

PUBLIC HEARING
STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF ENVIRONMENTAL HEALTH HAZARD ASSESSMENT

In the matter of:)
)
Notice of Proposed Rulemaking,)
Title 27, California Code of)
Regulations, Proposed Adoption of)
New Section Under Article 7, No)
Significant Risk Levels Section)
25704 Exposures to Listed Chemicals)
in Coffee Posing No Significant Risk)
-----)

CALEPA HEADQUARTERS
SIERRA HEARING ROOM
1001 I STREET
SACRAMENTO, CALIFORNIA

THURSDAY, AUGUST 16, 2018
10:00 A.M.

JAMES F. PETERS, CSR
CERTIFIED SHORTHAND REPORTER
LICENSE NUMBER 10063

A P P E A R A N C E S

STAFF:

Dr. Lauren Zeise, Director

Mr. Allan Hirsch, Chief Deputy Director

Ms. Carol Monahan Cummings, Chief Counsel

Mr. Carl DeNigris, Senior Counsel

Ms. Martha Sandy, Chief, Reproductive and Cancer Hazard
Assessment Branch

ALSO PRESENT:

Mr. Robert Donohue, Canteen

Mr. John Hornung

Ms. Sandra Larson, NAMA, CAVC

Dr. Alan Leviton, National Coffee Association

Mr. Jeffrey Margulies, California Retailers Association

Mr. Raphael Metzger, Council for Education and Research on
Toxics

Mr. William Murray, National Coffee Association

Mr. Trent Norris, National Coffee Association

Mr. Adam Regele, California Chamber of Commerce

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

2 DIRECTOR ZEISE: Okay. If everyone would like to
3 take their seats, we can get started.

4 Good morning. I'm Lauren Zeise. I'm Director of
5 the Office of Environmental Health Hazard Assessment or
6 OEHHA. I'd like to welcome you here to our hearing on the
7 proposed regulation of Proposition 65 listed chemicals in
8 coffee. We're really looking forward to hearing your
9 comments. And I'd also like to welcome, in addition to
10 people in the room, people that are listening via webcast.
11 So with that, I'd like to introduce the OEHHA staff
12 members at the table.

13 First, Al -- Oh, we're not on yet. The clock is
14 wrong.

15 We'll take a step back and start in two minutes.

16 All right. Once again, I'd just like to welcome
17 everyone in the room and attending via webcast to our
18 Proposition 65 hearing on chemicals -- listed Proposition
19 65 chemicals in coffee.

20 So welcome everyone in the room and on the
21 webcast. We're looking forward to hearing everyone's
22 comments. And with that, I'd like to introduce the OEHHA
23 staff people at the table. Allan Hirsch will be our
24 hearing officer. He's OEHHA's Chief Deputy Director.
25 Next to him is Carol Monahan Cummings, the OEHHA Chief

1 Counsel. On the other side of Allan is Dr. Martha Sandy.
2 She's Chief of the Reproductive and Cancer Hazard
3 Assessment Branch. And then at the end of the table is
4 Carl DeNigris, who's our OEHHA staff attorney.

5 And with that, I'll turn the meeting over to
6 Allan Hirsch.

7 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. Thank you
8 very much, Dr. Zeise.

9 So -- yeah, so we have a few housekeeping items
10 to go through at the beginning of our hearing here. Just
11 if you need to use the restrooms during the hearing, you
12 would go out the door in back of you, turn left, go down
13 the corridor, make another left, and the bathrooms are on
14 your right. So that's two lefts and one right.

15 In the unlikely event that there is an emergency
16 during this hearing, the most direct way out of the
17 building is to go out of the doors in back of you, then go
18 down the stairs toward the right and head right out of the
19 building. We tend to have fire drills here in the spring.
20 So given that it's mid-August, we should be okay.

21 And then lastly, again, as you probably -- as you
22 know, this is being webcast. I'd like to thank all the
23 people watching on the webcast for taking time out of your
24 day to join us remotely.

25 And if you -- for those of you in the room who

1 wanted to text a colleague that it is on the webcast, they
2 can access it by going to video.CalEPA - that's
3 C-a-l-e-p-a -- .ca.gov.

4 So under the provisions of the Administrative
5 Procedure Act, this is the time and place set for the
6 presentation of comments, orally or in writing, regarding
7 the proposed rulemaking that exposures to listed chemicals
8 in coffee do not pose a significant cancer risk.

9 This is regulation proposed for adoption by the
10 Office of Environmental Health Hazard Assessment. OEHHA -
11 that's our name in short - considers this proceeding to be
12 a quasi-legislative hearing, because it is carrying out a
13 rulemaking function delegated to it by statute. OEHHA
14 will take under submission all written comments and oral
15 statements submitted or made during this hearing.

16 The Director of OEHHA, Dr. Zeise, has designated
17 me to conduct this hearing on her behalf. And I will be
18 doing so in accordance with provisions of the
19 Administrative Procedure Act.

20 A certified court reporter, on the right side of
21 the room, is here and will be making a transcript of this
22 hearing. The transcript and all exhibits and evidence
23 presented at this hearing will be included in the admin
24 administrative record for this rulemaking. The written
25 public comment period for the proposed rulemaking will

1 close on August 30th, 2018.

2 So for organizational purposes, we request that
3 those of you wishing to speak at this hearing complete a
4 blue speaker's card. There should be a pile of them on
5 the table in the back of the room. And you can give it to
6 Monet Vela over on the left-hand side, though you're not
7 required to do so in order to speak.

8 Also, I want to be sure that you are aware that
9 because this is a formal public hearing, we will
10 essentially be in listening mode. Some you perhaps have
11 been to pre-regulatory workshops or you may have seen some
12 of the scientific panel meeting that we have where there's
13 a lot of back and forth between presenters and people on
14 the dais. This works a little bit differently.

15 This is a formal public hearing and we basically
16 go by the State procedures in which we're here basically
17 in listening mode. We can ask a clarifying question --
18 you know, a relatively simple clarifying questions of
19 presenters if we like. Similarly, presenters can ask
20 simple clarifying questions for us if they like. But
21 again, we're basically here in listening mode. So if we
22 don't ask a lot of questions, that doesn't mean that we're
23 not interested or we're not listening to what the
24 presenters are saying.

25 So with only two exceptions, we're enforcing a

1 five minute limit for each speaker at this hearing. So if
2 you have a long or complex argument, we strongly encourage
3 you to submit those arguments in writing to us by the
4 August 30th deadline. Submitting lengthy comments in
5 writing ensures that we will take as much time as we need
6 to review them and we'll give them full consideration.

7 So we did announce several weeks ago that people
8 or groups could send us requests for extended
9 presentations at today's hearing. And we received, and
10 have approved, two requests for extended presentations
11 from the Council for Education and Research on Toxics, and
12 the National Coffee Association.

13 If we adopt the final regulation concerning
14 listed chemicals in coffee, we will have written responses
15 to comments that we receive at today's hearing, as well as
16 the written comments we receive during the written comment
17 period.

18 So again, if you have a detailed comment, again
19 we strongly recommend that you submit it to us in writing
20 by the August 30th deadline.

21 So when you are called, to enable the audience to
22 hear you and to ensure that your comments are recorded for
23 the record, please come to the microphone over there, when
24 you are called to speak. It's helpful to us and for the
25 court reporter if you state your name and the organization

1 that you represent, if any. However, you're not required
2 to do so in order to speak.

3 So at this time, I'm going to pass the microphone
4 over to our Chief Counsel, Carol Monahan Cummings.

5 CHIEF COUNSEL MONAHAN CUMMINGS: Thank you,
6 Allan.

7 I wanted to mention that on the back of the --
8 back the table, I'm not sure if Allan mentioned it, there
9 are a few copies of the materials that -- including the
10 notice, the statement of reasons, and the proposed
11 regulation, as well as copies of the slides that we're
12 going to use today. So for anybody that wants to get
13 those, they're in the back. If we run out, let us know,
14 and we'll go ahead and make some more copies.

15 So as it was mentioned before, I'm the Chief
16 Counsel for OEHHA. Our legal office is responsible for
17 developing and shepherding our regulations through the
18 Administrative Procedure Act process.

19 On this particular regulation, my -- one of my
20 Senior Staff Counsel -- Carl DeNigris is the person that
21 has been working on this regulation primarily. And so I'm
22 going to have him go ahead and give you a brief overview
23 of the basis for the regulation. And then, of course,
24 we'll also have a discussion about the scientific basis of
25 the regulation.

1 So if you could go ahead, Carl.

2 (Thereupon an overhead presentation was
3 presented as follows.)

4 SENIOR STAFF COUNSEL DeNIGRIS: Thank you.

5 In order to save time, I have provided a copy of
6 the text of the proposed regulation, the Initial Statement
7 of Reasons, and the notice of the proposed rulemaking to
8 the court reporter to be marked as Exhibit A to the
9 hearing transcript, and included in the hearing record.

10 (Exhibit A marked for identification.)

11 SENIOR STAFF COUNSEL DeNIGRIS: As required by
12 the Administrative Procedure Act, the public and
13 interested parties were notified of this proposed
14 regulation at least 45 days prior to today's hearing. The
15 notice of this proposed regulation was published on
16 OEHHA's website and sent by email to interested groups and
17 individuals on June 15th, 2018, and was published in the
18 California Regulatory Notice Register on June 22nd, 2018.

19 I'll now briefly go over the legal authority for
20 the proposed regulation starting with some background on
21 Proposition 65.

22 --o0o--

23 SENIOR STAFF COUNSEL DeNIGRIS: Health and Safety
24 Code section 25249.6 generally requires businesses to
25 provide a clear and reasonable warning before exposing a

1 person in California to a listed chemical.

2 --o0o--

3 SENIOR STAFF COUNSEL DeNIGRIS: Health and Safety
4 Code section 25249.10 subsection (c) provides an exemption
5 to the warning requirement when an exposure to a listed
6 carcinogen poses no significant risk of cancer.

7 And as the lead agency for implementation of
8 Proposition 65, OEHHA may adopt regulations establishing
9 levels of exposure that pose no significant risk.

10 --o0o--

11 SENIOR STAFF COUNSEL DeNIGRIS: Which brings us
12 to our proposed regulatory text. OEHHA is proposing to
13 add a new section to Title 27 of the California Code of
14 Regulations section 25704, which would State that
15 exposures to listed chemicals in coffee created by, and
16 inherent in the processes of roasting coffee beans or
17 brewing coffee do not pose a significant risk of cancer.

18 So the proposed regulation does not focus on any
19 specific chemical, but rather the complex chemical mixture
20 that is coffee.

21 I'll now turn the meeting over to Dr. Martha
22 Sandy to discuss this unique mixture and briefly summarize
23 the scientific basis for the proposed regulation.

24 --o0o--

25 DR. SANDY: Thank you, Carl.

1 I'll start with a definition of coffee. In the
2 proposed regulation, coffee refers to a beverage made by
3 percolation, infusion, or decoction from the roasted seeds
4 of a coffee plant.

5 --o0o--

6 DR. SANDY: Coffee is a unique and complex
7 mixture. Coffee contains numerous chemicals formed during
8 the roasting of coffee beans, and the brewing process,
9 including carcinogens that are listed under Proposition
10 65, as well as other chemicals that are considered to be
11 protective against cancer.

12 --o0o--

13 DR. SANDY: So coffee, as a mixture, has been
14 studied extensively in humans. There has been a recent
15 evaluation of these human cancer studies as well as other
16 relevant information by the International Agency for
17 Research on Cancer. And it's been published in 2018 in
18 the IARC monographs on the evaluation of carcinogenic
19 risks to humans entitled *Drinking Coffee, Mate, and Very*
20 *Hot Beverages*. It's volume 116.

21 --o0o--

22 DR. SANDY: And now I'll present IARC's findings
23 on coffee. IARC concluded -- well, and these findings are
24 based on a review of over a thousand studies in humans,
25 animals, in vitro systems, and other experimental systems.

1 This review evaluated 460 human epidemiologic studies.
2 And those studies included numerous well-conducted
3 prospective cohort and population-based case-control
4 studies. IARC concluded there was inadequate evidence for
5 the carcinogenicity of drinking coffee, and classified
6 coffee in Group 3, not classifiable as to its
7 carcinogenicity to humans.

8 IARC also found that there is strong evidence in
9 humans that coffee has antioxidant effects.

10 --o0o--

11 DR. SANDY: And now to run through IARC's
12 findings for specific cancers in humans. IARC concluded
13 that drinking coffee reduces the risk of cancers of the
14 liver and the uterine endometrium that moderate -- there's
15 moderate evidence that drinking coffee reduces the risk of
16 co-colorectal adenoma, which is a precursor lesion for
17 most colorectal cancers.

18 Studies show that drinking coffee either reduces
19 the risk or has no effect on the risk of breast cancer.
20 There is evidence suggesting lack of carcinogenicity for
21 cancers of the pancreas and prostate. And there is
22 inadequate evidence of an association between coffee
23 drinking and other types of cancers.

24 --o0o--

25 DR. SANDY: There are many beneficial compounds

1 in coffee. These include: Soluble and insoluble fiber
2 that can reduce the uptake of certain carcinogens into the
3 body; chemicals that appear to increase colon motility
4 reducing contact time within the colon; many antioxidants
5 and free radical scavengers; and several anti-inflammatory
6 chemicals.

7 And in intervention trials where humans are given
8 a time period, usually a week or so, where they do not
9 consume coffee and blood measurements are taken for
10 certain biomarkers of effect. And then they're started on
11 a certain dose of coffee for a certain period of time.

12 Coffee consumption has been shown to decrease
13 markers of inflammation, to decrease markers of oxidative
14 stress, and to increase antioxidant capacity in humans.

15 --o0o--

16 DR. SANDY: So here's the proposed regulatory
17 text again, which Carl presented. And I'll just emphasize
18 something that's in the Initial Statement of Reasons, that
19 this regulation does not address exposures to listed
20 chemicals in coffee that may occur if the chemicals are
21 intentionally added to the coffee mixture, or enter the
22 mixture as contaminants, through a means other than the
23 inherent processes of roasting coffee beans or brewing
24 coffee.

25 Thank you.

1 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. Thank you.
2 So there's an opportunity now if anyone has simple
3 clarifying questions about the regulation or the
4 presentations that you've heard, this is a chance to ask
5 those, not public comments, per se.

6 So, okay, seeing none, okay. That's great. We
7 will now begin the public comment part of our public
8 hearing. So as I said earlier, we had authorized extended
9 presentations for two groups, Council for Research and
10 Education on Toxics[SIC]. And we authorized a
11 presentation of 30 to 45 minutes for that, and followed by
12 speakers from the National Coffee Association, which is 20
13 to 30 minutes.

14 So I think I'd like to ask the representative of
15 CERT, Mr. Metzger to make his presentation.

16 (Thereupon an overhead presentation was
17 presented as follows.)

18 MR. METZGER: Good morning. It's a pleasure
19 being here.

20 My name is Raphael Metzger. I am the general
21 counsel of the Council for Education and Research on
22 Toxics, and I will be speaking in opposition to this
23 proposed regulation.

24 Do we have a clicker?

25 CHIEF DEPUTY DIRECTOR HIRSCH: Are you able to

1 hear Mr. Metzger? Is -- I just -- you sounded a little
2 bit lower on the volume. So I just wanted to make sure
3 you're audible.

4 MR. METZGER: Is that better?

5 Okay.

6 --o0o--

7 MR. METZGER: What do I do with this?

8 Well, as you can see, the first slide has one
9 word on it, acrylamide. Although this is a hearing about
10 coffee, it's actually, in my client's view, a hearing
11 about acrylamide. And I'll talk about my client and its
12 interest in this after we address acrylamide, because they
13 tie in.

14 --o0o--

15 MR. METZGER: So acrylamide is a carcinogen.
16 It's been on the Prop 65 list, oh, I think, since the
17 early nineties. And it's classified as a carcinogen by
18 all the relevant agencies, IARC, NTP, EPA, OEHHA and Heath
19 Council of Netherlands, which says it should be regarded
20 as carcinogenic to humans. All of the agencies are in
21 agreement that it is a carcinogen. We don't have a
22 glyphosate issue here.

23 --o0o--

24 MR. METZGER: And the basis of IARC's
25 classification was sufficient evidence in supportive

1 evidence of genotoxicity, acrylamide and glycidamide -
2 that's its reactive metabolite - induce hemoglobin and DNA
3 adducts. Acrylamide induces gene mutations and chromosome
4 aberrations. And it has strong clastogenicity. It breaks
5 chromosomes.

6 It is a multi-site carcinogen producing tumors in
7 multiple organs and multiple species of animals. And the
8 World Health Organization has concluded that acrylamide in
9 food is a major concern for human health.

10 --o0o--

11 MR. METZGER: Acrylamide is a potent carcinogen.
12 Based on data from the U.S. EPA IRIS System, OEHHA
13 calculated a safe harbor level of 0.2 micrograms per day.
14 That's a very low level of exposure, making it more potent
15 than such carcinogens as benzene and formaldehyde.

16 --o0o--

17 MR. METZGER: In 2002, Swedish researchers
18 discovered that acrylamide, which was previously known as
19 an industrial carcinogen, that it's present in various
20 cooked foods. And shortly thereafter, scientists
21 determined that its presence in food is a result of the
22 Maillard Reaction, the browning reaction, that transforms
23 asparagine in plant-based foods that contain reducing
24 sugars to the carcinogen acrylamide when heated at
25 sufficient temperatures.

1 So acrylamide is formed in coffee when coffee
2 beans are roasted, which are at fairly high temperatures.
3 Coffee is the largest source of acrylamide in the adult
4 human diet.

5 --o0o--

6 MR. METZGER: Another reflection of its potency
7 is the margin of exposure, which is -- I think that's
8 actually of European origin. And its technical definition
9 is the point of comparison on the dose response curve
10 divided by the estimated intake by humans. Essentially it
11 reflects the margin between exposure to humans and the
12 exposure level to animals that have been shown to cause
13 harm.

14 And according to authorities, a margin of
15 exposure of 10,000 is considered safe. You want a
16 10,000-fold deference between animal exposures that cause
17 harm and human exposures.

18 And with margin of exposure, the lower the
19 number, the more dangerous. Acrylamide has a very low
20 margin exposure, according to the JECFA, the margin of
21 exposure is just 75 to 300, meaning that exposures to
22 animals just 75 times that of humans are causing harm.

23 And according to ILSI, they found a margin of
24 exposure as low as 40. So people are exposed to
25 acrylamide at levels that are just 100 times or less than

1 those that cause harm to experimental animals. So in all
2 the media press that this case -- this issue has gotten,
3 you've probably read, if you follow that stuff, oh, that
4 acrylamide is just present in coffee at trace levels. You
5 know, and your levels are so much lower than those --
6 thousands of times lower than those that cause harm in
7 animals, it's not correct. We're talking about 100 times
8 less.

9 And I think because of that, it's that the World
10 Health Organization concluded that acrylamide is a major
11 concern to public health.

12 --o0o--

13 MR. METZGER: Which brings me to CERT's interest.
14 CERT is the acronym for my client, that Council for
15 Education and Research on Toxics --

16 --o0o--

17 MR. METZGER: -- which is a public -- California
18 public benefit corporation, whose charitable purposes are
19 education and research on toxic substances. CERT is
20 rather unique among NGOs, because virtually every dollar
21 that CERT receives is distributed as education and
22 research grants, much -- I'd say most of those grants
23 being made to researchers and students at UC campuses.

24 CERT has focused much of its attention on
25 acrylamide, because acrylamide is the most prevalent

1 carcinogen in the human diet. And according to generally
2 accepted estimates, the diet is responsible for
3 approximately 40 percent of human cancers. And
4 approximately 40 percent of humans get cancer, so CERT
5 thinks that it's a big important issue that acrylamide is
6 so prevalent in the human diet, this potent carcinogen,
7 and especially in coffee. So CERT has long been at the
8 vanguard of protecting Californians from acrylamide in the
9 human diet.

10 --o0o--

11 MR. METZGER: CERT filed the first case to
12 enforce Prop 65 regarding acrylamide in french fries in
13 2002. And then CERT co-litigated the next case regarding
14 acrylamide in potato chips with the California Attorney
15 General. Those cases both resolved. And in the french
16 fry case, the manufacturers agreed to provide legally
17 required cancer hazard warnings.

18 The potato chip CERT considers to be more
19 successful, because the manufacturers of potato chips not
20 wanting to put a cancer hazard warning on packages of
21 potato chips, they decided to get the acrylamide out of
22 potato chips, so they wouldn't have to give that warning,
23 and we now have safer potato chips. And they did that by
24 using an enzyme asparaginase, which prevents the formation
25 of acrylamide.

1 --o0o--

2 MR. METZGER: All right. Well, since 2010, CERT
3 has been litigating a case, which you've probably all read
4 about and have received some -- a little bit of media
5 attention. The case is regarding acrylamide in coffee,
6 CERT versus Starbucks, et al. And the goal of the case is
7 to persuade the coffee industry, the roasters to reduce
8 acrylamide levels in coffee just like the potato chip
9 manufacturers did, so we have a healthier beverage, and we
10 done have a proliferation of warnings.

11 And after a very short time of eight years of
12 litigation, including two trials that lasted a total of
13 about six months -- and I see some defense counsel here
14 smiling -- CERT prevailed in the case, to the
15 consternation of, I guess, the next speaker from the
16 National Coffee Association.

17 And it appears to my client anyway that the
18 proposed regulation is a politically-driven effort to
19 overturn the judge's decision. I hope that's wrong, but
20 that's what it appears to be.

21 My client is of the view that this regulation is
22 totally unnecessary, because the coffee industry can
23 easily reduce acrylamide in coffee, so that the no
24 significant risk level for acrylamide is not exceeded.
25 There are many techniques available to do this. This was

1 the opinion of CERT's food scientist expert Dr. Ronald
2 Melnick who testified about published and confidential
3 industrial technologies at the trial.

4 And so just as the potato chip industry reduced
5 acrylamide, it was able to maintain flavor and taste. We
6 believe that the coffee industry can do so and should do
7 so.

8 And, of course, getting the acrylamide out, in my
9 client's opinion, is a much better result for public
10 health than warnings, especially for coffee, which is
11 addictive, and people are going to drink despite warnings,
12 just like smokers smoke cigarettes, despite warnings.

13 --o0o--

14 MR. METZGER: I think it's important to note that
15 the European Commission has last year adopted a regulation
16 establishing measures and benchmark levels for reducing
17 acrylamide in food. I won't go through the whole slide
18 here, but -- so at least in Europe, the problem is
19 considered to be serious enough that a regulatory
20 action -- affirmative regulatory action has taken place.

21 --o0o--

22 MR. METZGER: The FDA has not regulated
23 acrylamide levels in coffee. It was going to do so, but
24 the coffee industry claimed that acrylamide could not be
25 reduced in coffee without negatively affecting flavor.

1 Nestlé, one of the world's largest coffee
2 roasters, met with the FDA to address acrylamide in
3 coffee. And at that meeting, Nestlé intentionally
4 concealed information from the FDA that acrylamide could
5 in fact be reduced in coffee. This is shown by a
6 confidential Nestlé memo that the judge in the CERT versus
7 Starbucks case ordered declassified.

8 --o0o--

9 MR. METZGER: Here's a portion of the document.
10 It says, "Our visit to the FDA was successful in
11 influencing the FDA to use the toolbox approach and
12 against setting guidance values. Nega Beru at the FDA
13 mentioned FDA was going to issue a guidance document for
14 the management of acrylamide which was not issued. We
15 initially had offered to provide more data on acrylamide
16 to the FDA, but on the advice of legal and Nancy Rachman
17 at the Grocery Manufacturers Association we were advised
18 not to provide more data to the FDA, because of the risk
19 of the data being discovered in the event of a lawsuit
20 under Prop 65".

21 --o0o--

22 MR. METZGER: That same document acknowledges
23 that the NSRL for -- set for acrylamide as a carcinogen of
24 0.2 micrograms per day is so low that all of our products,
25 referring to Nestlé's coffee products, will need a warning

1 label under Prop 65.

2 --o0o--

3 MR. METZGER: So now the proposed regulation.

4 --o0o--

5 MR. METZGER: "Exposures to listed chemicals in
6 coffee created by and inherent in the processes of
7 roasting coffee beans or brewing coffee do not pose a
8 significant risk of cancer".

9 Magic wand?

10 No study has been done that shows that. And
11 CERT's belief is that there is no scientific evidence to
12 support that whatsoever, and I'll get into that now.

13 --o0o--

14 MR. METZGER: The proposed regulation does not
15 consider that acrylamide is such a potent carcinogen that
16 a cancer warning is required for all coffee. And it does
17 not consider that acrylamide can be reduced in coffee
18 without negatively affecting flavor and taste.

19 --o0o--

20 MR. METZGER: So in 2005, OEHHA itself was
21 considering acrylamide. And it conducted a study, which
22 was published called characterization of acrylamide intake
23 from certain foods. And in this report, OEHHA evaluated
24 whether consumption of coffee results in exposure to
25 acrylamide above the no significant risk level. And this

1 is what OEHHA concluded in 2005.

2 --o0o--

3 MR. METZGER: This is all quotations. In all
4 cases, the lower bound on acrylamide intake exceeded 1.0
5 micrograms per day, based on the lower end of the range of
6 consumption, average consumption of coffee with 4.1 ppb or
7 more acrylamide concentration would exceed the NSRL.
8 Since actual Consumption by coffee drinkers is greater, a
9 lower concentration would also exceed the NSRL. Of the
10 individual brewed coffee samples tested by FDA, 19 of 20
11 had levels higher than 4.1 ppb. All were above 1.9 ppb.

12 So OEHHA's conclusion is quote, "OEHHA is fairly
13 confident that the NSRL is exceeded for coffee drinkers".
14 That's heavy coffee drinkers, average coffee drinkers, and
15 light coffee drinkers. So that was the quantitative risk
16 assessment that OEHHA did in 2005. And my client finds it
17 very curious that this Initial Statement of Reasons
18 doesn't mention OEHHA's own conclusion that exposure to
19 acrylamide in coffee, per se, for all coffee drinkers
20 exceeds the no significant risk level, and the proposed
21 regulation simply declares it don't.

22 --o0o--

23 MR. METZGER: Yeah. Okay.

24 --o0o--

25 MR. METZGER: So reading through the IARC

1 monograph -- and the reason I'm going to that is because
2 it appears that most of the rationales, in their Initial
3 Statement of Reasons, are based on the IARC monograph that
4 was issued here. So I'm going to talk a little about the
5 IARC monograph.

6 --o0o--

7 MR. METZGER: So from the Initial Statement of
8 Reasons, yeah, it is clear that the major source of
9 information on which OEHHA relies is the monograph. It
10 was recently published, but reflects scientific research
11 as of May 2016 when the Working Group on Coffee met in
12 France to evaluate coffee. OEHHA misinterprets IARC's
13 conclusions in the monograph in at least three critical
14 respects.

15 --o0o--

16 MR. METZGER: It's more than that, but three
17 really important ones. First, OEHHA claims that quote,
18 "Coffee has not been found to increase the risk of any
19 cancers", unquote.

20 Absolutely untrue. The monograph nowhere says
21 that. Moreover, the monograph reports significantly
22 increased risks for a number of human cancers, especially
23 childhood leukemia from maternal consumption of coffee
24 during pregnancy. And significantly increased risks of
25 cancer from consumption of coffee have also been reported

1 for bladder cancer, esophageal cancer, gastric cancer,
2 laryngeal cancer, lung cancer, non-hodgkin's lymphoma,
3 ovarian cancer - that's an IARC major study postdating the
4 monograph - pancreatic cancer, prostate cancer, and total
5 cancer. And many of these are the subject of
6 meta-analyses that have found increased risks.

7 So OEHHA got that wrong.

8 --o0o--

9 MR. METZGER: Second, OEHHA assumes that inverse
10 associations noted by IARC between coffee consumption and
11 some cancers in the observational studies are causal.
12 IARC made no such determination. IARC concluded that the
13 available studies -- I should quote, "The available
14 studies are of insufficient quality, consistency, or
15 statistical power to permit a conclusion regarding the
16 presence or absence of a causal association between
17 exposure and cancer", unquote.

18 That is the definition in the preamble for group
19 3, which is a -- that the agent is not classifiable as to
20 its carcinogenicity. So IARC never concluded that coffee
21 prevents cancer whatsoever.

22 --o0o--

23 MR. METZGER: Had it done so, that would have --
24 it would have classified it as group 4, which is probably
25 not carcinogenic. IARC did not classify coffee as

1 probably not carcinogenic to humans.

2 The third major way in which OEHHA misinterprets
3 the monograph is that -- I just want to say something
4 before I do that. No one at OEHHA read the monograph
5 before the Initial Statement of Reasons was published. As
6 500 pages, it was first published by IARC on the 13th and
7 this rule came out on the 14th of June. Nobody read it.

8 All right. Anyway, the third reason OEHHA
9 misinterprets the IARC monograph is that IARC claims that
10 antioxidants in coffee prevent human cancer. But IARC
11 never made any such conclusion. The antioxidant cancer
12 prevention hypothesis is extremely controversial. It has
13 not been accepted by any governmental agency.

14 Most importantly, meta-analyses of randomized
15 controlled trials show that antioxidant intake actually
16 cause some human cancers and do not reduce the risk of any
17 cancer. Now, those are extremely powerful studies,
18 because randomized controlled trials are -- can establish
19 causality, unlike observational epidemiologic studies,
20 which are subject to massive confounding, bias, and
21 chance.

22 So when you have meta-analyses of randomized
23 controlled trials that show no reduction in the risk of
24 any cancer from antioxidant intake, but show that
25 antioxidant intake actually significantly increases the

1 risk of certain cancers, how can one possibly conclude
2 that the antioxidants in coffee prevent -- that's somehow
3 a mechanism by which coffee supposedly prevents human
4 cancer, which IARC itself never concluded.

5 --o0o--

6 MR. METZGER: So all of -- all three of OEHHA's
7 primary conclusion in this Statement of Reasons in support
8 of the regulation are simply flat out wrong. IARC did not
9 conclude that coffee consumption does not increase the
10 risk of any human cancer. IARC did not conclude that the
11 inverse associations between coffee and some cancers are
12 causal. And IARC did not conclude that anti-oxidants in
13 coffee prevent human cancer. IARC -- I'm sorry, OEHHA,
14 not IARC. OEHHA got it wrong on all counts.

15 --o0o--

16 MR. METZGER: Now, I'd like to talk briefly about
17 some post-IARC studies, because we're now two years since
18 the IARC literature review closed in May of 2016. And as
19 we all know, science marches forward.

20 --o0o--

21 MR. METZGER: At the time IARC did its review,
22 there had only been -- the only epidemiology studies that
23 had been published regarding coffee and cancer were
24 observational studies. And as I mentioned, such studies
25 are not controlled, and they're subject to massive

1 confounding and bias. And because of that, they cannot
2 prove causation.

3 That is especially true of nutritional
4 epidemiology studies, because of the enumerable
5 confounding variables in the human diet. And it's because
6 of -- because observational nutritional epidemiology
7 studies are scientifically inadequate to determine
8 causation, and because the coffee cancer epidemiology
9 studies reported conflicting results, IARC concluded that
10 coffee is not classifiable as to its carcinogenicity to
11 humans.

12 --o0o--

13 MR. METZGER: Well, in the two years since IARC
14 completed its review in May of 2016, several epidemiology
15 studies especially designed to determine whether the
16 inverse associations between coffee consumption and
17 various chronic diseases, including cancer, are causal
18 have been published. Kind of a tongue twister.

19 The bottom line is there are new studies, which
20 show that the inverse associations reported in the
21 observational studies, on which IARC relied, that those
22 are not causal. They do not prevent cancer. They are
23 artifactual.

24 --o0o--

25 MR. METZGER: There have been studies in the last

1 two years regarding type 2 diabetes, which observational
2 studies show significant reductions from consumption of
3 coffee. Also, Alzheimer's disease, cardiovascular
4 disease, and Parkinson's disease. The observational
5 epidemiology literature for these studies is consistent.
6 Coffee reduces the risk.

7 So these special new studies designed to
8 eliminate confounding and reverse causation were done,
9 since IARC's review and these studies found no adverse
10 association when -- so those inverse associations are not
11 real. They are artifactual. They do not reflect a
12 prevention of cancer for any cancer or any chronic
13 disease. They -- then these studies disprove the coffee
14 cancer prevention hypothesis. Now, the Initial Statement
15 of Reasons does not mention any of these studies.

16 --o0o--

17 MR. METZGER: OEHHA also claims that coffee is
18 unique.

19 --o0o--

20 MR. METZGER: OEHHA writes, "Coffee is unique, in
21 that it shows reductions in certain human cancers, has not
22 been shown to increase any cancers, and is particular..."
23 -- "...particularly rich in cancer chemo-preventive
24 compounds".

25 This statement is incorrect, because the same is

1 true of tobacco. So coffee is not unique in that regard.

2 --o0o--

3 MR. METZGER: Epidemiology studies - these are
4 observational studies - of coffee consumption have
5 reported decreased risks of breast cancer, endometrial
6 cancer, melanoma, and thyroid cancer. But this does not
7 make coffee unique among chemical mixtures, because
8 cigarette smoking has also been reported to reduce the
9 risk of these same cancers.

10 That kind of -- that's kind of a head scratcher.
11 Cigarette smoking reducing the risk of cancer?

12 Well, it actually does. It reduces the risk of
13 these cancers and that's based upon multiple epidemiologic
14 studies and meta-analyses. And it's attributed to an
15 anti-estrogenic effect of cigarette smoke.

16 So coffee is not unique in reducing the risk of
17 these cancers cause tobacco does it. Smoking does it.

18 --o0o--

19 MR. METZGER: I'm not saying that smoking is good
20 for you.

21 Okay. So the positive association between coffee
22 consumption and lung cancer is generally thought to be due
23 to residual confounding by smoking, which is highly
24 correlated with coffee consumption. But likewise, the
25 negative association between coffee consumption and

1 endometrial cancer is probably due to confounding by
2 smoking, because cigarette smoking reduces the risk of
3 endometrial cancer by more than 50 percent, just like
4 coffee. And they're highly correlated. Nobody seems to
5 consider that.

6 Oh, coffee prevents endometrial cancer. Reduces
7 the risk 50 percent. OEHHA totally failed to consider
8 negative confounding by cigarette smoke as a biologically
9 plausible explanation for the inverse association between
10 coffee consumption and endometrial cancer. OEHHA simply
11 assumed that coffee consumption prevents endometrial
12 cancer.

13 --o0o--

14 MR. METZGER: OEHHA also writes coffee is unique,
15 in that it is particularly rich in cancer chemo-preventive
16 compounds. I think that's basically referring to
17 antioxidants. And that statement is also erroneous
18 because the same is also true of tobacco. Tobacco
19 contains significant concentrations of polyphenols, just
20 like coffee, carotenoids, and also chlorogenic acid, which
21 is what's touted in coffee to be the major constituent
22 that's supposedly good.

23 So coffee is not unique, because it is
24 particular -- particularly -- I can't say that word --
25 particularly rich in cancer chemo-preventive compounds.

1 The same is true of the carcinogen tobacco.

2 --o0o--

3 MR. METZGER: OEHHA also claims that coffee is
4 unique because it has been the subject of very high
5 scientific interest for many years. That statement is
6 likewise incorrect, because it's also true of tobacco.

7 Among complex chemical mixtures studied, coffee
8 is surpassed only by tobacco for which even more
9 observational studies and experimental studies have been
10 published than have been published regarding coffee.

11 Well, in fact, the most important and relevant
12 analogy between coffee and tobacco is the addictive nature
13 of these chemical mixtures, which is arise -- rises from
14 the reinforcing properties of caffeine and nicotine.
15 OEHHA doesn't mention this important similarity between
16 coffee and tobacco, instead relying on incorrect
17 analogies, in CERT's view, for political reasons.

18 --o0o--

19 MR. METZGER: What about OEHHA claim's that
20 coffee is healthy?

21 --o0o--

22 MR. METZGER: So the Initial Statement of Reasons
23 ignores the many carcinogenic and other toxic chemicals in
24 coffee. Of the more than 1,000 chemicals in coffee, only
25 about 50 have been evaluated for carcinogenicity, and

1 long-term bioassays. And of those evaluated, about
2 two-thirds to three-fourths have shown carcinogenic
3 activity in animals.

4 --o0o--

5 MR. METZGER: Coffee contains caffeine. Caffeine
6 causes several adverse psychological and physiological
7 effects, including mental disorders. These are caffeine
8 intoxication, caffeine withdrawal syndrome, anxiety, sleep
9 disorders, and problematic caffeine use.

10 These are all diagnoses in the International
11 Classification for Diseases, tenth edition, and the
12 American Psychiatric Association's Diagnostic and
13 Statistical Manual for Mental Disorders, the 5th revision.
14 And these are effects that are established by randomized
15 double-blinded controlled studies. This is not
16 observational epidemiology. This is solid science.

17 So coffee has several proven adverse human health
18 effects.

19 --o0o--

20 MR. METZGER: Because coffee is naturally bitter,
21 it is typically consumed with sugars, sweeteners,
22 creamers, whiteners, flavorings and other additives, all
23 of which are not healthy. High levels of sugars and
24 saturated fat, of course, significantly increase the risk
25 of cardiovascular diseases, which is itself a major risk

1 factor for cancer.

2 --o0o--

3 MR. METZGER: And coffee, of course, is a well
4 known, recognized to cause adverse pregnancy outcomes,
5 including reduced fetal weight and growth, pregnancy loss,
6 spontaneous abortion and stillbirth.

7 By the way, these are -- there's five
8 meta-analyses that are consistent that show this.

9 Infertility in both men and women, and adverse
10 effects in children and adolescence. And I think it's
11 particularly noteworthy that a major effect of caffeine,
12 and largely from coffee, is reduced birth weight and
13 growth -- fetal growth of infants, because that has also
14 been shown for a acrylamide. There are three major
15 studies regarding acrylamide that used hemoglobin adducts
16 as biomarkers of acrylamide exposure, a very accurate
17 measure of exposure, much better than dietary
18 questionnaires.

19 These were three different countries did these
20 large studies. And they found that dietary levels of
21 acrylamide - we're talking about human dietary levels -
22 significantly increase fetal retardation and growth.
23 Acrylamide is, of course, a significant constituent of
24 coffee.

25 Okay.

1 --o0o--

2 MR. METZGER: What else? The consumption of
3 coffee increases the risk of several chronic diseases as
4 well. Numerous studies regarding bone disease,
5 osteoporosis, and bone fractures, cardiovascular diseases,
6 coronary heart disease, myocardial infarction, stroke,
7 heart failure and angina pectoris.

8 Autoimmune diseases, rheumatoid arthritis,
9 systemic lupus, erythematosus, and type 1 diabetes
10 gastrointestinal disorders, constipation, gallstones, and
11 gastroesophageal reflux disease.

12 Urological conditions, urolithiasis, lower
13 urinary tract symptoms, urinary incontinence, and urinary
14 tract infections.

15 Also, acute cardiovascular events within one hour
16 of consumption. Apparently, coffee is a trigger for acute
17 cardiovascular events.

18 --o0o--

19 MR. METZGER: Well, what about the Dietary
20 Guidelines Advisory Committee Report. The coffee industry
21 thinks that this is -- just proves coffee safety. Well,
22 the report suggests that coffee can be part of a healthy
23 diet, but it also states that coffee should not be
24 consumed by susceptible individuals, namely pregnant women
25 and children, that it can be consumed by healthy people

1 only in moderation, and that individuals who do not
2 consume caffeinated coffee should not start to consume it
3 for health benefits.

4 --o0o--

5 MR. METZGER: What about -- okay. So the coffee
6 industry also claims that coffee is healthy because it's
7 been consumed for hundreds of years without apparent
8 ill-effect.

9 Well, that's not a scientific argument. And the
10 absurdity that is shown by butter flavoring diacetyl,
11 which the FDA classified as GRAS, generally recognized as
12 safe. And in the very year that acrylamide was discovered
13 in coffee, this food flavoring was found to be extremely
14 toxic to the human respiratory system causing a fatal lung
15 disease in workers and consumers called bronchiolitis
16 obliterans.

17 And interestingly, this disease has been
18 diagnosed in coffee roasting workers exposed to diacetyl
19 in roasted coffee.

20 --o0o--

21 MR. METZGER: All right. Well, since I'm a
22 lawyer, you know, I can't go through this and just talk
23 science. I have to talk about a few legal issues here.

24 But there's only three of them, so bear with me,
25 because I understand that this is a scientific hearing.

1 It's a scien -- the regulation by the way is pure science.
2 It's a scientific issue, which is why I spent all that
3 time on the science, but I think it's also regulatory.
4 And there are three very important legal issues that
5 should be considered.

6 --o0o--

7 MR. METZGER: First is the people. In 1986, when
8 the voters adopted Prop 65, they intended it to apply to
9 carcinogens in coffee. Pre-election materials of both
10 proponents and opponents of the initiative asserted that
11 the Act would apply to carcinogens in coffee. As a matter
12 of fact, the opposition largely ridiculed the entire
13 initiative because coffee or some certain types of coffee
14 would require a cancer warning but the people voted for it
15 by about a two-thirds majority.

16 So it's CERT's view that OEHHA therefore proposes
17 to violate the intent of the people of California who, by
18 a large majority, voted for Prop 65 knowing that
19 warnings -- cancer warnings would be required for coffee,
20 if coffee contained carcinogens above the no significant
21 risk level.

22 --o0o--

23 MR. METZGER: The proposed regulation also
24 creates a categorical exemption for all listed heat-formed
25 carcinogens in coffee in the absence of any quantitative

1 cancer risk assessment. Well, there so far have been two
2 judges who have said you can't do that in your 19 --
3 around 1990 Judge Ronald Robie of the Sacramento Superior
4 Court, who's now on the appellate court up here, he was
5 the judge assigned to the Duke II case. That was a case
6 brought by the AFL-CIO, and labor, and environmental
7 organizations, a whole slough of NGOs, versus the agency
8 and the State, because the agency had adopted a regulation
9 that exempted all foods, drugs, cosmetics, and medical
10 devices that complied with federal standards without
11 regard to quantitative risk assessment.

12 And Judge Robie concluded that there can be no
13 categorical exemption. Determined that that regulation
14 violated the Act, Proposition 65 itself, and held it
15 unlawful. And ultimately, that regulation was repealed,
16 because it created categorical exemptions with -- for no
17 significant risk without any quantitative risk assessment.

18 And that's exactly what this proposed regulation
19 is doing. Hopefully, OEHHA will learn from its prior
20 mistake and not make the same mistake again.

21 In that case, by the way, on December 23, 1992,
22 there was a settlement agreement of that case signed by
23 the Governor, and the Health and Welfare Agency, which was
24 OEHHA's predecessor. And that settlement agreement
25 provided that quote, "Any provision which is adopted after

1 the date of this agreement to define the term, 'no
2 significant risk' of the Act for any food...shall be based
3 upon specific numeric standards for the chemical...",
4 unquote. So the proposed regulation violates the Agency's
5 and the Governor's own settlement agreement in that case.

6 --o0o--

7 MR. METZGER: So conclusions. OEHHA's proposed
8 regulation that would simply declare all listed heat form
9 carcinogens in coffee to pose no significant risk of
10 cancer with any quantitative cancer risk assessment
11 whatsoever is grossly unscientific and wrong for many
12 reasons.

13 --o0o--

14 MR. METZGER: First, the proposed regulation is
15 inappropriate and unnecessary, because the coffee industry
16 can and should reduce acrylamide levels in coffee, so that
17 coffee drinkers are not exposed to acrylamide from coffee
18 in excess of the no significant risk level.

19 --o0o--

20 MR. METZGER: Second, the proposed regulation is
21 contrary to OEHHA's own 2005 risk assessment in which
22 OEHHA concluded that all coffee drinkers are exposed to
23 acrylamide in excess of the no significant risk level. If
24 OEHHA is going to adopt a regulation that says it ain't
25 so, it has to explain why -- why it's prior scientific

1 quantitative risk assessment doesn't apply. You just
2 can't ignore that.

3 --o0o--

4 MR. METZGER: Third, the proposed regulation is
5 based upon OEHHA's erroneous interpretation of the IARC
6 monograph. IARC did not conclude that coffee prevents
7 cancer. It concluded that the available studies were
8 inadequate to determine whether coffee does or does not
9 cause cancer.

10 --o0o--

11 MR. METZGER: Fourth, OEHHA's assertion that
12 coffee has not been found to increase the risk of any
13 cancers is incorrect. IARC found consistent epidemiologic
14 evidence that maternal consumption of coffee during
15 pregnancy significantly increases childhood leukemia.

16 All the studies that IARC considered suitable
17 showed increased risks of that cancer. They were all
18 consistent, and they were significantly increased. And
19 many epidemiology studies have reported significantly
20 increased risks of other cancers as well.

21 --o0o--

22 MR. METZGER: Fifth, OEHHA's assumption that the
23 inverse associations between coffee consumption and
24 cancers are causal is unfounded. IARC did not make such a
25 conclusion, and OEHHA's assumption is contradicted by the

1 sophisticated new epidemiologic studies post-dating IARC's
2 review which are of a design which can assess causality.

3 --o0o--

4 MR. METZGER: Six, OEHHA's assumption that
5 antioxidants in coffee prevent cancer is unfounded. IARC
6 made no such conclusion. OEHHA's assumption is
7 contradicted by randomized controlled trials and
8 meta-analyses of them, which show no beneficial effect of
9 antioxidant intake, but do show increased risks of some
10 cancers.

11 --o0o--

12 MR. METZGER: Seven, OEHHA's claim that coffee is
13 unique because it is particularly rich in cancer
14 chemo-preventive compounds is unfounded. IARC made no
15 such conclusion. OEHHA's assumption is erroneous because
16 tobacco contains significant concentrations of
17 antioxidants, including chlorogenic acid just like coffee.

18 --o0o--

19 MR. METZGER: Eight, OEHHA's claim that coffee is
20 unique because it reduces the risk of certain cancers is
21 incorrect. Just as consumption of coffee reduces the risk
22 of endometrial cancer, thyroid cancer, and melanoma based
23 on observational studies, tobacco smoke also reduces the
24 risk of these cancers.

25 --o0o--

1 MR. METZGER: Woops, what happened to nine?

2 Oh, well, I missed one.

3 Next conclusion. OEHHA's claim that coffee is
4 unique because it has been the subject of very high
5 scientific interest for many years is also incorrect.
6 Tobacco surpasses coffee for scientific interest of more
7 studies.

8 --o0o--

9 MR. METZGER: Next, that OEHHA's claim that
10 coffee is healthy is incorrect. Coffee has been proven to
11 cause adverse physiological and psychological effects
12 through randomized control trials. And there are
13 recognized diagnoses in the ICD-10 and the DSM-5 for
14 adverse effects of coffee consumption. And coffee in
15 observational studies has also been shown to re -- to
16 increase the risk of multiple chronic diseases, bone
17 diseases, cardiovascular diseases, autoimmune diseases,
18 gastrointestinal diseases, and urological diseases.

19 --o0o--

20 MR. METZGER: I think this is lastly. The
21 proposed regulation is unlawful because, one, it
22 contradicts the intent of the voters that there should be
23 cancer warnings for carcinogens in coffee. It creates --
24 second, it creates a categorical exemption for carcinogens
25 in coffee in the absence of any quantitative risk

1 assessments. Third, it contradicts OEHHA's own 2005
2 quantitative risk assessment for exposure to acrylamide in
3 coffee. And four, it violates the State's agreement in
4 settling the Duke II case that any provision which is
5 adopted after the date of this agreement to define the
6 term no significant risk of the Act for any food shall be
7 based upon specific numeric standards for the chemical.

8 --o0o--

9 MR. METZGER: I guess the final conclusion is
10 that OEHHA should not adopt the proposed regulation, but
11 should instead withdraw the proposal because it is
12 contrary to science and law, and it should do that
13 notwithstanding the politics.

14 --o0o--

15 MR. METZGER: Thank you for your attention. If
16 there's any questions from anyone on the Panel, I'll be
17 happy to address them?

18 Okay. Thank you very much.

19 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. Thank you
20 very much.

21 So now we will hear the second extended
22 presentation from the National Coffee Association.
23 They've submitted, is it, three or four speakers?

24 Three. Okay. That's what I thought. William
25 Murray, Alan Leviton of Harvard Medical School and Trent

1 Norris.

2 MR. MURRAY: Thank you. Can you hear me.

3 Well, good morning, and thank you for this
4 opportunity to speak here today at this very important
5 public hearing. I will be speaking about coffee.

6 My name is Bill Murray, and I'm president of the
7 National Coffee Association. The NCA is one of the oldest
8 trade associations in the country. We represent entities
9 in all sectors of the coffee industry, roasters,
10 manufacturers, retailers, nonprofit organizations,
11 brokers, importers and coffee growers.

12 I should note for the record we are not a
13 litigant or a party to the litigation that was mentioned
14 earlier.

15 Let me begin by noting that we support
16 Proposition 65's basic purpose of ensuring consumers are
17 informed about exposures determined by the State of
18 California to cause cancer or reproductive harm. Indeed
19 we've demonstrated a deep commitment to educating coffee
20 consumers about health and safety.

21 For example, in 2016, we launched "Coffee & Me",
22 a website to provide consumers with information about
23 coffee and health. In providing this information, we've
24 been extremely careful to present only information that is
25 compiled from independent third-party research, research

1 that we have not funded or been associated with.

2 Our work in the area of coffee and health is
3 guided by a very respectable group of scientists who
4 together comprised the NCA Scientific Advisory Group, a
5 preeminent authority on coffee science, one of only a few
6 highly respected organizations devoted to this specialized
7 field.

8 Comprised of top industry experts, members of
9 this group hold collectively decades of experience in a
10 wide spectrum of disciplines, including epidemiology,
11 toxicology, biochemistry, medicine, food safety, and
12 quality assurance.

13 Because we are an organization guided by science,
14 we believe that if Prop 65's core purpose of warning
15 consumers for exposures is to be achieved in a meaningful
16 way, it is equally important to ensure that consumers are
17 not warned for exposures that do not cause cancer
18 reproductive harm. Indeed, we do believe that this
19 proposed new rule furthers this purposes.

20 In light of the compelling conclusions and the
21 findings of the scientific community that coffee
22 consumption does not cause cancer, and in some
23 circumstances actually prevents certain cancer, it's
24 enactment would serve to avoid dissemination of
25 information to the public in the form of a warning which

1 overwhelmingly has been found to be inconsistent with and
2 unsupported by extensive scientific research.

3 Any outcome other than which -- that which you
4 have proposed would frustrate the legal, scientific, and
5 the policy rationale upon which Proposition 65 is based.

6 To this end, and as we intend to articulate
7 further in a comment letter, which we'll be submitting, we
8 strongly believe that your proposal is supported by both
9 the weight of scientific evidence and the law.

10 From a scientific standpoint, this proposal is
11 based on the International Agency for Research on Cancer's
12 recent conclusion that there is insufficient evidence to
13 classify coffee as carcinogenic, and that coffee
14 consumption is actually associated with reduced risk of
15 certain cancers. IARC's review was the most comprehensive
16 evaluation of coffee and cancer to date, and included a
17 process which surveyed more than 1,000 separate scientific
18 studies and produced a comprehensive 500-page report.

19 Given that this proposed rule is so firmly
20 grounded in scientific research, I am particularly pleased
21 that we are here today joined by Dr. Alan Leviton who will
22 be speaking in support of this proposal. Dr. Leviton is a
23 physician epidemiologist. He's been on the faculty of
24 Harvard Medical School for 47 years. He founded and led
25 the neuroepidemiology unit at Boston Children's Hospital

1 for 45 of those years. And he's an author of over 400
2 peer-reviewed publications.

3 He continues as a professor of neurology at
4 Harvard Medical School. Dr. Leviton's perspective is
5 particularly insightful, as he will provide a firsthand
6 account of what he saw as a credentialed observer of the
7 proceedings of the IARC monograph committee when they met
8 to review coffee, maté, and very hot beverages in Lyon,
9 France in 2016.

10 Such observers are subject to a thorough vetting
11 process. They must abide by strict rules intended to
12 ensure that they only observe the proceedings and nothing
13 more. Dr. Leviton's expert assessment of the IARC
14 proceedings will confirm that those proceedings provide a
15 rigorous, independent, and thorough foundation and
16 justification for the proposed rule under discussion
17 today.

18 And even in the short period of time since IARC
19 issue its findings, there have been several peer-reviewed
20 scientific studies, which attest not only to the safety of
21 coffee but to its actual positive impact on various organs
22 in the human body. A recent study of more than half a
23 million people found that those who consumed six or seven
24 cups of coffee a day were 16 percent less likely to die
25 from any disease over a 10-year period than those who

1 never touch it. These studies further support OEHHA's
2 proposal.

3 From a legal standpoint, we have the benefit of
4 being represented here today by Trent Norris, a partner at
5 the law firm of Arnold & Porter. Mr. Norris will speak to
6 the legal issues shortly.

7 But at a basic level, NCA believes that OEHHA's
8 proposal is well within OEHHA's statutory authority, and
9 that this proposal furthers the purpose of Proposition 65
10 by avoiding inaccurate warnings for a widely consumed and
11 beneficial product.

12 Now that science has so comprehensively
13 established the facts on coffee, we believe it's
14 appropriate for OEHHA to give citizens confidence in what
15 they're consuming in a way that is based upon and
16 consistent with the overwhelming weight of evidence
17 regarding coffee and cancer.

18 For this reason, we support OEHHA's determination
19 that exposures to Prop 65 listed chemicals in coffee that
20 are produced as part of, and are in the process of
21 roasting and brewing coffee pose no significant risk of
22 cancer. And we respectfully request that OEHHA adopt the
23 proposal without modification.

24 I'd like to thank you for this opportunity to be
25 here. This is a privilege. And I'd like to ask Dr.

1 Leviton, if you would, come and speak to the issues that I
2 mentioned.

3 DR. LEVITON: Thank you, Bill.

4 My name is Alan Leviton, and I want to speak
5 today in support of OEHHA's proposed regulation.

6 Thank you.

7 Mr. Murray introduced me, and I'm grateful for
8 his introduction.

9 I was privileged to be an observer of the IARC
10 Review Committee of coffee, maté, and hot drinks conducted
11 in April 2016. Servers can sit in on all meetings of
12 members of the various committees that -- members of the
13 various committees attend. As an epidemiologist, I chose
14 to attend all meetings attended by the epidemiologists.

15 I was at every single epidemiology committee
16 meeting. As someone who all too frequently receives
17 peer-reviewed comments from people I do not consider my
18 peers, I am sensitive about the qualifications and
19 experience of people selected to be reviewers.

20 Every single member of the IARC Epidemiology
21 Committee was highly qualified by virtue of conducting and
22 reviewing epidemiologic studies of cancer that
23 specifically address food and beverage exposures. More
24 than a few were authors of papers reviewed at the meeting.

25 I was gratified to see how well my epidemiology

1 colleagues performed their due diligence. Every
2 epidemiologist had done her or his homework. They, as a
3 group, were methodical in their presentations, tables and
4 figures of all kinds, group studies of each organ by
5 sample size whether retrospective or prospective, the
6 quality of the data, attention to potential confounding,
7 and overall rank of quality. It was impressive to see
8 this done for every organ.

9 The rankings of papers based on overall quality
10 is essential to the process of what's called weighing the
11 data, or weighing the evidence.

12 Indeed, doing this is what changed the IARC
13 assignment of coffee from group 2B in 1991, which is --
14 classifies it as possibly carcinogenic to humans, to group
15 3 in 2016, which is defined as inadequate evidence in
16 humans for cancer.

17 For example, case control studies of cancer
18 obtain information about coffee consumption, cigarette
19 consumption, and other potential exposures from people who
20 have already been made aware of their disease. Because
21 some people, who develop tobacco-related malignancies, are
22 more likely than others to underreport their tobacco
23 exposure, case control studies of tobacco related
24 malignancies are prone to bias.

25 Contrast cohort studies which obtained data about

1 exposure, years and even decades before the diagnosis of
2 cancer, are deemed of much higher quality compared to case
3 control studies. Prospective, long-term cohort studies
4 are considered much less prone to bias.

5 Back in 1991, when IARC previously reviewed
6 coffee, the only studies of the relationship between
7 coffee consumption and some cancer sites were case control
8 studies.

9 By 2016, however, large-scale, well-conducted,
10 long-term cohort studies unavailable in 1991 were
11 available to the working group. Not only did the working
12 group in 2016 give more weight to these studies - and
13 that's the word that the working group used, "weight" -
14 they also gave the greatest weight to the largest studies.

15 The prominent discrepancy between findings of
16 case control studies and the large scale, long-term
17 prospective cohort studies prompted the working group to
18 conclude that the findings of some case control studies
19 were most likely due to the confounding of tobacco smoking
20 that had not been adequately controlled.

21 My impression in 2016 was that if the working
22 group did not have the old case control studies to contend
23 with, it would have concluded that the evidence suggested
24 lack of carcinogenicity in coffee consumption.

25 I was also gratified to see how well my

1 epidemiologic colleagues performed their assessments and
2 made judgments so fairly. They were as neutral about the
3 findings as they could be. Equipose is the word that I
4 would use to describe the Committee. Even authors of
5 relevant studies were reluctant to paint their own studies
6 in a more favorable light than they deemed appropriate.

7 I was delighted to hear one of the reviewers say
8 I fully recognize that the major limitation of my study is
9 the potential for recall bias. All in all, I felt that
10 the quality of the reviewers and the review process was
11 very high and unquestionably fair.

12 For these reasons, OEHHA's reliance on this very
13 detailed and unbiased review process is justified and
14 appropriate from a scientific standpoint.

15 I'm grateful to members of the Committee here for
16 the opportunity to encourage OEHHA to continue with the
17 plan to clarify that cancer warnings are not required for
18 coffee under Proposition 65.

19 Thank you very much for listening so patiently to
20 me. Thank you.

21 MR. NORRIS: Thank you, Alan.

22 Good morning. I am Trent Norris. I'm a partner
23 with the law firm of Arnold and Porter. And in the past
24 25 years, I've represented over a thousand companies in
25 lawsuits and regulatory matters concerning Prop 65. I'm

1 here today on behalf of the National Coffee Association.
2 And as Bill Murray explained earlier, NCA strongly
3 believes that OEHHA's proposal is supported by both the
4 weight of scientific evidence and the law.

5 As the agency tasked with implementing Prop 65,
6 OEHHA is empowered to quote, "Adopt and modify
7 regulations, standards, and permits as necessary to
8 conform with and implement Prop 65 and to further its
9 purposes".

10 From a legal standpoint, the rulemaking here is
11 on solid ground. It is well within OEHHA's statutory
12 authority. And it furthers the purpose of Proposition 65
13 by avoiding unnecessary warnings for coffee, a widely
14 consumed and beneficial food.

15 Two cases demonstrate OEHHA's broad statutory
16 authority to enact the rulemaking here. The first case
17 Nicolle-Wagner versus Deukmejian from 1991 confirmed
18 OEHHA's statutory authority to adopt regulations that
19 provide complete exemptions for exposures to even very
20 broad classes of chemicals in foods and beverages.

21 In the Nicolle-Wagner case, the court of appeal
22 upheld a regulation enacted by OEHHA's predecessor agency
23 that exempted naturally occurring chemicals in food from
24 Proposition 65's warning requirement.

25 The court determined that OEHHA's exemption for

1 all naturally occurring chemicals would further the
2 statutory purpose -- quote, "...would further the
3 statutory purpose in safeguarding the effectiveness of
4 warnings which are given, and in removing from regulatory
5 scrutiny those substances which pose only an insignificant
6 risk of cancer or birth defects within the meaning of the
7 statute", closed quote.

8 In the second case, much more recently, Mateel
9 Environmental Justice Foundation versus OEHHA, in 2018,
10 just earlier this year, the court of appeal confirmed
11 OEHHA's statutory authority to adopt regulatory safe
12 harbor levels for certain listed chemicals.

13 The safe harbor regulations have provided
14 important guidance to persons in the course of doing
15 business, i.e. the regulated community, so that they can
16 either reduce the level of chemicals in their products or
17 provide warnings. That reduces the number of warnings
18 that are provided simply to prevent litigation without
19 reference to whether they are required under Proposition
20 65.

21 It's well within OEHHA's statutory authority to
22 enact the rulemaking here. OEHHA's proposal is based on
23 extensive scientific data from the International Agency
24 for Research on Cancer, which the State's qualified
25 experts appointed by the Governor has determined to be an

1 authoritative body for the identification of listed
2 chemicals.

3 Unlike other proposed regulations that have been
4 challenges os overbroad Categorical exemptions, OEHHA's
5 rulemaking is narrow, precise, and based on a robust body
6 of scientific studies that are specific to the chemicals
7 and the product at issue.

8 Indeed, under the cooking provision adopted by
9 OEHHA's predecessor, a court has the authority to
10 determine that an alternative significant risk level is
11 appropriate for a chemical created in cooking food.
12 Likewise, OEHHA retains that same authority, and could
13 state a numerical level for an individual chemical, such
14 as acrylamide, created in cooking a type of food such as
15 coffee, where it's supported by quote, "sound
16 considerations of public health". And that's true even if
17 that level is higher than what OEHHA's default assumptions
18 or even more scientifically appropriate assumptions might
19 support as the significant risk level.

20 Here, such sound considerations clearly exist,
21 not only due to the risk of overwarning, but also due to
22 the overwhelming strength of scientific evidence showing
23 that drinking coffee does not increase the risk of cancer
24 if humans.

25 Significantly, nothing in Proposition 65 or its

1 implementing regulations indicates that a quote, "No
2 significant risk level", closed quote, must be stated
3 numerically or even be finite. OEHHA's rulemaking is the
4 practical equivalent of a finding that the no significant
5 risk level is infinite for carcinogens in coffee that are
6 produced as part of and inherent in the processes of
7 roasting and brewed coffee.

8 It does not affect the listing of these
9 chemicals, which is controlled by statutory requirements,
10 but instead it interprets and implements the expressed
11 statutory exemption from warnings where quote, "The
12 exposures poses no significant risk assuming lifetime
13 exposure at the level in question", closed quotes.

14 In Baxter Healthcare versus Denton, a 2004 case,
15 the court of appeal approved of a trial court finding that
16 any level of exposure to a chemical - the chemical at
17 issue there - requires no Proposition 65 warning, because
18 that chemical, although properly listed on the basis of
19 animal studies, does not affect humans in the same manner.

20 The Baxter court essentially adopted an infinite
21 safe harbor level for the chemical, based on the strength
22 of scientific evidence. Just as a court is permitted to
23 do this, so is OEHHA.

24 Finally, the rulemaking would further the purpose
25 of Proposition 65, because it would clarify that warnings

1 are unnecessary for chemicals in coffee that are
2 inherently created by the roasting or brewing process.
3 But consistent with the original intent of the law, it
4 would not exempt chemicals that may be intentionally added
5 to coffee. This is the same distinction that's set out in
6 OEHHA's regulation on naturally occurring chemicals in
7 food, which has been upheld as valid in the face of a
8 challenge.

9 So in summary, OEHHA clearly has the legal
10 authority to adopt this proposal. And accordingly, the
11 National Coffee Association respectfully requests that
12 OEHHA adopt the proposal without modification.

13 Thank you.

14 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. Thank you.

15 So we have now three speakers who have filled out
16 blue cards. So I will -- so we will hear from them. If
17 you want to speak and haven't filled out a blue card, I
18 recommend that you do so, and you can give it to Monet
19 Vela. If you want to speak, but prefer not to fill out a
20 blue card, that's fine. What I'll do is after all the
21 speakers who've filled out cards have spoken, I'll ask if
22 anyone else would like to speak.

23 So then the next speaker, and we are asking that
24 you limit your remarks to five minutes, is Jeffrey
25 Margulies of NRF. I believe that's National Retailer

1 Foundation, but you can correct me, as well as California
2 Retailers Association.

3 MR. MARGULIES: Thanks, Alan.

4 Actually, the NRF is Norton, Rose, Fulbright. I
5 did not have enough room to put all of that on one card,
6 so I apologize.

7 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. Well,
8 that's why I shouldn't assume.

9 MR. MARGULIES: That's not a problem. So, yes,
10 my name is Jeff Margulies. I'm a partner with the law
11 firm of Norton, Rose, Fulbright. And I'm here today on
12 behalf of the California Retailers Association with whom
13 I've worked for years on Prop 65 and other issues.

14 I'm not here to talk about the merits of the
15 proposed rulemaking. I will leave that to the roasters,
16 and to OEHHA, and Mr. Metzger. I want to talk about the
17 process a little bit, and I will be brief.

18 Between the court ruling, this proposed
19 rulemaking, and the extensive press coverage of both,
20 there's rampant confusion in the marketplace. Retailers
21 are hearing contradictory messages about whether warnings
22 are required for exposures to chemicals in coffee,
23 particularly acrylamide.

24 As of today, Judge Berle has shown no indication
25 of any willingness to stay the litigation pending the

1 outcome of this rulemaking, and expressed at a recent
2 hearing that he considers it speculative whether this
3 Agency will ever adopt a rule. And he intends to hear
4 CERT's motion for permanent injunction on September 6th.

5 If it's granted, and if the case isn't stayed,
6 that would only increase the amount of confusion in the
7 marketplace. For that reason, California Retailers
8 Association urges OEHHA to complete the rulemaking process
9 with all deliberate speed and to adopt the proposed
10 rulemaking to ensure that consumers are not given
11 misleading information about coffee and cancer.

12 Thank you.

13 CHIEF DEPUTY DIRECTOR HIRSCH: Thank you.

14 Next speaker is Robert Donohue representing
15 Canteen.

16 MR. DONOHUE: Good morning. My name is Robert
17 Donohue, and I'm an employee with Canteen here in
18 Sacramento.

19 As a member of the convenience service industry,
20 I support the OEHHA proposal to add a provision to the
21 code, which will effectively exempt coffee from Prop 65's
22 warning requirements. The convenience service industry
23 includes vending, micromarket, office coffee, and pantry
24 service channels. It has a two billion economic impact on
25 the state of California, and is responsible for over

1 10,000 jobs in the Golden State.

2 I agree with your assessment that exposures to
3 Prop 65 listed chemicals in coffee that are produced as
4 part of and in the process of roasting coffee beans and
5 brewing coffee pose no significant risk of cancer.

6 OEHHA is correct to side with the scientific
7 consensus, according to the federal government's own
8 dietary guidelines, moderate coffee consumption is not
9 only unassociated with the increased risk of major chronic
10 diseases, but it can actually be incorporated into healthy
11 living styles to mean good health and reduce the risk of
12 chronic disease.

13 The World Health Organization dropped coffee from
14 its list of possible carcinogens two years ago, noting
15 that moderate coffee consumption can actually lower cancer
16 risk, because coffee beans contain healthy antioxidants.

17 Most recently, two studies published in the
18 Annals of Internal Medicine tracked the coffee intake of
19 more than 600,000 individuals for over 16 years.

20 Researchers concluded that coffee drinkers
21 experienced lower risk of health -- of death from heart
22 disease, respiratory disease, diabetes, stroke, and
23 cancer.

24 Coffee remains on Prop 65's list of flagged
25 substances because of acrylamide, a flavorless chemical

1 naturally produced when coffee beans are roasted.
2 Although mega doses of acrylamide have been linked to
3 cancer in rodents, the National Cancer Institute has found
4 no consistent evidence that dietary acrylamide exposure is
5 associated with the risk of any type of cancer in human
6 beings.

7 Prop 65 warnings would impose onerous labeling
8 requirements on businesses like mine that are located in
9 California and supply coffee to California. Mandated
10 signage could leave us vulnerable to frivolous lawsuits
11 which could lead to increased consumer cost. Prop 65
12 threatens California's convenience service industries at
13 large whose vendors bring coffee as well as tea, water,
14 fresh food, and more to employers and employees throughout
15 the state.

16 Prop 65 would negatively impact the industry for
17 which employs thousands of individuals in the state and
18 brings in billions of dollars in revenue to California.
19 OEHHA should move forward with relieving Prop -- or
20 relieving coffee of its Prop 65 burden.

21 Thank you.

22 CHIEF DEPUTY DIRECTOR HIRSCH: Thanks.

23 Just a point of clarification. Coffee itself is
24 not on the Prop 65 list. Obviously, the focus of this
25 regulation is the cancer impacts of listed chemicals that

1 happen to be in coffee as a result of roasting or the
2 brewing processes.

3 So next speaker -- my apologies if I don't get
4 your name right -- John Hornung.

5 MR. HORNUNG: You said it perfectly.

6 CHIEF DEPUTY DIRECTOR HIRSCH: All right.

7 MR. HORNUNG: My name is John Hornung. And I am
8 here representing myself as a Californian. I do work with
9 a company called Incasa, Inc., which does handle coffee as
10 flavoring. But again, I'm representing myself here as a
11 Californian.

12 I was born in Merritt Hospital in Oakland. I was
13 raised in Contra Costa County. I've lived throughout
14 various counties in California. And I'm actually fifth
15 generation Californian on both sides of my family.

16 Back in -- when Prop 65 was first proposed, I
17 enthusiastically voted for it. I was happy to vote for
18 it. As Californians, we're at the forefront of a healthy
19 lifestyle, and wanting to know what we ate or drank was
20 good for us or if it was not. We were enthusiastic about
21 having the opportunity to vote for something that we
22 thought could protect us from potential cancers.

23 And this is why I want to thank you today for
24 your proposal, because I think that your proposal is
25 exactly in the ballpark of being the original intent of

1 those of us Californians who voted for Prop 65. We wanted
2 to know if something was going to be bad for us. We did
3 not want to -- we also wanted to know if something was
4 going to be good for us.

5 And we don't want labels on products that are
6 actually healthy for us that might, in some way, cause us
7 to have apprehension about consuming them.

8 Now, the science has been overwhelming. Because
9 I have been associated with the coffee, I played -- I paid
10 really close attention to the science over the years.
11 It's been overwhelming. We see 30-year studies with large
12 cohorts of 30,000 people in Czechoslovakia, Italy et
13 cetera, et cetera. And the recent conclusions by the
14 International Association for the Research of Cancer, the
15 World Health Organization arm, the FDA, et cetera, prove
16 again and again that the scientific community worldwide is
17 the consensus that coffee is very healthy for you.

18 In fact, many studies by respected scientific
19 organizations in their conclusions state coffee drinkers
20 live longer. Flat out. Coffee drinkers live longer.

21 So while there is all sorts of epi -- excuse me,
22 contradictory statements made because of associations with
23 different studies and different approaches to the studies
24 that were taken, overall the scientific community is of
25 the opinion that coffee drinkers do live longer.

1 But not only do the live longer, we've also seen
2 studies that have come out as Mr. Metzger mentioned about
3 prevention of Parkinson's, Alzheimer's, diabetes in
4 overwhelming numbers. In other words, not only do coffee
5 drinkers live longer, but they live healthier and better
6 lifestyles. So it's quality of life as whether -- as
7 length of life.

8 So for this reason, I really want to thank you
9 and really applaud you. And I really do encourage you to
10 continue forward and get this regulation passed as soon as
11 possible.

12 Thank you.

13 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. Thanks.

14 So the last speaker who has submitted a blue
15 card. And, I'm sorry, I think I'm going to butcher your
16 name, even though I shouldn't. But Adam Riegel, Rejel
17 from the California Chamber of Commerce.

18 MR. REGELE: Adam Regele on behalf of the
19 California Chamber of Commerce.

20 I'll keep my statements short. We're in strong
21 support of the proposed regulation. Thanks.

22 (Laughter.)

23 CHIEF DEPUTY DIRECTOR HIRSCH: Okay. So that was
24 the last of the blue cards.

25 Is there anyone who would like to speak?

1 Go ahead.

2 MS. LARSON: Sandra Larson with NAMA and CAVC.
3 We are the trade association for the convenience services
4 industry. And I concur with what my colleague Robert
5 Donohue testified to. We are very much, both of our
6 organizations, in support of the proposal.

7 Thank you.

8 CHIEF DEPUTY DIRECTOR HIRSCH: Okay.

9 Thank you.

10 Anyone else has any thoughts to share with us?

11 Okay. Hearing none, I hereby close this public
12 hearing.

13 And again, as a reminder, we will accept written
14 public comments until 5:00 p.m. on August 30th, 2018. You
15 can submit your written comments electronically through
16 our website at oehha.ca.gov/comments. If you'd like to
17 snail mail us your written comments, you can certainly do
18 that. You can send them to Monet Vela, M-o-n-e-t, V as in
19 Victor E-l-a, at the Office of Environmental Health Hazard
20 Assessment, P.O. Box 4010, Sacramento, California,
21 95812-4010. And all that information is on our website.
22 Or if you like, you can even fax them to us,
23 (916)323-2610.

24 And again, if we finalize this regulation, we
25 will under State law provide written responses to the

1 comments we've heard today as appropriate, as well as the
2 written comments that we get.

3 So thank you very much for your interest.

4 (Thereupon the Office of Environmental Health
5 Hazard Assessment public hearing adjourned at
6 11:39 a.m.)

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

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

That I am a disinterested person herein; that the foregoing Office of Environmental Health Hazard Assessment public meeting was reported in shorthand by me, James F. Peters, a Certified Shorthand Reporter of the State of California, and thereafter transcribed under my direction, by computer-assisted transcription.

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 meeting.

IN WITNESS WHEREOF, I have hereunto set my hand this 27th day of August, 2018.

JAMES F. PETERS, CSR
Certified Shorthand Reporter
License No. 10063