

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

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
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SACRAMENTO, CALIFORNIA

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A P P E A R A N C E S

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S. Katharine Hammond, Ph.D.

Michael T. Kleinman, Ph.D.

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Lisa A. Miller, Ph.D.

Beate R. Ritz, M.D., Ph.D., M.P.H.

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John Faust, Ph.D., Chief, Community and Environmental Epidemiology Research Branch

A P P E A R A N C E S C O N T I N U E D

REPRESENTING THE DEPARTMENT OF PESTICIDE REGULATION:

Edgar Vidrio, Program Manager, Environmental Monitoring
Branch

I N D E X

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1. Welcome and Introductions 1
2. Developing provisional health values to support the AB 2588 Air Toxics "Hot Spots" Program.

The California Air Resources Board (CARB) and local air districts are responsible for implementation of the Air Toxics "Hot Spots" Act (Health and Safety Code section 44300 et seq.; AB2588, Connelly). The goals of this program are to compile information on toxics emissions; identify facilities having potential for localized impacts; evaluate their health risks; notify nearby residents about significant risks; and ultimately reduce the risks below a health protective threshold.

For the past year, the Panel has provided feedback and approved preliminary findings on CARB's proposed updates to the list of air toxics that must be reported by stationary sources. The SRP-reviewed air toxics list is an important component of the Hot Spots program, but many of the proposed and existing air toxics chemicals on the list do not have OEHHA-approved cancer potencies or noncancer reference exposure levels. In order to contextualize the emissions from chemicals that have not been assigned an approved health value, staff propose to assign provisional values to these chemicals. Given the SRP's role in reviewing health values for specific chemicals and chemical classes, staff from the Office of Environmental Health Hazard Assessment (OEHHA) will present an overview and CARB staff will give a brief presentation on their proposed approach for assigning provisional health values, with the objective of seeking Panel Members' feedback on ways to improve the process.

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3. Informational Update on February 26, 2020,
Assembly Bill 617 Consultation Group Meeting.

Part I: Update from the AB 617 Consultation
Group member 43

The AB 617 Consultation Group includes individuals representing environmental justice organizations, air districts, industry, academia, public health organizations, and local government. Its meetings provide an opportunity to discuss various aspects of Community Air Protection Program implementation. The Panel's representative in the group will provide an update on the February 26, 2020, AB 617 Consultation Group meeting. OEHHA staff will provide a brief overview of SRP's potential role with respect to AB 617.

Part II: Update from Department of Pesticide
Regulation regarding 1,3-Dichloropropene
mitigation pilot studies 58

Staff will provide the Panel with a brief overview of proposed mitigation pilot studies for 1,3-Dichloropropene (Telone) in the AB 617 community of Shafter, as an example of a topic for which SRP might provide future input.

Following these updates, the Panel will have an opportunity to discuss potential ways in which they might support air quality and health protection at the community level.

4. Consideration of administrative matters.

The Panel may discuss various administrative
matters and scheduling of future meetings. 83

Adjournment 84

Reporter's Certificate 85

P R O C E E D I N G S

1
2 CHAIRPERSON ANASTASIO: Okay. Good morning
3 everyone and welcome to the meeting of the Scientific
4 Review Panel. My name is Cort Anastasio. I'm Chair of
5 the Panel and I'm a professor at UC Davis. I'd like to
6 first start by welcoming everyone on the broadcast,
7 including our Panel. So Panelists, if we could just go
8 around, if you could very briefly introduce yourself, that
9 would be great.

10 PANEL MEMBER HAMMOND: This is Katharine Hammond
11 from University of California, Berkeley. I'm a Professor
12 of Environmental Health Sciences at the School of Public
13 Health.

14 PANEL MEMBER RITZ: This is Beate Ritz. I'm a
15 Professor of Epidemiology and Environmental Health at UCLA
16 School of Public Health.

17 PANEL MEMBER MILLER: This is --

18 PANEL MEMBER KLEINMAN: This is Mike Kleinman.
19 Oh.

20 PANEL MEMBER MILLER: Go head, Mike.

21 PANEL MEMBER KLEINMAN: Okay. Mike Kleinman,
22 University of California, Irvine. I'm an inhalation
23 toxicologist.

24 PANEL MEMBER MILLER: Okay. This is Lisa Miller.
25 I'm a professor at the UC Davis School of Veterinary

1 Medicine.

2 PANEL MEMBER BESARATINIA: Good morning. This is
3 Ahmad Besaratinia. I'm an associate professor of
4 preventive medicine from University of Southern
5 California.

6 PANEL MEMBER LANDOLPH: Hi. This is Joe
7 Landolph. I'm associate professor of molecular
8 microbiology and immunology pathology and molecular
9 pharmacology and toxicology, and a member of the USC
10 Norris Comprehensive Cancer Center. My specialty is
11 chemically-induced cell transformation and carcinogenesis.

12 CHAIRPERSON ANASTASIO: Any chance that Paul is
13 on the line. Paul?

14 Yeah. Okay. Guess not. Well, thank you,
15 panelists. Appreciate that.

16 First to let everyone know who's attending, there
17 are five handouts available through GoToWebinar. You'll
18 see there's a -- on the menu on the right, the -- at least
19 on my screen, the next to last component on the menu are
20 the handouts.

21 A couple of administrative items before we begin.
22 Everyone will be muted except for the panelists and the
23 presenter. We will be accepting oral comments at the end
24 of the meeting. This is only on the AB 617 items, which
25 will be our last agenda item, so we're not accepting

1 comments on the other items.

2 If you would like Spanish interpretation for the
3 final item, which will be a presentation from Edgar Vidrio
4 from the Department of Pesticide Regulation on the plan
5 for Shafter, if you would like that, please let us know
6 when we get to that item when we have a translator
7 prepared to provide that service.

8 Let's see, Panel members, I've already mentioned
9 please mute yourself. If you want to be called on during
10 this discussion, you know, either wave your hand or put in
11 an exclamation point in the chat.

12 Yeah. Okay. So let's get to the agenda items.
13 So we have three major items today. The first will be a
14 discussion of the developing provisional health values for
15 CARB's proposed updates to the AB 2588 air toxics list.
16 So we'll have a presentation about items for that.

17 The second piece will be an informational update
18 on the February 26th, 2020 AB 617 Consultation Group
19 meeting, which Mike Kleinman attended, so he'll be
20 discussing that.

21 And actually before that, John Faust will give a
22 brief reminder of ways in which ARB thinks that the Panel
23 might be able to assist with AB 617 items.

24 And then finally, we'll end with Edgar Vidrio's
25 presentation about 1,3-Dichloropropene pilot mitigation

1 measures proposed for Shafter. And that's the item that
2 we'll be taking public comment on.

3 Okay. So without further ado, let's begin.
4 First major agenda item, developing provisional health
5 values to support the AB 2588 air toxics hot spots
6 program. So, Panel, you'll remember that for the past
7 year, although it seems longer, CARB has been working with
8 the SRP to update us about the list of proposed air toxics
9 that must be reported by stationary sources.

10 Now, as we've discussed in the past, you know,
11 this -- we're talking about adding hundreds of items to
12 the Appendix A. And many of these don't have approved
13 health values. And so because it's such a huge number,
14 rather than going through individually as we've been
15 normally doing, the idea is we have some kind of interim
16 provisional health value. So we're going to start today
17 with an overview of this risk evaluation process from the
18 Environmental Health Hazard Assessment OEHHA. And then
19 CARB is going to give a presentation about their -- their
20 current thinking on how to develop provisional health
21 values. And hopefully, the Panel will have some
22 suggestions about how to work with that.

23 Okay. So John Faust is going to start us, give
24 us an introduction. So I turn it over to John.

25 (Thereupon an overhead presentation was

1 presented as follows.)

2 DR. FAUST: Okay. Thank you. So we need to --

3 MS. KLEIN: John, I just handed you control of
4 your screen.

5 DR. FAUST: Okay. And is that showing full
6 screen?

7 MS. KLEIN: It is showing not in presentation
8 mode, but we can see the slides. And if need be, I have
9 your slides and I can do them for you.

10 DR. FAUST: Okay. For some reason, it's showing
11 up in presentation mode on my second screen, but not my
12 main screen.

13 MS. KLEIN: On your -- do you see a Button
14 dropdown that says display and that says swap presentation
15 and view, by chance?

16 DR. FAUST: On the dropdown?

17 MS. KLEIN: Yeah on your -- in the view where you
18 can modify things not on the viewer screen. You can swap
19 view. But if you want, I can just pull up your slides
20 quickly.

21 DR. FAUST: Okay. Maybe that would be better.
22 Thank you.

23 MS. KLEIN: Yes. Okay. So just say next slide
24 and -- when you're ready for me and I'll switch slides.

25 DR. FAUST: Okay. Great. All right. So just on

1 the first slide. So good morning. I'm John Faust. I'm
2 Chief of the Community -- Community and Environmental
3 Epidemiology Research Branch in OEHHA, Office of
4 Environmental Health Hazard Assessment

5 So as part of an introduction to today's first
6 agenda item, I'm going to make some comments on potential
7 ways to address the issue of unassessed chemicals. So I'm
8 going to give a little background on the nature of the
9 problem, some of the ways we can address it, some things
10 to think about as we move forward, and also some next
11 steps.

12 So next slide, please.

13 --o0o--

14 DR. FAUST: So this slide describes some of the
15 reasons and ways that the issue of unassessed chemicals
16 comes up. As the Panel is well aware, establishing health
17 guidance values, such as reference exposure levels or unit
18 risk factors by traditional approaches can be very time
19 and resource intensive. And because of this, we and other
20 entities have only established values for a fraction of
21 chemicals in use or, for example, on the AB 2588 hot spots
22 inventory.

23 So we encounter chemicals without values in a
24 number of different situations. Environmental monitoring
25 data, for example, can reveal the presence of chemicals in

1 air, water, soil, or food. Community air monitoring, for
2 example, can identify pollutants that people are likely
3 exposed to at home.

4 Other specific studies like sampling and analysis
5 of synthetic turf, an OEHHA program, can also identify
6 sets of chemicals that may produce potential exposures.
7 Emissions inventories like the air toxics hot spots list
8 leads to information about emissions of chemicals from
9 facilities. And other databases also provide information
10 about how and where chemicals are used in commerce or
11 industry, such as disclosures about fracking chemicals or
12 ingredient reporting.

13 Next side, please.

14 --o0o--

15 DR. FAUST: So one way to address the gap in
16 health guidance values is to establish provisional values.
17 And here, I describe this as a mechanism to provide
18 information in a more expedited manner on the potential
19 for health risks from exposure to a given chemical.

20 So while we adopt numerical values for
21 traditional RELs or unit risk factors, adopting
22 qualitative characterizations of toxicity, such as
23 categories, is also a possibility.

24 So since this approach carries a greater level of
25 uncertainty than traditional approaches, it's important

1 that we match the decision context that we're using to
2 be -- and the level of confidence. And it's also possible
3 but in some context, the level of uncertainty in
4 developing or adopting a provisional value is going to be
5 too high to be acceptable.

6 So the next slide, please.

7 --o0o--

8 DR. FAUST: So this slide describes some of the
9 key options in establishing provisional health guidance
10 for unassessed chemicals. They fall broadly into two
11 categories. One, using work from other authorities when
12 it exists, and two, using alternative approaches when no
13 values are available from other authorities or they're not
14 considered reliable.

15 And here, I've identified two options when
16 there -- when there are other established values. One,
17 option is to adopt their values. For example, recent
18 values from U.S. EPA's IRIS Program could be considered
19 for adoption. Alternatively, we can adapt other
20 authorities' health guidance values. For example, we can
21 apply uncertainty factors or adjustments consistent with
22 our established California values to a point of departure
23 from a key study identified in another agency's
24 assessment.

25 In the next slide, I'll describe a little bit

1 more about the things that we need to think about in using
2 that type of existing work.

3 So if there are no values from other authorities,
4 there's another range of options, and these include
5 producing expedited values in-house. This can be done if
6 there's a set of readily available studies that clearly
7 establish a point of departure for toxicity like a no
8 adverse effect level, and then uncertainty factors can be
9 applied to that, for example.

10 On the other hand, there is also so-called
11 read-cross approaches, where we apply knowledge about
12 chemicals that are more well studied to other potential
13 analogs that are -- that are data poor or less well
14 studied. And to be an analog, different types of
15 bioactivity can be considered, such as structural,
16 metabolic, or toxicological similarities. And I'll
17 describe a little bit more about this shortly. And then
18 there may be other possible approaches as well.

19 So if we could move to the next slide.

20 --o0o--

21 DR. FAUST: So this slide shows some of the
22 things that should be considered in either adopting or
23 adapting the values from other entities. First is to
24 understand how consistent the methodologies used to
25 establish the value are with California's health risk

1 assessment guidelines. For example, were they developed
2 with the purpose of predicting sensitive populations or,
3 for example, were they assessments to support occupational
4 standards.

5 Second is the methodology consistent with ours,
6 for example, with respect to the use of uncertainty
7 factors or how the dose response is evaluated and was the
8 value derived from an appropriate route of exposure.

9 Another consideration is whether the assessment
10 is comprehensive, that, is whether all health endpoints
11 were assessed versus, for example, a health guidance value
12 based on developmental only or other more limited set of
13 endpoints.

14 And finally, we want to also consider whether the
15 assessment was peer reviewed, whether there was public --
16 it was publicly reviewed and is currently available and
17 well documented, as well as how recently the data were
18 evaluated to produce the assessment.

19 So the next slide, please.

20 --o0o--

21 DR. FAUST: So for alternative approaches, I'll
22 briefly describe the two I mentioned earlier, developing
23 expedited values in-house, and considering read-across --
24 so called read-across approaches. For expedited values to
25 be established in-house, we generally need to work from a

1 reliable data set that can be evaluated relatively
2 quickly. The dose response information would also need to
3 be straightforward allowing a clear identification of the
4 point of departure, for example. So this would be, you
5 know, work that we would do in-house only.

6 And on the other hand, read-across is a method of
7 filling a data gap where a chemical with existing data is
8 used to make a prediction for a similar chemical. I drew
9 this definition from a presentation by Grace Patlewicz of
10 the U.S. EPA who discussed this topic at an OEHHA
11 symposium last spring.

12 So an example of a workflow broadly would be to
13 include identifying the decision context that the
14 read-across information is to be used, identifying
15 chemical analogs that are under consideration, identifying
16 the critical data gaps between the more and less well
17 studied chemicals, evaluating analogs for read-across
18 opportunities, and then characterizing the uncertainties
19 before completing the assessment.

20 This general approach can be adapted to different
21 levels of confidence, completeness, and speed. And there
22 are other possible approaches as well that can be
23 considered. For example, thresholds of toxicological
24 concern is a concept originally proposed by the US FDA for
25 food additives in which human exposure thresholds are

1 established, below which appreciable risk to human health
2 is very unlikely. And these would be based on specific
3 types of toxicities, such as presumed carcinogenicity
4 based upon structural inspirations.

5 So on the next slide --

6 --o0o--

7 DR. FAUST: -- I have a few next steps relating
8 to ongoing work at OEHHA. So in April of 2019, OEHHA held
9 a symposium entitled, *Understanding and Applying*
10 *Read-Across for Human Health Risk Assessment*. And as a
11 follow-up, we continue to evaluate different existing
12 read-across platforms for their potential usefulness, but
13 for single chemical assessments and for groups of
14 chemicals, such as perfluoroalkyl substances, or PFAS.

15 In collaboration with academic partners, OEHHA is
16 also supporting the development of methods using in vitro
17 studies and in silico molecular docking data.

18 And then regarding the SRP, OEHHA also wants to
19 bring a more robust discussion in the areas that I've
20 introduced, including evaluating existing non-California
21 health guidance values, as well as applying alternative
22 approaches. And, of course, we'll continue to coordinate
23 with the Air Resources Board on their efforts to establish
24 provisional values for the Hot Spots Program that you'll
25 hear about shortly.

1 So I hope that background has been helpful. And
2 at this point, I can either take questions or we can move
3 forward with the -- the Air Resources Board's
4 presentation.

5 CHAIRPERSON ANASTASIO: Yeah. This is Cort, I
6 think in the interests of time, let's move forward with
7 the ARB presentation. John, thank you very much. That
8 was very interesting and I look forward to hearing more
9 about that at a future meeting. And Panelists, if you
10 have questions on John's material, we'll have a little bit
11 of time after the next presentation.

12 So next, Melissa Traverso of CARB's Air Quality
13 Planning and Science Division is going to give us
14 presentation about the proposed approach for assigning
15 provisional health values to the chemicals that are
16 lacking values currently.

17 All right. Take it away Melissa.

18 (Thereupon an overhead presentation was
19 presented as follows.)

20 AIR POLLUTION SPECIALIST TRAVERSO: Thanks you,
21 Cort, for the introduction. Good morning, members of the
22 panel. Today we are back before you to begin the
23 discussion of a new topic related to the evaluation and
24 implemen -- implementation steps of the AB 2588 Air Toxics
25 Hot Spots Program.

1 Today's topic is the development of the
2 provisional health guidance, which will be non-regulatory
3 in nature, and which is needed to support the data
4 evaluation steps of the Hot Spots Program. We would like
5 to thank our colleagues from OEHHA for their help in
6 setting the stage for this discussion.

7 Next slide, please.

8 --o0o--

9 AIR POLLUTION SPECIALIST TRAVERSO: Today's
10 presentation will be provide a brief background on the
11 current status of the AB 2588 Air Toxics Hot Spots Program
12 updates and how this new topic, the concept of
13 non-regulatory provisional health guidance, is anticipated
14 to fit into the program. We will discuss the need and
15 purpose for provisional health guidance in the context of
16 AB 2588, as well as some prior history of the program
17 related to default health values.

18 Since we are still at the beginning of the
19 discussions regarding this topic, we will be providing
20 some framing questions as a way to guide today's
21 discussion on how to best to address the more formal
22 process just described by our OEHHA colleagues to meet the
23 needs of the Hot Spots Program.

24 Lastly, we will discuss the proposed process and
25 anticipated timeline for developing the provisional health

1 guidance, including how it relates to the overall timing
2 of our AB 2588 emission inventory guidelines regulation
3 update, which is expected to go to the Board in November
4 2020.

5 Next slide, please.

6 --o0o--

7 AIR POLLUTION SPECIALIST TRAVERSO: Overall, the
8 goals of the program are to collect air toxics emissions
9 data and make it available to the public, identify
10 facilities that may have localized impacts, assess the
11 risks to public health, and notify nearby residents about
12 significant risks, and reduce these risks to levels that
13 are more health protective.

14 Our previous meetings with the panel have focused
15 on compiling the list of chemicals for the emission
16 inventory and criteria guidelines regulation, which we'll
17 also refer to as the EICG regulation.

18 Compiling and updating the chemical list is part
19 of the regulatory process. We appreciate the panel's
20 valuable review and input in that process of updating the
21 substance list. To date, we are proposing to add roughly
22 700 substances to our chemical list for which emissions
23 must be quantified by the facilities subject to the AB
24 2588 program.

25 Updating the chemical list allows us to address

1 new and emerging chemicals since our last major update,
2 which was 1996, and to include chemicals that have been
3 recently recognized by international, national, State, and
4 other experts as having potential health concerns. It is
5 important to collect information on where, how, and how
6 much these chemicals are being emitted from California
7 facilities and operations. This is a necessary first step
8 in understanding the relative potential for public health
9 impacts.

10 At this stage, most of the new substances we are
11 proposing to add into Appendix A list do not yet have an
12 official OEHHA-approved health value. In fact, learning
13 about the nature and extent of emissions is one of the
14 things that later helps OEHHA with their health value
15 prioritization process.

16 In the absence of OEHHA approved values, it can
17 be very helpful to utilize any and all available basic
18 information regarding the relative toxicity of new
19 substances to help support the hot spots process. For
20 example, in the early days of the AB 2588 Hot Spots
21 Program, when there were not yet official cancer or
22 noncancer health values for some important substances, the
23 California Air Pollution Control Officers Association, or
24 CAPCOA, prepared default health values for a number of
25 chemicals that had some available data. These default

1 health values were found to be useful to facilities, as
2 well as districts, as a means to screen what types of
3 emitting processes and chemicals were likely to be of
4 either minimal concern for the facility or alert them to
5 potential instances warranting more careful consideration.

6 With the Panel's guidance, we would like to
7 propose to develop non-regulatory provisional health
8 guidance for as many of the new substances as feasible
9 where OEHHA acute or chronic REL and/or cancer potency
10 factors are not yet available.

11 To clarify, the provisional health guidance we
12 are proposing would not be explicitly listed in the EICG
13 regulation nor would it be used for official health risk
14 assessment purposes. Instead, it would be provided
15 outside of the regulation as useful, technical information
16 for facilities, air districts, and others. Its purpose is
17 to help guide reporting and preliminary evaluations, which
18 could potentially lead to voluntary emission reductions
19 by facilities.

20 Next slide, please.

21 AIR POLLUTION SPECIALIST TRAVERSO: Our purpose
22 for developing provisional health guidance aligns with the
23 goals of the Hot Spots Program to identify facilities that
24 have localized impacts, assess the risks to public health,
25 and reduce these risks to levels that are health

1 protective.

2 Provisional health guidance will continue to help
3 CARB, OEHHA, and facilities better understand the
4 relatively importance of processes and emissions at the
5 facility level. Facilities can use this information to
6 make more informed decisions regarding voluntary
7 reductions with assistance from CARB and districts.
8 Additionally, OEHHA can allocate their resources for
9 development of new health values based on the quantity of
10 emissions being reported for each new substance under the
11 AB 2588 program.

12 Next slide, please.

13 --o0o--

14 AIR POLLUTION SPECIALIST TRAVERSO: We'd like to
15 provide a little more context about the concept of the
16 provisional health guidance and also contrast how it might
17 be developed and used compared to the other program
18 elements of the AB 2588 Program, such as compiling the
19 chemical list itself and assigning the values we call the
20 reporting degree of accuracy values, which specifies how
21 accurately the emissions of each listed chemical must be
22 reported by a facility to ensure the emission data will be
23 useful.

24 First, we utilize information about the nature of
25 potential health concerns as one of the factors we are

1 considering in identifying substances for inclusion on the
2 chemical list.

3 The chemical list is part of the official EICG
4 regulation and is developed as part of that rulemaking
5 process, which we anticipate taking to our Board in late
6 2020.

7 Second, most AB 2588 facilities are required to
8 report their emissions on a four-year cycle. And that
9 reporting is subject to a reporting degree of accuracy
10 that we assign to every reportable substance and chem --
11 in the chemical list and it's included as part of the EICG
12 rulemaking process.

13 This value is meant to serve as a practical value
14 associated with emission reporting and it communicates the
15 facility how much and how precisely a particular substance
16 needs to be reported. For example, a highly potent metal
17 like hexavalent chromium must be reported out to several
18 decimal places in pounds per year, in order to have the
19 reported emissions be useful enough to evaluate the
20 possible public health implications for that facility. By
21 contrast, the emissions of benzene are sufficiently
22 accurate when reported to the nearest two pounds per year,
23 and the emissions of toluene to the nearest 200 pounds per
24 year.

25 These reporting degree accuracy values are

1 typically guided by some combined consideration of the
2 basic toxicity information about the chemicals and the
3 levels and types of their usage.

4 By contrast, the idea of provisional health
5 guidance, we are proposing today would not be a part of
6 the EICG regulation or its rulemaking process and
7 timeline. The provisional health guidance would be
8 intended to be available as technical supporting
9 information likely posted on our website to help inform
10 and support the later implementation stages of the AB 2588
11 Program consistent with how OEHHA-approved risk factors
12 are currently documented.

13 Next slide, please.

14 --o0o--

15 AIR POLLUTION SPECIALIST TRAVERSO: We would like
16 to emphasize our plan to work closely with OEHHA in the
17 development of AB 2588 specific health guidance. I will
18 now go into detail on some framing questions around our
19 approach. And some of these topics John Faust touched
20 upon in his presentation.

21 The first question is what data sources should be
22 consulted for health guidance? We are proposing a
23 hierarchical approach relying on available data and other
24 information, and we would value your input on any
25 additional sources we should look into further.

1 Currently, we're giving priority to health
2 related databases, such as Proposition 65, which can
3 provide an indication for provisional health guidance.
4 For example, the cancer potency of styrene could help us
5 estimate levels that might be of concern, even though
6 there isn't a formal AB 2588 adopted potency yet.

7 Additional health values available under U.S.
8 EPA's Integrated Risk Information System, or IRIS,
9 quantitatively characterizes health hazards of chemicals
10 found in the environment and can cover a chemical, group
11 of related chemicals, or a complex mixture. IRIS would
12 help provide a more quantitative approach. Whereas, for
13 example, PubChem or more related to HSDB, may provide
14 qualitative information to support the development of
15 provisional health guidance.

16 Another source of information would be workplace
17 limit values such as Cal/OSHA's Permissible Exposure
18 Levels, or PELs, and the American Conference of
19 Governmental Industrial Hygienists, ACGIH, threshold limit
20 values, or TLVs. We would propose several adjustments to
21 these workplace values to be more protective of vulnerable
22 populations and lifetime exposures instead of accounting
23 for only healthy adult workers during an eight-hour work
24 shift in a career duration.

25 Third in the hierarchy of available data sources

1 is the structure activity modeling or relationships. The
2 idea here is that looking at similarities in chemical
3 structures could help provide information on how to treat
4 a general class or group of similar compounds and provide
5 a benchmark type of approach for health guidance purposes.

6 Lastly, for substances on our list where there is
7 not enough supporting data from the other sources
8 previously mentioned, we are considering looking into
9 limit or guidance values from other media, for example,
10 water programs. We are aware that these values would have
11 to be adjusted to consider the potential for water-borne
12 pollutants to become airborne and would like the Panel's
13 guidance and thoughts on using this type of source.

14 The second question we'd like to pose to the
15 Panel is what is the most appropriate approach to
16 establish health guidance for a functional group class and
17 its members. As you may recall, we are proposing to add
18 three categories of substances defined by broad chemical
19 functional groups to the chemical list. We would like to
20 get the Panel's thoughts on possible approaches. For
21 example, could we consider using ranges of toxicity values
22 or treating subsets of the functional group class
23 together?

24 Next slide, please.

25 --o0o--

1 AIR POLLUTION SPECIALIST TRAVERSO: The third
2 question in this framework is what types of adjustments
3 should be considered? I mentioned some of these
4 adjustments when discussing the various data sources
5 available in the previous slide. However, we would like
6 to get the Panel's perspective on any additional criteria
7 that should be considered and how much weight to be
8 applied to factors, such as structure activity
9 relationships, the quantity and quality of available
10 health information, and the severity of health effects,
11 and relative toxicity, and other factors. Examples of
12 other factors we might consider could be persistence,
13 bioaccumulation, and multi-pathway effects.

14 Next slide, please.

15 --o0o--

16 AIR POLLUTION SPECIALIST TRAVERSO: I will now
17 provide an overview of the process and anticipated
18 timeline. Subsequent to today's discussion, we plan to
19 engage with our OEHHA colleagues to closely coordinate the
20 development of a methodology for reviewing and developing
21 provisional health guidance. We propose to return in
22 early 2021 to update the Panel on the proposed methodology
23 and request your feedback on any modifications that might
24 be necessary. We anticipate that draft health guidance
25 will be released for public review by mid-2022 and

1 available for use by mid-2023.

2 Next slide, please.

3 --o0o--

4 AIR POLLUTION SPECIALIST TRAVERSO: It should be
5 slide nine. That concludes today's presentation. Thank
6 you, Panel members for your time. Anyone listening in on
7 this call can feel free to contact Gabe, Greg, or myself
8 using the contact information provided here, if you have
9 any additional follow-up questions.

10 PANEL MEMBER BLANC: Sorry to interrupt. Paul
11 Blanc here. I had some difficult, but I'm on now.

12 CHAIRPERSON ANASTASIO: Great. Welcome, Paul.
13 Glad you could join us.

14 PANEL MEMBER BLANC: I apologize.

15 CHAIRPERSON ANASTASIO: Oh, it's no problem.
16 Thank you very much, Melissa.

17 Questions from the Panel for Melissa or for John
18 on his presentation, prior to Melissa's?

19 All right, Melissa --

20 Go ahead.

21 PANEL MEMBER KLEINMAN: Oh, sorry. I just wanted
22 to get some clarification on Melissa brought up some
23 framing questions. And are these things that we want to
24 be addressing on this call or is that for the later
25 discussion?

1 CHAIRPERSON ANASTASIO: Yeah. I think we'd like
2 to discuss them today, to the extent that we can. And
3 then I imagine that some of them will come up in the
4 future as well.

5 So Anne, could you go to the framing questions
6 slide?

7 MS. KLEIN: Yes.

8 AIR POLLUTION SPECIALIST TRAVERSO: It starts on
9 slide six, Anne.

10 MS. KLEIN: Okay. Do you see that?

11 AIR POLLUTION SPECIALIST TRAVERSO: I see slide
12 nine.

13 MS. KLEIN: Weird. Yeah, there's some -- plenty
14 of stuff going on with the slide transitions for some
15 reason today.

16 CHAIRPERSON ANASTASIO: Okay. Now, we can see
17 it.

18 MS. KLEIN: Okay.

19 CHAIRPERSON ANASTASIO: Okay. So data sources,
20 most appropriate approach for functional group classes.
21 And then, Anne, could you go to the next slide for the
22 last question? Okay. Types of adjustments to be
23 considered.

24 Okay. Well, let me -- let me start with a
25 question that's actually not related to the framing

1 questions. Melissa, I had a question. You talked about
2 provisional values being used -- I think used by 2023.
3 Can you explain what you mean by that? Are you suggesting
4 that you will have provisional values by then or that this
5 process will be producing provisional values by then?

6 AIR POLLUTION SPECIALIST TRAVERSO: The process
7 will be producing provisional health values by mid-2022
8 and available for use by mid-2023. So there's kind of
9 like a phase-in approach to first kind of reporting the
10 chemical substances that are new on our list and then
11 using those provisional health values for reporting
12 purposes.

13 CHAIRPERSON ANASTASIO: I see. Thank you. And
14 do you think you're going to have all of the compounds
15 with provisional values by then?

16 AIR POLLUTION SPECIALIST TRAVERSO: That is the
17 plan.

18 CHAIRPERSON ANASTASIO: Wow. That would be
19 great.

20 PANEL MEMBER RITZ: So I -- this is Beate.

21 CHAIRPERSON ANASTASIO: Go ahead, Beate.

22 PANEL MEMBER RITZ: So I actually don't
23 understand. If you're not -- if you're not asking
24 facilities to do anything, or is that a wrong
25 understanding, what are these provisional health values

1 giving you?

2 AIR POLLUTION SPECIALIST TRAVERSO: So the
3 provisional health values will provide facilities with an
4 idea for how toxic that substance might be. A lot of
5 these substance on our chemical list are, as you know,
6 very new. So facilities may not know they are reporting
7 those substances, or if they are reporting them, they'll
8 have a better idea of how much of a concern they should
9 give weight to those substances, if that makes sense.
10 And, Beth, if you want to chime in, feel free.

11 PANEL MEMBER RITZ: Yeah. I really don't get
12 that, because, you know, if we don't know much -- if
13 they're new, we won't know much. And then to give them an
14 uncertainty about a possible health effect will leave it
15 open to doing nothing.

16 AQPSD STAFF AIR POLLUTION SPECIALIST SCHWEHR:

17 This is Beth Schwehr. Let me jump in for just a
18 moment here. Can you hear me okay?

19 CHAIRPERSON ANASTASIO: Yes.

20 AQPSD STAFF AIR POLLUTION SPECIALIST SCHWEHR:

21 Okay. So one of the things that happened in the
22 very early part of the Hot Spots Program is that as
23 facilities began to look at their overall operations and
24 processes with an eye to what chemicals they had and what
25 they emitted, they began to learn more about what their

1 operations -- which of their operations were posing more
2 risk, for example, to the public than others.

3 But to really get at it, it's not just the amount
4 of emissions. They have to weight the amount of emissions
5 by the relative toxicity of those. For example a very
6 small number hex chrome doesn't look like much. But, of
7 course, if you realize it's very potent, then you realize
8 it might actually be your risk driving operation.

9 And so by having even a semi-quantitative number
10 available for some of these newer chemicals, as they began
11 to evaluate their whole suite of operations, they can
12 start to say, oh, which of my operations are actually
13 causing more risk to the public than others, right? They
14 can begin to identify what is their risk-driving
15 operations?

16 And what happened in the early days of the Hot
17 Spots Program, is that -- that understanding resulted in
18 facilities very quickly making a lot of voluntary emission
19 reductions and process changes. So they identified that
20 maybe a solvent they were using was their risk-driving
21 process and they decided to substitute a less toxic
22 solvent, for example, or they identified that there was a
23 process that had a lot of fugitive releases and that that
24 was creating concerns.

25 So then they would make efforts to tighten up

1 that process and have less fugitive emissions. But to do
2 that, you really do have to have at least a relative sense
3 of how toxic some of the chemicals are to be able to put
4 that in context along with their respective usage.

5 So that's what we're hoping to do here is to have
6 kind of some guidance. Even if it's not a formal
7 perfectly fleshed out health value, it can often be
8 helpful to a facility to understand whether this is a
9 chemical that's going to end up being really important for
10 their overall impacts to the public or a chemical that's
11 just going to be petty minimal for their impacts.

12 CHAIRPERSON ANASTASIO: So related to that --

13 PANEL MEMBER KLEINMAN: Hi, this is Mike. To
14 what extent is this information going to be communicated
15 to the communities that are potentially impacted? I see
16 this as -- you know, this is one of the factors that I'm
17 going to be talking about later in terms of uncertainty in
18 the AB 617 communities about other toxic chemicals that
19 were not on their initial watchlist.

20 So I see this as a -- you know, another way that
21 pressure can be brought from the community level back up,
22 but it's got to be done very carefully and correctly. So
23 will there be any attempt to put this in context -- these
24 emission data in context with potential community
25 exposures?

1 AQPSD STAFF AIR POLLUTION SPECIALIST SCHWEHR:

2 This is Beth again. So when the health values
3 become -- or health guidance type of approach become
4 available, we would anticipate posting something for these
5 chemicals on say a website. It wouldn't be regulatory,
6 but it would be something that people could use, and it
7 would be similar to the kinds of ways that adopted health
8 values can be looked at now. So someone could look at the
9 emission inventory that was reported for a facility.

10 There are some formulas, if you will, that the California
11 Air Pollution Control Officers Association, CAPCOA, have
12 come up with to give kind of a score approach to -- to
13 tell whether a chemical and that amount of emissions will
14 likely be of high priority or not high priority. So
15 someone -- members from the public could do that same kind
16 of thing.

17 What we anticipate is that it might be used by
18 air districts, for example, when they prioritize their
19 facilities as well. And, of course, by the facilities
20 themselves, they can do those same calculations to assess
21 what's important and what's not.

22 But, yeah, these things would be -- provisional
23 information would potentially be posted on a website made
24 available to anyone who wanted to do that kind of
25 analysis.

1 PANEL MEMBER KLEINMAN: It might be very useful.
2 I'm sorry. It might be very useful to have a brief
3 presentation of this to the consultation group that -- if
4 and when they have another meeting, so that they're aware
5 that this is available and that they should be looking at
6 that website.

7 AQPSD ASSISTANT DIVISION CHIEF EDWARDS: Yeah.
8 Mike, thanks for the comment. This is Dave Edwards.
9 Yeah, we can definitely circle back internally to talk to
10 your AB 617 counterparts to see if we can get that on
11 the -- the next agenda.

12 PANEL MEMBER KLEINMAN: Great. Thanks, Dave.

13 CHAIRPERSON ANASTASIO: Thank you, Beth.

14 PANEL MEMBER RITZ: Yeah. This is Beate again.
15 I have a bit of a concern doing this chemical by chemical.
16 I heard something about groups, but more or less in terms
17 of assessing the relative toxicity of several chemicals in
18 a group. But what about mixtures? I mean, we might have
19 ten different neurotoxic agents spewing out in emissions
20 from the same facility, and, you know, ranking them. And
21 giving relative toxicity does not help when you want to
22 assess the overall toxicity of this kind of mixture. Is
23 there any -- is there any sense that mixtures will be
24 evaluated?

25 AQPSD STAFF AIR POLLUTION SPECIALIST SCHWEHR:

1 There are a couple of approaches for mixtures.
2 Sometimes things are actually used in a mixture and we
3 would apply a profile to understand what is the
4 composition, the relative proportions in that mixture.

5 Alternatively, I'm thinking maybe what you're
6 getting at, is that when a facility as a whole is
7 evaluated, all of these would be looked at together. And
8 these -- this CAPCOA prioritization guidance document,
9 which I referred to a moment ago, does look at that, and
10 it does say what -- you can add up various things and look
11 at the facility as a whole. So you could look at the
12 overall -- say, look at all the carcinogens and look at
13 that as a -- as a whole.

14 And then for the -- the non-cancer effects, as
15 a -- at a screening level, sometimes those are looked at
16 across all endpoints. But if you want to do a more, you
17 know, correct assessment, you can look within endpoints,
18 for example. But, yes, the CAPCOA document is intended to
19 be looked at as a facility overall, you know, impact.

20 PANEL MEMBER RITZ: Great. Thank you.

21 CHAIRPERSON ANASTASIO: Can we go back one slide,
22 Anne.

23 CHAIRPERSON ANASTASIO: Panelists, any thoughts
24 about these framing questions, additional data sources
25 that should be consulted for health guidance? I know we

1 had a lot of discussion of data sources when we were
2 discussing the AB 2588 list last year. Are there
3 additional things they should be looking at in terms of
4 health guidance? Anybody have any thoughts?

5 Beate.

6 PANEL MEMBER RITZ: Definitely. I think all the
7 IARC documents should be looked at for cancer -- for
8 carcinogens. And I'm sure there are other European
9 documents that would give you some insight as well.

10 CHAIRPERSON ANASTASIO: Great. Thank you. Other
11 suggestions on health document or health guidance data
12 sources?

13 PANEL MEMBER KLEINMAN: Yeah. On the workplace
14 data, the more recent ACGIH TLV, you know, workups, they
15 are really calling out things that are either respiratory
16 sensitizers or skin sensitizers. And it would be very --
17 yeah, looking at the notations that go with the guidance
18 that they provide for workplace data could be extremely
19 important, because sensitizers, after an initial exposure,
20 can have a much more exaggerated effect in continuing
21 exposures. And so some of that kind of information could
22 help shade what you'd put down as a potential risk factor.
23 So, you know, certainly look at that.

24 And the other thing in the newer ACGIH data,
25 they're taking into account potential developmental

1 effects. And even though those might not be put in as the
2 basis for setting a guidance level, they are important in
3 terms of our being aware of chemicals that do have
4 potential developmental effects. And then carry that
5 forward to the general population with a little more
6 sensitivity.

7 PANEL MEMBER RITZ: There's also the National --

8 CHAIRPERSON ANASTASIO: Beate.

9 PANEL MEMBER RITZ: There's also the National
10 Toxicology Program, NIEHS, that puts out documents. You
11 should look at those. And I would even suggest to look at
12 the latest meta-analyses or summary analyses in PubMed and
13 see, you know, what -- what the scientific community
14 thinks about certain agents and groups, in terms of health
15 effects.

16 CHAIRPERSON ANASTASIO: Great. Thank you.

17 Anyone else have other -- Joe.

18 PANEL MEMBER LANDOLPH: Yeah. I would also look
19 at the EPA documents, as long as they reflect current
20 scientific understanding, and all the authoritative bodies
21 that we gather the data from, and are used by OEHHA that
22 go onto the Proposition 65 list.

23 CHAIRPERSON ANASTASIO: Right. Thank you, Joe.

24 I do think the last bullet -- sorry, I was going
25 to say the last sub-bullet under this main bullet,

1 threshold values from other media, I do think that's a
2 good idea, for example water. Obviously, the root of
3 exposure would be different, but in terms of setting
4 relative values, that could be very helpful.

5 Was somebody else going to say something?

6 PANEL MEMBER BESARATINIA: Correct.

7 CHAIRPERSON ANASTASIO: Yes, Ahmad, go ahead.

8 Yeah. I was wondering there were -- there was a
9 slide regarding the timelines and some milestones were
10 mentioned. I'm wondering with the current situation with
11 COVID, there would be probably some challenges with regard
12 to field work and data selection. I am wondering if this
13 was taken into account when they were setting up all these
14 timelines or not?

15 CHAIRPERSON ANASTASIO: Melissa or Beth, you want
16 to speak to that.

17 AQPSD ASSISTANT DIVISION CHIEF EDWARDS: This is
18 Dave. I could do that.

19 CHAIRPERSON ANASTASIO: Or Dave.

20 AQPSD ASSISTANT DIVISION CHIEF EDWARDS: So,
21 yeah, we definitely are -- are cognizant of what's going
22 on right now. And as sort of Beth and Melissa alluded to
23 in some of the responses, we are looking at a much more
24 phased-in approach than maybe we were even three to four
25 months ago and that will be rolling out in the next month

1 or so with our -- with our hot spots materials for our
2 regulatory update.

3 But we do understand that there are going to be
4 some limitations moving forward. And, yes, the timeline
5 that we do have out to 2023 right now, that is sort of
6 our sort of ideal path, but we also are aware that that
7 may get pushed out as things -- as new things develop,
8 so...

9 CHAIRPERSON ANASTASIO: Thank you, Dave.

10 PANEL MEMBER BESARATINIA: Thank you.

11 CHAIRPERSON ANASTASIO: Okay. Let's move on to
12 the second framing question then. People have thoughts
13 about this question, the most appropriate approach to
14 establish health guidance for functional group class and
15 its members. I mean, it seems that one part of that would
16 be gathering data that we know about whatever members of
17 that class are. And then you look at the variability
18 within the class to try to get some sense of whether
19 that's narrow or very large. And if it's large, what
20 seems to be influencing the toxicity of individual
21 members?

22 But I don't know if people have any experience
23 with this or any thoughts on this?

24 PANEL MEMBER KLEINMAN: Well, this is a really
25 new sort of issue in terms of the kind of chemicals that

1 are coming out like the PFAS and PFOAs. There are
2 literally hundreds of them. And it seems like when they
3 set regulations for one, somebody tweaks a molecule, and
4 now you've got a whole new chemical.

5 CHAIRPERSON ANASTASIO: Right.

6 PANEL MEMBER KLEINMAN: So I think it's really
7 important to set up exactly what you said, Cort,
8 understanding what are the driving factors for initiating
9 toxicity and focusing more on that than on a specific
10 chemical, so that we could use some sort of hazard index,
11 or, you know, group approach to a class of or family of
12 chemicals, because we're not going to, you know, be able
13 to keep pace the new chemicals being generated.

14 CHAIRPERSON ANASTASIO: Yeah.

15 PANEL MEMBER RITZ: Yeah. And I'm really afraid
16 that we have to worry about the tendency to go after
17 one -- one criterion, such as the lengths of the molecule
18 or how many fluorides, or fluoro compounds, or bromides
19 or -- brome is part of the chemical and making it more or
20 less persistent, right, because persistence is one of the
21 criteria that we are worried about, but then the toxicity
22 is another one. And it doesn't mean that when they are
23 less persistent, they're also less toxic.

24 So I think these are the kind of things that
25 probably chemists who know more about this have to think

1 about, and toxicologists, how to approach that.

2 CHAIRPERSON ANASTASIO: Thank you, Beate.

3 Joe.

4 PANEL MEMBER LANDOLPH: Yeah. As Mike mentioned,
5 there are just a plethora of certain things like
6 polycyclic aromatic hydrocarbons, and then there's TCDD
7 and its congeners, and dibenzofurans, et cetera. They've
8 set up this toxic equivalency factor usage. And that
9 seems to work okay, but, of course, they keep discovering
10 more and more, and there's a large number of them. But
11 the TEQ approach seems to have worked out okay.

12 Maybe we'll use something like that until we get
13 better guidance for dibenzofurans, and TCDD and its
14 congeners.

15 CHAIRPERSON ANASTASIO: Great. Thank you, Joe.

16 Any other thoughts on the second framing
17 question?

18 Okay. Anne, could you go to the next slide for
19 last framing question?

20 So types of adjustments to be considered.
21 Melissa, can you clarify this, types of adjustments to be
22 considered under what circumstances?

23 AIR POLLUTION SPECIALIST TRAVERSO: Yeah. So I
24 mentioned some of these adjustments when I was discussing
25 the various data sources available in the previous slide,

1 but we'd like to get the Panel's perspective on any
2 additional criteria that should be considered, and like
3 how the weight -- how weight should -- how much weight
4 should be applied to factors, such as like the structure
5 activity relationships, the quantity and quality of
6 available health information, and the severity of the
7 health effects and relative toxicity.

8 And then like what you mentioned previously, the
9 persistence bio -- bioaccumulation and multi-pathway
10 effects. So, you know, it sounds like persistence and
11 toxicity are two very separate things. So trying to
12 figure out how much weight to give one factor over another
13 for these provisional health guidance.

14 CHAIRPERSON ANASTASIO: Okay. Thank you,
15 Melissa.

16 Thoughts. Okay. Joe. Sorry. Hold on, Joe.
17 I -- Joe, it says you're self-muted -- well, and muted by
18 an organizer. Okay. Joe, you're self-muted. Joe, you
19 need to unmute yourself before you talk.

20 Still muted, Joe.

21 Oh. Now. Okay. Hold on one second. Okay. Go
22 ahead, Joe.

23 PANEL MEMBER LANDOLPH: Okay. Yeah. Certain
24 chemicals we have an enormous amount of mechanistic data
25 on how they act for carcinogenesis. And I'm thinking of

1 polycyclic aromatic hydrocarbons. And many physical
2 chemists have made calculations of the stability of the
3 carbonium ions generated. So they can use those
4 calculations to predict which ones would make the best
5 carbonium ions to attack DNA covalent and covalent
6 adducts, which would make mutations, et cetera. So that
7 data can be used to a certain extent.

8 And to the extent we have data like that for
9 other compounds, like aromatic amines, where they have
10 carbonium ions, which resonate with nitrenium ions, you
11 can make those calculations or simple binding to DNA, et
12 cetera. You can make predictions as to which out of a
13 whole group of chemicals would be carcinogens. But some
14 of the other chemicals, of course, we don't have such
15 great data on.

16 CHAIRPERSON ANASTASIO: Yeah. Thank you, Joe.

17 Yeah. So definitely there's some modeling
18 approaches that may give insights into toxicity of
19 chemicals where we don't currently have values. And,
20 yeah, that would be very -- a more rapid process to
21 estimate some health values.

22 Anyone have any other thoughts about this last
23 framing question?

24 Beate.

25 PANEL MEMBER RITZ: Yeah. I think you need to

1 consider how much you want to use the modinomics
2 technologies to infer health data or health information,
3 because we will not -- or we shouldn't be waiting for
4 long-term health outcomes that may occur in 10 years, 20
5 years, 30 years. We might need to consider whether we are
6 okay with looking at a chemical and finding that it
7 disturbs a certain metabolic pathway, or changes a certain
8 methylation patterns in tissue. And we know that these
9 metabolic pathways or tissue disturbances have been
10 related to health effects downstream and how much that
11 could be used as a warning sign for later health effects,
12 because otherwise we're going to be waiting for 20 or 30
13 years for health information, at least for the newer
14 compounds to exactly accumulate.

15 CHAIRPERSON ANASTASIO: Yeah. Thank you, Beate.
16 That's a good point. Right. With the old mix approaches,
17 there's a wealth of data. And perhaps some of that can be
18 used to understand relative health values.

19 Yeah.

20 Any other --

21 AIR POLLUTION SPECIALIST TRAVERSO: Yeah, these
22 are really great recommendations. Thank you.

23 CHAIRPERSON ANASTASIO: Yeah, you're welcome
24 Melissa.

25 Any final comments from the Panel?

1 Mike, you're muted, I believe.

2 PANEL MEMBER KLEINMAN: You're right. I'm just
3 going to riff off of what Beate had said a little while
4 ago about groups of chemicals that have the same target
5 and also compounds that will come up under structure
6 activity modeling. I think it would be very useful to
7 have a formalized and -- you know, I know we have, but to
8 kind of consider that in this framework to look at
9 something like a hazard index as opposed to individual
10 things for the individual level compounds. When you have
11 things that target the same, you know, biological system
12 or are structurally similar to chemicals that target a
13 given system, there should be a way to add those into a
14 framework with what we know about all the other things
15 that are out there.

16 And, you know, in some cases, we use the hazard
17 index where you look at the relative toxicity levels and
18 have a scheme for adding them up, so that the net result
19 gives you some idea of the toxicity of the -- and
20 potential health affects of the overall group.

21 The other thing I did want to bring up, this
22 approach sounds like it's facility by facility. And there
23 should be, as an overview, are there other facilities that
24 could impact a given area a given community that are
25 producing some of the same chemicals? Because you may

1 have one facility producing almost nothing, you know, very
2 small amounts. But if you have a lot of those, the total
3 exposure to the community doesn't really care whether it
4 came from smoke stack A or smoke stack B.

5 CHAIRPERSON ANASTASIO: Yeah. That's a good
6 point. This will be our final comment. Melissa, or Dave,
7 or Beth, you want to talk about this cumulative exposure
8 question.

9 AQPSD STAFF AIR POLLUTION SPECIALIST SCHWEHR:

10 Hi. This is Beth. Yes, I really appreciate that
11 comment. We definitely want to be cognizant of cumulative
12 exposures. We're doing things elsewhere within the
13 emission inventory criteria and guidelines regulation to
14 strengthen that as a criteria for districts to consider,
15 when they're looking at impacts under the Hot Spots
16 Program. And, of course, it's a big component of the AB
17 617 Program. So, yes, we're -- we're very aware of that.
18 We appreciate that comment.

19 CHAIRPERSON ANASTASIO: Great. Thank you, Beth.

20 All right. Well, that will conclude the
21 provisional health value because discussion. I look
22 forward to talking about it at a future meeting. Thank
23 you very much, Melissa. Thank you, Beth. Thank you,
24 Dave.

25 We're going to move on now to our second major

1 agenda item, which is -- first, we'll have a report from
2 Mike Kleinman on the AB 617 Consultation Group meeting
3 that he recently attended. So these consultation group
4 meetings are -- provide an opportunity to discuss
5 implementation of various aspects of the Community Air
6 Protection Program.

7 And we're going to actually start with Dr. John
8 Faust from OEHHA who's going to give us a brief overview
9 to remind us of three suggested areas where the Panel can
10 hopefully assist in AB 617 efforts. And then we'll have
11 Mike Kleinman give his presentation.

12 So, John, it's over to you.

13 (Thereupon an overhead presentation was
14 presented as follows.)

15 DR. FAUST: All right. Thank you. Yeah. So if
16 you could just turn to the second slide here.

17 --o0o--

18 DR. FAUST: So in the -- in the March 2019 SRP
19 meeting, we presented three different concepts that we
20 thought could potentially serve as a role that the SRP
21 could play in moving -- moving things related to SB -- AB
22 617 forward. And the three are described on this slide.

23 So the first of them health risk values for
24 contaminants in AB 617 communities. So this is around
25 providing guidance on the identification of emerging

1 contaminants of concern, including recommending priority
2 substances for OEHHA to develop or update health risk
3 values. And these may include contaminants identified in
4 communities through air monitoring or emissions
5 inventories.

6 So this -- this, you know, reflects a little bit
7 back on the previous discussion, since we had introduced
8 both the idea of identifying priority substances in
9 communities to move, you know, through a very similar
10 process as the -- as, for example, REL development, as
11 well as thinking about expedited methods for establishing
12 health guidance to be able to provide information. So
13 this -- this has some -- some commonalities with -- with
14 the work on provisional values.

15 The second topic area addressing cumulative
16 exposures in communities. So here, this is about
17 providing guidance on assessing potential health risks
18 from combined exposure to multiple contaminants,
19 especially where individual pollutant exposures are below
20 current standards, for example, reference exposure levels
21 or ambient air quality standards. And then risk
22 assessments should consider sensitive populations and
23 vulnerabilities as well. And then the third area is
24 tracking community health benefits through indicators,
25 providing input on identifying the kinds of health

1 benefits from reductions in localized air pollution that
2 are most amenable to measurement. So those are -- those
3 are the three topic areas.

4 CHAIRPERSON ANASTASIO: Great. Thank you, John.
5 Just a note to the Panel and also agency staff, you know,
6 our next meeting in October, right now the agenda is a
7 little light, so if we wanted to discuss one or more of
8 these topics at that meeting, I think that would be great
9 if -- to get us started. So I'll just leave that to the
10 agency to discuss amongst themselves and we can talk about
11 it offline.

12 So, Panel, these are three of the ideas that the
13 agencies have come up with where we might be able to
14 assist. So just keep this always in the back of your
15 mind. And now, we're going to segue into Mike Kleinman's
16 presentation from the February 26th meeting of the AB 617
17 Consultation Group.

18 Mike, the floor is yours.

19 (Thereupon an overhead presentation was
20 presented as follows.)

21 PANEL MEMBER KLEINMAN: Okay. Thank you. If we
22 can have the next slide, please.

23 --o0o--

24 PANEL MEMBER KLEINMAN: So this is the agenda of
25 the consultation group meeting. And the first part of the

1 meeting dealt with a survey run by UC Davis looking at how
2 the communities felt about basically giving a report card
3 to the process so far. And that took up, you know, a fair
4 amount.

5 The -- the next part is a discussion of the
6 blueprint that was provided. This was a joint effort to
7 develop a blueprint for how the AB 617 communities would
8 be working, what the guidelines were, what the time limits
9 were, and what the communities felt about where we were in
10 that process.

11 The last part, the Governor's office provided
12 their overview from the Office of Planning and Research,
13 and where we were going. And this was done just prior to
14 a discussion of the actual AB 617 budget, which it turns
15 out the Governor's office is reducing some of the support
16 for that.

17 So if I could have the next slide.

18 --o0o--

19 PANEL MEMBER KLEINMAN: From the survey, there
20 have been several really important pieces of progress.
21 One is that the community air monitoring plans have been
22 moving forward very well in some communities. And so
23 deploying various inexpensive monitors, so that more
24 granular data could be obtained, then you would get from
25 the ordinary, you know, ARB and district monitoring

1 central site data have been implemented and are beginning
2 to produce useful data.

3 In some -- you know, some areas not all of the
4 air districts are created equal. And their relationships
5 with the communities are also not equivalent in some
6 cases. So there are some very strong groups that have
7 really focused on using the AB 617 information to
8 eventually come up with community emissions reduction
9 plans, which can take into account land use, use of
10 pesticides, and things like that.

11 And they -- there is -- there has been a lot
12 better engagement working with the cities, counties, and
13 the Department of Pesticide research. And so there was
14 some real improvement over the initial beginnings of this.

15 And to some extent, projects and -- and plans
16 have been allowing communities to have various levels of
17 engagement in the process.

18 Next slide, please.

19 --o0o--

20 PANEL MEMBER KLEINMAN: So there are still
21 Challenges. The aggressive timeline, a lot of the
22 communities felt that because they had a specific timeline
23 to start implementing emission reduction programs, they
24 didn't have enough time to get warmed up to -- especially
25 if they weren't technically adept when they started up,

1 there's a fairly steep learning curve to doing effective
2 environmental monitoring. And then even more so to being
3 able to understand what that data is saying. So there was
4 a feeling of pressure to move forward with emission
5 reductions and/or plans for that before they felt
6 comfortable with some of the data acquisition side of it.

7 There was also, you know, some discussion that in
8 some cases, there was dissatisfaction with the goals of the
9 process where it was more a cut-down engagement, where the
10 districts took the lead and the citizens were invited to
11 sit at the table, but they really didn't have a whole lot
12 of power in terms of allocating budgets. So they -- that
13 was their perception.

14 Just this kind of partially stems from tensions
15 between the districts, and the industries, and the
16 communities that have been long-standing. And some of the
17 districts, as I said, were less involved with the
18 community than others. But overall, one of the things
19 that they felt was a challenge was they -- the communities
20 felt that there should be a more proactive role for the
21 Air Resources Board, and also for the SRP. And so input
22 from us, OEHHA, and CARB, will -- you know, is really
23 encouraged.

24 Next slide, please.

25 --o0o--

1 PANEL MEMBER KLEINMAN: So this is -- the blue
2 panel on the left is coming out of the blueprint. So
3 these are things that the steps that went through to set
4 up the different communities that were chosen for the
5 first wave of communities that were done. You can see
6 that there are ten communities that were selected and they
7 had leadership programs set up. They established their
8 meeting structures and processes.

9 And if you look at the right, you can see that
10 each of the communities had different models for how this
11 was led. So, for example, West Oakland has a very strong
12 co-leadership relationship with the Bay Area Air Quality
13 Management District and they are working very closely with
14 them, the same as in Richmond. And in Richmond, they
15 brought in an outside facilitator to help work with
16 communications.

17 Some of the communities, the process is more
18 district driven and some of them are less -- the
19 communities have less direct input in terms of how the
20 money gets spent, but some of it has led to, you know,
21 some actual programs and discussions as in Shafter, which
22 we'll be hearing about later.

23 Next slide, please.

24 --o0o--

25 PANEL MEMBER KLEINMAN: So this is my take on the

1 highlights of the meeting. Most of it dealt with process.
2 Very little dealt with what I consider, you know, the
3 substantive discussion of actual results. But two things
4 came -- you know, really floated to the top. One was the
5 Bay Area and the West Oakland community had a source
6 apportionment project, where they drew upon years of data
7 that AQMD had been collecting and working with, and had
8 done a lot of preliminary work, but they helped explain
9 this data to the community representatives who could then
10 bring these results back to the community. So they had a
11 real understanding of what the sources of their exposures
12 actually were in the area.

13 The other thing that was very innovative was the
14 district also funded and implemented a street level
15 monitoring program, where instrumented vehicles drove
16 every street and freeway in the West Oakland area and
17 collected air sampling data all along that track,
18 integrated that data, and came up with very extensive
19 exposure-related information, which again they could
20 provide back and explain to the community. And now the
21 community has this information and they have a much better
22 feel for what they're being exposed to, where it comes
23 from, which then leads to the plan to how do we cut this
24 out, and reduce exposures?

25 The other success that was brought up was the

1 South Coast Air Quality Management District. They took on
2 the program of evaluating the various sensors that are
3 being used and deployed in the different communities. And
4 they've set up programs to compare these sensors, their
5 reliability, their accuracy, calibrations, and things like
6 that. And so this is an ongoing effort the AQMD in the
7 South Coast District has been working on that
8 standardizing, the monitoring protocols, and also
9 standardizing how the data are reported, so that this can
10 be used to really provide useful information for
11 communities and for the regulatory community as well.

12 Next slide, please.

13 --o0o--

14 PANEL MEMBER KLEINMAN: So the areas that they
15 raised concerns were a lot of the communities don't have
16 the training or expertise to really interpret and
17 integrate the information that's coming out. And so they
18 really want the community partners that are working with
19 the districts to have access to better training and
20 understanding, so that they can more effectively
21 communicate with the rest of the people in their areas.

22 One of the things that several communities
23 brought out was that there were very incomplete data on
24 pesticide exposures that they could use. And there was
25 some jurisdictional problems in that the agricultural

1 usage of some of these things is not under ARB control,
2 or -- but under the agricultural division control.

3 And so the -- there were apparent conflicts on
4 which pesticides were allowed, what amounts were allowed,
5 and things like that. And so some of that I think this is
6 an administrative issue that could be worked on and
7 improved.

8 And then monitoring at the community level for
9 pesticides is not viewed as really practical. So it's
10 really important I think going back to our discussion of
11 what the sources of exposures are, I think, including
12 pesticides is part of our emissions inventory somehow
13 would be, you know, important.

14 And then air toxics, which are not part of the
15 general air quality monitoring programs, the data on these
16 things are really very localized and very hard to
17 integrate over an entire community.

18 There are also sources, such as certain storage
19 areas that are not always included in emission
20 inventories. For example, things that are unloaded from
21 the ports, the ports have data on emission inventories.
22 But once they are transferred and stored in off-site
23 facilities, the ports really don't have control over that
24 and they don't show up in their emission inventories. And
25 so there was concern that -- about the completeness of the

1 inventories.

2 And there was also the feeling that the SRP could
3 provide more context for toxic air contaminants and
4 pesticides, and really provide better information to the
5 community on the potential risks and on the
6 effectiveness -- the effectiveness of proposed mitigation
7 plans.

8 I think that is it. Is there another slide?

9 --o0o--

10 PANEL MEMBER KLEINMAN: Yeah. Okay. So a
11 summary. Thank you.

12 The blueprint was written two years ago. And
13 it's a living document, but it's really needing to be
14 updated, especially with respects to what we've learned
15 and what has now come out as best practices. And I think
16 the potential role of source apportionment to identify
17 targets have been applied in the West Oakland area, and
18 that is an approach that could be used more, you know,
19 effectively in many other communities, if the data are
20 available. But it takes a buildup of looking at long-term
21 data to really understand it.

22 There was definitely a call for a better
23 assessment of potential impacts of TACs. And then budget
24 issues were raised which is a real concern, because part
25 of the funding, which is used for incentives, which

1 basically are incentives to have facilities reduce their
2 emissions, that was cut 25 percent in the Governor's
3 budget and the implementation activity funds were cut by
4 50 percent.

5 However, all of this predated COVID. And so at
6 this point, things will -- you know, are in a changing
7 landscape. And so there are uncertainties to say the
8 least about how this is going to be prioritized for the
9 future.

10 And that is it. Thank you.

11 CHAIRPERSON ANASTASIO: Thank you, Mike. We
12 appreciate the update. Before we move on to our final
13 agenda item, I have one announcement and then I want to
14 take a break. So the announcement is for our last agenda
15 item, which will be the presentation from the Department
16 of Pesticide Regulation on potential mitigation plans for
17 1,3-D usage in Shafter, if anyone would like Spanish
18 translation, please put a question in the question box or
19 put something in the chat. We have a translator who is
20 able to provide that service for Spanish translation. So
21 please identify yourself and then we will do that.

22 Claudia, could you please translate roughly what
23 I just said into Spanish.

24 (Translated into Spanish.)

25 CHAIRPERSON ANASTASIO: Thank you, Claudia.

1 What I'd like to do now is take a five-minute
2 break. I know our intrepid reporter, Jim, is on the line
3 frantically pressing keys for the last hour and a half.
4 So let's give him a break and this will give us a chance
5 to run to the restroom, if we would like. It's 10:33 now,
6 so let's reassemble in five minutes at 10:38.

7 (Off record: 10:33 a.m.)

8 (Thereupon a recess was taken.)

9 (On record: 10:38 a.m.)

10 CHAIRPERSON ANASTASIO: Okay. Welcome back,
11 everyone. First for Spanish translation, do we have any
12 requests?

13 Patrick, maybe you could help me on that. I'm
14 looking at the chat. I don't see anything about Spanish
15 translation.

16 MR. GAFFNEY: I don't. Anne, maybe put up that,
17 and then we could maybe have someone translate it to let
18 people know to raise their hand if they would like Spanish
19 translation using their control panel.

20 (Translated into Spanish.)

21 CHAIRPERSON ANASTASIO: Thank you, Claudia. So
22 Lori, I'm not sure how to proceed in terms of Spanish
23 translation. If we don't get any requests, should we go
24 ahead and do it anyway or should we just provide the
25 English version.

1 PANEL LIAISON MIYASATO: If there are no
2 requests, I think we can go ahead and just do it English.

3 CHAIRPERSON ANASTASIO: Okay. So waits another
4 minute.

5 In the mean time, I would like to give a shout
6 out to Jim Behrmann who is apparently joining us. Jim,
7 it's nice to have with you us, although in a different
8 capacity, and we hope you're enjoying retirement.

9 PANEL MEMBER KLEINMAN: This is Mike. Because
10 this thing is being recorded and might be viewed later,
11 you may need to do the Spanish translation.

12 CHAIRPERSON ANASTASIO: That's a good point.
13 Okay. So how about we will proceed with the Spanish
14 translation.

15 Yeah. So Claudia, if you could translate Edgar's
16 presentation, that would be great.

17 Which brings us to our last major agenda item.
18 This is going to be the overview from the Department of
19 Pesticide regulation regarding 1,3-dichloropropene, 1,3-D
20 or Telone, pilot mitigation measures in Shafter.

21 The Panel has been asked to accept or and written
22 comment on this item, given the State's interest in
23 transparency and community participation in AB 617. The
24 upcoming staff presentation is informational only. We're
25 not being asked to vote on this matter or take any action

1 today. So I just want to make that clear.

2 If you do submit a comment today, we will make
3 sure that agency staff -- appropriate agency staff gets
4 the comment, so that they can follow up on that. We, the
5 Panel, won't be doing any follow up.

6 And, of course, there are multiple points along
7 the way where stakeholders and community members can
8 provide input on AB 617 matters as they move through the
9 agency's public process.

10 Okay. With that understanding, I'd like to turn
11 it over to Edgar Vidrio of the Department of Pesticide
12 Regulation for this 1,3-D presentation.

13 Thank you, Edgar

14 (Thereupon an overhead presentation was
15 presented as follows.)

16 MS. KLEIN: Okay. This is Anne. I just want to
17 interject. Edgar, I can show your slides or would like me
18 to give you control?

19 MR. VIDRIO: Yeah. My sharing or allowing me to
20 share my screen, I have some transitions that will be --
21 instead of saying, you know, next bullet, it will be
22 easier on my end.

23 MS. KLEIN: Okay. I just handed you control.

24 CHAIRPERSON ANASTASIO: Yeah. And then Edgar,
25 just a reminder to pause for the translation service.

1 MR. VIDRIO: Will do.

2 Let me make sure I share the right screen. All
3 right -- oh, that's the wrong one.

4 Okay. Can everybody see that?

5 CHAIRPERSON ANASTASIO: Yes.

6 MS. KLEIN: Yes.

7 MR. VIDRIO: All right. So -- sorry, technical
8 difficulties here. Are people still able to see the
9 presentation screen?

10 MS. KLEIN: Yes.

11 MR. VIDRIO: Yes. Okay. So. All right. Okay.
12 So for the Spanish translation before I begin, what I'm
13 going to do is go over either a bullet or a few bullets
14 that have to do with one another or read a paragraph that
15 I have on the slide and then pause.

16 Does that work?

17 --o0o--

18 THE INTERPRETER: Yes. That will work. If you
19 keep the paragraph, then the interpreter can do a side
20 translation into Spanish.

21 Thank you.

22 MR. VIDRIO: Okay. That would be great. Okay.
23 So hello, everybody. My name is Edgar Vidrio. And today
24 I'll be providing an update on the Department of Pesticide
25 Regulations 1,3-dichloropropene, acute mitigation. I will

1 also give an overview of the upcoming 1,3-D mitigation
2 pilot program.

3 --o0o--

4 MR. VIDRIO: Specifically. Sorry go ahead.

5 Okay. For this presentation, I'll be providing
6 essentially a very brief background on the pesticide
7 1,3-dichloropropene, which is also known as 1,3-D or
8 Telone. I will be going over its uses, past mitigation,
9 and the need for additional control measures.

10 THE INTERPRETER: I'm sorry. That was a little
11 longer. Do you mind repeating it, point by point?

12 MR. VIDRIO: Not a -- not a problem. So for this
13 presentation, I'll be providing a brief background on the
14 pesticide 1,3-dichloropropene, which is also known as
15 1,3-D or Telone include -- so I'll be going over the uses,
16 past mitigation, and need for additional control measures.
17 I will also cover DPR's approach to mitigating short-term
18 acute risks to fumigants, such as 1,3-D.

19 THE INTERPRETER: I'm sorry, 1,3-D you said?

20 MR. VIDRIO: 1,3-dichloropropene, but for the
21 rest of the presentation, I'll be referring to it as
22 1,3-D.

23 I will then go over DPR's upcoming mitigation
24 pilot program. And finally, I will go over the connection
25 for the link between the proposed mitigation measures, the

1 pilot program, and the AB 617 community of Shafter.

2 --o0o--

3 MR. VIDRIO: Okay. So let's start with a brief
4 background on 1,3-dichloropropene or 1,3-D. 1,3-D is a
5 pre-plant soil fumigant that is applied to control
6 nematodes, insects, and disease organisms. As with any
7 fumigant, the pesticide is directly applied into the soil,
8 either via subsurface injection or through chemigation.

9 In California, 1,3-D is used in over 60 different
10 crops, including fruit, and nut, trees and row crops.
11 Most of California's 1,3-D use is centralized to the San
12 Joaquin Valley and central coast regions.

13 1,3-D is listed under the Title 3 of the
14 California Code of Regulations section 6400 as a
15 restricted material, which requires a permit from the
16 local county agricultural commissioner to apply. And on
17 top of that, it also requires that any application of this
18 pesticide is only conducted by a certified pesticide
19 applicator.

20 DPR has placed mitigation measures that control
21 exposures to 1,3-D since 1995. These control measures
22 include what we call a township use cap. This basically
23 sets a use limit per California township with the focus of
24 reducing long-term cancer risk. And for this, a township
25 is defined as a six-by-six square mile area per the public

1 land survey system.

2 So DPR, in part due to recent elevated 1,3-D
3 ambient air concentrations that were measured at two
4 monitoring sites, is proposing to add additional
5 requirements that focus on the reduction of short-term
6 acute risks to children and infants, which are the most
7 sensitive populations.

8 --o0o--

9 MR. VIDRIO: In general, DPR has several options
10 available to mitigate unacceptable air exposures to
11 pesticides.

12 These include buffer zone distance or setbacks.

13 THE INTERPRETER: I'm sorry, you said setback?

14 MR. VIDRIO: Yes.

15 Also, there's changes to the application method
16 and the use of -- establishing use limits. Specifically,
17 for 1,3-D in order to address a few exposures, DPR is
18 considering the following options:

19 First is increase the distance between the
20 application and the sensitive receptors, and this can be
21 in the form of a buffer zone or setback. The next one is
22 to limit the amount of 1,3-D that can be applied. Another
23 possibility is to require the use of lower emitting
24 application methods. And lastly is to increase the soil
25 moisture requirement of the treated field.

1 So DPR combined the use of computer models with
2 vast air monitoring data to develop these appropriate
3 mitigation options. Specifically, DPR used two models.
4 One of them is HYDRUS. And HYDRUS is a industry standard
5 solute transport model that has been used by DPR to
6 simulate fumigant transport and volatilization. The use
7 of HYDRUS is very important, because it allows us to
8 estimate the flux for emissions that result from 1,3-D
9 either during and following an application.

10 The second model that we used is called AERFUM,
11 which stands for Air Exposure and Risk model for
12 Fumigants.

13 THE INTERPRETER: I'm sorry. That one went very
14 fast. Would you mind repeating?

15 MR. VIDRIO: Yeah. No. No worries. Air
16 Exposure and Risk model for Fumigants.

17 AERFUM was actually developed by DPR in order to
18 simulate fumigant air dispersion. So AERFUM uses a
19 commonly used model that's called AERMOD, to -- we use
20 that as a simulation engine. And then AERFUM allows the
21 pre- and post-processing functions of fumigant applicants.

22 AERFUM is -- again, it's specifically designed
23 for regulatory purposes and it actually takes into account
24 the California pesticide use data, weather information,
25 and GIS layers.

1 So DPR's views of both HYDRUS and AERFUM models
2 went through an extensive peer-review process that was
3 coordinated by the University of California in 2019.

4 THE INTERPRETER: I'm sorry, could you repeat the
5 second segment?

6 MR. VIDRIO: Sure. It went through an intensive
7 external peer-review process coordinated by the University
8 of California in 2019.

9 So DPR -- via the use of these two models, DPR
10 results -- modeling results indicate that 1,3-D
11 applications -- it basically indicates that for 1,3-D
12 applications in the -- with the use of what is called a
13 totally impermeable film, or TIF, tarp that the actual use
14 of the tarp can suppress emissions to below health
15 protective values.

16 And for those of you guys that are unfamiliar,
17 TIF tarps are commonly used for some fumigant
18 applications. And they're used to suppress the fumigant
19 in the ground while also maintaining certain soil moisture
20 levels. However, while the use of DPR approved TIF tarps
21 have a long track history of being able to reduce
22 fumigants, gas emissions, the use of TIF tarps may not be
23 feasible for all crops grown in the San Joaquin Valley.

24 --o0o--

25 MR. VIDRIO: And there's actually several reasons

1 why the use of TIF tarps may not be feasible for all
2 crops.

3 The first one is availability. There's not
4 enough TIF tarp manufacturers or supply to cover the whole
5 1,3-D industry.

6 The second one is waste or recyclability.
7 Currently, there are no commercially available means of
8 recycling the amount of TIF tarps that will be produced,
9 if the whole 1,3-D industry were to use these.

10 And the last one will be price. The cost of
11 using TIF tarps per acre treated may only be -- make sense
12 for high-grossing crops. And, for example, this will
13 include something like strawberries. However, lower cash
14 crops, like sweet potatoes for example among others, may
15 not be able to recoup their costs of using TIF tarps. And
16 this is because the use of TIF tarps can be up to \$1,500
17 per acre.

18 THE INTERPRETER: I'm sorry, could you repeat the
19 price again?

20 MR. VIDRIO: It's an average of \$1,500 per acre.

21 Therefore, DPR's approach, instead of focusing
22 exclusively on the use of TIF tarps, we decided to take
23 a -- basically, a different approach and look at
24 alternative options that could potentially reduce the
25 1,3-D emissions to levels that would be comparable to

1 using these tarps.

2 And essentially, currently both the United States
3 Environmental Protection Agency and DPR offer a 60 percent
4 buffer zone reduction credit when applicators use TIF
5 tarps in certain fumigant applications.

6 On top of that, by using the models that I
7 mentioned on the previous slide, DPR modeling results show
8 that 60 percent emissions equates to a minimum a 60
9 percent buffer zone reduction that will be needed for most
10 field sizes and most application rates.

11 Therefore, for this mitigation effort, DPR aims
12 to reduce 1,3-D emissions by at least 60 percent as
13 compared to an equivalent untarped application, which in
14 this case is the 18-inch deep untarped method. And the
15 reason why we chose this as a base method is because it
16 is -- this application methods is the predominantly used
17 method to apply 1,3-D in California. And with around 80
18 to 90 percent of all applications that occur in the San
19 Joaquin Valley taking place via the 18-inch deep untarped
20 method.

21 By doing this, or by taking this approach, it
22 will allow the flexibility for -- to reduce the fumigant
23 emissions by the required amount, which in this case is 60
24 percent. But at the same time, they will allow the grower
25 the flexibility to choose an option that best fits their

1 needs.

2 DPR has identified several options that will
3 reduce 1,3-D emissions by at least 60 percent compared to
4 the base standard fumigation. We posted this -- a
5 document on our website, which is linked on the bottom,
6 that actually lists all 13 plus different options that
7 provide this -- these comparable results.

8 So every proposed application method in that
9 document may be feasible in all situations, but each
10 method -- so sorry, not every application method listed in
11 there may be feasible for all applications. However, each
12 method should be feasible in a limited number of
13 situations.

14 And what I mean by that essentially to kind of
15 break that down is that not all listed options meet the 60
16 percent emission reduction goal individually. However,
17 they could either be used in combination with one another
18 or they can be additional restrictions placed on those
19 applications in order to meet the 60 percent goals.

20 And these additional restrictions that could be
21 placed on these options can be anything from either
22 limiting the size of the application area either -- or
23 limit the application rate that can be used, or you could
24 actually impose a specific setback distance.

25 --o0o--

1 MR. VIDRIO: So considering that 1,3-D is
2 extensively used in California with an average usage of
3 around 12 million pounds annually, also considering the
4 fact that there are no commercially-scaled alternative
5 options currently available where people can transition
6 from 1,3-D to something else, and also some of the
7 mitigation measures that we're proposing can be very
8 costly, and lastly, the fact that we -- proposed
9 mitigation measures may not be feasible and may not
10 necessarily achieve the desired emission reductions for
11 all cases, therefore, before we roll -- we roll these
12 proposed mitigation measures into a statewide regulation,
13 DPR is planning on rolling out a, what we call, a pilot
14 program to test these mitigation measures. And we hope to
15 do it in a regional setting prior to statewide
16 implementation.

17 We hope to begin this program in the fall.
18 Obviously, that, you know, COVID-19 may have a saying on
19 this. By doing this pilot program, it will allow the DPR
20 to evaluate the proposed mitigation measures on a regional
21 scale, again before we go statewide. And for the pilot,
22 while we have chosen select high-use regions that are
23 located near air monitoring locations in the communities
24 of Delhi, Parlier, and Shafter, the applicators in these
25 specific areas will have the option of using 1,3-D in the

1 new application methods or with the new restrictions in
2 order to reduce air emissions by 60 percent compared to
3 untarped methods.

4 The lower emitting methods that we hope to try on
5 will rely on either having the fumigant injected at deeper
6 depths or we could also increase the amount of
7 pre-application soil moisture. And, of course, we always
8 have the ability to have the -- either complete or partial
9 TIF tarping. And ultimately, if none of these are an
10 option, the growers may be able to combine with other
11 options, or have additional restrictions placed.

12 And the additional restrictions are application
13 rates or application area, or like I mentioned before,
14 increased distance between the application and a sensitive
15 site.

16 --o0o--

17 MR. VIDRIO: Specially, the pilot program will
18 have the following three objectives.

19 The first one is the collection and evaluation of
20 air monitoring data that result from the use of these new
21 application methods to validate computer modeling
22 estimates. The next objective will be to evaluate the
23 feasibility of the -- all the proposed mitigation options
24 that we are putting forth. And lastly, it will be to
25 evaluate the effectiveness of these mitigations at

1 reducing the emissions of the 1,3-D to the levels that we
2 have -- we hope to get.

3 On top of the new emission reduction options that
4 we're going to put forth, there's going to be some
5 enhanced air monitoring efforts. So we will continue our
6 weekly ambient air monitoring sampling that we already
7 conduct in the towns of Delhi, Parlier, and Shafter.

8 THE INTERPRETER: And I'm sorry, would you mind
9 repeating the areas again?

10 MR. VIDRIO: Yeah, no worries. The towns are
11 Delhi, Parlier, and Shafter.

12 On top of these, the ambient air monitoring, we
13 also want to conduct application site monitoring studies
14 that are targeted to measure and validate emissions from
15 the new methods.

16 So so far, I've talked about DPR's regulatory
17 development process, what we can do with 1,3-D
18 specifically, and what we hope to achieve in order to
19 address the acute exposures of 1,3-D this fall.

20 THE INTERPRETER: I'm sorry, what was the last
21 segment? Can you repeat it again?

22 MR. VIDRIO: Yeah. What we hope to -- basically
23 to address the acute exposures of 1,3-D this fall. The
24 pilot program will help us evaluate the effectiveness and
25 feasibility of these proposals at a regional scale again

1 before we scale it up to a statewide regulation. But so
2 far, I haven't really addressed AB 617 or how AB 617 fits
3 into these efforts.

4 --o0o--

5 MR. VIDRIO: So although pesticides were not
6 specifically included in AB 617, DPR has been
7 collaborating with CARB and various air districts in an
8 advisory role to address pesticide exposures.

9 For example, in the community of Shafter, DPR
10 attended multiple steering committee meetings and made
11 various presentations on pesticide-related topics. In
12 that same community, there were several pesticide related
13 amendments that were included in Shafter's approved
14 community emission reduction program, or CERP.

15 THE INTERPRETER: I'm sorry, can you repeat the
16 second segment?

17 MR. VIDRIO. Sure. That's the Shafter's
18 community emission reduction program, or CERP. These
19 commitments included our department's commitment to
20 continue pesticide air monitoring activities in the
21 Shafter community, as well as DPR's commitment to develop
22 statewide regulations to reduce exposures to 1,3-D in
23 ambient air.

24 Therefore, ensuring that the Shafter AB 617
25 community boundary was actually included in this pilot

1 program was definitely a priority for the Department. And
2 as you can see in the map that you have here in this
3 slide, the pilot area here is highlighted with a dark
4 border. And the actual border of the community of AB 617
5 in Shafter is included in the lower right box.

6 The image on the right of that is what we call
7 the windrows and it's showing the wind direction. So you
8 can see that the use on the northern and the northeast --
9 or northwest part of Shafter is blowing into the
10 community, so that we capture in this pilot program.

11 Therefore, through the pilot program, DPR will be
12 able to better assess the efficacy and the practicality
13 essentially of these new proposed mitigation measures in
14 how effective they are at reducing 1,3-D emissions.

15 And finally, the pilot program will help DPR meet
16 those commitments that were included in the AB 617
17 community of Shafter CERP.

18 THE INTERPRETER: I'm sorry, can you repeat that
19 again?

20 MR. VIDRIO: That it will help us basically
21 reduce the pesticide exposures or emissions in the Shafter
22 community.

23 With that, I'd like to thank you for your time.
24 And I will ask if there are any questions that the Panel
25 may have.

1 CHAIRPERSON ANASTASIO: Thank you, Edgar.

2 Any questions from the Panel?

3 Edgar, I have a question for you. So you talk
4 about weekly monitoring. This is at fixed points
5 throughout the area?

6 MR. VIDRIO: Yeah, So DPR has been conducting
7 weekly ambient air monitoring in the community of Shafter,
8 for example, since 2011. So in that community, we've been
9 collecting one air sample that we analyzed for over 36
10 different pesticides. 1,3-D is one of them. I don't
11 know, is there a translation that needs -- that will
12 happen here or --

13 CHAIRPERSON ANASTASIO: I think in the interest
14 of time, maybe we should not do the translation for the
15 questions from the Panel.

16 MR. VIDRIO: Okay. But yes, it's a fixed item in
17 each community and we do it weekly and we use it for
18 trend, and exposure estimates and so forth.

19 CHAIRPERSON ANASTASIO: So when you say weekly,
20 that's one sample that integrates over the entire week or
21 that's one sample per week at a shorter integration time?

22 MR. VIDRIO: Yeah, so it's a 24-hour sample
23 collected every week in a random day.

24 CHAIRPERSON ANASTASIO: Okay. All right. But
25 presumably a person's exposure at very high levels would

1 be on the order of minutes at a much higher level
2 potentially. I'm just wondering -- I mean, are there
3 health guidance values for 1,3-D?

4 MR. VIDRIO: No. So unfortunately, there's
5 absolute -- there's no State or federal agency that has
6 any health standards for pesticides in the air, unlike
7 some of the other criteria pollutants. So for -- because
8 of this, DPR, when we first started the air network,
9 coordinated with OEHHA to develop what we call regulatory
10 standards and screening levels. So we use those as kind
11 of a barometer to see how high or high low we are from
12 those values.

13 CHAIRPERSON ANASTASIO: I see. And do you know,
14 is there any interest on DPR's part on -- in developing
15 health guidance values for some of these pesticides that
16 don't have them?

17 MR. VIDRIO: Yeah. So essentially what we do for
18 most of these pesticides is again we have a -- what we
19 called a screening level. But for pesticides that have
20 gone through the risk assessment process, which is a
21 little bit more in detail, they look at all the health
22 effects, the exposures, the sources. They develop what we
23 call a regulatory health -- regulatory target, which is a
24 little more stringent and has more impacts and triggers
25 for the Department to take regulatory action if they

1 exceed it. So we do have that for a few of those
2 pesticides, including 1,3-D.

3 PANEL MEMBER RITZ: Is that -- this is Beate. Is
4 that monitoring data available for research?

5 MR. VIDRIO: Yes. So DPR has every single sample
6 that's ever been collected by both DPR and ARB since 2010
7 on our website. We used to have actually a very detailed
8 very user-friendly interface. But because of different
9 technology problems, we have a downloadable file that can
10 be imported into any system that you would like to use.

11 PANEL MEMBER RITZ: And have you compared or are
12 you regularly comparing this with the pesticide use
13 reports?

14 MR. VIDRIO: Yes, we have. So every year, we
15 develop a -- basically an annual report that has every
16 single pesticide sample that was measured as part of the
17 network. And we compared that with again either a
18 screening level or regulatory target. And we -- if
19 there's any exceedance then we talk about what was done to
20 follow it up.

21 On top of that, we also look at -- every three
22 years we look at the pesticide use patterns in the area
23 and compare that or try to coordinate it to air
24 concentrations, as well as look at how mitigation options
25 that were placed during that time frame how that impacted

1 the use in air concentrations in the area. So we've done
2 that and most of these document that we've done are posted
3 on our website as well.

4 CHAIRPERSON ANASTASIO: Thank you.

5 PANEL MEMBER KLEINMAN: It would be great if you
6 could actually append some of those website listings to
7 your presentation, so it becomes part of the record, so
8 that if people do want to go look those up, they would be
9 able to do it without having to wind through a more
10 involved menu.

11 MR. VIDRIO: Yeah, we can definitely make those
12 available. They're all pretty much on our website pretty
13 easy to find, but we can definitely email those over so
14 they can be included in a single document essentially.

15 CHAIRPERSON ANASTASIO: Yeah. Edgar, maybe you
16 could cut and paste some of that into the chat. I believe
17 the chat is archived as part of the presentation, so that
18 would allow people to get it directly.

19 MR. VIDRIO: Yeah. Unfortunately, I don't have
20 access to those documents right now. I know they're on
21 our website.

22 CHAIRPERSON ANASTASIO: Okay.

23 MR. VIDRIO: Some of these, unfortunately because
24 the State has been transitioning to an ADA new form of
25 website, some of these documents may not be clickable

1 essentially on our website, but they're available.
2 Basically, there's a name, a document, and where -- a
3 place where the user can request that document. So I
4 could actually do that and just send those documents over
5 to you guys, and that way, you know, you'll have the
6 actual document as opposed to just the link.

7 CHAIRPERSON ANASTASIO: Okay. Maybe you could
8 work with Lori on that and then Lori could upload it to
9 the website link for today's meeting.

10 PANEL LIAISON MIYASATO: I'll do that. Thanks,
11 Cort.

12 CHAIRPERSON ANASTASIO: Thank you, Lori.

13 Other questions from the Panel?

14 PANEL MEMBER KLEINMAN: Edgar, I have a --
15 just -- this is more of an informational thing, but you
16 said it costs about \$1500 per acre for the TIF tarps. How
17 much of the cost of that is actually the cost of the tarp
18 and how much is the cost of getting rid of it after it's
19 used?

20 MR. VIDRIO: That's what we don't have a lot of
21 idea. There's not -- there's not enough recycling plans
22 essentially for this type of plastic. It's a different
23 type of plastic. It actually has alcohol embedded in the
24 sheets to block the fumigant from escaping, so it cannot
25 be processed in the same type of recycling plants as

1 normal plastic is at this stage.

2 In California, to my understanding, there was
3 only one recycling plant, and that may have closed either
4 last year or the year before. So we don't have any actual
5 information on the recycling costs at this stage. But
6 because there's no local area to -- or place to recycle,
7 it might be higher now than it was three, four years ago,
8 for example.

9 PANEL MEMBER KLEINMAN: Because I know a lot of
10 toxics can be gotten rid of in cement calcining plants,
11 because of the high temperatures of that process.

12 MR. VIDRIO: Right.

13 PANEL MEMBER KLEINMAN: And that has been done
14 before. But I don't know if again whether that would be
15 more practical than the existing method.

16 MR. VIDRIO: Yeah, because right now the use of
17 these TIF tarps is very common, especially for like the
18 hydroseed crops like strawberries, and mostly in the
19 central coast regions. And so there is a way of getting,
20 you know, rid of those, recycling them. But I -- we don't
21 have any information on those about the cost at this
22 stage.

23 PANEL MEMBER RITZ: So just out of curiosity,
24 once you're taking the tarps off, is there any Telone left
25 in the soil that escapes?

1 MR. VIDRIO: So fumigants have a very short
2 lifespan, I mean, compared to, you know, the other type of
3 chemicals. We have -- basically, when the fumigant is
4 injected into the ground, the use of tarps are, for
5 example, will keep it in ground, because it wants to move
6 through the soil and either come out the top or breakdown
7 with other -- with other nematodes and other organisms.

8 But we have done testing where we look at how
9 long that fumigant takes to break down completely, and we
10 have seen that it takes anywhere from -- you know, most of
11 it goes out between one and seven days. But there's some
12 residue up to 21 days, for example. These tarps usually
13 are kept in the -- especially for the strawberry
14 production, they're kept for the whole season, because
15 they also use them as a soil moisture regulator
16 essentially, keeping the soil moist and keeping the water
17 in there. So by the time they do take them out, there's
18 pretty much nothing left in them, because it's been a few
19 months at that time.

20 PANEL MEMBER RITZ: Thank you.

21 PANEL MEMBER HAMMOND: I'm pleased to see that
22 you'll be actually testing some of the computer models.
23 My memory of the methyl iodide situation was that after a
24 lot of modeling on this, they actually used some tarps in
25 Florida. And some of us had been somewhat skeptical of

1 the computer models. And I think that in Florida they
2 found the concentrations released to the environment were
3 much higher than what had been predicted by the computer
4 model. So I think this is excellent that you're going to
5 be actually checking the models.

6 MR. VIDRIO: Yeah. No, we definitely want to,
7 especially we're going to place a lot of interest or a lot
8 of importance on the use of models for this. We wanted to
9 make sure that we have the confidence in these. So again,
10 that's why we initiated that peer-review process that
11 CalEPA - we're one of the departments - usually goes with
12 a UC and they do a peer review where they look at experts
13 in those areas to evaluate not just the models that we're
14 using, but how we're using them.

15 On top of that, we -- even though we have a lot
16 of emission data on 1,3-D, we don't have a lot of emission
17 data for the new methods. So there's definitely some
18 extrapolation that we're doing. And we just want to
19 confirm that, you know, the models are giving the right
20 values when these methods are actually used in the real
21 world essentially.

22 CHAIRPERSON ANASTASIO: Further comments from the
23 Panel?

24 Edgar, I have a question for you. So you said
25 that you have a rough health screening value for 1,3-D and

1 you've got this monitoring data. So do you see that there
2 are occasional or regular exceedances of what you think
3 the health value is in your monitoring?

4 MR. VIDRIO: Yeah. So we've done monitoring of
5 1,3-D again in the City of Shafter for going over ten
6 years now. On top of that, we currently monitor for 1,3-D
7 in over ten different communities, again during that same
8 24 hours per week basis.

9 So during those -- that whole time, what we do is
10 we have three basically levels that we compare to. We
11 have an acute value that is usually done in the order of
12 24 hours. So we compare 24-hour samples with that value,
13 and we do it anywhere from 24 to 72 hours, depending on
14 where that acute study came from for different pesticides.
15 For 1,3-D, it's 72 hours.

16 Then we also have a subchronic target of usually
17 on the order of a few weeks. And lastly, we do the whole
18 chronic, which is the year. So we compare air
19 concentrations of 1,3-D to these values throughout the
20 whole time. And so far, we've exceeded a subchronic value
21 in the city of Shafter, for example, which is one of the
22 reasons why it costs the Department to look a little
23 closer into the current control measures for 1,3-D, as
24 well as what else, if any, things should be done to reduce
25 those emissions.

1 In terms of the acute, we have gotten a
2 high-value of 111 parts per billion, for example. That is
3 the maximum that we've gotten. And the current 72-hour
4 target is 110. So on a 24-hour basis, that exceeded that
5 value. But again, there' two different time scales, one
6 was 24-hour concentration compared to a 72-hour target.
7 But because of that again, it just caused us to look a
8 little closer, so that we will have a definitive, whether
9 that value or any other value has been exceeded. But it
10 basically create or trigger the Department to look closely
11 into those.

12 CHAIRPERSON ANASTASIO: And presumably, there are
13 people who live closer to the fields than the sampling
14 site within Shafter?

15 MR. VIDRIO: And that's what we use the
16 application site monitoring study. So the application
17 site studies, as opposed to the ambient, gives us more of
18 a sense of those acute exposures, because it's actually
19 capturing -- the complete emissions are coming out the
20 field. And we do that -- we usually have the studies for
21 a -- you know, again up to 21 days following the
22 application. You want to capture everything that came out
23 of the field.

24 Ambient, that's why we're in the areas that we're
25 at, because we actually want to see what kind of

1 quote/unquote normal air concentrations or average air
2 concentrations are exposed for the whole community. So
3 that that's kind of the difference of our two different
4 sampling types that we do.

5 CHAIRPERSON ANASTASIO: Yeah, I see. I mean,
6 part of the reason I ask is because you have this 60
7 percent reduction target to get as good a reduction as a
8 TIF tarp would. But it seems at least possible that there
9 are exposures from residents near site where a 60 percent
10 reduction would --

11 (Off record: 11:36 a.m.)

12 (Webinar shut down.)

13 (On record: 11:46 a.m.)

14 CHAIRPERSON ANASTASIO: So --

15 PANEL MEMBER BLANC: Okay. I'd like to move that
16 we adjourn

17 CHAIRPERSON ANASTASIO: Can I get a second?

18 PANEL MEMBER MILLER: Second.

19 CHAIRPERSON ANASTASIO: Second. Thank you, Lisa.

20 Okay. All in favor?

21 Raised your hand and if I can see it or say aye.

22 (Hands raised.)

23 (Ayes.)

24 CHAIRPERSON ANASTASIO: Any opposed?

25 Okay. I'll take that as -- so what I'll do is

1 I'll work with Lori and the agencies to figure out what
2 can we do to transfer over the public comment to the
3 October meeting, because there were a number of questions
4 that people had. Sorry about the technical glitch. I
5 thought it was going reasonably well until then.

6 So just to remind everybody we will be meeting in
7 October. Let me see here.

8 PANEL LIAISON MIYASATO: October 9.

9 CHAIRPERSON ANASTASIO: October 9th and 9:30. So
10 please make sure that's in your calendar, October 9th at
11 9:30. We're still working on the agenda. You know, we
12 normally stop at 2:30 or. So, for now, please plan for
13 that and then as we get a better sense of the agenda, we
14 will let you know if we can end earlier.

15 I also just wanted to let the Panel know that we
16 have approved -- I, as Chair, approved the revisions that
17 OEHHA made to toluene para-chlorobenzotrifluoride and
18 cobalt. So we've made great progress on those and those
19 are all in the bag. So congratulations to OEHHA, and John
20 Budroe and staff on all of that.

21 Okay. That's it. Thank you, everybody. Sorry
22 about the abrupt ending.

23 (Thereupon the California Air Resources Board,
24 Scientific Review Panel adjourned at 11:48 a.m.)

25

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


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

4 That I am a disinterested person herein; that the
5 foregoing California Air Resources Board, Scientific
6 Review Panel meeting was reported in shorthand by me,
7 James F. Peters, a Certified Shorthand Reporter of the
8 State of California;

9 That the said proceedings was taken before me, in
10 shorthand writing, and was thereafter transcribed, under
11 my direction, by computer-assisted transcription.

12 I further certify that I am not of counsel or
13 attorney for any of the parties to said meeting nor in any
14 way interested in the outcome of said meeting.

15 IN WITNESS WHEREOF, I have hereunto set my hand
16 this 21st day of July, 2020.

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