

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

In the Matter of:

Public Workshop on Perfluoroalkyl)
And Polyfluoroalkyl Substances)
(PFASs) in Carpets and Rugs)

CAL/EPA HEADQUARTERS BUILDING

KLAMATH ROOM, SECOND FLOOR

1001 I STREET

SACRAMENTO, CALIFORNIA

TUESDAY, MARCH 20, 2018

1:00 P.M.

Reported by:

Peter Petty

APPEARANCES

MODERATOR

Asha Setty, Public Participation Specialist

SAFER CONSUMER PRODUCTS BRANCH (SCP) PANEL

Meredith Williams, Deputy Director

Karl Palmer, Branch Chief

Andre Algazi, Team Lead

Simona Balan, Senior Environmental Scientist

PRESENTERS

Jessica Bowman, FluoroCouncil

Warren Lehrenbauer, FluoroCouncil

Steve Korzeniowski, FluoroCouncil

Joe Yarbrough, The Carpet and Rug Institute (CRI)

Miriam Rotkin-Ellman, National Resources Defense Council

Alvaro Palacios Casanova, Center for Environmental Health

Liza Grandia, UC Davis/Woodland Coalition for Green
Schools

Tom Bruton, Green Science Policy Institute

AGENDA

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P R O C E E D I N G S

1:02 P.M.

SACRAMENTO, CALIFORNIA, TUESDAY, MARCH 20, 2018

MS. SETTY: Hello everyone. Can you hear me okay? Yes? Good. We'll go ahead and get started. My name is Asha Setty and I'm a Public Participation Specialist with the California Department of Toxic Substances Control. I'd like to welcome you to this meeting on our proposal to list perfluoroalkyl and polyfluoroalkyl substances, or PFASs, in carpets and rugs as a Priority Product.

We're seeking public comment on the Product-Chemical Profile on PFASs for carpets and rugs. In particular, we're requesting your input on a specific list of topics and questions that we'll get to after our presentation. You also have the opportunity to submit general comments on the proposal using comment cards, which are available at the front. We have a court reporter here recording this meeting, as well.

For those of you here in person, I'd like to point out the two emergency exits located on this side of the room. Restrooms are located

1 just outside the hallway. And in the event of an
2 evacuation, please exit the building by using the
3 stairwells, just located outside of the hallway,
4 as well.

5 For our webcast viewers, please email
6 this email address to submit your comments.

7 For those of you here today in person,
8 please make sure you checked in at the
9 registration table and picked up an agenda and
10 comment card, as well as the list of questions.

11 Now I'd like to introduce you to the
12 panel representing our Safer Consumer Products
13 Program.

14 Here, first we have Dr. Simona Balan, who
15 is our Senior Environmental Scientist, and will
16 be this afternoons presenter. And next we have
17 Dr. Meredith Williams, who is our Deputy
18 Director. And next to her, we have Karl Palmer,
19 who is the Branch Chief. And then we have Andre
20 Algazi, who is the Chemical Product Evaluation
21 Team Lead.

22 I'll go ahead and turn it over to you,
23 Dr. Williams, for opening remarks.

24 DEPUTY DIRECTOR WILLIAMS: Thank you,
25 Asha.

1 Thank you all for being here in person,
2 and thanks to those who are participating online.
3 We welcome you to this discussion and for the
4 beginning of and to continuation of an ongoing
5 conversation. We want to continue the
6 conversation we began last year on -- with this
7 workshop on the per- and polyfluoroalkyl
8 substances in carpets and rugs.

9 And I'm sure you're all well aware that
10 we released a document last month that is a
11 technical document that explains our basis for
12 concern about these products. And that document
13 was developed using, of course, extensive staff
14 research, but also a great deal of engagement,
15 both from participants who are here today and
16 from partners at the local, state, federal, and
17 even international level, who have been giving
18 this set of chemicals and these products a great
19 deal of consideration.

20 And yet, despite that, the great amount
21 of research that went into this document, it's
22 still just the relatively early part of our
23 process. We're counting on additional input
24 through the comments. And we use that input to
25 inform further deliberations about this

1 combination of product and chemical.

2 And as you're hopefully aware, also, we
3 extended the comment period on this document
4 until April 16th, and that's to allow adequate
5 time for thoughtful input and consideration of
6 this highly complex and very technical document
7 and topic.

8 So we take comments quite seriously. We
9 will take all the comments we receive here today
10 and through the formal comment period on CalSAFER
11 under consideration as we decide whether to move
12 forward with any rulemaking, and in terms of
13 developing the support for a potential Priority
14 Product listing.

15 So if we do go ahead with the Priority
16 Product listing, we will initiate rulemaking.
17 And that will provide, again, another comment, a
18 more formal comment period and hearing. So this
19 is -- the comment on this document as it is today
20 would not be the last opportunity to engage with
21 the Department.

22 And as always, with the Safer Consumer
23 Products Program and Regulations, even rulemaking
24 does not provide any certainty about what the
25 ultimate outcome is of a Priority Product

1 listing. That really depends on the alternatives
2 analysis that's undertaken by the manufacturers,
3 by the findings of those alternative analyses and
4 the recommendations of the manufacturing sector,
5 and that becomes the basis to dictate a path
6 forward on this product-chemical combination.

7 So with that, I think I'll have an
8 opportunity to make a few comments at the end.
9 We're looking forward to the conversation today.
10 And I will turn it over to Dr. Simona Balan.

11 DR. BALAN: Thank you. Good afternoon
12 and thank you, everyone, for joining us today and
13 for engaging with us in this process and on our
14 proposal to list PFASs in carpets and rugs as a
15 Priority Product. Whoops.

16 According to the Safer Consumer Products
17 Regulations, a Priority Product is a product-
18 chemical combination that meets two key criteria:
19 there must be potential for exposure to the
20 Candidate Chemical in the product, and there must
21 be potential for one or more of these exposures
22 to cause or contribute to significant or
23 widespread adverse impacts. And we discussed how
24 these factors are met in great detail in our
25 Profile, which is available on CalSAFER for

1 comment until April 16th. But today, I'll just
2 give you a brief overview of the definitions and
3 scope of this proposal. And I'll summarize the
4 evidence for the potential for exposure and the
5 potential adverse impacts, and I'll end with a
6 couple additional considerations.

7 Okay, so the scope of the product,
8 carpets and rugs, is any product made from
9 natural or synthetic fabric that is intended to
10 be used as a floor covering inside commercial or
11 residential buildings. So that includes carpeted
12 door mats because they can be used indoors or
13 outdoors, but it excludes carpets and rugs in
14 other interior environments, such as cars, trains
15 or planes. And here are the relevant product
16 classification codes that we've identified.

17 In terms of the class of chemical, the
18 Candidate Chemicals, that's the entire class of
19 perfluoralkyl and polyfluoroalkyl substances, or
20 PFASs, and they're a class of over 3,000
21 chemicals, highly diverse in terms of structure;
22 there are polymers, nonpolymers. But what they
23 have in common is that they all contain as least
24 one fully fluorinated carbon atom, so one carbon
25 that has no more carbon-hydrogen bonds because

1 all the hydrogens were replaced with fluorine.
2 And all our Candidate Chemicals for our program,
3 they've been listed in 2015 by Biomonitoring
4 California as priority chemicals. They're used
5 in a wide variety of consumer products. In
6 carpets and rugs, they serve as stain resistance
7 and soil resistance, including resistance to oil-
8 and water-based stains.

9 So this entire universe of PFASs that is
10 highly diverse can be subdivided into four main
11 categories, according to a recent paper by Wang,
12 et. al., 2017. We have the perfluoralkyl acids,
13 or PFAAs. These are the most widely studied, the
14 best known out of this chemical class. Then
15 there are PFAA precursors (chemicals that degrade
16 into PFAAs), fluoropolymers and
17 perfluoropolyethers. And I'm going to tell you a
18 little bit about all of these four categories and
19 how they relate to carpets and rugs, but all of
20 them, basically, one way or another connect back
21 to PFAAs, because they either degrade to PFAAs or
22 they're manufactured using PFAAs.

23 So what are PFAAs? They are
24 perfluorinated chemicals. They are nonpolymeric.
25 The key concern with these chemicals is their

1 extreme persistence. There's no known natural
2 degradation pathway for these chemicals in the
3 environment. So once they're out there in the
4 environment, they can last indefinitely, maybe
5 even longer than human civilization.

6 They're also bioaccumulative, the ones
7 that are longer chains, so sulfonates with six or
8 more fluorinated carbons than all other PFAAs
9 with seven or more fluorinated carbons are called
10 long chains because of their bioaccumulation
11 potential. The shorter chain ones tends to be
12 very mobile in the environment, and that's
13 another key concern. And toxicity has also been
14 documented in both human and animal studies.

15 Now, PFAAs are not used in carpets and
16 rugs. They're not intentionally added to carpets
17 and rugs. However, they can be found in carpets
18 and rugs as a manufacturing impurity or as a
19 degradation product of the PFASs that are added
20 to carpets and rugs.

21 Which brings me to PFAA precursors.
22 These are probably the biggest subcategory of
23 PFASs. They're both polymers and nonpolymers.
24 They're mostly polyfluorinated, meaning that
25 there are still carbon-hydrogen bonds in the

1 molecule. And their key concern is that they
2 degrade to PFAAs. Some of them can also be
3 persistent. They can still be in the environment
4 for a while before they degrade to PFAAs. Some
5 are also very mobile. For instance,
6 fluorotelomer alcohols are volatile and they can
7 be transported in air throughout the globe. And
8 some, such as fluorotelomer carboxylates and
9 aldehydes were found to have greater acute
10 toxicity than the PFAAs.

11 Now the side-chain fluorinated polymers,
12 as the name describes, they're a long hydrocarbon
13 chain with side chains that are fluorinated that
14 can cleave off, so eventually they do degrade
15 into PFAAs. And they are the most commonly used
16 carpet and rug treatment currently in North
17 America, so they're highly relevant to this
18 product category. Nonpolymeric PFAA precursors
19 have been used in carpets and rugs in the past,
20 and they may still be used in imported products.
21 And they may also be found in carpets and rugs as
22 impurities or as incomplete degradation products
23 of the side-chain fluorinated polymers.

24 The last of the categories,
25 perfluoropolyethers and fluoropolymers are true

1 polymers. They do not degrade, but they're also
2 probably too big to get into the cell membranes
3 and cause toxicity. So the key concern here is
4 that, traditionally, they've been manufactured
5 using PFAAs. In fact, fluoropolymers have been
6 the biggest source of perfluorooctanoic acid or
7 PFOA to the environment. Even though it's not
8 manufactured generally with PFOA anymore, they
9 still use other PFAAs, such as fluorinated ethers
10 or GenX. And they're not as widely used in
11 carpets and rugs. We found a couple instance of
12 perfluoropolyethers being used as carpet
13 treatments. However, a patent by Invista
14 (phonetic) from 2017 says that PFASs is suitable
15 for carpet and rug treatment includes
16 fluoropolymers and perfluoropolyethers.

17 Now, moving on to the potential for
18 exposure, our regulations consider several
19 different lines of evidence to determine this
20 potential. So one of these lines of evidence is
21 the market presence of the product. Carpets and
22 rugs make up more than half of the market for
23 flooring, according to 2016 data, both by revenue
24 and by volume. And according to the Carpet and
25 Rug Institute, California is about a third of the

1 U.S. carpet market. And also, most residential
2 and commercial carpets are treated with PFASs.
3 So it seems likely that the majority of
4 Californians are going to be exposed to carpets
5 containing PFASs during -- on a pretty regular
6 basis, either in their homes or in their offices
7 or in other indoor buildings that they frequent.

8 Another line of evidence we look at is
9 monitoring data. And PFAAs have been found in a
10 wide variety of environmental media, including
11 indoor air and dust, outdoor air, fresh water,
12 ocean water, soil and sediment. They've been
13 found in plants and animals and in, pretty much,
14 all humans studied around the world, including in
15 indigenous populations in the Arctic, far away
16 from any emissions sources. They've also been
17 found in human food, including vegetables, fish,
18 meat, as well as in drinking water, including in
19 California in some places at levels exceeding
20 USEPA health advisories.

21 And please note that this monitoring data
22 that we have on PFASs is limited to some PFAAs
23 and some of their precursors. The majority of
24 PFASs cannot currently be measured using current
25 analytic techniques. So the extent of

1 contamination may be even bigger than we know.

2 Another line of evidence we look at are
3 the properties of the chemicals, such as
4 persistence. The more persistent the chemical is
5 the longer it's going to be in the environment,
6 so the higher the likelihood of exposure and re-
7 exposure for humans and biota, so PFASs are very
8 persistent.

9 Another trait of concern of
10 bioaccumulation. The longer-chain PFAAs
11 bioaccumulate. And also, lactational and
12 transplacental transfer was displayed by pretty
13 much all PFASs tested for this property.

14 (Coughs.) Excuse me.

15 So, for instance, the fetus gets exposed
16 to PFASs in-uterus and babies are born with PFASs
17 already in their bodies, and they get (clears
18 throat) additional loadings through breast
19 feeding. Excuse me.

20 DEPUTY DIRECTOR WILLIAMS: Take your
21 time.

22 DR. BALAN: I knew that was going to
23 happen. I'm recovering from a sickness. Sorry
24 about that.

25 So we also look at the exposure

1 throughout the lifecycle of the product, not just
2 during the use phase. And this is not actually
3 shown on this diagram, but during manufacturing
4 there can also be releases of PFASs into the
5 environment while the carpets are being treated.

6 And once the carpet has been put on the
7 market and treated with PFASs, the nonpolymeric
8 PFASs can come out in dust that then humans and
9 animals can ingest or inhale. They can come out
10 in air, if they're volatile, that then humans and
11 animals can inhale. Then there could also be
12 dermal contact; right? If you're get in contact
13 with a carpet, that's especially a concern for
14 toddlers that spend a lot of time in contact with
15 the carpet. Also, if the carpet is cleaned, the
16 cleaning extract ends up, eventually, at the
17 wastewater treatment plant that is not
18 necessarily set up to deal with these chemicals,
19 and they end up being released into the
20 environment.

21 And once they're in the environment,
22 these chemicals cycle there forever, since they
23 don't get degraded, so there's the possibility
24 for multiple avenues of exposure, and eventually
25 can make it into human food and drinking water.

1 And especially at the end of life, our
2 regulations are concerned with what happens in
3 terms of adverse impacts at the end of life of a
4 product, or adverse impacts to waste management.
5 So carpets typically are landfill at the end of
6 their life.

7 In California in 2016, 75 percent of the
8 carpet discarded was landfilled. So from
9 landfill, any water that percolates through can
10 carry these chemicals out in the leachate. That
11 leachate may be directly released into surface
12 and groundwater, or it can be brought to a
13 wastewater treatment plant that cannot
14 necessarily remove it. Removing PFASs is
15 possible, but it's cost prohibitive for most
16 wastewater treatment plants. And it's not
17 possible for all PFASs at the moment, as far as
18 we know.

19 Now the other carpets and rugs that are
20 not landfilled are either incinerated for energy
21 recovery or are recycled, and that leads to
22 recyclers being exposed to these chemicals, and
23 also to the perpetration of PFASs in the recycled
24 product.

25 We also consider three kinds of hazard

1 traits of the Candidate Chemicals: exposure
2 potential, environmental and toxicological hazard
3 traits. These exposure potential hazard traits
4 listed on the left on the slide are displayed by
5 different PFASs. Not all of them meet all of
6 those, but different PFASs display all of these,
7 and I've talked about the first four.

8 The last one, global warming potential,
9 is displayed by some fluorinated ethers and by an
10 incomplete combustion product of PFASs. And some
11 PFASs also show toxicity to plants and to other
12 terrestrial and aquatic organisms.

13 And in terms of toxicological hazard
14 traits, there are numerous epidemiological
15 studies that have looked at adverse impacts to
16 humans, including kidney and testicular cancer,
17 increased serum cholesterol, thyroid disease,
18 immune dysregulation, including reduced efficacy
19 of vaccines and higher incidence of infectious
20 diseases for children, and pregnancy-induced
21 hypertension. So these effects were mostly found
22 for longer-chain PFASs because they were studied
23 for this. But the shorter chains are starting to
24 show similar impacts, as well, in more recent
25 studies. PFASs accumulate in human lungs,

1 kidney, liver, brain, bone tissue, basically
2 anything that is very protein-rich.

3 A whole suite of other hazard traits were
4 found in animal studies. And Appendix 3 to the
5 Profile lists some of these studies, but please
6 note that they're not comprehensive; right?
7 There's hundreds of studies out there. We did
8 not try to be comprehensive there. We just tried
9 to show kind of the breadth of research that
10 exists for these chemicals.

11 And we also have paid special attention
12 effects on sensitive subpopulations, endangered
13 species, sensitive habitats in California,
14 including the human populations that are
15 typically most susceptible to hazardous
16 chemicals, such as fetuses, infants, children,
17 pregnant women. But exposure to PFASs in carpets
18 and rugs is of concern to anyone who is in close
19 contact with PFASs in carpets for their work,
20 such as carpet installers, carpet cleaners,
21 carpet retail sector workers, carpet recyclers,
22 as well as office workers or school children who
23 are indoors most of the time.

24 It can also be a cause of concern for
25 people who have certain preexisting conditions,

1 like high cholesterol of thyroid disease or other
2 diseases that are similar to those associated
3 with the use of PFASs.

4 So lastly, a couple more thoughts, data
5 gaps; right? Despite the thousands of papers out
6 there on PFASs, there are quite a few data gaps
7 remaining and we discuss some of them in the
8 Profile. We hope we can fill some of them with
9 your help, either today or through this comment
10 period. But please note that despite the data
11 gaps, there is still sufficient information for
12 DTSC to make this proposal to list PFASs in
13 carpets and rugs as a Priority Product.

14 And lastly, we also looked at
15 alternatives. Alternatives are already available
16 for most uses of PFASs in carpets and rugs,
17 including inherently stain-resistant fibers that
18 may not need any chemical treatment, as well as a
19 whole range of chemical alternatives.

20 Sulfonation is one that has been used for
21 a while. It blocks the acid dye sites on the
22 nylon, so that the carpet then is impossible to
23 stain using coffee or wine or anything that is
24 acidic. It doesn't work for all types of stains,
25 but it works for acid stains.

1 There's a bunch of other different
2 alternatives that have been developed and are
3 listed here in the Profile. But please note that
4 DTSC has not assessed these alternatives and
5 we're not endorsing any particular formulation.

6 So please, if you haven't yet, take a
7 look at the Profile. It's available on CalSAFER
8 for comment until 11:59 p.m. on April 16th. And
9 we look forward to hearing your comments. If
10 you'd like to stay engaged with us, here's our
11 contact information.

12 Thank you for your attention. I look
13 forward to hearing from you today and throughout
14 this comment period. So I'll pass it back onto
15 Asha.

16 Thank you.

17 MS. SETTY: Thanks for the presentation,
18 Dr. Balan.

19 Now we'd like to switch it over to public
20 comment. First, we'd like to seek your input on
21 specific questions that we have posted on our
22 CalSAFER website, also available to pick up at
23 the table. You can find the link posted on our
24 workshop information page, as well. I'll go
25 through each of these one by one. Let's get to

1 that slide here. If you have a comment that is
2 unrelated to these specific questions, then
3 please hold them for the next comment session
4 that will follow.

5 For this process, in-person attendees do
6 not need to fill out a comment card. We'll be
7 taking your comment cards for the general comment
8 period after this session.

9 So I'd like to go ahead and get started
10 on the topic of product and chemical description.
11 Our first question is: Is the product definition
12 clear and unambiguous as to which related
13 products are included or excluded?

14 Is there anyone in this room that would
15 like to comment on this question?

16 Do we have any webcast attendees with a
17 comment?

18 Okay, then we'll move on to the second
19 question: Are the Global Product classification
20 and North American Industry Classification System
21 Codes relevant and comprehensive?

22 Does anyone have any comments in this
23 room?

24 And from the webcast?

25 Okay, we'll move on to the third question

1 then. Is the definition of the class of PFASs
2 clear and accurate?

3 Anyone in this room with a comment?

4 Webcast?

5 Okay, before we move on to the next
6 category, I'll just take one last moment to ask
7 if anyone has any questions on this category?

8 Okay, we'll move on to the next topic
9 then. Okay, so these questions are about the
10 potential exposures and impacts. So our first
11 question is if anyone has more specific data on
12 the market presence of the product and its supply
13 chain?

14 Anyone in this room with a comment?

15 Webcast?

16 Okay, we'll move on to the second
17 question. We'd like to know if you have
18 information on the release, loss or degradation
19 rate of the PFAS-based treatment of carpets and
20 rugs?

21 No comments?

22 Okay, our third question is what is the
23 scientific basis for claims that lower toxicity
24 is indicated by lower apparently bioaccumulation,
25 persistence or long-term body burden?

1 No comments?

2 I will move on to our next slide here, a
3 couple more questions on this topic. Our fourth
4 question is: What additional research is
5 industry doing to address global concerns on the
6 persistence of PFASs in the environment and
7 potential human and ecological health impacts?

8 Anyone? Alright.

9 Okay, our fifth question on this topic
10 is: What methods are used for handling and
11 disposing of PFAS waste and PFAS-containing
12 carpet and rug, pre- and post-consumer waste?

13 Okay. We don't have any comments on this
14 topic, potential exposures and impacts. We'll
15 move on to the next topic.

16 Okay, so now we're moving on to the topic
17 of alternatives. We'd like to know if you have
18 any information on the alternatives listed in the
19 Profile, as well as any information you have on
20 alternatives that are not listed? Again, we'll
21 just go through these one by one.

22 Our first question is: Do you have
23 further information on the alternatives listed in
24 Chapter 7 of the Product-Chemical Profile?

25 Alright, no comments? Alright.

1 We'll move on to our second question,
2 which is: Are there other functionally
3 acceptable alternatives to the use of PFASs in
4 carpets and rugs. In particular, are they
5 commercially available?

6 Anyone have comments?

7 Second, do they require the use of a
8 replacement chemical?

9 Any comments?

10 Third, are there known hazards associated
11 with these alternatives? Okay.

12 And are any potential replacement
13 chemicals listed as Candidate Chemicals?

14 Any comments?

15 Okay, so that concludes our portion of
16 the comments specifically focused on our
17 questions.

18 Now we would like to open it up to
19 general comments. We have a few comment cards
20 that we've received.

21 Chris, you've got some comment cards for
22 us. If you could go ahead and bring it up, that
23 would be great.

24 We'll just move on into our next session.
25 Okay, anyone else with comment cards on general

1 topics? Anyone else? (Pause)

2 MS. SETTY: Okay, we have seven comment
3 cards. I'll go ahead and call up our first
4 speaker, and that would be Jessica Bowman from
5 the FluoroCouncil.

6 Go ahead and come up to the mic, and you
7 have no more than five minutes.

8 MS. BOWMAN: Thank you. Thank you. I'm
9 Jessica Bowman with the FluoroCouncil.

10 First, I just want to say that we
11 appreciate the opportunity to provide comments on
12 the Profile document, both at this workshop and
13 through written comments.

14 I also want to say that we appreciate the
15 opportunity that we've had over the last year-
16 and-a-half to have a dialogue with the Department
17 as you've worked to better under PFASs and their
18 use in carpets and rugs.

19 However, I must say that we were deeply
20 disappointed in the document, especially to find
21 out that much of the information that we provided
22 to the Department regarding the primary PFASs
23 that are actually used in carpeting today and
24 have been in use for more than a decade, those
25 are short-chain/ side-chain fluorinated polymers,

1 has not been included in the Profile document.

2 We think the document is fundamentally
3 flawed from both a factual and a scientific
4 basis, and that the concerns raised in the
5 document regarding potential adverse impacts and
6 exposure are based almost wholly on PFOA and
7 PFOS. PFOA and PFOS are not used in carpeting
8 today. The PFASs that are used in carpeting
9 today are not a relevant source of these
10 substances. And there's a robust body of data,
11 much of which we've provided to the Department,
12 that was not included in the Profile document
13 that shows the concerns associated with PFOS and
14 PFOA are not characteristic of the entire class
15 of PFASs or the specific PFASs that are used in
16 carpeting today.

17 In the Profile document the Department
18 has documented its concerns with PFOA and PFOS
19 from both a hazard and an exposure standpoint.
20 And as I conveyed at the January 2017 workshop on
21 this matter, these substances continue to be
22 manufactured outside the U.S. by companies that
23 didn't participate in the EPA PFOA Stewardship
24 Program. And therefore, articles containing
25 these substances can be and continue to be

1 imported legally to the U.S.

2 So if the Department does, in fact, have
3 concerns about these substances, about PFOA and
4 PFOS, then we would encourage you to take a
5 closer look at other applications where they
6 continue to be used today, rather than focusing
7 on an industry on an application that over ten
8 years ago switched away from long chains.

9 We will be submitting detailed written
10 comments by the April 16th deadline. But in the
11 meantime, we want to offer several high-level
12 points for the Department to consider. I'm going
13 to introduce those points, and a couple of my
14 colleagues will discuss them in more detail.

15 First, DTSC cannot and has not
16 demonstrated widespread adverse impacts for all
17 PFAS chemicals.

18 Second, DTSC should acknowledge that only
19 a limited subset of PFASs are actually used in
20 carpeting today. Those are primarily short-
21 chain/side-chain fluorinated polymers.

22 And finally, there's a robust body of
23 degradation, toxicity and exposure data on those
24 short-chain/side-chain fluorinated polymers that
25 demonstrates a lack of widespread adverse impacts

1 from those chemistries that are actually used to
2 treat carpeting today.

3 So with that, I think we have it in
4 order, so my colleagues will speak right after
5 me. Thank you.

6 MS. SETTY: Thanks for your comments.

7 Next we have Steve Korzeniowski from the
8 FluoroCouncil.

9 MS. BOWMAN: Actually, it should be
10 Warren Lehrenbauer next.

11 MS. SETTY: Okay. We'll take Warren then
12 next.

13 MR. LEHRENBAUER: Thanks, Steve. You'll
14 get Steve later. So thank you all. As Jessica
15 mentioned, I'm going to pick up on two points
16 that she raised.

17 The first is that DTSC, we think, cannot
18 make the determination of widespread adverse
19 impacts from the entire class of PFAS chemicals.
20 As we saw in the earlier presentation, the term
21 PFAS describes a very broad category of chemistry
22 that encompasses hundreds of products that are
23 currently in commerce, as well as hundreds of
24 other substances that are no longer in commerce
25 or present as waste products or impurities or

1 only in a laboratory.

2 The universe of chemistries can be
3 divided into several different categories,
4 including fluoropolymers, side-chain fluorinated
5 polymers, fluorosurfactants and
6 perfluoropolyethers. These chemistries have
7 widely differing physical chemical properties and
8 very different toxicological profiles, and also
9 very diverse performance characteristics. And
10 because of this very broad diversity, it would be
11 inappropriate, scientifically incorrect, and
12 ultimately an arbitrary decision to address,
13 quote, all PFAS chemicals as if they were a
14 single class of closely related chemicals because
15 the data show that's not correct.

16 While some subclasses of PFAS chemicals
17 might be associated with potentially adverse
18 impacts, other subclasses of PFAS chemistries are
19 clearly not associated with the adverse impacts.
20 One example is fluoropolymers. These are very
21 large molecules that are chemically and
22 biologically inert and are not bioavailable. The
23 overwhelming weight of scientific evidence
24 supports the conclusion that fluoropolymers do
25 not present any significant risks to human health

1 or the environment. These data have been
2 collected in a peer-reviewed scientific paper
3 that is currently in press and available on line
4 in pre-publication format in Integrated
5 Environmental Assessment and Management.

6 Similarly, a large and growing body of
7 scientific data also supports the conclusion that
8 short-chain/side-chain fluorinated polymers
9 currently on the market in the U.S. do not
10 present any significant risks to human health or
11 the environment. Before these products were
12 allowed onto the market, EPA undertook an in-
13 depth review of the data supporting the safety of
14 these products. And, in addition, EPA continues
15 to retain regulatory oversight of these products
16 through its use of TSCA Section 5 e-orders.

17 As OECD and other scientific bodies have
18 noted, when multiple chemicals have differing
19 toxicity characteristics, they cannot be grouped
20 together for risk assessment purposes. This is
21 true of the large and diverse universe of PFAS
22 chemistries. The overwhelming weight of
23 scientific evidence demonstrates that different
24 categories of chemistries within the broad PFAS
25 universe have widely differing toxicological

1 profiles. Therefore, it is inappropriate to
2 regulate all so-called PFAS chemicals as a single
3 class.

4 More to the point, with specific
5 reference to the Safer Consumer Products
6 Regulation, DTSC cannot, in good faith, determine
7 that the entire universe of PFAS chemistries
8 presents adverse impacts in the state of
9 California. The scientific data simply do not
10 support such a determination.

11 The second issue I'd like to address is
12 that, as Jessica mentioned, side-chain
13 fluorinated polymers, specifically those that are
14 short-chain, are the specific category that is
15 overwhelmingly used in carpeting. And the only
16 other alternative that we're aware of is the
17 perfluoropolyether.

18 The sole focus of the chemical assessment
19 profile should be on these materials, their
20 impurities and their degradants. These materials
21 are considered low risk to humans and the
22 environment. And it is incorrect and extremely
23 misleading to associate these actual carpet
24 treatment materials with PFAS chemicals that show
25 evidence of toxic effects. These materials that

1 are actually in use have not been associated with
2 toxic endpoints for carcinogenicity,
3 developmental toxicity, mutagenicity or
4 reproductive toxicity.

5 FluoroCouncil members represent the
6 majority of fluorinated treatments sold into
7 carpets in the U.S. have considerable expertise
8 in this application. The vast majority of PFAS
9 materials used in carpet are side-chain,
10 fluorinated polymers with short-chains, as I
11 mentioned. The only other PFAS material, again,
12 as I mentioned are the perfluoropolyethers.
13 Long-chain fluorinated polymers -- fluorinated
14 products, like C8 and PFOA and related products
15 that were discussed extensively in the Profile
16 document, are not used and no longer even
17 produced in the United States.

18 Fluoropolymers, despite what is indicated
19 in the Profile document, are not used in carpet
20 applications. Polymerization aid like GenX and
21 Adona, which were discussed extensively in the
22 Profile document, are simply not suitable for
23 this use and have never been used in carpeting.
24 Short-chain fluorosurfactants, likewise, are not
25 used in carpet treatment. They are not suitable

1 of this end use.

2 There's no credible evidence of the use
3 or presence of PFAS chemicals, other than short-
4 chain-based polymers and perfluoropolyethers.
5 Any observations of the presence of other
6 materials would be as unintended contaminants of
7 the test methods or the materials. Only the
8 short-chain-based polymers are used, and only
9 these materials and their impurities and
10 degradants should be considered relevant in the
11 focus of the DTSC Profile document.

12 Fluorinated side-chain polymers and
13 degradation products are considered low risk to
14 humans and the environment. These polymers are
15 not bioavailable and are considered low risk.
16 And it is incorrect and extremely misleading to
17 state that the degradation products of these
18 short-chain/side-chain polymers show evidence for
19 carcinogenicity, developmental toxicity,
20 mutagenicity or reproductive toxicity and so
21 forth. The toxic endpoints for long-chains, such
22 as PFOA and PFOS, listed in the Profile document
23 have not been associated with the polymers,
24 monomers or degradation products of the PFAS
25 chemicals actually used in carpeting today.

1 Thank you.

2 MS. SETTY: Thanks for your comments.

3 Okay, we'll move on to Steve Korzeniowski
4 with the FluoroCouncil.

5 MR. KORZENIOWSKI: Thank you very much.

6 I want to spend just a few moments more on the
7 technical side. I represent the FluoroCouncil,
8 but I represent the Science Workgroup of the
9 FluoroCouncil, and part of the work that we do
10 every day as to try to understand what work has
11 been done, what it means and so on, not unlike
12 what you've done, Simona.

13 I want to talk about four things. I want
14 to first talk about degradation, degradation of
15 the C6 products and the other fluorotelomer-based
16 products.

17 There's the concept out there of
18 irreversible exposure and forever chemicals, and
19 I think we're all familiar with that. However,
20 recently completed studies on the C6 short-chain
21 fluorotelomer-based polymers, the acrylates and
22 methacrylates, conducted under USEPA directed and
23 approved protocols indicate that the current
24 half-life, T1/2s, are on the order of millennia.
25 As we saw in the document, there's rather an

1 overt bias toward the John Washington, et. al.
2 Study that looks at maybe decades. But we
3 present additional evidence that it's likely
4 different than that.

5 Degradation pathways for fluorotelomer
6 intermediates and precursors, such as the 6:2
7 fluorotelomer alcohol, are well known and well
8 studied, and the respective studies published in
9 peer reviewed literature. Regardless of the
10 exact short-chain fluorotelomer-based products
11 that were used in carpets and rugs, potential
12 degradation products or impurities ultimately
13 result in dead-end and stable short-chain acids,
14 like the C6 and the C4.

15 The hazard profile of fluorinated
16 polymers used in carpeting is assessed based on
17 the degradation products. At the direction of
18 regulatory agencies, the most well-studies of
19 those degradation products is perfluorohexanoic
20 acid, although data is available on other
21 degradation products.

22 Speaking of the C6 acid, some of the
23 safety data on the C6 acid is published, peer
24 reviewed and been out, the literature, for many
25 years. It is well studied with a large body of

1 data published in the open literature. This data
2 has demonstrated that the C6 acid is not
3 carcinogenic, has not exhibited DNA mutation of
4 genotox effects in several studies, is not an
5 endocrine disruptor, does not exhibit adverse
6 impacts on reproduction, development at doses --
7 even at higher doses in other studies. And
8 studies where effects have been observed, and
9 again, those that do toxicology do understand
10 that studies are often done to show effects, the
11 only effects that were shown were at the high
12 doses.

13 We'll talk about C6 exposure, the C6 acid
14 exposure because, again, that's a central part of
15 this document about the potential exposure to
16 humans and animals.

17 Data gaps regarding the levels of the C6
18 acid in the environment and human serum, they do
19 exist. They do exist because the C6 acid has
20 generally been excluded from environmental
21 monitoring surveys and blood serum analyses due
22 to low frequency of detection and low levels of
23 detection compared to other associated method
24 detection limits. This is the stated reason why
25 the C6 acid was not included in EPA's Unregulated

1 Contaminant Monitoring Rule and the CDC's
2 studies, the NHANES. The available data
3 consistently shows extremely low frequencies of
4 detection and low levels of detection for the C6
5 acid in both environmental media and in human
6 populations. Biomonitoring studies consistently
7 demonstrate that the C6 acid is infrequently
8 detected in human serum, particularly compared
9 with most other perfluoralkyl acids.

10 And one point of note, as our study was
11 published in 2017, in all exposure analyses, one
12 should also consider the reference dose for the
13 C6 acid of 0.32 milligrams per kilogram per day
14 for the C6 acid derived by ANSES, the French
15 agency, an August body of toxicologists and other
16 folks in 2017. Now that reference dose is four
17 orders of magnitude higher, safer than PFOA, for
18 example.

19 I want to finish with one last item. And
20 again, I think that one of the biggest issues
21 that we're facing today, of course, is these
22 chemicals get into the environment, and the
23 question is: When they do, can you get them out?

24 And I think that the general thinking is
25 that once short-chains get in the environment,

1 you can't get them out. You can't use carbon.
2 You can't use this. You can't use that. The fact
3 of the matter is short-chain alkyl acids, such as
4 the C6 acid, can be removed from source water to
5 meet drinking water standards. Water treatment
6 technologies in commercial use utilize a variety
7 of removal technologies, and some would call it a
8 treatment train.

9 Commercial systems were most recently
10 described by Arcadis, Wood, ECT 2, Tersus, EA
11 Engineering, and others at the Emerging
12 Contaminants Summit held March 6th and 7th in
13 Westminster, Colorado, a couple of weeks ago,
14 which I and many of my colleagues attended.
15 Technologies deployed include granulated carbon,
16 superfine carbon, ion exchange, ozone
17 fractionation, reverse osmosis, and polymeric
18 absorbents.

19 And with that, thank you very much. I'll
20 turn that over to Joe Yarbrough; right?

21 MS. SETTY: Thanks for the comments.

22 MR. KORZENIOWSKI: Thank you.

23 MS. SETTY: All right, Joe, you're next
24 with The Carpet and Rug Institute.

25 MR. YARBROUGH: Good afternoon. My name

1 is Joe Yarbrough. I'm the President of The
2 Carpet and Rug Institute. It's my privilege to be
3 here with you today.

4 I'd like to state that The Carpet and Rug
5 Institute is the trade association for the
6 manufacturers of carpet. And we represent more
7 than 90 percent of the carpet that's produced in
8 the United States.

9 I just want to begin by saying that
10 carpet manufacturers have long led the way in
11 creating products that are safe, sustainable and
12 beautiful for homes, schools and commercial
13 spaces.

14 Many years ago, our CRI members
15 voluntarily stopped the use of what are known as
16 long-chain perfluorinated compounds, that is C8
17 chains and higher. These were substituted to
18 further ensure safe and environmentally-sound
19 methods of protecting carpets from soiling and
20 liquid stains were employed. Now while some of
21 the products today are not treated with side-
22 chain-based fluoro chemistries, certain
23 applications of those products are suitable for
24 the end-use expectation of the customers for
25 that. But as we stated numerous times in our

1 presentation in January of 2017, there are many
2 product applications that require that the only
3 compounds that we are aware of that will
4 satisfactorily provide the performance
5 characteristics are the now-utilized short-chain
6 perfluorinated chemical compounds.

7 It's been clearly stated by my preceding
8 speakers that side-chain polymer-fluoro chemistry
9 employed in carpeting is unlike many of the more
10 than 3,000 chemicals that you've identified in
11 your own report. And looking at them as a
12 general class, we think is flawed pursuit of that
13 objective.

14 Secondly, the carpet industry was
15 completely transitioned from long, so-called
16 long-chain fluoro chemistries by 2007. That
17 transition process began as early as 2003. Now
18 this is relevant because one of the obligations
19 that the carpet industry has through a
20 stewardship program under CARE is to achieve a 24
21 percent recycling rate by January of 2020. We
22 are concerned that there can be unintended
23 consequences of our ability to achieve a statute
24 if these products are identified in a way that is
25 unduly causing concern about the ability to

1 recycle these materials.

2 Now it's important to understand the
3 lifecycle of carpets; 7 to 12 years is typical
4 for carpet installations. Now some shorter, some
5 longer, but generally 7 to 12 years is an
6 accepted lifecycle for installed carpet.

7 As I said, we completely transitioned to
8 short-chain by 2007. So that means that, by and
9 large, all the carpeting that's being recycled
10 today, those materials that are being pulled up,
11 if they were treated with fluoro chemistry, they
12 would be treated with fluoro chemistry that is of
13 the short-chain variety. And I implore you to
14 consider that fact as you think about calling a
15 carpet product a Priority Product for these
16 reasons.

17 The importance of recycling is very
18 significant to our carpet industry. As I said,
19 we've long led the way in environmental
20 leadership. And we want to make sure that we're
21 doing everything we can to achieve the
22 sustainable practices of dealing with post-
23 consumer carpet in an effective and important
24 way. And it is our objective to accomplish that.

25 Finally, I'd just like to echo one other

1 thing that Jessica Bowman mentioned, and that is
2 that imported product, and in the state of
3 California there is significant imported product,
4 I don't have the statistics to validate what the
5 quantities are, but I believe that there are
6 substantial amounts of broadloom carpeting and
7 carpet tiles being imported into the state of
8 California. And we voluntarily are making sure
9 we're doing everything we can to provide products
10 that are safe and environmentally sound. I
11 cannot speak for those others who are in
12 unregulated environments where they may not have
13 the same objectives and/or focus that our
14 industry has held for decades.

15 So I would implore you to concentrate, as
16 we asked in January of 2017, to be more
17 specifically focused on not domestically produced
18 product, but that that's being imported from
19 offshore.

20 That concludes my remarks. Thank you.

21 MS. SETTY: Thanks for your comments.

22 Next we have Miriam Rotkin-Ellman from
23 the Natural Resources Defense Council.

24 MS. ROTKIN-ELLMAN: Good afternoon.

25 Thanks so much for the opportunity to comment.

1 As stated, my name is Miriam Rotkin-Ellman and
2 I'm a scientist with the Natural Resources
3 Defense Council. And as an environmental
4 advocacy organization, we have no financial
5 interest in the subject of these comments that
6 we've submitted or the comments that I'm going to
7 be providing today.

8 I want to thank the staff of the Safer
9 Consumer Products Program for a very impressive
10 and comprehensive look at and review of a large
11 class of chemicals with a global footprint. The
12 opportunity for California to be a leader in
13 providing public health protections is front and
14 center in my mind today. And my comments are
15 aimed at moving California into a place of
16 leadership towards addressing what is a global
17 contamination problem from this class of
18 chemicals.

19 I'm going to apologize. I also am
20 getting over a respiratory problem, and I'll do
21 my best.

22 I'm going to cut -- my main points today,
23 the Priority Profile provides ample evidence that
24 the PFAS chemicals in carpets and rugs meet
25 criteria for the Safer Consumer Products Program

1 listing as a Priority Product. It is critical
2 that product listings cover the entire class, not
3 only to make sure that we are addressing all
4 contaminants that we see today and in the future,
5 and that we are not ending up in a cycle of
6 regrettable substitutions. The opportunity to
7 head that off is now. We've already seen that
8 extensively with this class of chemicals. We
9 should not be aimed at any regulatory actions
10 that further that practice.

11 And lastly, while I appreciate the
12 thorough discussion of data gaps, it is important
13 to distinguish those types of data which
14 contribute to risk analyses not required to meet
15 the listing criteria. These gaps should not
16 impede moving forward with developing regulatory
17 language. And any further refinement of this
18 Profile should make this distinction clear.

19 So to go into those points with a little
20 bit more detail, as noted, there's two main
21 criteria for listing. From the priority
22 product -- the Profile here gives extensive
23 documentation of widespread exposure and
24 doesn't -- sorry, do you need that? Sorry.
25 Product -- for specific studies which link the

1 contaminants to different exposure routes and
2 contamination in the environment at large. It's
3 important to note that these connections are very
4 clear for both the use of the product for
5 workers, and also for lifecycle and disposal.
6 Each of those on their own meet the criteria and
7 the Safer Consumer Product listing requirements,
8 and then collectively provide significant and
9 ample support for the listing.

10 There's, you know, extensive
11 documentation of the toxicity information that we
12 know highlighted in this Profile. But I want to
13 highlight that increasingly, scientific experts
14 are flagging toxicity concern, not only with PFOA
15 and PFOS chemicals. And the scientific community
16 is raising the flag that we should not be waiting
17 for those effects that we have seen in some of
18 these other compounds to show up in epidemiologic
19 studies. In order to see them in epidemiologic
20 studies, you have to have widespread
21 contamination. That is not a public health-
22 protective pathway forward. And the scientific
23 community is joining together to argue that the
24 indication that these chemicals may operate in
25 similar fashion is sufficient for addressing them

1 regulatorally.

2 And the last, to get a little more
3 specific on the Profile ID'd data gap
4 specifically. The language was: full
5 characterization of the duration, frequency
6 level, population exposures has not been well
7 characterized. That information is needed for
8 risk analyses, is needed for setting standards,
9 but is not relevant for the criteria associated
10 with setting -- and should be indicated as such.

11 I want to close, just by returning to the
12 question of regrettable substitutions. We --
13 again, this action by California has the
14 opportunity to lead to address a global
15 contamination issue. And we should be taking all
16 steps towards addressing the problem holistically
17 and setting us up to drive towards California as
18 a leadership in developing alternatives and not
19 on contributing to regrettable substitutions.

20 Thank you.

21 MS. SETTY: Thank you for your comments.

22 Next we have Alvaro Palacios Casanova
23 with Center for Environmental Health.

24 MR. CASANOVA: So hello everybody. My
25 name is Alvaro Palacios Casanova. I am the

1 California Policy Manager at the Center for
2 Environmental Health. CEH is a national
3 nonprofit organization dedicated to protecting
4 people from harmful chemicals in consumer
5 products, the environment and our food. And we
6 thank the Department of Toxic Substances Control
7 for conducting a Chemical-Product Profile on per-
8 and polyfluoroalkyl substances in carpets and
9 rugs.

10 CEH is here to express support of the
11 listing of PFASs in carpets and rugs as a
12 Priority Product because we believe the product-
13 chemical combination meets the criteria for
14 potential widespread exposure and adverse impacts
15 to public health and the environment. The
16 scientific evidence cited in the Product Profile
17 shows a widespread PFAS contamination in soils,
18 plants, and in particular water, with an
19 estimated 6 million Americans being affected by
20 water contamination that exceeds EPA's advisory
21 levels for PFAS in drinking water. PFAS
22 contamination is so widespread that one study,
23 which is in the Product Profile, stated that
24 there's no unexposed control population.

25 The Product Profile also provides

1 evidence that PFASs are persistent chemicals that
2 accumulate in the environmental media and
3 organisms. Studies show that PFASs can harm fish
4 and other marine organisms as they bioaccumulate
5 and concentrate throughout the food chain, with
6 certain PFAS chemicals causing malformations in
7 fish.

8 In addition, the PFAS chemicals being
9 widespread and impacting aquatic ecosystems,
10 there's evidence that the indoor built
11 environment with rugs and carpets have elevated
12 levels of PFASs in air and dust, exposing
13 vulnerable populations like children, and
14 subpopulations such as office workers.

15 Lastly, CEH would like to thank you for
16 considering PFAS as a class of chemicals in this
17 Product Profile. PFAS has a similar chemical
18 structure to their predecessors, PFOS and PFOA.
19 And the current data that exists indicates that
20 PFASs have similar properties to those chemicals.
21 Therefore, we support PFAS being considered as a
22 class of chemicals in this Priority Product
23 listing.

24 Thank you.

25 MS. SETTY: Thank you for your comments.

1 Next we have Liza Grandia from UC
2 Davis/Woodland Coalition for Green Schools.

3 DR. GRANDIA: Good afternoon. My name is
4 Liza Grandia. I am a Professor at UC Davis in
5 Native American studies, Mellon New Direction
6 fellow working to connect communities with
7 environmental health scientists. I am founder
8 and Coordinator of the Woodland Coalition for
9 Green Schools, but I'm here really more in my
10 civic hat. It's funny, I'm actually a Georgia
11 girl, but I'm not here to speak on behalf of the
12 carpet industry. Rather, I want to applaud you
13 for the courageous action that I hope you will
14 take to begin to regulate this industry.

15 I'm really here to speak to the canaries
16 as a mother, as a cancer survivor. And I want to
17 thank you for noting, Dr. Balan, the
18 disproportionate impact on native populations.
19 And I also want to reemphasize that carpet is the
20 number one source of exposure, according to
21 Arlene Blum at UC Berkeley, of this class of
22 chemicals in children. Why? Right, we know,
23 they're rug rats. They spend most of their time
24 near and close to the floor. They jump around
25 and produce a lot of dust. The hand-to-mouth

1 gestures increase the concentration of exposure
2 in children.

3 And I just want -- and in addition to
4 those behavioral characteristics that we always
5 need to think about in sensitive populations is
6 to emphasize that there are also institutional
7 issues, whether in hospitals or in schools. The
8 squirt; many of you, who have children, know from
9 common core testing, right, they don't even have
10 time to be allowed to wash their hands. So every
11 day, children, whatever they've gotten on their
12 hands, they put into their mouths at lunch
13 because they're not given an opportunity to wash
14 their hands.

15 And yet, you can put these chemicals in
16 carpet and call it Green Label. How can a carpet
17 with forever chemicals that will stick around in
18 children's bodies ever be labeled as green?

19 My first experience with Green Label
20 carpet was ten years ago. Actually, I was
21 thinking about that when I was driving here
22 today. I started chemotherapy today, ten years
23 ago, after having an aggressive lymphoma induced
24 in a sick building that sickened nearly a third
25 of the faculty at my first university and whose

1 indoor air quality problems could be traced back
2 to carpet. That experience induced me with
3 multiple chemical sensitivity. What was it in
4 carpet that did that to me? I don't know.

5 I know that I can -- I'm having a hard
6 time breathing in this room. My heart is racing.
7 I feel very ill in this room, and in all places
8 with carpet after that experience. What was in
9 it? I don't know. We had this very interesting
10 report by the Healthy Building Network about,
11 potentially, 44 hazardous substances in carpet.
12 I guess I shouldn't have to prove what's making
13 me sick. You should have to prove that it's
14 safe.

15 I applaud you, California EPA, for taking
16 this action 25 years after the USEPA capitulated
17 to the carpet industry in the Green Label
18 Program. As I was trying to find a reason for my
19 illness, what's in carpet? Like something that
20 we're surrounded by cradle to grave, you don't
21 think it could be dangerous. It's soft. We put
22 our children on it to play. How could it be
23 dangerous? We've become so used to it that we
24 don't think about its potential hazard.

25 Well, interestingly, the EPA in 1987 to

1 1988 as it installed new carpet at its D.C.
2 Waterside Headquarters, as the rugs rolled out,
3 roughly 600 staff and scientists, about a fifth
4 of the workforce, fell ill. And of those, about
5 60 people became so hypersensitized, they could
6 not return to work in the building.
7 Investigations showed the common denominator in
8 that case might have been the chemical called 4-
9 pc, 4-phenylcyclohexane that is known, they
10 thought, at parts as low as ten parts per billion
11 to induce hypersensitivity. In that case the EPA
12 scientists, after two years of struggle and
13 multiple tomes of research, recommended that the
14 Agency set a regulatory level for 4-pc at less
15 than ten parts per billion.

16 The carpet industry countered with a
17 voluntary proposal to self-police at 300 parts
18 per million. You don't have to be a
19 mathematician to note the difference.

20 That's how the Green Label was born in
21 1992. And after that, regulators never tried to
22 confront the carpet industry again. So I thank
23 you for your courage. I am here as a citizen. I
24 knew that there would be the carpet industry
25 here. And I knew that you also needed to hear

1 about people who are affected by carpet.

2 Down the road in Woodland in our school
3 district, we have dozens of children who have
4 been sickened by carpet installation in
5 classrooms this year. We don't know what's
6 causing it, but we do know that the children are
7 sick, coming home with red eyes and headaches
8 every day.

9 It's been 25 years since the EPA had its
10 own carpet crisis. And I think it's wonderful
11 that we're finding out, at least about one of the
12 many chemicals in carpets. And I encourage you
13 to move forward with this, and then continue to
14 look at what else might have been swept under the
15 rug.

16 Thank you.

17 MS. SETTY: Thanks for your comments.

18 The last comment card I have from our in-
19 person attendees is from Tom Bruton for the Green
20 Science Policy Institute.

21 MR. BRUTON: Good afternoon. My name is
22 Tom Bruton and I'm a Scientist at the Green
23 Science Policy Institute. Our institutes mission
24 is to facilitate responsible use of chemicals to
25 protect human and environmental health. And I'm

1 here today to express our strong support for the
2 proposal to list carpet and rugs with PFAS as
3 Priority Products.

4 I've read through the DTSC's draft
5 Priority Product Profile and I found it to be a
6 well-researched synthesis of the science on this
7 class of chemicals. And I want to commend the
8 Department for doing such a thorough job on this.

9 The draft Profile shows clearly that PFAS
10 in carpets and rugs meet the two key criteria of
11 the Safer Consumer Products Regulations; one,
12 that they result in the potential for public or
13 environmental exposure; and two, that those
14 exposures have the potential to contribute to or
15 cause significant or widespread adverse impact.

16 Furthermore, I believe that there are
17 compelling scientific and practical reasons for
18 treating the entire group of per- and
19 polyfluoroalkyl substances as a class. PFOA,
20 PFOS and other long-chain perfluoroalkyl acids are
21 the most-well-studied PFASs from an environmental
22 and toxicological standpoint. And as a result of
23 what's known about their adverse effects, they've
24 been phased out by many manufacturers.

25 Now, some stakeholders have made the

1 point that PFAS are a diverse class of chemicals
2 and that many of the PFASs in use today differ
3 from PFOA and PFOS in important ways. One common
4 argument is that short-chain PFASs are not
5 biopersistent and that, therefore, they're
6 environmentally preferable. Human biomonitoring
7 studies typically measure PFAS in blood plasma.
8 And while it's true that the short-chain
9 perfluoralkyl acids do not accumulate in plasma
10 to the extent that the long chains do, this alone
11 is not sufficient evidence to conclude that there
12 is no cause for concern. The short-chain
13 compounds have been less-well studied. And some
14 recent research does raise red flags.

15 For instance, studies in both live mice
16 and human autopsy tissue have detected short-
17 chain PFAS in several organs other than blood,
18 including at concentrations higher than the long
19 chains.

20 Another study published just last fall
21 showed that the short-chain PFHxA was not
22 detected when scientists looked for it in blood
23 serum, but it was found in 100 percent of whole
24 blood samples.

25 And all of this suggests that there's

1 reasons for concern about the short-chain PFAS.
2 And this is important because they're the
3 ultimate degradation products of many of the
4 chemistries currently used to treat carpets.

5 Another argument is that fluoropolymers,
6 like PTFE and PVDF, are a distinct subgroup of
7 chemicals that ought not to be lumped in with the
8 other PFASs. While it's true that fluoropolymers
9 have a high molecular weight and are not likely
10 to be bioavailable themselves, their manufacture
11 requires the use of problematic fluorinated
12 monomers, such as PFOA and GenX. Because the
13 Safer Consumer Products Regulations allow for
14 consideration of lifecycle impacts, it's logical
15 to include fluoropolymers in the PFAS class.

16 Finally, the fact that there are
17 thousands of different PFAS in use means that
18 it's impractical to evaluate the safety of these
19 chemicals one at a time. A large number of
20 academic, government and NGO scientists from
21 around the world feel that the evidence against
22 this class of chemicals is strong enough to merit
23 limiting their production and use. The Green
24 Science Policy Institute applauds the work of
25 DTSC to protect the health of Californians, and

1 including the proposed listing of PFASs in
2 carpets and rugs.

3 Thank you.

4 MS. SETTY: Thanks for your comments.

5 We have a few comments that came in
6 through webcast, so we'll go through those next.

7 Our first comment from Stacy Tatman,
8 "In the technical document and in today's
9 presentation, autos are said to be excluded.
10 Does that include after-market or replacement
11 parts for autos, such as floor mats?"

12 Does anyone from the panel want to
13 respond?

14 MR. PALMER: Can you repeat that comment?

15 MS. SETTY: "In the technical document
16 and in today's presentation, autos are said
17 to be excluded. Does that also include
18 after-market or replacement parts for autos,
19 such as floor mats?"

20 MR. PALMER: Yes.

21 MS. SETTY: Okay. Thank you.

22 MR. PALMER: Yes, was the answer.

23 MS. SETTY: Okay. Our next comment from
24 webcast from Miriam Gordon, "Did you investigate
25 potential releases of PFASs from waste to

1 energy?"

2 DR. BALAN: No, we didn't look into
3 details about -- we did not research that topic
4 in detail, no.

5 MS. SETTY: Our next comment, also from
6 Miriam Gordon,

7 "Carpet pads question. Did you look into
8 carpet pads from waste textiles, some of its
9 carpet fibers, and whether these should be
10 regulated too? Are there members of the
11 industry who can speak to whether waste
12 carpet fiber is being used in carpet pads,
13 and which carpets?

14 "Since AB 1158 requires the carpet industry
15 to reach a 24 percent recycling rate, how can
16 the FluoroCouncil say that the discontinued
17 use of long-chain PFASs means that these
18 chemicals are not going to persist in carpet?
19 Old carpets being recycled into new ones
20 likely contain the PFOS and PFOA used more
21 than ten years ago. Given their persistence,
22 PFOA and PFOS are likely to be recycled into
23 carpet products and other products for years
24 to come and stain these products through
25 their lifecycle."

1 MR. PALMER: I think there's a question
2 in there about did we consider the pads? And I
3 think the answer is, no, we didn't specifically
4 look at pads. That's the response.

5 MS. SETTY: Okay. Our last question from
6 the webcast is from Hardy Sullivan.

7 "At last year's workshop the FluoroCouncil
8 reported 99 percent of the PFOA in the
9 environment came from sources other than
10 side-chain/long-chain fluorinated polymers.
11 And zero percent of PFOA and PFOS came from
12 side-chain/short-chained fluorinated polymer.
13 Why is DTSC focusing on stain-resistant
14 treatments, rather than the primary sources?
15 "Consider that removal of this fiber
16 protection will shorten the life of carpet,
17 leading to premature replacement of carpet.
18 This will increase water consumption,
19 increase consumption of non-renewable fossil
20 fuels or pesticides to produce fibers,
21 increase landfill, increase greenhouse gas
22 emissions, and increase costs."

23 MR. PALMER: Let me just say that the
24 exercise of evaluating a potential Priority
25 Product is not the same as doing a complete

1 alternatives analysis. And so the criteria that
2 we're required to look at are very clear in terms
3 of some -- can we nominate and address and list
4 something as a Priority Product? At that point,
5 what's it's listed, then you go into the
6 alternatives analysis process which is when those
7 different types of potential impacts throughout
8 the whole lifecycle of the product would be
9 addressed.

10 So it's important, then, when you look at
11 the Profile that you look at our regulations,
12 which specify the criteria that DTSC is held to
13 in terms of making that determination. And it's
14 not the same as those requirements in Article 5
15 which are for the alternatives analysis, so --

16 MS. SETTY: Thank you.

17 We have one more comment from the
18 webcast, and this is from Heather Covert.

19 "Is the boundary for carpet and rugs interior
20 to the home or would this also include
21 interior to offices, hotels, hospitals, et
22 cetera? What about outdoor rugs and
23 carpets?"

24 DR. BALAN: So it includes all carpets
25 that are inside buildings, so that could be

1 hospitals, yes, all those buildings mentioned,
2 but not outdoor carpets. And that has to do with
3 the product categories in our Work Plan. This
4 work is based on the 2015-2017 Work Plan, so we
5 have there the indoor built environment and home
6 and office furnishings as the relevant
7 categories.

8 MS. SETTY: Alright. Thank you.

9 A comment from our webcast viewer, Stacy
10 Tatman in a follow-up question.

11 "Although it is clearly stated that autos are
12 exempt, does this exemption include trucks,
13 vans and other vehicles?"

14 MR. ALGAZI: Yes.

15 DR. BALAN: Yes. It includes all
16 vehicles, again, because they're not covered in
17 any product category in our Work Plan. So
18 anything that's out of the scope of the Work Plan
19 is out of the scope of this proposal.

20 MS. SETTY: Any last comments from our
21 in-person attendees?

22 Any last comments from our webcast
23 viewers?

24 Do we have any closing remarks?

25 MR. PALMER: Yes. Thanks, Asha.

1 MS. SETTY: Great. Thanks.

2 MR. PALMER: So again, Meredith was going
3 to do this, but she got called to a higher
4 calling, so I'll fill in.

5 First and foremost, thank you for your
6 participation today. Thank you for everyone here
7 in the room that gave us comments and then
8 listened. Also, thanks to everyone online who's
9 paying attention and providing comment.

10 I want to stress that, as Meredith said
11 earlier, this is still part of the -- the
12 dialogue is ongoing, so it's important to us.

13 I'll note that no one responded to the
14 questions that we laid out. That does not
15 prevent you from responding to those questions
16 formally by submitting them to CalSAFER prior to
17 April 16th, at the end of the day on April 16th.
18 And additionally, you can provide whatever
19 comments you care to by that time on our Profile.

20 The other thing I'd like to do is just
21 emphasize to folks that this is a regulatory
22 process, but we haven't regulated anything yet.
23 You need to look at our regulations, to look at
24 the criteria and the requirements in the
25 regulations, which dictate our decision making

1 here at DTSC in terms of this step of the
2 process, which is proposing and listing a
3 Priority Product. Further than that, once a
4 product is listed, then you need to look at the
5 requirements for the alternatives analysis.

6 I think I'm just encouraging people to
7 look holistically at this because DTSC has not
8 made any determination of an outcome here, other
9 than we're moving forward on proposing to list
10 this product-chemical combination and put it
11 through the AA process. There are many, many
12 potential outcomes from that process.

13 So with that in mind and looking at the
14 criteria that we are required to meet, please,
15 when you look at the comments that you might
16 submit, do them in the context of the regulation
17 and the process overall.

18 Also, just to give you some sense of
19 where we go from here, once the comment period
20 closes, then our staff and our team will look at
21 all the comments submitted and evaluate those on
22 their merits. And we may, at that point, choose
23 to change something in our proposal. And it
24 depends on the comments we get, our evaluation,
25 and we'll go from there.

1 So once that happens the next logical
2 step is that then we go ahead and move forward in
3 the rulemaking process. And at that point, we'll
4 put out a technical doc, the final technical
5 document, and the other documents required in
6 rulemaking, including our statement of reasons,
7 our fiscal and economic impact statement, and
8 those things. And so that process in and of
9 itself is another formal process, so that you'll
10 have another chance to participate at that point
11 too.

12 So with that, thank you very much. Thank
13 you to Simona and the team of scientists and
14 engineers that worked very hard on this document,
15 and we really appreciate their hard work. Thank
16 you for the support staff here today. And thank
17 you everyone, and we'll look forward to reading
18 your comments.

19 And with that, we'll conclude this
20 workshop. Thanks.

21 (The public workshop concluded at 2:16 p.m.)

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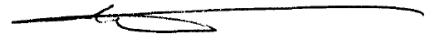
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I do hereby certify that the testimony in the foregoing hearing was taken at the time and place therein stated; that the testimony of said witnesses were reported by me, a certified electronic court reporter and a disinterested person, and was under my supervision thereafter transcribed into typewriting.

And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

IN WITNESS WHEREOF, I have hereunto set my hand this 11th day of April, 2018.



PETER PETTY
CER**D-493
Notary Public

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And I further certify that I am not of counsel or attorney for either or any of the parties to said hearing nor in any way interested in the outcome of the cause named in said caption.

I certify that the foregoing is a correct transcript, to the best of my ability, from the electronic sound recording of the proceedings in the above-entitled matter.



April 11, 2018

MARTHA L. NELSON, CERT**367