads to different
2 emission rates, and that definitely complicates trying to
3 estimate an emission rate.

4 CHAIRMAN FROINES: I just want to make one comment
5 about meteorology, and it stems from our experience in Los
6 Angeles in looking at traffic density issues.

7 We spend a lot of time looking at the meteorology
8 around roadways over a year period, and we've developed
9 distributional graphs to demonstrate that. And so we know
10 how often the wind is coming from this direction versus the
11 off-shore flow in the evening, for example. And we know how
12 much is coming from what varying directions, so we have a
13 fairly comprehensive picture of what happens both in a
14 diurnal fashion, but also over a year of measurement.

15 So we have some confidence in how bad the wind can
16 be on relative to most days that people are measuring it.

17 And so that the meteorology turns out not to be a
18 trivial issue, because the fact if you do some application
19 site monitoring, you happen to measure wind direction and
20 wind speed on that particular day, that doesn't necessarily
21 tell you what you really need to know.

22 If you really do believe that for the calculation
23 of an MOE you want some measure of a worst case scenario
24 that says this is what it could possibly be in order to
25 maximize public protection, we need to look at it from that

1 standpoint.

2 So there are clear policy decisions about how to
3 approach it, but the scientific issues really require a fair
4 amount of information to be able to accurately define those
5 distributional issues around which you -- and then end up
6 doing your modeling --

7 DR. GLANTZ: No, no, that's not quite right, John,
8 because there's really two different -- it may come down to
9 what you mean by modeling.

10 CHAIRMAN FROINES: Right.

11 DR. GLANTZ: But what I talk about modeling, what
12 I talk about is a set of equations or computer code or
13 something where if you put the right inputs in it will give
14 you a good prediction of what it is you're trying to
15 measure.

16 And I was trying to ascertain how close are we to
17 having that for pesticides.

18 And it sounds to me like we've got good models.

19 The hard part is getting the emission rate to put
20 into the model.

21 So that seems reasonably under control.

22 What you're raising is a different issue, which is
23 sort of how do you use the model in order to do this
24 estimate of what is the worst case by putting in a
25 distribution of weather conditions and distribution of other

1 input variables and then you got a distribution out of
2 concentrations or exposures, and to do that you need to know
3 what a reasonable distribution on the metrological
4 conditions is.

5 But I take it from what Lyn said, that that isn't
6 the problem. They have that information.

7 CHAIRMAN FROINES: I'd be highly skeptical of
8 that.

9 MR. BAKER: For doing the longer term modeling
10 there's usually metrological data available.

11 But Dr. Froines is making a very valid point that
12 the application site data or the application site monitoring
13 is done for three days during and following an application.
14 If that metrological -- if the metrological conditions
15 during which that monitoring was conducted are not typical,
16 maybe they're -- it's windier, there's more dispersion than
17 usual, then the concentrations are going to be lower, the
18 back-calculated concentration that we would use as an
19 emission rate will not represent worst case.

20 DR. GLANTZ: That should be --

21 DR. BLANC: But you're applying the actual
22 meteorological conditions at that time, which you take into
23 account if the model has already been validated --

24 DR. GLANTZ: That's right. If the model -- if the
25 model's an accurate model, as long as you've got a

1 reasonable measure of the meteorological conditions at the
2 time of the application, it shouldn't matter what the
3 weather is, as long as you know what the weather is and that
4 the model is capable of describing that.

5 So if you have unusual -- I mean, that to me was
6 one of the whole reasons that we were suggesting a more
7 modeling approach is because as long as you validated the
8 model, your decision making isn't so tied to what happened
9 to happen the day or two you actually went out and took the
10 measurements.

11 DR. BLANC: Is the --

12 DR. GLANTZ: So I mean is that all correct? I
13 mean, as long as you go out and measure what the weather
14 is --

15 MR. BAKER: Which we do.

16 DR. GLANTZ: Then it doesn't really matter what it
17 is in terms of the ability of the model to be used more
18 generally.

19 MR. BAKER: We might have to make some additional
20 conservative assumptions.

21 DR. SANDERS: It depends on how you want to use
22 that data.

23 For example, when we have put mitigations measures
24 together for Telone because there's different weather
25 conditions or meteorological conditions in the winter versus

1 the summer, we have different restrictions. For example, we
2 restrict the use or the application of it in December or
3 January in certain areas of the state because we know it's
4 over very stable conditions and those concentrations build
5 up.

6 DR. GLANTZ: But you're not saying that you need a
7 different model in the winter or summer?

8 DR. SANDERS: No.

9 DR. GLANTZ: Okay. That's the important point is
10 if you have a validated model, then I mean -- and that again
11 gets back to why it seemed to me that using computer
12 modeling was a good idea, because then rather having to say,
13 well, we can't do anything in the winter or the summer until
14 we have gone out and measured in the winter and the summer,
15 if you have a good model you know what emission rate you
16 should be using and you know what the weather is, then you
17 can figure out, without having to go out and do additional
18 measurements, what the conditions would be, and then develop
19 our regulations accordingly.

20 DR. BLANC: Isn't the issue here in part that the
21 worst case scenario, that term that we keep using, would be
22 if all of the pounds per acre of the pesticide applied were
23 to go up a smokestack as a fairly rapid emission?

24 MR. GOSSELIN: Yeah. The factor would be of a
25 default of a 100 -- the factor usually would be one,

1 essentially.

2 DR. BLANC: Right.

3 MR. GOSSELIN: 100 percent.

4 DR. BLANC: Wouldn't it make sense for this
5 committee, when you bring forward documents, to have as one
6 piece of the document the worst case scenario, which is the
7 smokestack calculation?

8 DR. SANDERS: An artificial, automatically each
9 one --

10 DR. BLANC: It can't be any worse than that, can
11 it?

12 DR. SANDERS: Right.

13 DR. BLANC: If we really want to see -- because I
14 would say that as a panel member, if you want to bring
15 forward a pesticide and convince me that it's not a TAC
16 because the exposure levels are too low to trigger a
17 reasonable exposure level in terms of adverse health
18 effects, then you should show me what the default smokestack
19 exposure level would be, given what a heavy use would be,
20 and given the assumption that there would be people living
21 in close proximity to the edge of the fields. That's --

22 DR. FRIEDMAN: Isn't the smokestack too extreme,
23 because when you are putting something on the field it's
24 never quite that concentrated.

25 DR. BLANC: If you want to prove to me the

1 negative, I want to see the worst -- it is extreme, but I
2 want to see the most conservative from a public health point
3 of view --

4 DR. GLANTZ: Would that really --

5 DR. FRIEDMAN: I'm not sure that's reasonable to
6 make it that extreme.

7 MR. GOSSELIN: We have in the past used, you know,
8 other empirical defaults using the highest value of other
9 compounds we may have and a lot of them are gases, that
10 would be based upon some other established values that could
11 be used as defaults.

12 So using surrogate data as defaults that are at
13 least as long as they're reasonable, but overly probably on
14 the conservative side isn't a bad idea. And we do have --

15 DR. GLANTZ: Is the smokestack the most
16 conservative thing, because it seems to me let's say you've
17 got a big field, a ten-acre field, and you put the
18 smokestack in the middle of the field, you're out of the --
19 you're getting probably lower concentrations.

20 MR. BAKER: I don't think that -- I don't think
21 Dr. Blanc meant it would all go up a little point source.

22 I think you meant it would all go --

23 MR. GOSSELIN: Hundred percent on --

24 DR. BLANC: From what you said in your models
25 there isn't a piece of those models which is the size of the

1 smokestack, or is there?

2 MR. BAKER: This modeling will be modeled --

3 DR. BLANC: Not this model. In standard modeling.
4 Standard point source modeling, does it include, you know,
5 diameter of the smokestack?

6 MR. BAKER: It does.

7 DR. BLANC: So you could put the diameter of the
8 smokestack to be the diameter of the field; couldn't you?

9 MR. BAKER: Yeah. But we will be using this model
10 as an area source model rather than as a point source model.

11 DR. BLANC: But I'm asking a sort of mind
12 experiment question. What's the worst -- what would give
13 you the highest value?

14 MR. GOSSELIN: Hundred percent emission factor.

15 DR. BLANC: Hundred percent emission factor
16 using -- a very big --

17 MR. GOSSELIN: Whatever the --

18 DR. BLANC: A very small smokestack, but --

19 DR. FUCALORO: Again, explain to me what a hundred
20 percent emission factor is? You told me an emission factor
21 was a rate per unit, time per unit area. So what now -- why
22 are we talking about percent? I don't understand.

23 DR. SANDERS: Hundred percent just means that the
24 total amount applied to the field, hundred percent emission
25 would be that all of those pounds or all of those grams

1 would get into the air.

2 DR. FUCALORO: But isn't the important thing is in
3 what period of time?

4 DR. SANDERS: We have to make some assumptions
5 about how long it takes to do that.

6 DR. FUCALORO: Doesn't the -- well, I don't know
7 the model, and there's some things that confuse me quite a
8 bit about it, in the description. It's the amount of
9 evolution from the ground per unit time per square meter.

10 MR. BAKER: Right.

11 DR. FUCALORO: Isn't that right?

12 I don't understand the term a hundred percent. I
13 don't know what that means in that context.

14 DR. SANDERS: This all comes out over a period of
15 time and some pesticides come out -- go into the air more
16 quickly than others, as a function of physical chemical
17 properties.

18 DR. FUCALORO: Yeah.

19 MR. BAKER: Some you would not -- you would not
20 assume that hundred percent of it ever was emitted, so to
21 make the hundred percent assumption would be a health
22 protective assumption.

23 DR. FUCALORO: Hundred percent, but in a given
24 time.

25 CHAIRMAN FROINES: I think that Paul's point is

1 well taken and it fits into the context of what we use these
2 risk assessments and monitoring data for.

3 The only cautionary note I think we would want to
4 apply is we don't want you to do on a emission factor that
5 is ludicrous, to follow Gary's point of view, so that one
6 could argue it had no meaning whatsoever, and everybody
7 looked like idiots by pursuing it.

8 So there has to be some sense of realism, as well
9 as -- so that it doesn't appear to be something that you
10 would ridicule, so but it has to have enough merit therefore
11 that when you go out and actually make measurements that
12 you're going to be within some reasonable order of magnitude
13 within the process.

14 I think -- Gary, does that capture what you're --
15 DR. FRIEDMAN: Yeah. Thank you.

16 DR. BLANC: I mean, it's analogous, let's say, to
17 you coming forward with a chemical and saying this is not a
18 laboratory carcinogen because we gave it to five test
19 animals and none of them developed cancer.

20 And then Stan says, well, based on sampling error,
21 the rate, you know, of cancer could be as high as 20
22 percent, or whatever number he would tell you based on that.

23 And this is sort of the same issue. I'm just
24 saying when you come to us and try to convince us that a
25 pesticide X is not -- does not meet the threshold for being

1 a toxic air contaminant, my wish is going to be to see
2 conservatively estimated exposure levels, conservative from
3 a public health protection point of view, which makes
4 certain assumptions about worst case scenarios, and that's
5 been one of the problems, quite frankly, with the data
6 that's come forward to us up to date. The presumption is
7 that these are hazardous materials, given what their use is
8 in first place, until proven otherwise.

9 DR. GLANTZ: Not to beat a dead horse, and we're
10 kind of stuck on number one, hopefully we'll get on to
11 number two.

12 CHAIRMAN FROINES: Number one is actually the
13 fundamental one.

14 DR. GLANTZ: The question I then have is how many
15 of -- we have this huge book with all these pesticides in it
16 that have been prioritized. I mean, if you take the top 30
17 things, however we end up with the list, which will also be
18 discussed, I mean how many of those could you just go out
19 right now today and take your model and go get the Farmer's
20 Almanac and get the weather conditions and do, or whatever
21 you get at this time, the farmer's computer tape or CD ROM,
22 but get the known meteorology, then go out and do the
23 calculations and come up with credible estimates of what
24 exposure. You know how much of the stuff is used, at least
25 you know how much was used last year.

1 So if you take those 30 or 50 top ones and say,
2 okay, we know these are the chemicals, we know this is where
3 it's used, we know the physical chemical properties, because
4 Tony made you get the vapor pressure right, and you know
5 what the meteorology is, and you're going to run off and do
6 calculations about spraying my backyard, say.

7 How many of those calculations that you came out
8 with would you be able -- would you say I believe this, this
9 is credible within, you know, reasonable errors and how many
10 of those are you lacking of these factors in the exposure
11 factors that you have?

12 DR. BLANC: Emission factors.

13 DR. GLANTZ: Emission factors, I mean.

14 MR. BAKER: It would depend on the list.

15 Whichever ones we've done application site monitoring for,
16 we could probably certainly make a calculation based on. If
17 we hadn't, then there would be a lot more uncertainty.

18 DR. GLANTZ: So basically what you're saying is
19 that in order to do the calculations, you need to go out and
20 have application site monitoring for each of these
21 compounds?

22 DR. FUCALORO: In order to get the emission
23 factor.

24 DR. GLANTZ: To get the emission factor.

25 How many of those do you have? How many of the

1 many many pesticides that were thrown around, how many do
2 you have?

3 MR. BAKER: Most of the 40-plus pesticides that we
4 have done monitoring for we have also done application site
5 monitoring.

6 DR. FUCALORO: May I ask you something, and I know
7 we're really belaboring this, but and I'm kind of interested
8 in this model and getting the emission factor by empirically
9 the way you do it, did you notice any effect of temperature?
10 Not temperature in the air, downstream, but temperature at
11 the field.

12 DR. BLANC: They don't have that.

13 DR. SANDERS: We don't have that data.

14 MR. BAKER: We have temperature collected at a
15 nearby airport. We don't have temperature at the actual
16 field.

17 DR. FUCALORO: Just a guess, emission factor will
18 change by a factor of two every ten degrees Centigrade.

19 MR. GOSSELIN: There were issues that came up --

20 DR. FUCALORO: Very educated guess.

21 MR. GOSSELIN: When we were going through some of
22 the variability of the some of the different data points to
23 try to take a look at what the factors were with methyl
24 bromide and some of the other materials, things such as
25 material being injected into the soil, what was the effect

1 of soil moisture --

2 DR. FUCALORO: Absolutely.

3 MR. GOSSELIN: What was the soil temperature and
4 soil type, and all of those things started to get us down to
5 a very complicated path.

6 And so one of the things that we did was almost
7 somewhat back away from that and look at in -- we had some
8 statisticians look at it. At least for methyl bromide we
9 did have a much greater data set than we have for some of
10 the other pesticides, about the grouping and different
11 method types which seems to be more prominent.

12 DR. FUCALORO: All I'm suggesting, before I call
13 in the statisticians like this, you call in physical
14 chemists first and see if they can't make things easier for
15 the statisticians, and I suggest maybe you do some of that.

16 I don't know. People may have done all this. I
17 just don't know the modeling.

18 But I think there are some times that people --
19 there are some rules of thumb that you can actually measure
20 and know.

21 MR. BAKER: You certainly see higher
22 concentrations when it's warmer than when it's not, but at
23 the same time the metrological conditions are also critical.
24 I know some of the monitoring we have done, some of the
25 application site monitoring we have done, we've taken

1 daytime samples and nighttime samples.

2 You would think -- this is after the
3 application -- you would think, well, it's warmer during the
4 day, you're going to see more off-gassing, but there's
5 almost much more atmospheric turbulence and wind so we end
6 up usually seeing higher concentrations at night.

7 DR. FUCALORO: So you're telling me you ought to
8 bring in the statisticians first?

9 DR. GLANTZ: Well, go ahead.

10 MR. BAKER: I was just going to make one other
11 quick point to answer Dr. Glantz's question of how much of
12 this actually has been done.

13 One of your former panel members, Dr. Seiber, had
14 a graduate student a couple of years ago that actually used
15 some methyl bromide emission data that was back-calculated
16 from all the different field studies, used the range in the
17 emissions rates of whatever has been observed, and then used
18 the Salinas Valley, used for a week all the different
19 applications that had occurred, knew the size or the
20 emission or the amount of methyl bromide that had been
21 applied to each of those fields, and put all that
22 information into the model, and then they also did actual
23 monitoring during that period and did exactly what we're
24 talking about doing, a model comparison with the downwind
25 measurements versus the model predictions, and the some of

1 the scenarios underestimated measured concentrations, some
2 of them overestimated, but all within about a factor of two,
3 either under or overprediction.

4 DR. GLANTZ: That's very helpful, actually. If
5 let's say we picked some chemical today that you didn't --
6 you hadn't done any monitoring on yet and to make it easy
7 let's say that it's something it's applied in January.

8 How long would it take you to come up with your
9 emission factor for that chemical, assuming it's out there
10 being used right now?

11 MR. BAKER: In terms of just making some estimate
12 of what the emission would be?

13 DR. GLANTZ: In order to come up with something
14 that you think would be good enough that you could get it
15 past us in a report that -- I don't mean that -- I don't
16 mean that flippantly. But the whole idea of this exercise
17 is to produce a document that this committee would approve,
18 and so how long is it -- would it take you to go out and do
19 something that you'd come back here confident enough in that
20 you could present it and if we said are you confident in
21 this and you'd say yes and we'd believe you.

22 MR. BAKER: Are you saying without field
23 measurements?

24 DR. GLANTZ: No. If I said to you -- yeah, if I
25 said you don't have a clue what the emission factor is so

1 you're going to have to get out and get it, by going out and
2 measuring an application, and it happens that they're
3 applying it right now. So it's not like something they're
4 not going to apply until October. It's being used right
5 today, you can go out and they're applying it over here by
6 the bay or something and you can go over there and measure
7 it, how long would it take you to go from that, from needing
8 the number to having the number?

9 MR. GOSSELIN: Would one -- I mean, at a minimum
10 one -- I'm asking, one data set would provide, you can do
11 the back-calculation, but you're also dealing with a high
12 level of uncertainty.

13 DR. GLANTZ: But to get a level of uncertainty --

14 MR. GOSSELIN: If you --

15 MR. BAKER: If you ask today, if it was something
16 that we readily had a method available and could
17 reprioritize and go out and do monitoring, it could be fast.

18 If it was a compound that we didn't have a
19 analytical method readily available, and it was only being
20 applied, say, in January, we'd probably have to wait until
21 next January, and then get results and then do the modeling,
22 if necessary. It would be a year and a half.

23 CHAIRMAN FROINES: We need to go back to Paul's
24 point, which I think is central, because Stan's individual
25 chemical, you know, there may be hundreds of farms that are

1 using the chemical, they may have completely different
2 topography, different metrology, you have enormous
3 variability, you have different sites on any one farm that
4 you can monitor.

5 So, as you know, the variability, the numbers of
6 variables are enormous, and so the question is how do we get
7 to some estimate of potential exposure that meets our
8 concern about the worst case scenario?

9 And I, unlike Stan, Stan is a statistician who
10 likes modeling, and I'm a chemist and so is Tony and so is
11 Craig, and so we are the people who actually like to see
12 data as well.

13 DR. GLANTZ: I like data too.

14 CHAIRMAN FROINES: I'm not suggesting that you
15 don't.

16 DR. GLANTZ: I don't just make it all up.

17 CHAIRMAN FROINES: I'm suggesting --

18 DR. FUCALORO: He's suggesting that's exactly what
19 you're doing.

20 CHAIRMAN FROINES: All I'm suggesting is --

21 DR. GLANTZ: That would be like a film maker.

22 CHAIRMAN FROINES: Chemists versus statisticians
23 bring a slightly different perspective perhaps, and so that
24 the point is how do we get to where we need to go, and that
25 seems to me to be really, I think that the terms, what we

1 need, I think has been well defined. I think the actual
2 process --

3 DR. BLANC: Let me ask a different question.

4 Suppose you were trying to calculate, you kind of
5 come to us with a recommendation for whether or not hydrogen
6 cyanide gas as a fumigant should be listed as a toxic air
7 contaminant, theoretically. Do you feel that you would
8 actually need to go and do field data and get an emission
9 measured or back extrapolated emission value in order to
10 have the sufficient data to -- from other sources to say
11 that this was something which was an agricultural chemical
12 which should be labeled as a toxic air contaminant?

13 MR. GOSSELIN: Something that -- I mean with
14 something that --

15 DR. BLANC: Something which is completely volatile
16 and highly toxic and efficiently distributed to the
17 atmosphere, let's say, would you really need to go and
18 measure levels at the edge of a field where people were
19 fumigating for rats with hydrogen cyanide, if that's what
20 they were doing?

21 MR. GOSSELIN: I think with that, probably not.

22 DR. BLANC: Aren't there other things on your list
23 which are of the organophosphate or carbamate or herbicide
24 equivalent from a toxicologic point of view where the rest
25 of this is just sort of an exercise in -- that's being

1 driven more by the perceived need to do these -- to do the
2 risk calculations in a specific manner that requires a
3 specific number that then must be come up with by some other
4 ways so that you can --

5 MR. GOSSELIN: Actually what I started to say at
6 the beginning of this is that previously we have front
7 loaded and sort of highlighted what the snapshot in time
8 that the monitoring has shown to predetermine whether
9 something should be listed or not.

10 One of the things that I think we've come to
11 understand actually by finally getting some documents
12 through and how that fits with the law is the threshold for
13 a listing a TAC is whether it has the potential to get into
14 the air to cause public health harm and harm.

15 So the need for us to do sort of the work we're
16 doing is still important, but whether that outcome from an
17 MOE standpoint is critical for us to determine whether to
18 list is much lower than I think what it had been a few years
19 ago.

20 I think the threshold is that we need to
21 determine, based upon the monitoring, does the material have
22 the potential, even beyond what currently we monitor and
23 what the uses are, because uses -- after the document comes
24 before this panel, uses may change, uses may increase and we
25 have to be cognizant of that.

1 And so the level of hurdle, based upon the
2 monitoring, is a lot lower and almost equal and somewhat
3 secondary to what the tox profile is.

4 What we are bringing things here, I think what
5 we've started to value is the peer review of the documents
6 we have for particularly on the hazard ID part for the main
7 goal.

8 One is the listing part is critical, but also for
9 our program, and I think coming here with what OEHHA has
10 been bringing before ARB is the establishment of RELs,
11 because in time the exposures that we're going to be working
12 with from pesticides as toxic air contaminants are going to
13 change, but the main thing we're going to get from our
14 documents is certain pesticides listed that we're
15 prioritizing and also the establishment of a reference
16 exposure level or a value to benchmark, and then use that
17 hopefully in time to then build in an ongoing surveillance
18 program for these TACs that are going to be a priority for
19 air exposures.

20 So I think even with all this monitoring, the
21 ambient data that comes here, at least for my mind is going
22 to have a certain level of caveat associated, because it is
23 going to be a snapshot in time for hopefully something that
24 what we are going to bring is going to have a pretty
25 important and serious health implication. That is really

1 what we're focused in on to determine, what is the benchmark
2 we're concerned with for exposures and then keeping a track
3 on that.

4 DR. BLANC: I'd appreciate hearing the chair
5 comment on that, since I think that's a very pivotal
6 statement.

7 John, is that consistent with your view of the
8 situation?

9 CHAIRMAN FROINES: It's certainly pivotal.

10 It represents a quite significant rethinking of
11 the approach to pesticides.

12 What's not clear, and this is not meant as a
13 criticism at all, it's meant as the need for clarification,
14 and that is, you know, when does something come forward
15 based on what you've just said, and when do we rely on the
16 old kind of MOE and how one differentiates that is not so
17 clear at this point.

18 I don't think I added clarity.

19 But, Gary, you were going to say something.

20 DR. FRIEDMAN: I had another question.

21 Lyn, I didn't quite understand something you said
22 before when you were talking about if there was no way to
23 monitor something in this January, we'd have to wait until
24 next January. And then I thought you say that it would take
25 then a year and a half or 18 months. I was surprised that

1 it would take an additional six months to do the
2 calculations once you got those measurements.

3 MR. BAKER: I meant if we didn't have an
4 analytical method currently available, we would take a few
5 months to develop it, so we would be beyond January. So
6 we'd have to wait until next January to do the monitoring.
7 Then we'd collect the samples, give them to a laboratory.
8 They would analyze them. That would take a few weeks. A
9 report would be developed. And then we would make the
10 calculations. So that would take a few months as well. So
11 that's where that extra six months --

12 DR. FRIEDMAN: Don't the calculations take a day?
13 I mean, you have the model already, why does it take so long
14 to do the calculations once you have the data?

15 MR. BAKER: With all the internal reviews built
16 in, I guess I was thinking about all of that.

17 DR. SANDERS: That is typically what it's taking
18 now for us to process one of these sorts of chemicals.

19 DR. FRIEDMAN: Even though you have a formula, you
20 have a model formula that all you need to do is feed in
21 these, I forget --

22 DR. SANDERS: I'm talking about the whole process
23 it's taking 18 months just to get the data collected and
24 that sort of thing. It doesn't take that long to put it in
25 the model, but if it was made real higher priority, I guess

1 we could turn it around very quickly. I'm just saying
2 historically how long it's taken ARB to collect the data and
3 us to process it and all that takes quite a while.

4 CHAIRMAN FROINES: Can I go back to Paul's
5 question again, because I answered it as though I was you.
6 And that's -- I didn't give a very good answer to your
7 answer.

8 The point I think Paul's asking is if this does
9 represent a change in policy, which seems that it does, then
10 is it true that the basic decision around listing a compound
11 as a TAC will be determined primarily on its toxicologic and
12 epidemiologic evidence, and that the MOE and the monitoring
13 exposure will be information that would be contained within
14 a document to meet the requirements of 1807, but wouldn't
15 necessarily be the defining feature for the designation.

16 MR. GOSSELIN: Largely, yes. I think there is a
17 threshold in the law that has to be met, that there is the
18 likelihood that the material could get into the air at
19 levels that could pose a health risk.

20 DR. BLANC: That need not be based on exposure
21 data. Let's come back to the example of cyanide.

22 Based on what you just said to me, I would feel
23 comfortable seeing a document that came from you that said
24 this is used in X number of pounds, the physical chemical
25 properties of the substance are such that it's entirely

1 volatilized, that if one makes a simple calculation based on
2 X milligrams and X meters of air, one would under worst case
3 scenarios easily exceed value Y, which would then cause
4 illness in one out of a thousand people, which would
5 therefore be high enough threshold to trigger, and it
6 wouldn't require sampling data from actual use at all.

7 MR. GOSSELIN: The only caution I have is if there
8 is some data collected on it, let's say a pesticide that
9 shows beyond what chemical physical characteristics we may
10 have thought they would have resulted in air concentrations,
11 that the fact of the matter is that it just dropped like a
12 stone and there's no off-site movement, I think we would
13 have a tough time making any case.

14 DR. BLANC: But you wouldn't have to delay
15 bringing a document to us waiting for field data which had
16 not been done.

17 MR. GOSSELIN: Right.

18 CHAIRMAN FROINES: But I think that Paul's raising
19 a good point and it's unfortunately a point that is based on
20 history rather than -- based on history rather than
21 assumptions and that is Telone was a compound that was
22 predicted early on to not disperse and not be a problem, and
23 those -- and in fact then we found it in Bakersfield and a
24 whole set of things was -- I think Bakersfield or Fresno.

25 MR. BAKER: Merced.

1 CHAIRMAN FROINES: Merced.

2 So that, one, there has been some experience with
3 predictions that didn't turn out to be quite correct and we
4 want to obviously avoid those kinds of problems.

5 MR. GOSSELIN: If it would be helpful, I could put
6 pen to paper and kind of explain this.

7 DR. BLANC: I would welcome that.

8 CHAIRMAN FROINES: I think everybody would. Well,
9 I won't speak for everybody.

10 MR. GOSSELIN: I mean various stakeholders we have
11 too have been asking questions too about us bringing
12 documents forward and what it means, and verbally this has
13 been done over the last two years, but it would probably be
14 helpful to bring this forward to the panel and put it down.

15 CHAIRMAN FROINES: I think there's value in
16 application site monitoring and modeling as Stan says, but
17 it's with what context does it fit within the
18 decision-making process and I think that's what you're
19 talking about.

20 Shall we continue?

21 Sorry, John, but I think this was an extremely
22 important discussion.

23 DR. SANDERS: Show the next overhead, please.

24 Another recommendation of the panel for the air
25 monitoring was that DPR and ARB staff could consider

1 enlisting assistance from the University of California in
2 developing a new monitoring strategy. Staff from DPR and
3 ARB have discussed strategy with Professor Spear, and
4 nothing concrete has come out of that at this point.

5 However, I want to point out that prior to the
6 workshop that the panel had, ARB had already revised its
7 application site monitoring strategy to optimize for
8 computer modeling. So they added additional air samplers
9 around the field, they added collection of on-site weather
10 data, and then they separated the monitoring periods into
11 application period, day periods, night periods in order for
12 us to use the models to do that. So we're moving in that
13 direction before the panel made its recommendation.

14 The next slide, please, overhead.

15 The panel has also in the past asked us for a
16 rationale for monitoring, so I was just going to mention for
17 the last -- the 2000, the year 2000 monitoring request that
18 went to ARB, we asked them to monitor for methyl bromide and
19 1,3-D or Telone, which are two of the fumigants. These are
20 already toxic air contaminants. They were selected because
21 they are high priority for control measures, because of
22 identified health concerns.

23 There is a lack of data testing on longer term
24 exposures for these compounds.

25 Also it's possible to monitor simultaneously, the

1 methods are there for us to monitor simultaneously for these
2 compounds, and we had already put into effect regulatory
3 changes and so we wanted to see if the air data reflected
4 those changes.

5 And that ARB has conducted that monitoring in, I
6 believe, Kern County and Monterey County, and those final
7 reports are either -- one for Monterey is completed --

8 MR. BAKER: The one for Kern is completed.

9 DR. SANDERS: The one from Monterey is in the
10 process.

11 MR. BAKER: It will be completed by the end of the
12 month.

13 DR. BLANC: Appropre of the previous line of
14 questions about time frame, and how long was the period, the
15 one for Kern is done you said?

16 MR. BAKER: Yes, that was done.

17 DR. BLANC: And how --

18 MR. BAKER: That monitoring was conducted in July
19 and August of 2000.

20 DR. BLANC: And the plan was initiated to do the
21 monitoring --

22 MR. BAKER: Early -- late '99, early 2000.

23 DR. BLANC: So basically it's consistent with the
24 time frame that you said, that it's taking approximately 12
25 to 18 months.

1 MR. BAKER: 12 to 18, right.

2 DR. BLANC: With methods that were already
3 developed actually. That didn't require developing sample
4 methods?

5 MR. BAKER: That's correct.

6 DR. BLANC: So even with the sampling methods in
7 hand it was about a year?

8 DR. SANDERS: Of course part of that -- there were
9 methods, so minimal method development or validation was
10 needed, but a high use period occurred in the summertime and
11 so we had to wait that amount of time for it to happen.

12 DR. BLANC: Right.

13 DR. SANDERS: The third recommendation from the
14 panel was the computer modeling may be an important tool for
15 developing exposure assessments and we agree with that. In
16 fact, DPR staff and ARB are developing protocol to
17 incorporate computer modeling into the exposures
18 assessments.

19 My staff is working on a draft of that right now.

20 DPR is currently using computer modeling for
21 developing --

22 MR. BAKER: John, I'm sorry to interrupt. I was
23 just going mention to Dr. Froines, because you were out for
24 just a minute, that we had met with Dr. Spear and this
25 protocol that John just mentioned is going to be run by

1 Dr. Spear for his input.

2 CHAIRMAN FROINES: Congratulations. That's a real
3 coup. He's hard to get to commit time and that's very
4 valuable.

5 MR. BAKER: We had a very productive conference
6 call with him in late last year, and he said he would be
7 interested in working us and reviewing the protocol.

8 CHAIRMAN FROINES: Great. Thank you.

9 DR. SANDERS: We currently use computer modeling
10 for developing mitigation measures, for example buffer zones
11 for several of the fumigants. So that's where most of our
12 experience comes from.

13 The next recommendation from the panel is DPR
14 should consider using control application for some
15 application site monitoring.

16 We agree that it -- those are useful for some
17 situations, particularly situations, for example, we thought
18 if you're trying to compare, directly compare two
19 application methods.

20 However, DPR and ARB are satisfied with grower
21 cooperation for conducting application site monitoring and
22 believes that brings in an element of real-world application
23 that are happening out there.

24 DR. BYUS: I'm sorry. What do you mean by real
25 world? I mean, as opposed to controlled application? I

1 mean, it seems to me you're trying to validate these models
2 and you don't want -- at this point you don't want any,
3 quote, real-world variables. You want to have as minimal
4 variables as you can. I mean point one. You know, I
5 mean --

6 DR. SANDERS: For example, if DPR is going to do
7 an application of a pesticide, we would still have to hire
8 somebody to do that who does that for a living. We don't
9 have equipment to do that. We don't have the expertise to
10 do that.

11 It's controlled, I guess as we can get it, because
12 there's certain guidelines and regulations and laws that the
13 applicators have to follow in terms of application and that
14 sort of thing and application rate and the how they do the
15 application, the way they use the equipment. So we monitor
16 that when these are measured, the air concentrations are
17 measured, and so I guess from our standpoint it's fairly
18 well controlled or as much controlled as we can do it, even
19 if we tried to do it ourselves.

20 MR. GOSSELIN: Usually what happens, and some of
21 this is a -- this all gets into good and bad, but a lot of
22 times when they know that, you know, Cal EPA is going to be
23 there, they'll have some of their top more experienced
24 people do the application, so it's done, you know, without
25 any sort of mistakes and anything else.

1 That that's like you're saying is very valuable
2 and we need to know that there aren't any compliance issues
3 or anything else, but like any of these monitoring programs
4 that are industrial settings, you have that human factor,
5 how people conduct their business day to day that, you know,
6 does get picked up as we start getting into more and more
7 replicates of monitoring. You get into the human factor on
8 just how people conduct their business.

9 CHAIRMAN FROINES: In my experience in the
10 occupational health world, one of the things that when we
11 were doing inspections of work places what you find is that
12 the first day you go into a plant you find that everybody is
13 doing everything perfect. Every respirator is being worn,
14 every ear plug is being worn.

15 People take tests. When they take tests they do
16 their best.

17 What you want them to do is what they normally do.

18 And how one achieves that is not so easy, but it's
19 certainly something to try and shoot for because obviously
20 on the day that they're all primed for it it may not be
21 exactly what you want.

22 MR. GOSSELIN: Right.

23 DR. SANDERS: Next.

24 Another recommendation from the panel was DPR
25 should supplement all monitoring data with follow-up

1 characterization of actual application data from pesticide
2 use reports.

3 We agree with this recommendation.

4 And the only caveat there is that full
5 agricultural use reporting didn't come in until 1990. We do
6 have a certain number of data sets that were conducted by
7 ARB prior to 1990, and therefore it might not be possible to
8 go back and see where their actual use for that
9 particular -- those particular data sets.

10 And because of that, DPR may need to request that
11 ARB do more monitoring for those particular pesticides,
12 because we don't have either. Maybe that monitoring data
13 was collected with old analytical methods or maybe we don't
14 have the use report to check after the fact.

15 Next one.

16 Next recommendation is ARB should consider
17 expanding the use of multiple pesticide sampling in the
18 future. And DPR will request that ARB to monitor where this
19 is possible when multiple pesticides are used in the same
20 locations and the periods of high use coincide. We
21 certainly think that that's a doable thing.

22 Naturally, the strategy is most efficient whenever
23 the number of sampling, slash, analytical methods are
24 minimized. In other words, it doesn't make a lot of sense
25 or it's not very efficient if for the five pesticides we're

1 monitoring for have to have five separate sampling
2 apparatus and five different analytical methods. That's not
3 very efficient.

4 We do have some recent examples where we have
5 requested multiple pesticide monitoring or we've done it
6 ourselves.

7 In '99 there was amitraz, bifenthrin, and
8 propargite.

9 In 2000 there was 1,3-D and the methyl bromide.

10 And we conducted Lompoc monitoring, which we're
11 going to mention in another presentation. We did sampling
12 for 28 pesticides at the same time.

13 CHAIRMAN FROINES: Was the Telone and methyl
14 bromide an application site or ambient?

15 MR. BAKER: It was ambient.

16 CHAIRMAN FROINES: It was ambient.

17 MR. BAKER: Eight weeks of ambient monitoring in
18 both Kern and Monterey counties.

19 DR. SANDERS: The last one here is for this
20 portion of the presentation is a clear rationale for
21 selection of pesticides for monitoring should be included in
22 the new process for prioritization.

23 We agree with that. And we're revising that
24 prioritization document and we'll address the selection of
25 pesticides for monitoring.

1 We also want to -- this prioritization will
2 coordinate the monitoring with the preparation of
3 assessments, and DPR can provide the panel with updates on
4 the status of the monitoring and the risk assessments.

5 MR. GOSSELIN: We were going to move to agenda
6 item number 2, at the close of this, and at the end have a
7 presentation on some of the modeling examples.

8 And would it be worth having that now before we
9 get into the prioritization, or timing wise --

10 CHAIRMAN FROINES: What is your pleasure?

11 MR. GOSSELIN: It's a 15-minute or so presentation
12 on the agenda item, item 1, that we talked about.

13 DR. SANDERS: It explains the modeling.

14 CHAIRMAN FROINES: The first question, Paul,
15 before we answer that question, is does anybody else have
16 any other comments to make at this point about what's been
17 presented so far?

18 DR. GLANTZ: I just have a question.

19 So is there any sort of endpoint or decision point
20 you want out of us in terms of this issue of the modeling
21 and the long discussion or were you just coming back to us
22 and saying here's what you're doing to implement the
23 recommendations we made?

24 CHAIRMAN FROINES: I think Paul agreed to do some
25 writing and come back, and they'll be coming back with other

1 protocols in the future. So I think it's now in their
2 court.

3 DR. GLANTZ: But you're not asking us -- there's
4 no action for us to take based on this discussion today;
5 right?

6 CHAIRMAN FROINES: I don't think so.

7 DR. GLANTZ: I want to make sure I didn't miss
8 anything here.

9 I think I'm pleased to see things moving ahead on
10 this. I think you're going to end up with reports and with
11 analysis that are going to be a lot stronger, both
12 scientifically, and I think also probably a lot more useful
13 in terms of providing a scientific basis for policy making
14 compared to the old way you were doing it, if it was a hot
15 day and it was a hot day, if it was a cold day it was a cold
16 day.

17 So I'm very pleased about this, even if it is
18 modeling, it's statistics, and not chemistry. You can model
19 chemistry. And there are statistical chemists.

20 DR. FUCALORO: Absolutely.

21 DR. FRIEDMAN: But there are no chemical
22 statisticians.

23 DR. FUCALORO: Modeling five mice as compared to
24 modeling ten to the 23rd molecules, you get better
25 statistics with the latter.

1 CHAIRMAN FROINES: Why don't we go ahead and do
2 the 15-minute presentation. Then we'll take a break and
3 then we'll have prioritization.

4 And I agree with Stan. I think this last hour or
5 so has been a really excellent discussion, and so I really
6 appreciate DPR's contribution.

7 DR. JOHNSON: My name is Bruce Johnson. I'm a
8 senior environmental research scientist with the Department
9 of Pesticide Regulation, and I'm going to run through an
10 example of the computer modeling. Of course be happy to
11 answer any questions as we go along.

12 Next slide.

13 The computer modeling that we've done at DPR has
14 been almost exclusively with the Industrial Source Complex
15 Short Term Model, ISCST. This is a Gaussian plume model,
16 and it predicts downwind air concentrations based on the
17 emissions, the meteorology and the terrain.

18 Now, the emissions, as you've kind of discussed
19 already, also called flux, is a mass per area per time.

20 Typically we use micrograms per meter squared per
21 second, but in some of our permit conditions we have a table
22 of pounds per acre per day. But it's the same idea.

23 Meteorology requires the wind speed, the wind
24 direction and the stability, which you have probably
25 encountered numerous time before. Has to do with vertical

1 motion of the air.

2 During the afternoon in a warm summer day, you
3 tend to get lower air concentrations. If the flux is
4 constant, you get lower air concentrations because the
5 stability, it's an unstable situation. Downwind
6 concentrations get diluted.

7 Whereas in the middle of the night, say at 3:00 or
8 4:00 in the morning on a clear night you have a condition of
9 great stability where the ground by re-radiation gets cold,
10 it cools the air, it stratifies the air, and for the given,
11 same given flux you will get much higher air concentrations.

12 And then terrain, rural versus urban type terrain,
13 the model has factors for those situations. We normally use
14 rural factors and then elevation.

15 Next slide.

16 We've kind of established a procedure for
17 analyzing an application, and that procedure we published a
18 comparison between the back-calculated flux and the measured
19 flux in a paper in 1996 in the Journal of Environmental
20 Quality, and that procedure consists of encoding the field
21 and receptor geometry into the model. So you need to know
22 where the field is located, how big it is and where the
23 receptors and monitors are located in relation to the field.

24 Then you have to process the meteorologic data, so
25 we will have a Campbell 21 X or something out there

1 collecting, logging the wind speed and the temperature and
2 so on.

3 That data comes back into the office and it's in a
4 big file and has to be processed in a way to make it usable
5 to the ISCST model. It doesn't just automatically somehow
6 go in. You've got to process it and put it in the right
7 format and summarize it the way the model needs it.

8 DR. FUCALORO: For example?

9 DR. JOHNSON: For example, you may be taking
10 measurements every minute for, you know, during the whole
11 time, so each hour you have 60 measurements. Those 60
12 measurements have to be collapsed into a single hour
13 measurement, so you have to somehow take an average of those
14 measurements.

15 Now, for variables like temperature, that's pretty
16 straightforward.

17 DR. FUCALORO: I understand.

18 DR. JOHNSON: Okay. After you get those two
19 things ready to go, then you run the model.

20 So the third element that's required for the model
21 is some estimate of the flux.

22 As we start the exercise, we may have some
23 guesstimate, or we may not, on what the flux is. Generally
24 we use an arbitrary value in like hundred micrograms per
25 meter squared per second, put that into the model, run the

1 model and then we compare the estimated concentrations at
2 our monitoring locations to the measured concentrations.

3 Then we regress the measured concentrations on the
4 model concentrations. We determine the slope and the R
5 squared and we use the regression coefficient from that
6 statistical analysis to adjust our assumed flux rate.

7 The reason that this works is because the
8 fundamental equation that the Gaussian plume model uses, if
9 you can imagine for a second on the left-hand side is a
10 concentration and on the right-hand side you have two terms,
11 you have the flux times a constant, and that constant is a
12 number that derives from the meteorology and the distance
13 and the elevation and all that stuff, so once you've got the
14 geometry of the situation and the meteorology of the situation
15 fixed, that constant K is also fixed, so the only thing that
16 determines the concentration is the flux. If the flux
17 doubles, the concentration doubles and that's why the
18 regression works.

19 DR. GLANTZ: Now, this gets back to the discussion
20 we were having earlier. So that's for that site that you
21 use to validate it. What if you got to another site that
22 has different geography or different weather, does that
23 constant still stay the same?

24 DR. JOHNSON: Right. What struck me when I first
25 started working on some of this was the approach, which you

1 several have alluded to, where you would have a site which
2 was monitored and then you would attempt to construct buffer
3 zones or make some inference about exposure based on one
4 particular site that happened to be monitored with all of
5 its peculiarities.

6 And I felt that we needed to look for something
7 that was a little more generalizable from a study like that,
8 and that generalizable thing that's more generalizable
9 anyway is the flux the issue. So the issue that you're
10 asking really is what happens to the flux rate, what happens
11 to the flux in different applications.

12 So maybe a question thought experiment would be if
13 you applied the same material the same way a hundred
14 different times, how much would the flux change, what would
15 the variability of that flux be and that's a good question.

16 I don't have a ready answer to that question,
17 because the thought experiment is lot less expensive than
18 the actual conduct.

19 DR. GLANTZ: The question is if you've got this
20 model, you validated it, you validated it in one place,
21 physical place.

22 DR. JOHNSON: I wouldn't call it validation. I
23 could call it calibration.

24 DR. GLANTZ: You've calibrated it in one place.

25 DR. JOHNSON: Right.

1 DR. GLANTZ: How confident are you that you can
2 take that model and put it somewhere else and adjust the
3 geographic variables of the model, which are easy to
4 measure, and the meteorological variables, which we'll
5 assume that you've got, and say I'm going to put the same
6 number of pounds per acre of this stuff on, how confident
7 are you going to be that the calibration you did before will
8 be valid calibration for a different situation somewhere
9 else?

10 DR. JOHNSON: I'm pretty confident that it works.

11 DR. GLANTZ: What's the evidence for that? I'm
12 not being hostile, I'm just trying to understand.

13 DR. JOHNSON: The evidence for that, one bit of
14 evidence for that is this paper that was published in 1996
15 where the comparison was within a factor of two.

16 The other evidence is some work that hasn't been
17 published, which one of the registrants has conducted, and
18 they have compared their measured flux rates with their
19 back-calculated flux rates and come up with pretty good
20 comparisons.

21 So I'm confident in the estimation procedure.

22 I'm less confident when you start asking me about
23 we're going to change the soil moisture, we're going to
24 apply it in July when the soil is hot versus December when
25 the soil is cool.

1 We don't have as good a handle on that introducing
2 those kinds of variabilities into it.

3 DR. SANDERS: Or application types.

4 DR. JOHNSON: Or application types. We know for
5 example with methyl bromide that application type does make
6 a difference. It matters whether you apply it under a tarp
7 or don't apply it under a tarp, that kind of thing.

8 DR. GLANTZ: Okay.

9 DR. BLANC: I think that's partly the nature of
10 your question. And what Tony had said earlier was that
11 temperature by a factor of ten degrees would change --

12 DR. FUCALORO: Vapor pressure --

13 DR. BLANC: By doubling.

14 DR. FUCALORO: By a factor of two.

15 DR. BLANC: So it seems that even if you had
16 accurate flux estimates or calibrated flux estimates based
17 on normal operating situations, that one safety factor or
18 uncertainty factor that might be applied in these
19 calculations, would be a factor of two or three, let's say,
20 so that even if you assumed in your 95 percent confidence
21 intervals a scenario of external situations like terrain and
22 the external weather conditions, wind factors, let's say,
23 that even on top of that you might want to add some safety
24 factor based on the issues that could have impacted your
25 flux, your fundamental flux value, even if all the other

1 values were at the extreme.

2 Let's say, for example, the ambient air
3 temperature was at the extreme of what you would think would
4 be, it's a hundred degrees, and you make the wind very low
5 and there's an inversion and it's a farm on a top of the
6 hill and everybody else lives below it and you do all that,
7 as the 95 percent worst scenario, it sounds like there needs
8 to be some kind of safety factor on top of that that might
9 be these things that you're -- you aren't going to have
10 enough differing conditions or extreme conditions to sample.

11 DR. JOHNSON: In my capacity as for what I do, I
12 agree that there's uncertainty in the flux.

13 As far as whether there should be a safety factor
14 or how much that safety factor would be, I can't say.

15 I think that probably methyl bromide is the
16 chemical that we have the most application site studies on
17 and we're unable, when we do the statistical analysis on the
18 results of that, there are things that don't show up very
19 well like depth of application, for example. You logically
20 think that depth of application the deeper you apply
21 material the less that comes out, that's a fairly reasonable
22 statement to make.

23 But when you try to look at the studies that we
24 have, and you statistically try to show that, yes, all the
25 deeper studies had less come out, it doesn't work out that

1 way because there's more variability in those numbers and
2 it's too fuzzy, you can't tell.

3 DR. BLANC: What's the distribution pattern like
4 in the flux values as calibrated that over what range for
5 this one chemical in the various sites?

6 DR. JOHNSON: For methyl bromide?

7 DR. BLANC: Yes. What's the range?

8 DR. JOHNSON: It goes from, I'm just off the top
9 of my head, it goes from five to hundred percent.

10 DR. BLANC: Well, here we come back to the
11 percent. It goes --

12 DR. JOHNSON: Sorry. I'm thinking in terms of the
13 emission factor.

14 In the case of methyl bromide we have used this
15 thing we called emission factor, and it's related to the
16 amount that comes out in 24 hours, and we've used that to
17 characterize the different application methodologies. We
18 have broken them down into three groups. And I can't
19 remember the exact numbers off the top of my head, but it's
20 something like 30, 45 and 80 percent, if I remember
21 correctly.

22 DR. BLANC: You're saying there's a factor of 20
23 between the highest and the lowest flux value if it goes
24 from five percent to 100 percent?

25 DR. JOHNSON: In terms of individual studies,

1 right, that have gone into those. Yeah.

2 DR. BLANC: That's not very reassuring.

3 DR. JOHNSON: That's for 24 hours of emission.

4 DR. FUCALORO: You're basically a chemist.

5 MR. BAKER: Bruce, aren't you saying, though, that
6 that's five to a hundred percent emitted in the first 24
7 hours, but in the low cases, the five to ten or whatever
8 percent, then don't you find more emissions the second or
9 the third day? So if you look at it not just for one day,
10 but for a three- or four-day period following the
11 application.

12 DR. JOHNSON: More comes out later on.

13 MR. BAKER: Right.

14 CHAIRMAN FROINES: That's not clear what you just
15 said.

16 DR. BLANC: It doesn't come out the first day, it
17 comes out later on.

18 DR. JOHNSON: For methyl bromide, yes.

19 DR. BLANC: All I'm saying is the whole purpose of
20 this thing about calibrating the model was to say if I have
21 come up with an estimate of how much will off-gas per pound
22 applied per acre, and I've done that by calibrating on some
23 actual applications where I've measured at the edge of the
24 field and I've come and back-calculated what the emission
25 rate should have been, right, and granted that there are

1 various meteorologic conditions, but you plug them into the
2 model.

3 DR. JOHNSON: You're trying to adjust for that.

4 DR. BLANC: You come back and you come up with an
5 emission rate.

6 DR. JOHNSON: Right.

7 DR. BLANC: Then what we're going to be faced with
8 is saying that given that assumption about an emission rate,
9 given that you took three samples, there were three times
10 you sampled in order to come up with emission rates, how
11 close are those emission rates on each time or --

12 DR. JOHNSON: You mean how close are they to the
13 measured values?

14 DR. BLANC: No. How close are they to each other.
15 See, it doesn't really matter to me how close they are to
16 the measured values. What matters to me more is how much
17 variability is there likely to be in an emission rate,
18 because then if you're asking me from a health protection
19 point of view to say we want to apply a hundred pounds of
20 Telone to a field or methyl bromide or whatever substance it
21 is, what is my worst case scenario. My worst says scenario
22 has to assume what is the possible highest emission rate to
23 achieve.

24 CHAIRMAN FROINES: If you say that your emission
25 rate varies from five to hundred percent then we have no --

1 DR. JOHNSON: The emission factor varies from five
2 to 100 percent.

3 DR. FUCALORO: Emission factor being five percent
4 in a 24-hour period --

5 DR. JOHNSON: Yes, and that's over all kinds of
6 studies with all different kinds of applications.

7 CHAIRMAN FROINES: If it's also true that if you
8 also find a hundred percent, then it's from a policy
9 standpoint for risk assessment, you can only choose 100
10 percent. There's no other decision.

11 DR. JOHNSON: Unless the 100 percent is a
12 particular type of application.

13 DR. GLANTZ: I think there's a miscommunication
14 here.

15 I think, let me try to rephrase Paul's question.
16 And that is for a given chemical, okay, what's the range of
17 uncertainty in the emission factor? I think you're
18 answering the question about what's the range of possible
19 emission factors for all possible chemicals, so if you took
20 a given chemical -- well, I think that's what he answered.
21 If you have --

22 DR. BLANC: No. He said for methyl bromide when
23 they sampled it under different conditions --

24 DR. GLANTZ: Okay. Then I misunderstood.

25 CHAIRMAN FROINES: He's saying --

1 DR. FUCALORO: You're saying uncertainty and
2 variability. I mean there's -- and I think you're talking
3 about variability.

4 DR. BLANC: Variability.

5 DR. GLANTZ: Okay. But, well, if you're
6 talking -- I guess I'm using uncertainty to talk about a
7 specific observation, which could be either uncertainty or
8 variable.

9 CHAIRMAN FROINES: No. We haven't gotten actually
10 to uncertainty. We really are talking about variability.

11 DR. GLANTZ: Okay. Well, no. I'll talk about
12 variability.

13 DR. FUCALORO: We are all very uncertain.

14 DR. GLANTZ: That's okay. We both mean the same
15 thing.

16 So are you really saying that if you're talking
17 about methyl bromide, say, that the factor could be anywhere
18 from five percent to hundred percent. If you're talking
19 about a fixed amount of time too, because obviously --

20 DR. JOHNSON: Yes.

21 DR. GLANTZ: Okay.

22 DR. JOHNSON: Overall application methods and all
23 soil types and all the range of things that can happen.

24 DR. GLANTZ: Per day. Then I misunderstood.

25 DR. BYUS: Actually the more --

1 DR. GLANTZ: Then I think what Paul says is right,
2 if that's the case then you really do need to assume 100
3 percent for purposes of policy.

4 DR. BYUS: My analogy, I do pharmacology, and we
5 have something called fractional drug absorbents, it's the
6 fraction of the drug that's actually absorbed, and if you're
7 going to calculate peak drug values, you have to factor that
8 in, the more the drug that is absorbed, the higher the peak
9 value, under any given time, and then that varies depending
10 on how you get the drugs.

11 DR. JOHNSON: Yes. It varies depending on how you
12 give the drug and it depends on the class of drugs --

13 DR. BYUS: Exactly.

14 DR. JOHNSON: So on and so forth.

15 DR. BYUS: So it's sort of a fractional absorbent
16 is the way I would -- in pharmacokinetic --

17 DR. JOHNSON: It depends. In the case of methyl
18 bromide, there are some application patterns that we can
19 grab a hold of and say statistically that we do see a trend,
20 here some are higher, some are lower.

21 DR. BYUS: Sure. That's very scientifically sound
22 and it makes a lot of sense, but if we're not aware of that,
23 when we're looking at these documents of this potential
24 variability, you follow me, it isn't always --

25 DR. JOHNSON: I want to say --

1 DR. BYUS: We are with drugs or with other
2 chemicals it's clear --

3 DR. JOHNSON: Methyl bromide is a pretty special
4 chemical. It's a special chemical, because it has such a
5 high volatility. It stands way above most of the other
6 chemicals in terms of its volatility.

7 And I fall into this trap myself sometimes because
8 I've been dealing with methyl bromide and 1,3-D, and most
9 agricultural chemicals don't have -- don't come even close
10 and the percentages of off-gassing are going to be much
11 lower.

12 DR. BLANC: You've chosen this as your poster
13 child for this methodology. I mean, you guys can't have
14 your cake and eat it too. If you want to say, hey, we do
15 have one good example where we've really shown how you do
16 this, here it is, it's methyl bromide, we've got all this
17 great sampling data, then you said, but, you know, don't
18 really pay attention to this because methyl bromide is
19 really volatile and it's all over the map and it goes from
20 five to hundred percent.

21 What am I supposed to think of the next chemical
22 you bring?

23 DR. JOHNSON: I don't think we brought methyl
24 bromide to you as a poster child to estimate concentrations
25 between all the other chemicals.

1 CHAIRMAN FROINES: Let me follow up and say it
2 more nicely than Paul just did.

3 DR. BLANC: We trade off.

4 CHAIRMAN FROINES: I think the problem that Paul
5 is raising, and I think it's entirely valid, is that methyl
6 bromide turns out to be the case example where you have the
7 most data, and when your case example shows you the widest
8 variability, then it raises real confidence questions in a
9 whole series of other compounds for which you don't have
10 that level of data.

11 So we end up by saying if your best data shows you
12 that degree of variability, then we have to assume that
13 other data would follow a similar pattern, and that's a
14 problem.

15 DR. JOHNSON: Well, the variability that you speak
16 of when you say five to a hundred percent, which is what I
17 said before, refers to the emission factor for methyl
18 bromide, which is a 24-hour period which we have grouped
19 into three different application types so that the
20 variability within each of the application types is
21 certainly lower than five to 100 percent.

22 DR. GLANTZ: What is it?

23 DR. FRIEDMAN: What is it?

24 DR. JOHNSON: What is it? I don't remember off
25 the top of my head. What you're asking for is the

1 coefficient of variation. I can get you that information
2 after I go back to the office.

3 DR. FRIEDMAN: Roughly, Stan said the same thing,
4 within each type would it be like the lowest type be 5 to 15
5 or 5 to --

6 DR. JOHNSON: For coefficient of variation?

7 DR. FRIEDMAN: The percentage of --

8 DR. FUCALORO: The range.

9 DR. JOHNSON: The range of --

10 DR. GLANTZ: Of the absolute emission factor.

11 DR. FUCALORO: Of the emission factor, the range.

12 DR. GLANTZ: Roughly. We're not holding you to
13 it.

14 DR. JOHNSON: I'm not going to even hazard a
15 guess, because I can get you that information and get it to
16 you precisely if I go back to the office.

17 DR. FRIEDMAN: You're saying that if we know the
18 application, the type of application, you can narrow it down
19 quite a bit from the five to a hundred?

20 DR. JOHNSON: Yes.

21 DR. FRIEDMAN: Can you just give us a feel for --

22 DR. JOHNSON: I'm going to go back to the office
23 and I'll get you the numbers if you want.

24 DR. GLANTZ: Okay. You wouldn't guess and then
25 send us the number to see if you were right.

1 DR. JOHNSON: That's a good game.

2 DR. GLANTZ: Blanc can give you a hard time.

3 CHAIRMAN FROINES: Let's move ahead, because we're
4 asking a series of policy related and scientific questions.
5 We're not picking on the presenter.

6 DR. JOHNSON: It's kind of fun, though; isn't it?

7 CHAIRMAN FROINES: No.

8 I think that -- but I think, remember, that all of
9 this is within the context of how we do our job with respect
10 to the risk assessment and designation of the TAC. That's
11 the foundation.

12 And so that question is how do we have confidence
13 in the information that comes before us in terms of those
14 decisions.

15 And Paul is going to deal with that in a different
16 context, but I think so that's the context in which this
17 discussion is occurring.

18 So why don't you go ahead.

19 DR. JOHNSON: So here we have a graph showing
20 measured air concentrations versus the model air
21 concentrations. We do the regression, multiply the assumed
22 flux of hundred by the slope, which was .7, and estimate the
23 flux at 70 micrograms per meter squared per second.

24 Next slide.

25 Once we've estimated the flux, then we can go back

1 to the model and we can ask questions about what is the air
2 concentration pattern for different metrological conditions
3 or for different field sizes or for different application
4 rates.

5 And this is just an isoplot showing a realized air
6 concentration distribution, the 815 is the -- on the
7 left-hand side of the field there is the reference level.
8 We can, for example, look at where it's farthest away from
9 the field and make an assessment of our buffer zones, is our
10 buffer zone, table buffer zone large enough, is it not large
11 enough, et cetera, et cetera.

12 DR. FUCALORO: Let me guess that the wind is
13 blowing this way.

14 DR. JOHNSON: Right. The wind blew that way most
15 of the time, but it also blew in the other direction part of
16 the time.

17 DR. FUCALORO: Obviously.

18 DR. FRIEDMAN: There's nothing that goes sideways?

19 DR. JOHNSON: No. This is probably for a 24-hour
20 period.

21 Actually you see patterns like this typically in
22 the Salinas Valley where you have a diurnal shift. You have
23 wind coming in off the ocean during the day and then it
24 blows back out at night.

25 The buffer zones for the case of methyl bromide

1 were established with regard to the reference level of 815.

2 The buffer zone distances were based on monitoring
3 data and computer modeling of 34 fumigations.

4 The buffer zones are set up to vary with regard to
5 application rate, acres and the fumigation method.

6 And we did simulate in each case what the sort of,
7 quote, unquote, required buffer zone should have been, and
8 in 95 percent of the time, I think it is 33 out of 34, is
9 the case, the tabled buffer zone was adequate for the
10 farthest distance away where 815 occurred.

11 Computer modeling is currently in progress to
12 provide a second estimate of how protective the buffer zones
13 are.

14 Next slide.

15 This actually is currently being reviewed by our
16 colleagues at ARB.

17 And just a quick outline of the protocol to
18 determine the highest use counties, this is for methyl
19 bromide, saying multiple years of metrological data from
20 high-use counties, and then to simulate various combinations
21 of flux and acreage and then to obtain the frequency
22 distributions where we look at the distance to 815, and the
23 maximum direction from the field. Like on that figure that
24 I showed you before, that would have been off to the west.

25 And also to look at the frequency distribution of

1 concentrations at the buffer zone distance in all
2 directions.

3 And that latter statement there kind of comes from
4 some input we received from the National Academy of
5 Sciences. They seemed to be very interested in knowing what
6 the frequency distribution was in all directions away from
7 the field.

8 And that concludes my part of the talk.

9 CHAIRMAN FROINES: Thank you very much. That was
10 quite useful.

11 MR. GOSSELIN: If I could add one thing, one of
12 the tools that we see using this methodology, and we haven't
13 used it for anything other than gaseous fumigants, and how
14 that will work for other pesticides is going to be something
15 we're going to have to explore, but the utility of it to be
16 able to point out in TAC context would be once we get the
17 reference exposure limit proposed, to be able to say at what
18 distance would you start to hit those exposures, and then
19 you get into your assessment of demographics and potential
20 exposures in different areas.

21 So that sort of exposure assessment methodology is
22 going to take some time for us to evolve into.

23 CHAIRMAN FROINES: I think that's so much better
24 approach than the kind of MOE, and we're talking about
25 apples and oranges a little bit here. I mean the notion of

1 having your RfC and then looking at your exposures within
2 that context is very useful.

3 Let's take a ten-minute break.

4 I think we'll go with the prioritization
5 discussion next.

6 (Thereupon a short recess was taken.)

7 CHAIRMAN FROINES: Tobi, you want to introduce
8 yourself and we'll proceed.

9 DR. JONES: I'll introduce myself and let Paul
10 make some opening comments.

11 I'm Tobi Jones, with the Division of Registration
12 and Health Evaluation.

13 And I'll preface this by saying I'm relatively new
14 to this process, not to the department, so bear with me as I
15 discuss what Randy, Scott and I have been working on with
16 the four members of the committee.

17 CHAIRMAN FROINES: Thanks.

18 MR. GOSSELIN: Tobi is the new assistant director
19 of that division, the position that I previously held.

20 Thanks.

21 One of the things I wanted to give an introduction
22 on, update on prioritization. We started to get into some
23 dialogue with some of the leads on the panel on this, and
24 the presentation, as we go through here today, are going to
25 outline some of the issues that we had during those

1 discussions.

2 But one thing as we get into it, as late as
3 yesterday we had somewhat of a re-thinking based upon some
4 of the comments we heard about the prioritization document
5 that are fairly significant. Well, I think not significant
6 in what's in the the documents and the issues, but how it's
7 formatted.

8 And essentially starting back to the original, and
9 we'll get into this in a bit, but the original document from
10 '96 was a prioritization for monitoring only and now that we
11 started to get into a prioritization scheme for initiating
12 risk assessments, we were looking at having a parallel
13 duplicate track, and we've kind of come to the conclusion
14 that we probably only need one prioritization scheme, and
15 use the one that's in there with a lot of the issues and
16 have that come forward to initiate what we're going to be
17 bringing forward for TACs coupled with a monitoring request.

18 But we'll get into that in a moment and I'll turn
19 it over for Tobi to go through the changes and updates to
20 the document and some of the issues that we've raised.

21 DR. JONES: We've provided -- Dr. Froines
22 identified himself and three of the members of the committee
23 for us to work with on redrafting the '96 report, and so
24 based on the recommendations from the committee we have
25 begun to do that. We've had the opportunity to confer with

1 Dr. Atkinson, I believe. We haven't had a chance to talk
2 with Dr. Blanc or Dr. Froines -- well, I'll say Dr. Froines
3 provided us comments indirectly through Elinor Fanning, and
4 I believe Randy Segawa has gotten some feedback from
5 Dr. Glantz.

6 But the committee recommended that we update the
7 prioritization report itself on an annual basis, and so we
8 will be updating the pesticide use data on an annual basis,
9 as a basis for looking at the joint prioritization of
10 monitoring and risk assessment.

11 The updated report will include a prioritization
12 for risk evaluation and control measures, as well as for
13 monitoring. I think as Paul indicated, we'll be looking at
14 how we have presented merging the prioritization for risk
15 evaluation and monitoring itself for the risk evaluation.

16 There is a need to discuss possible changes in the
17 prioritization scheme and what I'd like to go through are
18 just few of those suggestions that we have thrown out and
19 we're looking for input.

20 And, Jim, if I could have the next overhead,
21 please.

22 CHAIRMAN FROINES: Can I ask you just one quick
23 question, Paul or Tobi.

24 Given what the two of you have just said, that
25 you're going to bring together the prioritization document

1 for monitoring and for risk assessment, does that mean that
2 you'll be preparing a subsequent document that will link
3 everything together?

4 DR. JONES: I think given the input we have
5 received we need to go back, and this document tries to look
6 at what I would say Paul described as currently the two
7 tracks. We need to go back and look at the document and I
8 think better describe how we will merge those two. Okay.

9 From the standpoint of changes to the
10 prioritization candidate list, here some of the
11 considerations we're looking at is whether or not we've used
12 the complete list of pesticides prioritized for SB 915, this
13 is the high priority, the 200 that we initially called in
14 data for, or whether or not we look at those listed as high
15 priority for risk assessment.

16 Next overhead, please.

17 We're looking at possible changes in the
18 prioritization criteria themselves, and I think one of the
19 areas of input we had got from Dr. Atkinson was by using
20 both Henry's law constant and vapor pressure we're sort of
21 double dipping, so whether or not we should select one or
22 the other for that criterion is one of the considerations.

23 Including pesticide use trends as a criterion
24 becomes increasingly important as we look at the
25 consequences of the federal Food Quality Protection Act and

1 how that has and will continue to influence how pesticides
2 are used.

3 Whether or not to include pesticide illnesses as a
4 criterion, because we have our illness database. And while
5 most of those data aren't based on exposure to ambient air
6 concentrations of pesticides, it still is another
7 measurement we have.

8 DR. FUCALORO: Just a question of clarification.
9 When you say include pesticide use trends as a criterion, as
10 opposed to or in addition to actual usage, are you looking
11 at rates of changes when you say trends or rates of
12 change --

13 DR. JONES: I'm sorry, use trends. So it would be
14 overall use patterns. I think at this point we haven't
15 tried to go into the detail about changing use rates,
16 per se.

17 DR. FUCALORO: Okay. I'm not suggesting that. I
18 just --

19 DR. BYUS: I'm still confused. Do you mean trends
20 of pesticides use in the future or do you mean --

21 DR. JONES: As a year-to-year basis.

22 DR. BYUS: Like you think maybe some pesticide is
23 going to be used a lot more in the future?

24 DR. JOHNSON: No. More specifically, the
25 consequences of FQPA are that the older, more highly toxic

1 pesticide uses will decline.

2 DR. BYUS: All right.

3 DR. JONES: Based on both decisions by US EPA and
4 decisions by manufacturers, and so I think trying to account
5 for that in our selection of candidates becomes important.

6 DR. BYUS: Okay.

7 DR. JONES: And last but not least, method of
8 application as a criterion. I think the discussion from the
9 last item illustrates some of the issues about how material
10 is applied and how that might affect its becoming ambient
11 air concentration.

12 CHAIRMAN FROINES: Before you run ahead, I just
13 want to make sure, does anybody have comments on those
14 questions that they're raising?

15 DR. FUCALORO: Well, you know, I was looking
16 through this. The one that's -- what's really going to be
17 helpful to us is to see how it's actually done, an example.

18 And, for example, you say account for multiple --
19 I'm sorry. Include method of application as a criterion.
20 What does it mean? How is that used? Do you end up with a
21 number ultimately at the end which places it in some
22 priority list, things like a method of application, has to
23 to be an ordinal number, it can't be -- it's got to be
24 something that orders things rather than gives real value to
25 the number in having real value?

1 I'd like to really see how such a prioritization
2 list actually works, methodology works.

3 ARB has presented actually how it works, and we
4 got a sense of the numbers when they showed it to us.

5 MR. GOSSELIN: One of the other things we've been
6 looking also to consider with some of these factors that
7 might get -- might not be very straightforward in putting a
8 number factor to them, but almost have it, you know, beyond
9 the numeric factors that are in there now, use them almost
10 as a narrative weighting factor when we come forward with a,
11 you know, the decisions to initiate a document and
12 monitoring that, a description or some sort of justification
13 how these other things may have weighed into those
14 decisions.

15 DR. FUCALORO: So you're suggesting --

16 MR. GOSSELIN: I'm saying that's another option.

17 DR. FUCALORO: That's another possibility. In
18 other words, be probably verbal in your approach as opposed
19 to being quantitative --

20 MR. GOSSELIN: It would be qualitative more than
21 quantitative, as part of a weighting factor. Or it could be
22 a numeric factor weighted to it.

23 DR. FUCALORO: In other words --

24 DR. GLANTZ: I suppose what you would do -- I
25 think that's not a bad idea, because, you know, there's some

1 things that are a little bit hard to put numbers to. I
2 think probably the way you would operationalize this is you
3 would continue with more or less the approach you've used
4 and then when you come to us with the list, some things
5 would be out of numerical order, and then you could have a
6 column over there that says comments that explains why you
7 promoted or demoted something beyond where it came if you
8 just did a numerical sort.

9 So I think that's actually a good idea. I think
10 it would bring some judgment to the process rather than just
11 raw arithmetic.

12 CHAIRMAN FROINES: Peter, were you going to say
13 something?

14 DR. WITSCHI: No.

15 CHAIRMAN FROINES: Okay. I think that I'm not
16 sure I agree or disagree with Stan. It depends.

17 I think one of the weaknesses of the current
18 document in the risk prioritization section is that when you
19 read it, it's almost impossible to determine how a decision
20 would actually be made. The document is extremely opaque in
21 that respect.

22 And I think that the -- I'm really following up on
23 what Tony was saying, I think that when we get into the
24 process of risk assessment, everybody feels better the more
25 transparent the process.

1 And so as much as one, as you hate to rigidify
2 things down to numerical values so that you can't get away
3 from them and they end up being frustrating, on the same --
4 at the same time having too much subjective qualitative
5 judgment makes the process appear unclear as to how
6 decisions were made.

7 So I think that we should avoid that level of
8 subjectivity, so that anybody who reads a risk assessment
9 can understand what decisions you made, how you made, and
10 why you made them.

11 DR. GLANTZ: I agree with that too.

12 And I wouldn't think that this qualitative thing
13 would lead to wholesale shuffling of the list.

14 But I also -- and as you recall, I'm the one who
15 came up with the score thing in the first place, and I think
16 that should be the basic guide, but I think -- I also agree
17 it should be transparent, but I think after you've gone
18 through the exercise of doing the scoring and coming up with
19 a prioritization, that it would be totally reasonable for
20 DPR to come back to us and say, well, here's how things
21 scored out on a strict numerical basis, but we're going to
22 make some, not wholesale, but some adjustments to this list
23 because of these things that the numbers just didn't
24 capture.

25 If you had something, for example, that based on

1 the scoring was rated very very high, but you knew that the
2 manufacturer had agreed to withdraw the chemical at the end
3 of the year, then even if it was number one on the list you
4 don't want to do it.

5 I think that rather than trying to build some sort
6 of numerical score that takes every one of these kind of
7 possible situations into account, we should say you can
8 move -- once you've come up with a numerical ranking, if
9 you've got a good qualitative reason for moving something up
10 or down the list, you can do it, but you need to state
11 precisely why, which I think meets your transparency
12 requirement.

13 CHAIRMAN FROINES: So that's the guidelines from
14 the panel would be don't over-rigidify it on the one hand,
15 but make it so everybody understands why it was done.

16 DR. FUCALORO: But with a clear understanding, of
17 course, that if the quantitative result does not seem
18 reasonable to people who know about these things, then the
19 quantitative method is wrong, is bad.

20 DR. GLANTZ: Right.

21 DR. FUCALORO: So presumably you're going to get
22 something which on its face is going to make sense to people
23 who know --

24 DR. GLANTZ: Right. If you look how we did that
25 with the ARB some time ago, that worked out pretty well

1 fine.

2 But I think this just adds a little bit of
3 flexibility, and I think makes a lot of sense.

4 But I think doing it in a more quantitative way as
5 the basic method is the way we ought to do it. But I also
6 think some of these other things should be allowed into the
7 decision making.

8 CHAIRMAN FROINES: I just had one question for
9 Paul Blanc.

10 And that is if to get his opinion on the idea of
11 having -- this is a question for a physician, and that is
12 that you're considering including pesticide illnesses as a
13 criterion, and so I wondered what Paul thought about that
14 kind of surveillance information as a criteria for
15 prioritization.

16 DR. BLANC: I think what you want to do is have,
17 if yes, it raises, you know, raises the profile, and if
18 absent doesn't mean that it's not a problem, most of these
19 surveillance systems are -- have a tendency to vastly
20 underreport, and overreporting of illness is not
21 particularly the problem.

22 So the number of illness reports through the
23 pesticide illness reporting scheme, for example, is not
24 going to make you identify something that you shouldn't
25 identify. If it's not there, it doesn't mean that it's not

1 a problem.

2 So as long as your weighting, your relative
3 weighting system or your qualitative or semiquantitative
4 scoring system takes that into account.

5 You wouldn't want to weight pesticide illnesses by
6 saying that, you know, it's -- if there are 50 cases then
7 you get 50 points. You wouldn't want it to overwhelm the
8 system, but it's a reasonable thing and it doesn't have to
9 be just illnesses through the pesticide illness reporting
10 system. For example it could be pesticide illnesses could
11 include both illnesses reported through our system and case
12 reports of serious illness.

13 For example, I mean on the next slide you talk
14 about the toxicity data, which may include it in a different
15 way, but I can imagine for maneb, for example, since there
16 are case reports that suggest Parkinsonism in human case
17 reports that would be something that you would take into
18 account in a weighting scheme, even though there's never
19 been a case report in the pesticide illness reporting system
20 in California of that, as far as I know.

21 Nor would it be likely, because the pesticide
22 illness report is only good for acute illness, it's not good
23 for chronic illness, by and large.

24 CHAIRMAN FROINES: Tobi.

25 DR. JONES: I think the next overhead bears

1 directly on the issue of how the scoring criteria are used.

2 And I think, Dr. Glantz, we would appreciate
3 further your further consideration of this. Others of you
4 also.

5 Because I think what we're suggesting, are there
6 better ways or different ways to use the scoring, decreasing
7 the range of individual criteria, decreasing the range of an
8 overall score. I think currently the way the scoring system
9 is set up, there can be a total of something like 25 points.

10 Whether we -- whether or not we use a single
11 toxicity score, and I think currently, I'm not going to drag
12 out the report, but we've got a couple of different
13 approaches there.

14 Whether or not we should weight certain of these
15 criteria in different ways, give more weighting to certain
16 aspects, I'll say the physical chemical characteristic of
17 the compound as opposed to the toxicity.

18 Also accounting for outliers in the scoring.

19 And one thing I can quite honestly say, I'm not
20 sure quite what Randy -- Randy prepared these things,
21 accounting for multiple pesticide monitoring, I can't
22 honestly tell you, I'm not quite sure what he exactly meant
23 to include in that, per se.

24 DR. FUCALORO: I might suggest it may mean classes
25 of compounds that have the same toxicological effect.

1 MR. GOSSELIN: If there's a method for multiple
2 residue monitoring, it might give it a plus.

3 DR. FUCALORO: Just guessing. I don't know.

4 DR. JONES: Now, one of the things, based on the
5 recommendations of the committee, and I'm not going to dwell
6 on this point, is the committee recommended a batched
7 approach to organophosphates.

8 Let me just say at this point, based on discussion
9 at the OP workshop that you had back in October, we and
10 OEHHA are currently working on organophosphate policy. I
11 think the overall issue of whether or not a batched approach
12 to organophosphates would work at all needs further
13 discussion with the panel itself.

14 I think this probably kind of wraps up what Paul
15 and I have mentioned, and that is the committee's
16 recommended we need a clear policy in ranking process to
17 coordinate the priority of all the programs, and that is
18 1807 and SB 950. And we agree with that.

19 We currently use a number of factors in
20 prioritizing initiation of risk assessment, ranging from
21 toxicity in air concentrations to amount of use, the manner
22 of use, the illnesses in the populations exposed.

23 And what we are proposing in this instance, hand
24 in hand with providing an annual update on this report, is
25 providing to the committee an annual plan that will describe

1 which risk assessments are initiated, the rationale for
2 those risk assessments and coordinating the prioritization
3 of risk assessments with the prioritization for air
4 monitoring.

5 I think this probably best captures that in that
6 the improved coordination needs to update a prioritization,
7 expand to include both the risk assessments and the control
8 measures.

9 The prioritization should include -- improve the
10 coordination of the monitoring and risk assessment.

11 Paul and I have been discussing how to use the
12 backlog of existing monitoring. I think looking at the
13 history of the 1807 process relative to the history of the
14 department being involved in developing risk
15 characterization documents, we're sort of out of sync and
16 we're kind of gradually catching up to that.

17 I think we need to determine how best to use the
18 past monitoring data that we have collected and whether or
19 not in the context of the initiating our risk assessments
20 whether or not we need to go back and ask ARB to update that
21 monitoring data and particularly in light of the discussion
22 you just had about application site monitoring and modeling
23 itself, how we need to better explain how we're going to
24 plan to do that.

25 So that's where we are.

1 I would, I'd like to for Drs. Froines, Blanc,
2 Glantz and Atkinson to receive any further comments. I
3 don't believe Dr. Atkinson is here today to hear further
4 discussion. We had quite a good discussion with him. But
5 any further comments you have for us on the document,
6 particularly in light of the discussion today, would be most
7 helpful.

8 MR. GOSSELIN: Kind of the what you all kind of
9 see after we get through with this is the same sort of
10 numeric ranking with some of those adjustments going
11 through, and essentially some of the other, you know, very
12 narrow list of some of the qualitative issues, and then us
13 coming back annually starting from the top saying here's
14 what we're going to plan, whatever we can manage staffing
15 wise to initiate TAC documents, and couple that with a
16 request to ARB for monitoring at the same time, and they go
17 in parallel tracks.

18 And then if we go down the list because of
19 whatever reasons that that is laid out in writing and it's
20 sort of very transparent as to sort of the plan we have.

21 And then I think it kind of gets away from, I
22 think we're all struggling with is two different separate
23 tracks and trying to have the roads meet.

24 DR. FUCALORO: Let's assume you do a quantitative
25 approach, and you have end categories in which you rank them

1 and you add up those numbers, and you come up with the
2 number and it comes up with the priority number, then you
3 order them in that fashion.

4 And let's assume for the moment that a good number
5 of these end categories are not one, two, three, but really
6 have some gradation in them, for example usage. You would
7 have all sorts of gradation.

8 It might be a good idea to have a column, N plus 1
9 column. N plus 1 column would be, of course, the
10 prioritization list in its ranking in order and the ordering
11 of the other categories, to see if there's any one
12 particular one that really you should be able to see which
13 one really affects the overall outcome, because in a
14 discussion on the plane with Craig, who said it might be a
15 good idea just to look at the usage, the usage might in
16 fact be an overwhelming, I mean at least in common sense, if
17 you look at usage, it might be an overwhelming factor of
18 what determines what we should be looking at it.

19 MR. GOSSELIN: That was one of the issues on the I
20 think on the outlier factors where, you know, I think you're
21 limited to, what, a factor of four as the max and then --

22 DR. BYUS: Out of how many, 24?

23 MR. GOSSELIN: Yeah.

24 But to get the four, you have to achieve a certain
25 poundage, but then there are some poundages that are orders

1 of magnitude far beyond what you would need to get a four,
2 and that somehow that needs to be taken, if you look at the
3 list of usage by pounds, some really stand out as major uses
4 around the state that you'd probably lead to more widespread
5 potential exposure.

6 DR. BYUS: When I read the document I thought it
7 was pretty good attempt to do this, but that was my only --
8 my feeling was that usage was underrepresented in the sense
9 that if it was -- you could only get a possible four out of
10 the total of 24 for using -- because there's a considerable
11 variation in the usage among all of this.

12 I would in general, many of these, most of these
13 things are reasonably toxic, and at first blush it seems
14 almost that usage should receive more points than that. You
15 follow me? How do you decide it gets 4 out of 24? That's
16 kind of the -- all these factors are great, I mean I think
17 they're all very important, but I think the key then is each
18 category how many points it actually gets is something that
19 needs to be discussed, not so much the relative within each
20 category, which I think you've done -- it seems that you
21 have a relatively very nice job on, but it's sort of the
22 overall weighting of these categories and how many points
23 they should really get.

24 DR. JONES: Let me ask you just for example,
25 because as I go back and look at how we've described it in

1 this instance, there's equal weighting to whether or not
2 something is identified as a B carcinogen by US EPA.

3 DR. FUCALORO: I can't hear what you're saying.

4 DR. JONES: There's equal weighting numerically to
5 whether or not something is identified as a class B
6 carcinogen by EPA or the National Toxicology Program,
7 compared to the usage.

8 So you may have something that has relatively low
9 use, but it may receive a score of four, based on its
10 carcinogenicity.

11 So I guess what I'm interested in is would you say
12 change that relative ranking of the usage versus that
13 particular toxicity characteristic.

14 DR. BLANC: Do you have an overhead of the point
15 system?

16 DR. FUCALORO: That's what we need.

17 DR. JOHNSON: I'm sorry, I don't.

18 CHAIRMAN FROINES: I can read it to you. Can I
19 just use the '96 document?

20 DR. FUCALORO: Just read that whole thing to us.

21 CHAIRMAN FROINES: I'll read you the whole thing.

22 Vapor pressure is, you know, sales use data,
23 Henry's constant, acute toxicity, oncogenicity, and NOEL.

24 So there are three toxicity measures, one vapor --
25 two vapor pressure measurements and one use measures.

1 DR. GLANTZ: I mean, we'd had some e-mail go back
2 and forth and I talked to, I forget the fellow's name.

3 DR. JONES: Randy.

4 DR. GLANTZ: Yeah, Randy. About this issue of use
5 and I think it makes sense to give the use more weight, or
6 actually not more weight, but to extend the scale because
7 what's -- because I don't remember what got you a four, but
8 there were other -- there were things that got way more
9 usage than a four.

10 DR. JONES: Well, currently it's anything greater
11 than 500,000 pounds on an annual basis, but yet have
12 categories that were way up in the multimillion pounds.

13 DR. GLANTZ: So I think that that -- that we ought
14 to let -- what I think you ought to do is expand the scale
15 for the usage, which would mean -- what that would mean is
16 you could potentially get -- if it's very heavily used it
17 will probably also -- the usage would sort of implicitly
18 weight more heavily in the prioritization and then if you
19 end up with, you know, something where you're using a huge
20 amount of water to drown ants or something, you can use your
21 judgment thing to say, well, there's a drought, it's good
22 that we're using all this water.

23 CHAIRMAN FROINES: You could also, you could
24 consider some a little bit of a tiered system where, say,
25 you took everything over, what, five million pounds and

1 said, boom, let's look at this, because there's so much of
2 it or a million pounds and say above a million pounds it
3 gets starred, and we look at it and then we rank things
4 within that context for toxicity.

5 The question is does that mean that something
6 around 600,000 pounds gets left out that should be in, and I
7 don't know, but that's something to think about anyway.

8 DR. GLANTZ: I think, though, I think, John, if
9 they expanded the range of weights that you could give based
10 on usage, that would happen sort of naturally, and then
11 especially if we add in this, let's look at the -- apply a
12 little judgment here.

13 I think that's a more straightforward way to do
14 it.

15 Because I'm afraid if you start doing things by
16 tiers, what if you have some huge amount of something that's
17 really very benign versus some small amount of something
18 that's hideously toxic and, you know.

19 Just add a couple more.

20 CHAIRMAN FROINES: It means that when you have
21 things with huge amounts of use, they should, by definition,
22 be a first priority for evaluation of toxicity.

23 DR. GLANTZ: Right.

24 CHAIRMAN FROINES: And then you may discard them.

25 DR. GLANTZ: Right.

1 CHAIRMAN FROINES: It's something that you've got
2 15 million pounds being used in the state you better say we
3 better figure out whether this is important or not.

4 DR. BYUS: If you look at the usage table, which
5 is very informative, if I might add, quite fascinating to me
6 to read it, it is quite amazing how much of these chemicals
7 are put into the environment. Some of these chemicals, huge
8 amounts of pounds, nearly inconceivable. If you looked at
9 the overall priority score where the most it could get is
10 four, out of a total of 24 points in prioritizing it, it
11 just seemed to be --

12 DR. GLANTZ: Well, that's what we're saying.

13 DR. BYUS: I know that you can have all the
14 caveats of using a little bit of a highly toxic material,
15 but I'm just saying as you -- if look at it, that is what I
16 was struck with.

17 DR. GLANTZ: That's why I'm suggesting that
18 instead of zero through four for the usage it should go
19 maybe zero through eight.

20 DR. BYUS: Okay.

21 DR. GLANTZ: So that weight it more heavily.

22 I think if you did that, then I think the natural
23 result of that process is that what you guys are talking
24 about would just happen.

25 DR. FUCALORO: You know, this is a difficult

1 problem, because at the end of the day after you get some
2 sort of prioritization list, really we're lacking something
3 here, and that is the expertise for someone to say, someone
4 who has judgment of the toxicity, has knowledge of the
5 toxicity, knowledge of usage and probably exposure, some --
6 all these things, and then in good judgment to say this
7 makes sense or it doesn't make sense.

8 DR. GLANTZ: That's what we're here for.

9 DR. FUCALORO: I understand that.

10 DR. GLANTZ: We have our chair. Our chair is.

11 DR. FUCALORO: Let me finish this. If someone is
12 able to do -- if one can do that, look at the current list
13 today and come up with something like that, then you would
14 go back and look at all the determinants and you do some
15 sort of pattern recognition mathematics to come up with how
16 you should weight. In other words, you're comparing that
17 usage accounts for only 16 percent of the total score.
18 Maybe it should count for 30 percent, I don't know. But
19 that would be some way to do that.

20 DR. GLANTZ: Well, yeah, I can tell you, they come
21 up with their new weighting, we can discuss it, move things
22 around arbitrarily, and then I'll go run it through the
23 computer and give you the scoring for that function. I
24 mean, that's something that that's ten minutes.

25 DR. FUCALORO: You see what I'm saying, we're

1 doing it in some ways backwards. If you knew what the
2 results should be, if you knew what the results should be in
3 terms of at least ordering, then you can see what the
4 important determinants of that --

5 DR. GLANTZ: But that's what we're doing by
6 setting these weights. I mean, that's what we're doing
7 actually. I'm sorry.

8 CHAIRMAN FROINES: Paul.

9 DR. BLANC: I just want to clarify by rather than
10 what would actually be used to calculate the score and what
11 that actual score would be, but let me see if I understand.

12 MR. GOSSELIN: No, we're going to keep the score.

13 DR. BLANC: I understand. Let me see if I
14 understand.

15 The four generic categories of contribution, would
16 it be safe to categorize them as use, volatility, chronic
17 toxicity and acute toxicity? Is that really basically what
18 we're coming down to?

19 MR. GOSSELIN: For what would be the score?

20 DR. BLANC: The use we just talked about.

21 The volatility is this issue of not using both
22 Henry's constant and the vapor.

23 Chronic toxicity is really oncogenicity plus other
24 issues.

25 The acute toxicity is what you raised about the

1 pesticide illness reporting, but also the NOEL. Is that an
2 acute NOEL?

3 CHAIRMAN FROINES: No. I think it would be a
4 NOEL, because they have an acute toxicity.

5 DR. JONES: We have identified both.

6 CHAIRMAN FROINES: Chronic NOEL.

7 DR. JONES: Acute toxicity as a category and the
8 NOEL, and I think that could probably run the range of
9 relatively acute like teratogenic effect to chronic NOEL,
10 and I don't think we've tried to prejudge that in the
11 document itself, probably be more based on the NOEL from
12 which we would determine our regulatory endpoint.

13 DR. BLANC: What I was getting at, if one could
14 more or less categorize each thing into one of those things,
15 if you conceptualize it that way, then you could decide if
16 you thought that -- if you thought that those were the four
17 components and then you could decide what the relative
18 weighting would be conceptually, and then you can come up
19 with a scoring system which incorporates it.

20 For example, let's say roughly there are 32 or 64
21 pesticides. Let's say there are 64 pesticides. I don't
22 know how many there are on your list all together. Let's
23 say you were roughly dealing with that number.

24 Then you could in terms of use, you could actually
25 rank order them in use and then divide by eight or dividing

1 by 16 and you, if divide by 16 and there were 64 of them,
2 then the one who was the highest could come out at four, or
3 if you wanted it to come out at eight you divide by a
4 different number. I mean, the arithmetic would be simple,
5 but I think what would -- and I think you should keep a
6 scoring system, because that will allow you to be the most
7 transparent, which is something that John was urging.

8 And in terms of the nuance of it, I think you do
9 need to think through the relative weighting of chronic
10 toxicity, and I would put oncogenicity within that, but I
11 wouldn't have it, you know, run the show.

12 And similarly with acute toxicity, I would think
13 about the acute, you know, LD 50 and animal data, but if you
14 had lot of reports of human illness, then acute human
15 illness, then I would, you know, bump it up and as long as
16 we can see when it comes to us, you know, little notes that
17 explain how something got to scoring it did more or less and
18 things aren't widely out of shape, then that makes sense,
19 because I don't think there's another, beyond those four
20 broad categories, those seem to me to be the things that
21 matter.

22 DR. BYUS: Very nicely stated, Paul.

23 DR. FUCALORO: I think it is.

24 DR. BYUS: The document is, I mean, again --

25 DR. GLANTZ: You've become our poster child.

1 DR. BLANC: Not to misuse a term.

2 DR. GLANTZ: Not to misuse a term.

3 CHAIRMAN FROINES: If I can change the subject a
4 little bit. Because I think that there's one thing that
5 Tobi said that I wanted to emphasize, and that is that this
6 document in 1996 was good. I mean, it laid everything out
7 the way we're talking about, and there may be differences in
8 the approach based on what you, Paul, said and what Stan
9 said and what Craig said and so on and so forth, but this
10 did -- this was an acceptable ranking system.

11 Where the questions arose was then there seemed to
12 be a disconnect between what was in the document and then
13 what got done or was planned to have been done.

14 So the other piece that's important is to have the
15 ranking, yes, but also to have the program plan that says
16 this is what we're going to do and here's why we're going to
17 do it.

18 So I don't think those things are separable.

19 We can debate these little categories and how to
20 do the rankings for a hundred years and we wouldn't
21 necessarily improve upon them dramatically, but if there's a
22 disconnect between priority setting and program, then that
23 is a problem.

24 And so that's one thing I think we need to be
25 careful to avoid, because I think that's what gets us into

1 the kinds of confusion that led to these kinds of
2 discussion.

3 DR. BLANC: Which I think will be largely solved
4 by what you said earlier today, which is that the sine qua
5 non of bringing the document to us will not be having air
6 sampling data, although if you have air sampling data that
7 will be included.

8 MR. GOSSELIN: There will still be an exposure
9 section to the document.

10 DR. BLANC: But it may not be driven by field data
11 necessarily.

12 CHAIRMAN FROINES: And that's required under the
13 law, so that absolutely needs to be there.

14 Does that seem sufficient for you folks to go back
15 to your drawing board?

16 DR. JONES: Certainly a good start.

17 CHAIRMAN FROINES: Great.

18 DR. JONES: If you have -- if the four selected
19 members have any additional comments for us, we would most
20 appreciate it.

21 CHAIRMAN FROINES: I have one I'll say right now
22 and let it go.

23 It seems to me you use, and Paul may disagree on
24 this, because he doesn't like carcinogens and I do, you use
25 EPA and NTP, and but you use Prop 65 lists on reproductive

1 toxins.

2 And it would seem to me that you should consider
3 authoritative bodies for carcinogens as well as
4 authoritative bodies for reproductive toxins, to have an
5 internal consistency, or in the alternative certainly the
6 use of IARC documents would be an acceptable approach in
7 terms of identifying oncogenicity.

8 I think the trouble with picking regulatory
9 agencies approach like EPA is regulating carcinogens is a
10 very different tact than identifying them sometimes and IARC
11 probably does a better job of identifying than EPA does and
12 so considering the use of -- consistent use of authoritative
13 bodies or IARC would be, I think, useful addition.

14 Thank you very much. It's very nice to have Tobi
15 here.

16 DR. JONES: Thank you.

17 CHAIRMAN FROINES: Look forward to working with
18 you again.

19 MR. GOSSELIN: Actually we had one small
20 presentation and we don't need to give it. It was a
21 description of the multi-residue monitoring we had in
22 Lompoc. We could, if we have them, just hand out the
23 overheads and forego the discussion.

24 CHAIRMAN FROINES: Okay.

25 DR. BLANC: Good idea.

1 CHAIRMAN FROINES: So we're going to talk now
2 about -- this is basically the panel talking with itself,
3 but, Melanie, can you join us.

4 Just for the record, there will be no closed
5 session on litigation. And I'm required to say that for the
6 record so that everybody is aware that we are not going to
7 hold a closed session.

8 DR. BLANC: How about a session with clothes?

9 CHAIRMAN FROINES: What?

10 DR. BLANC: A session with clothes.

11 DR. BYUS: Closing a session.

12 CHAIRMAN FROINES: We're getting there. We'll be
13 there shortly.

14 DR. GLANTZ: I going to get us some new clothes
15 after this meeting.

16 CHAIRMAN FROINES: The first thing to raise is,
17 Jim, do you want to have a seat next to Melanie for a
18 second.

19 Everybody knows Jim Behrmann, on the panel.

20 DR. FUCALORO: And admires him.

21 CHAIRMAN FROINES: And admires him.

22 MR. BEHRMANN: Thank you, Tony.

23 CHAIRMAN FROINES: We want that in the record.

24 I just want to make it an official statement that
25 Jim Behrmann is the new SRP liaison. He is replacing Bill

1 Lockett, who appears to have left the meeting.

2 DR. BLANC: No, he follows Bill Lockett, who is
3 irreplaceable.

4 MR. BEHRMANN: I was going to comment on that.

5 CHAIRMAN FROINES: That's better said.

6 But we want to, the next time we have a meeting,
7 we want to officially thank Bill.

8 So this is --

9 DR. FUCALORO: This is the last?

10 CHAIRMAN FROINES: No, he's going to continue part
11 time on special projects for a period of time. Bill is
12 retired from ARB.

13 So Jim will be will serving as SRP liaison from
14 now on.

15 DR. FUCALORO: Keeping you awake?

16 CHAIRMAN FROINES: Sorry, we're keeping you from
17 your appointed sleep in the afternoon.

18 DR. BLANC: I wish.

19 CHAIRMAN FROINES: Jim, the other thing is that
20 the upcoming meeting dates that are tentative meeting dates
21 are Monday, March 5th, at Riverside, and Monday, April 30th,
22 at UCLA.

23 Can I take --

24 DR. FUCALORO: Just one second, please. Give it
25 to me again.

1 CHAIRMAN FROINES: March 5th, Monday, UC
2 Riverside.

3 And Monday, April 30th, at UCLA.

4 We have had a number of meetings in San Francisco
5 Bay Area, so we're going to try to spread it around.

6 DR. FUCALORO: In fact, I'd like to read
7 Fucaloro-Byus' priority list where we should be meeting. UC
8 Riverside, number one. Ontario Airport, number two. San
9 Francisco Airport, number three. UCLA, number four. And UC
10 San Francisco, number five.

11 DR. BLANC: What about Claremont? You did that
12 nice dinner.

13 DR. FUCALORO: I did that as --

14 CHAIRMAN FROINES: Do you want to read it again?

15 DR. FUCALORO: I'm no longer dean. I don't carry
16 any swat any longer.

17 CHAIRMAN FROINES: Well, the point being --

18 DR. FUCALORO: UC Riverside and Ontario Airport,
19 in some ways is I think certainly easy for Roger, for me,
20 for Craig. And that's three of us.

21 And I don't think --

22 DR. WITSCHI: UCSF is very convenient for four,
23 for Gary, Stan, Paul and me.

24 DR. FUCALORO: That's why this priority list has
25 to be thrown away.

1 DR. BLANC: I want to apologize, because it's
2 partly been because of my -- certainly because of my
3 scheduling in December that the meeting was where it was,
4 and there was at least one previous one where that was --

5 DR. GLANTZ: It was my -- I couldn't --

6 DR. BLANC: And I fundamentally agree that it's
7 really not been fair, the amount of San Francisco meetings.

8 DR. BYUS: The only problem is the taxi, is taking
9 the long taxicab --

10 DR. FUCALORO: It takes --

11 DR. BYUS: Getting in there and out of there from
12 the airport. At least if it's here, it's a lot more
13 convenient. Not that -- you know, it's just getting a
14 taxicab out is difficult to catch an airplane. We've just
15 barely made it.

16 DR. FUCALORO: Sometimes we have just made it.

17 CHAIRMAN FROINES: You guys should have --

18 DR. FUCALORO: I was going to show up at your
19 doorstep --

20 DR. FRIEDMAN: Can you rent a car?

21 DR. BLANC: That takes an hour to return in this
22 airport, unfortunately, with the new system.

23 DR. FUCALORO: I was going --

24 DR. BYUS: The airport here is much better.

25 CHAIRMAN FROINES: Can I move this along?

1 We're going to try and balance the meetings
2 between these areas and Claremont, Riverside and San
3 Francisco, and once in a while have a meeting at UCLA. But
4 Kennedy and I are two, we aren't three and we aren't four,
5 so we understand that our general position is weak on this,
6 but once in a while a meeting around at UCLA or at the Los
7 Angeles Airport.

8 So we'll, Jim and I, will work that out.

9 DR. GLANTZ: I think the general rule of trying to
10 keep it near the airport, so we don't have to pile the cab
11 ride on.

12 DR. FUCALORO: From Ontario we can fly to LAX.

13 CHAIRMAN FROINES: And the question I wanted to
14 raise is I want to go back --

15 DR. BLANC: What about your helicopter?

16 CHAIRMAN FROINES: Remind you that until we had
17 the workshop in '98 on diesel, we had never had anything but
18 reviewing specific documents that came to us from the ARB or
19 from -- well, from the ARB basically.

20 And since that time we've had the diesel workshop,
21 two pesticide workshops, the acute RELs, the chronic RELs,
22 the stochastic modeling document. Now we're going to be
23 getting SB 25.

24 So that we've actually talked about having other
25 workshops on pesticides at some point, depending upon areas

1 of interest, so that we not only take up documents --
2 although it would be interesting if Melanie or Janette could
3 tell us when an actual real-live document about a chemical
4 would come forward -- but the fact of the matter is we have
5 a fairly diverse portfolio at this point, and that I think
6 everybody is working very hard because of it.

7 And so my question would be is what do you think
8 is a reasonable period of time for meeting? Would you say
9 every month, every other month, every three months? And so
10 we need to in a sense define our workload so that we're in
11 some measure of control of it, because there's enough work
12 where we can meet every month, clearly.

13 DR. GLANTZ: I think we should schedule monthly
14 meetings.

15 DR. BLANC: No.

16 DR. GLANTZ: You can always cancel.

17 DR. BLANC: No. Absolutely not. That would be an
18 odious burden. I'm sorry. I cannot.

19 DR. GLANTZ: We've been more or less meeting
20 monthly.

21 DR. BLANC: No, we haven't.

22 DR. GLANTZ: Yeah, we have.

23 CHAIRMAN FROINES: But there's another issue here
24 that Jim and I would like to raise with you, is we would
25 like to schedule on whatever frequency we come up, we would

1 like to schedule those meetings at a specific day and time
2 every month so everybody can plan their calendars on a
3 consistent basis, rather than every month trying to figure
4 out who's available.

5 DR. BLANC: Well, there's something in between,
6 which is doing what you're doing now, which is at a given
7 meeting -- and it's not something that we've actually done
8 consistently -- is at a meeting everybody gets out their
9 calendars and commits at that meeting to the next two
10 meetings and or whatever it is.

11 I mean, I tell you the truth, the way my schedule
12 works it would be we could say we're going to meet every
13 other month on the first Tuesday of the month, but I can
14 tell you that based on my schedule I would miss a lot of
15 meetings, because it's hard for me to predict, even though I
16 know that there are certain days of the week where I could
17 never commit because of some fixed thing, but just the
18 nature of my schedule is not very predictable in that way,
19 because how do I know when the American Thoracic Society
20 meeting is going to be, which week of the month it's going
21 to be in a given month, and that kind of thing.

22 But if we -- it seems to me we can take a middle
23 ground where we sat down at these meetings and just like you
24 just said, okay, these are the two dates, do those work for
25 everybody. Everybody get them on their calendar. It saves

1 Peter a lot of headache.

2 CHAIRMAN FROINES: He's already gone through the
3 headache. You haven't saved anything. That's the headache
4 he's gone through to get to these days. I'm trying to help
5 it out further.

6 DR. GLANTZ: But the problem is like if you look
7 at my situation, in the fall I have a big teaching
8 commitment that clobbers Tuesdays and Thursdays, so I
9 couldn't go to meetings on Tuesdays and Thursdays and that
10 was actually why we had a couple of them at UCSF, so I could
11 make it.

12 But the the rest of the year, I don't have
13 Tuesdays and Thursdays, you know. And I just don't think
14 we're going to be able to have just a fixed --

15 DR. FUCALORO: I'm going to tell you, if we're all
16 giving our own individual situations, and unless you hit the
17 spring break, I'm not going to be able to make it in the
18 morning to any meeting on a weekday for this spring
19 semester.

20 After the middle of May, I will be relatively
21 free. I have a year sabbatical and I'll be mostly on JPL,
22 but just in town, so to speak.

23 But these two dates that you gave me on Monday,
24 the Riverside one is a possibility if it's scheduled at noon
25 or thereabouts.

1 DR. BLANC: Or you can miss the morning part.

2 DR. FUCALORO: Or I can miss the morning.

3 CHAIRMAN FROINES: Let's move ahead, because it's
4 clear -- I'm sorry, that one is not going to fly.

5 DR. FUCALORO: In some ways that's supporting what
6 Paul is saying.

7 CHAIRMAN FROINES: That one is -- I'm pushing the
8 rock of Sisyphus up the hill on this one, I think.

9 Let's switch --

10 DR. FUCALORO: What happened to Sisyphus?

11 CHAIRMAN FROINES: What?

12 Let's make a decision about frequency, because
13 that we can decide.

14 DR. GLANTZ: How many meetings did we have last
15 year?

16 DR. FRIEDMAN: How about every two months, six a
17 year.

18 DR. FUCALORO: I think that's probably good.

19 DR. FRIEDMAN: That feels good to me.

20 MR. BEHRMANN: That has been your approximate
21 meeting frequency.

22 DR. GLANTZ: That's fine. It seems like it was
23 more frequent than that.

24 MR. BEHRMANN: I think one year there were seven
25 meetings, and so you've been ranging between six and seven

1 meetings a year.

2 DR. GLANTZ: Okay. Every two months, except
3 you've got March and April here, but that's okay.

4 DR. BYUS: Well, I think unless the workload,
5 unless you have to have us -- we would not --

6 DR. GLANTZ: Then you can have every two months,
7 and then you could have an additional meeting if we needed
8 it.

9 CHAIRMAN FROINES: If the workload --

10 DR. BYUS: If the workload warrants it.

11 DR. BLANC: So consistent with that idea,
12 wouldn't, John, it make sense for us to choose or to discuss
13 now a date in the last two weeks in June, for example, and
14 people would be ready, so rather than tomorrow have Peter
15 start sending out faxes for us to mark out the dates we're
16 not available in June.

17 CHAIRMAN FROINES: Okay.

18 DR. FUCALORO: I think that's good.

19 DR. BLANC: And say that it should be in Claremont
20 in June.

21 DR. FRIEDMAN: I can already tell you, I will not
22 be here in the last two weeks of June.

23 CHAIRMAN FROINES: Okay.

24 DR. FUCALORO: Me either. Vacation.

25 DR. GLANTZ: I don't have problems. That's pretty

1 clear for me. Tuesday isn't a great day for me.

2 DR. BLANC: When in the second week of June do you
3 guys leave?

4 DR. FRIEDMAN: I'm going to leave either on the --

5 DR. GLANTZ: I think we should have Peter do the
6 fax.

7 DR. BLANC: Wait a second. Let's just see how
8 long this takes. This is an experiment.

9 When do you leave?

10 DR. BYUS: My problem is it's my 30th wedding
11 anniversary and planning --

12 DR. BLANC: No, no, the problem is you're married
13 30 years.

14 CHAIRMAN FROINES: Just tell us the facts, don't
15 tell us the story.

16 DR. BYUS: The earlier in June, the better for me.
17 First week is the best.

18 DR. BLANC: The first week is not possible for me,
19 but the second week is possible for me.

20 CHAIRMAN FROINES: First week?

21 DR. FANNING: Not the 7th and 8th.

22 DR. GLANTZ: I think we should have Peter send us
23 faxes.

24 CHAIRMAN FROINES: If I can tell you one thing
25 that you may be interested in, that is the Southern

1 California Particle Center and Supersite is organizing,
2 under contract with OEHHA, a two-day meeting on gasoline and
3 health effects, gasoline-associated health effects and risk
4 assessment, and so the first week in June there will be a
5 very interesting two-day meeting.

6 And it's the first time that -- no, it's the
7 second time that in California there's been a meeting on
8 gasoline-related issues in contrast to diesel, which there's
9 been obviously a lot.

10 So one may want to keep that mind. We could
11 conceivably try and schedule the meeting about the same time
12 as that meeting in case anybody wanted to stay over for it.

13 DR. BLANC: We just said it's going to be the
14 second week of June that we're going to meet, not first
15 week.

16 CHAIRMAN FROINES: Okay.

17 DR. BLANC: So what day of the week is bad for
18 people?

19 CHAIRMAN FROINES: What day of the week is good
20 for people?

21 DR. FUCALORO: That's a positive way to put it.

22 DR. BYUS: Any day is fine.

23 DR. FUCALORO: Again, if we're going around the
24 table, any day is fine with me.

25 CHAIRMAN FROINES: Peter.

1 DR. FRIEDMAN: Is the second week the one
2 beginning the 4th?

3 DR. BLANC: Beginning the 11th. The week that
4 begins the 11th.

5 CHAIRMAN FROINES: Peter, the 11th to the 15th.

6 DR. BLANC: You said it had to be earlier in that
7 week, right?

8 CHAIRMAN FROINES: Peter doesn't know.

9 He says okay.

10 He says okay.

11 DR. FRIEDMAN: I can only do the 11th or 12th.

12 CHAIRMAN FROINES: Stan.

13 DR. GLANTZ: The 12th isn't so hot for me.

14 DR. BLANC: So, Peter, try the 11th, poll
15 everybody for the 11th of June, but then if it's 11th of
16 June, I would say since the two preceding are in Southern
17 California, it actually be in San Francisco that one,
18 because I will have just gotten back to town on Sunday from
19 two weeks out of town, I won't be able to travel very
20 easily.

21 DR. GLANTZ: We're saying the 11th of June
22 tentatively?

23 DR. BLANC: In San Francisco.

24 DR. FUCALORO: Your contrition is embarrassing me
25 so.

1 CHAIRMAN FROINES: We need some lead persons for
2 the methodologic issues associated with SB 25, for the
3 children's health issues. That's correct?

4 DR. MARTY: Correct. We need some lead people on
5 the document that we're producing that describes the
6 prioritization of the toxic air contaminants to place on the
7 list of TACs that potentially differentially impact
8 children.

9 CHAIRMAN FROINES: At the last meeting, Gary, Stan
10 and Paul expressed some interest.

11 DR. BLANC: Not I, said the king.

12 DR. MARTY: Peter, I thought it was Dr. Witschi.

13 DR. WITSCHI: I did not express anything.

14 DR. FRIEDMAN: I just raised the question, you're
15 talking about the health effects of kids or whether you're
16 talking --

17 DR. FUCALORO: It's not me.

18 DR. MARTY: This is when we were describing our
19 approach to looking at the TACs and there's 200 of them and
20 what we have to do is come up with a list of five, up to
21 five, we started to describe what we had done to date and
22 Drs. Witschi, Glantz and Friedman, in my memory, commented
23 that they would be very interested in looking at --

24 CHAIRMAN FROINES: Dr. Witschi has agreed and
25 Stan --

1 DR. GLANTZ: I'll agree.

2 DR. FUCALORO: Stan never says no.

3 DR. GLANTZ: No, That's not true. I say no
4 sometimes.

5 DR. BLANC: He says no all the time.

6 DR. GLANTZ: I like this sort of manipulating
7 lists.

8 CHAIRMAN FROINES: Moving on. Moving on. I also
9 have down here an ARB list update.

10 Do we need a lead on that, Janette?

11 MS. BROOKS: In the past, the way it was done,
12 usually there was an exposure atmospheric scientist side and
13 then someone else, and Stan and Dr. Seiber did it the last
14 time.

15 CHAIRMAN FROINES: So the logical person would be
16 Tony Fucaloro and a health person.

17 DR. BYUS: What's the chemical?

18 CHAIRMAN FROINES: It's up the date --

19 DR. BLANC: Someone in a background in organic
20 chemistry and particles and industrial hygiene would be
21 important, really, on this kind of thing.

22 DR. GLANTZ: No, I don't think that's fair.

23 DR. WITSCHI: What are the compounds or the list?

24 CHAIRMAN FROINES: Craig is not currently a lead
25 person.

1 DR. GLANTZ: I think Craig would be really good at
2 that.

3 DR. BYUS: It's just the priorities? All right.

4 DR. FUCALORO: Who is on this list?

5 CHAIRMAN FROINES: You and Craig.

6 And the chronic RELs, Melanie, why don't you go
7 ahead and tell us about that.

8 DR. MARTY: I actually have a few overheads on
9 this.

10 DR. FUCALORO: It wouldn't be Melanie without
11 overheads.

12 DR. MARTY: I just wanted to update the status of
13 the chronic reference exposure levels.

14 Andy, you want to go ahead and put up the prior
15 actions.

16 Let's skip the batch 2B and put up the prior
17 actions first.

18 As you'll recall, initially we had a draft
19 technical support document for the determination of
20 noncancer chronic reference exposure levels.

21 This was available in '97 for public comment.

22 We revised the draft, and the panel reviewed it
23 and finally approved the methodology for the chronic RELs as
24 well as a list of an initial 30 or so chronic RELs on
25 February 23rd, 2000.

1 Since then, the panel has reviewed and approved
2 two more batches, which we have labeled 1B and 2A. And they
3 are adopted now for use in the air toxic hot spots program.

4 The next batch that we want to give you is batch
5 2B. We have incorporated public comments on this batch and
6 updated the methodology where panel commenters had indicated
7 needed updating.

8 And we also added in some new data.

9 Next slide.

10 So we're looking at sending batch 2B to the panel
11 for review, perhaps starting in -- the review starting in at
12 the March meeting.

13 I guess the concern that I have is that we also
14 need time for the panel to look at what we're doing under SB
15 25, so I'm a little concerned about the overload issue.

16 And finally I just wanted to remind you that we
17 actually have about 60 more chemicals that we were
18 developing chronic RELs for, so we're going to be putting
19 those into batch 3, and those are going to go out for public
20 comment shortly.

21 DR. GLANTZ: How many batches are there all
22 together?

23 DR. MARTY: There's actually three -- the history
24 is we started out giving 120 chemicals. And that just
25 didn't work in the scheme of things. It was overload. So

1 we've broken it into three batches.

2 DR. GLANTZ: So batch 3 is the last batch?

3 DR. MARTY: Batch 3 should be the last batch.

4 Should be the last batch for now.

5 DR. GLANTZ: For now. Okay.

6 DR. MARTY: But again my major concern is
7 overloading the panel with batch 2B while they're also
8 having to deal with the information we need to bring forth
9 under SB 25 in terms of prioritizing the TACs to develop the
10 list.

11 The batch 2B chemicals we actually have them, I
12 don't know if you want to put the slides up, but Dr. Froines
13 has already assigned leads on those. We did that about a
14 year ago.

15 CHAIRMAN FROINES: They have undoubtedly
16 forgotten.

17 DR. BLANC: He may need to update that.

18 DR. GLANTZ: You may need to remind us.

19 CHAIRMAN FROINES: I have it here. This is like,
20 you know, McCarthy. I have the list.

21 DR. BLANC: Did we already discuss these?

22 DR. GLANTZ: No.

23 CHAIRMAN FROINES: No.

24 DR. BLANC: These are things we're supposed to
25 discuss?

1 DR. MARTY: These are things that you have not
2 gotten yet.

3 CHAIRMAN FROINES: We're going --

4 DR. BLANC: Have we gotten the document? No, we
5 haven't. It's not like I forgot there was something I --

6 CHAIRMAN FROINES: We're going to have to mix it
7 up a little bit more, because Dr. Kennedy is out ill, and so
8 his compounds will have to be rescheduled.

9 DR. WITSCHI: Can you read the list, the
10 assignments?

11 CHAIRMAN FROINES: Oh, you want me to go through
12 all of them right now?

13 DR. GLANTZ: No. You can get a copy.

14 CHAIRMAN FROINES: I'll get you a copy.

15 DR. BLANC: Any more bad news? Melanie, what else
16 do you want to hit us?

17 DR. MARTY: No bad news, really.

18 The March 5th meeting I would like to go over a
19 little more what we've done on SB 25, so that I would like
20 to provide the leads what we've got to date and then present
21 that to the panel.

22 And also I'm -- I haven't talked to Dr. Froines
23 about this, but we do have a presentation we've given in a
24 couple places now on why children might be more sensitive to
25 chemicals in an environmental context than adults, and we'd

1 be happy to bring that presentation to the panel.

2 DR. BLANC: In March?

3 DR. MARTY: In March.

4 DR. BLANC: Does it have audiovisual?

5 DR. MARTY: It's got --

6 DR. BLANC: It's high-tech.

7 DR. MARTY: It's high-tech.

8 DR. GLANTZ: That means they have color
9 transparencies.

10 DR. BLANC: Is there background music?

11 DR. FUCALORO: What audience is this intended for,
12 this particular presentation, where is it pitched?

13 DR. MARTY: This presentation has been presented
14 at the American College of Toxicology meetings and --

15 DR. FUCALORO: It's a high level?

16 DR. MARTY: Correct.

17 DR. BLANC: Yes. Fine. Do that. I would be in
18 favor of that.

19 CHAIRMAN FROINES: We have two more items, quick,
20 brief items.

21 One item that may -- hopefully is brief, is at the
22 last meeting there was a seemed to be a general consensus
23 that we should take up the issue of environmental tobacco
24 smoke.

25 And so what we'd like to do is decide if the panel

1 wants to set it up as an action item for a future meeting.

2 In the meantime I'd like to ask Melanie to go back
3 and look at the document and see if to what degree it needs
4 to be updated for a meeting that we would schedule in the
5 future.

6 And so the question before the panel would be do
7 you want to proceed with it, and do you want us to schedule
8 at a future meeting?

9 DR. FRIEDMAN: What is the reason for taking this
10 up again? I mean, it's already been labeled as a toxic air
11 contaminant.

12 CHAIRMAN FROINES: No, it hasn't been labeled.

13 DR. FRIEDMAN: That's right. What good will it do
14 for us to reassert that we think it is?

15 DR. WITSCHI: I think the issue came up because we
16 couldn't deal with the toxic air contaminants for children
17 without having to deal with environmental tobacco smoke,
18 which is probably the most important one.

19 DR. FRIEDMAN: Is that the context that we would
20 be hearing about it in relation to children?

21 CHAIRMAN FROINES: Yes.

22 DR. WITSCHI: Yes.

23 CHAIRMAN FROINES: In other words, take it up as
24 an SB 25 compound that would have to be listed as a toxic
25 air contaminant.

1 DR. MARTY: The way the statute is worded is
2 requested us to look at existing TACs and prioritize those,
3 and since ETS isn't on the list, it's not on our list.

4 DR. FUCALORO: Then it's worth doing.

5 DR. GLANTZ: Yeah, I think if that's the case, and
6 as Peter said, I think we should bring it up at the next
7 meeting and do whatever we have to do to bring that fact to
8 the ARB's attention.

9 Because to do a report, an SB 25 report on toxic
10 air contaminants that affect children now, and leave out the
11 most important one is just, I mean, it's just ridiculous.

12 DR. BLANC: Is the precise wording of the
13 legislation -- what is the precise wording of the
14 legislation in terms of when they say something is a toxic
15 air contaminant?

16 DR. MARTY: What the legislation did was it
17 updated the Health and Safety Code sections that deal with
18 the TAC program, and so it didn't change the language that
19 defines what a TAC is. What it did was ask us to look at
20 existing TACs and prioritize them as to those which might
21 impact children more.

22 DR. BLANC: What I'm asking is the precise
23 language where they say that.

24 DR. FUCALORO: You'll slip it in without doing it.

25 CHAIRMAN FROINES: Well, if I can make a comment

1 on that while she's looking.

2 Right now we are under two suits, as everybody
3 knows.

4 And the potential problem with environment tobacco
5 smoke is the entire tobacco industry comes in and we would
6 have to have a public input process if we were going to take
7 it up as a TAC. So we have a potentially very contentious
8 document that we would be taking up.

9 I'm worried that if this panel starts getting
10 viewed as a controversial panel, that we begin to lose our
11 credibility in terms of scientific integrity.

12 And I think that it's important to do everything
13 we think we should, but we also need to be sensitive to our
14 view.

15 DR. GLANTZ: Well, I understand that.

16 But, you know, I think that this panel's
17 responsibility is to see the good science that's done. And
18 there are times that certain interests don't like that.

19 And, I mean, the whole way this process was set
20 up, and you and I as the longest continuously serving
21 members, was to separate the regulatory aspects of these
22 issues from the scientific aspects.

23 And I think if the panel starts to allow lawsuits,
24 you know, people bringing lawsuits or calling us dirty names
25 to interfere with intelligent scientific judgments, then

1 you've defeated the purpose of having the panel.

2 And I think we should proceed based on the
3 science, and if someone doesn't like it, then everybody in
4 America has the right to bring a lawsuit.

5 I mean, we've discussed these actions which are
6 pending. I'm frankly surprised, having been on here for a
7 long time, it took someone that long to get around to
8 bringing a lawsuit, you know.

9 But I don't think -- I mean just from my
10 experience in other areas.

11 But, you know, the fact is that I think we need to
12 proceed using our best scientific judgment, independent of
13 these other issues.

14 And, you know, during the debate, the discussions
15 over diesel, I remember going to one of the many many
16 workshops we had and listening, and one there was lawyer
17 there who threatened to sue if we didn't do something or
18 another, and my reaction to that, I had sat quietly through
19 most of this just listening, and my reaction is if want to
20 sue the Air Resources Board or us, it's a free country, but
21 our job is to give you the best science.

22 And, you know, and I think we just need to proceed
23 on those, that course.

24 I can tell you that one of the reasons that we get
25 more and more work given to us by the Legislature is because

1 they have a great deal of respect for this panel, and they
2 think that this panel does very good work and it's a very
3 high-class scientific operation.

4 And I think that's why SB 25 was passed the way it
5 was.

6 And I just think we should just proceed, and I
7 think that the -- with the issue of second -- I think you're
8 proposing a good thing. I think that Melanie should go back
9 and look at the report that existed and see if anything else
10 needs to be done.

11 And I think that before we -- the next meeting is
12 almost two months away, and I think in the meantime you
13 should look at that and consult with Melanie, talk to the
14 people at the Air Resources Board, and if an action item on
15 this is appropriate, then it should be, you know, as the
16 chair as you ought to move it.

17 And I don't think -- I think the minute we start
18 having to worry about whether somebody is going to sue
19 somebody or how some public relations firm is going to
20 portray the activities of this panel, we've lost our
21 credibility and we've completely given up on the purpose
22 that we exist.

23 DR. BLANC: Stan, I think you've -- okay. Can I
24 just get an answer to my question?

25 DR. FUCALORO: Can we sneak it in.

1 DR. MARTY: Sure. The office, that's us --

2 DR. GLANTZ: I wouldn't sneak anything anywhere.

3 DR. MARTY: In consultation with the state board
4 shall establish a list of up to five toxic air contaminants
5 identified or designated by the state board pursuant to
6 section 39657 that may cause infants and children to be
7 especially susceptible to illness.

8 So section 39657 --

9 DR. BLANC: What I would ask, and consistent with
10 what Stan suggested and John suggested, is that you and John
11 be in consultation, and at the discretion of the chair, if
12 there's an action item that should be constituted in
13 whatever form makes sense for the next meeting, that part of
14 that data gathering should be your consultation with the Air
15 Resources Board and the counsel of the Air Resources Board
16 as to whether or not your office is precluded or not
17 precluded from considering the approved report that is
18 already existing in your review of substances for which you
19 should list five, or whether or not it would need to come
20 back again.

21 Because it seems to me that there's enough
22 vagueness in the statute as written that you may -- because
23 the only reason you brought this up in the first place is
24 you felt precluded from addressing that substance because
25 ultimately the recommendation of the panel had not been

1 implemented by the state Air Resources Board.

2 DR. GLANTZ: I think there's another possible
3 option there, and that is that the Air Resources Board, in
4 light of the discussions at the last two panel meetings,
5 could simply decide to take the report up and act on it on
6 their own, without us having to do anything.

7 DR. BLANC: To revisit again.

8 DR. GLANTZ: Without us having to revisit it.
9 They can do that too if they wanted to.

10 DR. FUCALORO: In fact that would be ideal.

11 DR. GLANTZ: In fact, I have to say I'm a little
12 bit disappointed, because it was my impression after the
13 last meeting that we would have some indication at this
14 meeting as to what the board wanted to do, the Air Resources
15 Board wanted to do. And I was sort of surprised that we
16 didn't have some, I mean some indication of how they viewed
17 this whole issue.

18 DR. BYUS: Again, it was my understanding the
19 original report was put together on ETS with their approval.

20 DR. GLANTZ: Yes.

21 DR. BYUS: Under certain guidelines, and we are
22 susceptible to process, due process. We have to follow the
23 accepted process. We just can't do whatever we want, even
24 if we think it's scientifically valid.

25 DR. GLANTZ: The report, the original ETS report,

1 was assembled under the 1807 guidelines. And it happened
2 that it was not -- it went to the Air Board up to, but then
3 they chose not to act on anything with the report.

4 So it's still sort of -- the one thing that they
5 did say, actually, and it is on the record, I think it was
6 Dr. Friedman, I think was his name, who is -- is that his
7 name, who is one of the members of the board. Not this
8 Dr. Friedman.

9 DR. MARTY: Bill Friedman.

10 DR. GLANTZ: Who said we should revisit this in a
11 year, which they didn't do.

12 But I think this really does need to be clarified
13 as to -- because I think one thing which is sort of a clear
14 informal consensus that you've heard from the panel, if you
15 look at the intent of SB 25, to not include ETS in
16 consideration would be really really bizarre in terms of
17 what the scientific evidence says.

18 And how we get from here to there is a different
19 question.

20 DR. WITSCHI: There is just of course a way around
21 this, and this is taking after identifying five compounds
22 and they're plenty of them in ETS, we could --

23 DR. GLANTZ: I don't think we should play games
24 with this. I don't think slipping things in, if we have
25 learned one thing --

1 DR. BLANC: No, but my suggestion is not playing
2 games. My suggestion is, you know, putting us in a better
3 position to be responsive rather than initiating a process
4 which would be backwards.

5 DR. FUCALORO: If ETS is clearly the worst
6 environmental contaminant for children, ARB has to know that
7 and say our hands might be tied by this because we can't
8 designate it as such because --

9 DR. GLANTZ: There's nothing can't. They decided
10 not to take action.

11 CHAIRMAN FROINES: We are, in all due respect,
12 everything is getting quite repetitive at this point.
13 Everything has been said at least two or three times.

14 DR. GLANTZ: Okay.

15 CHAIRMAN FROINES: And we should move on.

16 I just want to say one thing.

17 I agree with Stan a hundred percent in terms of
18 his view of the process with respect to the SRP, and I think
19 we always have to do everything within our power to maintain
20 the scientific integrity of this panel and I think that has
21 to be our watchword as we move forward.

22 So that I think is a central consideration for us
23 to always keep in mind.

24 DR. MARTY: Can I make one quick comment?

25 I just want people to be aware, panel members, to

1 be aware that we are sponsoring another children's
2 environmental health symposium April 23rd and 24th in
3 Monterey, California.

4 It's the first day is pharmacokinetics and
5 modeling the differences between kids and adults.

6 And the second day is neurotoxicology and using in
7 particular neurobehavioral studies in animals and in humans
8 and how you can use those in risk assessments, also
9 involving differentiating between kids and adults.

10 So that the panel members, if interested, should
11 attend. We have a great speaker lineup.

12 CHAIRMAN FROINES: Finally, the last thing on the
13 agenda, last item, and then we'll be finished, is I want to
14 say that, first, I want to thank Elinor Fanning for
15 everything she's done for the panel. She has been
16 absolutely outstanding in every sense. She's been central
17 to working out with DPR and with OEHHA and ARB on a number
18 of these issues, and so we appreciate her work with the
19 panel.

20 She has now moved to the State of Washington. She
21 lives currently around Seattle, Washington, but she's going
22 to be continuing as special consultant to the panel. So
23 we're going to keep her busy as long as we possibly can.
24 So she's still with us, even though she's moved to
25 Washington.

1 And but one thing I want to raise for you to
2 consider at future meetings is we need to consider, given
3 the workload that we have, whether we want to identify
4 potential consultants who would be paid for consulting for
5 the panel on technical issues or on specific chemicals,
6 because it's written into the law that the panel can use
7 consultants to facilitate its work.

8 And we should discuss that in terms of do people
9 have ideas about people who we could hire in some capacity
10 or other to help lighten the workload of the panel.

11 DR. FUCALORO: What's the budget?

12 CHAIRMAN FROINES: I don't think there is a
13 budget. The budget would have to be created.

14 DR. FUCALORO: It seems to be --

15 DR. GLANTZ: You can't hire your wife.

16 CHAIRMAN FROINES: But it's an option to help us
17 out and so it's something -- please give it some thought and
18 we can talk about it at a future date.

19 And I believe that's the last --

20 DR. GLANTZ: I move we adjourn.

21 CHAIRMAN FROINES: Good. Thank you.

22 DR. WITSCHI: Second.

23 CHAIRMAN FROINES: All in favor of adjourning say
24 aye.

25 (Ayes.)

1 CHAIRMAN FROINES: It's unanimous. Thank you very
2 much.

3 (Thereupon the meeting was adjourned
4 at 3:58 p.m.)

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CERTIFICATE OF SHORTHAND REPORTER

I, JANET H. NICOL, a Certified Shorthand Reporter of the State of California, do hereby certify that I am a disinterested person herein; that I reported the foregoing meeting in shorthand writing; that I thereafter caused my shorthand writing to be transcribed into typewriting.

I further certify that I am not of counsel or attorney for any of the parties to said meeting, or in any way interested in the outcome of said meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 17th day of January 2001.

Janet H. Nicol
Certified Shorthand Reporter
License Number 9764