

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
DEPARTMENT OF TOXIC SUBSTANCES CONTROL

GREEN RIBBON SCIENCE PANEL
MEETING

RED LION INN
SIERRA ROOM
1401 ARDEN WAY
SACRAMENTO, CALIFORNIA

WEDNESDAY, APRIL 29, 2009

9:00 A.M.

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

A P P E A R A N C E S

Green Ribbon Science Panel Members

Ken Geiser, PhD, Co-Chair

Deborah Raphael, Co-Chair

William F. Carroll, PhD, Co-Chair

Ann Blake, PhD

Jae Choi, PhD

Tod Delaney, PhD

Richard Denison, PhD

Arthur T. Fong, PhD

Lauren Heine, PhD

Dale Johnson, PhD

Michael Kirschner

Richard Liroff, PhD

Timothy F. Malloy, JD

Roger McFadden

Kelly Moran, PhD

Oladele A. Ogunseitán, PhD, MPH

Robert Peoples, PhD

Julia Quint, PhD

Julie Schoenung, PhD

Megan R. Schwarzman, MD, MPH

Anne Wallin, PhD

Michael P. Wilson, PhD, MPH

DTSC Staff Present

Maziar Movassaghi, Acting Director

Maya Akula

Kathryn Barwick

Robert Brushia, PhD

Cindy Chain-Britton

Yolanda Garza

Peggy Harris

Colleen Heck

Radhika Majhail

Patrick Movlay

Hortensia Muniz

Michael O'Docharty

Nancy Ostrom

Donald Owen, Jr.

Joseph Smith

Jeffrey Wong, PhD

Elizabeth Yelland

Xioaying Zhou

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Also Present (by Affiliation)

Michael Girard
Aerojet

Ryan Tacorda
Beveridge & Diamond, PC

Judy Yee
California Air Resources Board

Marylou Verde-Carlos
California Department of Pesticide Regulation

Fareed Ferhut
California Integrated Waste Management Board

Ansje Miller
Center for Environmental Health and CHANGE Coalition

Christina Medina
Center for Environmental Health and CHANGE Coalition

Ryan Nestle
Center for Environmental Health and CHANGE Coalition

Andria Ventura
Cleanwater Action and CHANGE Coalition

Davis Baltz
Commonweal and CHANGE Coalition

Robert Doty
Cox, Castle & Nicholson

Tom Jacob
DuPont

Jessica Noggle
Georgia-Pacific

Topher Buck
GreenBlue

Kenoli Oleari
Institute of the Commons

Marc Tognotti
Institute of the Commons

Also Present (by Affiliation)

Plasad Jaladi
Intelligent Enterprise Solutions

Kim Waggoner
Kim Waggoner and Associates

Sara Hoover
Office of Environmental Health Hazard Assessment

Fran Kammerer
Office of Environmental Health Hazard Assessment

Melanie Marty, PhD
Office of Environmental Health Hazard Assessment

Beth Percynski
Procter & Gamble

Lauren Ornelas
Silicon Valley Toxics Coalition and CHANGE Coalition

Suzanne Murphy
Worksafe and CHANGE Coalition

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

2 MS. BARWICK: Thank you, everybody. Welcome to
3 the first meeting of the Green Ribbon Science Panel for the
4 Department of Toxics. I would like to thank everybody for
5 coming such a long way, or not such a long way to be with us
6 here today.

7 My name is Kathy Barwick and I work for the
8 Department of Toxics in the Pollution Prevention Program. I
9 am staff to the panel; also to Jeff Wong, Dr. Jeff Wong over
10 there. So it's my job to get this meeting going and be
11 staff to the operations of the panel.

12 So what I would like to do this morning is just do
13 a couple of housekeeping items. I am going to do a very,
14 very quick agenda review and then I would like to go over a
15 few public comment issues so that we know how we are going
16 to go through the day.

17 So housekeeping. I think you probably all walked
18 by the restrooms on your way in. Now I realize the room is
19 a little bit tight. And for those of you on that side of
20 the room, those doors actually, you can't get past the
21 camera there. You can go out those doors and then this one.
22 If you go out those doors and in that one you need to turn
23 the latch, that way you can get in. Just so that you know.

24 So we did good, we are only ten minutes late
25 getting started. And I am going to --

1 We have a little issue here with blinding the
2 Chairs. They are very gracious and have agreed to pop up
3 and down during the day.

4 So I am just going to go over the agenda very
5 quickly. And for members of the public I will talk about
6 the opportunities for public comment. So we will have some
7 opening remarks from our director, Maziar Movassaghi. And
8 then our Co-chair, Debbie Raphael, has organized an activity
9 so that we can all learn to meet one another.

10 And you know, I ought to just do this right now.
11 Debbie Raphael, co-chair, Dr. Ken Geiser and Dr. Bill
12 Carroll will be your co-chairs. And Dr. Jeff Wong is going
13 to do a quick introduction of the panel and then we'll have
14 our little get to know you exercise.

15 We will have a short break and then I am going to
16 lead you through a very quick discussion of the Terms of
17 Reference, which is the guiding document for the activities
18 of the panel. I have been asked to shorten it a little bit
19 so your copy has a bunch of slides and I am only going to go
20 through the most important ones.

21 And then after lunch, which is scheduled for
22 12:10, we will have -- And there will be a public comment
23 period at that point. We will have an overview of the
24 recently enacted green chemistry laws. And then we are
25 going to start in the afternoon on presentations on the

1 technical issues. Which this is our DTSC staff here and
2 Dr. Wong will be introducing them as well.

3 So at the end of the day we will adjourn and
4 reconvene in the morning and we are going to continue the
5 topic area discussions. And then there will be a longer
6 public comment period. That's our meeting.

7 I'd like to go over just a couple of things.
8 First of all, please turn your cell phones off. Dr. Carroll
9 said if you have a really boss ring tone you can leave it
10 on, but I don't know.

11 (Laughter.)

12 MS. BARWICK: The other thing is when we have our
13 presentations this afternoon and tomorrow morning we are
14 going to ask people to save clarifying comments until the
15 end of the presentation. So what we will do is have
16 presentations, clarifying questions, answers from staff and
17 then we will have the panel discussion.

18 So I wanted to mention very quickly. I wanted to
19 welcome the public to our meeting and express our gratitude
20 and appreciation for you being here today. We would like to
21 remind you that this meeting is for the purpose of DTSC
22 staff receiving expert advice from the panel. So what we
23 would like you to do is, if you are going to make a public
24 comment, please address it to the panel, not to staff. We
25 have other opportunities like the public workshops and the

1 regulatory process to do that.

2 Where is Maya? Maya is sitting right there. She
3 is one of our public participation specialists and she will
4 receive your public comment cards. We have small comment
5 sessions after the technical presentations and we request
6 that you make comments specific to that topic at that time.
7 If you have general comments we have a longer period
8 scheduled for tomorrow morning. And we are allocated three
9 minutes to make comments. And let's see, did I forget
10 anything else? I think that's it.

11 So I would like to introduce Maziar Movassaghi who
12 is going to give you a welcome address. This is our
13 director.

14 (Applause.)

15 MR. MOVASSAGHI: Thank you everyone. Good morning
16 to the panel members, good morning to the public, good
17 morning to our staff and some of our colleagues from other
18 departments at Cal-EPA and the state department.

19 Folks, today is -- I don't know if the cameras are
20 going to like this but I am going to step in here a little
21 bit so I can see you folks and the audience a little bit.

22 My name is Maziar Movassaghi, acting director of
23 DTSC. And everybody gets a 30 day pass to butcher my name
24 and then I'll correct you. So please feel free to
25 experiment.

1 Folks, today is a truly monumental day. When I
2 was struggling to prepare for this meeting I asked for some
3 advice about, well what has this group done, what are we
4 going to be doing. You know, the nuts and bolts. And I
5 realized it's important for me to highlight the fact that
6 how important this event is and not necessarily focus on
7 some of the nuts and bolts. Because this is truly the start
8 of a fundamental paradigm shift.

9 When you have a fundamental paradigm shift, new
10 tools, new science, new thought, it creates a seismic event
11 where we really shift away from the way we have been
12 thinking and doing our work into a whole different process.
13 And this doesn't happen without some concerted effort. And
14 some of these concerted efforts sometimes backfire and
15 sometimes they actually advance.

16 Let me give you a couple of examples. The 5th
17 Solvay Conference of Physics and Chemistry, 1927 in
18 Brussels. A young Heisenberg and Niels Bohr lay the
19 foundation for quantum physics. At the day of the meeting
20 actually Schroedinger and his allies, you know, were able to
21 prevail with the wave particle theory of physics and quantum
22 physics didn't really take off for a little while. But who
23 was in the audience? Albert Einstein, Max Planck, and a few
24 other luminaries of quantum physics.

25 Today reminds me of that kind of a day. Today we

1 are laying a foundation for a fundamental shift in how we
2 think about our environment. We are going to challenge some
3 very long-held beliefs about how we are supposed to be
4 stewards of the environment. We are going to challenge
5 programs such as recycling programs. We are going to
6 challenge regulatory mitigation requirements. We are going
7 to challenge business practices. This is not an easy task
8 but it is a task that we need to start.

9 You know, a lot of folks use this term in science
10 that, you know, we, the next generation, always get to stand
11 on the shoulders of giants. To me you folks are that
12 collective. And this really, really daunting task needs
13 your help. We for 30 years have been trained to look at
14 environmental regulation, to me, in a very binary manner.
15 Black and white. What's good or bad. Define how bad, bad
16 is. But all that energy, get to a point, draw the line.

17 But after 30 years we realize we are not
18 protecting the environment, we are not protecting health and
19 human safety the way we thought we were. I am a father of a
20 13-month-old kid. I'm terrified to know how much PBD is in
21 her system. I used to run home, look at the back of bottles
22 and go, oh my God, X, Y and Z and try to discard it. And my
23 wife is rummaging through the garbage saying, no, we need a
24 bottle to feed her tonight.

25 So I understand the struggles. But I am part of

1 the fortunate few that has the knowledge and has the
2 economic capability to make some decisions. There's
3 hundreds of thousands of parents out there in California,
4 even beyond our borders, that are going to be struggling
5 with this right now. We don't have the luxury to wait, we
6 don't have the luxury to go through a very complicated
7 process. We have got to make particular incremental
8 advances.

9 Today you are going to be hearing about our staff,
10 about some of our activities. We need to hear from you
11 folks, what model have you seen out there that works. What
12 model have you seen that doesn't work that we need to be
13 aware of. Are we asking the right questions about our
14 alternative analysis? On the issue of chemical traits and
15 our lists should our staff be thinking about grouping
16 products? Maybe by media, maybe by products.

17 You know the idea of just, you know, taking a
18 broader approach really needs your collective help. And
19 this is no offense to our staff but we have only developed
20 regulations that have been binary. Developing this
21 alternatives analysis that to me is a gradient of defining
22 what is safer as compared to what's in the product right now
23 requires a truly fundamental different way of asking
24 questions to know if we get there.

25 I also wanted to make a quick little comment.

1 Yes, I am new to this position. But the fact that the
2 Secretary and the Governor decided to pick somebody from
3 within the DTSC family to lead this organization was a sign
4 that we need to keep the momentum going on the good work
5 that has already begun.

6 A lot of you folks I see -- I haven't met most of
7 you, I know most of your names and e-mail addresses. But I
8 know you all have contributed greatly to get us to where we
9 are right now so we can have this momentous event. So I
10 think the people of California are eternally grateful for
11 your energy, for your expertise, for your willing to share
12 this with us. Because our activities would not succeed
13 without you. This fundamental paradigm shift needs to be
14 led by science and not led by politics. So again, this body
15 is very important to this, thank you.

16 With that I'll end. I know we have a number of
17 presentations. I wish I could stay for the duration of the
18 meeting today. I have one emergency to deal with with the
19 Secretary so I am going to be leaving and joining you again
20 tonight and hopefully be able to attend the session tomorrow
21 as well. So for those I have had a chance to meet, hello.
22 For those I haven't, my door is always open. I welcome
23 discussion. Please share your thoughts with us. We won't
24 succeed without all of your help. So again, thank you very
25 much.

1 (Applause.)

2 MS. BARWICK: Does the panel have any questions
3 that you would like to ask Director Movassaghi?

4 MR. MOVASSAGHI: All right, good.

5 MS. BARWICK: Thank you so much.

6 I have been in the department for 24 and a half
7 years and it is a thrill to have been working under former
8 Director Maureen Gorsen's leadership as well as Maziar's
9 because it is a great moment for pollution prevention as
10 well as chemical policy.

11 Okay, so Debbie.

12 PANEL CO-CHAIR RAPHAEL: Jeff.

13 MS. BARWICK: Oh, Jeff, I'm sorry. We would like
14 Dr. Jeff Wong. Where did he go? Jeff is going to do some
15 brief introductions of DTSC staff and the panel and then we
16 will have our exercise.

17 DR. WONG: Thank you, Kathy. So again I would
18 like to welcome you all. We hope that we can make today
19 entertaining. But right now I have to go through this
20 methodical process of introducing all those of you who
21 volunteered to come and help us out. We do appreciate your
22 efforts to come and help California. We know that you have
23 a lot of spare time.

24 So first I'll start with Dr. Ken Geiser.
25 Dr. Geiser is our Co-Chair of the Panel. He serves as a

1 Professor of Work Environment and as the Director of the
2 Lowell Center for Sustainable Production at the University
3 of Massachusetts, Lowell. Welcome.

4 I would like to also add that Dr. Geiser was
5 involved heavily with TURI. He was the director of that
6 program and we are grateful that he has flown all the way
7 from there to here.

8 Debbie Raphael is -- let's see, I'm trying to get
9 this right for the camera. Is this okay? Okay, all right.

10 (Laughter.)

11 DR. WONG: Debbie Raphael is the other Co-Chair
12 for the Panel. She has spent the last 15 years working
13 within local government on the design and implementation
14 around the reduction of hazardous chemicals used in San
15 Francisco's city operations. She has helped us a lot with
16 Green Chemistry and welcome, thank you.

17 Dr. Carroll. William Carroll is also our Co-
18 Chair. He is the Vice President of Occidental Chemical
19 Corporation and he is the Adjunct Industrial Professor of
20 Chemistry at Indiana University. He too helped us with our
21 Science Advisory Panel and we thank him for being here.
22 Thank you, Dr. Carroll.

23 Ann Blake. Dr. Blake is an independent consultant
24 who has worked for 16 years in the area of environmental and
25 public health regulation. She is a former DTSC employee.

1 Welcome, Dr. Blake.

2 Jae Choi is with Avaya. He has more than 40 years
3 of experience in the industry and has been recognized as a
4 green material and chemistry subject matter expert at that
5 company. Dr. Choi is a person after my own desires, notice
6 that he is not wearing a tie. I like that.

7 (Laughter.)

8 DR. WONG: Let's see. Dr. Cords. Dr. Cords is a
9 Vice President of Environment, Food Safety and Public Health
10 at Ecolab and he is not here.

11 George Daston, a Research Fellow overseeing research at
12 Procter & Gamble. He too is not here.

13 Our next is Dr. Tod Delaney. He is President of
14 First Environment and has more than 30 years of industrial
15 experience as a chemical and environmental health engineer.
16 Welcome, Dr. Delaney.

17 Next is Dr. Richard Denison. Dr. Richard Denison
18 has worked with us in our efforts and long worked with the
19 Office of Environmental Health Hazard Assessment in our
20 green chemistry and chemical safety area. He is with, he is
21 a Senior Scientist at the Environmental Defense Fund and has
22 more than 25 years of experience in this area. Thank you,
23 Richard.

24 Our next is Dr. Arthur Fong who is a Senior
25 Toxicologist at IBM and he is a member of the IBM Corporate

1 Environmental Affairs Team. Welcome, Dr. Fong.

2 Lauren Heine. Lauren Heine advises organizations
3 seeking to integrate green chemistry and engineering into
4 product and process design. She is a Principal for the
5 Lauren Heine Group and formerly she was with GreenBlue.
6 Welcome, Dr. Heine.

7 Dale Johnson is an Adjunct Professor of Molecular
8 Toxicology at UC Berkeley and the President and CEO of
9 Emiliem, Incorporated. So again, welcome, Dr. Johnson.

10 Michael Kirschner is the President of Design Chain
11 Associates, has worked in engineering management for
12 electronic companies such as Compaq, Tandem and Intergraph
13 and we welcome you, thank you.

14 Dr. Liroff. Dr. Richard Liroff found and serves
15 as the Executive Director of the Investor Environmental
16 Health Network. Dr. Liroff has published a great number of
17 articles that are of great interest to us. And we have
18 actually had Dr. Liroff come and make presentations in our
19 very early Green Chemistry symposiums back in 2006.
20 Welcome, Dr. Liroff. And also Dr. Liroff does not have a
21 tie. I like that.

22 Dr. Timothy Malloy is a Professor of Law and
23 Faculty Director of the UCLA Law and Environmental Health
24 Sustainable Technology Policy Program. Dr. Malloy, we
25 cannot make an acronym out of that.

1 Dr. Malloy has been, he is also the Co-Director of
2 the School of Law's Frank G. Wells Environmental Law Clinic
3 and a member of the UC Center for Environmental Implications
4 of Nanotechnology. Welcome, Dr. Malloy.

5 Scott Matthews is the Research Director for the
6 Green Design Institute and Associate Professor in Civil
7 Engineering at Carnegie Mellon, is not here today.

8 Okay, now I switch. Do we have the right camera?
9 Okay.

10 Roger McFadden is the Chief Scientist for Staples
11 CE and has worked as a formulating and consulting chemist
12 and product design engineer for several manufacturing
13 companies. Welcome.

14 Dr. Moran. Kelly has been involved with our
15 department. She has helped us with our Pollution Prevention
16 Program. She is currently the President of TDC
17 Environmental, which is an environmental consulting firm
18 specializing in water quality and pollution prevention. She
19 also co-founded the Brake Pad Partnership and the Urban
20 Pesticides Pollution Prevention Project and she sits on the
21 California Source Reduction Advisory Committee. Welcome,
22 Dr. Moran.

23 Dele Ogunseitan is a Professor and Chair of the
24 Program in Public Health at UC Irvine. He is also a
25 Professor of Social Ecology. He directs research in green

1 material components in the UC system and he too has worked
2 with our department in the area of green chemistry. Welcome
3 Dr. Ogunseitan.

4 Dr. Peoples. Dr. Robert Peoples is the Director
5 of the American Chemical Society's Green Chemistry Institute
6 and has been a member of the ACS for 35 years. I too want
7 to point out that Dr. Peoples does not have a tie on.
8 Great, great trend, I am glad. Welcome.

9 PANEL MEMBER PEOPLES: Thank you.

10 Dr. Quint. Julia Quint is a public health
11 scientist. She is the retired Chief of the Hazard
12 Evaluation System and Information Service, which is an
13 occupational health program within the California Department
14 of Public Health. She too has worked with us on green
15 chemistry and we welcome you, Dr. Quint. Dr. Quint is not
16 wearing a tie either.

17 (Laughter.)

18 DR. WONG: I have to back up. The camera guy says
19 I have to back up.

20 Julie Schoenung is a Professor in the Department
21 of Chemical Engineering and Materials Science at UC Davis
22 and is the Co-Director of the University of California's
23 Toxic Substance Research and Teaching Program in Green
24 Materials. Welcome, Dr. Schoenung.

25 Dr. Megan Schwarzman is a research scientist with

1 the Program in Green Chemistry and Chemicals Policy at UC
2 Berkeley Center for Occupational and Environmental Health at
3 the School of Public Health at UC Berkeley.

4 I want to point out that while many of us have
5 PhDs, Dr. Schwarzman is a real doctor, she has an MD.

6 Next is Anne Wallin. Dr. Wallin is the Director
7 of Sustainable Chemistry for Dow Chemical and leads the
8 company's Life Cycle Assessment Expert Group. Welcome.

9 John Warner, who is the President and CTO of
10 Warner Babcock, and as you all know, very famous.
11 Dr. Warner is not here today. We have his book along with
12 his co-author, Paul Anastas, over many of our slides. We
13 have it like a little bible in all of our offices.

14 Our last person on the edge there who is trapped
15 between all these people and that camera is Mike Wilson.
16 Dr. Wilson is a research scientist at the Center for
17 Occupational and Environmental Health, also in the School of
18 Public Health at UC Berkeley. He is the chief author of the
19 2006 UC report commissioned by the Legislature, Green
20 Chemistry in California: A Framework for Leadership in
21 Chemicals Policy and Innovation. And also he is the author
22 of a report, the Cornerstone report which also laid out
23 further policy development in this area. So welcome,
24 Dr. Wilson. Dr. Wilson has been very intimately related to
25 all of our efforts within the agency.

1 Julie Zimmerman, who is an Assistant Professor
2 with the School of Engineering and Applied Science and the
3 School of Forestry and Environment at Yale. She too is on
4 the Committee and she is not here.

5 So again, I would like to thank once again all of
6 you for your willingness to serve. This will involve a lot
7 of hard work and a lot of listening and we hope that we get
8 a lot of good feedback from you, it will help California.
9 Thank you very much.

10 Okay, that's why we have Kathy here, because I
11 failed in one. The DTSC team I need to introduce. We have
12 Dr. Robert Brushia. He has been involved in the chemical of
13 concern area.

14 We have Peggy Harris. She has been the overall
15 team lead in the regulation development to implement AB
16 1879.

17 We have Nancy Ostrom. She has been key in the
18 working of the alternatives analysis.

19 We have Don Owen. Don Owen has been our overall
20 policy guru on the entire regulatory process.

21 Xioaying Zhou, she has been working with Bob
22 Boughton on basically the life cycle component of this.

23 And we have Sara Hoover who has been working with
24 us. She is with the Office of Environmental Health Hazard
25 Assessment. And she has been working on the integration and

1 the implementation of the 509 or the online toxics
2 clearinghouse part. So I hope I've got it all right.

3 And back there hiding in the corner we have
4 Yolanda Garza. She is like the master sergeant of the
5 entire effort and she keeps us on track.

6 Of course we have Hortensia back here. She too
7 has been involved heavily in the organization and making
8 this program move forward. So once again if I have missed
9 anybody I apologize. And again, welcome and thank you.

10 Oh sorry, the lawyer raised his hand. Joe Smith
11 in the back, our attorney. He is the one that keeps us on
12 the straight and narrow and will tell you if you violate
13 Bagley-Keene. So again thank you, thank you all for coming.

14 MS. BARWICK: Thanks, Jeff. Maya told me that I
15 didn't make the public comment stuff entirely clear so I
16 wanted to go over that once again.

17 There are four major agenda items on today's
18 agenda, the meeting today and tomorrow, and there will be a
19 public comment period at the end of every agenda item.

20 Some of those we have allocated a very short time
21 for because we didn't expect, we need to have the public
22 comment period but there are some that are shorter than
23 others. But the ones that immediately follow like a
24 presentation what we are asking is that the public comment
25 be related to the topic at hand.

1 There is a couple of extra public comment periods.
2 There will be one slightly longer one at the end of today
3 and then there will be a 45 minute public comment period
4 tomorrow later in the morning. And that is designed to
5 receive comments to the panel that aren't specifically
6 related to the technical material that we are presenting.

7 Is that, is that better? And we'll be announcing
8 that. As we move through the day we'll be -- Maya is
9 collecting the public comment cards. So please just let us
10 know which agenda item that you are wanting to comment on.

11 I wanted to say one more thing. As you all know
12 we are webcasting this meeting today. I would like to
13 introduce John, he is our court reporter. This meeting will
14 be transcribed and we should have the entire transcription
15 posted within a couple of weeks. So I wanted to let you
16 know that was going on.

17 Any other housekeeping things I've missed? I
18 don't think so. The other thing is, panel members, please
19 speak into a microphone. And if there's not enough to share
20 we can bring this one around as well. Okay.

21 PANEL CO-CHAIR RAPHAEL: Okay, this is on, all
22 right, wonderful. My name is Debbie Raphael, as you have
23 heard, and I am shepherding us through the next 45 minutes.

24 And I would like to acknowledge the fact that this
25 is a business meeting. This is a meeting where we have

1 traveled far to come to Sacramento to share technical
2 expertise and that this is the beginning of a process for
3 the panel. The panel, we will be working together over the
4 years, potentially, to advise DTSC staff on how to move
5 forward on this issue.

6 To get us started on the right foot and to give us
7 an opportunity to get to know each other just a little bit
8 better than our name and affiliation I have been working
9 with some colleagues of mine who I have worked with on a
10 number of occasions, Kenoli Oleari and Marc Tognotti who are
11 standing there. They are experts in public facilitation and
12 they are going to be leading us through this exercise.

13 What I would like everyone to do is just take
14 whatever they are holding in their hands and put it down
15 because you are actually going to move. And we are going to
16 do this in a little bit of what I would call a three ring
17 circus. So the fourth ring is people on the webcast. So
18 anyone who is listening in on the webcast, I would suggest
19 you go get a cup of coffee, read a book, whatever it is you
20 want to do, because you are not going to be able to hear a
21 lot for about another 40 minutes because we are going to be
22 working here internally.

23 So the groups are going to be the panel members.
24 That's one ring of this three ring circus. The other ring
25 is DTSC and Sara, who you are the honorary -- every time we

1 say DTSC, Sara, you just have to think DTSC today. And then
2 the public members. You will be involved as well so you are
3 your own ring in this circus.

4 And with that, while I call it a circus, as
5 facetious, I hope by the end of this exercise we will not
6 only know a little bit more about each other but we will
7 also share a common vision or understand what the vision is
8 for today and tomorrow and how we are moving forward. So we
9 are going to accomplish all of that in a brief 45 minutes.
10 And I guarantee you it will go very quickly.

11 So with that I am going to turn it over to my
12 esteemed colleagues Marc and Kenoli, thank you.

13 MR. OLEARI: Well it's exciting to be here. As
14 Jeff Wong said earlier, We are the guys that are going to
15 get people talking about stuff that is scary to talk about.
16 And he is going to be back behind that piece of cardboard up
17 in the front of the room.

18 So my name is Kenoli Oleari. Marc and I work with
19 groups like this. We have worked with a bunch of state
20 agencies and local agencies and federal agencies to help
21 bring all the voices together into the room so people can
22 have the kind of conversations they need to have. And we
23 are just going to lead you through one little piece this
24 morning and I'll let Marc say hi to you also.

25 MR. TOGNOTTI: Hi. I just noticed on the panel

1 people I have met in other workshops and conferences and
2 such that Kenoli and I have designed. And it is a real
3 pleasure to see you here and I am really proud to be here on
4 such a momentous day. All right. And we are from the
5 Institute of the Commons, which is actually a nonprofit. We
6 do consulting work but we do consulting work in the public
7 interest so we are glad to help support this.

8 So everybody walks into a room like this. Often
9 your reputation precedes you. And we all come in with
10 different tasks and goals and jobs that we have accepted.
11 And we also come in as individuals, as people, bringing
12 everything that we bring into the room as the people that we
13 are. So we are just going to take a little moment to give
14 people a chance to crack into that human piece with each
15 other. To share some of that with each other and to share
16 some of what we have learned with that from the whole group.

17 And the way we are going to do this. One of our
18 mentors who has done this for many years said that his
19 daughter described his job as moving furniture around the
20 room. So we are going to have to do a little bit of that
21 today. The first thing we are going to want you to do, and
22 don't do it yet, I am just going to tell you about it, is to
23 find a partner. Find one other person. And we are going to
24 have the panel find a partner amongst the panelists.

25 And I think actually we will have -- I think it

1 would work out okay to have the DTSC staff and the public
2 kind of intermingle with each other also to find a partner.
3 And we would like you to find somebody that, you know, isn't
4 your best friend. Somebody that you might not just decide
5 to choose immediately. Maybe a new person, you know.
6 Somebody whose phone number you would like to have perhaps.

7 (Laughter.)

8 MR. TOGNOTTI: Okay. So anyway, we are going to
9 have you find a partner and we are going to give you
10 something to talk about with each other. One person is
11 going to talk and the other person is going to listen. It
12 will just be a two minute exercise with each of you speaking
13 for two minutes, all together about five minutes. Then we
14 will give you an instruction after that.

15 So right now the way we are going to -- the
16 logistics here are difficult but what we would like to
17 propose to the panel is that you get up and just mingle.
18 Walk around, find a partner and then just grab whatever
19 chairs are close to you. It's okay to use somebody else's
20 chair, okay. And you can start doing that. And this group,
21 do the same thing. Stand up and mingle and find a partner.

22 (Off the record for getting acquainted
23 exercise.)

24 MR. TOGNOTTI: I'd like to start taking a couple
25 of comments from the panel and then we'll take a couple of

1 comments from everybody else. Would somebody like to share
2 something?

3 SPEAKER FROM THE AUDIENCE: Are we sharing what we
4 heard in our groups?

5 MR. TOGNOTTI: You can share something you heard
6 in your groups, you can share whatever it is that you would
7 like to just, you know, that moves you, that you would just
8 like to share with the larger group at this moment.

9 PANEL CO-CHAIR RAPHAEL: We had an aha moment.

10 THE REPORTER: Please identify yourself for the
11 record.

12 PANEL CO-CHAIR RAPHAEL: Sorry. Debbie Raphael.
13 We had a little aha moment, something, an indication about
14 DTSC I think. But that we are a group of oddballs is sort
15 of what we thought of ourselves. Because we, you know, we
16 have in our little group really a combination of government,
17 industry, scientists. You know, like probably all the
18 groups. And we all felt that we had a personal stake in
19 this process that maybe our larger entity, whether it's
20 government or industry, might not be known for in the world
21 but we as individuals felt really strongly. And the
22 personal stories just show that over and over again.

23 PANEL MEMBER DENISON: I was struck in our group
24 by --

25 THE REPORTER: Identify yourself, please.

1 PANEL MEMBER DENISON: I'm sorry, thank you.

2 MR. OLEARI: Oh yes, I was supposed to say this.
3 Being a public meeting it's important when you speak to say
4 your name. They'd like you to do that now.

5 PANEL MEMBER DENISON: Richard Denison. I was
6 struck in our group by not just that we have got a group of
7 folks here that are out of the box thinkers but that almost
8 all of us have made some fairly radical shift in our career
9 paths along the way to get us to where we are today. Doing
10 one thing, not liking it. Or as Michael said, he was a
11 lousy employee. He didn't like his boss. Something that
12 broke us out of the mold and sort of made us start thinking
13 differently about what we had been doing.

14 MR. OLEARI: Would any other panelists like to
15 share something?

16 PANEL MEMBER JOHNSON: Dale Johnson. Well I was
17 struck with the level of passion and commitment people have
18 made. And it's really, I mean it's career commitment,
19 lifelong commitment and so forth, to actually solving some
20 of the, some of the problems that we face. And it's really,
21 you know, just sitting with these three gentlemen it's
22 really inspiring.

23 MR. OLEARI: And if there's any comments from
24 anybody else, the rest of the public, we are all the public.
25 Or staff. Would you like to share something with everybody?

1 MR. BALTZ: David Baltz with Commonweal and the
2 CHANGE Coalition. Well in our group I think that there was
3 a tremendous amount of enthusiasm and excitement about this
4 initiative. And also a realization that it is really going
5 to take some thinking about a new paradigm to make it
6 successful. And that all of us will need to work together
7 to usher in this new thinking.

8 DR. MARTY: Melanie Marty from Cal-EPA's OEHHA. I
9 was just struck by this younger person behind me, what he's
10 doing, in terms of social media and networking through the
11 things that I don't know anything about except my kids do,
12 Twitter and so forth. And the power of that.

13 So rather than just having top-down, bottom-up
14 through social networking will make a gigantic difference in
15 how far this can all go.

16 MR. OLEARI: Okay. So we are going to do another
17 exercise that Marc is going to take you through and we'll
18 have a chance to do some more sharing after that.

19 MR. TOGNOTTI: Congratulations, you have just
20 completed round one. Now round two. You are familiar with
21 the exercise. I would like everyone in each group, look
22 around the room and choose, as you did the first time,
23 another person to pair up with.

24 And I'll go ahead and I'll give you the
25 instruction now. The listener's instruction is to listen,

1 listen intently with appreciation and support. Don't ask
2 questions. And the speaker will address these questions:

3 Why did you, and depending on whether you are on
4 the science panel, in the public audience or on the DTSC
5 staff you will choose to respond to a different question.
6 Why did you choose to serve on this panel? Why did you
7 choose to work on this project, the project that might have
8 brought you here today? Why did you choose to participate
9 in this process? And the other question: What are your
10 highest hopes for what this panel might achieve?

11 Please in a moment find your partner. You will
12 each have three minutes to answer the questions. I will
13 give you all a 30 second warning so you can prepare to
14 switch roles. Do that now. Everyone find a partner.

15 (Off the record for second exercise.)

16 MR. TOGNOTTI: Time is up. May I have your
17 attention. Wrap up your conversations. Okay, let's take a
18 few moments now. Our break is scheduled to start in about
19 15 minutes. May I have your attention. May I have your
20 attention please, thank you. Groups, please.

21 We can take another opportunity now. I want to
22 invite anyone who would like to share something they heard
23 in their groups, again, that was surprising or moving or
24 inspiring to you. Or just share anything you would like to
25 at this time after this experience you have had this

1 morning. Anyone?

2 PANEL MEMBER OGUNSEITAN: I am Dele Ogunseitan. I
3 was very surprised to learn about the process of group
4 dynamics in terms of what our highest hopes are for the
5 panel. And I think I would actually let Robert explain that
6 but he talked about four stages. We all have very high
7 hopes but we have to recognize there are certain milestones
8 that we have to cross to get to those things. But he has
9 the perfect four words to describe this.

10 PANEL MEMBER PEOPLES: Okay. Since we've got the
11 facilitators here they will probably smile because I'm
12 probably --

13 THE REPORTER: Please identify yourself, please.

14 PANEL MEMBER PEOPLES: Bob Peoples. Thank you.
15 I'm stealing a little of their thunder.

16 But group dynamics, there's four stages you always
17 have to go through. Forming, storming, norming and
18 performing. And I think the important thing to do is trust
19 the process but also recognize that once you get to the
20 performing stage, everybody feels good about it, something
21 will come up and it will create a little controversy and
22 there's a little bit of backsliding to the storming stage
23 where somebody wants to reestablish their position or
24 credibility. That's okay, it's normal, and if you trust
25 that we'll get right back to performing.

1 PANEL CO-CHAIR CARROLL: Bill Carroll. One of the
2 observations from the small group we had. You notice there
3 were four of us instead of six. And we did that on purpose
4 so that each of us could have a little more air time.
5 Because I found that even that, you know, there really
6 wasn't enough time for us all to tell our story.

7 But part of, part of that story and something that
8 I took away from this is that, is that each of us may have a
9 different responsibility in terms of what we do. But also
10 each of us has a passion for chemistry and a desire to see
11 chemistry done well, implemented and used for the public,
12 for the public benefit. I'm not sure that that should have
13 been a surprise to me, and maybe it isn't, but it was
14 certainly that we each took the time to express in this
15 group.

16 PANEL MEMBER HEINE: My name is Lauren Heine, I'm
17 with Clean Production Action. Our group, I was really
18 struck with how we all recognize that each of us has
19 expertise within silos but we all recognize the need to
20 interact and communicate across different stakeholder
21 groups. And the need for tools, the need for metrics, but
22 the need not to be prescriptive in any way that squelches
23 industry. That this needs to be a way to promote innovation
24 and positive change. So we recognize the complexity of what
25 we are trying to do and recognize the diversity of this

1 group and the importance of us talking to each other. So
2 thanks for this exercise too.

3 PANEL MEMBER WILSON: Mike Wilson at UC Berkeley.
4 Our group, one of the things I was struck with was the sense
5 that we have this potential for transformation here and that
6 that's what drew people to this process. Not to be nibbling
7 around the edges of problems that we have been, you know,
8 sort of facing for the last 30 or 40 years but to
9 fundamentally break the ice and really recreate and revision
10 what it is that we are doing in this arena.

11 And the potential for that to have a large
12 influence, given the size of the state, and also the
13 opportunity for this diverse group of people with this rich
14 experience to come together and apply that experience across
15 all these different disciplines as an opportunity for
16 learning and new experience.

17 MS. VENTURA: My name is Andria Ventura, I'm with
18 Cleanwater Action and also with the CHANGE Coalition.

19 And something that struck me in both the groups
20 that I met with is also an obvious but it is good to
21 remember this. This is not a bunch of really intelligent
22 people in a room in Sacramento having a really interesting
23 conversation. This is real world, blood and guts kind of
24 stuff.

25 You know, those of us that work as advocates, you

1 know, our concern, we see the environmental problems or the
2 health problems. You know, we have people here from
3 industries that are thinking, how do we actually make this
4 work in our businesses and how do we make those products,
5 you know. This is real chemistry, this is real. It is
6 going to affect everybody.

7 We have got people in the room that are advising
8 companies and providing tools so they can make decisions.
9 So this is a really physical thing at the end of the day.
10 And I hope we remember this. I hope that -- you know, this
11 is not science for the lab. This is going to be science to
12 really make things better in the state.

13 It just hit me that while we all kind of know
14 that, to have it come back and just hit me in the face that
15 everybody that I spoke with this morning was looking at this
16 from a very practical point of view. It's really important
17 to remember.

18 MR. BUCK: I'm Topher Buck from GreenBlue. I was
19 just going to say that I think it echoes some of what has
20 already been said. Certainly for me coming at this as a
21 chemist, you know, that focus on chemistry and the love of
22 chemistry and seeing it applied well is clearly important.

23 But the group I was in, we've got an incredible
24 diversity of people. I mean, some from labor law. I think
25 that idea that everybody here is coming to it -- as Lauren

1 said, you know, we all have our expertise, we all have our
2 passions. But the importance of bringing people together,
3 people from industry that really do want to figure out how
4 to do what we are doing better and protect public health.
5 The range of perspectives and backgrounds is really
6 impressive and I think there's -- I think as Mike said too,
7 the potential here is really exciting.

8 PANEL MEMBER SCHWARZMAN: Schwarzman, Meg
9 Schwarzman. This is very brief. I just wanted to say that
10 I was struck within my group but also in all the other
11 things that I have heard that every single person in this
12 room is here because they want things to be better. And
13 that's just a great place to start from.

14 PANEL CO-CHAIR RAPHAEL: Okay, so thank you.

15 THE REPORTER: Please identify yourself.

16 PANEL CO-CHAIR RAPHAEL: I'm sorry. Probably by
17 tomorrow I'll remember.

18 THE REPORTER: That's all right. You probably
19 won't like me by the end of the day.

20 (Laughter.)

21 PANEL CO-CHAIR RAPHAEL: So sorry. Debbie
22 Raphael. Okay, let me just do a time check. Okay, so we
23 are going to do -- All right, we are going to do one quick
24 thing to close this and then I am going to come back, wrap
25 it up and give it to Kathy and we are going to do that in

1 under five minutes.

2 MR. TOGNOTTI: Okay. To close I invite every
3 single person in the room to take the microphone and say
4 just two words. Two words that represent how you are
5 feeling right now. Let's go around the whole room.

6 PANEL CO-CHAIR RAPHAEL: We are just going to move
7 the microphone so you guys have a lot of time to think about
8 it.

9 MR. TOGNOTTI: Two words. Really two words. Oh,
10 you have to state your name quickly, then the two words.

11 PANEL MEMBER McFADDEN: Roger McFadden. Passion
12 and compassion.

13 PANEL CO-CHAIR CARROLL: Bill Carroll. Challenged
14 and encouraged.

15 PANEL MEMBER MORAN: Kelly Moran, better products.

16 PANEL MEMBER DENISON: Richard Denison, good
17 chemistry.

18 PANEL MEMBER QUINT: Julia Quint. I'm hopeful.

19 PANEL MEMBER KIRSCHNER: Mike Kirschner, challenge
20 opportunity.

21 PANEL MEMBER DELANEY: Tod Delaney, life cycle.

22 PANEL MEMBER HEINE: Lauren Heine, clarity,
23 direction.

24 PANEL MEMBER SCHOENUNG: Julie Schoenung, better
25 design.

1 PANEL MEMBER BLAKE: Ann Blake, optimistic -- it's
2 too many words but ready to work.

3 PANEL MEMBER WALLIN: Anne Wallin, hopeful and
4 eager.

5 PANEL MEMBER WILSON: Mike Wilson, real
6 opportunity.

7 PANEL MEMBER CHOI: Jae Choi, safety and
8 reliability.

9 PANEL MEMBER JOHNSON: Dale Johnson, my children.

10 PANEL CO-CHAIR RAPHAEL: Debbie Raphael, excited,
11 motivated.

12 PANEL CO-CHAIR GEISER: Ken Geiser, this worked.

13 PANEL MEMBER LIROFF: Richard Liroff, challenged,
14 inspired.

15 PANEL MEMBER OGUNSEITAN: Dele Ogunseitan, science
16 policy.

17 PANEL MEMBER SCHWARZMAN: Meg Schwarzman, I'm
18 inspired.

19 PANEL MEMBER MALLOY: Tim Malloy, cautious
20 optimism.

21 PANEL MEMBER PEOPLES: Bob Peoples, global
22 leadership.

23 PANEL MEMBER FONG: I'm Art Fong, allergies suck.
24 No, erase that.

25 (Laughter.)

1 PANEL MEMBER FONG: Excited and hopeful.

2 MS. BARWICK: Kathy Barwick, thank you.

3 MS. HARRIS: Peggy Harris, actionable direction.

4 MS. AKULA: Maya Akula, healthy California.

5 DR. MARTY: Melanie Marty, actionable advice.

6 MS. MAJHAIL: Radhika Majhail, life and hope.

7 MS. MEDINA: Christina Medina, Amtrak fatigue.

8 MS. KAMMERER: Fran Kammerer, better planet.

9 MR. SMITH: Joe Smith, safer grandkids.

10 MS. CHAIN-BRITTON: Cindy Chain-Britton, proud of

11 my job.

12 MR. JALADI: Plasad Jaladi, security and focus.

13 UNIDENTIFIED SPEAKER: Green jobs, healthy

14 families.

15 THE REPORTER: Your name?

16 UNIDENTIFIED SPEAKER: I didn't want to be accused

17 of -- I'm (inaudible - said away from the microphone).

18 MS. MURPHY: Suzanne Murphy from Worksafe.

19 Democratization of chemistry.

20 MR. BUCK: Topher Buck from GreenBlue. Humbled

21 and excited.

22 MR. BALTZ: Davis Baltz, Commonweal. Remember

23 workers.

24 MS. MUNIZ: Hortensia Muniz, bravo.

25 MS. ORNELAS: Lauren Ornelas, think harder.

1 MR. FERHUT: Fareed Ferhut, excited and hopeful.

2 MR. OWEN: Donald Owen, challenged, listening.

3 MR. TACORDA: Ryan Tacorda, open process.

4 MS. ZHOU: Xioaying Zhou, good tours.

5 MR. DOTY: Robert Doty, environmental lawyer,

6 hated chemistry.

7 (Laughter.)

8 MS. VENTURA: Andria Ventura, not toxic.

9 MR. WAGGONER: Kim Waggoner, future preparation.

10 MS. MILLER: Ansje Miller, ready, go.

11 MS. GARZA: Yolanda Garza, anticipating teamwork.

12 MR. NESTLE: Ryan Nestle, cleaner living.

13 DR. WONG: Jeff Wong, life is unrepeatabe.

14 MS. HECK: Colleen Heck, practical hope.

15 MR. GIRARD: Michael Girard, compromise, progress.

16 MS. YELLAND: Elizabeth Yelland, cradle-to-cradle

17 sustainability.

18 MS. PERCYNYSKI: Beth Percynski, fruitful

19 discussions.

20 MS. NOGGLE: Jessica Noggle, Georgia-Pacific,

21 balanced, effective.

22 TOM JACOB: Tom Jacob, DuPont, evolutionary

23 change.

24 MR. MOVLAY: Patrick Movlay, clean air California.

25 MS. VERDE-CARLOS: Marylou Verde-Carlos, practical

1 perspective.

2 MS. YEE: Judy Yee, common sense.

3 MS. OSTROM: Nancy Ostrom, let's get to it.

4 MR. OLEARI: Appreciative and hopeful.

5 THE REPORTER: Your name?

6 MR. OLEARI: Kenoli Oleari.

7 MR. TOGNOTTI: Marc Tognotti, I feel the
8 chemistry.

9 (Applause.)

10 PANEL CO-CHAIR RAPHAEL: So thank you all for your
11 participation in that. The rest of the day will not be like
12 this unfortunately. But with that I am going to give it to
13 our fearless leader and boss, Kathy.

14 MS. BARWICK: I just got promoted, thank you,
15 Debbie.

16 We are going to take a ten minute break. So we
17 will start up at about 10:52 or 3, something like that.

18 This morning I am going to go over the Terms of
19 Reference for the panel and we will have a public comment
20 opportunity and then we'll have lunch and this afternoon we
21 will get to the technical presentations.

22 Thank you so much. And Debbie Raphael, thank you
23 so much for bringing this exercise, it's wonderful.

24 (Whereupon, a recess was taken.)

25 MS. BARWICK: I would like to remind members of

1 the public, if you haven't signed in we would really
2 appreciate it if you would do that. For one thing John our
3 court reporter will need your names so he can include those
4 in the transcript of the meeting. Your two words will be
5 immortalized. I'm glad mine were thank you.

6 Also we have now procured some name tags for
7 members of the public and Yolanda is passing some of those
8 around. Our apologies for not having those for you this
9 morning. But that way we can address you by name instead
10 of, excuse me.

11 One more reminder for members of the public. We
12 have a short comment period after the next agenda item. If
13 you would like to make any comments please provide the card
14 to Maya and she will let us know. Remember that there will
15 be other public comment opportunities later so this isn't
16 your only chance.

17 So right now we would like our Co-Chairs to say a
18 few words to us and they can decide who goes first.

19 PANEL CO-CHAIR CARROLL: I think we decided that I
20 would go first. My name is Bill Carroll, I work for
21 Occidental Chemical Corporation in Dallas, Texas. And I
22 wanted to first of all thank Kathy who has done all the work
23 to get us organized and here and helped prepare the agenda
24 and so on. She has done a marvelous job.

25 (Applause.)

1 PANEL CO-CHAIR CARROLL: Yes. And welcome to you
2 all and thank you for donating your time to this panel.

3 I had a couple of thoughts that I wanted to
4 express. This is, of course, the Green Ribbon Science
5 Panel. And maybe I'm saying this out loud to all of you to
6 remind myself and I will try to take my own advice. Some of
7 us have two hats, we have a science hat and we have an
8 advocacy or a policy hat.

9 And having seen the straw document that came out
10 there is probably a natural tendency for those of us who
11 wear those two hats to do something like turn to page eight,
12 point to it and say, how is this going to work. At this
13 point in the process we are trying to step back from that
14 and offer advice mainly on science and technical topics to
15 the Department to help them shape regulation. We are very
16 early in the process of regulation and there will be plenty
17 of opportunity to comment on how this is going to work. But
18 at this point the goal is to give the best advice that we
19 can based on our experience and background on the science of
20 what's, of what's going into this.

21 The second thing is we have roughly an hour plus
22 or minus for each topic. And we have done pretty well
23 staying on time so far and we are going to have to adhere to
24 that pretty well. But if you just do the math it means that
25 there really is limited air time for any of us as

1 individuals to comment and for the Department to answer
2 questions and to take it in.

3 So try to be economical about the comments that
4 you make. If we wind up being so economical that there is
5 time left at the end during the part that I am chairing I
6 will go around and make sure that there are no unaired
7 topics. And each of us as a Chair will just do the best we
8 can in getting us moving forward. The way this will work,
9 we will switch in various sections as to who is responsible,
10 who is responsible for chairing each of these individual
11 sections.

12 One other thing to the panel. These mics are on
13 all the time. I know there are times where you want or need
14 to have a sidebar conversation. But just in your mind think
15 back to some time when you can think of someone who didn't
16 know that the mic was on and remember how that looked on the
17 front page of the New York Times. Thank you all.

18 PANEL CO-CHAIR GEISER: That was the Governor of
19 California actually at one point.

20 My name is Ken Geiser and I also have the honor of
21 welcoming you and telling you what a pleasure it is to be
22 able to serve as one of the three Co-Chairs for the Green
23 Ribbon Science Panel. It does seem odd that there's three
24 of us up here. But I think that you will find that it is
25 very good that you have three different folks because we

1 have different perspectives on things and a kind of a deep
2 commitment to make this panel really work.

3 Tim said earlier maybe it just creates a nice
4 ratio between us and the number of panelists. There's 27 on
5 the panel so there's nine of you for each of us.

6 But I would just like to say a couple of words
7 too. Already I think this exercise has kicked us off in the
8 right mode. And that is that what we are gathered here
9 today to do and what is happening in California at this
10 point is critical in terms of the larger history of the work
11 that many of us have been dedicating our lives to, either in
12 the public health movement or in the environmental movement
13 or in the business movements.

14 And that is to really try to find ways to change
15 some of the paradigm, the word has already come up, and find
16 a new way to think about creating a healthier and safer
17 economy that really respects the need for innovation and
18 economic viability. But also is really moving forward with
19 new chemicals and new chemical processes that are really
20 going to be the kind of workhorse basis for the economy of
21 our children.

22 And I think -- I don't want to overplay our role
23 here but if we look at what is happened in Europe, we look
24 at what is happening internationally, we look at what is
25 happening in other states that have been moving forward in

1 this area, and we look to what we hope may happen at the
2 federal level, California plays a very, very important role
3 here. And so I think that we are here, I think many of us
4 came here because we really believe in what this new
5 legislation and this new mission is about. And I really ask
6 the panel members to work really hard.

7 Our dynamic, the dynamic that we are here for.
8 Bill has already said something about it. Is a conversation
9 with the people largely at that table. And what we are here
10 to do is to try to help them to build the best program they
11 can. They will be presenting to us over the next day and a
12 little more questions they have about the actual technical
13 and scientific and other aspects of the kind of work that
14 they are trying to put forward.

15 Our job is really to try to help them as best we
16 can. Now we all come from different perspectives, we all
17 have different hats on, different ideas. I would ask that
18 we try as much as we can to understand our role is, as a
19 science panel, to really work hard and work together to help
20 them do the best job they can.

21 I know it's easy to fall back in, well I've got
22 something really important to say or it's really different
23 from somebody else's. It's fine that we have differences
24 but let's do that in a way that doesn't create conflicts
25 that can't be resolved with something higher, something

1 better, something that is getting us to another level. When
2 these kind of processes really work I think we find
3 ourselves all in a kind of creative moment in which we
4 really are bringing our best work together to really build
5 something bigger and better in the long run.

6 So I would just sort of say, I look forward to
7 some hard work ahead. I am really appreciative of the
8 number of people who have been able to get here today and we
9 look forward to further meetings of this panel. We are, the
10 Co-Chairs, going to be continuously working to try to plan
11 things that will make sense to us and don't use more of your
12 time than absolutely necessary but get us to really do the
13 work that this law requires. So thank you, thank you very
14 much from my point of view.

15 PANEL CO-CHAIR RAPHAEL: Debbie Raphael. My two
16 Co-Chairs have said most of everything I would like to say.
17 One of the things I want to pick up on, Kathy's two words
18 that she chose to say, and that is, thank you. I am, as a
19 Californian here, very, very grateful to the people who are
20 not Californians. Maybe you are at heart and that's why you
21 are here. But those of you who have traveled far to help
22 our state do this. I mean, my Co-Chairs as well. I am
23 deeply grateful.

24 This is something that is very important to us in
25 this state. We understand that it may have implications

1 beyond our boundaries. But as state agency members, as a
2 local government person, this commitment to civil service
3 and making sound policy is a deeply personal one and I am
4 incredibly grateful for the help of all of you in this room
5 towards that end.

6 As the co-chairs we are very committed to not
7 wasting your time and we have worked very hard with DTSC
8 staff before this meeting to try and craft questions that
9 will draw upon the expertise of the people in this room.
10 The intent of those questions is not consensus. We are not
11 expecting that we will be singing in a choir here. Our
12 purpose is a conversation. Really when this meeting is
13 working well is when there's dialogue in this direction.
14 When we have got an amazing dialogue that the people on that
15 table are listening to and weighing and considering.

16 So we are successful not when we reach a vote. We
17 will never vote. We are successful when we have raised
18 issues and allowed the DTSC staff who have to write
19 regulation to understand in an in-depth way what the
20 implications of their regulations are going to be. And at
21 the end of the day, as actually many members of the public
22 said, they are worried about it being practical,
23 implementable. And I think everyone around this table has
24 that same goal. So with that I again thank you and look
25 forward to the next three years, or how ever long our terms

1 are.

2 MS. BARWICK: Your terms are all three years, at
3 least for the moment, for the first three years.

4 Thank you very much. Maya, did we have any people
5 wanting to make comment at this point?

6 MS. AKULA: Kathy, no.

7 MS. BARWICK: No, okay.

8 I do want to express my gratitude for the thanks
9 that I have gotten but I wanted to mention that we have a
10 very large team of people here putting on this meeting. In
11 particular Michael O'Docharty. I don't know. He's right
12 back there. He is the logistics guy and he has really
13 pulled an amazing amount of work. I am deeply grateful to
14 have him working with me.

15 (Applause.)

16 MS. BARWICK: I just didn't want to take all the
17 credit for that. And of course there is more to go around.

18 So what I am going to do right now is briefly
19 review the Terms of Reference that we have prepared with the
20 assistance of the Co-Chairs. And these are the Terms of
21 Reference that will guide the activities of the Panel.

22 You should have a copy of 14 slides in your
23 packet. In the interest of providing as much time as
24 possible for questions, for the questions that I am sure you
25 are going to have about certain portions of the terms of

1 reference, I have actually cut my presentation down to what
2 I think are the most important things for you panel members
3 to understand in terms of how we operate. But when we have
4 a discussion after my short presentation please feel free to
5 bring up any additional issues that you see in the Terms of
6 Reference that you would like to discuss or have questions
7 about.

8 So I am going to go straight to my third slide,
9 which talks about the purpose of the Panel. And as you see
10 there are five sections. I took this directly from the
11 regulation, from the statute, AB 1879, as to what this panel
12 is to do.

13 And when you read all five of those sections you
14 will see that it is a very broad assignment. That there are
15 some very specific things we are going to ask you about in
16 particular today with respect to writing the regulations.
17 But it is very broad on a policy and a scientific level. We
18 are going to be doing things during this meeting that may be
19 different on down the road.

20 So I bolded a couple of things here. In the first
21 bullet you are advising us on scientific and technical
22 matters. But I bolded, at the bottom it says, "encouraging
23 the redesign of consumer product, manufacturing processes,
24 and approaches." Which is very important to remember. We
25 are not just here to do one thing, to ban a chemical that

1 everybody thinks is bad or whatever. We are actually here
2 to try to figure out how we can craft our regulations and
3 our program in such a way that it encourages the redesign of
4 those consumer products, manufacturing processes and
5 approaches. So I wanted to highlight that.

6 In the second bullet, you will be assisting in
7 developing green chemistry and chemicals policy
8 recommendations and implementation strategies. But the part
9 I bolded was the "strong scientific foundation."

10 Now not all of you on the panel are scientists.
11 We have lawyers and we have other policy experts. We are
12 going to have, we are going to need all of that advice as we
13 move forward with this program.

14 And then -- you probably can't see it very well
15 and I know you can't on your handout. I put Item D in
16 green. Because that's, most of the stuff that we are going
17 to be doing today and the stuff that's on our plate right
18 now, is advising us in the adoption of the regulations. And
19 those are the technical presentations that we will be
20 hearing later today and tomorrow.

21 Our membership. The statute has 15 areas of
22 expertise that we were to have provided for in the makeup of
23 the panel; we added additional areas. For instance LCA,
24 life cycle analysis expertise, was not on that list.
25 Neither was alternatives analysis expertise. and we thought

1 it was very important due to the nature of the task at hand
2 that we have that kind of expertise. So when you look
3 around the room you will see more than just the 15 areas
4 that are, that are required by the law.

5 You were appointed by the former DTSC Director
6 Maureen Gorsen.

7 And the law says that members shall serve
8 staggered three year terms. And we struggled a little bit
9 with how to implement that because we didn't count off one,
10 two, three and you get a one-year term or a two-year term or
11 a three-year term. So what we decided to do was provide for
12 an initial three year term for everybody and then we can
13 deal -- you can be reappointed however many times, you know,
14 that your service would be valuable and you are willing to
15 serve. So that's how we are going to deal with that.

16 And as Debbie mentioned, I think it was Debbie,
17 that we are not asking you to represent your affiliated
18 organization. We have invited you to sit on the panel
19 because of your expertise. So we are inviting you to share
20 that expertise with us. But because it is your expertise we
21 are looking for we ask you not to send a delegate or a
22 substitute to a meeting because it's these individuals that
23 we would like to hear from. Do please, however, notify us
24 if you change your affiliation.

25 So we have got our three co-chairs. We didn't

1 have a chair and a vice-chair or anything like that. And we
2 think we have got a nice, a nice balance there. They have
3 been helping us with developing the agenda for this meeting
4 and, of course, they are chairing the meetings and we will
5 let you know. They are going to be rotating the chairing
6 responsibility.

7 And they can serve as a liaison between panel
8 members and staff. That doesn't mean that panel members
9 can't contact us directly, that's fine as well. It's sort
10 of a trying to make sure that the process is running
11 smoothly and everybody is happy.

12 So about the meetings. As we mentioned before, as
13 I mentioned, I am your primary staff contact within DTSC and
14 I work for Dr. Jeff Wong in this capacity. You are going to
15 be meeting a whole bunch of other staff people here. So if
16 you would, treat me as your primary staff person. I am here
17 to work for you so I am your staff person as well as Jeff's.

18 The law requires that we meet at least twice a
19 year. Starting today that gives us one year to have another
20 meeting. We may have more meetings. We may try to have
21 some teleconferencing meetings, which we will discuss a
22 little bit later. We don't know right now for what reason
23 and when we need another meeting so that is going to be left
24 up in the air for the moment.

25 And then here comes the fun one. We are governed

1 by the Bagley-Keene Open Meeting Act. This is a terrific
2 law and I have given each of you a copy of the guidance.
3 The purpose of Bagley-Keene is to make sure that the
4 people's business is conducted before the people. And so
5 they are always invited to participate in our activities.

6 That does create some logistical challenges for
7 some of our activities. Teleconferencing is interesting.
8 We can have teleconference meetings. Now we have panel
9 members from all over the United States. Every location
10 from which a panel member participates in an activity has to
11 be open to the public and we have to public notice that. We
12 can do that and we may be doing that. We'll need a lot of
13 lead time.

14 We did not get that together for this meeting but
15 some of the people that couldn't make it today asked about
16 that but we just didn't get it together. But what we want
17 to do in the future is you might think about where in your
18 community you could participate in a teleconference or
19 videoconference call that is open to the public, that we
20 would be able to provide a public notice for. And we will do
21 all that logistical stuff but we would need you to identify
22 that location.

23 So as I mentioned before, John is transcribing the
24 meeting. We are going to be posting that to the website. I
25 think we have requested that within two weeks. And we are

1 webcasting the meeting as well.

2 So the Bagley-Keene Open Meeting Act applies when
3 we all get together in a room. It applies, I've got Joe
4 here behind me. He's going to hook me if I say something
5 wrong. And he is going to be available during the question
6 and answer to be the expert on this. But it applies when we
7 are on a teleconference or a videoconference call.

8 And it also applies in something called serial
9 meetings. A serial meeting would be, Mike calls Ann, who
10 then calls Meg, who then calls Julie. And when we reach a
11 quorum in such a serial meeting on the same topic relevant
12 to our business we have potentially violated the Bagley-
13 Keene Open Meeting Act. So it gets to be very complicated.
14 And Joe if it's okay I am going to save the details on this
15 for the question and answer. Because I'm sure there's going
16 to be a lot of questions about how you people communicate
17 outside of the meeting and maintaining our compliance with
18 this law. Is that okay?

19 MR. SMITH: Sure.

20 MS. BARWICK: We also have provided in the Terms
21 of Reference the possibility of breaking into subgroups. If
22 you'll notice when you read the Terms of Reference document
23 we refer to the Chief Scientist of DTSC. That is Dr. Jeff
24 Wong. Or a designee. That might be me, I don't know. So
25 basically if there is a need for a subgroup, and that could

1 happen in today's meeting, we could decide to have a
2 specific technical issue gone into in much more detail by a
3 certain segment with specific expertise on the panel. We
4 will be doing that with the approval and support of the
5 Chief Scientist.

6 Those groups are also purely advisory, as is the
7 panel itself.

8 Membership of course is voluntary.

9 And we have some language about how those
10 subgroups operate. The most important of which is that they
11 report to the Green Ribbon Science Panel, not independent.

12 And those meetings themselves will be subject to
13 the Bagley-Keene Open Meeting Act.

14 DTSC staff will also be present. It is important
15 for us to be there to both support those activities and do
16 whatever work is needed, and also be aware of the
17 conversations going on.

18 So those are the highlights. I'll stop there.

19 PANEL CO-CHAIR CARROLL: I guess it's time for me
20 to take this back and ask if there are questions for Kathy
21 and I'll break the ice here. First of all, one bit of
22 hygiene work. It probably isn't going to be a problem
23 during this session. But when we get to the point of the
24 substance I would ask the members of the panel to turn your
25 flag up like this if you would like to speak and I will try

1 to keep a list of the order in which I see people. And you
2 will undoubtedly help me do that because sometimes you
3 can't, you can't see them all. That's one of the main jobs
4 that we will have as chairs.

5 Kathy, it's really, I want to thank you for this
6 snappy 40 page document that could only have been called A
7 Handy Guide to the Bagley-Keene Open Meeting Act 2004.

8 (Laughter.)

9 MS. BARWICK: I didn't name it.

10 PANEL CO-CHAIR CARROLL: I'm sure that by now you
11 have all kind of browsed through to find this.

12 Something I'd like, and you brought this up and
13 maybe Joe you would like to address this on a practical
14 basis. Many of us have green chemistry in our day to day
15 portfolios. We will undoubtedly run into one another at
16 other kinds of business. Can you give us some guidance on
17 how we can conduct our normal, day to day business and still
18 keep ourselves from having a serial meeting.

19 MR. SMITH: Yes, I can. The first piece of
20 guidance I would have for you. If you are not talking about
21 this California law, the green chemistry law, but you are
22 talking about other green chemistry issues, you are not in
23 the universe of discussion that could potentially pose a
24 problem for you. Once you enter that universe of the
25 California law, what does California need, what should

1 California have? Once you enter that universe.

2 And you can get a feel for that universe by going
3 back to Section III of the Terms of Reference where it lists
4 the statutory mandate that the Legislature has put before
5 you, if you will. And when you look at those I guess four
6 or five items there you can see that they are very broad,
7 except for the one that asks you to provide recommendations
8 for the priority chemicals that should be populated in the
9 Toxic Information Clearing House. Other than that one that
10 is fairly specific, you can see it covers pretty broad
11 issues related to green chemistry in California.

12 The mere fact that you are in that universe also
13 does not necessarily pose a problem for you. It really gets
14 down to when you are focusing in those other groups on
15 issues that are on the next agenda for one of these open
16 collective meetings, or you know, say through a conversation
17 with DTSC staff, is likely to be put on the agenda. It's in
18 that context where you should step back for a moment and
19 consider whether or not what you are about to do is going to
20 violate Bagley-Keene.

21 Now as Kathy started to say, if you have a serial
22 meeting in which less than a quorum participate, either
23 through a chain, Member A to Member B to Member C has direct
24 communication, or through what's called a hub where if one
25 member communicates with 13 others, 13 other members, you

1 have reached that magic trigger point, the quorum. And then
2 once you start discussing the issues or providing
3 information to one another then you are in danger of
4 violating Bagley-Keene. Any questions about that?

5 PANEL MEMBER OGUNSEITAN: The follow-up for me is
6 how does e-mail count in this?

7 MR. SMITH: E-mail, you should treat e-mail just
8 like you are talking person to person, face to face. And e-
9 mail, a serial meeting that is conducted by e-mail or
10 telephone that reaches a quorum point would violate Bagley-
11 Keene.

12 PANEL CO-CHAIR CARROLL: And this is one thing we
13 have talked a little bit before this meeting in setting it
14 up. Something that we might suggest, and Joe, I'm looking
15 for your help on this, is to sort of help avoid that kind of
16 thing. If there is communication that you need to have with
17 the group the suggestion has been that you handle it through
18 Kathy. That you make the suggestion that Kathy do the
19 distribution for us. Joe?

20 MR. SMITH: Yes, that is a great way to control
21 the matter. Any questions you may have, any issues that you
22 think should be brought before the panel for your
23 consideration, address them to DTSC, send them to Kathy.
24 And I would strongly recommend you not copy all the other
25 members on that communication. We will ensure that when

1 that communication is distributed to the panel it is done in
2 accordance with Bagley-Keene and the public is given the
3 appropriate notice along with that.

4 PANEL CO-CHAIR CARROLL: Are there other, other
5 questions? Yes please.

6 PANEL MEMBER MORAN: Kelly Moran. I have two
7 questions related to the relationship of Bagley-Keene and
8 the Terms of Reference. So I just wanted to clarify, when
9 subgroups are established they would be officially and
10 clearly established and then we would have Bagley-Keene
11 apply to that. But if three of us get together for lunch
12 and talk about this, we are not directly violating Bagley-
13 Keene unless we have serial meetings. Am I getting this
14 right?

15 MR. SMITH: Right. Unless you didn't include
16 another 11 of you in that lunch conversation you would be
17 okay.

18 And with regard to the subgroups that are governed
19 by Bagley-Keene. If you appoint a subgroup and all the
20 subgroups according to the Terms of Reference will be
21 advisory, you will not delegate to them any decision-making
22 authority. They'll basically be bringing it back to you for
23 consideration of the whole panel.

24 If you appoint a subgroup that has two members you
25 are okay, Bagley-Keene doesn't apply. But for an advisory

1 subgroup that you appoint, when you hit that magic number of
2 three, those meetings are subject to the Bagley-Keene Act.
3 Serial communications, all that is triggered.

4 PANEL MEMBER MORAN: My second question is there
5 are subgroup reports and recommendations. On page five it
6 says specifically, member discussion of the report outside
7 of an open meeting is strictly prohibited. And again I'm
8 assuming that means that member discussion that might reach
9 a quorum.

10 MR. SMITH: That's correct.

11 PANEL MEMBER MORAN: Okay. So if I talk to one
12 other member that's okay. But if we start talking to other
13 members beyond that we run into trouble.

14 MR. SMITH: Yes.

15 PANEL MEMBER MORAN: If we get to 14. Okay, thank
16 you.

17 PANEL CO-CHAIR CARROLL: Richard, please.

18 PANEL MEMBER DENISON: Also two questions.

19 Richard Denison.

20 First is, what are the obligations of us as panel
21 members in anticipating that a communication we initiate
22 might become a violation? In other words, if I do send an
23 e-mail to two people do I need to say in that e-mail, it
24 shouldn't go any further? How does one anticipate something
25 that may or may not come to pass and what's the obligation

1 on the member? And second, what's the consequence of a
2 violation to the member?

3 MR. SMITH: The obligation on the member is to try
4 to avoid that quorum from being reached. And I think you
5 have to look at it in a case-by-case situation. Who are the
6 couple of members you are communicating with. It can't hurt
7 to, you know, remind them about the Bagley-Keene
8 implications from them passing it on to other members.

9 With regard to your second question. The
10 liabilities for violating the Bagley-Keene Act, as it really
11 relates to this type of panel are really two-fold. There is
12 one for the panel itself as an organization. And that is
13 that the attorney general or any member, any interested
14 party can file a civil lawsuit to prevent the continuation
15 of that type of violation of Bagley-Keene. And if that
16 member is successful in the lawsuit they can recover their
17 costs and attorney fees. That's the risk for the panel as a
18 whole, really for DTSC.

19 But from the standpoint of your individual
20 liability. If you engage in a serial meeting that violates
21 the Bagley-Keene Act with the intent to deprive the public
22 of information that should remain available to them you run
23 the risk of being charged with a misdemeanor.

24 PANEL CO-CHAIR CARROLL: Of course we can also
25 have the discussion for those of us out of state about

1 extradition.

2 (Laughter.)

3 MR. SMITH: That's true and particularly
4 problematic probably for those of you from Texas, I think.

5 PANEL CO-CHAIR CARROLL: I think that's yes, yes.

6 Are there other questions?

7 This of course, if this feels just the slightest
8 bit unnatural to many of you I think that's an emotion that
9 we all, that we all share. So questions are always in-
10 bounds. And Joe, you will be reminding us before we to
11 break that the breaks are a wonderful opportunity to
12 accidentally start engaging in a serial meeting.

13 MR. SMITH: Right. Breaks, lunch, the reception
14 after the meeting are all opportunities to cross the line.

15 PANEL CO-CHAIR CARROLL: Yes. So don't think a
16 bit about it, it's really no problem at all.

17 (Laughter.)

18 PANEL CO-CHAIR CARROLL: Go ahead, Kelly.

19 PANEL MEMBER MORAN: Kelly Moran again. I would
20 just like to make a request of fellow members. I serve on a
21 city, I have served on city commissions for the last ten
22 years subject to these laws and I am keenly aware of easy
23 ways of violating them that we have successfully avoided.

24 And one of the most important things with e-mail
25 becoming so prevalent now is that I have agreed with my

1 fellow commissioners to not forward any e-mails that come to
2 us. Normally we do the communication through staff but
3 occasionally there will be some reason for direct
4 communication, normally about meeting for lunch or
5 something. But we try not to forward e-mails.

6 And I wanted to ask this group to consider that
7 same request since some of us do interact one way or another
8 on various things. One way of avoiding that would be for us
9 to mutually make an agreement that if we receive an e-mail
10 from each other that we do not forward it. So are folks
11 willing to do that?

12 PANEL CO-CHAIR CARROLL: I think that's a common
13 sense, a common sense approach to things.

14 Well I have us at 11:25, at which time we have
15 scheduled an opportunity also for public comment for ten
16 minutes. Are there those of the public who would like to
17 comment at this time on what you have heard up to this
18 point? Is this the only comment that we have at this time?
19 Very good. Three minutes, please.

20 MR. BALTZ: Okay, thank you very much. Davis
21 Baltz with Commonweal and the CHANGE Coalition. For those
22 of you who don't know, CHANGE, Californians for a Healthy
23 and Green Economy. It is a coalition of environmental,
24 environmental justice groups, health organizations, labor
25 advocates, community-based organizations, parent

1 organizations and others concerned with the impacts of toxic
2 chemicals as well as the lack of a regulatory framework to
3 prevent exposure to toxic chemicals.

4 I am going to have to be at the Capitol this
5 afternoon so I am only going to take just one minute and
6 make essentially one comment. That we look forward to
7 participating in these meetings and providing comments, both
8 for this meeting and later.

9 We heard this morning about everyone in the room
10 during the facilitation exercise realizing that we want
11 something that is better than we have now. And we certainly
12 agree with that. One of the key reasons we need to make
13 something better is we have a staggering lack of data about
14 most chemicals that are in the marketplace.

15 So I hope that you will, in your deliberations,
16 give a lot of attention to what is the mandatory data set.
17 And we will need to ask DTSC to write into the regulations
18 so that we have these data and we can make informed
19 decisions about which chemicals are safe to use, which ones
20 may require additional information be provided so that we
21 avoid the problem of regrettable substitutions, which I know
22 everyone in the room wants to avoid.

23 So I won't take any more time now and appreciate
24 all of your work for serving on the panel.

25 PANEL CO-CHAIR CARROLL: Thank you for your

1 comment.

2 At this point the chairs change and I turn it over
3 to Dr. Geiser for the next segment.

4 PANEL CO-CHAIR GEISER: Thank you. This is on,
5 right? This next step that we take at this point is really
6 to move into the actual work of the panel. So that from
7 here on for the rest of the day we are going to basically be
8 taking a look at the areas in which we are interested in
9 members' comments. The way these will normally be framed is
10 we are going to have someone from the Department basically
11 provide us with a short presentation and then open it up.

12 Again, we would like to follow in this pattern of
13 having a discussion by which you raise your cards and we
14 will, in this case I, will try to call on you in sequence.
15 Try to keep your comments short on this but again try to
16 provide as much technical and scientific and other comments
17 to this as you can.

18 We are going to start with the big picture. How
19 does this all fit together. How does 1879, how is that we
20 are structured and what does it really ask of the Department
21 and of the state agency to be able to do. And Don Owen from
22 the Department is going to make the presentation on giving
23 us a big picture of this and then we will take questions
24 after that. I would encourage you, don't interrupt Don.
25 Let Don come through with the whole presentation, we'll then

1 follow with the questions. So Don.

2 MR. OWEN: Thank you, Dr. Geiser.

3 My name is Donald Owen. I am with the Department
4 of Toxic Substances Control. And my mission today is to
5 give you an overview of the specific statutory laws which
6 our department is tasked with implementing, devising and
7 then implementing regulations for.

8 You heard from our acting director, many of your
9 heard from our prior director about the nature and substance
10 of our initiative. The projector is not particularly good,
11 but I know this presentation is in your package. This is an
12 overview of my presentation to you this morning. I'll tell
13 you a little bit about where we have been, what the origin
14 of these laws was and what processes we have used to date.
15 And how your technical and scientific advice to my
16 colleagues here on the panel, in their specific questions to
17 you in their individual presentations, will be most helpful.
18 I thank you for your service to the people of California and
19 look forward to hearing from you in specific.

20 In your packages in preparation for this meeting
21 you received this report, which is the final report of the
22 first and second phase of our initiative. It outlines six
23 policy recommendations that the Schwarzenegger
24 administration has embraced and is moving forward in. We
25 are focused on one of those six but I wanted to draw your

1 attention to the others because they do give you a context
2 for what our work in implementing regulations with respect
3 to safer alternatives means in the overall ambient of green
4 chemistry and our program in California.

5 We had a broad stakeholder process, consultative
6 process, learning process, in Phase 1 and Phase 2. We used
7 a lot of social media tools. Our former director was at the
8 cutting edge of using Facebook and Wiki and other things.
9 We have received tens of thousands of comments from more
10 than -- with about 880 individual ideas that were convergent
11 from those comments. That's a bit unheard of for a
12 relatively small department that is a regulatory entity in
13 the large California government. So it was an exciting
14 opportunity to hear from the world, to learn from the world,
15 and then to move forward with ideas.

16 As Dr. Wong noted and as the acting director
17 noted, we had a science Advisory panel in Phase 2. Several
18 of you served so I'm glad that you returned. It was a
19 wonderful opportunity for us to gain momentum and to find a
20 convergence of ideas that led to the completion of the
21 report and presumably the adoption of these two laws.

22 As I said I'll quickly review what was in the
23 report. The Executive Branch of California government
24 proposes to expand our existing pollution prevention
25 program. That's with regard to facilities that voluntarily

1 participate here in California. So to move upstream from
2 our source reduction activities to the design and
3 manufacture and apply green chemistry principles. We
4 believe that will lead to triple bottom line economic
5 benefit to the participants and to the people of California.

6 One of the things we heard throughout the
7 initiative and particularly from our prior science advisory
8 panel members was we need to build capacity in our education
9 system, in primary and secondary education, at the
10 university level, in our work force, including vocational or
11 technical education. And we need to do more in research and
12 development and tech transfer for new processes, cleaner
13 processes, sustainable processes and products and green
14 approaches.

15 We also had a recommendation to disclose product
16 ingredients through an online network. This is something
17 that remains in the legislative debate.

18 Number four was our Online Toxics Clearinghouse,
19 which was a proposal to expand the world's access to
20 information about hazard traits and toxicity of chemicals.
21 Or as former director Gorsen put it, Facebook for chemicals.
22 My colleague Sara Hoover from the Office of Environmental
23 Health Hazard Assessment will give you a particular
24 presentation on that as to the processes and challenges that
25 they are addressing in support of our rulemaking effort.

1 Number five, accelerate the quest for safer
2 alternatives. This is our purpose for convening you here
3 today and tomorrow. It's to gather your scientific and
4 technical expertise to us as we begin the official process
5 of promulgating a regulation.

6 The National Academy of Sciences late last year
7 indicated that the nation and the discipline would benefit
8 largely from development of alternatives assessment. But
9 they forecast that that will take until the year 2100. We
10 have until next year. And our director has put a much
11 faster time frame for us as staff to complete our initial
12 draft.

13 The law calls for simplified approaches so we need
14 your input to us on what is necessary, what is essential and
15 what will work from a scientific and technical perspective.
16 We will frame, as staff, in individual presentations this
17 afternoon and tomorrow, specific questions for you to help
18 us.

19 And lastly is our ambitious goal of moving our
20 economy to a cradle-to-cradle society by challenging
21 retailers to apply continuous innovation to the development,
22 manufacture, transport, use and end-of-life management of
23 products in California.

24 So that's quick background on where we have been.

25 What's before us are two particular laws. And I

1 understand also in your package you received an excerpt of
2 the Health and Safety Code. Beyond the legislation, which
3 are the two individual bills, those bills when enacted
4 codify in our statutes. So terms that are defined in our
5 statute, the enforcement of our statute are in other parts.
6 Which is why we gave them to you in the consolidated fashion
7 as statutory code.

8 Chapter 559 or Assembly Bill 1879 is the one that
9 grants to the Department the authority to promulgate
10 regulations for our process, to prioritize chemicals, to --
11 well, to identify then prioritize chemicals, and then a
12 process to write a regulation for a process looking at safer
13 alternatives to those chemicals in consumer products. And
14 that's the focus of our panel questions this afternoon and
15 tomorrow.

16 Chapter 560 was a related statute. It authorizes
17 the establishment of the toxics information clearinghouse.
18 It includes provisions related to your panel. They work
19 together.

20 We have been working to brainstorm in a variety of
21 different methods and techniques with the world community,
22 with experts such as yourself, with industry, with academic
23 institutions, with non-governmental organizations, community
24 and other organizations.

25 We posted on what we called our Wiki an invitation

1 to have the world help us write the rule. It had mixed
2 success but we got a lot of input.

3 And we have also conducted five informal
4 workshops. And there will be additional workshops to
5 continue that dialogue with the purpose of educating us as
6 staff about the knowledge of how safer alternatives
7 assessments might be conducted and how we might go about
8 developing a rule to establish the statutory processes that
9 are called for in the law.

10 We have also consulted with people who wanted to
11 share their thoughts and knowledge with us. We have sent to
12 you in your package what we call the draft straw proposal.
13 It is a plain English outline of the ideas that represent
14 what we think are the convergence of thoughts on the
15 specific steps that will be part of our regulation. It is
16 not regulatory in language but it is intended to give you an
17 idea of where our thinking from these processes has evolved.

18 And it helps us distill for your purpose the
19 discussions we will have seeking your technical advice and
20 scientific expertise with respect to the process to identify
21 chemicals, the process to prioritize those chemicals in
22 consumer products and then to conduct alternatives analysis
23 using life cycle thinking. So you are critical in helping
24 us get ready and go toward rulemaking, as we heard.

25 Our rulemaking schedule is ambitious but we are in

1 the early stages. So you are here today and tomorrow to
2 give us that input.

3 The next few slides frame those parts of our draft
4 straw proposal which my colleagues on the team will present
5 to you in individual sections and questions. This is our
6 rough schematic to give you an idea of the sequencing and
7 the order in which things may occur as we are currently
8 thinking. There are pathways we don't fully understand so
9 we have marked questions on those.

10 To give you a little bit of context, some of these
11 are statutory. For example, the diamond on the first line
12 at the far right where it says, Excluded Product. Both of
13 the statutes together as they codify in our law indicate
14 that there are categories of consumer goods which are not
15 subject to this law. Those are food, which are otherwise
16 regulated by our sister agency Food and Agriculture,
17 pharmaceuticals, certain durable medical and dental goods
18 and some other narrow ones. So that's the purpose of that
19 decision point diagram. Those are excluded in the law.

20 We don't have a question for you on that but we
21 wanted to give you an idea of where some of those statutory
22 pieces fit. One of the challenges frankly in all of our
23 consultations, our Wiki, our workshops has been to figure
24 out where we move from chemical to product.

25 So as you think of the advice you give us through

1 your comments this afternoon or tomorrow help us understand
2 that. Tell us what adds value to California. Tell us
3 what's essential for a simplified approach. We recognize
4 that this is a first step. We are early in terms of what
5 the National Academy sees as a long question toward
6 improving something that is not yet matured. It goes beyond
7 the traditional risk management system because it calls for
8 us to address unknowns. There's a great number of unknowns.
9 And what's the right way to handle those is part of what's
10 underlying our questions for you.

11 My colleague Dr. Brushia will present later Step
12 1, which is the process to identify chemicals. In our draft
13 straw proposal we outline in plain English some ideas with
14 respect to establishing a process built on criteria for the
15 identification of a candidate list of chemicals.

16 That includes hazard end-points.

17 It includes criteria that other authoritative
18 bodies use.

19 It includes processes or steps or consideration of
20 both known and unknown information about chemicals, about
21 their toxicity and about their hazard traits.

22 It includes existing and new chemicals.

23 And attempts to use proxy methods and other
24 methods to generate information to help fill those unknowns.

25 You will hear more about this particular topic as

1 our first discussion section following lunch.

2 Secondly in the next step Dr. Brushia will present
3 to you the draft straw proposal as a process to prioritize
4 chemicals of concern. This will be built on criteria and
5 essentially divide the candidate chemical universe into
6 tiers. Tiers which would then lead to action for analysis
7 of alternatives, applying life cycle thinking.

8 Thirdly, my colleague Nancy Ostrom along with
9 Xioaying Zhou and Bob Boughton if he's well will present
10 tomorrow morning their thinking on an evaluation process for
11 alternatives assessment and the application of life cycle.

12 One of the unique attributes of this law is that
13 we move to integration and synthesis beyond all of our
14 individual silos and media regulatory programs. And we move
15 from treating waste as emissions, discharges or pollutants
16 to consideration of what happens in the design phase.
17 That's an ambitious challenge and we must get started and we
18 need your advice.

19 In our working straw draft we use the manufacturer
20 here as a surrogate because we think that's where these
21 considerations practically apply best. But I will present
22 that there is a legal concept underlying this. The point of
23 application of this law is for the sale or use of a consumer
24 product in California.

25 We have a number of sister agencies that deal with

1 this regularly. The Air Resources Board is probably the
2 most well-known with respect to fuels and cars. Cars are
3 made around the world, very few are made in California. But
4 our 36 million people have purchased about 22 million
5 vehicles. The Air Board's programs regulate how those cars
6 are sold and used and set standards.

7 So we are thinking along those lines in terms of a
8 legal construct. But for simplifying purposes of a
9 discussion we are using the word manufacturer in brackets.
10 It may mean person or something else. The manufacturer/
11 person would evaluate feasible alternatives using
12 appropriate methodologies and tools. The law calls for us
13 to find simplified ones in application. Particularly this
14 is an early, innovative regulation. We need your input on
15 what that means, how that works.

16 Companies that would compare those alternatives.
17 There are a number of criteria in the law that have to be
18 balanced. They depend on information. Again, we need
19 scientific and technical advice with respect to how that
20 works. And how California can add value in using what has
21 developed in other jurisdictions, is used in industry and
22 elsewhere. The law also directs us to look to, and to the
23 best advantage we can, use those tools that are developed
24 elsewhere.

25 Lastly just for context. The outcome of the

1 alternatives analysis leads to a regulatory response. That
2 means that there are a number of actions beyond just banning
3 a chemical and a product that could take place. As you
4 think about alternatives assessment with life cycle thinking
5 what are the conditions that would lead to different
6 regulatory responses. We will not have a presentation to
7 you on this section but this is the next step in the natural
8 flow of decision-making from the alternatives assessment.

9 That's a quick overview of where we have been.
10 What a particular group of laws are about. Our challenge as
11 staff to devise and then promulgate and implement these
12 regulations.

13 Today and tomorrow you will hear from my
14 colleagues on the team on three specific steps. The
15 identification of chemicals, the prioritization of
16 chemicals, the evaluation of alternatives using life cycle
17 thinking. And again, thank you for your service and for
18 your advice that you will give us.

19 PANEL CO-CHAIR GEISER: Thank you, Don.

20 So in particular focus on whether you have
21 clarifying questions or you want to make that point about
22 what Don has presented at this point. Mike.

23 PANEL MEMBER WILSON: Mike Wilson at UC Berkeley.
24 Don, I have a clarifying question on scope. Sort of getting
25 to your question of how you were trying to delineate

1 consumer products and manufacturing.

2 Looking at the three different points of language
3 that Kathy presented as a purpose for the panel being,
4 encouraging the redesign of consumer products, manufacturing
5 processes and approaches. And then in the straw proposal
6 being, under Section 3, the process to identify chemicals or
7 chemical ingredients of concern in consumer products.
8 Juxtaposed against your slide that fairly specifically lays
9 out under Chapter 559, evaluating alternatives and moving
10 towards safer consumer products somewhat more narrowly.

11 So I guess I am asking for clarification on the
12 scope of the statute and the panel's charge with respect to
13 manufacturing processes versus consumer products.

14 MR. OWEN: I'll do my best to answer your
15 question, Dr. Wilson.

16 In our report we identified six policy strategies,
17 one of which was to accelerate the quest to safer
18 alternatives. That is the focus of our initial steps toward
19 formal rulemaking and the substance of our draft straw
20 proposal. That's what we need advice on first.

21 The panel is created in statute and continues into
22 existence for the larger purposes you describe as the
23 panel's charge. And we envision as staff convening the
24 panel to help us address subsequent parts of that rule's
25 implementation as well as the other five parts of the

1 initiative.

2 So I think that it's a sequencing of time for your
3 work. The law is a legal construct with respect to
4 chemicals in consumer products. So I don't know that that's
5 narrow. In fact I think it may be broader than we thought
6 as we think about all of the chemicals in commerce and the
7 unknown number of consumer products that are not exempt.

8 PANEL MEMBER WILSON: Can I follow that with a
9 follow-up question? It's short, very quickly.

10 PANEL CO-CHAIR GEISER: Sure.

11 PANEL MEMBER WILSON: The question is, does the
12 statute exclude assessment of manufacturing processes?

13 MR. OWEN: As a non lawyer I think it does not.
14 But our legal reach in terms of enforcement of the statute
15 is with respect to the sale or use of a consumer product in
16 California. We are cognizant that it is not just upon those
17 things manufactured in California.

18 PANEL CO-CHAIR GEISER: Roger.

19 MR. OWEN: The same way the Air Board deals with
20 automobiles. If that helps.

21 PANEL MEMBER WILSON: Thank you.

22 PANEL CO-CHAIR GEISER: Thank you. Roger.

23 PANEL MEMBER McFADDEN: Roger McFadden. A
24 question, clarification question on excluded products.
25 Currently in California you have CARB VOC regulations that

1 go across a number of product groups. I'm assuming that
2 those products are not exempted in this process.

3 MR. OWEN: The statute does not specifically and
4 explicitly exempt any other consumer products other than
5 food, durable medical goods, pharmaceuticals, dental
6 amalgams and I think certain mercury-containing lighting.
7 Those are the exemptions in the law. Which is why we
8 included the definition of consumer product in the statutory
9 excerpt we sent to you.

10 It's true that a number of our sister agencies
11 regulate a number of consumer products in different ways.
12 With respect to many categories of consumer products, the
13 Air Board has set standards for volatile organic compounds
14 for air quality control purposes. They are not necessarily
15 exempt from this law. But how we coordinate programs is
16 also a challenge we will address. The law does say we must
17 work to, for lack of a better word, harmonize with those
18 programs. And to look beyond to single end-point of VOCs,
19 for example.

20 PANEL MEMBER WILSON: Thank you.

21 PANEL CO-CHAIR GEISER: Richard.

22 PANEL MEMBER DENISON: Don, thank you for that. I
23 want to follow up I guess on Mike's question and understand
24 this phraseology of sale and use. If you could reiterate
25 where that construct come from. I didn't see it in the

1 statute itself. And secondly --

2 MR. OWEN: The words in the statute are brought or
3 used. We understand there's technical clean-up language to
4 change brought to bought. So it's a past tense construction
5 just in English language of sale or use. But the idea is
6 that we respect the constitutional requirements of commerce
7 clause and others. But that there are ways to incent change
8 in the marketplace through a regulatory structure that is
9 legally founded. If that helps.

10 PANEL MEMBER DENISON: My question would be, given
11 the life cycle nature of the approach that is urged through
12 the legislation would, for example, that language be
13 interpreted in a way that includes production in California
14 or disposal of post-use management that occurs in California
15 as well as strictly sale and use?

16 MR. OWEN: No it certainly would include within
17 California. But we have very long supply chains that go way
18 beyond California's border. And as we understand from our
19 consultative process throughout all phases of the
20 initiative, the majority of consumer products that
21 Californians consume are not made in California. We have a
22 relatively small manufacturing base with respect to our
23 overall economy. We are becoming more of a service economy,
24 which means we buy from around the world and from other
25 states. How we get to that product is at the point of

1 retail.

2 PANEL CO-CHAIR GEISER: I'm taking note of the
3 fact that we have several people who want to speak and we
4 only have a limited amount of time so I am going to try to
5 move as rapidly as I can. Tim.

6 PANEL MEMBER MALLOY: Thank you, Tim Malloy. I
7 just wanted to get at the manufacturing issue again because
8 I wasn't quite clear of the outcome so let me pose it by way
9 of an example. So there's a hypothetical chemical
10 manufacturer in California that's buying a particular
11 chemical to be used in the manufacturing process. Is the
12 view -- My reading of the statute is that that chemical
13 would be a consumer product because it is a chemical used in
14 California and therefore an alternatives assessment might be
15 required for the use of that chemical rather than other
16 chemicals in that manufacturing process or alternatives
17 manufacturing processes for the ultimate product produced by
18 the chemical company.

19 So I guess my question is, is that the way in
20 which the Department currently views consumer product to
21 include the use of consumer products in manufacturing
22 processes by commercial or industrial entities?

23 MR. OWEN: That's an excellent point and one that
24 has come up repeatedly in our informal workshops since the
25 beginning of this year, who is a consumer. Is a

1 manufacturer that buys a chemical intermediate consuming a
2 consumer product for purposes of use to formulate some other
3 product which ultimately ends up on a retail shelf in
4 California? I don't know that we have settled that
5 question. But we certainly would like the panel's
6 scientific and technical advice with respect to those issues
7 in these particular three areas that we will present to you
8 this afternoon.

9 Certainly we have regulatory authority over
10 facilities that use and dispose of chemicals in California.
11 We are also cognizant that we are looking at the larger
12 supply chains but we have a particular legal set of
13 parameters as a state, not a nation, that we must abide by.

14 So with a small manufacturing base would it make
15 sense to just apply alternatives assessment to things made
16 in California? So those are things we are struggling with.
17 We don't have the answer. It's probably more of a legal
18 answer than I am prepared to give as a staff person. If Joe
19 would like to say anything, wherever Joe is.

20 PANEL CO-CHAIR GEISER: I'm going to see if I can
21 get Julia in here. Julia.

22 PANEL MEMBER QUINT: I have a similar question,
23 this is Julia Quint, about the definition of the term,
24 consumer product. And it has to do with a number of small
25 businesses who buy like single chemicals, often solvents,

1 from Home Depot and other places, to use in businesses. So
2 in terms of our charge, those would be considered consumer
3 products? They are bought by maybe one person but they are
4 sold -- anybody I suspect could go into Home Depot and buy
5 them. But I know that some solvents are not, it's a single
6 chemical but, you know, bought in what I would consider --

7 MR. OWEN: Frankly as staff we have been
8 struggling with the scope and application of the legal
9 import of consumer product. So we have been just using
10 simply what's in the statute.

11 PANEL MEMBER QUINT: Okay.

12 MR. OWEN: My interpretation would be that
13 something sold at retail that is used for, a single chemical
14 for an application, could be a consumer product.

15 PANEL MEMBER QUINT: Okay, thank you.

16 MR. OWEN: The reason I raised consumer product
17 was to think about product not chemical alone. And that's a
18 significant challenge for us is how do we move through a
19 system that starts with chemicals and ends with a product.
20 And at what point do the different considerations, when
21 should we make those. Whether it's in identification
22 prioritization or alternatives assessment.

23 PANEL MEMBER QUINT: Yes, because product often,
24 you know, it's the form of it and often mixtures. Things
25 like toys or whatever. So I just wanted to be clear.

1 MR. OWEN: All excellent questions.

2 PANEL CO-CHAIR GEISER: Kathy, I understand we
3 have one.

4 MS. BARWICK: Yes.

5 PANEL CO-CHAIR GEISER: One. Can I see if I in
6 that case see -- Dele, Don. One more question. Dele.

7 PANEL MEMBER OGUNSEITAN: Dele Ogunseitán. The
8 exemption of food and I wonder how broad the scope is. Does
9 it include the production of food, agricultural pesticides,
10 the packaging of food?

11 MR. OWEN: Thank you for raising that point. I
12 did omit one important excluded product and that is a
13 pesticidal or FIFRA-regulated pesticidal ingredient. Those
14 are pesticides used in agriculture but they are also things
15 that are used in homes that have antimicrobial properties.

16 The law does specifically indicate that packaging
17 for food is not exempt. But food production and food. Food
18 definitely is as a product. Production, I believe, is
19 probably within the scope of that cross-citation to another
20 code. So the best advice I can give you as staff is we have
21 copied for you the statutory definition of consumer product.
22 Be aware that there are five categories of things that our
23 rule does not apply to.

24 PANEL CO-CHAIR GEISER: All right, thank you, Don,
25 thank you very much.

1 Okay, we do have time for then specific comments
2 to this section. And we have one public comment here and
3 then also one that has come over the web. Who would like to
4 stand to that public comment?

5 MS. BARWICK: Andria Ventura.

6 PANEL CO-CHAIR GEISER: Yes, please provide your
7 name.

8 MS. VENTURA: Hi again. I am Andria Ventura, I am
9 with Cleanwater Action. I am here on behalf of our 60,000
10 California members. Cleanwater Action is also a member of
11 the CHANGE Coalition.

12 And I may be guilty of jumping the gun here a
13 little but I wanted to provide my comment to you because I
14 think that as you go into the sections that we are going to
15 talk about in the afternoon, and even the questions that you
16 have just been talking about now, how you approach chemicals
17 and decisions about chemicals is going to be at the crux of
18 all of those discussions.

19 So I wanted to just share briefly some very quick
20 points about how we, and I think I can speak on behalf of
21 the CHANGE Coalition in that we did provide comments to DTSC
22 on our vision for the future of the Green Chemistry
23 Initiative and we did talk about, you know, how we make
24 decisions about chemicals. So very, very quickly.

25 Obviously one of the most important things to do

1 is to establish criteria on which those decisions are going
2 to be made. And that's whether they are decisions about
3 what a chemical of concern is, how we prioritize them, how
4 we do alternatives analysis and the ultimate regulatory
5 decisions.

6 So I do want to say out front that we do believe
7 that the intrinsic hazard traits of any chemical, i.e. it's
8 impact on health and the environment, should be the
9 foundation on which these decisions are made. This should
10 be applied to both new chemicals and those already on the
11 market. And this is really fundamental to our vision of a
12 real Green Chemistry Initiative that will lead us toward a
13 sustainable future.

14 We consider that the harm the chemicals pose to
15 future generations must be deeply imbued in all of the
16 decision-making about products and chemicals that are made
17 through this body and by DTSC. This of course includes the
18 impacts on generations that are developing now. You know,
19 the reproductive harm or developmental harm to fetuses and
20 infants through direct and indirect exposure. But also to
21 future generations who are going to be impacted by the
22 decisions we make today and those on the environment.

23 We do not support on a whole decision-making based
24 on economic factors. Obviously it is difficult to put a
25 price on health and the environment and human life. But if

1 economic factors do become part of the decision-making
2 process we have to look beyond the traditional cost-benefit
3 analysis. We have to look at looking at the externalities
4 that are often left out. The societal costs, the treatment,
5 the cleanup, the liabilities, et cetera.

6 And we see that while exposure potential, volume
7 of use and other factors are certainly part of the decision-
8 making process, especially when we are prioritizing
9 chemicals, the final decision about what to do about
10 chemicals in products should be based on the hazards they
11 pose.

12 So to summarize, safety standards should chemicals
13 should focus on whether the chemical presents an intrinsic
14 hazard and not on risk assessment or on balancing safety
15 with economic or other countervailing considerations.
16 Because it is the harm that chemicals, some chemicals I
17 should say, cause that has brought us here today. That's
18 what we are struggling with. And that is what should drive
19 our regulatory decisions and the development of new
20 chemicals to serve society.

21 So I wanted to share those thoughts with you
22 because I think that those basic points should and hopefully
23 will imbue your decision-making and your thought processes
24 throughout the rest of the discussion today. Thank you.

25 PANEL CO-CHAIR GEISER: Thank you very much, very

1 good comment.

2 It turns out the web-based comment is more
3 general. I know this is a little complicated. We are
4 trying to be very specific to asking for comments on the
5 specific sections in each case and we are providing the
6 larger time tomorrow morning for the general comments and we
7 appreciate that if you can try to follow that. But thank
8 you very much for that comment.

9 I think we had a very good presentation from Don.
10 Two things stand out in my mind. One is this whole question
11 about manufacturer, which we need to face, and another is
12 about the product, the definition. Those both came up. I
13 think that was very helpful, Don, thank you.

14 And at this point I think we turn it back to Kathy
15 who is going to dismiss us for lunch.

16 MS. BARWICK: I would like to make one comment
17 about the public comment period. We have Radhika there with
18 the three minute, two minute, one minute warnings. So when
19 members of the public provide their comments we will be
20 looking over in that direction so we can help time that
21 process.

22 We will break for lunch. We have procured some
23 documents on the front table that have local restaurants
24 which may or may not be applicable for lunch, maybe for
25 dinner. But let me just remark, as you are probably acutely

1 aware, we have got a giant shopping mall right over here.
2 And most of the better like lunch places in the mall would
3 be at the far end over by the theaters. So it's a little
4 bit of a hike or you can take your car. But most -- there's
5 actually some very good restaurants if you go right as if
6 you are going to go to the movies there's some restaurants
7 there. And then again, we have got some information on the
8 front table for local restaurants and I'll give you some
9 more advice for things this evening.

10 We will meet again at 1:30 sharp. Please be here
11 on time. And I was going to try to help Joe. Joe is going
12 to give us our reminder about the Bagley-Keene issues before
13 we break. I was going to give you all a topic of discussion
14 for lunch that will keep you all in the clear. I want you
15 to discuss whether Flatt & Scruggs or Bill Monroe had more
16 impact on bluegrass music.

17 MR. SMITH: Need I say more after that? We just
18 ask that during lunchtime you not continue the discussion
19 that you have heard this morning or the one scheduled for
20 this afternoon or tomorrow morning. Thank you.

21 PANEL CO-CHAIR GEISER: Thank you.

22 MS. BARWICK: Thank you all, we'll see you at
23 1:30.

24 (Whereupon, the lunch recess was taken.)

25 --oOo--

1 first, the first part of the afternoon.

2 We have a presentation from Rob Brushia. Then
3 I'll ask the panel to ask any clarifying questions. There
4 are two places in Rob's presentation where he has questions
5 teed up for us to discuss. And we'll hold those kinds of
6 questions, all the questions until the end.

7 I am going to work as facilitator to try to
8 allocate time such that we get to both of those question
9 slides. There are an unequal number of questions on the two
10 of them so this is going to be a bit of an inexact science
11 and I would ask for your forbearance in terms of, in terms
12 of my role as a Chair here. But we'll get it all in one way
13 or another.

14 So Rob, with that I guess it's, I guess it's all
15 yours.

16 DR. BRUSHIA: Okay, well thank you and good
17 afternoon. My name is Rob Brushia. I am a research
18 scientist with the Department. And I guess I get the
19 privilege of making the first presentation. So I am looking
20 forward to this actually.

21 The topic of my discussion is going to be on the
22 identification and prioritization of Chemicals of Concern.
23 So it's Agenda item 4 on your agendas.

24 And this is really small and hard to see but don't
25 really be bothered by the fact there's so much on the slide.

1 It's just meant to kind of set the tone for your
2 consideration as you are thinking about the questions we
3 ask. And it's meant to just convey a couple of really
4 important things about what we are required to do.

5 The statute says that we have to adopt regulations
6 that establish a process for identifying and prioritizing
7 chemical ingredients of concern in consumer products. So we
8 are working on the assumption that what that means is that
9 we are only really concerned with the things that actually
10 end up in consumer products that are sold or offered for
11 sale in California, or manufactured in California.

12 Another important aspect of the law is that it
13 requires us, it doesn't limit us to these three factors, but
14 it requires us in evaluating chemicals to take into account
15 three very specific factors, volume, potential for exposure,
16 and potential effects on sensitive subpopulations. So we
17 have those three criteria that the law actually spells out
18 for us that we have to take into account in addition to
19 others that we will discuss in a bit.

20 Another thing that's really important in respect
21 to how the law is worded is that it says that we shall, to
22 the extent feasible, actually take into account basically
23 what has been developed by other authoritative bodies. We
24 have to take a look at what's gone on elsewhere and to the
25 extent we can, incorporate that into our own system. So

1 that is another really important concept to keep in mind.

2 Okay, and a couple of definitions. I think it's
3 just sort of important. And these are not in the statute
4 but they are just kind of definitions that we have come up
5 with internally for how to think about this.

6 When we are talking about chemicals, or chemical
7 ingredients, what we have kind of interpreted that to mean
8 is that chemicals are those things that end up in a product
9 not because they impart any functionality necessarily but
10 because they might be, for example, naturally occurring in
11 one of the raw materials that went into the product. So
12 they are just things that are there because they are there.

13 The chemical ingredients are those things then
14 that are being intentionally added during the manufacturing
15 process.

16 So it's just kind of a way to think about things
17 to kind of help keep clear what's meant by chemicals or
18 chemical ingredients.

19 Okay, so this is a really, really summarized
20 description of the process as we envision it. The idea here
21 is that we begin with this universe of chemicals. That we
22 apply some distillation, some filtering criteria that then
23 take that down and get us to a new point where we have
24 another group of chemicals that are now chemicals that have
25 passed through this filter. Some criteria have been applied

1 and we are going to talk about those criteria.

2 And our idea is that initially what we would do is
3 develop a candidate list of chemicals. And these would be
4 basically chemicals of interest that we would then apply
5 further criteria to, to develop our ultimate list of high
6 priority chemicals of concern.

7 Okay, so I am first going to talk just a little
8 bit about the identification process. Again, what we are
9 talking about here is we think that it would be -- I think
10 the best way to approach this would be to first come up with
11 a candidate list of chemicals that we are interested in.

12 And so we have considered really two ways to go
13 about that. We have considered adopting a very large and
14 diverse set of criteria so that we would capture a very
15 large universe of chemicals. Or we have thought about also
16 possibly narrowing our criteria so that we focus on just a
17 very few chemicals.

18 We have opted to go with the large set of criteria
19 for the time being. And the idea here is, again, that this
20 will not limit us. That we will be able to take a look at
21 all chemicals in commerce and then, and then focus on those
22 that we find are issues with respect to consumer products.

23 Okay. And so the idea is that we have this
24 criteria, this very large set of criteria, and that any
25 chemical that fits into one or more of these criteria would

1 then be placed on our candidate list. Okay. And in your
2 packets I think you have our draft straw proposal and in
3 there are this long list of criteria. And I am not going to
4 go through all of them now just because time won't allow
5 that. But you have that available to you, you can take a
6 look at it.

7 This is just a brief summary of what some of those
8 criteria may be. Things like chemicals for which we know
9 nothing might be a criteria to put something on a candidate
10 list to take a look at. Chemicals which have already been
11 designated as persistent, bioaccumulative and toxic, for
12 example. Known endocrine disruptors. Or very persistent,
13 very bioaccumulative chemicals and so on. So these are the
14 types of criteria that we are looking at.

15 And as you all probably know, there are lists upon
16 lists upon lists of chemicals that fit into these criteria
17 that have been developed by various authoritative bodies
18 around the world. And so what we are looking at is
19 basically looking at using those same criteria that have
20 already gone into developing those other lists to sort of
21 develop our own list.

22 Okay. And so the first question we have for you
23 is, is this list of criteria -- first of all, is it an
24 appropriate approach to identify candidate chemicals that we
25 will take a further look at? And if so, is the criteria

1 that we have, that we have, you know, proposed, is that
2 appropriate? Or are there additional criteria that we have
3 missed that we haven't considered and we should consider.
4 So we would be very interested in hearing your thoughts on
5 that.

6 So then once we have this candidate list our idea
7 is that we would apply some additional criteria to
8 prioritize chemicals on that list. Excuse me for just a
9 second here so I can follow along. And the idea is that we
10 have to come up with some sort of a prioritization scheme.
11 And we have to, you know, we have to have chemicals
12 classified differently.

13 The initial idea that I had was designating things
14 as high priority based on this set of criteria. So we have
15 our candidate list, we take those chemicals. We take a look
16 at how and where they are being used. Those that are in
17 consumer products we apply a second set of criteria in order
18 to prioritize them. We then take those that fall out of
19 this second, second evaluation phase and designate them as
20 high priority and formulate a high priority chemicals of
21 concern list. And that's the working list that would then
22 go through the rest of the process that you are ultimately
23 going to hear about from my colleagues, the alternatives
24 analysis, life cycle assessment and so on.

25 Okay. And so some of the possible prioritization

1 criteria that we have been thinking about. Again, the law
2 tells us to use volume. The law tells us to use potential
3 for exposure. And the law tells us to use the potential
4 effects on sensitive subpopulations.

5 Some additional criteria, again coming back to
6 data. Maybe a lack of data is again another reason that
7 first a chemical gets into the candidate list and then is
8 designated as a high priority depending on where that
9 chemical might be used, if we can find that out.

10 So again, you have in your packets a list of these
11 types of criteria that we are thinking about for the
12 prioritization. And the idea again would be that we take
13 any chemical that is on this candidate list, it got there
14 for a reason. We take it, apply this screen. Any chemical
15 that falls into any one of these criteria would then be
16 designated a high priority chemical of concern.

17 And a couple of the questions that we have for you
18 in passing are, in terms of volume, we really can't get a
19 grasp on how to apply that. What is an appropriate volume
20 threshold above which you designate something high priority.
21 I mean, different chemicals have different, you know,
22 biological effects, different ecological effects. How do
23 you apply volume to this?

24 Okay. And for potential for exposure. One of the
25 concepts that we had and it's another question that I would

1 kind of like to leave you with is, you know, would it be
2 suitable in terms of potential for exposure to ask what are
3 -- is a chemical that is in a consumer product, is there
4 expected to be, you know, is there a known or anticipated
5 release of that chemical during its use or its ultimate
6 disposal. One example you might think about are -- well
7 perfumes are a good example. They are designed to release.
8 Glues on envelopes that you have to lick them to seal the
9 envelope. Again, there is a release that goes on.

10 Would something along those lines, some sort of
11 consideration along those lines, be suitable for gauging
12 possible exposure? Would that be an appropriate, an
13 appropriate thing to look at.

14 So I already mentioned this.

15 So here is some of our questions. In line with
16 what I asked you about, our criteria to designate chemicals
17 as candidate chemicals, are our prioritization criteria also
18 appropriate? Did we miss any important criteria that we
19 should be thinking about?

20 Again with respect to volume. You know, if you
21 have any thoughts on what is appropriate or how we can make
22 appropriate use of the volume criteria, what that should
23 look like. We would be interested in hearing that.

24 And then the final question is, in this
25 prioritization we have thought about it many different ways.

1 We have heard input at our public workshops. It has been
2 suggested that we just have high and low priority chemicals.

3 It has been suggested that we also establish tiers
4 and that chemicals be placed somewhere in this tier based on
5 certain criteria. So for example you'd have a top tier
6 which has a few chemicals that really, we really want to
7 focus on those chemicals because there's really a known
8 problem associated with those chemicals. The second tier
9 might be chemicals for which there is an apparent problem
10 but we don't have enough data to really evaluate what's
11 going on with them, and so on.

12 And so we are very interested in your thoughts on
13 how the prioritization scheme should look and what our end
14 product should be. Whether or not we should have this sort
15 of tiered structure, you know, and how it will work. Or
16 whether or not we should just make it very simple and say,
17 you know, things that go through our initial screen are
18 candidates, things that go through our prioritization screen
19 and hit one of those criteria are high priority and that's
20 it.

21 So I think -- yes, that concludes my presentation.
22 What I am going to do is I am going to stand up here and
23 answer any of your clarification questions. And then I'm
24 probably going to take a seat and participate from where I
25 was sitting so I can take notes. But I will be able to

1 participate because there is a microphone on the table.

2 PANEL CO-CHAIR CARROLL: And Rob, when we get to
3 the questions that you have embedded in your presentation
4 I'd like you to put your first question slide up, your
5 criteria slide, and then we'll talk about how much time
6 we'll spend on that. And then get to the end of that and
7 then put your other, your other slide up.

8 DR. BRUSHIA: Okay, will do, no problem.

9 PANEL CO-CHAIR CARROLL: So questions related to
10 clarification of the presentation that don't necessarily go
11 to the questions that were presented? Okay, fine. I saw
12 you first, Kelly, go ahead. And then Dale and then Richard.

13 PANEL MEMBER MORAN: Rob, I was wondering if you
14 could explain a little bit how, as you understand it right
15 now, how the Department envisions this prioritization scheme
16 which is chemical by chemical in nature, linking to
17 eventually the development of a rulemaking calendar, given
18 that it doesn't talk about use patterns or groupings or
19 anything else. I would just like to understand, is there a
20 linkage, what is the linkage. Kind of, where does this
21 prioritization go?

22 DR. BRUSHIA: I'm not sure I understand where you
23 are going. Where the prioritization goes though is it feeds
24 into this alternatives analysis and life cycle assessment
25 process that the law also calls for. That is -- I'm not

1 sure I fully understand. If you can maybe rephrase it.

2 PANEL MEMBER MORAN: I guess I'm confused because
3 it is a chemical by chemical thing. I see a chemical by
4 chemical list of prioritization. But I have heard outside
5 of this room, and this would affect how I would comment on
6 this which is why I am asking the clarifying question, that
7 the Department is recognizing that it may tackle in its
8 regulatory responses based on use patterns or grouping of
9 chemicals or other kinds of things. So I was trying to
10 figure out what does it mean to be a priority. And is this
11 the only way the Department envisions proceeding through the
12 process now. So what does that mean?

13 DR. BRUSHIA: Well, the way I envision what it
14 means is, first of all the law requires us to establish this
15 process to identify and prioritize chemicals. And it
16 doesn't talk about groups of chemicals. It talks about
17 identifying and prioritizing chemicals and chemical
18 ingredients of concern. And so that's kind of what I'm
19 working off of, it's what the law asked for.

20 And so I understand what you are saying but -- I
21 guess, I guess the response is that you are right, it's a
22 chemical by chemical approach to some extent. But
23 ultimately what we get out of it is a universe of chemicals
24 that are of high concern. Ultimately that then goes through
25 this process that we have, that we are developing to look at

1 each of those. To look at alternatives for each of those
2 chemicals and their respective uses.

3 I don't myself envision how we can deal
4 necessarily with groups of chemicals. Perhaps based on
5 structural relation. But I don't see how we can do that
6 because we are talking about a manufacturer using a specific
7 chemical that ends up in a specific consumer product. And
8 what the relative risks are associated with that particular
9 product and how they might be able to go back and change
10 their use of that chemical to reduce the potential impact of
11 that product and the chemical in that product.

12 So really we are talking about a chemical by
13 chemical process but it is done at the manufacturing level.
14 But it is designed to be a robust system that enables us in
15 essence -- that's one other thing that I wanted to point
16 out. We did consider initially just going out and adopting
17 lists of lists and I didn't mention that. You know,
18 everybody like I mentioned is developing lists. Canada has
19 a list and the list in Europe and the Candidate list for
20 REACH and so on, the endocrine disruptor list in Europe and
21 so on.

22 We wanted to avoid doing that I think to avoid
23 limiting ourselves. Rather if we look at the criteria that
24 they used that are already in place, and some of the data
25 sets that are being required elsewhere, our feeling I think

1 is that manufacturers to some extent are already generating
2 some of that data in efforts to comply with these various
3 regulatory requirements that are being put in place around
4 the world. So they should be having that data.

5 But it wouldn't limit us to only look at those
6 chemicals that have already been put on a list. We can come
7 back and say later, here is a chemical that belongs on our
8 list because of this, even though it is not on anyone else's
9 list for example. So that's kind of -- I hope that answers
10 the question.

11 PANEL CO-CHAIR CARROLL: Very good, thank you,
12 Kelly.

13 I have Dale, Richard and Art and then Tim.

14 PANEL MEMBER JOHNSON: Yes, this Dale Johnson.

15 I think you were answering my question I was going
16 to ask right there at the end. The use of data and so forth
17 from other countries, other regions and so forth. And you
18 mentioned that the law pretty much directed you to do that.
19 But it doesn't direct you to say that you have to use the
20 information in a certain way, correct?

21 DR. BRUSHIA: That is correct.

22 PANEL MEMBER JOHNSON: Yes. And then it also
23 applies to the way another country, the Netherlands or
24 whoever, prioritizes various chemicals. They go through
25 their priority list, they define the kind of volume, what

1 that means and so on and so forth. So that, so that kind of
2 information you would also look at but not necessarily
3 adopt.

4 DR. BRUSHIA: That's exactly right. I think that
5 what we are trying to do is take what we can adopt and apply
6 it to -- See, the systems that are in place are slightly
7 system than our system because we are really looking at what
8 actually ends up in the consumer product. And they may be,
9 they being other authoritative bodies, may be interested
10 because a chemical has been shown to be accumulating in the
11 environment. Not necessarily from just consumer product
12 usage but maybe from some manufacturing operation or some
13 other operation that is going on that is not perhaps
14 directly related to consumer products.

15 So you're right. I think we want to take a look
16 at these other things and use them to the extent we can
17 exactly as the law says. To the extent feasible.

18 PANEL MEMBER JOHNSON: So then one other question
19 on that. So then just the, you know, the concept of the
20 consumer product and so forth. Is there any indication of
21 how much you actually miss from a chemical impact on the
22 environment by just being associated with the chemical
23 product or the consumer product?

24 DR. BRUSHIA: That's a very good question. I have
25 no idea what that number might look like. But what I can

1 say is that the Green Chemistry Initiative in its total,
2 actually one of the other elements is, I believe, to look at
3 manufacturing processes and their impact. So I think that
4 ultimately it will be something that is looked at and
5 captured in the green chemistry system, whatever that turns
6 out to look like, when it is finally put all together.

7 But just for the purposes of this law we can't
8 look at that. I have no idea what the number is. And I
9 agree with you, it's probably something that we should be
10 interested in.

11 PANEL CO-CHAIR CARROLL: Very good. Flag down
12 please, Dale.

13 And Richard, you are next. We're sort of feeling
14 our way along here. This is meant to be questions and
15 clarification and not necessarily questions about your
16 approach to candidacy and your approach to prioritization.
17 I just want a substance check for the questions that are up
18 there. That's what we are all on, correct? Okay, go ahead.

19 PANEL MEMBER LIROFF: Okay. I thought we had
20 moved beyond the clarification questions.

21 PANEL CO-CHAIR CARROLL: No. And --

22 PANEL MEMBER LIROFF: I'll hold mine then.

23 PANEL CO-CHAIR CARROLL: I have a feeling what's
24 going to happen is that fine distinction ain't gonna work.

25 (Laughter.)

1 PANEL CO-CHAIR CARROLL: So we sort of tried that.
2 I don't get to make executive decisions at home, I'm going
3 to make one here.

4 PANEL MEMBER LIROFF: I'm going to try to support
5 the Chair here so I'll wait for Category 2.

6 PANEL CO-CHAIR CARROLL: I guess it's all in
7 bounds at this point because I think it's hard to hold
8 otherwise.

9 PANEL MEMBER LIROFF: Maybe I'm being overly
10 respectful then so I will add my question.

11 PANEL CO-CHAIR CARROLL: Absolutely, go right
12 ahead.

13 PANEL MEMBER LIROFF: This pertains to criteria
14 for inclusion on the candidate list. You know, looking over
15 the science literature I see scientists concerned about
16 neuro-developmental toxicants, immune system toxicants.
17 There's growing concern about diabetes and related metabolic
18 diseases. This slide lists a whole bunch of various listed
19 end-points. And I'm wondering if you can tell me whether or
20 not to your knowledge what's listed there includes these
21 various end-points that I just mentioned or whether they
22 ought to be mentioned specifically in this list of end-
23 points of concern.

24 DR. BRUSHIA: What I would suggest is that if you
25 have that draft straw proposal included in your packet that

1 you take a look at it because the list is much more
2 extensive. I just kind of tried to summarize a few here
3 without trying -- there's a lot on the slides already. I
4 didn't want to -- you know, it would take four slides
5 probably to put the entire list in there. But there are
6 criteria in there I think that would address exactly what
7 you are getting at.

8 PANEL MEMBER LIROFF: Thank you.

9 DR. BRUSHIA: Things like adverse human health
10 effects or potential adverse human health effects.

11 PANEL CO-CHAIR CARROLL: Rob, please put your
12 candidate slide up again, please.

13 DR. BRUSHIA: Is that the one you are referring
14 to?

15 PANEL CO-CHAIR CARROLL: Yes. So is that question
16 clear in your minds as something that's in play? There's a
17 little bit more detail on the prioritization question. I
18 would ask you to leave that on for the panel. You are clear
19 on this question. Please go down to the prioritization
20 question slide then and just leave that and I won't bother
21 you again. Well.

22 (Laughter.)

23 PANEL CO-CHAIR CARROLL: Maybe I won't bother you
24 again. Art.

25 PANEL MEMBER FONG: Art Fong. For the purposes of

1 this particular presentation does DTSC have a working
2 definition of volume? Is it volume of chemicals in the
3 consumer products or is it volume of chemicals in commerce?
4 I notice that both definitions were in your presentation.

5 DR. BRUSHIA: We do not have a definition and we
6 are actually asking you folks what you think. Keeping in
7 mind that the universe we are concerned with here strictly
8 is those chemicals that are in consumers products. However,
9 by virtue of the fact that they end up in a consumer
10 product, if they get onto our candidate list and become a
11 priority of concern, we can look at their volume as part of
12 the prioritization. Their total use I think, their total
13 volume of use I think in manufacturing that product I think
14 then can be considered. As long as they end up in the
15 product. Do you understand what I'm getting at?

16 In other words, if a chemical is used to make a
17 product and some of it ends up in the product but not all of
18 it, you still could consider that volume that didn't end up
19 in the product, I think, as part of the overall volume of
20 use. But I think that it has to be something that ends up
21 in a product that we are, that we are taking a look at.

22 PANEL CO-CHAIR CARROLL: Art, do you have an
23 opinion on what, what the right answer is?

24 PANEL MEMBER FONG: No I don't.

25 PANEL CO-CHAIR CARROLL: And that's -- Go ahead.

1 PANEL MEMBER FONG: Well obviously for, you know,
2 in terms of affecting the environment and public health,
3 obviously chemicals used in manufacturing that do not
4 necessarily end up in consumer products can potentially have
5 an adverse impact. So if the purpose of the Green Chemistry
6 Initiative is in fact to protect the environment and public
7 health, I don't see how you can separate the two. But
8 that's why I was asking a very specific question. For the
9 purposes of prioritization in your presentation, if you had
10 -- if DTSC in fact had a working definition at this point?

11 DR. BRUSHIA: We do not. And there's another
12 related question to volume and it's concentration. And
13 whether or not there should be a threshold concentration in
14 a product for anything that we are looking at. Again,
15 different chemicals have different hazardous characteristics
16 or may have different characteristics. Very different
17 potencies in terms of, you know, what type of biological
18 effect they may elicit.

19 So, you know, dose makes the toxin, I've heard
20 risk assessors say. But what is a potentially hazardous
21 dose of one chemical may not, may be totally different, you
22 know, a potentially hazardous for another chemical. So
23 what, what should we be looking to.

24 And unfortunately the law in this one area is
25 very, is not very specific, it just says, volume. And so we

1 are very interested in what -- we have no working definition
2 at this point and we are very interested in what the panel
3 might have to say regarding that and what kind of
4 recommendation you all might have.

5 PANEL CO-CHAIR CARROLL: Thank you, Art.

6 Two things. First of all, we have -- On the list
7 we have Tim, Richard Denison, Michael, Ken, Bob, Lauren,
8 Debbie and Megan in the order that I've seen you.

9 Second, and the reason that I prompted you on
10 this, Art. Asking questions is fine. But in many cases you
11 are asking a question because you have a point of view that
12 goes along with it. Please feel free to express that point
13 of view, that is also part of the dialogue that we are
14 trying to, that we are trying to get here.

15 Okay, Tim.

16 PANEL MEMBER MALLOY: Thank you. Just two points.

17 One, is it okay to suggest additional criteria for
18 inclusion now?

19 DR. BRUSHIA: Sure.

20 PANEL MEMBER MALLOY: We can do that? I'm
21 wondering whether you had considered. And I guess I would
22 suggest for inclusion also, size. And what I'm getting at
23 there is whether what you have is a nano-material or not?

24 The other question, I guess. And I don't have a
25 point of view on this as of yet. But the question is, when

1 you talk about prioritization and you have those factors, do
2 you have a sense of how those factors would work, in the
3 sense of, are they interrelated? Thus, can a smaller volume
4 but a higher, you know. I don't have the list in front of
5 me but -- something of small volume but a high potential for
6 exposure come in? Or would each of these operate
7 independently of the others?

8 So is there a weighting? Would there be a
9 weighting of these criteria? Would there be an interaction
10 between those criteria? Or is this just a list that if you
11 fall within one of them you fall within a particular tier?

12 DR. BRUSHIA: My personal feeling is that it has
13 to be either/or. I mean not either/or but both situations.
14 That if you fall, that if you make it onto the candidate
15 list because of our initial screening criteria and you meet
16 any one of these factors that you might then be labeled a
17 chemical of high concern.

18 Or if you meet any combination of these factors
19 like you're saying. Maybe a chemical isn't there in what we
20 might consider above a threshold volume amount but at the
21 same time maybe there's a really high risk for exposure to a
22 sensitive subpopulation. And those factors should weigh, I
23 think, in the overall evaluation of that chemical.

24 And again, any input that the panel might have in
25 terms of how these criteria that we have created or proposed

1 might go together and might be weighted would also be very
2 welcome information.

3 PANEL CO-CHAIR CARROLL: Okay, very good.
4 Richard.

5 PANEL MEMBER DENISON: Three quick questions/
6 comments. One is, you have I think very appropriately
7 identified lack of hazard data as a potential criterion for
8 identification and prioritization. There is a comparable if
9 not larger lack of data on use of chemicals. And you have
10 relegated that in some ways to a step that would take place
11 at the beginning of the prioritization process.

12 And I'm wondering if you have had any
13 consideration of bringing use criteria into the
14 identification process and also conceivably moving up the
15 collection of better use information in California to help
16 in the identification of chemicals if that information is
17 not sufficient? But even without that collection you could
18 conceivably have use criteria for chemicals used in
19 particular kinds of products, for example, as an
20 identification mechanism.

21 Second, I'm wondering if the Department reads the
22 law as requiring a low priority classification. Or whether,
23 and I personally find it very problematic when based on very
24 incomplete information, agencies start calling things low-
25 hazard, low-exposure, low-priority, as opposed to

1 identifying things where the available information, as
2 imperfect as it is, is sufficient to say it's a high
3 priority. So I would urge may rethinking whether you need
4 more than one bin, frankly.

5 And the third is, I think in terms of the
6 identification criteria, they looked a little bit heavily
7 weighted toward human health and not necessarily eco
8 criteria. And for example there's a lot of air lists but no
9 water lists, or at least I didn't see them. So it might be
10 that you would want to add in some criteria that are more
11 eco and water oriented.

12 DR. BRUSHIA: Thank you. Exactly those kind of
13 comments are what we are looking for. And I'll agree with
14 you that up until this point in time we haven't put in that
15 many ecotoxicity. And if you have any specific suggestions
16 on specific ones that we might consider we would also be
17 interested in getting that from you and we are going to look
18 more at that.

19 And as far as use goes and putting use into the
20 identification process. In a way it's there. It may not
21 just be obvious in that, you know. First of all, we have to
22 know that these things that we are going to focus on and
23 require to go through this process are in consumer products.
24 So we are going to have to get some sort of information on
25 where they are and what's there.

1 The other thing is that when we are looking at
2 specific subpopulations, for example. Well that implies
3 something like children's toys, for example, that children
4 are more likely to put in their mouth. Again, we will have
5 to get -- in order to make the prioritization work we will
6 have to get some of that information. And we are
7 considering ways to do that. And again, if you have
8 additional recommendations on how to get it. But I think
9 the straw proposal has some discussion of how to get that
10 use information.

11 PANEL MEMBER DENISON: Could I just clarify. I
12 totally agree with you, it's there in the prioritization
13 process. I was suggesting there might be a set of
14 additional criteria for identification in the first place.

15 DR. BRUSHIA: Oh I see. Indeed, it could be in
16 there where it's used. Although the way that I kind of
17 structured it, just to let you all know, is that the
18 candidate list would be everything, not necessarily just
19 those things that end up in consumer products. It would be
20 everything that we are interested in looking at further and
21 then evaluating their use and so on.

22 We have to have some way of getting from, you
23 know, from no knowledge to use knowledge. And so if we
24 bring a chemical into the process because of some criteria,
25 whatever that may be, then maybe we can get some use

1 information on it in order to help us further prioritize
2 that chemical. And so that's kind of the way I was looking
3 at it. But we could certainly and we will take that under
4 consideration.

5 PANEL CO-CHAIR CARROLL: Thank you, Richard.

6 Michael.

7 PANEL MEMBER WILSON: Thank you. Mike Wilson.

8 So my question in really trying to go back and
9 forth between the statute and the draft straw proposal is as
10 we move from the chemical universe to the candidate list to
11 the prioritized chemicals. It seems that in reading the
12 straw proposal that it was only those chemicals that are
13 identified within the priority chemicals that are the
14 chemicals of greatest concern or high concern that are then
15 actionable. That was the way I was reading the straw
16 proposal.

17 And yet then when I read the statute and from your
18 slide it looks to me that there's, if we were to draw from
19 the prioritized chemical list and identify low or, you know,
20 as you said, sort of a range of levels of concern, that any
21 one of those could be actionable by DTSC through regulation.

22 And so my question is, was it intentional in the
23 straw proposal to constrain the actionable chemicals to
24 those of high concern? In other words, that triggers, that
25 triggers the alternatives analysis and so forth.

1 DR. BRUSHIA: You know, I really hadn't thought of
2 it in that context before but in a way that is the way that
3 it's written, you're right. And that was intentional but
4 not -- well, unintentionally intentional, how's that. What
5 I'm getting at is that it's still, we are at such an initial
6 stage it still remains to be seen how all this is going to
7 flow together. And ultimately we want a clear flow from
8 once we identify a chemical and label it as, of concern, to
9 this point where there is some ultimate regulatory response.

10 Our idea is, again, that we have, you know, high
11 and low or what have you, or tiers or however that turns out
12 to look. But we are not exactly sure. I mean, our idea I
13 think is that the highest priority chemicals will be the
14 ones that will go through this process. And others, exactly
15 I think the way that Dr. Denison was talking about. Why
16 have other criteria, why have other categories. You have
17 those that you need to go through the process, you have
18 those that you don't because evidence suggests they are not
19 a problem or whatever.

20 And again, that's what we want to get your input
21 on. But I think that's how we kind of envisioned it in
22 drafting the straw proposal the way it looks now. But if
23 you have a recommendation on tiers, and ultimately we decide
24 to take a look at that, then we would have to have sort of a
25 different approach at dealing with those. And presumably

1 they would feed into our different regulatory response
2 actions in some way. Whatever those turn out to look like.

3 PANEL MEMBER WILSON: If I could just follow that
4 up with a comment then. That it would be my recommendation
5 that, that chemicals that are sort laid out by tiers would
6 be actionable, sort of appropriate to each tier. Rather
7 than constraining action to only those of high priority.

8 And it may be that there are substances of high
9 priority that might not be even appropriate to conduct an
10 alternatives assessment. That they are of such that they
11 should be moved directly to another sort of actionable step.

12 So I guess I would encourage that we keep that
13 discussion open and the actionable substances open.

14 DR. BRUSHIA: Certainly. And that, again to the
15 entire panel, is exactly what we want to hear. If you have
16 ideas for a tiered-type structure like that and what it
17 should look like we would be very interested in hearing some
18 of your ideas on how -- how chemicals would be placed, what
19 the different tiers would be. How many of them there would
20 be, even. I mean, should there be three, six. What should
21 the criteria be that put a chemical into a given tier. And
22 you can make an argument for all different sorts of
23 combinations but what really is the best way to structure
24 that.

25 PANEL CO-CHAIR CARROLL: Thanks, Mike. Does that,

1 does that address your --

2 PANEL MEMBER WILSON: Yes, very good, thank you.

3 PANEL CO-CHAIR CARROLL: Let's do a couple of
4 things here. First of all on the list I have Ken, Bob,
5 Lauren, Debbie, Megan, Dele, Roger and Jae at this point, in
6 that order, just so that you can be prepped.

7 Second, we are starting to get some questions from
8 the web. And many of those questions as we are looking at
9 them are questions that are more appropriately addressed to
10 DTSC and not what would be part of the public comment sort
11 of part of this.

12 So for those of you on the web, if you have
13 questions, if you are asking DTSC how they might interpret
14 something, I would ask that you submit those questions in
15 one of the other venues that you might, that you might
16 otherwise use. Those questions appropriately do go to DTSC
17 and will probably not be dealt with in this venue. And I
18 wanted to offer that clarification.

19 Okay Ken, the floor is yours.

20 PANEL CO-CHAIR GEISER: Yes, Rob. I see you --
21 What I am trying to do here is also modeled with what I'm
22 hoping the panel can do, which is to try to answer some of
23 the questions you laid out there. You've got two blocks of
24 questions but I think that they are related.

25 I'm a big fan of tiering. I feel out of the years

1 of working with TURA we have learned some of the value of
2 tiering. So what we have to do is after a period of time we
3 decided we did need to tier in order to do a couple of
4 different things. One reason, which is to manage. To
5 select chemicals. To know where you are in a kind of
6 landscape of chemicals, as to what you are prioritizing and
7 what you are not in regards to a set of different levels of
8 thinking about the chemicals.

9 I'm concerned therefore when you think about
10 putting chemicals of what you might call unknown, the not
11 enough data, into the same category as chemicals of high
12 hazard or a hazard. And I think that that is a problem
13 because it tends to mix two different things in a way that
14 -- I know it's a driver but I think it mixes two different
15 kind of intentions there. And it does not point the
16 scientific community to those chemicals for which we don't
17 have enough data, which is a particularly important block of
18 information if we are going to try to advance information
19 about chemicals. And merging those two categories together
20 I think robs us of that.

21 The second reason why I think tiering is important
22 is because I think it gives a landscape for those in the
23 unregulated community or whatever you want to say, the
24 public, to know which chemicals are in what kind of
25 relationship to each other. Particularly for firms that are

1 trying to make selection decisions in forming an
2 alternatives assessment. It's useful to know whether you
3 are talking about high-hazard chemicals or hazardous
4 chemicals or chemicals of unknown hazard or chemicals of
5 some kind of low hazard.

6 And here, I respect Richard's point but I think
7 that it is useful to have some kind of category which does
8 not rob the idea of a chemical having a hazard but that it
9 is of a lower, maybe an acute hazard or something of that
10 nature.

11 So I feel like an answer that I would offer comes
12 out of the TURA program. That we have a much smaller
13 universe of chemicals, about 1200 chemicals, of which we
14 identified about 190 as hazardous chemicals. And then about
15 32 is the high-hazard chemicals and then actually a much
16 smaller group having to do with things that were focusing on
17 any one year in order to keep a management flow going
18 through the program itself.

19 But the background of that is it created a whole
20 landscape for people to be able to tell where we were and
21 how we were progressing. And I would urge you to think
22 about that as you think about this. Thank you.

23 DR. BRUSHIA: Thank you.

24 PANEL CO-CHAIR CARROLL: Bob.

25 PANEL MEMBER PEOPLES: Okay, thank you, Bill. Bob

1 Peoples. A couple of points.

2 First of all I wanted to echo Richard's comment
3 about eco criteria. I felt that there were some
4 opportunities when I read through your straw model on that
5 one.

6 But more importantly I want to go back to Art's
7 comment about distinguishing source for exposure. And I
8 believe this is a clarification question on my part. You
9 know, as I read the requirements they are product-focused.
10 Yet the question is, how do you distinguish exposure from
11 product versus manufacturing operation and more importantly,
12 end of life criteria? So once it gets into the environment
13 through another mechanism.

14 Am I correct in assuming that end of life is
15 incorporated in the criteria under the product category but
16 manufacturing is not at this point in time. And how are you
17 going to reconcile that conundrum?

18 DR. BRUSHIA: I think not exactly is the answer.
19 And the reason I say that is because the way that a consumer
20 product is defined, a chemical that is being purchased by a
21 manufacturer to use in their manufacturing operation could
22 fit the definition of consumer product and therefore would
23 be something that is subject to this process, in the context
24 of that chemical being a product. So in essence you might
25 capture those things that are used in manufacturing

1 operations if that transaction is going on here in
2 California.

3 PANEL MEMBER PEOPLES: So if I could just peel
4 that onion another layer here. If you are buying a chemical
5 and putting it into a product you would see that differently
6 from manufacturing a chemical and putting it into a product.

7 DR. BRUSHIA: That's a good question that I don't
8 think I can answer.

9 So if you are a manufacturer that actually
10 manufactures the chemical you have also put in a product
11 that you manufacture and you are not buying it from anyone.
12 Well, I think --- the law says, uses in California, right?

13 MR. OWEN: Brought or used.

14 DR. BRUSHIA: Bought or used. The law defines
15 consumer product as anything that may be bought or used.

16 Brought, I'm sorry. Brought or used.

17 Yes, Joe has a comment.

18 MR. SMITH: Let me address that. The word brought
19 in there. In the definition of consumer product, it means a
20 product or part of the product that is used, brought or
21 leased for use by a person for any purpose. And the word
22 brought there we believe is a typo because there is some
23 cleanup legislation that is going through now to change that
24 word to bought, okay. So it can be used for any purpose.
25 And that's what we have to look at, chemicals of concern in

1 consumer products. So if the manufacturer is making a
2 consumer product then it's got -- and it's got the end
3 product as a chemical of concern in it, it's in the system.

4 PANEL MEMBER PEOPLES: Okay.

5 DR. BRUSHIA: But Joe, if the manufacturer is
6 actually making a chemical, that is something that may be
7 used, right. And then they are taking that chemical
8 themselves and making a product out of it that then they
9 offer for sale, is the chemical in that context -- They are
10 not buying it from another chemical supplier, they are
11 making it themselves to use in their own product. Is the
12 chemical in that context a consumer product?

13 PANEL MEMBER PEOPLES: We've stumped Joe.

14 MR. SMITH: Well, you have got to think about
15 these things carefully.

16 PANEL MEMBER PEOPLES: Well this is an example
17 where you can come back and seek clarification on this
18 particular issue.

19 MR. SMITH: Okay, let's do that.

20 PANEL MEMBER PEOPLES: Okay, so I do have one
21 other quick clarification question, I think this will be
22 easy. Are things like fuels, oils and lubricants considered
23 products in the scope of this ruling?

24 DR. BRUSHIA: I believe so, absent any specific --
25 there aren't any specific exclusions or exemptions are

1 there, for those types of things, fuels. So yes, they would
2 be considered also.

3 PANEL MEMBER PEOPLES: Okay, thank you.

4 PANEL CO-CHAIR CARROLL: Okay, let me just review
5 the bidding as to where we are right now. We are at about
6 2:16 by my watch. We have about 45 minutes remaining for
7 this segment. We'll go through this. I would like to
8 perhaps reserve a minute or so at the end and call my own
9 number but I am not going to do that until we get to the
10 end. So Lauren, Debbie and Megan next in line.

11 PANEL MEMBER HEINE: Thank you. I have been very
12 impressed with what you have pulled together already, it's
13 very comprehensive, and I just wanted to build on a couple
14 of other ideas. My name is Lauren Heine.

15 I believe that what you are doing has great
16 potential to drive continual improvement. And the idea of
17 tiering, I really support that. And I would like to address
18 a couple of ideas.

19 First of all I think it is really important to tie
20 these chemicals to use. Application and both functional use
21 of what function the chemical serves within a product.
22 Because if you take a kind of global perspective on what is
23 a chemical of high concern you may end up in a situation
24 where you miss certain things that are of high concern in
25 certain product classes. For example, what may be of

1 moderate concern in a paint stripper would be a very high
2 concern in a baby shampoo. Something like that.

3 So I think it's important to keep it tied to the
4 product so that when you are comparing paint strippers to
5 paint strippers you can begin to notch down the use of the
6 highest hazard chemicals. And when you are comparing baby
7 shampoos to baby shampoos you can begin to notch down the
8 use of the higher hazardous chemicals. And I think it's
9 important not to lose that when you take only the global
10 metric. You want to have sort of have the best in class
11 metric as well to complement it.

12 And I think the idea of multiple tiers is really
13 important. I like the idea of -- I agree with what Ken was
14 saying about keeping the unknown data as a subset of the
15 high category but separate from the results.

16 But also there's potential here to have a low
17 category that could really identify greener chemicals that
18 are fully assessed and low hazard across a spectrum. And
19 that would be really important for people to know that these
20 chemicals are fully assessed and they do appear to be a low
21 hazard. Of course, water will kill you if you, you know,
22 whatever. But you are really, you are really capturing
23 that. And that will help to drive a continual improvement
24 as well.

25 And then finally, I was wondering if there is a

1 process of adding chemicals. There are things that might --
2 if we make the criteria pretty black and white there may be
3 things that slip through. And what will be the process of
4 nominating additional chemicals. Something we find out
5 later is a kidney, a severe kidney toxic and then it's used
6 in a lot of products. How do you begin to add that to a
7 list if it doesn't get captured as a CMR or a PBT or
8 something like that?

9 DR. BRUSHIA: Okay, a couple of comments. One on
10 the first part of your talk when you were talking about the
11 evaluations. I think you are only hearing one small part of
12 the overall big picture in terms of AB 1879 implementation.
13 I think that some of Nancy and Bob Boughton's analyses get
14 at exactly that, taking a look at different uses and
15 different products and how, you know.

16 We are trying to create a robust system that just
17 gets chemicals into the system. And then their system would
18 then look, I think, at individual uses and would go through
19 that process of trying to identify, is this use in this
20 particular context safe or not safe, or do you need to do
21 something to change it and so on. And then that would feed
22 into the regulatory process.

23 The tiered comment. A really good idea actually
24 about the lower tier. I never had even thought of that
25 possibility and that's a really, really good ideal I think

1 to do that. There was something else I wanted to say.

2 PANEL MEMBER HEINE: A question about nominating
3 new chemicals.

4 DR. BRUSHIA: Right, nominating new chemicals. We
5 don't have a process for nominating new chemicals. I think
6 what we are trying to do is set up a robust enough system
7 that we don't have to necessarily worry down the road that
8 we won't capture things. And the way that we are doing that
9 is if you look at the specific criteria there are criteria
10 in there that say things like, demonstrates any potential
11 adverse human health, or effect on human health or the
12 environment. So that's kind of a catch-all phrase. And
13 it's meant to be so that we could say -- Something like
14 you're talking about would be something that puts a chemical
15 into that category.

16 PANEL MEMBER HEINE: Thank you.

17 PANEL CO-CHAIR CARROLL: Debbie, it's you.

18 PANEL CO-CHAIR RAPHAEL: SO I am going to model
19 something right now, since Ken modeled it, and that is to be
20 contrary a little bit to the discussion that just happened.
21 And maybe it's just a point of clarification.

22 So where i'm coming from is, setting boundaries.
23 Trying to think of a way to get my arms around this problem
24 and set the boundaries to it. And when I think about your
25 presentation there's sort of two screens. So there's the

1 first screen of every chemical out there in commerce, let's
2 just say that 80,000 number that we have, screening it to
3 being on these lists or meeting these criteria. And that's
4 our candidate list, okay.

5 Now by definition the way I hear that, everything
6 on that candidate list is there because there is something
7 of concern about it, otherwise it wouldn't be on one of
8 those other millions of lists. So I can't imagine a
9 scenario of a low hazard, safer substitute, green thing
10 potentially on that candidate list because you have already
11 screened out so many products. So that's my first kind of
12 conundrum here.

13 My second conundrum is when I look at these
14 priorities they don't seem to do anything in that second
15 screen. They seem so, they seem to be almost a repetition
16 of what got things on that list to begin with.

17 And so I think that this idea of setting tiers,
18 and I'm really intrigued by Mike Wilson's comment about
19 thinking about setting tiers to the regulatory actions. And
20 this is where the whole iterative process of this becomes
21 challenging in this where we are talking about it's
22 sequential in a process that may be iterative.

23 But thinking about -- the easy example would be
24 the things where there is little data. The regulatory
25 action would probably not be a ban, it would be the more

1 information regulatory action, right. So that's an easy
2 example of taking a tier and linking it to a regulatory
3 action. There may be some other easy ones like --

4 Well one of the prioritizations that's not on
5 here, at least I'm not sure if it is, is banned from
6 landfill in California. Again, that would be an easy
7 prioritization for the end of life management regulatory
8 action. And so you might think in those tiers and groupings
9 in terms of those regulatory actions, I like that idea.

10 My concern is that these prioritizations are just
11 not going to get you down to any sort of list, especially
12 when I see something that says, any evidence suggesting that
13 there are reasonable grounds for concern. I mean, it
14 wouldn't be on that candidate list of concern if it didn't
15 already have that.

16 So my advice would be to not try and make the
17 perfect be the enemy of the good. And I know we are going
18 to hear a lot of things like that. And think about what you
19 can accomplish in perhaps Phase 1 of implementation of 1879
20 and set that screen a little tighter, biomonitoring data,
21 whatever. And then the final -- sorry, I'm now not getting
22 articulate here.

23 And the thing about volume. So the end-point
24 about volume is in a way that's the hardest one because that
25 one requires all these unknown information that Richard was

1 talking about, Richard Denison, about what's in products
2 now. And what I am assuming though is that these are ors,
3 not ands. And so the volume could stand alone as a tier and
4 you could actually come back to things. And as you get more
5 information that tier that's in there because of volume will
6 grow over time as information becomes more available.

7 PANEL CO-CHAIR CARROLL: Very good. Thank you,
8 Deb.

9 Megan.

10 PANEL MEMBER SCHWARZMAN: Thanks. I'm going to
11 pick up where Debbie left off on the volume, which is a
12 really thorny issue, I think that's why you are asking it.
13 And the more I think about it the thornier it gets as we
14 start talking about the definitions of the consumer product.
15 Then you get into the definition of the consumer product is
16 bought or used by a person. And then I look on page, is it
17 page two of the straw proposal? It defines person as an
18 individual, a company, a trust, a firm, a business concern,
19 whatever.

20 And it makes me, when you say what's our working
21 definition of volume, it makes me wonder if we are not
22 through all of these legal definitions back sort of where
23 the EU is with defining volume in commerce. Just using that
24 as their first screen. And it's not like, not like the law
25 or the straw proposal has intentionally done that. But it

1 almost sounds like through legal definition that that's
2 where we are. If it is anything used by anybody for any
3 purpose or bought by anybody for any purpose, and that
4 anybody can be a company as well as an individual person.

5 The idea of that being our normal understanding of
6 what a consumer product is in common language, it doesn't
7 seem to be the same to me anymore. And so I am just
8 wrestling with that idea of what it should be, you know.

9 I tend to, I hear what Lauren is saying and I
10 think it's an excellent idea about being able to look at, I
11 think especially as we move toward looking at alternatives.
12 They have to be use specific. And yet when I think about
13 setting a priority based on intended use, that again gets
14 very difficult for me because we think of PCBs, say. That's
15 not something you would have flagged because it is intended
16 for use by children. And yet we know we got into a lot of
17 trouble with it. It's not intended for use by pregnant
18 women or children or something like that.

19 So I tend to want to pull back a little bit from
20 the product category and look at some of the other
21 surrogates for exposure or for a potential hazard like
22 resistance in the environment or bioaccumulation. And those
23 aren't the only ones obviously. But just to sort of
24 reintroduce that idea of it's not just about products.

25 The statute hasn't limited it to our own

1 understanding of, you know, what we would go to the store
2 and buy being a product. But it makes me ask, what is the
3 definition going to be? What universe of substances is this
4 law or is the set of regulations going to apply to? Because
5 when I look at the legal definition it seems to be, to me to
6 say sort of, all chemicals in commerce. I wonder if you
7 have any thoughts on that.

8 DR. BRUSHIA: I think we have had a lot of debate
9 on that exact subject. But our conclusion has been, I
10 think, that it is not necessarily all chemicals in commerce,
11 if I am not mistaken, it's consumers -- I mean, it's
12 chemicals that actually end up in consumer products, as
13 consumer products are defined by the statute. And we can't
14 change the definition in the statute to make it less. We
15 simply really can't change it because it is in the statute
16 and that's a superseding law.

17 PANEL MEMBER SCHWARZMAN: Right. So I'm just
18 thinking about how as you struggle to write the regulatory
19 language, it's in line with the statute but in a way that
20 makes functional sense in the world. Which is I think why
21 we are all here, right.

22 DR. BRUSHIA: Yes. Peggy was just mentioning that
23 we could make it like a different tier, I believe. Did you
24 want to --

25 MS. HARRIS: Well, we have thought about that too

1 because the statute does cast that net very, very broadly.
2 And one of the things that I have thought about would be, is
3 there a way that we could regulatorily narrow -- the
4 regulations can't be different than the statute. But we
5 could make the regulatory definition narrower in scope. But
6 then perhaps phase in the broader definition through tiering
7 or through application or whatever.

8 So we'd say, initially we will deal with consumer
9 products that would perhaps meet our most common definition
10 of what a consumer product is. And then those that would
11 meet this broader definition we could address at a different
12 time. Just as a way to sort of struggle with, how do we
13 deal with this extremely broad net. It's just an idea.

14 PANEL MEMBER SCHWARZMAN: Obviously it's a
15 conversation that needs to continue happening.

16 But I guess just to get in my other thought that I
17 wanted to raise is to echo a little bit what's come up about
18 the issue of having a non-linear process. And that will
19 probably come out as we talk about more parts and processes.
20 But that each level shouldn't hit -- each point moving
21 through the regulatory process shouldn't necessarily hinge
22 only on surviving the previous one.

23 So does everything have to have met the criteria
24 for being of high concern to enter the process of an
25 alternatives assessment, and does everything have to have

1 gone through an alternatives assessment to enter, you know,
2 subject to regulation. And I think a lot of people here
3 would argue no, and I'm saying definitely no.

4 And I think that's what Debbie was suggesting, a
5 bit about pinning these particular regulatory actions to the
6 levels of designation or the reason they are on the list.
7 And I would support that.

8 PANEL CO-CHAIR CARROLL: Okay, let me do the
9 following. We have approximately 25 minutes remaining in
10 this segment. I have five people who have not yet spoken
11 who are asking for the floor. I have three people who are
12 asking to speak for a second time.

13 What I would like to do is go through the five
14 people that I have who have asked for the floor but have not
15 spoken. And then I want to check to make sure that no one
16 who has not spoken still wants the floor.

17 I am going to ask each of you to remember to be a
18 bit economical on your time as we have about 25 minutes
19 remaining in this segment. In no means do I want to
20 truncate your statement but just be thinking about the rest
21 of the bits of this that we have to get in.

22 Dele, it's yours.

23 PANEL MEMBER OGUNSEITAN: Thank you. I think our
24 advice to DTSC will be more precise if we begin with the
25 interpretation of the letter of the law than the spirit of

1 the law, which can take us places which will be what the
2 National Academy says will take 100 years to do.

3 So for example, if we go with the definition of
4 person, that's all the chemicals in production. There are
5 lots of people, manufacturers, in California. But the key
6 word is consumer here. And also to think about the word
7 product. By that product I would assume it's a manufactured
8 product and the consumer is not somebody who buys a product
9 for resale or for reconstitution and resale.

10 So what we probably should start with is a
11 compendium of all products that any individual can go to a
12 store and buy, not for the purpose of reselling but use and
13 then dispose. Because I think that's what this is supposed
14 to guide us.

15 Also what we don't have right now is what they
16 call the Bill of Materials for all these kinds of products.
17 So beginning with a very narrow scope of something, somebody
18 can go to these, what are the ingredients of those products.
19 I think if we begin with that we will be able to get a
20 handle on what the volume question is.

21 We also need to think about the fact that products
22 come online all the time. It would be extremely expensive
23 to get information on the chemical components of all the
24 products currently in consumer hands, in circulation. But
25 we need to set a deadline, a date for new products that are

1 coming online, that this is the responsibility of the
2 manufacturer to provide the information on the chemical
3 ingredients so that we don't have to do this in retrospect
4 anymore. But we have to spend some money and agency time
5 now to find out what's in all of these narrowly defined
6 consumer products.

7 DR. BRUSHIA: Thank you for the comment. And if
8 you look at the straw proposal there's been a lot of talk
9 here on data acquisition. There are some elements of that
10 in the straw proposal that weren't presented here because we
11 were focusing on just the identification and prioritization
12 process. But there is some information in there on what we,
13 the kinds of things we are thinking about in terms of
14 acquiring data.

15 PANEL CO-CHAIR CARROLL: I have Roger, Jae, Julia
16 and then Michael K. over here. Roger, please.

17 PANEL MEMBER McFADDEN: Thank you. Roger
18 McFadden.

19 Rob, compliments to you and your folks at DTSC on
20 a great, a great report. One of the advantages of waiting
21 this long is I get to hear some of the other comments. I
22 wanted to, if I could, talk about the uses. One of the
23 reasons that I would support looking at uses, that you look
24 at that. Let's take vinegar, baking soda and lemon oil as
25 examples. All food products, used in food products.

1 But some people use those as alternative cleaning
2 agents. So by looking at even those that are exempted you
3 could begin to make a case that maybe we have exempted
4 certain chemicals, or products in this case, that may be
5 used for applications outside of the normal use.

6 The other one is definitions are going to be
7 important here. As chemists or scientists here we are
8 familiar with elements, we are familiar with compounds, we
9 are familiar with mixtures, we are familiar with
10 ingredients. People call things ingredients, they call them
11 products, they call them materials. There's a whole bunch
12 of different words that can get mixed up here if we don't
13 clearly define them. So I would encourage that we move
14 forward with some clear definitions for when we use these
15 words. And of course we are limited, I understand, by the
16 statutes and what the law says and sometimes you are not
17 allowed to do that.

18 I'd like to cover all three of your questions real
19 quick. I would suggest adding in your criteria, corrosives.
20 And maybe they're here. I don't have the full document. If
21 they are I'll beg forgiveness. Corrosives, sensitizers,
22 neurotoxins, asthmagens, irritants and flammables. All of
23 those, some are physical properties but they can have an
24 effect on the user and on the environment and on us as
25 people. So I would encourage that we add those if they

1 haven't been.

2 The issue of volume and concentration. Probably
3 would suggest you look at the volumes of these chemicals in
4 the US and also in California to get an idea. Those are
5 probably already out there. There's probably -- Industry
6 probably already collects that data. To screen these
7 hazardous substances against how much of those are being
8 made now. And then use that as a screen to help you, you
9 know, dig in deeper.

10 As far as concentration it is critical that we
11 understand how much of these chemicals are used in products.
12 And so I think the concentration in the product will be
13 critical for the end user. Again, this is about people. We
14 in the supply chain, are part of the supply chain. My kids,
15 my grandkids, they are all users and consumers of these
16 products.

17 I want to make sure that we use cradle to cradle
18 thinking here. That we don't just start looking at
19 chemicals at a certain place but that we understand
20 chemicals are reactive, they are made. They are made in
21 different processes. Some processes are easier on the
22 planet than others. And when we can we should try to
23 identify the process itself. The synthesization, the
24 synthesis process used to get to that particular chemical.

25 Sorry for taking so much time.

1 PANEL CO-CHAIR CARROLL: It's quite all right.

2 Comments?

3 DR. BRUSHIA: No. Thank you for all those
4 comments. I mean, we'll definitely take the transcripts and
5 the notes and we'll take under consideration all these
6 things that you guys are putting forth.

7 PANEL CO-CHAIR CARROLL: Thank you, Roger.

8 Jae.

9 PANEL MEMBER CHOI: Thank you. I second to
10 Roger's comment. You know, this is the beauty of being the
11 last person, the last person to learn all the comments.

12 The number one, I like the idea of what Ken and
13 Debbie mentioned about, I call it a phase-in program.
14 Because being in industry so long, I mean, we cannot cover
15 everything in two months or two years.

16 So my interpretation of consumer product is
17 finished goods or an end product that I or you do not have
18 to mix. Like Tide or Windex, for example. So my, you know,
19 wish is to use concentrations for labeling. I think
20 somewhere you guys mentioned labeling.

21 Because in that way we have to think about how the
22 state of California can enforce this list, for example. For
23 enforcing stage you cannot possibly cover volumes, for
24 example. So in that sense I'd like to suggest your team
25 should consider the enforcing point of view.

1 The other one, Roger make some, you know, baking
2 soda example. But like Windex, for example, 99 percent
3 water or alcohol, right? But there is small ingredients
4 they don't tell us, which is a surfactant, which is usually
5 made by like BASF. Pyrrolidone or something like that. A
6 surfactant, that actually make Windex more environmentally
7 friendly, okay. So Tide is the same thing.

8 So therefore into this phase-in program, or what Ken
9 says, tiering program, must be considered in order for state
10 of California. Easy for them to enforce. Because if we
11 don't enforce after all this is not very good, right. So
12 that's one suggestion I have.

13 And then the other one, in terms of win-win-win.
14 It means a win for state of California, win for public, win
15 for manufacturer or the producer of a consumer product. Is
16 that we have to make a common-sense approach here in terms
17 of using labeling, that's one, in addition to controlling
18 according to the chemicals. So Robert's idea in terms of
19 getting some kind of a database, and relying on
20 organizations like REACH, they have a huge compilation of
21 chemicals with all the ingredients that you may need such as
22 any medical criteria or environmental criteria, et cetera.
23 So thank you.

24 PANEL CO-CHAIR CARROLL: Thank you, Jae.
25 Julie.

1 PANEL MEMBER QUINT: I'm Julia Quint, I'll be very
2 brief.

3 In looking at the issue of volume and
4 concentration. When you look at products, first of all,
5 there are many different products, you know, with toxic
6 chemicals in them of varying concentrations. And then there
7 are also mixtures of toxic chemicals and products, you know,
8 and synergistic effects and those types of things. So I
9 think in prioritizing, you know, on that issue of
10 concentration we may have to look at the numbers of products
11 that might be a cut --

12 I mean, I'm familiar with the National Library of
13 Medicine's Household Products Database. And if you search
14 that database on a toxic chemical that would fit your
15 criteria you can find like 312 products, all of which, you
16 know, would be consumer products of varying concentrations.
17 Some of which have 90 percent PERC in them and things like
18 that. So it's complicated just to talk about concentration
19 in consumer products. It varies.

20 So you could have -- for one of these chemicals of
21 interest we could have products ranging from 10 percent to
22 90 percent. And for those with 10 percent we could have,
23 you know, many different chemicals of concern. So I just
24 raise that because I have been looking at that database
25 recently and very interesting information in it. And they

1 are all consumer products.

2 DR. BRUSHIA: Thank you.

3 PANEL CO-CHAIR CARROLL: Very good. Thank you,
4 Julia.

5 Michael Kirschner.

6 PANEL MEMBER KIRSCHNER: All right, thank you. So
7 Rob, a couple of, a couple of clarifying questions and some
8 comments.

9 The question, what is a consumer product? I deal
10 with a lot of companies that make things that they don't
11 consider a consumer product but they are bought by people
12 for use in California. Large electronic equipment that's
13 servers or network infrastructure or a piece of, you know,
14 \$5 million fab equipment that's used in a fabrication, an
15 electric fabrication facility.

16 You don't go to a Target or to a Circuit City and
17 buy those sort of things. So it's not at a retailer where
18 you see that product. Would those be considered within the
19 scope here?

20 DR. BRUSHIA: I think it's our interpretation that
21 yes they would.

22 PANEL MEMBER KIRSCHNER: That's what I thought.

23 DR. BRUSHIA: Because of the definition in the
24 statute.

25 PANEL MEMBER KIRSCHNER: That's what I thought,

1 okay.

2 So I also wanted to again echo, the chorus of
3 echoes to Richard Denison's incorporation of more eco tox
4 criteria. Particularly in California where we find
5 chemicals that we don't expect to find in places in the
6 environment like in estuaries. For instance, there's a
7 recent study finding flame retardants in an estuary in the
8 Bay Area. So that might be a criteria to consider. Because
9 very often the manufacturers don't exactly expect to find,
10 that they are going to find these substances that they have
11 produced or incorporated into their product in these places.

12 One other point, kind of a technical point related
13 to the language in the draft straw proposal. And I
14 mentioned this -- in section three. I mentioned this at
15 Berkeley last week. While I think it makes sense to
16 identify criteria that has been used in other similar
17 regulations, in this proposal it calls out the actual
18 regulations. It references, for instance, Directive 67/548/
19 EEC, which is the Dangerous Substances Directive. It also
20 references Annex 13 of REACH.

21 I have a, I guess, a philosophical problem with
22 that. That first of all, technically the Dangerous
23 Substances Directive is going to go away in 2015. REACH
24 actually also does reference that so they are going to have
25 to rewrite REACH, or at least amend it at some point.

1 But the more important issue is that I as a
2 citizen and as a voter really don't have a say as to what's
3 in there and can't, I am not represented in addressing that.
4 I mean, I'd like to hear what lawyers around here have to
5 say about that. But it seems very strange for us to be
6 pointing at incorporating European or other countries'
7 regulations in our regulation since we don't have a say over
8 what is actually in those regulations. It might be easier
9 to just, or better I think, to just copy the criteria if
10 that's what we want to do. That's just a comment.

11 PANEL CO-CHAIR CARROLL: Very good, thank you.
12 That completes those who have asked for the floor. We have
13 a couple -- I'm sorry, Julie, I didn't see your flag, go
14 right ahead, please. And then I want to have one more check
15 for those of you who have not yet spoken if you would like
16 to have an opportunity.

17 PANEL MEMBER SCHOENUNG: Thank you. I just put up
18 my flag so you just caught it, and it was in response to
19 Mike's comments. If in reality this statute goes as far as
20 to regulate products such as processing equipment and
21 fabricating equipment would it also go as far as to regulate
22 automobiles, which we purchase? Would it go as far as
23 airplanes which companies like American Airlines purchase?

24 And if you get into that level of consumer
25 product, identifying the material composition of those types

1 of products becomes extremely challenging. It's challenging
2 enough to tell you what is in this microphone and have a
3 company either know what's in it, and secondly disclose
4 what's in it because of the complexity of the different
5 alloys and ceramics and other components. It's not the same
6 as perhaps chemicals in a pharmaceutical application where
7 they can identify those separate chemicals. In a complex,
8 engineering design product I think you are going to run into
9 significantly more challenge in getting Bill of Materials
10 type of data and being able to regulate that effectively.

11 I am not saying we shouldn't try. I'm just saying
12 that then an early focus needs to be getting companies in
13 the mind set of needing to start collecting that data before
14 the product goes on the market.

15 DR. BRUSHIA: The answer is yes. I believe they
16 all would be captured in this law, automobiles, airplanes,
17 and duly noted.

18 PANEL MEMBER SCHOENUNG: What?

19 DR. BRUSHIA: Duly noted, all of your concerns
20 with getting composition information on what's in those. We
21 understand that it's going to be a challenge not just for us
22 but especially for manufacturers. Who may buy hundreds of
23 components separately from different supply chains and then
24 assemble those into some product with no knowledge of how
25 those specific things are being assembled and so on. So

1 there definitely are challenges.

2 And as far as Mike Kirschner's comment on flame
3 retardants. I just want to say I would be surprised at this
4 stage if there was some place we didn't find flame
5 retardants. It seems like we are finding them wherever we
6 look. So.

7 PANEL CO-CHAIR CARROLL: All right, very good.
8 Anyone else who has not yet spoken?

9 And Kelly, I've got you on the list, I understand.
10 I just wanted to check. Okay, fine.

11 Then I have Tim, Kelly, Richard and Mike. And
12 that's all I have on the list and I think that will probably
13 exhaust our time. We have about ten minutes.

14 PANEL MEMBER MORAN: Thank you.

15 PANEL CO-CHAIR CARROLL: We'll get there if we get
16 there. Go ahead.

17 PANEL MEMBER MORAN: Thanks. I didn't realize
18 when I asked my informational question that we were also
19 making comments.

20 PANEL CO-CHAIR CARROLL: You were the first
21 experimental animal in this --

22 PANEL MEMBER MORAN: Because I was just asking a
23 question but I would like to make some comments here. I'll
24 just echo the eco toxicity comment and note that there
25 aren't -- we have spent a lot of time making lists on humans

1 but very few lists exist that reflect environmental
2 toxicity. So I do think that the Department is going to
3 need to make a list. And an easy approach that I am
4 familiar with would be to start with the EPA Eco-Tox
5 database and just take everything that is very highly toxic
6 and above as a way of creating a starting point.

7 More importantly, I think in terms of a candidate
8 list and prioritization. I sense some mixing in the
9 candidate list criteria of prioritization. And it might
10 help to go back through. I would suggest you go back
11 through and really think about that. That some of the
12 things that create a candidate list maybe should be
13 prioritization criteria. Maybe two or separated. That has
14 been one of my problems in reviewing this is figuring that
15 out.

16 In terms of prioritization. I think that some
17 important things are missing like things that are actually
18 causing environmental problems and things that are requiring
19 regulatory responses at state or local levels. Those kinds
20 of things should be included.

21 With respect to volume. I am very hesitant to see
22 volume used as an exclusive criteria. Because my experience
23 is that very small volumes of things can have very dramatic
24 environmental effects. We are aware of dioxin and some
25 other chemicals like that. I am personally tackling a

1 problem with a pesticide, Bifenthrin, that is used at a
2 relatively small quantity, about 40,000 pounds. It is
3 causing surface water toxicity in sediment statewide at this
4 really low level.

5 So I would suggest that rather than using volume
6 as an exclusive screen, the ratio of volume to toxicity
7 data. And of course that would vary. But that ratio seems
8 to be more commonly used in these kinds of screening
9 evaluations to set priorities and that's a way of handling
10 those volume differences.

11 To the extent a threshold is considered. It will
12 be important to think about that toxicity ratio. And also
13 to think about dispersive uses differently than those uses
14 that are contained during their lifetimes. Because I have
15 seen in my professional work concentrations in products as
16 low as a part per million creating a regulatory violation or
17 environmental issue. So it can be a much lower level in
18 those that are dispersed than those that are contained.

19 And then finally to go back to the question I
20 asked. One of the problems I see here with this and why
21 this is a very hard thing that you guys are tackling and you
22 guys are really doing an excellent job. I just want to say
23 how much I appreciate that all of you are working for
24 California.

25 One of the issues, and I think why this is hard,

1 is that we are trying to walk linearly through a process
2 that starts with a group of chemicals and go chemical by
3 chemical through to the end. Practically speaking I don't
4 think the process can or will work that way well. And it
5 will be easier to have this conversation and to think about
6 this managerially if there is a little bit of de-linking.

7 So for example, when it comes to actually doing
8 the regulations you will probably, practically speaking,
9 establish some sort of rulemaking calendar and establish
10 what it is you are going to work on. You will probably as
11 an agency want or need to, or the Legislature will make you,
12 bring in other kinds of things, a specific use pattern,
13 flame retardancy, specific kinds of products. There's brake
14 pad legislation out there this year that says, bink, if this
15 happens stick it right in at the end of the rulemaking
16 calendar. I think there's going to be a lot of that going
17 on.

18 And in fact I think that may be how you are going
19 to do that separation between chemicals and use patterns
20 that you asked us about. So if you can mentally make that
21 de-linking, all of the rest of this conversation will be
22 much easier for setting a set of priorities for some
23 specific things. But the prioritization chemical by
24 chemical is not the only way to approach it. I think it
25 will be much easier practically speaking.

1 And I particularly want to emphasize that because
2 not only are use patterns really important. A chemical --
3 copper in computer equipment may not be that important.
4 Copper in a brake pad that is dispersed broadly in the
5 environment is very harmful potentially. So that use
6 pattern thing is super important. You couldn't ever
7 prioritize copper among all these other chemicals. But we
8 have actually got environmental harm occurring as a result
9 of a particular use pattern for this not-so-harmful
10 chemical.

11 And finally, chemical by chemical has gotten us
12 into this mess. The chemical by chemical approach, even
13 with all the protections we are trying to put in, did not
14 work very well for pesticides. And realistically, often it
15 won't be one chemical substituting for another but a
16 completely different way of doing things may end up
17 resulting in a different kind of product or a complete
18 reformulation of a product is likely to occur.

19 So we have to think about the process that way.
20 So if we do that de-linking then we can go ahead and have
21 the prioritization conversation but still have other ways of
22 thinking about solutions.

23 DR. BRUSHIA: Thank you for the comments.

24 PANEL CO-CHAIR CARROLL: Thank you, Kelly.

25 Tim, you were sort of caught the same way in

1 asking a question. I'll go to you next, please.

2 PANEL MEMBER MALLOY: Okay, thank you. And I have
3 to echo the comments about the work you have done. But also
4 every time I hear somebody say something I want to say
5 something else.

6 (Laughter.)

7 PANEL MEMBER MALLOY: But I am thrilled to see
8 legal issues come up somewhat, it gives some legitimacy I
9 hope. So I would like to just address a couple of points.

10 I want to stress, I actually think that the
11 statute is quite clear, for a change, right. It says, a
12 product involves anything that is used or bought. So when I
13 listen to the hypotheticals it seems to me completely clear
14 that a manufacturer who uses a chemical, whether they buy it
15 or make it themselves, who use it in a process, that
16 chemical was a consumer product.

17 It's unfortunate that the word consumer was used
18 as the word in the statute but the definition itself I think
19 is quite clear, quite broad, and it makes sense for a couple
20 of reasons. One, you know, if we don't think that way then
21 essentially we are carving out occupational exposures,
22 essentially from this rulemaking. Which to me would be
23 obviously consumer in the kind of vernacular, the way we
24 think about it, those are important.

25 But occupational exposures are obviously clearly

1 important. And I think the other thing that concerns me
2 about occupational uses are, you know, folks can find out
3 hopefully, and will find out, more information about what
4 they are buying and they can make a choice about whether to
5 buy that or not. Hopefully there's alternatives. Workers
6 in many cases do not have that opportunity, right. They are
7 not going to be able to go to a different job because they
8 don't like the chemicals being used.

9 So I think in terms of populations we ought to be
10 worried about, we shouldn't be reading the definition of
11 consumer product so narrowly. And I am concerned about
12 saying, well one way to deal with it would be to kind of
13 prioritize again, and let's start with the consumer products
14 as we commonly think of them and then eventually get to the
15 occupational exposures.

16 My concern there is that is not really making
17 prioritization based on harm to people as much as it is kind
18 of a, and I'll use the arbitrary but not in a negative
19 sense. But it is an arbitrary distinction, meaning it has
20 no principal basis in terms of the effect on human health or
21 the environment.

22 The other point I just wanted to make is, you
23 know, I actually liked the idea that lack of data put
24 something in a higher priority. I think the lack of data is
25 what got us in trouble, obviously with a lot of chemicals.

1 I got the sense from reading this that putting it into a
2 higher priority was designed to leverage your authority
3 under the regulatory program to get more information. My
4 reading of the statute is you don't, there's questions about
5 what level of authority DTSC has to require additional
6 information prior to something being viewed as a chemical of
7 concern and undergoing alternatives analysis, right.

8 So I had viewed this as, okay, so you say that
9 lack of information makes it a high priority, do an
10 alternatives analysis. Which is I think what it says to do.
11 And then obviously you won't be able to because you don't
12 have enough information. Which then ends with an incomplete
13 alternatives analysis triggering having to get additional
14 information. Which I view as a very elegant, in a way,
15 solution to that problem.

16 My concern is that I don't know that the way this
17 straw proposal was written up -- and maybe I'm getting ahead
18 to the next section, should I stop? No. The way that it's
19 written I don't know that it necessarily gets us there.
20 Because when you look at the additional information
21 restriction, to me it seems to give too much room to the
22 manufacturer to actually not generate the information. That
23 they could continue using the product as long as they comply
24 with certain notification and end of life management
25 requirements.

1 So I think -- I'm sensitive to the lack of
2 information. I think that lack of data is not necessarily
3 indicative of lack of a problem and it makes sense to make
4 that a high priority. Even quite apart from the idea that
5 that will also give us leverage to get information. But I
6 think more work needs to be done in the straw proposal to
7 dealing with the lack of data case. Thank you.

8 PANEL CO-CHAIR CARROLL: Thank you very much.

9 Richard, one minute please. Michael one minute
10 and then I'll take one minute.

11 PANEL MEMBER DENISON: Thanks. I just wanted to
12 circle back to this tiering idea. I wasn't trying to argue
13 against tiering but I more so argue against this low concern
14 or low priority thing. And one reason is, as Debbie and
15 others have pointed out, every chemical going into the
16 prioritization process has been identified because it has
17 some level of concern.

18 But second and more importantly, low priority,
19 almost always it connotes evidence of no harm or low harm as
20 opposed to absence of evidence of harm. And when we are
21 dealing in the real world with data gaps, the idea that you
22 can actually say, Chemical X is of low priority, which means
23 low concern, which means don't bother getting any better
24 information about it, is very problematic unless and until
25 you get to the ideal that Lauren talked about which is you

1 have a completely assessed chemical where you really have a
2 high degree of confidence.

3 So if the tier you are talking about for low
4 priority is fully assessed and fully passed, okay. But the
5 reality is that is almost never the case. There is a
6 characterization in the document about the CHAMP program
7 that EPA is running. It's very inaccurate. They are
8 putting hundreds of chemicals in a low-priority category
9 that have absence of information, not affirmative evidence
10 of no harm.

11 PANEL CO-CHAIR CARROLL: Thank you, Richard.
12 Michael.

13 PANEL MEMBER WILSON: Yes. Picking up on that and
14 also Debbie Raphael's point about what is the point here, in
15 a way. And I would argue that what we are trying to do in
16 the big picture is influence the market and motivate
17 companies toward investment in safer substances and market
18 de-selection, if you will, of those that are prioritized as
19 a high hazard and so forth.

20 So three things that come to mind to me in sort of
21 making that work, making the market work based off these
22 regulations. One is, identifying as you have done in the
23 straw proposal the data gaps and the need to fill those. I
24 really appreciate you flagging that issue in the straw
25 proposal.

1 The second is putting constraints, very narrow
2 constraints on trade secret allowances. And any allowances
3 that are made for trade secrets have to be justified by the
4 applicant and would be time limited.

5 And the third would be that any -- that the
6 information that is generated in this process is then placed
7 into the public domain in a way that is usable and robust
8 and transparent so that the market can use it and third
9 parties can use that information to package it in different
10 ways for workers and small businesses and so forth in the
11 way that we see, you know, in the finance markets and so
12 forth. That these third parties can then take it and work
13 with it. And that will get companies moving toward
14 continuous improvement.

15 PANEL CO-CHAIR CARROLL: Very good, thank you.

16 PANEL MEMBER WILSON: Thank you.

17 PANEL CO-CHAIR CARROLL: I have one short comment
18 that I'll choose to air at this time and it goes to -- on
19 the prioritization slide one of the bullets says any
20 evidence suggesting that there are reasonable grounds for
21 concern and so on. It seems odd that we have placed in
22 prioritization, that that seems to be more of something that
23 you would use to identify a chemical of concern.

24 But if in fact that is what you are using to
25 identify a chemical of concern, the words any and reasonable

1 are kind of difficult words to place here. And I submit to
2 you that there is a very good chance that you would enlarge
3 the universe of chemicals of concern well beyond where it
4 would be otherwise. Which thus increases the size of the
5 job and places a lot more pressure on learning how to tier.

6 And with that I will close the session. It is
7 time for a break. We have -- Joe is here to give us our
8 reminder.

9 MS. BARWICK: Before he does that I would just
10 like to say, we are going to reconvene at 3:15. Sara Hoover
11 will give her presentation on hazard traits.

12 And we will have a public comment period at 4:20
13 this afternoon, just so that you all know that.

14 MR. SMITH: Yes. Once again I just ask you to
15 keep in mind the Bagley-Keene limitations as we go into our
16 break.

17 MS. BARWICK: This will become our mantra.

18 I would like to thank Dr. Carroll for his
19 excellent chairmanship of the session, nice job.

20 (Applause.)

21 (Whereupon, a recess was taken.)

22 MS. BARWICK: Okay, we are ready to start our next
23 session. I'd appreciate it if everybody could take their
24 seats. I was advised to bring a small bell. I'm going to
25 try to find one for tomorrow. A little bell. Ding, ding,

1 ding, time to sit down.

2 Thank you so much for coming back. And Dr. Ken
3 Geiser will be chairing the next portion of the show.

4 PANEL CO-CHAIR GEISER: All right, so we are
5 moving to the second of these major blocks that we are
6 trying to work through today, which has to do with hazard
7 traits. And this one, as the two parts of the legislation
8 mandate, is part of the Office of Environmental Health
9 Hazard Assessment, OEHHA, that is actually responsible for
10 this.

11 And we are going to do the same thing that we did
12 previously in the same pattern. And that is, Sara Hoover is
13 going to make a presentation on where the Office is and
14 where she is in thinking about this and then we are going to
15 go to responses to this. And please understand, and this
16 was something that Bill wrestled with a little bit earlier,
17 and that is, we were trying to think that maybe we could
18 separate out sort of clarifying questions from responses to
19 our presenter. And that didn't work quite as well as we
20 thought it might.

21 So what I am going to do here is just ask you to
22 mix questions, clarifying questions, into your responses.
23 But remember that beyond simple clarifying questions we are
24 not trying to ask our presenter a lot of questions. We are
25 actually trying to give, in this case Sara, real responses.

1 What do we think about what she is trying to do. And
2 therefore may I also say respectfully, we are trying to ask
3 Sara not to spend a long time trying to explain a lot to you
4 either about what she did. She is trying to listen to you
5 to get the best you can on the ideas that she is presenting.
6 That feels comfortable to folks?

7 (Affirmative responses.)

8 PANEL CO-CHAIR GEISER: Good, okay.

9 So it's a pleasure to introduce Sara Hoover.

10 MS. HOOVER: Yes, hi. Welcome everyone and I am
11 glad to be here. My name is Sara Hoover and I am the Chief
12 of the Safer Alternatives Assessment and Biomonitoring
13 Section in OEHHA. And we have responsibility primarily in
14 OEHHA for Green Chemistry activities along with my colleague
15 here, Dr. Melanie Marty, who is the Chief of the Air
16 Toxicology and Epidemiology Branch. And Melanie and I have
17 been the two people mostly working on Green Chemistry in
18 OEHHA so I asked her to sit up here with me so we can get
19 your input.

20 SO I am going to talk today about OEHHA's specific
21 responsibility, which is evaluating and specifying the
22 hazard traits, toxicological and environmental end-points
23 and other relevant data for inclusion in the Toxics
24 Information Clearinghouse.

25 So what is the clearinghouse? It was established

1 by SB 509. and in that law it specified that it is to be a
2 decentralized web-based system for the collection,
3 maintenance and distribution of specific chemical trait and
4 environmental and toxicological end-point data.

5 It should be accessible to the public through a
6 single Internet web portal.

7 And DTSC shall operate the clearinghouse at the
8 least possible cost to the state. So there's a fiscal
9 component to the development of this clearinghouse, as you
10 can see.

11 In terms of the clearinghouse content. On or
12 before January 1, 2011 OEHHA is supposed to evaluate and
13 specify the traits, end-points and other relevant data that
14 are to be included in the clearinghouse.

15 In the Green Chemistry Initiative Final Report it
16 was recommended that the clearinghouse should start with
17 existing data from authoritative sources, California and
18 other states, the federal government, other nations.

19 And in terms of actually generating new data for
20 the clearinghouse, that would follow the process laid out by
21 AB 1879.

22 But there is a relationship between 1879 and 509.
23 So as Don and Rob talked about, DTSC is establishing a
24 process to identify and prioritize chemicals of concern,
25 which includes as a minimum these criteria that Rob talked

1 about.

2 As part of the process DTSC is also supposed to
3 develop criteria for evaluating chemicals and alternatives.
4 And that has to include the traits, characteristics and end-
5 points that are included in the clearinghouse data. So as
6 you will see later, when people are suggesting additional
7 traits that Rob should consider, that's really going to be
8 captured in this list that OEHHA is going to be making.
9 We'll be making a very broad list.

10 So in terms of what we have done so far. We have
11 been doing a lot of research on exiting definitions,
12 identification and evaluation methods, and data sources for
13 traits and end-points.

14 Some of the preliminary concepts we have talked
15 about is focusing on identifying chemical characteristics
16 that are linked to hazard.

17 That we would consider "exposure traits," quote/
18 unquote, as part of hazard traits.

19 We are also interested in looking at the
20 possibility of developing a hierarchical structure that
21 shows how early indicators link to toxicological and
22 environmental end-points. So if you have a suspicion of an
23 effect what does that mean in terms of frank toxicity.

24 And also some sort of evaluation process so that
25 you can identify something that is already known or

1 suspected to be a hazard.

2 In terms of the consultation process that we have
3 been undertaking. We have been having ongoing meetings with
4 DTSC. And DTSC has been in contact with other states and
5 countries regarding data sharing and we will be involved in
6 that process as well.

7 We also held our first public workshop on January
8 29, which was basically a brainstorming session to get input
9 on some broad questions from the public and a really great,
10 expert panel.

11 I also wanted to note that we have applied jointly
12 with UCLA and UCB for funding for an additional workshop
13 series.

14 And we are planning a formal consultation process.
15 You will note in the laws that both OEHHA and DTSC are
16 supposed to have formal consultation with other state
17 agencies.

18 SO I just wanted to give you a little background
19 on the January 29 workshop. Because we had a really great
20 so I wanted to bring you up to speed a little bit. It is
21 not going to be complete, obviously, in the limited time I
22 have.

23 But we collected a great panel with members from
24 academia, the federal government, industry and NGOs. And
25 some of the members of the Green Ribbon Science Panel were

1 part of our panel. And a very wide range of stakeholders
2 participated in the meeting.

3 I just wanted to through the questions that we
4 asked, which as I said were very broad.

5 What characteristics of a chemical should be
6 considered a hazard trait?

7 What traits and end-point should be included in
8 the clearinghouse?

9 What traits, end-points and other data would be
10 useful in identifying a chemical of concern without a full
11 toxicological database? So we are very interested in this
12 issue of what do you do when you have massive data gaps.

13 Also what traits, end-points and other data would
14 be useful evaluating exposure potential?

15 And sensitive subpopulations.

16 So in terms of developing the clearinghouse we are
17 definitely thinking about it in terms of a useful tool for
18 DTSC in their process. So the way that it feeds into the
19 1879 process.

20 So again, this is going to be a very brief summary
21 of a very extensive discussion. I am just going to go
22 through some of the major points that discussants had.

23 So one of the major points was to cast a broad net
24 for both hazard traits and chemicals. And that -- so just
25 look at everything you can for hazard traits and then figure

1 out which are the priority hazard traits to consider first.

2 There was also an emphasis that you shouldn't only
3 look at data-rich chemicals and bad actors but to include
4 all chemicals that might be an issue in California.

5 There was an emphasis that we should incorporate
6 emerging upstream end-points, such as endocrine disruption.

7 There was also a caution that we shouldn't extend
8 too far into end-points that are less well understood.

9 We shouldn't neglect traditional end-points. And
10 various lists of end-points were suggested that we could
11 consult.

12 And again, an emphasis on ecotoxicity. And that
13 typically that's measured through looking at aquatic
14 receptors and that we should go beyond just looking at
15 aquatic receptors.

16 We should include physical chemical properties.

17 We should definitely consider computational
18 toxicology, structural alerts.

19 There was also an emphasis that when you look at a
20 set of hazard traits you should look at the same set for all
21 chemicals as a way of illustrating data gaps and comparing
22 across chemicals.

23 In terms of addressing exposure potential. There
24 was a suggestion that we should look at both the direct
25 information such as biomonitoring data and indirect such as

1 production volume.

2 Persistence and bioaccumulation are always
3 highlighted as being of importance.

4 And exposure timing and windows of vulnerability
5 were mentioned as being important.

6 There was a mention of addressing differential
7 susceptibility.

8 There was a big discussion and there has been an
9 ongoing discussion about dose-response information. So
10 there was a discussion about that dose-response is critical
11 in terms of establishing relative toxicity.

12 And then there was the opposite comment that no,
13 don't look at dose-response and risk, only look at hazard.
14 What's often referred to intrinsic hazard.

15 There was a real emphasis that we should leverage
16 existing data sources because there's already so much out
17 there. But that we should clearly identify the data source
18 and any potential conflict of interest.

19 And there was a broad discussion about the absence
20 of adequate data. So it's kind of an interesting problem
21 because we actually have both problems. There's a huge
22 amount of data out there and yet there's also quite a lot of
23 data gaps. So you have both problems that you are dealing
24 with.

25 We are kind of interested, we have done a lot of

1 work over 20 and more years of OEHHA evaluating hazards,
2 looking at bad actors. We are very interested in broadening
3 and looking at chemicals that don't have data. Illustrating
4 the data gaps. Figuring out some way to look at that issue.

5 But there was also a comment that, again, you
6 can't look at everything at face value. Missing information
7 is not necessarily a data gap because sometimes there is
8 tier testing. There might be a choice actually not to do
9 certain tests on certain chemicals. There might actually be
10 a reason behind that. So that should be clear that a data
11 gap should be interpreted. It shouldn't just be put there
12 as no data.

13 So here's just a list, example of hazard traits.
14 And you will see that essentially the law separates out
15 hazard traits, tox environmental end-points and other
16 relevant data. But we are heading towards the idea of just
17 calling all of those things hazard traits. So
18 carcinogenicity, reproductive, developmental toxicity, et
19 cetera. A big long list of effects. Effects on organs,
20 endocrine disruption, perturbation of other hormone systems,
21 ecotoxicity, irritation, sensitization. Also issues -- it
22 was mentioned, corrosivity and things like that.
23 Flammability, reactivity, structural alerts and other
24 physical chemical properties.

25 So this is not like the final list but you can see

1 where we are heading in terms of casting a broad net for
2 hazard traits.

3 So in discussions with the Co-Chairs we talked
4 about --- one of the, one of the issues that we are
5 confronting on developing an Online Toxics Clearinghouse is
6 how can we add value? There are so many out there. There's
7 tons of databases on the Internet, I use them all the time.
8 There's portals. There's all kinds of different ways to
9 access the data and information. So we really want to look
10 at what can we do that's going to add value. So with that
11 view Debbie had asked me to talk about a couple examples of
12 things that are already out there.

13 So I can't, I can't do what I normally do in the
14 course of a day, which is to go through the Internet and
15 consult all kinds of databases so I am just going to show
16 you a couple of examples. And the two I chose were the
17 eChemPortal of OECD and this relatively new tool by US EPA,
18 ACToR, the Aggregated Computational Toxicology Resource.

19 So you are not going to be able to read this,
20 these are just some screen shots. This is the opening
21 screen for the eChemPortal. You can search by CAS number or
22 chemical name. You put the chemical name in or the CAS
23 number and it pops up a series of links that you can go to
24 for results.

25 So for example, this particular chemical that I

1 chose, 2-butoxyethanol, has a report by Canada from the
2 Existing Substances Assessment Repository. I had some
3 information on it from Japan's Chemical Risk Information
4 Platform. It was also on the European Chemical Substances
5 Information System. So it's a nice source of information,
6 the eChemPortal, of some places that you might not normally
7 think to look.

8 ACToR, the US EPA tool, is pretty impressive. It
9 hits a really, really broad capture of data. So this just
10 shows when you enter a chemical name, the initial screen.
11 It pops up with -- it actually gives you a list of chemicals
12 to choose from so I just cut the rest of the screen off
13 because this was the relevant chemical in this case. The
14 structure, the CAS number, the name, and then what kinds of
15 information is contained in the database.

16 So when you hit Details you see a little bit more
17 information on the chemical. And then you have a whole big
18 long list of links to choose from by Toxicology Phenotype
19 they call it. Hazard, carcinogenicity, gene tox, for
20 example. A Toxicology Data Category. Non-Toxicology Data
21 including phys-chem properties, chemical categories, use
22 levels and so forth. It's really a very impressive
23 database.

24 So again you are not going to be able to read this
25 but this just pops up a tiny portion. When you click on

1 Show Hazard it expands a whole series of results. So for
2 example, just to read you a few. It has a link going out.
3 You can also -- it also sometimes summarizes it right there
4 for you and other times it gives you links to go out and
5 look at the data yourself. So the NIOSH is a link out.
6 They have information for the Risk Assessment Information
7 System, summarizing that. Something from OECD. And then it
8 gives you some specific tox summaries and toxicity excerpts.

9 This is just an example from the physico-chemical
10 properties. When you click on that. Again, this is a very
11 small subset. It gives a whole long list of very
12 interesting properties. So again it's a really great
13 resource. It's brought together a lot of data.

14 So with that in mind. Again, this is just a few
15 small examples. There's portals out there. And I guess
16 I'll just say a word about recent experience with this. I
17 have been working to help actually the City of San Francisco
18 on a project looking at dry cleaning alternatives and trying
19 to compare alternatives.

20 And it has been a very interesting process. First
21 of all trying to figure out even exactly what the chemicals
22 are, and then trying to get information on chemicals that
23 are actually very poorly studied. So you start to dig into
24 these databases and dig deeper. And go into some databases
25 that are actually not available to the public where I find

1 more information. So there's a lot available but it takes a
2 lot of times a trained eye in order to figure out how to dig
3 it out. So that's one thing to keep in mind.

4 And then Debbie also, I really want to hear from
5 you all about how can we add scientific value. And she
6 asked me to put up some possible ways.

7 So one possible way is trying to look for
8 California-specific information. There is now some new
9 legislation that is going to be implementing an electronic
10 system for California data on hazardous chemicals at
11 regulated sites. So linking to that would be potentially
12 useful.

13 As I mentioned earlier, most -- And again, I am
14 not speaking broadly for all databases. But most databases
15 just list information. We are thinking about trying to show
16 some relationship. So if you have a structural alert what
17 does that mean. Or if you have a disruption of a hormone
18 system, what could that mean. So trying to show some
19 hierarchy in linkages that gives you a little bit more
20 interpretation.

21 The ability compare across chemicals would be very
22 useful in terms of illustrating data gaps and potentially
23 identifying safer alternatives.

24 And I am very interested in trying to do something
25 with data gaps. Instead of just the common thing which is,

1 well gee, there's no data here. And that can be interpreted
2 by some people to mean, well there's no data so it's not a
3 problem, let's use it. Or there's no data and it's a huge
4 problem, we can't use it. But instead of just having it
5 blank, being able to interpret it in some way. Like have
6 some sort of data gap score.

7 The other possibility would to try to look at, to
8 try to incorporate some consideration of cumulative or
9 synergistic effects. So if you have a common mechanism, a
10 common end-point, looking at chemicals from the perspective.
11 Or looking at the chemical mixtures, which was earlier
12 mentioned. So those are just some thoughts we had. And
13 again, I am very interested to hear your thoughts about how
14 can we add value.

15 Some other broad questions for the panel. Which
16 would you consider to be the highest priority hazard traits
17 for inclusion in the clearinghouse? And the reason I'm
18 asking this mostly is just in terms of where to start.
19 Certainly we understand that casting a broad net is
20 preferable.

21 Again, the idea of organizing them in some way or
22 evaluating them in some way instead of just having a passive
23 clearinghouse.

24 How would you deal with data gaps? Meaning not in
25 terms of filling them but in terms of illustrating them or

1 describing them or evaluating them in some way.

2 And Bill Carroll had asked me to include something
3 about data quality and so this is my attempt at that. Just
4 what data sources should we look at first? What would be
5 the most important data sources, because there's lots of
6 possibilities out there.

7 I guess I'll first put up my Next Steps just to
8 fill you in on that and then we can go back to the
9 questions. So we are just going to continue this work we
10 have been doing on evaluating and specifying the hazard
11 traits.

12 We are planning to hold an additional series of
13 public workshops.

14 And we are coordinating with DTSC to consult with
15 other state agencies, pursue data sharing and to seek your
16 ongoing input.

17 And I really welcome input from all quarters. My
18 e-mail address is here on the slides. Thank you.

19 PANEL CO-CHAIR GEISER: Thank you, Sara. Can you
20 put the questions one --

21 MS. HOOVER: Do you want the questions or do you
22 want to start with this? Or do you want me to just go
23 straight to the questions?

24 PANEL CO-CHAIR GEISER: Which is most valuable to
25 you?

1 MS. HOOVER: I'm really interested to hear about
2 what people think on this as well.

3 PANEL CO-CHAIR GEISER: Okay.

4 MS. HOOVER: So maybe we could start with that.

5 PANEL CO-CHAIR GEISER: So the floor is now open.
6 And Mike, you want to start off.

7 PANEL MEMBER WILSON: Sure, Mike Wilson.

8 That was the first thing that came to mind for me,
9 Sara, in terms of generating. You know, what's the value
10 added that OEHHA could provide here. And that would be the
11 California-specific substances. And of course that gets
12 into the problem that Richard raised earlier about our lack
13 of information on uses.

14 So my clarifying question is, on your slide that
15 describes the legislation, implementing an electronic system
16 for California data on hazardous chemicals at regulated
17 sites. I'm wondering if that's the CUPA database. And
18 maybe you could explain what the CUPAs are to the --

19 MS. HOOVER: Why don't you do that, Mike, since
20 you --

21 PANEL MEMBER WILSON: Okay, if that's what this
22 is.

23 MS. HOOVER: I know that's one of your -- Yes.

24 PANEL MEMBER WILSON: Okay. So --

25 MS. HOOVER: It's what we have talked about many

1 times so why don't you go ahead.

2 PANEL MEMBER WILSON: Right. Feel free to jump in
3 here also, Melanie. So California has in each county what's
4 called a Certified Unified Program Agency that is
5 responsible for gathering business plans from businesses
6 within their jurisdiction and for dealing with underground
7 tanks and a number -- sort of six regulatory era sort of
8 programs were collapsed into these CUPAs. And one of the
9 things that they do on the business plans is every year they
10 gather information on hazardous substances stored on-site at
11 facilities within their jurisdiction. And that information
12 is then used by emergency responders mainly.

13 But the reality is that there are only three
14 jurisdictions in the state that have put that information
15 into an electronic database. The rest of it is in shoe
16 boxes dispersed across 54 counties in the state of
17 California in 2009.

18 And so, and so this piece of legislation would
19 then, as I understand it, is going to give sort of a funding
20 infrastructure in the CUPAs to make that information
21 uploaded into an electronic database that is then searchable
22 and so forth.

23 And that gives us information on -- and it's
24 fairly specific information on chemicals stored on-site in
25 facilities across the state but it doesn't give us

1 information on consumer products and what types are sold and
2 so forth. Is that right? Is that what we are looking --

3 MS. HOOVER: Yes, yes. I mean, obviously. That's
4 just one small example but yes. It's a small start.

5 PANEL MEMBER WILSON: Right.

6 MS. HOOVER: But it doesn't do the other thing.

7 PANEL MEMBER WILSON: Okay.

8 DR. MARTY: It's also chemicals in a specific list
9 for which they gather the data. So it's not all chemicals.

10 PANEL MEMBER WILSON: Right.

11 DR. MARTY: So that's another real limitation.

12 PANEL MEMBER WILSON: Okay.

13 DR. MARTY: Yes, and there are actually -- that's
14 right, there's limits to how much is stored on-site before
15 you actually have to report anything. So it's not
16 comprehensive by any stretch.

17 PANEL MEMBER WILSON: Okay. Well I guess my main
18 point would be, I guess, that an important piece I think
19 would make it valuable would be that we gather the
20 information to make it California-specific for sure. And
21 the second, that I think your point about coming up with a
22 way to score in a fairly simple, a fairly easily understood
23 way across chemicals, both on hazard -- and you had an
24 interesting point I think about scoring the extent of data
25 gaps is an interesting idea. But something.

1 You know, what strikes me about the database that
2 you illustrate here is that it is not very user-friendly for
3 a downstream user that is trying to get product out the
4 door. And they are going to be reluctant possibly to use it
5 unless they have somebody full time who does that job. And
6 so one of the things that OEHHA could do would be to make
7 that information user-friendly for businesses.

8 PANEL CO-CHAIR GEISER: Thank you, Michael.

9 What I have at this point is, let's see. Roger,
10 Michael, Rich, Art, Richard and Julia. Roger.

11 PANEL MEMBER McFADDEN: Thank you. Sara, nice
12 job. You should go into sales, you did a nice job of
13 directing that back over there. Don't try that with me,
14 though. Just kidding. Roger McFadden.

15 One of the things that could be useful to us as we
16 look at supply chain and trying to make decisions about the
17 products and the chemicals that we allow through our doors
18 in our supply chain out to consumers is the lack not only of
19 data, that is data gaps, but also the integrity of the data.

20 We used to use Material Safety Data Sheets pretty
21 regularly to try to collect that data. And then we started
22 looking behind the scenes at the accuracy and we found it to
23 be rather lacking in a whole lot of ways. In fact, we did
24 some studies that showed around 80 percent of the MSDS
25 sheets that we reviewed either lacked the information that

1 we needed, had incorrect information. Just a whole myriad.

2 So we just stopped using it and trying to go to databases.

3 Then we got the databases and we found, you know,

4 where's the integrity of the data? Who is screening that?

5 So one of the things that I think would be useful is if you

6 had some kind of a screening process or some type of a

7 mechanism by which you required the submission of the data

8 to meet some kind of -- and I would like to offer some

9 suggestions but none come right to mind. There are probably

10 others in the room who are more experienced in this. Maybe

11 the attorneys, they're pretty good at that. But I think it

12 would be great if we had more reliability.

13 If we are going to make decisions about products

14 that we allow to come into our supply chain. Because this

15 is about that, you know. It's about companies and

16 organizations making decisions here about what they will

17 allow and won't allow. We can try to ban everything out of

18 existence all we want to. The most effective way is to get

19 organizations to adopt screening mechanisms that just won't

20 allow certain things into their supply chain.

21 But to do that we have to have a measure of surety

22 that the decisions we are making are based on reliable data.

23 Otherwise we are not fair to the supplier, first of all.

24 The supplier, you know, has been transparent to give us the

25 information. And then we reject because we find something

1 in a database somewhere that troubles us. And then later we
2 find out maybe that that was not correct. Then we kind of
3 feel bad that we mistreated our partner. So that would be
4 something that would be very useful.

5 I don't know, do you screen, do you screen those
6 databases now? Do you just accept that if it is on a
7 certain database that it is okay? Do you just accept it or
8 do you have a --

9 MS. HOOVER: No, no.

10 PANEL MEMBER McFADDEN: Okay.

11 MS. HOOVER: I mean, in terms of our own process
12 within OEHHA, no, it's a very critical process of how we
13 collect and review data.

14 PANEL MEMBER McFADDEN: Do you have something you
15 could share with us that would show us what screening
16 mechanism you use? Is that something that is publicly
17 available?

18 DR. MARTY: Just a comment. We thought about this
19 in terms of developing a hierarchy of sources. So for
20 example, if we have a chemical that we are being asked to
21 look at under a specific program. If IARC has already
22 evaluated this chemical for carcinogenicity, and in
23 particular if it has been a recent evaluation, that is
24 pretty high up on our hierarchy of adequately reviewed
25 material. So that would rank high in our ranking of whether

1 we are going to view that chemical and treat it as a
2 carcinogen in a regulatory setting.

3 So we have done that in real limited ways and, you
4 know, we are thinking about how could you develop a
5 hierarchy. If it's coming from US EPA chances are it's
6 pretty darn good, especially if it's been recent. So
7 that's, you know, one way to try to get at that. But it's
8 easier said than done.

9 PANEL MEMBER McFADDEN: Could I follow up with a
10 question? Or am I taking too much time?

11 PANEL CO-CHAIR GEISER: You're doing a fine job of
12 doing what you suggested Sara was capable of doing.

13 PANEL MEMBER McFADDEN: That's right.

14 PANEL CO-CHAIR GEISER: Which is turning it into a
15 question. Unless it's very short.

16 PANEL MEMBER McFADDEN: It's a real quick
17 question.

18 PANEL CO-CHAIR GEISER: Okay, go ahead.

19 PANEL MEMBER McFADDEN: When you have data
20 conflict. when data on a chemical conflicts. One data says
21 this, one data says that. Do you have a way of deciding?
22 Would that be your hierarchy that you're talking about?

23 MS. HOOVER: Vast scientific experience of 20-plus
24 years. I mean, yes, you know. We encounter that all the
25 time and then you have to dig into the data. I mean, we

1 have a, we have a very broad set of experts within OEHHA and
2 we work together. So for example if I am working on a
3 chemical and there's an air issue I might go to Melanie and
4 get consultation on it. If I find a couple of studies on
5 reproductive toxicity I would go to our reproductive group
6 and get some evaluation on that.

7 So we have a very, you know, robust process for
8 doing that. That can take a long time too so there's that
9 caveat on that. So there's the kind of ranking of sources
10 that Melanie talks about, which is a little quicker. You
11 know if it comes from here you have more confidence without
12 going into it that you can rely on it without having to
13 really rip it apart and examine it closely.

14 PANEL MEMBER McFADDEN: Thank you.

15 PANEL CO-CHAIR GEISER: Okay, Michael is going to
16 be next. And may I suggest that we try to be efficient in
17 these because we now have a lot of people who want to get
18 up. So Michael.

19 PANEL MEMBER KIRSCHNER: Just a couple of points.
20 I'm unclear a bit Sara on the purpose of this database. Is
21 it to add scientific value, or as Mike Wilson said, to be a
22 resource for manufacturers? Or is it supposed to be both or
23 all things to all people?

24 MS. HOOVER: Well, one thing I want to clarify
25 here is the reason why I am asking for ways that it could

1 add scientific value was a discussion with the Co-Chairs
2 that this is a science panel and we want to talk about the
3 scientific issues and not the user issues.

4 But, you know, the user issue. I mean, obviously
5 that's the intent if you look at the Green Chemistry Final
6 Report. Clearly, providing user-friendly information to the
7 public is also an important issue. I took off everything on
8 the slides that talked about that. So, you know, we have
9 talked about layered interfaces that direct to certain
10 audiences and so forth. So we just set aside that
11 particular discussion.

12 PANEL MEMBER KIRSCHNER: Okay. Because I think
13 that manufacturers are going to desire something that you
14 are probably not going to want to provide. Detailed data
15 that is very readily comparable that they don't have to
16 spend an awful lot of time dealing with. That's just not
17 practical. It could be a source that's used for some of
18 that but I don't think that that should be an immediate goal
19 anyway. I think it would be too difficult to produce
20 something that is readily usable by manufacturers that would
21 be useful to anybody else. Or that would be actually
22 accomplishable by OEHHA.

23 PANEL CO-CHAIR GEISER: So there's a nice
24 statement, a position on that, thank you.

25 Rich.

1 PANEL MEMBER LIROFF: There are three questions
2 for the panel on one of your slides I'd like to speak to. I
3 promise you I will speak to them efficiently.

4 The first one is, what are the highest priority
5 hazard traits for inclusion in the clearinghouse? And I'm
6 wondering if you have looked at the work that is being done
7 at Wal-Mart to develop a screening or scoring system.
8 Because there is a working group there that is piloting
9 something now and a lot of people, there's at least one
10 participant, maybe more on this panel that have been there.
11 They have given some thought to this issue. That might be
12 some useful guidance for you, particularly from the
13 perspective of suppliers and manufacturers. So that's one
14 suggestion.

15 Your question, should the hazard traits be
16 organized and/or evaluated in some way? There you might
17 look at the brominated flame retardant, the alternatives
18 evaluation that was done for the Design for the Environment
19 Program. That lays out a whole bunch of characteristics and
20 ratings and that kind of thing. Again, there are some
21 people on this panel who may have been involved with that.

22 Finally the third question, how would you deal
23 with data gaps? I would refer you to something called the
24 Critical Windows of Development, which was developed at the
25 Endocrine Disruption Exchange, endocrinedisruption.org. And

1 it is particularly useful for scientists because what it
2 does, it lays out the first nine months of human
3 development, the corresponding periods in mouse and rodent
4 development, and shows what happens in normal development.

5 I think this is especially pertinent to the
6 concern the statute for especially vulnerable populations.
7 And it lays out both normal development and it lays out the
8 information known for three different chemicals thus far,
9 Bisphenol A, Dioxin, and if I remember correctly,
10 Phthalates.

11 And what is very elegant about this is that it
12 lays out along one dimension the different bodily systems,
13 the reproductive system, immune system, the nervous system,
14 et cetera and so forth. Very quickly you can look at that
15 and you can see, oh, we know an awful lot about the
16 reproductive effects of Bisphenol A, we know virtually
17 nothing about the effects on the nervous system, et cetera
18 and so forth.

19 So for a research manager in a government agency,
20 for a manufacturer of the chemical who is worried about
21 potential liability, it very clearly signals, here's what we
22 don't know and maybe what it costs in resources to us.

23 I'm done, Ken.

24 PANEL CO-CHAIR GEISER: Thank you Richard.

25 Arthur.

1 PANEL MEMBER FONG: Art Fong. On the question of
2 adding value to the database. I think it's important to go
3 back to the basics. In terms of the basics I think it's
4 dose-response information.

5 And you mentioned a large number of databases. In
6 terms of usefulness certain databases, at least, you know,
7 for me personally, are much more useful than others. A
8 perfect example is the EPA IRIS database. And what makes
9 that really useful? It's the fact that it contains very
10 detailed dose-response information. Obviously, as you know,
11 OEHHA also has a lot of dose-response information in their
12 various hazard evaluations and databases.

13 Unfortunately in the case of the EPA IRIS and the
14 OEHHA situation, the number of chemicals are much limited,
15 it's fairly limited. So if in fact you are talking about
16 adding scientific value, I think dose-response information
17 is really critical.

18 PANEL CO-CHAIR GEISER: Thank you.

19 Richard.

20 PANEL MEMBER DENISON: You have got a potentially
21 infinite universe of chemicals, a potentially infinite
22 universe of traits, and a perhaps not potentially infinite
23 but a large number of sources of data. And I just want to
24 speak to each of those briefly in terms of how I think you
25 might want to narrow the universe, so to speak.

1 On chemicals I would go back to what Mike had
2 said. I do think it is critical to get some handle on what
3 chemicals are in commerce or in use in California as a basis
4 for that. That's one of the reasons why in the earlier
5 discussion I raise this idea of moving a use data collection
6 aspect into the identification phase rather than the
7 prioritization phase. And I think it might help to limit
8 the universe in your context as well.

9 Melanie raised something I was going to raise
10 about this data hierarchy concept. I think that would be a
11 very critical thing to establish in terms of both not only
12 sources of data but the type of data. Is it a measured
13 piece of information, is it estimated, is it modeled, the
14 age of the data. Things like that that you could capture in
15 a hierarchy. And then not only just capture that but
16 actually communicate those distinctions so that when people
17 are doing cross-comparisons against alternatives, for
18 example, they can tell that the alternative is either more or
19 less well tested than the, than the other -- one alternative
20 is more or less well tested than another one.

21 In terms of traits. I do think this is a place
22 where you ought to be working in close conjunction with DTSC
23 in developing the regulations. And I would say you ought to
24 prioritize those traits that they are looking at, either
25 through the list-based process or through the definition of

1 a minimum data set. And those would be your top priorities.
2 I am not trying to suggest you shouldn't go beyond that but
3 those would be maybe where you start.

4 And then finally this idea of data gap scoring.
5 That does entail the establishment of what would be a
6 minimum data set that would be your denominator and a score,
7 presumably. And I don't know what you thought of there in
8 terms of thinking about a scoring system. But if you can
9 say anything about that that would be, that would be
10 helpful, thanks.

11 MS. HOOVER: You know, basically I'm just
12 gathering input on whether that is something people think is
13 worth pursuing. We have not talked in detail about what
14 that would look like but it is definitely something I think
15 is important. Like as you say, knowing -- even bringing up
16 the issue of is it predicted, is it measured, is it
17 estimated. I mean, that's important information that often
18 you have to dig back in to figure out where is that data
19 coming from. So yes, thank you for that input.

20 PANEL CO-CHAIR GEISER: Julia.

21 PANEL MEMBER QUINT: Julia Quint. I am so pleased
22 that OEHHA is doing this. I can't think of a better group
23 to do it. And I think the most important thing that you
24 could do is your evaluation of some of these lists. I too
25 have looked extensively for data and that list and sources

1 of information, they are very disparate. The quality varies
2 a lot. The age of the data varies a lot.

3 I think, you know, we have access to a lot of data
4 but, you know, coming up with trying to figure out which are
5 the best sources and which is the most, you know, accurate,
6 is an issue. So I think also, you know, having a hierarchy
7 like IARC, EPA, of course OEHHA, those would be the sources
8 that I would rate highly.

9 But things getting on lists. It takes some time
10 for that to happen. And I think we also have to have,
11 capture in some way developing data. Because there are a
12 number of things -- I know I have worked in an agency where
13 our function was early warning and a number of things
14 didn't, you know, it took years to make it to the list. So
15 I think in some field we need to capture, you know, either,
16 you know, information that is developing on chemicals.
17 Although it's difficult but I think we can't just rely on
18 the list.

19 But, you know, I can't emphasize enough what you
20 bring to the table is the 20-plus years of experience in
21 looking at a lot of these chemicals. You are a trusted
22 source for evaluation. Because just identifying chemicals
23 and having them classified according to these traits that we
24 are all concerned about usually isn't enough.

25 MS. HOOVER: Thanks.

1 PANEL CO-CHAIR GEISER: Julia, it sounds like you
2 suggest something that would be sort of criteria for
3 evaluating lists and being able to rank the lists.

4 PANEL MEMBER QUINT: Absolutely.

5 PANEL CO-CHAIR GEISER: That might be really
6 interesting to think about. What kind of criteria --

7 PANEL MEMBER QUINT: Right.

8 PANEL CO-CHAIR GEISER: What kind of criteria
9 might be useful for evaluations.

10 PANEL MEMBER QUINT: Exactly. Especially before a
11 lot of you retire.

12 (Laughter.)

13 PANEL CO-CHAIR GEISER: Debbie.

14 PANEL CO-CHAIR RAPHAEL: Thank you Sara, that was
15 a great presentation. I am a little bit daunted by the task
16 in front of you when I think about not only the problem as
17 Richard Denison talks about, the infinite number of
18 chemicals, but just keeping it up to date once you even have
19 the first thing. If there's changes to your assessment on
20 things. And I don't know how you are going to do that and
21 minimize the cost to DTSC at the same time. I don't know
22 how that works. So I have just really quickie things.

23 So in terms of that list of hazard traits. One of
24 the ones that I keep hearing a lot of interest in is things
25 that cause asthma. And I don't know if that's what

1 sensitization is or of these other things are but that --

2 MS. HOOVER: It's on our, yeah, that's definitely
3 on our list. We have a very -- this is an example list.
4 This isn't our full, broad --

5 PANEL CO-CHAIR RAPHAEL: Oh, this is not even the
6 full hazard trait list.

7 MS. HOOVER: Asthma would definitely be on it,
8 yes.

9 PANEL CO-CHAIR RAPHAEL: Okay, good.

10 MS. HOOVER: It's not a full list. But yeah,
11 asthma would be on there.

12 PANEL CO-CHAIR RAPHAEL: Because that is one I'm
13 hearing a whole lot.

14 And then this thing that in terms of adding value.
15 This comparison of chemicals is really intriguing to me of
16 being able -- because the whole purpose of 1879 is this idea
17 of alternatives assessment. And so the way you do an
18 alternatives assessment is by comparing chemicals that have
19 the same functionality. So what that means though is you
20 are going to have to have fields that talk about use of the
21 chemical. So surfactant or solvent or something like that.
22 Because otherwise I don't know how you compare chemicals.

23 Like what if you have, if you are looking at 2-
24 butoxyethanol for example. What am I comparing it to? Well
25 I am comparing it to something that does the same function.

1 So that use comes, no matter how we try to avoid it, it's
2 going to get in there. Thank you.

3 PANEL CO-CHAIR GEISER: Dale, is your card up
4 there?

5 PANEL MEMBER JOHNSON: Yes it is, it's up.

6 Well since I participated in the workshop before.
7 But one of the things I think is really important, and it
8 has come up here before, is the quality of the data and the
9 ability to understand the quality and actually make some
10 kind of a assessment as to whether it's good, whether it's
11 bad, whether it's hard data, soft data and so on and so
12 forth. And this is not an easy task to do. And as you go
13 through various databases and the types of annotation that
14 comes from literature and so on and so forth, you will see
15 -- And this occurs in every database and so forth.

16 So a lot of us who look at these, you know,
17 obviously you are looking at -- and I'll just mention one.
18 You're looking at an NTP database. You're pretty sure
19 exactly what's there because it goes through this extensive
20 peer review type of process. And then that same thing is
21 going on in various EPA databases. And then, you know, if
22 you look at the Gold Carcinogenic Database from UC Berkeley
23 it's the same kind of thing. Constant review and so forth
24 in assessing the data. And so this becomes critical.

25 Then when you get into the data gaps and so forth

1 and understanding where the predictive stuff comes from and
2 so forth, one of the issues you have is the ability to use
3 -- and this is particularly true for those people who
4 actually use this as a portal and use it for information.
5 And it will be used to create MSDS sheets, for instance, and
6 other types of prioritization things.

7 Whether or not things are coming from models where
8 there actually is an open source review and ability to look
9 at what's in, what makes up the model, how it's actually
10 made. It's very hard to have anybody who knows any kind of
11 chemistry to look at a black box approach and think that
12 they can trust anything that is coming out of it. So an
13 open source type of thing becomes extremely important.

14 And then I think there are some very critical user
15 portals that are going to be different. And I just mention
16 one because participating in that workshop there is a
17 definite consumer request to use the portal to understand
18 how an individual, how the individual's children, how family
19 members and so forth, are affected in various areas and what
20 the actual effect is. So as a consumer there's a scientific
21 part of it and it will be -- if you are able to do this this
22 will be a monumental task and one of the most important
23 things that ever comes out of this field.

24 PANEL CO-CHAIR GEISER: No small ambition.

25 Lauren.

1 PANEL MEMBER HEINE: Thank you. This is very
2 exciting work.

3 I wanted to build a little bit on the idea of data
4 quality, list quality and also model quality. There are
5 some models that people very confident with, some of the
6 ECOSAR models. And so if there would be some sort of
7 prioritization of models too so that you could feel
8 confident, say, using an ECOSAR.

9 My other point was -- Oh, I'm wondering if you
10 thought about aligning more closely with the GHS
11 categorization? It seems like setting up that way might be
12 very helpful, where you set up the criteria. The only
13 question I had as I was looking at them -- and I don't think
14 GHS really breaks out, you know, cardiology effects and
15 neurotox effects and all the other. It doesn't break all
16 the systemic effects or chronic effects into the
17 subcategories. And there's definite power in that but that
18 makes it infinitely more complicated too.

19 So that's beyond my knowledge of toxicology at
20 this point. But if you know whether, you know. What does
21 the umbrella of systemic or chronic toxicity capture of
22 these other organ effects. That might help you group
23 things. And if you feel that it doesn't adequately cover
24 immunotoxicology or neurotoxicology then maybe those need to
25 be broken out. But the more you can align with

1 international criteria the better you will be able to use
2 data from other sources.

3 PANEL CO-CHAIR GEISER: Tim.

4 PANEL MEMBER MALLOY: Thank you. Tim Malloy.

5 I was really intrigued by some of the things you
6 mentioned in your presentation. Three in particular that
7 led me to start thinking about how is the clearinghouse
8 going to be integrated with the identification and
9 prioritization provisions under 1879. So the three things
10 were:

11 This notion of scaling the data gap along the
12 lines you mentioned and I think Richard started to flesh out
13 a little bit as possibilities.

14 This notion of an exposure trait. I'm taking that
15 to mean that's some kind of relative measure of the extent
16 or nature of exposure that might be, you might see with
17 different uses of these chemicals.

18 And then the last thing the notion of comparing
19 chemicals. And the more I listened to that and read that it
20 started to look like I had originally thought of the
21 clearinghouse of kind of this information source that would
22 be used by people, you know, as raw data in making
23 individual decisions, whether they are regulators or
24 consumers, broadly defined.

25 But now with these three things you have mentioned

1 it starts to look like more and more like a decision-making
2 tool that might be used either as kind of a default approach
3 in prioritizing chemicals of concern. Obviously I'm not a
4 scientist. And I'm also, as a lawyer I'm always a little
5 leery of trying to take complex issues and convert them
6 into, you know, scales or scores or numbers or whatever.

7 But to the extent that it is possible to create
8 kind of a qualitative assessment based on all of these
9 things. About just how much we should be worried,
10 particularly if you can do it across chemicals, comparing
11 them. Excuse me.

12 I just wondered to what extent the clearinghouse
13 could be used as a decision support tool for prioritizing or
14 maybe even creating kind of default -- not default but, you
15 know, proposed or default slices of how concerned we should
16 be about particular chemicals, either as a starting point or
17 an assist to the Department for actually prioritizing
18 chemicals. And I'm wondering whether any of those
19 conversations have been had.

20 MS. HOOVER: Well that's definitely, I mean, I
21 think that's the intent of the legislation is that it should
22 be a tool that is going to help DTSC in its process. I
23 think that, you know, we have talked with DTSC about this
24 integration. And we talked very early on about the idea
25 that they need to move forward pretty quickly with their

1 1879 process. And the clearinghouse may be, you know, a
2 much longer development process. But they can, they can
3 immediately go to -- I mean, it's not hard to figure out
4 some high priority chemicals to immediately start with and
5 the clearinghouse can help, you know, fill in in terms of
6 emerging concerns over time.

7 So I think that's what we have in mind, you know.
8 To be able to use the clearinghouse for that purpose. You
9 know, in terms of how ambitious, overly ambitious that is.
10 But that's definitely what we are trying to think about is
11 how is it going to help the process under 1879.

12 PANEL MEMBER MALLOY: Thank you. So I would just
13 say then, when you look at the straw proposal, that doesn't
14 come through. So it might be helpful to have that kind of
15 more articulated more clearly in the straw proposal.
16 Because it looked like timing-wise there were obviously
17 under statute some issues.

18 MS. HOOVER: But it does -- I mean, the straw
19 proposal does reference the hazard traits toxin points in
20 the clearinghouse. So it's incorporating that process by
21 reference. That's the concept, at least, that we have
22 talked about with DTSC.

23 PANEL CO-CHAIR GEISER: Great, thank you.

24 Julie.

25 Please lower your cards if you have spoken.

1 PANEL MEMBER SCHOENUNG: Julie Schoenung. I want
2 to comment on two different aspects in relation to the
3 clearinghouse, in particular for engineered products since
4 that's my background. And the comments were made earlier
5 about how could this be used for manufacturers and that's my
6 second comment.

7 The first comment regards to where we have tried
8 to use existing databases and the MSDS sheets and other
9 sources for making choices about materials for engineered
10 goods as opposed to for Tide or Windex or other liquids.
11 But for the solids we always run into trouble with lack of
12 data or lack of specificity between things like lead and
13 lead compounds, always get lumped together. And if lead is
14 in an alloy do you need the lead and the silicon and the
15 aluminum that are separately in that alloy or is there data
16 for the alloys.

17 And so as experts in looking through these
18 databases that get me totally overwhelmed whenever I even
19 start, if you can be as specific as possible. But some of
20 the list might not use the right specificity based on what
21 engineers might need to choose the material from because it
22 is not just the elements added up together, it's individual
23 substances, materials that are used, whether that's a
24 polymer, a ceramic or an alloy. And then you get to
25 composites, which gets that much more complex.

1 The second comment is related to that but more on
2 the user interface. And since you didn't talk about it I am
3 not sure how far you have gone with it. But there is a user
4 interface that we use that is very well designed for
5 material selection, not very well designed for environmental
6 attributes for material selection. But it's put out by Mike
7 Ashby at Cambridge University and it's called the CES
8 selector, Cambridge Engineering Selector.

9 And it's a wonderful interface to be able to take
10 things that are preferably quantitative, but in some cases
11 qualitative, and be able to sort substances or materials
12 based on a whole list of attributes. In this case they are
13 using things like strength and ductility and thermal
14 conductivity.

15 But it would be wonderful to have a similar
16 database that could incorporate what you find to be the most
17 important hazard traits. And that way it makes it easier to
18 compare substances in one category.

19 It's not necessarily the best interface for doing
20 the actual prioritization and trying to figure out how to
21 combine them. But to be able to just say, this one is worse
22 in this category or ten times worse in this category, there
23 are interfaces like that.

24 The other facet of it that I like is that it has
25 pop-up windows like a textbook. So for users like me who

1 don't know much about toxicology, to be able to go in and
2 go, well what does this particular hazard trait really mean?
3 You can click on it and get a textbook definition of what
4 that means and have that pop-up window be readily available.

5 So I would be happy to share information on that
6 just as an example. I'm sure there's others out there. But
7 it's a pretty nice decision-making tool that's pretty user-
8 friendly for the uninformed.

9 PANEL CO-CHAIR GEISER: Okay, I have Kelly, Ann,
10 Anne. Oh, Ann, this Ann. Two Anns, that's what's going on.
11 And Bill. And we've got only about eight more minutes or
12 so, so I am going to ask people to be pretty short. So Ann.

13 PANEL MEMBER BLAKE: So as Sara knows, and
14 probably some of you, others of you know as well, this is
15 the world I live in and we are sort of challenging. We have
16 encountered a lot of the same challenges that you have
17 talked about.

18 So in answer to your questions about what value
19 you could add, I would echo some of the comments that have
20 been made here. That if you could come up with criteria,
21 transparent criteria for vetting databases and data sources
22 that would be immensely helpful. Because there are several
23 of us that have attempted to do that on our own and that has
24 been a challenge. And there is an emerging consensus about
25 some of those data sources but to have your invaluable

1 experience as OEHHA would be a huge value added to that.

2 A comment on these first two questions for the
3 panel about the highest priority hazard traits to be
4 included and how they should be lumped and/or evaluated. I
5 would push for some clarity about who your intended audience
6 is. Because my experience is that hazard traits are going
7 to, although everybody seems to care about many of the same
8 hazard traits, the weighting is going to be slightly
9 different depending on who your target audience is. I know
10 that from working consumers versus environmentally
11 preferable purchasing for municipalities and states for
12 example. In different product categories and
13 functionalities that varies quite a bit so more clarity on
14 that would be helpful.

15 And then I think one of the -- if this is part of
16 your authority in working with DTSC, to me the most useful
17 thing would be to identify, to describe data gaps and the
18 implications that those data gaps have for policy makers.
19 And that would help DTSC prioritize which data gaps should
20 be filled first in terms of moving forward and tying
21 information to regulatory action.

22 PANEL CO-CHAIR GEISER: Kelly. And please be like
23 about two minutes.

24 PANEL MEMBER MORAN: Yes. So to answer your
25 question, what value can we bring to California. The thing

1 I would love to have someday would be some way of
2 identifying enough information about use that I could figure
3 out what environmental compartments a chemical gets into or
4 could get into.

5 As somebody who is always looking for pollutant
6 sources, it is really hard to figure that out from just
7 volume data or some other data. And we often use conceptual
8 models as a tool to do that. So if we can better understand
9 what environmental compartments it might get into it would
10 really help us.

11 In terms of priorities I'll echo the comment about
12 ecotoxicity. In terms of what should be, how this should be
13 organized. I think one of the most important things you can
14 do is to have some sort of link or something that would show
15 us what the data source was. As someone who uses these data
16 the first thing I do is say where did it come from. And
17 even if you can't go through all the evaluation everybody
18 has talked to, if you could do that as an early thing it
19 would be really important.

20 And the other early thing I would recommend would
21 be to try to suck in the eco-tox database from US EPA and
22 use those updates. Because that is just such a rich data
23 source.

24 And then finally in terms of interface. My
25 preference and probably the preference of most of the deep

1 scientists here is to be able to get at the actual
2 information. But I have found in working with really
3 intelligent colleagues that they do want the screening that
4 other people are looking for. And a method for doing that
5 for the environmental toxicity that has proven fairly
6 accurate and very useful to my colleagues is on the
7 pesticideinfo.org website, they have done that for
8 pesticides. They have used some of the standard
9 categorization and so forth. But that interface I found to
10 be both accurate and useful to the colleagues that only want
11 that level of screening.

12 PANEL CO-CHAIR GEISER: Thank you.

13 Dele.

14 PANEL MEMBER OGUNSEITAN: Dele Ogunseitán.

15 In terms of California-specific information. I
16 think one of the potentially wonderful scientific values of
17 this clearinghouse is to interface with the California
18 Environmental Contaminant Biomonitoring Program. So we
19 could trace back from what is actually in people's bodies
20 and fluids to what the consumer product would be that might
21 have caused such exposures. I think such linkages will be
22 very much high on the priority of things to regulate. To
23 understand their paths through the environment to people.

24 Secondly, there are a series of studies going on
25 now, for example, UC Irvine and a set of campuses have the

1 Vanguard National Children's Study. That's supposed to
2 monitor thousands of mothers and their children born to them
3 over the next 20 years or so in terms of chemicals and what
4 the health effects would be. Setting up this clearinghouse
5 to accommodate such things as the data that is collected
6 over the next two decades will be very, very valuable.

7 And one more thing. The kind of information that
8 I think Julie referred to would be considered biological
9 availability. So that differences between say certain sorts
10 of lead that may or may not be biologically available should
11 be part of the criteria.

12 PANEL CO-CHAIR GEISER: Thank you.

13 Anne.

14 PANEL MEMBER WALLIN: Anne Wallin. I would like
15 to echo what Debbie said and Julie said. We are trying to
16 facilitate the identification and design of safer products.
17 And so one of the really unique things that you could do
18 with this clearinghouse is to organize it in a way that it
19 is easy for people to go find those safer alternatives. And
20 that means that you are probably going to have to come up
21 with some additional categories. Use I think would be a
22 very helpful one.

23 But along the lines of what Julie said, some other
24 physical chemical properties that a chemist or an engineer
25 or a materials scientist is going to use to try and identify

1 an alternative to replace something that maybe is an issue.

2 And this is going to be such a rich data
3 repository, it's something that you want them to use
4 relatively early in that design process when they have got a
5 lot of degrees of freedom and a lot of opportunities to make
6 a variety of choices. And to make the best one that they
7 can. Because once you invest time in that product
8 development it is very hard then to tell people, well you
9 really ought to not use that and we would like you to find
10 an alternative.

11 PANEL CO-CHAIR GEISER: thank you, Anne.

12 Lastly, Bill.

13 PANEL CO-CHAIR CARROLL: Thank you, Chair. And I
14 want to first apologize to Richard for disrespectfully
15 rolling my eyes during the last discussion when he talked
16 about a fully characterized chemical.

17 When you take a look at the number of potential
18 end-points that you have, and the potential to add more end-
19 points, it is very difficult to imagine how you would have
20 something fully characterized for all of those end-points
21 that you might deem important.

22 But in terms of setting some priorities for those.
23 It would seem to me that what you would want to do is to
24 pick those that are most common and most important. And by
25 doing so you will probably minimize the number of data gaps

1 that you have. I appreciated the discussion that not all
2 data gaps are in fact gaps.

3 We support the idea of a minimum data set
4 necessary for characterizing material. That minimum data
5 set may change from material to material. I'll give you one
6 trivial example. It is really not necessary to know the
7 aquatic toxicity of Phosgene since it reacts with water. So
8 there are cases where you will want to substitute other
9 things that will be important for making your
10 characterization.

11 And the other thing to remember is the more end-
12 points you specify the more data gaps you will have. So it
13 is not just a matter of having data gaps. It's a matter of
14 -- And I think someone else brought up the point of
15 assessing the importance of those data gaps being able to
16 make some characterization.

17 Finally, and Sara, reacting to the discussion of
18 conflict of interest in terms of the data. Sometimes
19 conflict of interest is code words for industry generated
20 the data. And I'm not sure why but I react negatively to
21 that. And the reason is because if data gaps are an issue
22 and industry goes out and fills them using its own money or
23 its own people to fill that data gap, and then immediately
24 it becomes a problem because it's a conflict of interest,
25 then what's the point of going out and filling the data gap

1 in the first place. So I would urge you to avoid creating
2 that kind of paradox for people who might, who might be
3 providing more information. Thank you, Chair.

4 PANEL CO-CHAIR GEISER: Well very good, we got
5 through an enormous number of items and I am hoping that the
6 recording captures all of this. I tried to list a bunch of
7 these but I ran out after awhile of being able to do it,
8 Sara, so very good.

9 We do have a couple of public, we have a one
10 public comment and then a couple of actual things that have
11 come in over the web.

12 MS. BARWICK: Thank you, Sara, thank you,
13 Dr. Geiser and everybody, that was great a conversation and
14 very helpful.

15 Robert Doty. Did I say that correctly?

16 MR. DOTY: Yes.

17 MS. BARWICK: Okay. Remember we have got three
18 minutes for our comments.

19 MR. DOTY: I'll try to make a couple of points and
20 make them briefly. I'm a private practice lawyer. I am not
21 here on behalf of any client or clients. My comment relates
22 primarily to the discussion you had in the prior session
23 about the breadth of the definition of consumer product.
24 And I shared this already with one of the panel members.

25 As I read that definition it is virtually

1 everything. This room was leased to someone for a purpose.
2 This room is a consumer product. Every dwelling unit in
3 California is a consumer product. Every office building in
4 California is a consumer product. So as you think about
5 data gaps and who has got what burdens, that is what you are
6 potentially regulating. Do so with a wary eye that you are
7 sweeping broadly.

8 And when you think about who does alternatives
9 analysis. The draft straw proposal says it is the
10 responsibility of any entity responsible for placing the
11 product in commerce that has to determine if there is a
12 prioritized chemical of concern. Every mom and pop who rent
13 a rental unit that might have carpet off-gassing something
14 that comes onto the prioritized chemical list have to go
15 into that unit and figure out that they have got something
16 and they potentially have to do an alternatives analysis.

17 So that is how broadly you are potentially
18 sweeping. I am not saying it's good or bad. I'm just
19 saying, be cognizant of how broadly drafted this tool is as
20 you think about how to help DTSC implement it.

21 Think also about the law of unintended
22 consequences. MTBE was going to be great for air, it turned
23 out to be a disaster for water. Think carefully about the
24 enforcement mechanism.

25 PANEL CO-CHAIR GEISER: Thank you.

1 MS. BARWICK: Thank you. And I will read -- I
2 have three comments to read to you. I am going to take the
3 most difficult one first because it's long and I can't quite
4 read it very well. This is from Amanda Hawes from Worksafe.
5 And her comment is:

6 "For consumer products used in
7 workplaces that are prioritized for phase-
8 out, exposed workers need protection using a
9 hierarchy of control principles. More and
10 better PELs and better ventilation, not just
11 PPE during period of use pending replacement
12 with safer alternatives.

13 "Medical surveillance during the period
14 of exposure is also important to the goal of
15 mitigating harm to the vulnerable
16 subpopulation of exposed workers. Requiring
17 better health protective PELs and ventilate
18 adequately to meet protective PELs will --"

19 I hope I got that right.

20 "-- help drive more alternatives, will
21 better protect vulnerable workers than they
22 have been protected to date, so that is a
23 win-win. Worker protection and helping to
24 drive the development of safer alternatives.

25 "Cal-OSHA has not been at all proactive

1 in ensuring health protection of workers
2 exposed to many chemicals recognized to cause
3 cancer, reproductive and developmental
4 toxicity. DTSC should take this opportunity
5 to build this concept of protection of
6 vulnerable workers with the regulations and
7 invite Cal-OSHA to get on board."

8 Let me start over. She's got stuff in-between there.

9 "The regulation and prioritization in
10 alternatives assessment and invite Cal-OSHA
11 to get on board.

12 "So thank you very much. Oh, one more
13 comment. When you're pregnant every day is
14 Bring Your Child to Work Day."

15 That's from Amanda Hawes. Thank you very much, Amanda.

16 From Lauren Ornelas from Silicon Valley Toxics
17 Coalition and CHANGE. Her comment is:

18 "Mandatory not voluntary program.
19 Reduce and eliminate animal testing."

20 And we have one that came in on the web from Chris
21 Laszcz-Davis. And I'll read that:

22 "Agree with gentleman who stated that
23 dose-response is very critical. Database
24 needs to have fields that allow for dose-
25 response and end uses that may well change

1 over time. Otherwise we fall into a trap of
2 assuming that existence of chemical equates
3 to risk. Not clear that nano-materials are
4 considered to be part of this legislation, a
5 huge market.

6 "Consider sponsoring a panel of
7 potential database users, representatives of
8 the community, industry, academia, consumers,
9 other government agencies, federal state and
10 international, to calibrate its value and
11 usefulness. With feedback on the front end
12 and at periodic points of database
13 development is absolutely critical.
14 Realistic concern with database effort
15 sustainability. Staff resources, leveraging
16 of information across agencies and continued
17 improvement."

18 Thank you Ms. Laszcz-Davis.

19 And that's the end of that public comment period.

20 PANEL CO-CHAIR GEISER: Kathy, I think maybe at
21 this point we just close this and just congratulate the
22 panel on the afternoon. I think it has been very helpful.

23 PANEL CO-CHAIR RAPHAEL: Can I make an
24 announcement, Ken?

25 MS. BARWICK: And I have a couple as well.

1 PANEL CO-CHAIR GEISER: What I want to do is turn
2 this over to you and Jeff to kind of close out.

3 MS. BARWICK: Okay.

4 PANEL CO-CHAIR GEISER: Is this regarding the
5 panel?

6 PANEL CO-CHAIR RAPHAEL: Yes.

7 PANEL CO-CHAIR GEISER: Okay.

8 PANEL CO-CHAIR RAPHAEL: Just before we close.
9 For the panel tomorrow we are going to just cover the
10 alternatives assessment and Nancy's presentation. And I
11 just want to encourage everybody for bedtime reading to
12 really take a look at that straw proposal because it is
13 actually very detailed. In her presentation the slides are
14 going to be really sort of at a higher level but we will
15 have a much richer discussion if people have really digested
16 those three pages. So I just want to encourage that. Thank
17 you.

18 PANEL CO-CHAIR GEISER: And I know Jeff wants to
19 say something as well so I think let's close this.

20 MS. BARWICK: I'm going to do some logistical
21 stuff so Jeff, you go ahead.

22 DR. WONG: Thank you, Ken. Just as a point of
23 clarification and then there's also a logistical issue. If
24 you look at Health and Safety Code 25256.2, the Department
25 is responsible for the design and the setting of data

1 requirements and data quality of information coming with the
2 portal. So that is not just going to go off into the ether
3 and we'll just collect anything. To be clear about that.

4 The second is that all the speakers have done a
5 great job and they have also supplied you contact e-mail
6 addresses for the panel to send any comments. And we don't
7 want those to sort of like go to many different places and
8 then we have to search for them. So please send your
9 comments as a panel. Send them to Kathy. Make sure that
10 Yolanda gets a copy and of course send a copy to the others.
11 But make sure that they do go to a central place. Don't
12 just send them to Peggy, don't just send them to Rob, just
13 don't send them to Sara. Thank you.

14 MS. BARWICK: I am now the central place.

15 Okay, just a couple of logistical things.
16 Tomorrow morning we are starting at 8:30 not 9:00 so we look
17 forward to seeing you then.

18 For those of you that are from oh -- Oh, the
19 reception. At 5:30 -- from 5:30 to 6:30 there is a
20 reception in the lounge of the hotel. Just all the way back
21 down towards where you registered. And that will be just
22 for an hour. And everybody is invited to that and we hope
23 to do a little socializing.

24 For later this evening. I know a lot of you are
25 from out of town and we again have some restaurants noted on

1 the registration table out there. But as a Sacramento
2 native, I have been here a very, very long time, I do have a
3 recommendation and I can give more specific information.
4 But Sacramento is built on a grid. If you get back on the
5 Capital City Freeway right at Arden and go into town, get
6 off on J Street, go right, and head to about the
7 intersection of L and 18th. Right around there if you can
8 find a place to park your car there must be about 30
9 restaurants within about a five block area. And it's a
10 really nice section of town. It's a nice evening so I do
11 recommend that. More information, you can just talk to me
12 at the reception or something. So that's --

13 MS. HARRIS: But parking your car --

14 MS. BARWICK: You know, there's a lot of
15 restaurants and so there's a lot of customers so you might
16 end up walking three or four blocks to get to the
17 restaurant. Car pooling is good as well. But Sacramento is
18 built on a grid. So when you head back into town you'll get
19 to J Street, it's one way toward the west. And if you get
20 to say about 15th it's one way to the south and turn right
21 on L and then head to 18th and you're right there. Just
22 remember, 18th and L. You'll figure out which way the
23 numbers and the letters go.

24 PANEL CO-CHAIR GEISER: Kathy, I thought you --

25 MS. BARWICK: Be careful of the one way signs

1 though.

2 PANEL CO-CHAIR GEISER: I thought you were going
3 to tell us about where there was some good music tonight.

4 MS. BARWICK: I'm so sorry. L Street, you want to
5 go west on L Street. Thank you, Nancy.

6 Oh, and Nancy's question for the evening's
7 discussion is, lager versus ale.

8 There is going to be an Irish music session at the
9 Fox and Goose pub. That is at the corner of 10th and R
10 Streets.

11 PANEL MEMBER BLAKE: Are you playing?

12 MS. BARWICK: I wasn't planning to because it's
13 kind of a busy week but if people are going to go I'll take
14 my guitar. My Irish band hosts that session. Some people
15 asked about music here evening. And there's food there as
16 well. It is English pub food.

17 Okay, thank you all so much, we'll see you in the
18 morning.

19 Oh, one more thing. The room will be locked. We
20 will not vouch for your belongings so I would take them with
21 you. Panel, would you leave your name tags on the table,
22 please. I am going to do a little shuffling to see where
23 we're sitting in the morning. Move some people around.

24 MR. SMITH: Just a moment.

25 MS. BARWICK: Bagley-Keene, don't forget about

1 Bagley-Keene.

2 MR. SMITH: I hope that my instructions earlier
3 today about the limitations of Bagley-Keene were a little
4 bit clearer than Kathy's directions into town.

5 (Laughter.)

6 MS. BARWICK: I used to be a blonde.

7 (Whereupon, the Green Ribbon Science Panel
8 Meeting of the Department of Toxic Substances
9 Control was adjourned, to reconvene at 8:30
10 a.m., Thursday, April 30, 2009, at this same
11 location.)

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CERTIFICATE OF REPORTER

I, JOHN COTA, an Electronic Reporter, do hereby certify that I am a disinterested person herein; that I recorded the foregoing California Department of Toxic Substances Control Green Ribbon Science Panel Meeting; that it was thereafter transcribed into typewriting.

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

IN WITNESS WHEREOF, I have hereunto set my hand this 14th day of May, 2009.

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

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