

# Exhibit 174

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IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
SOUTHERN DIVISION  
No. 7:23-CV-00897

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IN RE:  
CAMP LEJEUNE WATER LITIGATION

This Document Relates to:  
ALL CASES

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VIDEO-RECORDED EXPERT DEPOSITION OF  
JOHN C. LIPSCOMB, PHD

Wednesday, May 14, 2025  
10:00 AM EASTERN TIME

Reported by: Denise Dobner Vickery, CRR, RMR  
JOB NO.: 7300385

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Wednesday, May 14, 2025  
10:00 AM EASTERN TIME

Video-Recorded Expert Deposition of  
JOHN C. LIPSCOMB, PHD, held at the offices of:

U.S. DEPARTMENT OF JUSTICE  
1100 L Street NW  
Washington, DC 20005

Pursuant to notice, before Denise  
Dobner Vickery, Certified Realtime Reporter,  
Registered Merit Reporter, and Notary Public in  
and for the District of Columbia.

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P R O C E E D I N G S

- - -

THE VIDEOGRAPHER: We are now  
on the record.

My name is David Campbell.  
I'm a videographer for Golkow, a Veritext  
division. Today's date is May 14, 2025  
and the time on the video monitor is  
10:00 AM.

This video deposition is being  
held at 1100 L Street, Northwest,  
Washington, DC 20005. This is in the  
matter of In re: Camp Lejeune Water  
Litigation. This is in the United States  
District Court for the Eastern District  
of North Carolina, Southern Division.

The deponent today is John  
Lipscomb.

The court reporter is Denise  
Vickery also with Golkow.

Counsel, will you please  
identify yourselves for the record.  
After which the reporter will please  
swear in the witness and we can proceed.

1 MR. MICELI: I'm David Miceli.  
2 I'm here for the Plaintiffs Litigation  
3 Group and I have with me JJ Snidow.

4 MS. PLATT: Elizabeth Platt  
5 for the United States.

6 MS. ELLISON: Anna Ellison  
7 also on behalf of the United States.

8 - - -

9 JOHN C. LIPSCOMB, PHD  
10 called for examination, and, after having been  
11 duly sworn, was examined and testified as  
12 follows:

13 - - -

14 EXAMINATION

15 - - -

16 BY MR. MICELI:

17 Q. Good morning, Dr. Lipscomb.

18 A. Good morning.

19 Q. We met shortly before this  
20 deposition. My name is Dave Miceli. I'm going to  
21 be asking you a series of questions and ask you to  
22 give me verbal answers. Okay?

23 A. Yes, sir.

24 Q. I know that you've given some

1 depositions before, and I saw that you had given  
2 one, I believe, in August of last year?

3 A. My most recent deposition was in  
4 February of this past year --

5 Q. Of this year?

6 A. -- as I recall.

7 Q. Is that the case that's pending in  
8 Indiana?

9 A. Yes, it is.

10 Q. Okay. So you've been through this  
11 before and fairly recently; correct?

12 A. I have.

13 Q. Okay. I will do my best to ask  
14 questions that are understandable, but I'll prove  
15 to you during the course of this deposition that  
16 I'll fail at that.

17 A. Uh-huh.

18 Q. You'll have to ask me to clarify  
19 something. If I ask you something that you don't  
20 understand, please ask me to clarify it. Because  
21 if you answer, I'm going to assume that you  
22 understood my question and you answered  
23 accordingly. Okay?

24 A. Yes.

1 Q. Is that a fair rule?

2 A. I believe it to be so.

3 Q. Okay. If you could please state  
4 your full name for the record.

5 A. John Charles Lipscomb.

6 Q. And you are from Little Rock,  
7 Arkansas?

8 A. I am.

9 Q. Okay. What is your professional  
10 address in Little Rock?

11 A. My professional address is 7501  
12 Glenn Hills Drive, Sherwood, Arkansas 72120.

13 Q. Okay. Is that also your home  
14 address?

15 A. That is my home address.

16 (Document marked for  
17 identification as Lipscomb Exhibit 1.)

18 BY MR. MICELI:

19 Q. Okay. I'm going to start off by  
20 just showing you a number of exhibits that we're  
21 going to be using going through today.

22 I'm going to hand you what's been  
23 marked as Exhibit Number 1, and I'll represent to  
24 you that that is the notice for your deposition.

1 Do you recognize that?

2 A. I do.

3 Q. Have you seen this before?

4 A. I have.

5 Q. Okay. And I just want to make --

6 MS. PLATT: Do you have copies  
7 for us as well?

8 MR. MICELI: Oh, I'm sorry.

9 Yeah. (Laugh).

10 MS. PLATT: Thank you.

11 MR. MICELI: I don't mean to  
12 ignore you. (Laugh).

13 BY MR. MICELI:

14 Q. Just so I clear up my mistake from  
15 this morning, if you look on the front page of  
16 Exhibit Number 1, second line of the first  
17 paragraph notes that we noticed this for 9:00;  
18 correct?

19 A. That's what it says here.

20 Q. Okay. But we have -- we are  
21 beginning at 10:00 this morning; right?

22 A. I believe so.

23 Q. All right.

24 MS. PLATT: Dave, just for the

1 record, I believe you sent an amended  
2 notice of deposition.

3 MR. MICELI: Okay.

4 MS. PLATT: Are you planning  
5 to produce that as an exhibit?

6 MR. MICELI: I didn't have  
7 that one, but we can attach it at a later  
8 time. I'll get one. That's all right.

9 (Document marked for  
10 identification as Lipscomb Exhibit 2.)

11 BY MR. MICELI:

12 Q. I'm going to show you what I marked  
13 as Exhibit 2, and this is defendant's responses  
14 and objections to our deposition notice.

15 Have you seen this before?

16 A. I have.

17 Q. Okay. Did you assist in creating  
18 the objections and/or the responses to this, to  
19 the deposition notice and subpoena?

20 A. (Reviews document.)

21 Can you clarify that question for  
22 me, please?

23 Q. Yeah.

24 Did you review this and assist in by

1 putting together the documents that have been  
2 produced to me?

3 A. Yes.

4 Q. Okay. And I've been produced your  
5 CV and I've received your invoices, and I've  
6 received the contract that you have with the  
7 Department of Justice for your services.

8 Did you produce anything else in  
9 relation to this notice?

10 A. No.

11 Q. Okay. And you didn't withhold  
12 anything from production?

13 A. No, I did not.

14 MR. MICELI: Okay. All right.  
15 We can put those aside. I just wanted to  
16 get that out of the way.

17 (Document marked for  
18 identification as Lipscomb Exhibit 3.)

19 BY MR. MICELI:

20 Q. I'm going to show you what I marked  
21 as Exhibit 3 to your deposition and ask if you  
22 could identify this for me.

23 A. (Reviews document.)

24 I can identify it as my expert

1 report in this matter.

2 Q. Okay.

3 A. It is not my supplemental report.

4 MR. MICELI: Right, which  
5 would be Exhibit Number 4.

6 (Document marked for  
7 identification as Lipscomb Exhibit 4.)

8 MS. PLATT: I would just note  
9 for the record that Exhibit 3 does not  
10 contain a materials list.

11 MR. MICELI: We're going to go  
12 over that.

13 MS. PLATT: Okay.

14 MR. MICELI: Yeah. Here you  
15 go. That's two copies there.

16 BY MR. MICELI:

17 Q. And is Exhibit 4 your supplemental  
18 report?

19 A. It is.

20 MR. MICELI: Okay. We will be  
21 reviewing that today.

22 (Document marked for  
23 identification as Lipscomb Exhibit 5.)

24 BY MR. MICELI:

1 Q. I'm going to show you and ask you to  
2 identify what is -- I have marked as Exhibit  
3 Number 5 and ask if you can identify that  
4 document.

5 A. (Reviews document.)  
6 Exhibit 5 appears to be the  
7 reference list from my document -- from my  
8 original report.

9 Q. And thank you.  
10 If you look at the last page of your  
11 report, it is page --

12 A. 84.

13 Q. -- 84.

14 A. Yeah.

15 Q. And the first page of your  
16 references is 85; correct?

17 A. That's correct.

18 Q. Okay. Did you compile this list of  
19 references yourself?

20 A. I did.

21 Q. Were any of these items provided to  
22 you by counsel?

23 A. (Reviews document.)

24 Yes, they were.

1 Q. Okay. What -- what materials were  
2 provided to you by counsel?

3 If you could identify them by page  
4 number and then location so we can be singing out  
5 of the same hymnal.

6 A. Sure.

7 (Reviews document.)

8 Counsel provided me the documents  
9 identified as expert reports --

10 Q. Okay.

11 A. -- and the documents identified as  
12 supplemental reports.

13 Q. Okay. Those are the documents that  
14 begin on page 93 and carry over to page 94?

15 A. That is correct.

16 Q. Okay. We'll talk about some of  
17 those today as well. I think you can -- you may  
18 want to keep that and your two reports separate  
19 from the other exhibits because we're probably  
20 going to spend a fair amount of time discussing  
21 those today.

22 Just to make sure we're -- I'm going  
23 to get some of these on the record before we get  
24 started.

1 (Document marked for  
2 identification as Lipscomb Exhibit 6.)

3 BY MR. MICELI:

4 Q. Provide you with Exhibit Number 6.  
5 I'll represent to you this is -- there's a page  
6 number 97 and it is Appendix A to your original  
7 report.

8 Does that seem accurate to you?

9 A. Yes, it does.

10 Q. Okay. And it shows the appears to  
11 be four depositions across two cases that you have  
12 provided testimony in before?

13 A. I don't understand what you mean by  
14 "two depositions."

15 Q. Well, for instance, the Opal  
16 Millman, et al. versus RTX Corporation, it says  
17 deposition January 23 and February 8.

18 A. Yes, it does. I.

19 Q. You test --

20 A. That was the same deposition.

21 Q. Same deposition. You sat for it two  
22 times?

23 A. That's correct.

24 Q. Okay. And then in the Sandra Taylor

1 matter, again, there are two dates but one  
2 deposition?

3 A. Correct.

4 Q. So you had the pleasure of sitting  
5 in the hot seat four times but only for two  
6 depositions; correct?

7 A. I -- I -- that's correct.

8 (Document marked for  
9 identification as Lipscomb Exhibit 7.)

10 BY MR. MICELI:

11 Q. Okay. Then I'm going to show you,  
12 provide you with Exhibit Number 7, which is  
13 appears to be a copy of your curriculum vitae;  
14 correct?

15 A. That is correct.

16 Q. All right. I'm going to go back to  
17 just -- I don't think you need to look at Exhibit  
18 6, but I'm going to ask you.

19 Prior to August of 2023, had you  
20 ever had to provide testimony in a -- well, strike  
21 that.

22 Prior to the two cases that are  
23 listed in your testimonial history --

24 A. Uh-huh.

1 Q. -- in the last four years, prior to  
2 those, had you ever had to sit for a deposition?

3 A. No.

4 Q. Okay. And other than those two that  
5 are on this list, have you sat for another  
6 deposition?

7 A. I have not.

8 Q. Okay. So this is the third  
9 opportunity for providing testimony by way of  
10 deposition?

11 A. That's correct.

12 Q. Have you ever testified in court for  
13 any reason?

14 A. No.

15 Q. Okay. I'm going to go through a  
16 little bit of your CV, and we're going to come  
17 back to it later as well.

18 But you received a Bachelor of  
19 Science and a Master's of Science from the  
20 University of Central Arkansas?

21 A. I did.

22 Q. Is that Go Bears?

23 A. How about them Bears?

24 Q. (Laugh).

1                   And are both your BS degree and your  
2 master's in biology?

3                   A.           They are.

4                   Q.           Okay. Did you have any minors when  
5 you received those degrees?

6                   A.           Yes. For my BS I had a minor and it  
7 was in psychology.

8                   Q.           Okay. And prior to seeking your  
9 PhD, had you had any formal training in  
10 toxicology?

11                  A.           I have to the extent that I  
12 conducted my master's thesis at the National  
13 Center for Toxicological Research. I had formal  
14 training, but I did not have formal coursework.

15                  Q.           Okay. And it appears -- and I think  
16 this is later in my outline, but I can go ahead  
17 and hit it here.

18                                It appears that you received your --  
19 from my reading of your CV, it looks like you  
20 received your BS degree and then while getting  
21 your master's and your PhD, you worked at the FDA  
22 Center for -- what is the name of it?

23                  A.           The National Center for  
24 Toxicological Research.

1 Q. That's it.

2 Is that correct? You worked there  
3 while you were getting your master's and  
4 doctorate?

5 A. That's correct.

6 Q. Okay. So you received some  
7 on-the-job training while you were getting your  
8 master's?

9 A. Yes.

10 Q. Okay. And you worked there for was  
11 it seven years?

12 A. That's correct.

13 Q. Okay.

14 A. From 1984 to 1991.

15 Q. Okay. When I -- when I look at  
16 your -- pard me.

17 When I look at your CV and your time  
18 at the National Center for Toxicological Research,  
19 you start off by saying served as a principal  
20 investigator and then you go on to explain some  
21 things.

22 Would it be fair to say that when  
23 you came out of Central Arkansas with your BS  
24 degree, you didn't immediately become a principal

1 investigator?

2 A. I honestly don't recall that. I was  
3 acting as a principal investigator, but whether I  
4 had the federal designation as a principal  
5 investigator, I don't recall when that came about.

6 Q. I looked at your CV for a separate  
7 listing of funded research or funded grants --

8 A. Uh-huh.

9 Q. -- as a principal investigator.  
10 Have you ever received federal  
11 grants for as a principal investigator?

12 A. No. In my line of work as a federal  
13 employee, we were precluded from getting grants.

14 Q. Okay. So while you were at the  
15 National Center for Toxicological Research for the  
16 USFDA, you were a federal employee?

17 A. That's correct.

18 Q. Okay. And your -- your work as an  
19 investigator there was -- was as part of your  
20 employment therefore not funded by outside  
21 sources?

22 A. That is correct.

23 Q. Okay.

24 A. It was funded directly by the -- by

1 the Food and Drug Administration.

2 Q. Okay. And perhaps it's my  
3 misunderstanding of how principal investigator  
4 designation works, but in prior litigation it's  
5 been my understanding -- prior depositions in this  
6 litigation -- it's been my understanding that  
7 principal -- the designation of principal  
8 investigator is something that is made when you  
9 apply for a grant, say, from NIH or another  
10 organization to get research dollars.

11 Is that your understanding of how  
12 grants work?

13 A. Yes, to a point. Principal  
14 investigator is a term used across disciplines,  
15 and while someone applying for a federal grant  
16 will be identified as the principal investigator,  
17 people who for the government write experimental  
18 protocols and conduct the research according to  
19 those protocols are also identified as principal  
20 investigators. It's the same name but a different  
21 meaning.

22 Q. Right.

23 Internal versus an external  
24 principal investigator?

1 A. Depending on the organization.

2 Q. Okay. That helps me.

3 And it says that while you were  
4 there that you planned and conducted toxicology  
5 research in the areas of pre-, peri-, and  
6 postnatal development related to drug metabolism  
7 and pharmacokinetics; correct?

8 A. Where are you reading that?

9 Q. If you look at page 102 of your CV.

10 A. Uh-huh.

11 Q. Down at the bottom right corner.

12 Just begins on the top line.

13 A. Yes.

14 Q. "Served as principal investigator:  
15 planned and conducted toxicology research."

16 A. That's what it says.

17 Q. Okay. And were you looking for  
18 teratogenicity of the drugs or the compounds you  
19 were investigating?

20 A. Not specifically. I was more  
21 interested in evaluating some of the mechanisms  
22 that might be responsible for -- for the brain  
23 damage, the neurotoxicity that was associated with  
24 a -- with a specific chemical.

1 Q. Okay. What chemical was that?

2 A. It was a chemical called  
3 Trimethyl-10.

4 Q. And did you spend your entire time  
5 while you were at the National Center for  
6 Toxicological Research studying Trimethyl-10?

7 A. Yes, but that was not the only thing  
8 that I studied.

9 Q. Okay.

10 A. I also studied pharmacokinetics as  
11 part of -- of my investigations with Trimethyl-10.

12 Q. Okay.

13 A. And the ability to extrapolate in  
14 vitro findings to the in vivo situation so we  
15 better understand what's going on in the entire  
16 body rather than just in those cells and test  
17 tubes.

18 Q. Okay. And in vitro to in vivo -- I  
19 think you may have already answered this question  
20 at the end of that last answer.

21 In vitro is in a test tube or in  
22 petri dish; correct?

23 A. That's the Latin meaning is in  
24 glass.

1 Q. Right.

2 And in vivo means?

3 A. In the intact body.

4 Q. Right.

5 And that could be both in an animal  
6 model or in the human; right?

7 A. Right.

8 Q. Okay. And prior to receiving your  
9 PhD in toxicology internally at FDA at the Center  
10 for Tox Research, did you receive any  
11 certifications in toxicology?

12 A. No.

13 Q. Okay. And then you received your  
14 PhD in 1991?

15 A. I did.

16 Q. And what was your thesis?

17 A. My thesis, as I recall, had a title  
18 of "The effects of Trimethyl-10 on rat hepatic  
19 glutathione S-transferase."

20 Q. We will not go into the specifics of  
21 that.

22 A. All right.

23 Q. Okay. And then from 1991 until the  
24 present, you've been working as a toxicologist in

1 one form or another; correct?

2 A. That's correct.

3 Q. Okay. Now, when you were at FDA  
4 Center for Tox Research you worked in a  
5 laboratory; correct?

6 A. That's correct.

7 Q. All right. Then when you went to  
8 the U.S. Air Force, Research Toxicologist, and  
9 Chief, Metabolism Section -- of the Metabolism  
10 Section, did you work in a laboratory there?

11 A. I did.

12 Q. Okay. Did you do animal models?

13 A. Our goal there was to develop human  
14 models for different toxicants.

15 Q. Okay. Did you have human subjects  
16 or did you use in vitro human tissue or human  
17 tissue in vitro studies?

18 A. The question is a little bit  
19 difficult to answer either/or. I used human  
20 tissues, but the review protocol was the same as  
21 if we were using actual humans in terms of the  
22 Institutional Review Board designation in the  
23 human studies.

24 Q. Okay. But you weren't doing the

1 studies on intact human beings?

2 A. I did not expose human beings to my  
3 chemicals. No, sir.

4 Q. Correct. That's -- that's what I  
5 wanted to get to.

6 A. Okay.

7 Q. And then and we're going to go over  
8 some of this in a little greater detail.

9 When you left the Air Force and went  
10 to the EPA in it appears 1998?

11 A. I'm not looking at my CV, but I  
12 recall my separation date from the Air Force to be  
13 February 14, 1998.

14 Q. Okay. When you were with EPA, were  
15 you conducting laboratory experiments?

16 A. I was.

17 Q. Okay. On -- were they in vitro or  
18 in vivo studies?

19 A. These were in vitro studies and they  
20 were largely carried on to continue the work that  
21 I had -- had begun initiated and had some success  
22 with at Wright Patterson Air Force Base.

23 Q. Okay. So as a toxicologist with EPA  
24 beginning in 1998, you continued to do in vitro

1 studies?

2 A. I did.

3 Q. Okay. And then when you left the  
4 EPA National Center for Environmental Assessment  
5 and went to the EPA's Office of Research and  
6 Development for National Homeland Security  
7 Research Center, did you operate in a laboratory  
8 there as well?

9 A. I did not.

10 To clarify something about the  
11 laboratory location. When I was with ORD's  
12 National Center for Environmental Assessment, we  
13 had agreements with the National Institute for  
14 Occupational Safety and Health. I conducted my in  
15 vitro experiments on that campus.

16 Q. Okay. And were you in Cincinnati at  
17 that time?

18 A. Yes.

19 Q. Okay. And was the laboratory that  
20 you conducted your in vitro experiments in in  
21 Cincinnati as well?

22 A. It was.

23 Q. Okay. And then in 2016 when you  
24 went to the Office of Research and Development for

1 National Homeland Security, you no longer  
2 conducted laboratory experiments; is that fair?

3 A. I don't recall whether any of the  
4 experiments we had ongoing followed my tenure into  
5 National Homeland Security. However, in vitro and  
6 laboratory experiments were not part of my  
7 official duties conducted for EPA's National  
8 Homeland Security Research Center.

9 Q. Okay. I'm going to work backwards a  
10 little bit because I probably could have asked  
11 these questions better.

12 But you were not a principal  
13 investigator for the Office of Research and  
14 Development for National Homeland Security?

15 A. They don't use that designation, to  
16 my knowledge. I was a Toxicologist GS-0415.

17 Q. Okay. But you weren't doing either  
18 in vitro or in vivo experimental studies while at  
19 National Homeland Security's Office of Research  
20 and Development?

21 A. Unless there's some part that I  
22 can't recollect that followed me into that, but  
23 that was not part of my duties or  
24 responsibilities.

1 Q. Okay. And while you were with EPA's  
2 Office of Research and Development, you were doing  
3 only in vitro studies; correct?

4 A. Yes, I did not do any whole animal  
5 studies while there.

6 Q. Okay. And then when you left EPA  
7 and began your tenure either with Lipscomb and  
8 Associates and/or -- or CTEH LLC, do -- in your  
9 role with either Lipscomb and Associates or CTEH,  
10 do you do laboratory experiments?

11 MS. PLATT: Objection.

12 THE WITNESS: CTEH is not  
13 retained as part of this evaluation.

14 I'm here representing Lipscomb  
15 and Associates.

16 BY MR. MICELI:

17 Q. Okay.

18 A. For Lipscomb and Associates, I have  
19 not done any in vitro or laboratory work.

20 Q. Okay. I'm trying to find out what  
21 your experience has been. So I'm going through  
22 all of your listed employment on your CV.

23 With CTEH, do you operate a  
24 laboratory?

1 A. No.

2 Q. Okay. Have you conducted any  
3 laboratory experiments since leaving EPA's Office  
4 of Research and Development in 2016?

5 A. Not that I recollect.

6 Q. Okay. And you have not done any  
7 animal studies or whole animal studies as an  
8 experimental toxicologist since leaving the Air  
9 Force in 1998; is that fair?

10 A. Say that again, please.

11 Q. Sure.

12 You have not conducted whole animal  
13 studies as a research toxicologist since leaving  
14 the U.S. Air Force Toxicology Division Armstrong  
15 Laboratory; is that fair?

16 A. Yes, that's right.

17 Q. Okay. So your last whole animal --  
18 experience with whole animal toxicological  
19 experiments -- toxicological experiments was in  
20 1998?

21 MS. PLATT: Objection.

22 THE WITNESS: The last time  
23 that I touched an animal was in 1998. I  
24 collaborated with other researchers in

1 EPA who conducted hands-on experiments  
2 with animals for the purposes of  
3 pharmacokinetics analysis. However, I  
4 was not involved in the animal phase of  
5 those works.

6 BY MR. MICELI:

7 Q. Okay. Now, I want to review a  
8 little bit more about your background.

9 You've authored a number of  
10 peer-reviewed articles; correct?

11 A. Yes, I have.

12 Q. Okay. We're going to go into some  
13 of those in a bit, but I counted about 78.

14 Is that what you recall? Somewhere  
15 in that neighborhood?

16 A. That sounds about right.

17 Q. Okay. You've either authored or  
18 edited book chapters?

19 A. I have.

20 Q. I think in your CV you list about 15  
21 of those.

22 A. Again, that sounds about right.

23 Q. Okay. And you've authored a number  
24 of technical reports in your career; correct?

1           A.           Yes, I have.

2           Q.           Okay. For purposes of folks who  
3 don't you understand, like myself, what a  
4 technical report is, tell me what a technical  
5 report is.

6           A.           I would distinguish technical report  
7 from a journal article by indicating that the  
8 technical reports that I wrote or contributed to  
9 were more designed for an internal organizational  
10 agency audience than an external agency.

11                       In that regard, there would be a  
12 different emphasis placed on the presentation of  
13 the materials. Meaning that there would be more  
14 appendices in a technical report that provided  
15 maybe things like actual laboratory readouts from  
16 instruments. So that whoever read the technical  
17 report and had an understanding of the issue could  
18 go back and check the validity all the way back to  
19 day one.

20          Q.           Okay.

21          A.           So a technical report is something  
22 that is more technical than a journal article.

23          Q.           Okay. And so -- and I know we're  
24 going to talk about some of the technical reports

1 that -- I'm going to ask that we talk about some  
2 of the technical reports that you did while with  
3 the Air Force.

4 And given your explanation of what a  
5 technical report is, would it be fair to say that  
6 the audience that you are writing the technical  
7 report for has an understanding of the internal  
8 policies and procedures and, therefore, your  
9 audience is a little more educated about what  
10 you're going to be writing on in your technical  
11 report?

12 MS. PLATT: Objection.

13 THE WITNESS: That's hard to  
14 say. It's the technical reports are  
15 written for an audience that could be  
16 supposed to have a more intense interest  
17 in the subject than a casual reader of a  
18 journal article.

19 BY MR. MICELI:

20 Q. Okay. And are they peer reviewed?

21 A. Most are. All of my technical  
22 reports here have been subjected to peer review.

23 Q. Would that peer review be internal  
24 to the organization you're writing to?

1           A.           Sometimes we don't know the answer  
2 to that. Peer reviews are blinded. The authors  
3 of the reports and the journal articles don't know  
4 who the reviewers are.

5           Q.           Okay. Well, for instance, and I  
6 know we will talk about this in a bit, but when  
7 you submit a manuscript for potential publication  
8 in a journal article, you submit it to the journal  
9 and it is a blinded review by peer reviewers of  
10 the journal's choosing; correct?

11          A.           In most cases, that is correct.

12          Q.           Okay. In an internal technical  
13 report, although you may be blinded to the peer  
14 reviewers, would you have turned your technical  
15 report and its appendices in to somebody  
16 internal -- and let's use the Air Force as an  
17 example -- to somebody within the Air Force?

18          A.           Logically, yes.

19          Q.           Okay. That's -- so the peer review  
20 at least begins internally?

21          A.           I wouldn't say it like that.

22                        An internal operation might be  
23 choosing the outside vendor that conducts the  
24 actual peer review, and in conducting the actual

1 peer review, I mean that that vendor and that  
2 vendor without outside influence, including from  
3 the sponsor, would select qualified peer reviewers  
4 and provide the review comments. Provide the  
5 document to the peer reviewers, collate the  
6 comments, and send them back to the sponsoring  
7 organization like the Air Force.

8 Q. Okay. Just going to go through some  
9 quick shots here.

10 You're not a medical doctor?

11 A. I'm not.

12 Q. And you don't diagnose or treat  
13 medical conditions?

14 A. I do not.

15 Q. Okay. You're not an epidemiologist?

16 A. I am not.

17 Q. I have looked through your CV and I  
18 don't see any training in epidemiology.

19 Is that fair?

20 A. You should not see any training in  
21 epidemiology on my CV.

22 Q. Okay. I know that like on the first  
23 page of the CV, there's a number of or -- excuse  
24 me -- not on the first page. I apologize.

1           Second page. You have a number of  
2           certifications and classes that are not  
3           specifically related to toxicology, for instance,  
4           roles of leadership, conflict resolution.

5           You've taken some classes outside of  
6           the context of toxicology; correct?

7           A.           I have.

8                       MS. PLATT: Objection.

9           BY MR. MICELI:

10          Q.           One of the things is you want to  
11          take a breath because Elizabeth may have an  
12          objection she wants to make.

13          A.           Thank you.

14          Q.           You have not taken any such classes  
15          outside of your area of toxicology in the area of  
16          epidemiology; correct?

17          A.           If I have, they would be listed  
18          among the continuing education courses that I've  
19          taken at national scientific meetings like the  
20          Society of Toxicology or the Society of Risk  
21          Analysis.

22          Q.           Okay.

23          A.           As I sit here, I can flip through  
24          here and make sure that I haven't, but I don't

1 recollect any.

2 Q. Okay. I don't normally ask this  
3 question in deposition, but because it's been  
4 asked of my experts or our experts, I want to ask  
5 you.

6 Do you consider yourself to be an  
7 expert in toxicology?

8 MS. PLATT: Objection.

9 THE WITNESS: My CV provides  
10 adequate documentation that I am, indeed,  
11 an expert in toxicology.

12 I have a PhD not only in  
13 toxicology but in interdisciplinary  
14 toxicology, which includes the study of  
15 systems beyond those in traditional  
16 toxicology.

17 I have received postgraduate  
18 education in medical physiology, in  
19 pharmacology, biochemistry, cancer  
20 biology, oncology, biostatistics, and  
21 probably another few that I've -- I  
22 haven't recognized.

23 BY MR. MICELI:

24 Q. Okay.

1           A.           I have seven years experience as a  
2 biologist in the U.S. Food and Drug Administration  
3 conducting, guiding, writing the protocols for,  
4 conducting and interpreting toxicology studies. I  
5 have numerous publications, as you've noted, in  
6 the peer-reviewed literature in technical reports.

7                       I have certification in general  
8 toxicology by the American Board of Toxicology,  
9 and I am recognized as a Fellow of the Academy of  
10 Toxicological Sciences.

11           Q.           Okay. Thank you.

12                       In either of the two cases that  
13 you've offered deposition testimony in the Millman  
14 or the Taylor cases, do you know whether or not  
15 your opinions have been subjected to court  
16 scrutiny yet by way of a motion to either exclude  
17 or limit your testimony?

18                       MS. PLATT: Objection.

19                       THE WITNESS: I was -- yes, I  
20 know. I have been told that -- that I  
21 was not excluded from the Taylor case,  
22 but that was when I was working for CTEH,  
23 who is not retained in this case.

24 BY MR. MICELI:

1 Q. Okay.

2 A. Today I represent Lipscomb and  
3 Associates.

4 Q. Okay. And you haven't been  
5 challenged as an expert yet in the Millman case;  
6 correct?

7 MS. PLATT: Objection.

8 THE WITNESS: Again, CTEH is  
9 not a party to this case. I represent  
10 Lipscomb and Associates. And I do not  
11 know whether that challenge has been  
12 made.

13 BY MR. MICELI:

14 Q. I understand that you draw a  
15 distinction between the cases you work on for CTEH  
16 and Lipscomb and Associates, but in all due  
17 respect -- with all due respect, Dr. John Lipscomb  
18 is who offers the opinions, not CTEH; correct?

19 A. I am responsible for my own  
20 opinions, and the opinions that I offer in this  
21 case are those developed from Lipscomb and  
22 Associates.

23 Q. Okay. What determines whether or  
24 not you accept an assignment with CTEH or Lipscomb

1 and Associates?

2 A. CTEH is not a party to this  
3 litigation and Lipscomb and Associates is.

4 When I am approached at Lipscomb and  
5 Associates by people interested in my services, I  
6 make an internal decision as to whether I want to  
7 accept the work or not.

8 Q. Okay. And then if someone calls  
9 CTEH, they contact you and you make a decision as  
10 to whether or not you'll take on the assignment?

11 A. CTEH is not party to this  
12 litigation.

13 Q. I understand. I'm trying to figure  
14 out how you become an expert through CTEH versus  
15 Lipscomb and Associates.

16 I mean, I see that they have  
17 different addresses and different telephone  
18 numbers, and you have an e-mail address under each  
19 one.

20 So one can get contacted or the  
21 other can get contacted; correct?

22 MS. PLATT: Objection.

23 THE WITNESS: Your original  
24 question was how I became an expert at

1 CTEH versus Lipscomb and Associates.

2 I have been an expert long  
3 before I got to either organization.

4 BY MR. MICELI:

5 Q. No, I understand that.

6 My question was different. I  
7 appreciate you trying to restate it for me.

8 But my question was: How do you  
9 determine -- what determines whether you are  
10 retained as an expert through CTEH versus Lipscomb  
11 and Associates?

12 A. (Pause).

13 Q. This isn't a trick one. I'm trying  
14 to think, is it just because who gets contacted?

15 A. As I understand the workflow at  
16 CTEH, it comes in and then the managers make a  
17 decision as to who might fit the case.

18 Q. Okay. That's fair enough. I won't  
19 ask any more about that one.

20 Let me go back to follow up.

21 We've already talked about  
22 epidemiology a little bit, but you do not consider  
23 yourself an expert in epidemiology; correct?

24 A. I have enough expertise in

1 epidemiology to be able to review a study for  
2 relevance and to understand the general premises  
3 of it.

4 Q. Do you hold yourself out to be an  
5 expert in epidemiology for purposes of consulting  
6 in litigation like this?

7 A. Yes.

8 Q. You do?

9 What qualifies you educationally to  
10 be an epidemiology expert?

11 A. I would say it would be my -- my  
12 general training in the area of the scientific  
13 method.

14 Q. Okay. You don't hold any degree in  
15 epidemiology?

16 A. I do not.

17 Q. You haven't done any postdoctoral  
18 work in epidemiology?

19 A. No.

20 Q. You've never served as an expert in  
21 litigation in epidemiology?

22 A. No.

23 Q. Okay. Ever told another scientist  
24 that "Hello, my name is a John Lipscomb and I'm an

1 expert in epidemiology"?

2 MS. PLATT: Objection.

3 THE WITNESS: I've never had  
4 that opportunity or needed to.

5 BY MR. MICELI:

6 Q. Okay. If I look through your --  
7 your CV, is there anything that relates directly  
8 to your work as an epidemiologist?

9 A. (Reviews document.)

10 No.

11 Q. Okay. You are an expert in  
12 regulatory risk assessment; correct?

13 A. That's correct.

14 Q. Okay. Regulatory risk assessment  
15 and epidemiology are two totally different things,  
16 aren't they?

17 A. I wouldn't say it that way.

18 Epidemiology plays a part in  
19 regulatory risk assessment, along the same lines  
20 as toxicology, dose-response, and pharmacokinetic  
21 analysis.

22 Q. Okay.

23 A. Epidemiology is a little bit softer  
24 science in that oftentimes the exposures related

1 to the investigation aren't well characterized.

2 Q. Okay. Epidemiology studies the  
3 distribution and occurrence of diseases across  
4 populations; is that a fair statement?

5 A. I believe so.

6 Q. Okay. Risk assessment seeks to  
7 predict health protective measures for possible  
8 events for regulatory and policy-making decisions;  
9 correct?

10 A. There are other purposes of risk  
11 assessment besides what you mentioned, but that's  
12 probably the main purpose of regulatory risk  
13 assessments.

14 Q. There may be some similarities.  
15 There may even be slight crossover. But  
16 epidemiology and risk -- regulatory risk  
17 assessment are not the same discipline; correct?

18 A. That's correct.

19 Q. Okay.

20 (Document marked for  
21 identification as Lipscomb Exhibit 8.)

22 BY MR. MICELI:

23 Q. I'm going to show you what I marked  
24 as Exhibit Number 8 and it's just a simple

1 equation.

2 MR. MICELI: You know what? I  
3 didn't make three copies. Would you like  
4 to go make three copies of that? I  
5 apologize. Take it and look at it.

6 MS. PLATT: We can -- we can  
7 make a copy on the break.

8 MR. MICELI: Okay.

9 MS. PLATT: It's -- just for  
10 the record, it looks like it's a  
11 handwritten piece of paper with this  
12 equation written on it and no source.

13 MR. MICELI: Correct.

14 MS. PLATT: And on break I'll  
15 make a copy.

16 MR. MICELI: Okay. I won't  
17 use any more out of this file and I'll  
18 let you make a copy of every one of them.  
19 Okay?

20 MS. PLATT: Okay.

21 MR. MICELI: Thank you. I  
22 appreciate that and I do apologize.

23 BY MR. MICELI:

24 Q. I just wrote "risk assessment does

1 not equal epidemiology."

2 Do you agree with that?

3 A. Yes, I can agree with that.

4 Q. Can you initial that paper for me?

5 MS. PLATT: Objection.

6 THE WITNESS: If I initial  
7 that, this only means that I'm looking at  
8 it.

9 BY MR. MICELI:

10 Q. And that you -- you've already  
11 testified you agree with the equation, though.

12 A. I have testified that I agree with  
13 the equation.

14 Q. You won't initial it for me?

15 A. I see no need to initial that. I'm  
16 afraid that if I do that it may be later  
17 misconstrued.

18 Q. Okay.

19 A. You have my agreement that that is  
20 right.

21 MR. MICELI: Okay. Put that  
22 over there. So hold that to the side so  
23 you can make a copy of that one.

24 Can I see that for a second?

1                   For the people on the camera,  
2                   I just need to hold that up.

3                   THE VIDEOGRAPHER: Hold it  
4                   higher, please. One second. 1, 2, 3, 4,  
5                   5. Okay.

6                   MR. MICELI: Thank you.

7 BY MR. MICELI:

8                   Q. Risk assessment does not seek to  
9                   establish causation, does it?

10                  A. Regulatory risk assessments are not  
11                  conducted to support causation.

12                  Q. Thank you.

13                         I'm going to want to work back to  
14                         front a little bit in your CV. We're going to go  
15                         back. We're going to start with the technical  
16                         papers. Begin on page 112. And if you look from,  
17                         actually, 112 to page 116.

18                                 And take your time if you like to  
19                                 review the titles of your technical papers, but  
20                                 from pages 112 to 116, I see -- 1, 2, 3, 4, 5 --  
21                                 six technical papers that deal with  
22                                 trichloroethylene directly.

23   Is that a fair total? I may have  
24   overstated it but...

1 A. (Reviews document.)

2 Q. Perhaps there are five.

3 Would you like me to point them out  
4 to you?

5 A. I can read them.

6 Q. Okay. Thank you.

7 A. (Reviews document.)

8 There are about six of these papers  
9 that have the word "trichloroethylene" involved in  
10 their title. There are more technical reports  
11 that relate to trichloroethylene than is  
12 discernible from a reading of the title.

13 Q. Okay. You'd agree with me from  
14 reading your CV, the only way I would know if  
15 trichloroethylene was involved would be through  
16 the title? (Laugh).

17 A. Yes.

18 MS. PLATT: Objection.

19 BY MR. MICELI:

20 Q. Okay. And it appears that -- I want  
21 to go through.

22 On page 116, the third from the  
23 bottom, the 1994 technical paper titled  
24 "Trichloroethylene: Metabolism and Other

1 Biological Determinants of Mouse Liver Tumors";  
2 correct?

3 A. That's the title of that report,  
4 yes, sir.

5 Q. Okay. I'm going to come up three  
6 more. There's one in 1995 "The Effects of  
7 Trichloroethylene on Form-Selective Cytochrome  
8 P-450 Activities in the Rat, Mouse and Human."

9 Did I read that correctly?

10 A. Effect is singular. Other than  
11 that, yes.

12 Q. Okay. I'm sorry.

13 Okay. Cytochrome P450 pathway is a  
14 known pathway for trichloroethylene; correct?

15 A. That -- that's fair to say.

16 Q. Okay.

17 A. It is -- it is one of two major  
18 pathways of metabolism. It is not the only  
19 pathway.

20 Q. Right.

21 What -- is the other one the  
22 glutathione conjugation?

23 A. Yes, it is.

24 Q. Okay. Okay. If you go up three

1 more, you have a technical paper on the  
2 "Application for Absorption and Metabolism of  
3 Trichloroethylene in the Fischer 344 Rat";  
4 correct?

5 A. I see that.

6 Q. Okay. That's a 1995 paper?

7 A. Yes, it is.

8 Q. Okay. That's obviously an animal  
9 model in the Fischer rat?

10 A. It is.

11 Q. Okay. Did you conduct -- were you  
12 conducting animal model experiments while with the  
13 U.S. Air Force?

14 A. That's a difficult question to  
15 answer in a binary fashion.

16 So while this is done with an actual  
17 animal, the isolation is important. So we have  
18 taken this -- this intestinal prep and we've  
19 isolated it from the animal.

20 Q. Okay.

21 A. So it's hard to characterize like  
22 that.

23 Q. Okay. So --

24 A. It was not a study of something in

1 the intact animal.

2 Q. You removed the tissue from the  
3 animal and the study was on the tissue?

4 A. We surgically isolated the tissue.  
5 We left it in the animal to preserve the innate  
6 nature of the animal, but the tissue was no longer  
7 a quote part of the intact animal.

8 Q. And was the purpose of doing animal  
9 studies in that regard to learn information that  
10 could then be transferred to knowledge about human  
11 interaction with TCE?

12 MS. PLATT: Objection.

13 THE WITNESS: I'm afraid I  
14 don't recall all the particulars of that  
15 study right now without seeing it to be  
16 able to answer that.

17 BY MR. MICELI:

18 Q. Okay. Look with me if you could at  
19 your CV, Exhibit 3, that's in -- excuse me, not  
20 Exhibit 3.

21 A. Is that it?

22 Q. Yeah. It will be on page 101. I'm  
23 sorry. 101 of your CV.

24 MS. PLATT: Sorry. I think

1           the CV is Exhibit 7. Just so we have the  
2           record clear.

3                       MR. MICELI: I'm already  
4           getting confused here. Yes, Exhibit 7.  
5           I apologize.

6                       Let me do this. That way I'll  
7           know and look at my exhibits. (Laugh).

8 BY MR. MICELI:

9           Q.           Are you there with me on your job  
10          description with the U.S. Air Force?

11          A.           Page 101?

12          Q.           Yes.

13          A.           Yes.

14          Q.           Okay. Under your job description  
15          -- pard me -- you "designed and implemented  
16          research projects in the area of xenobiotic  
17          metabolism in response to Air Force environmental  
18          and occupational needs"; correct?

19          A.           That's what it says.

20          Q.           Okay. The environmental and  
21          occupational needs were for the members of the Air  
22          Force; correct?

23          A.           It went beyond that. The  
24          environment was related to -- let's see. How

1 would I say that?

2 The environmental component also was  
3 a line of funding received from the Air Force  
4 Office of Scientific Research and the Strategic  
5 Environmental Research and Development Program,  
6 SERDP.

7 Q. Okay. All right. Would it be fair  
8 then that in part your work doing these animal  
9 study experiments were in part for the benefit of  
10 the occupational health needs of members of the  
11 Air Force?

12 MS. PLATT: Objection.

13 THE WITNESS: Someone at my  
14 level in the organization as a captain  
15 could not be aware of all of the purposes  
16 of the research, given the chain of  
17 command and the ultimate application of  
18 the information we developed.

19 BY MR. MICELI:

20 Q. Sure.

21 But you did put your CV together and  
22 put this job description in here, correct, from  
23 '93 to '98?

24 A. I did.

1 Q. And it says you "developed and  
2 implemented research projects in the area of  
3 xenobiotic metabolism in response to Air Force  
4 environmental and occupational health needs";  
5 correct?

6 A. That's correct.

7 Q. And the occupational health needs  
8 were for members of the Air Force? In part. At  
9 least in part.

10 A. At least in part.

11 Q. Okay. And if you go down further in  
12 this paragraph that you authored, you "determined  
13 enzymological basis for human individual and  
14 species-dependent difference in bioactivation; and  
15 identified modifiers for toxicity."

16 Correct?

17 A. That's not correct.

18 Q. What's not correct?

19 A. There's one word that's missing.  
20 It's "human interindividual" which is the  
21 difference in populations.

22 BY MR. MICELI:

23 Q. Okay. You were doing -- you were  
24 doing animal studies for the benefit of the Air

1 Force and the people who were employed and in  
2 service with the Air Force; correct?

3 A. I conducted animal studies and  
4 studies in human tissues, and the purpose of that  
5 was for human health risk assessment of the  
6 chemicals that were used in the Air Force.

7 Q. Thank you.

8 All I'm really trying to get at is:  
9 You were doing animal studies that were ultimately  
10 for the benefit of humans?

11 A. The animal studies that I were doing  
12 was for the benefit of humans and I was also doing  
13 human studies.

14 Q. Thank you.

15 All right. Then if we move up  
16 further into your CV into the book chapters area,  
17 and it looks like -- and I'm only assessing the  
18 titles by what I can read --

19 A. Uh-huh.

20 Q. -- in your CV.

21 It appears that there are 15 book  
22 chapters listed.

23 Are these ones that you authored or  
24 did you simply -- I say simply -- did you author

1 or edit these?

2 A. (Reviews document.)

3 These are all authored publications  
4 or publications that I at least co-authored on.  
5 My editorial responsibilities are called out  
6 separate on the CV.

7 Q. Okay. From my review of the book  
8 chapters that are listed here, 10 of the 15 deal  
9 with human risk assessment; is that a fair  
10 statement?

11 A. (Reviews document.)

12 10 is an underestimate in that,  
13 since I know a little more about these than you  
14 might from reading the title, they're all human  
15 health risk assessment related works.

16 Q. Okay. And, again, I appreciate  
17 that.

18 By the titles as I review them, they  
19 appear to be -- they appear that they are not  
20 drug- or chemical-specific chapters; is that a  
21 fair statement?

22 A. (Reviews document.)

23 The final report is specific for  
24 Hydrofluorocarbon-123. It is the only of these

1 chapters that is chemical-specific.

2 Q. Thank you.

3 Would it be fair to say then that  
4 the others relate to the processes or procedures  
5 of performing regulatory risk assessments?

6 MS. PLATT: Objection.

7 THE WITNESS: Repeat that for  
8 me, please.

9 BY MR. MICELI:

10 Q. Sure.

11 Would it be a fair characterization  
12 that the, other than that last one dealing with  
13 the Hydrofluorocarbon-123, your book chapters  
14 relate to the processes and procedures of  
15 conducting human risk assessments?

16 A. Many of the chapters do deal with  
17 that. Other -- others of the chapters deal with  
18 topics that are a little more specific than that  
19 and topics that pertain to other areas of  
20 toxicological science beyond risk assessment.

21 Q. Okay.

22 A. It's difficult to put these in a  
23 single basket.

24 Q. Okay. And then in the -- before we

1 go to the publications, I want to go back to the  
2 technical papers.

3 And tell me if I'm correct in this  
4 that the last technical paper that you wrote that  
5 specifically identifies dealing with  
6 trichloroethylene in the title would have been in  
7 1996. I believe it's at the bottom of page 115.

8 A. (Reviews document.)

9 Yes, I believe that to be correct.

10 It's important to note that in early  
11 1998 I transitioned to the U.S. Environmental  
12 Protection Agency, where the emphasis was not on  
13 producing technical reports.

14 Q. Right, and that's a fair statement.  
15 I was going to point that out. It's not -- I was  
16 just wanting to address when the last technical  
17 paper was authored.

18 Let's go to your publications now if  
19 we can, and I believe these start or they begin on  
20 page 104 of your CV down the bottom right-hand  
21 corner and they go to page 111 about the middle of  
22 the page.

23 Do you see that?

24 A. Yes.

1 Q. Okay. And, again, I counted them.  
2 I may be off by one or two and I'm not doing it to  
3 trick you, but I counted about 78 publications.

4 Does that sound roughly right to  
5 you?

6 A. That sounds generally right.  
7 Different organizations have counted my pubs, and  
8 it seems to me that they come up with a different  
9 number. The most recent one I remember was 80.

10 Q. Okay.

11 A. We're close.

12 Q. Do you have any manuscripts  
13 currently under submission to any journals?

14 A. No, I don't.

15 Q. Okay. If we go to page 109.

16 Are you there with me?

17 A. I'm there.

18 Q. If you go 3, 5, and 6 from the  
19 bottom of the page, there are publications that  
20 deal with, by their title, "trichloroethylene."

21 MS. PLATT: Objection.

22 BY MR. MICELI:

23 Q. Do you see that?

24 MS. PLATT: Sorry. Did you

1 say 3, 5, and 6?

2 MR. MICELI: 3, 5, and 6  
3 counting from the bottom of the page.  
4 The name.

5 THE WITNESS: Tell me the  
6 citation you're after.

7 BY MR. MICELI:

8 Q. Sure.

9 1998. "In Vitro to in Vivo  
10 Extrapolation of Trichloroethylene --

11 A. Yes.

12 Q. -- Metabolism in Humans" is the  
13 first one.

14 A. Yes.

15 Q. In toxicological -- Toxicology  
16 Applied Pharmacology; correct?

17 A. Correct.

18 Q. Okay. And in vitro to in vivo is  
19 the extrapolation from in glass to whole animal;  
20 correct?

21 A. That's correct.

22 Q. Okay. And, again, the purpose of  
23 going from in vitro to in vivo is to follow the  
24 progression of research from laboratory to animal;

1 correct?

2 A. With respect to this paper, which  
3 was done in humans, there's not an ethical way to  
4 conduct human research. We're restricted to in  
5 vitro there. So we have to do that for humans.

6 Q. Right. Okay.

7 Coming up the page two more.

8 The 1998 "Covalent Binding of  
9 Trichloroethylene Proteins in Human and Rat  
10 Hepatocytes"; correct?

11 A. You left the "to" out.

12 "Trichloroethylene to Proteins."

13 Q. To. Okay. Thank you.

14 And that is a -- that was a  
15 laboratory experiment that you conducted?

16 A. Yes. The exposures were conducted  
17 in my laboratory and the samples were sent to  
18 Dr. Griffin for analysis.

19 Q. Okay.

20 A. Between he and Dr. Pumford.

21 Q. Okay. And was that while you were  
22 working with the United States Air Force?

23 A. Yes, it was.

24 Q. Okay. And then the next one up the

1 page. This is where I picked up on the  
2 glutathione conjugation.

3 Your 1999 paper about "Glutathione  
4 Conjugation of Trichloroethylene in Human Liver  
5 and Kidney"; correct?

6 A. I see the paper.

7 Q. Okay. And we've -- I think you've  
8 mentioned earlier that glutathione conjugation is  
9 one way in which TCE is metabolized; correct?

10 A. The initial metabolism of TCE is a  
11 bifurcation in the pathway, where the -- where the  
12 molecule is either conjugated with glutathione or  
13 oxidized by cytochrome P450, and there are a lot  
14 of factors that impact which way it goes.

15 Q. I understand.

16 I just want to make sure that we  
17 confirm that both of those, cytochrome P450  
18 pathway and the glutathione conjugation, are known  
19 pathways for the metabolism of TCE?

20 A. Yes, that's right.

21 Q. Okay. Then if you go to page 108,  
22 third from the bottom, you were coauthor with  
23 Lash, Fisher, and Parker in 2000 "Metabolism of  
24 Trichloroethylene"; correct?

1 A. Yes.

2 Q. All right.

3 A. That's correct.

4 Q. If you flip one more page. In the  
5 middle of the page.

6 A. What page, please?

7 Q. Excuse me. 107.

8 You are listed with -- is it -- do  
9 you pronounce that name "chewy"?

10 A. Chiu.

11 Q. Chiu, Okino, Lipscomb, and Evans in  
12 2006 published "Issues in the Pharmacokinetics of  
13 Trichloroethylene and Its Metabolites"; correct?

14 A. That's correct.

15 Q. All right. And then again if you  
16 flip one more page to 105. There's the  
17 publication in the middle of the page: Chiu,  
18 Jinot, Scott, Makris, Cooper, Dzubow, Bale, Evans,  
19 Guyton, Keshava, Lipscomb, Barone, Fox, Gwinn,  
20 Schaum, and Caldwell. 2013.

21 "Assessment Report: Key Findings and  
22 Scientific Issues in the Human Health Effects of  
23 Trichloroethylene"; correct?

24 A. It's on page 105?

1 Q. Yes, sir.

2 A. Environmental Health Perspectives  
3 121?

4 Q. Yes, sir.

5 A. I see that.

6 Q. All right. And you're welcome to  
7 look forward from there, but it appears that this  
8 2013 peer-reviewed article was your most recent  
9 publication where you're listed as a coauthor that  
10 I saw in your CV.

11 Is that correct?

12 MS. PLATT: Objection.

13 THE WITNESS:

14 (Reviews document.)

15 Yes, that's when my research  
16 focus and scope and assignments changed.  
17 We had completed the EPA's  
18 trichloroethylene risk assessment in 2011  
19 and the agency's priorities shifted.

20 BY MR. MICELI:

21 Q. Okay. But with that in mind, this  
22 is your most recent publication that directly  
23 relates to trichloroethylene?

24 MS. PLATT: Objection.

1 THE WITNESS: I believe that  
2 to be true.

3 BY MR. MICELI:

4 Q. Okay. And I know that you've done a  
5 lot of work in this litigation reviewing  
6 literature; correct?

7 A. I have.

8 Q. Okay. And you've reviewed all of  
9 the expert reports submitted by plaintiffs in  
10 December of last year; correct?

11 Or strike that.

12 You can look at your references if  
13 you want to.

14 You've looked at a number of expert  
15 reports that have been submitted by the Plaintiffs  
16 Leadership Group in this litigation; correct?

17 A. That is correct. Some I looked at  
18 for background information and some I technically  
19 reviewed.

20 Q. Okay. We'll go over some of those  
21 more particular issues later, but it would be fair  
22 to say that you are aware that there are many,  
23 many articles on TCE and the various health  
24 concerns related to exposure to TCE that have been

1 published since your last publication in the  
2 peer-reviewed literature in 2013?

3 MS. PLATT: Objection.

4 THE WITNESS: While I'm aware  
5 that there have been such, I have limited  
6 my evaluations to the documents that were  
7 pertinent to this case.

8 BY MR. MICELI:

9 Q. Okay. And you made that decision  
10 based on your review of the literature; correct?

11 A. I decided what was pertinent by  
12 looking at and reviewing risk assessment  
13 documents, risk assessment guidance documents, and  
14 materials provided by the plaintiffs in the case  
15 materials.

16 Q. Okay. Have you kept up with the  
17 literature on TCE over the years?

18 A. In general.

19 Q. Okay. I mean, we're 12 years  
20 removed from your last publication --

21 A. Uh-huh.

22 Q. -- on TCE, and I'm not asking if  
23 you've reviewed every single article, but you are  
24 aware that the scientific world has continued to

1 move forward in evaluating the effects and  
2 particularly the toxic effects of TCE on various  
3 organ systems.

4 Would that be a fair statement?

5 MS. PLATT: Objection.

6 THE WITNESS: Well, the extent  
7 that the knowledge base has moved  
8 forward, that's an open question.

9 There have been more refined  
10 evaluations of some effects of  
11 trichloroethylene that may be possible  
12 under some circumstances of exposure in  
13 some species, sexes, and strains of  
14 animals.

15 I'm not sure that we have  
16 advanced our understanding to the extent  
17 that it would necessitate or warrant a  
18 revisitation of the risk assessment  
19 values that have been developed for TCE  
20 in 2011.

21 BY MR. MICELI:

22 Q. Okay. Okay. And you said that you  
23 limited your review to the pertinent information  
24 concerning the risk assessment guidelines related

1 to TCE.

2 That's one of the things you said  
3 you restricted your review to; correct?

4 MS. PLATT: Objection.

5 THE WITNESS: I didn't only  
6 -- your statement concerns me in that  
7 it's a bit off.

8 I looked at risk assessment  
9 guidance irrespective of whether it was  
10 specific to TCE or not.

11 BY MR. MICELI:

12 Q. Okay. Did you conduct a literature  
13 search of the epidemiologic evidence concerning  
14 either -- let's deal with TCE first -- the  
15 epidemiologic evidence concerning TCE in your  
16 review of materials in prep for giving your  
17 report?

18 A. I did not conduct a literature  
19 search for the epidemiologic aspects of TCE or any  
20 other aspects of TCE. Because a literature search  
21 would be beyond the scope of the documents for  
22 which I relied upon, which are case materials  
23 developed here, risk assessment guidance, and risk  
24 assessments for Camp Lejeune, and other materials

1 that I'm aware of from my previous investigations  
2 and evaluations.

3 Q. Okay. Did you do any literature  
4 search on TCE?

5 A. I did not because such was not  
6 required given the scope of my evaluations.

7 Q. Okay. Did you do any literature  
8 search on PCE?

9 A. Again, I did not because the  
10 literature search was beyond the scope of what I  
11 needed to know for this evaluation.

12 Q. For the next couple of questions, I  
13 think that may be our same answer, but I'm going  
14 to ask.

15 Did you do a literature search  
16 concerning vinyl chloride?

17 A. No. Same answer applies. I did not  
18 do a literature search because it was not required  
19 for the scope of my evaluation.

20 Q. Would the same hold true if I ask  
21 that same question for benzene and DCE?

22 A. Yes, it would.

23 Q. Okay. Did you do a literature  
24 search concerning the water at Camp Lejeune?

1 MS. PLATT: Objection.

2 THE WITNESS: Again, I did  
3 not because the literature search was  
4 beyond the scope of my evaluations.

5 BY MR. MICELI:

6 Q. Did you review the Camp Lejeune  
7 Water Act?

8 MS. PLATT: Objection.

9 THE WITNESS: Tell me what  
10 you mean by the "Camp Lejeune Water Act."

11 BY MR. MICELI:

12 Q. Did you -- did you review the  
13 legislation that created this litigation?

14 A. I did not.

15 Q. Okay. And you didn't review the  
16 epidemiological literature on the chemicals we  
17 just discussed, the VOCs I just asked you about,  
18 because it was beyond the scope of what you needed  
19 to do for your opinions; correct?

20 MS. PLATT: Objection.

21 THE WITNESS: That's not an  
22 accurate statement.

23 BY MR. MICELI:

24 Q. Okay.

1           A.           I did not read -- I did not review  
2 the epidemiologic investigations. I read the  
3 reports of the experts for background --

4           Q.           Right.

5           A.           -- and I have read some of the  
6 epidemiology reports for Camp Lejeune to develop  
7 an understanding of the issues that were present  
8 and the issues that were addressed in a general  
9 sense.

10          Q.           But you didn't do a full literature  
11 search on the epidemiology of the VOCs related to  
12 this litigation because it was beyond the scope of  
13 your report because you're offering risk  
14 assessment opinions, not epidemiology opinions;  
15 right?

16                           MS. PLATT: Objection.

17                           THE WITNESS: My opinions are  
18 1 through 10 in the front part of my  
19 report.

20 BY MR. MICELI:

21          Q.           I understand.

22                           Do you -- and we can go -- we're  
23 going to go through your report and we're going to  
24 take a break before we do that.

1 A. Okay.

2 Q. But what I want to know is: Do you  
3 consider yourself as giving opinions concerning  
4 risk assessment in this litigation?

5 MS. PLATT: Objection.

6 THE WITNESS: My opinions do  
7 relate to risk assessment and to other  
8 parts of the report identified as  
9 opinions 1 through 10 in this report and  
10 in the supplemental report.

11 BY MR. MICELI:

12 Q. Okay. And we're going to talk about  
13 those. The bulk of this deposition is going to be  
14 walking through your report.

15 Do you consider your opinions to be  
16 epidemiologic opinions in this case?

17 MS. PLATT: Objection.

18 THE WITNESS: I don't offer  
19 any opinions on epidemiology.

20 MR. MICELI: Thank you.

21 All right. Let's take a break  
22 because we're going to get into a longer  
23 section here.

24 THE VIDEOGRAPHER: Off the

1 record at 11:16.

2 (A recess was taken.)

3 THE VIDEOGRAPHER: On the  
4 record at 11:33.

5 MR. MICELI: Thank you.

6 BY MR. MICELI:

7 Q. Are you ready to proceed?

8 A. I'm ready to proceed.

9 Q. Thank you.

10 Because the last bit wasn't on  
11 the -- on the record, we'll say it again.

12 Did you speak with counsel about  
13 your testimony during the break?

14 A. I did not.

15 Q. Okay. And did you review any of the  
16 exhibits that she so kindly copied for me?

17 A. No.

18 Q. Thank you.

19 Doctor, can we agree that there's no  
20 ethical way to do human experiments for PCE and  
21 TCE in the water at Camp Lejeune?

22 MS. PLATT: Objection.

23 THE WITNESS: To a point and  
24 that depends on what you mean by

1 "experiments." There are ways to  
2 ethically experiment on humans with TCE,  
3 PCE, and other condition -- other  
4 chemicals within bounds.

5 BY MR. MICELI:

6 Q. Okay. How would you do that? What  
7 are you referring to there?

8 A. It is unethical to expose humans to  
9 chemicals for the substance of producing toxicity  
10 to better understand the toxicity.

11 It is completely ethical to expose  
12 humans to chemicals to understand nontoxicological  
13 effects like the distribution of the chemical in  
14 the body. Indeed, I was part of experiments  
15 exactly on that matter when I was in the Air  
16 Force, but I was not the PI and I had no major  
17 part in that experiment except to provide some  
18 advice on chemical analysis.

19 Q. Okay. But I think you said it very  
20 nicely.

21 You don't do experiments on humans  
22 to see if you can give them cancer?

23 A. That's exactly. That's -- that's  
24 one reason why we don't do experiments with

1 humans.

2 Q. Right.

3 A. It's unethical to intentionally  
4 expose a human for the purpose of producing a  
5 toxic effect.

6 Q. Right.

7 And the same would hold true if I  
8 would have asked the same question concerning  
9 Parkinson's disease. It's unethical to give  
10 somebody a toxicant to see if it will cause them  
11 to get Parkinson's disease?

12 MS. PLATT: Objection.

13 THE WITNESS: That would fall  
14 within the realm of what we spoke.

15 BY MR. MICELI:

16 Q. Right.

17 And so do you know of a way to  
18 measure the loss of dopaminergic receptors in the  
19 brain without --

20 MS. PLATT: Objection.

21 MR. MICELI: I'm not finished  
22 yet, but I'll accept the objection.

23 (Laugh). I'm going to start over again.

24 BY MR. MICELI:

1 Q. Do you know of a way to measure the  
2 loss of dopamine receptors in the brain while an  
3 individual is still alive?

4 MS. PLATT: Objection.

5 THE WITNESS: (Pause).

6 Because such an analysis would fall  
7 within the area of clinical medicine,  
8 that's not a topic that I -- I know  
9 anything about.

10 BY MR. MICELI:

11 Q. Okay. So you don't know one way or  
12 the other?

13 A. The short answer right there is,  
14 that's not part of what I do.

15 Q. Okay. Do you agree that human  
16 epidemiology provides higher quality point  
17 estimates than risk assessment?

18 MS. PLATT: Objection.

19 THE WITNESS: I need you to  
20 rephrase that for me, please.

21 BY MR. MICELI:

22 Q. Sure. Sure.

23 Epidemiology studies and we've --  
24 we've established that you're not an

1 epidemiologist; correct?

2 A. That's correct.

3 Q. Okay. And you don't do epidemiology  
4 studies; correct?

5 A. I do not.

6 Q. You understand, you can read an  
7 epidemiology study; correct?

8 A. I can understand the general  
9 principles of the epidemiology study, like why it  
10 was conducted, what it set forth to do, things  
11 like that.

12 Q. Right.

13 Odds ratios, relative risk, that  
14 sort of thing?

15 A. Yes, sir.

16 Q. Okay. So epidemiology studies that  
17 provide relative risks and odd ratios provide  
18 point estimates for risks to individuals under the  
19 study; correct?

20 MS. PLATT: Objection.

21 THE WITNESS: They provide  
22 numerical values, and part of the  
23 certainty that we can assign to their  
24 numerical values is the subject of issues

1           like statistical confidence and other  
2           aspects of the specific epidemiology  
3           investigation that are beyond my capacity  
4           to address.

5 BY MR. MICELI:

6           Q.           Okay. Did you read -- I know that  
7           you've read because you've cited it in your report  
8           the -- well, let me strike that.

9                        Did you read the Bove mortality  
10           studies?

11           A.           I read them.

12           Q.           Okay. Did you read the Bove Cancer  
13           Incidence Study?

14           A.           Yes.

15           Q.           You read the ATSDR health  
16           assessment; correct?

17           A.           The Public Health Assessment for  
18           Camp Lejeune.

19           Q.           Yes.

20           A.           2017. Right.

21           Q.           Yes.

22                        Did you review the summary of the  
23           evidence document from 2017?

24           A.           I did.

1 Q. Okay. Did you read the Aschengrau  
2 studies?

3 A. I have a recollection of the  
4 Aschengrau studies. I cannot recall further.  
5 Yes.

6 Q. Okay. Did you read the Cohn  
7 studies? C-o-h-n.

8 A. (Reviews document.)  
9 Which Cohn study was that?

10 Q. Was a water study '94.

11 A. I recollect having read the Cohn  
12 study.

13 Q. Okay. Let's turn to Exhibit 3, your  
14 report dated February 7, 2025.

15 And you may want to keep your  
16 reference list handy. That would be Exhibit 5.  
17 Because we may be jumping back and forth with  
18 that.

19 You had mentioned before we just  
20 took our break that your report sets out your 10  
21 opinions in the list of opinions on page 7  
22 carrying -- excuse me -- over to page 8; correct?

23 A. Those pages contain my opinions in  
24 my original report.

1           Q.           Okay. Does this report -- and,  
2 again, with the exception I know that you did a  
3 supplemental report that we will address  
4 separately.

5                       Other than what is stated in your  
6 supplemental report, does Exhibit 3 contain all of  
7 the opinions you form and intend to offer in this  
8 litigation?

9           A.           You know, I reserve the right to  
10 develop other opinions as they may become  
11 necessary.

12           Q.           Well, I understand. Every expert  
13 puts that in their report that you reserve the  
14 right.

15                       If new information comes to light,  
16 you reserve the right to offer further opinions;  
17 correct?

18           A.           That's correct.

19           Q.           As we sit here today and subject to  
20 what you've said also in your supplemental report,  
21 are these the opinions you intend to offer?

22           A.           Yes, they are.

23           Q.           Okay. Did you compile these  
24 opinions on your own with the assistance --

1 without the assistance of any other person or  
2 persons?

3 A. I did.

4 Q. Okay. Did you meet with anyone,  
5 other than the lawyers who retained you, prior to  
6 or while drafting your report?

7 A. No.

8 Q. You didn't have any meetings with  
9 other experts prior to finalizing your report?

10 A. No.

11 Q. Okay. Were you ever in attendance  
12 on a Zoom meeting with Julie Goodman?

13 A. The only time I have been on a Zoom  
14 meeting with any person has been in the presence  
15 of counsel.

16 Q. I understand. I don't want to -- I  
17 don't want to know what was discussed with  
18 counsel.

19 I'm just asking: Have you been in  
20 attendance at meetings with individuals who you  
21 understand are also experts in this litigation?

22 A. Yes, only in the presence of  
23 counsel.

24 Q. Okay. How many such meetings did

1 you attend?

2 A. I can't recall specifically. I  
3 would guesstimate a few.

4 Q. I don't want to play the game of is  
5 it bigger than a bread box, but when you say "a  
6 few," do you mean two, three or four, or more?

7 A. I think that's privileged.

8 Q. Well, if it's a privilege, the  
9 attorney can instruct you not to answer.

10 A. Okay. Honestly, I don't recollect.  
11 It was probably on the nature of six.

12 Q. Okay. And, again, without telling  
13 me what was mentioned in the presence of your  
14 counsel, how many -- if it was in the neighborhood  
15 of six, what is the time span from when the first  
16 one occurred to when the last one occurred?

17 A. I'd have to guess on the first one,  
18 but the last one certainly would have been within  
19 the past couple of weeks.

20 Q. Okay. Okay. Would the first one  
21 have been in the year 2024?

22 A. Remind me the line of interest here.  
23 Is your interest regarding with the experts?

24 Q. With the experts.

1 A. It would have been in 2024.

2 Q. Okay. How early in 2024?

3 A. I honestly can't recall.

4 Q. Okay. You were provided with some  
5 reports authored by plaintiffs' experts that were  
6 served in this case on December 5th of 2024.

7 Would that help you understand  
8 timing at all as to whether or not the first  
9 one -- first meeting where other experts were in  
10 attendance was before or after December 5th of  
11 2024?

12 MS. PLATT: Objection.

13 THE WITNESS: No, the timing  
14 of that would not help me understand.

15 BY MR. MICELI:

16 Q. Okay. I'm going -- I'm going to try  
17 to ask this a couple ways. It will help me narrow  
18 down, I think, some of my future questions.

19 Were any of the meetings at which  
20 other experts were in attendance in person?

21 A. No.

22 Q. Okay. Would they have been by Zoom?

23 A. I can't recall whether they would  
24 have been on the Zoom platform.

1 Q. Okay. Were they on some  
2 videoconference platform?

3 A. They were.

4 Q. Okay. And if the last one was  
5 within the last couple of weeks, it would have  
6 occurred -- and you correct me if I'm  
7 wrong -- after you authored your supplemental  
8 report?

9 A. (Pause). I can't be certain.

10 Q. Okay. Was one of the other  
11 attendees Dr. Julie Goodman?

12 MS. PLATT: Objection.

13 THE WITNESS: Is that  
14 privileged?

15 I'd like to confer with my  
16 attorneys before I answer that question.

17 MR. MICELI: Okay. Just so  
18 we're clear on the record, I'm not asking  
19 about -- yet about anything that was  
20 said, and you know we have to do this to  
21 make our record.

22 MS. PLATT: Yes.

23 The fact of whether another  
24 expert was on the call is not privileged

1 information. Any of the discussions or  
2 the reasons why we had that call is  
3 privileged. So don't provide any of that  
4 information.

5 THE WITNESS: (Nods head).

6 MS. PLATT: But if you also  
7 don't understand the question, feel free  
8 to ask him to rephrase.

9 THE WITNESS: Okay.

10 Yes, I have had conversations  
11 with Dr. Goodman only in the presence of  
12 the attorneys.

13 BY MR. MICELI:

14 Q. Okay. Other than Dr. Goodman, what  
15 other experts were -- participated in any of the  
16 six meetings?

17 A. Dr. Julie Lakind, Dr. Lisa Bailey,  
18 and I believe the other expert was Dr. Shields. I  
19 reserve the right to be in error on that.

20 Q. Okay. All right. Now, before you  
21 were retained in this litigation, did you know  
22 Julie Goodman?

23 A. I did.

24 Q. How do you know Julie Goodman or

1 Dr. Goodman? I'm not her friend.

2 A. Dr. Goodman and I are acquainted  
3 socially in a broad sense in that we have similar  
4 research interests, and the only time we've ever  
5 met in person was at professional meetings of the  
6 Society of Toxicology or the Society of Risk  
7 Analysis.

8 Q. Okay. Prior to this litigation, did  
9 you know Dr. Lakind?

10 A. Yes. Dr. Lakind and I met in, I  
11 believe it was, 2008 at an EPA-convened scientific  
12 meeting in Colorado. She and I have published, I  
13 believe, two papers together, as they appear on my  
14 CV, as a result of efforts at that meeting.

15 Q. Okay. Did you know Dr. Bailey  
16 before this litigation -- before you were retained  
17 in this litigation?

18 A. No.

19 Q. Okay. Do you understand that Drs.  
20 Lakind and Bailey have been identified as what's  
21 known as a specific cause expert in this case?

22 MS. PLATT: Objection.

23 THE WITNESS: I don't know  
24 the answer to that question. I don't

1 know what a specific causation expert is.

2 BY MR. MICELI:

3 Q. Okay. Do you have any understanding  
4 as to what courts require a party to prove in an  
5 environmental case like the one you're testifying  
6 in today?

7 MS. PLATT: Objection.

8 THE WITNESS: No.

9 BY MR. MICELI:

10 Q. Okay. If I use the term "general  
11 causation" in the context of a legal proceeding,  
12 do you understand what that means?

13 MS. PLATT: Objection.

14 THE WITNESS: I'm not a  
15 lawyer. I don't understand what legal  
16 terms are.

17 BY MR. MICELI:

18 Q. Okay. You've never heard anybody  
19 use that term "general causation" before?

20 MS. PLATT: Objection.

21 THE WITNESS: I've heard the  
22 term used. I've never inquired as to its  
23 meaning.

24 BY MR. MICELI:

1 Q. And have you ever reviewed the  
2 Manual on Scientific Evidence for federal judges?

3 A. No.

4 Q. Okay. Have you ever read the Camp  
5 Lejeune Water Act?

6 MS. PLATT: Objection.

7 THE WITNESS: No.

8 BY MR. MICELI:

9 Q. Okay. Do you know what threshold or  
10 evidentiary threshold plaintiffs have to meet in  
11 this case in order to prevail at trial?

12 MS. PLATT: Objection.

13 THE WITNESS: No, I don't.

14 BY MR. MICELI:

15 Q. Okay.

16 A. That's a -- that's completely a  
17 legal issue that's beyond me.

18 Q. I want to make sure we're clear.  
19 That's completely a legal issue;  
20 correct? Not an illegal issue? (Laugh).

21 A. Yes, a legal issue.

22 Q. Okay.

23 A. My southern accent as well.

24 Q. I understood you fine. I wanted to

1 make sure we're clear on the record. (Laugh).

2 Okay. You -- we've talked about the  
3 group meetings at which counsel was present;  
4 correct? Not this counsel but counsel, general  
5 speaking.

6 A. That's the context in which I've  
7 answered the questions, yes.

8 Q. Thank you.

9 Have you ever had personal  
10 conversations with Dr. Goodman one-on-one  
11 concerning this Camp Lejeune litigation?

12 MS. PLATT: Objection.

13 THE WITNESS: No, I have not.

14 BY MR. MICELI:

15 Q. Have you ever --

16 A. Beyond those that have -- you said  
17 one-on-one. So no, I have not.

18 Q. Okay. Have you had any one-on-one  
19 conversations concerning this litigation with  
20 Dr. Lakind?

21 MS. PLATT: Objection.

22 THE WITNESS: No, I have not.

23 BY MR. MICELI:

24 Q. How about Dr. Bailey?

1 MS. PLATT: Objection.

2 THE WITNESS: No, I have not.

3 BY MR. MICELI:

4 Q. Dr. Shields?

5 MS. PLATT: Objection.

6 THE WITNESS: No, I have not.

7 BY MR. MICELI:

8 Q. Have you had any conversations with  
9 any other experts that you understand have been  
10 identified in this litigation not in the presence  
11 of counsel concerning the litigation?

12 I don't need to know about little  
13 chitchat in the hallways. (Laugh).

14 MS. PLATT: Objection.

15 THE WITNESS: No, I have not.

16 BY MR. MICELI:

17 Q. Okay. Would it be fair to say that  
18 at least some of the meetings that you had with  
19 these experts in the presence of counsel occurred  
20 prior to the completion of your February 7, 2025  
21 report?

22 A. Yes.

23 Q. Okay. You told us the first one was  
24 sometime in 2024.

1 A. (Nods head).

2 Q. How many of the six meetings with  
3 experts -- with other experts and counsel occurred  
4 prior to February 7th of 2025, to the best of your  
5 recollection?

6 A. I don't recall meeting with any  
7 experts after February 7, 2025.

8 Q. Okay. So all of the meetings would  
9 have been before your report was issued?

10 A. Logically.

11 Q. Okay. Well, the reason I ask that  
12 is you said the last couple of weeks would have  
13 been the last of the meetings.

14 A. That was vague. I --

15 Q. That was incorrect then at that  
16 time?

17 A. It was incomplete at that time.

18 Q. You would -- I'm not -- I'm not  
19 trying to trick you here.

20 I'm just saying we want to make sure  
21 we're correcting ourselves that all of the  
22 meetings occurred before your report?

23 A. And that is correct.

24 Q. Okay. Thank you.

1           And so, again, logically then, none  
2 of the meetings that included other experts  
3 occurred between your first report and your  
4 supplemental report, which was three weeks later?

5           A.       Yes. Yes, I believe that to be  
6 right, to the best of my recollection.

7           Q.       Okay. All right.

8                   Now, was your purpose of meeting  
9 with these other experts in an effort to  
10 coordinate consistency with opinions?

11                   MS. PLATT: Objection, and I'm  
12 going to instruct Dr. Lipscomb not to  
13 answer the purpose of the meetings as  
14 privileged and so I object on privilege.

15 BY MR. MICELI:

16           Q.       Okay. We're going -- the lawyers  
17 are going to agree to disagree on that. I'm going  
18 to ask you some other questions, and I'm not doing  
19 it to be argumentative with you, but I'm going to  
20 ask them because I'm creating a record.

21                   But did you have conversations with  
22 other experts to coordinate specific opinions in  
23 your report?

24                   MS. PLATT: Objection on

1 privilege, and I'm again going to  
2 instruct Dr. Lipscomb to not answer that  
3 question.

4 I would also like to put on  
5 the record that this line of questioning  
6 also is in violation of CMO 17 which  
7 protects all communications between  
8 retained and nonretained experts.

9 MR. MICELI: I understand.  
10 We're going to be challenging that. So  
11 this has gone on in three other  
12 depositions.

13 So I'm not -- I'm not trying  
14 to be impolite. I'm not trying to be  
15 mean, but I am going to create the record  
16 in this deposition as well. So we can  
17 agree to disagree on a number of things,  
18 including the application of --

19 MS. PLATT: That's fine.

20 MR. MICELI: -- CMO.

21 MS. PLATT: I will continue to  
22 create the record of our objections.

23 MR. MICELI: Sure. I  
24 understand, and I don't hold it against

1           you. I'm happy you're doing it.

2                       Well, not necessarily happy.

3           I wish you'd say go ahead and answer the  
4           question, but you know what I mean. I  
5           don't hold it against you.

6 BY MR. MICELI:

7           Q.           Were your conversations specifically  
8           with Dr. Lakind and Dr. Bailey in an effort to  
9           coordinate what you say in your general causation  
10          expert with their opinions on specific plaintiffs?

11                       MS. PLATT: Objection. Again,  
12          this is privileged information, and I  
13          instruct Dr. Lipscomb not to answer and,  
14          again, this is in violation of CMO 17.

15 BY MR. MICELI:

16          Q.           Okay. And you will be following  
17          that instruction, Doctor?

18          A.           I will.

19                       MR. MICELI: Okay. Let me --  
20          I'm going to take a little bit of a  
21          break, and I'm going to come back and ask  
22          some more objectionable questions in a  
23          minute (laugh), but I'm going to show you  
24          your invoices at this point.

1 (Document marked for  
2 identification as Lipscomb Exhibit 9.)

3 MR. MICELI: I think that one  
4 is backwards.

5 BY MR. MICELI:

6 Q. There you go, Doctor.

7 And, Doctor, these are the invoices  
8 that have been provided to me by through counsel,  
9 and this is what you produced in relation to your  
10 deposition notice and subpoena; correct?

11 A. (Reviews document.)

12 They do appear to be such.

13 Q. Okay. And they run through March of  
14 this year; correct?

15 A. (Reviews document.)

16 Yes, they run through the end of  
17 March 2025.

18 Q. Okay. And have you billed time in  
19 April and May to this case?

20 A. I've billed time in April.

21 Q. In April. Okay.

22 So when you say you "billed time,"  
23 you've -- you've sent another invoice?

24 A. That's correct.

1 Q. Okay. When did you send that?

2 A. I believe it was either the last day  
3 of April or the first day of May.

4 Q. Okay. So it's within the last  
5 couple of weeks?

6 A. Yes.

7 Q. Yeah. Okay.

8 All right. I'm going to try to  
9 narrow down the dates of the meeting.

10 The first meeting you had with --  
11 with counsel that involved other experts, would it  
12 have been in the before or after July 1st of last  
13 year?

14 A. I can't recall.

15 Q. Okay. So we can't even put it in  
16 the first half of 2024 or the second half of 2024?

17 A. I'm afraid I simply didn't maintain  
18 records of that and I don't know.

19 Q. Okay. That's all right. I was  
20 going down to quarters, but if we can't split it  
21 in half, then that's fine.

22 But if you look then at, say, the  
23 Bates number for Bates number 15 of your invoice,  
24 which is Exhibit 9.

1 A. That doesn't mean anything to me.

2 Q. Okay. The number down in the far  
3 right.

4 A. Bottom right-hand corner?

5 Q. Yeah.

6 A. Number 15?

7 Q. Right. Actually, you should  
8 probably go to 16.

9 Are you there with me?

10 A. I am.

11 Q. Okay.

12 A. But the number on the bottom right  
13 I'm looking at is 16.

14 Q. Right. It's 16.

15 A. Okay.

16 Q. In two of the entries here, you have  
17 attorney call, the first and the last. First for  
18 two hours and the second for five hours.

19 A. The hours relate to the total number  
20 of hours I spent on that day and the individual  
21 task I accomplished on that day are separately  
22 recording on the right.

23 Q. Okay.

24 A. It's not fair to assume that the

1 attorney call on 5/2 lasted for two hours.

2 Q. Oh, I understand.

3 A. Okay.

4 Q. I understand.

5 You're billing for the entire day,  
6 but because it says "attorney call" on portions of  
7 two of the entries here, does that help you  
8 understand whether or not other experts were  
9 involved in that call?

10 MS. PLATT: Object.

11 THE WITNESS: No, it doesn't.

12 MS. PLATT: Objection. I just  
13 want to clarify that the fact that a call  
14 happened is not privileged and he can  
15 answer information about that, but the  
16 substance of that call is privileged.

17 MR. MICELI: I understand.

18 BY MR. MICELI:

19 Q. So if we look -- if you look through  
20 your billing time and your individual line items  
21 where you list things, such as report drafting,  
22 attorney call, is there any way that any of these  
23 references to attorney calls would refresh your  
24 recollection as to when calls including other

1 experts would have transpired?

2 A. No.

3 Q. Okay. All right. Have you ever  
4 totaled up what your invoices have been thus far  
5 for your work done in the Camp Lejeune litigation?

6 A. I have and that information is  
7 reflected on the monthly invoices.

8 Q. Okay. So if I look at the last  
9 page, which is the last month that I have from you  
10 is March of 2025, and it reflects -- I don't see a  
11 total number.

12 Do you see a total number?

13 A. I didn't specify. It does -- the  
14 invoices don't have a cumulative amount.

15 Q. Right.

16 A. So you can't look at one invoice and  
17 tell how much I've billed over the entire period.

18 Q. Have you ever attempted to do that?

19 A. No. I could give you an estimate.

20 Q. What would your estimate be?

21 A. Probably somewhere around, you know,  
22 I'm --

23 Q. Again --

24 A. I'm not -- I'm not sure. It's

1 probably going to be somewhere around -- I just  
2 don't know. I'd rather not guess.

3 Q. Well, I've added them up with what's  
4 in front of you.

5 Would a total of approximately  
6 365,000 be about right?

7 A. That wouldn't raise any red flags  
8 with me and I wouldn't argue with the figure.

9 Q. Okay. It's a little bit less 363  
10 and some change but...

11 A. Eh.

12 Q. Okay. During the course of the  
13 meetings with the other experts, was it ever  
14 discussed that you should take any facts or data  
15 from that meeting and use them in considering or  
16 forming your opinions?

17 MS. PLATT: Objection. Again,  
18 I instruct you not to answer about the  
19 substance of meetings and, again, this is  
20 in violation of CMO 17.

21 MR. MICELI: It is not in  
22 violation of CMO 17 if anybody at that  
23 meeting suggested to him things, facts or  
24 data that he considered in forming his

1           opinions. That's under Rule 30 and  
2           Rule 26.

3                   MS. PLATT: The conversations  
4           in the meetings are privileged.

5                   MR. MICELI: But you can't --  
6           you can't obfuscate the obligations of  
7           Rule 26 in expert witnesses by saying  
8           that it's privileged.

9                   If facts or data were  
10          considered based upon those meetings,  
11          then -- and they were used in forming his  
12          opinions, it's absolutely not privileged.

13                   And we can take that up with  
14          the court. If you want to instruct him  
15          not to answer, he can take your advice,  
16          and we'll take that up with the court.

17                   MS. PLATT: If you can answer  
18          what an attorney asked you to rely on as  
19          facts and opinions, then you can answer  
20          the question.

21                   MR. MICELI: Well, I'll be the  
22          master of my question.

23          BY MR. MICELI:

24                  Q.           My question is: After meeting with

1 the attorneys and the other experts, were you  
2 asked to include facts or data that you considered  
3 in forming your opinions?

4 MR. MICELI: That's the  
5 question. Not just what he talked about  
6 with the attorneys because there were  
7 other people present.

8 MS. PLATT: And, again, if you  
9 can answer to the facts and opinions,  
10 that is fine. Anything beyond that would  
11 be privileged.

12 THE WITNESS: I understand  
13 the question regarding what went on at  
14 the meeting. Can you ask me the last  
15 part of your question, the operative part  
16 of your question about facts and opinions  
17 directly, please?

18 BY MR. MICELI:

19 Q. Uh-huh. Sure.

20 Were you asked to consider facts,  
21 assumptions or data during those meetings that  
22 went into forming your opinions as stated in your  
23 report and that you will offer in this case?

24 A. No.

1 Q. Okay. Thank you.

2 But what we do know is that you  
3 attended or participated in approximately six  
4 meetings with counsel and other experts present  
5 before you issued your report in this case;  
6 correct?

7 MS. PLATT: Objection.

8 THE WITNESS: Yes.

9 BY MR. MICELI:

10 Q. Okay. And in your invoices  
11 throughout 2024 and 2025 prior to February 7th,  
12 you include numerous entries for report drafting;  
13 correct?

14 A. Yes, I do.

15 Q. Okay. And because there are a  
16 number of such entries, we are -- based upon your  
17 recollection or lack of a solid recollection of  
18 when those meetings took place, we don't know  
19 where within the continuous listing of report  
20 drafting those meetings would have fallen;  
21 correct?

22 MS. PLATT: Objection.

23 THE WITNESS: Yes, that's  
24 correct.

1 BY MR. MICELI:

2 Q. Okay. And so if we know the first  
3 one was sometime in 2024, the last one was  
4 sometime before February 7th, all of those  
5 meetings and if any -- well, strike that for a  
6 second.

7 Based upon what we know from your  
8 billing that your last report drafting entry prior  
9 to your first or prior to the first report,  
10 February 7th -- your last entry for report  
11 drafting was February 6th -- that all of your  
12 meetings with these other experts with counsel  
13 present occurred before you finalized your report?

14 MS. PLATT: Objection.

15 THE WITNESS: Say that again,  
16 please.

17 BY MR. MICELI:

18 Q. Sure. Sure.

19 Because your -- we can agree that  
20 the last entry for report drafting that you have  
21 in your billable timesheets here was February 6th,  
22 the day before you finalized the report, signed  
23 it, and it was served on us; correct?

24 MS. PLATT: Objection.

1 THE WITNESS: What are you  
2 looking at?

3 BY MR. MICELI:

4 Q. Sure. I'm looking at your timesheet  
5 for February 2025.

6 A. Page number on that is 40?

7 Q. 40, yes.

8 A. Okay.

9 Q. Your third entry is report drafting  
10 for five hours on February 6th.

11 A. That's right.

12 Q. Okay. And if you compare that to  
13 the date you signed your report, February 7th,  
14 that's the day before your report was signed and  
15 served on us.

16 We can agree that February 7th  
17 follows February 6th?

18 A. Absolutely.

19 Q. Okay.

20 A. 100 percent.

21 Q. Right. (Laugh). Every year like  
22 clockwork.

23 You had six meetings with other  
24 experts and with counsel present before you

1 finalized your report on February 6.

2 Now we don't know when those  
3 meetings took place --

4 A. Yeah.

5 Q. -- but we know that all of them took  
6 place before February 6th.

7 MS. PLATT: Objection.

8 THE WITNESS: And I'm not  
9 sure there were six.

10 BY MR. MICELI:

11 Q. Okay.

12 A. Remember that's an approximation.

13 Q. Right. Could have been five?

14 A. Could have been five.

15 Q. Okay. But we can agree that all of  
16 those took place before you finalized your report?

17 MS. PLATT: Objection.

18 THE WITNESS: Yes.

19 BY MR. MICELI:

20 Q. Okay. And then if you look -- stay  
21 on that February page for a second.

22 A. Uh-huh.

23 Q. You have -- if you look at February  
24 and you just take away the -- that's on page 40

1 again.

2 If you take away those first three  
3 entries, which are 14 hours, and you take 14 away  
4 from 63, you get 49.

5 You billed 49 hours in February of  
6 2025 working on an 8-page rebuttal report --  
7 excuse me -- a 9-page rebuttal report addressing  
8 only Dr. Steven Bird's 4-page supplemental report;  
9 correct?

10 MS. PLATT: Objection.

11 THE WITNESS: That can't be  
12 deduced from this timesheet.

13 BY MR. MICELI:

14 Q. Okay. Well, you have it, on  
15 February 10th you have review case materials;  
16 correct?

17 A. Yes.

18 Q. Okay. And then every other line  
19 where you billed includes, among other things,  
20 report drafting; correct?

21 A. Yes, that's correct.

22 Q. Okay. And attorney call is listed  
23 on four of those as well, which is the February  
24 11th and 12th, February 14th, and February 18th;

1 correct?

2 A. You're missing February 24th.

3 Q. Ah. There we go. Thank you. Okay.

4 So can we agree that all three and a  
5 half hours was not an attorney call --

6 MS. PLATT: Objection.

7 BY MR. MICELI:

8 Q. -- on the 11th?

9 MS. PLATT: Objection.

10 THE WITNESS: We can't tell  
11 from this.

12 BY MR. MICELI:

13 Q. Okay. You think you may have talked  
14 to the attorneys for three and a half hours while  
15 you were report drafting that day?

16 A. It -- it's hard for me to separate  
17 the amount of time allocated from any of those  
18 activities from that day.

19 Q. Okay.

20 A. Or any other day.

21 Q. All right. So some or part of 49  
22 hours in the month of February were spent  
23 responding to a 4-page report from Dr. Steven  
24 Bird?

1 MS. PLATT: Objection.

2 THE WITNESS: I spent some  
3 time between February 11th and February  
4 27th preparing my response to Dr. Bird's  
5 supplemental report.

6 BY MR. MICELI:

7 Q. Right.

8 And -- and some of that time, some  
9 or all, not all, but some of that time totaled up  
10 to -- or the remaining time between the 6th and  
11 the end of February totaled 49 hours; right?

12 A. I'd like to confer with my attorney  
13 before I answer that question.

14 Q. I don't know.

15 MS. PLATT: You can answer the  
16 math if you want to do it in your head.

17 THE WITNESS: (Pause). Some  
18 of that time absolutely was directed at  
19 developing my supplemental report in  
20 response to Dr. Bird's report.

21 BY MR. MICELI:

22 Q. Okay.

23 A. Dr. Bird's report identified a  
24 number of issues that required some substantial

1 evaluations and research. So for me to give  
2 Dr. Bird's supplemental report the response that  
3 it deserved, I had to do quite a bit of background  
4 reading and reference checking.

5 I think that's apparent in the  
6 report that I developed in response to Dr. Bird's  
7 supplement.

8 Q. Was there anything new in Dr. Bird's  
9 report -- supplemental report that you were not  
10 aware of before you issued your original report?

11 MS. PLATT: Objection.

12 THE WITNESS: Dr. Bird's  
13 supplemental report went further and more  
14 broadly afield than his original report.

15 Dr. Bird's report relied upon  
16 a document that no reasonable scientist  
17 would rely upon, especially for  
18 proceedings like this, and I'm referring  
19 to the press release developed by EPA in  
20 2024.

21 Dr. Bird's report made  
22 allegations that the ban of TCE by TSCA's  
23 risk assessment program was applicable to  
24 Camp Lejeune, which is categorically

1 false, as indicated in my report, and  
2 further invoked the ban of TCE relative  
3 to perchloroethylene, which is the  
4 subject to a separate treatment by TSCA  
5 and reported, and the TSCA effort  
6 resulted in a conclusion completely  
7 different from that of TCE.

8 BY MR. MICELI:

9 Q. Okay.

10 A. In that Dr. Bird invoked these other  
11 documents and other assessments and conclusions,  
12 it was incumbent upon me to set the record  
13 straight regarding the reliability and  
14 reasonableness of Dr. Bird's contentions.

15 Q. Sure. Okay.

16 Let me just -- we're going to talk  
17 about Dr. Bird's supplemental report and your  
18 response to it a little bit later, but let me just  
19 ask some direct questions about a few things.

20 The press release was made in  
21 December of 2024; correct?

22 A. I -- yes.

23 Q. Okay. You were aware of it before  
24 you did your report in February; correct?

1           A.           I can't say that I was aware of it  
2 before my report was completed.

3           Q.           Okay.

4           A.           I was fairly busy at the time.

5           Q.           Okay. The Final Rule for TCE was  
6 issued December, mid-December, 16, 17th, somewhere  
7 in that neighborhood --

8           A.           That's --

9           Q.           -- of 2024?

10          A.           You asking me or telling me?

11          Q.           Well, I'm asking if that's what you  
12 recall through the --

13          A.           I think that sounds in general  
14 right.

15          Q.           Okay. So that document was  
16 available before you issued your original report;  
17 right?

18          A.           Factually, the document had been  
19 published before I completed my original report.

20          Q.           Okay. The PCE Final Rule --

21          A.           I'm sorry. P or T?

22          Q.           Perchloroethylene.

23          A.           Yes.

24          Q.           That Final Rule was issued by EPA

1 and published in the Federal Register in December  
2 of 2024 as well; right?

3 A. I honestly can't recall. I believe  
4 that to be right.

5 Q. Okay. So that, if that's true, it  
6 was available before you did your final report --  
7 your original report on February 7th; correct?

8 MS. PLATT: Objection.

9 THE WITNESS: It would have  
10 been.

11 BY MR. MICELI:

12 Q. Okay. All right. So with regard to  
13 the operative documents -- and we're going to talk  
14 about Woburn, Massachusetts later in this  
15 deposition -- but the operative documents that  
16 Dr. Bird addresses at the beginning of his report,  
17 the press release, the PCE Final Rule, and the TCE  
18 Final Rule, were all available to you before you  
19 did your initial report; correct?

20 MS. PLATT: Objection.

21 THE WITNESS: They were  
22 published before my available report, and  
23 my focus on the trichloroethylene TSCA  
24 decision was largely in response to

1 references to the document made by  
2 Dr. Gilbert in her expert report.

3 BY MR. MICELI:

4 Q. Okay.

5 A. At the time that I finished my final  
6 report, I had no reason to discuss the decision of  
7 TSCA relative to the continued use of  
8 tetrachloroethylene.

9 Q. Okay. At page 81 of your report,  
10 you have Section 13 "EPA's Ban of TCE Does Not  
11 Apply to Drinking Water Contamination at Camp  
12 Lejeune."

13 MS. PLATT: Sorry. What page  
14 are you on?

15 MR. MICELI: 81.

16 BY MR. MICELI:

17 Q. Do you see that?

18 A. I do see that.

19 Q. Okay. We're going to talk about  
20 this in greater detail later today in this  
21 deposition, but this -- this at least demonstrates  
22 that you were aware of the TCE ban from the Final  
23 Rule on tetrachloroethylene; correct?

24 MS. PLATT: Objection.

1 THE WITNESS: It does  
2 indicate that I was aware of the decision  
3 of the TSCA program to ban  
4 trichloroethylene.

5 BY MR. MICELI:

6 Q. Okay.

7 A. But the issue with me -- I think  
8 I'll stop there.

9 Q. Okay.

10 A. It doesn't.

11 Q. You had -- you had available to you  
12 Dr. Gilbert's report in December of 2024; correct?

13 A. I don't recall the date of her  
14 report, but that sounds right.

15 Q. Okay. You also had the supplemental  
16 report of Howard Hu?

17 A. That's correct.

18 Q. And you had the supplemental report  
19 of Dr. Jason Cannon as well; correct?

20 A. I don't recall the date on  
21 Dr. Cannon's report.

22 Q. Okay. Okay. On your -- on page 94  
23 of your references, you list "Supplemental Report  
24 of Jason Cannon, January 10, 2025."

1           A.           You give me a moment to find that,  
2 please.

3           Q.           Sure.

4           A.           (Reviews document.)

5                       Page 94 "Supplemental Report of  
6 Dr. Jason Cannon, January 10, 2025."

7           Q.           Okay. And your supplemental report  
8 does not address the opinions of Dr. Cannon nor  
9 Dr. Howard Hu; correct?

10                       MS. PLATT: Objection.

11                       THE WITNESS: May I see the  
12 expert reports of Dr. Hu and Dr. Cannon,  
13 please?

14 BY MR. MICELI:

15           Q.           Well, let's look at your  
16 supplemental report to tell me if you -- if you  
17 identify them in your supplemental report. That  
18 would be Exhibit 4 in front of you.

19           A.           (Reviews document.)

20                       No. As indicated, this is a  
21 response directly to Dr. Bird's supplemental  
22 report.

23           Q.           Right.

24                       While you have that in front of you,

1       though, go to Section 3.1 of your report.

2                               MS. PLATT:   Of the  
3                               supplemental?

4       BY MR. MICELI:

5               Q.       Of the supplemental report.

6               A.       Yes.

7               Q.       Okay.  In Section 3.1 of your  
8       supplemental report, you don't address anything  
9       that Dr. Bird said in his supplemental report, do  
10      you?

11                              MS. PLATT:  Objection.

12      BY MR. MICELI:

13              Q.       Let me ask it differently.

14                              Do you identify any opinion of  
15      Dr. Bird in Section 3.1 of your supplemental  
16      report?

17                              MS. PLATT:  Objection.

18                              THE WITNESS:  Dr. Bird cites  
19      the TSCA decision on trichloroethylene as  
20      the basis for his extension of that to  
21      perchloroethylene.

22                              In that he cited to the TSCA  
23      risk assessments for trichloroethylene,  
24      it becomes imperative on reasonable

1 science -- scientists to understand the  
2 toxicologic underpinnings of that  
3 assessment and the methods under which  
4 that method -- that decision was reached,  
5 the risk assessment was conducted, and  
6 the conclusions were reached.

7 In reviewing the TSCA risk  
8 assessment of EPA 2020, TSCA confirms  
9 that "risk based on margin of exposure  
10 values for autoimmunity that are based on  
11 an early biomarker that may not be  
12 adverse itself."

13 My report continues: "In other  
14 words, the effect protected against by  
15 the benchmark margin of exposure may not  
16 be adverse."

17 BY MR. MICELI:

18 Q. Okay. Thank you.

19 My question was: Do you identify in  
20 Section 3.1 of your supplemental report any  
21 opinion offered by Dr. Bird in his supplemental  
22 report?

23 MS. PLATT: Objection. Asked  
24 and answered.

1 THE WITNESS: Dr. Bird brings  
2 into the effect into the report the  
3 reliability of the TSCA report relative  
4 to injuries that may be associated with  
5 other chemicals, namely, PCE.

6 BY MR. MICELI:

7 Q. Okay.

8 A. I point out that the TSCA program in  
9 the trichloroethylene risk assessment point out  
10 that they have protected against an effect that  
11 may not be adverse. In that regard, I have  
12 directly addressed a point made by Dr. Bird in his  
13 supplemental report.

14 Q. Where -- where in Dr. Bird's  
15 supplemental report does he address TSCA to the  
16 point where you had to include this in your  
17 supplemental report?

18 MS. PLATT: Objection.

19 THE WITNESS: A reasonable  
20 scientist will not only accept -- will  
21 not accept the opinion of another  
22 scientist without verifying the validity  
23 of that opinion.

24 Part of the verification

1 process involves evaluating the  
2 underpinnings of the statement made by  
3 the first scientist, and one of those  
4 ways to check the validity of the  
5 underpinnings is to evaluate the subject  
6 matter at hand, which was indeed the TSCA  
7 risk assessment and decision made for  
8 trichloroethylene.

9 BY MR. MICELI:

10 Q. Okay. You do not identify in  
11 Section 3.1 of your report that Dr. Bird's opinion  
12 in any way, shape, or form in his supplemental  
13 report necessitated the need for the inclusion of  
14 Section 3.1 in your report, do you?

15 MS. PLATT: Objection. He's  
16 asked -- you've asked and answered that.  
17 You can answer again.

18 THE WITNESS: I believe I  
19 provided a good answer for that.

20 A reasonable scientist will  
21 fact-check the basis for the opinions  
22 made by other scientists. In that  
23 regard, that's what I have done.

24 BY MR. MICELI:

1 Q. Okay. Show me in your supplemental  
2 report -- strike. I'm not going to say. I've got  
3 enough of that. I'm coming back to that. We'll  
4 be revisiting that one.

5 Let's go back to your primary  
6 report, your first report, and turn to page 15  
7 with me, please.

8 A. Page 15, 1-5?

9 Q. Yes, sir. Section 5 on biology.

10 Now, Section 5 goes through to the  
11 bottom of page 19; correct? Extends from 15, 16,  
12 17, 18, and 19.

13 A. Yes.

14 Q. Okay. If you go to Section 5.1 at  
15 the bottom of page 15, three lines down in that  
16 paragraph you have:

17 "It is important to separate  
18 'exposures' from 'doses.'"

19 Do you see that?

20 A. No, I don't. Tell me again where  
21 you're reading, please.

22 Q. Sure. Section 5.1.

23 A. Oh.

24 Q. And it really starts with the word

1 "it" at the end of the second line. It says  
2 after:

3 "Therefore, it is important to  
4 separate 'exposures' from 'doses.'"

5 Correct?

6 A. Yes, I see it.

7 Q. Now, your report in general and  
8 overall discusses the regulatory risk assessment  
9 framework; correct?

10 MS. PLATT: Objection.

11 THE WITNESS: That's one of  
12 the things covered in my report.

13 BY MR. MICELI:

14 Q. Sure.

15 A. Yeah.

16 Q. I mean, you cite throughout your  
17 report multiple, multiple EPA regs that deal with  
18 risk assessment; correct?

19 MS. PLATT: Objection.

20 THE WITNESS: I do.

21 BY MR. MICELI:

22 Q. Okay. And this section, though, and  
23 at this point in this section, particularly 5 and  
24 5.1, you don't cite anything and this is just

1 background information; is that fair?

2 MS. PLATT: Objection.

3 THE WITNESS: This is  
4 information gained from a career in  
5 toxicology, pharmacokinetics, and risk  
6 assessment.

7 BY MR. MICELI:

8 Q. I --

9 A. It's fair to call it background  
10 information.

11 Q. Thank you. Okay.

12 And when you go through this  
13 exposures and doses, you state that, continuing:

14 "Exposures can be thought of as  
15 contact with an environmental medium (e.g. air,  
16 drinking water) that contains the chemical. The  
17 absorbed dose is the amount of contacted chemical  
18 that is taken in by the body."

19 Correct?

20 A. That is correct.

21 Q. Okay. Is it feasible -- is there a  
22 feasible way, as a toxicologist with your  
23 experience, to know an exposure level or an  
24 estimated exposure level at Camp Lejeune -- and

1 let's just pick a year -- say 1975 and know what  
2 the absorbed level for a Marine on Camp Lejeune  
3 would have been?

4 MS. PLATT: Objection.

5 THE WITNESS: That relies on  
6 information beyond the scope of  
7 toxicology. That would rely on  
8 information about exposure, and I'm not  
9 opining on exposure.

10 BY MR. MICELI:

11 Q. Okay. But you would agree with me  
12 from a toxicological standpoint, it is impossible  
13 to take an exposure level at Camp Lejeune in 1975  
14 and understand the individual absorption levels by  
15 the number of Marines that were exposed to  
16 contaminated water?

17 MS. PLATT: Objection.

18 THE WITNESS: (Pause). That  
19 is a very multifaceted question. Would  
20 you mind breaking that down for me?

21 BY MR. MICELI:

22 Q. Sure.

23 We can assume a number -- doesn't  
24 matter what the number is -- an exposure, the

1 amount of micrograms per liter that were in the  
2 water at Camp Lejeune at any one point in time.  
3 Okay? Just we don't need to know an exact number  
4 for this example.

5 If a Marine consumes water  
6 contaminated with either TCE, PCE, vinyl chloride,  
7 benzene, DCE, or some combination of those, in  
8 1975, is there a way as a toxicologist you can  
9 tell me "I can know what the absorbed level is in  
10 a Marine in 1975"?

11 MS. PLATT: Objection.

12 THE WITNESS: Well, to answer  
13 the question, first and foremost, I'd  
14 point out that you're asking a question  
15 about what was known in 1975, and that's  
16 a difficult question to answer because if  
17 I'm right, there are no sample data for  
18 water concentrations of the chemicals  
19 before 1982.

20 BY MR. MICELI:

21 Q. Okay.

22 A. All right. So given --

23 Q. My -- I'm sorry. Go ahead. I don't  
24 want to interrupt.

1           A.           No, I'm just -- I'm done with  
2 answering that part of the question.

3           Q.           Right.

4           A.           So what's the rest of it?

5           Q.           Is there a way if a -- if a person  
6 consumes water contaminated -- and I'm just going  
7 to use TCE to make it a single chemical --  
8 consumes water contaminated in 1975, contaminated  
9 with TCE, for you to tell me from a toxicological  
10 standpoint how much the absorbed level would be  
11 for that Marine in 1975?

12                           MS. PLATT:  Objection.

13                           THE WITNESS:  Your first  
14 question asked can we know, which is a  
15 very difficult premise to answer.  Know  
16 is, in spite of other musings, is a  
17 difficult thing to answer.

18                           We can predict with a  
19 relatively high level of confidence, high  
20 enough to meet the standards for  
21 regulatory risk assessment and regulatory  
22 risk management, that we can predict what  
23 the absorbed dose would be.

24   BY MR. MICELI:

1 Q. Okay.

2 A. That will be accompanied by  
3 confidence bounds and some uncertainties.

4 Q. Okay. Would you be able to know for  
5 an individual what their level of absorption would  
6 be?

7 MS. PLATT: Objection.

8 THE WITNESS: Risk assessment  
9 is not a science directed at the  
10 individual level. Regulatory risk  
11 assessment is done at the population  
12 level.

13 BY MR. MICELI:

14 Q. Uh-huh.

15 A. One of the aspects of doing the  
16 population level work is to assume some of the  
17 worst-case scenarios.

18 Q. Okay.

19 A. Meaning if we have a range of  
20 parameter values, like how big is the liver or how  
21 much blood flow goes to the liver over the course  
22 of an hour, those things can be -- those  
23 parameters can be evaluated, and the parameters  
24 that most impact risk could be programmed into

1 the -- into the physiologically based  
2 pharmacokinetic program.

3 Q. Okay.

4 A. If we know the things like the  
5 breathing rate, the body weight, the blood flow to  
6 the liver, cardiac output, fat composition, fat  
7 composition of the liver, blood flow to the  
8 kidneys, various levels of enzymic concentrations  
9 in proteins in -- in metabolically active tissues,  
10 rates of urine flow. If we know those things, we  
11 can get a handle on individual risk.

12 Short of that, risk assessment  
13 cannot make predictions of exposure, tissue  
14 concentrations of chemicals, and the likely  
15 response at an individual level. Those are some  
16 of the many things that preclude using risk  
17 assessment approaches to evaluate individual risk.

18 Q. And that's why risk assessment is  
19 not done for individual causation; correct?

20 MS. PLATT: Objection.

21 THE WITNESS: I don't opine  
22 on causation, but risk assessment is a  
23 complex animal to understand.

24 BY MR. MICELI:

1 Q. And you actually stated in your  
2 report you don't -- it doesn't -- it doesn't  
3 indicate the actual level of risk?

4 MS. PLATT: Objection.

5 THE WITNESS: The way risk  
6 assessments are conducted under  
7 the -- under the federal program for  
8 regulatory purposes, they are worst-case  
9 analysis, and they usually almost always  
10 show how high the risk might be if we  
11 assume the worst-case scenarios for these  
12 complex factors, like blood flow to the  
13 liver, cardiac output, the amount  
14 inspired, etc., etc., etc. Their  
15 worst-case.

16 One of the aspects of cancer  
17 risk assessment and the interpretation of  
18 point estimates for cancer risk indeed  
19 acknowledges the uncertainties,  
20 extrapolations, and assumptions embedded  
21 and indicates from ATSDR and EPA that  
22 these are indeed worst-case possibilities  
23 and that the true risk may be a zero.

24 BY MR. MICELI:

1 Q. All right. And you say that  
2 multiple times in your report; correct?

3 A. I do.

4 Q. Okay. And you have been operating  
5 as a PhD toxicologist who does risk assessments  
6 for 34 years now?

7 MS. PLATT: Objection.

8 BY MR. MICELI:

9 Q. You graduated. PhD you got in '91;  
10 correct?

11 A. Got PhD in '91. Do the math. I've  
12 worked in toxicology and risk assessment ever  
13 since. I'm recognized as an expert in both. I've  
14 contributed to both.

15 Q. I understand.

16 A. Yeah.

17 Q. I graduated law school in '91 so  
18 that's why. 34 years --

19 A. Yeah.

20 Q. -- is what we're talking about.

21 A. Okay.

22 Q. In your 34 years, have you ever been  
23 asked to opine on a -- on an individual's specific  
24 causation by using the methodology of regulatory

1 risk assessment?

2 MS. PLATT: Objection.

3 THE WITNESS: I do not opine  
4 on causality here, and I've never been  
5 asked to opine on an individual's  
6 likelihood of risk or anything at all  
7 like that.

8 BY MR. MICELI:

9 Q. For over the 34 years you've been?

10 A. Over 34 years.

11 Q. Okay.

12 A. Yeah, that -- that precludes --  
13 we're speaking in the context of chemical risk  
14 assessment specifically for these chemicals.

15 Q. Right.

16 A. I'm not talking about, you know,  
17 what happens if you ride your bicycle through  
18 traffic, young lady.

19 Q. Right, I understand. (Laugh).  
20 Yeah.

21 A. I'm not talking about that.

22 Q. I appreciate that example.

23 If someone said to you: Based on  
24 your 34 years of experience in risk assessment

1 someone's chance of getting cancer of the -- let's  
2 say of the kidney was X percent based upon their  
3 regulatory risk assessment methods, would you  
4 agree with them that they could do that?

5 MS. PLATT: Objection.

6 THE WITNESS: I would want to  
7 know more about the information that went  
8 into that assessment, and I would point  
9 out that if they used the cancer slope  
10 factors of EPA in making that  
11 calculation, that the true estimate may  
12 be as low as zero and that's simply an  
13 upper bound estimate.

14 BY MR. MICELI:

15 Q. Could it be above what's the slope  
16 factor?

17 MS. PLATT: Objection.

18 THE WITNESS: That's a  
19 mathematical question.

20 BY MR. MICELI:

21 Q. Sure.

22 A. I'm not a statistician.

23 Q. That would be superlinear; right?

24 MS. PLATT: Objection.

1 THE WITNESS: Superlinear is  
2 a term that's been given different  
3 definitions by different people at  
4 different times.

5 BY MR. MICELI:

6 Q. Sure.

7 A. For me to answer that, I need to  
8 know what you mean by superlinear.

9 Q. It means instead of having a linear  
10 line rising from left to right on an XY graph, it  
11 would -- it would bow outward above that straight  
12 line.

13 A. Given your description of  
14 superlinear, I can't answer that question.

15 Q. Okay. And in your 34 years, though,  
16 you haven't seen anybody determine specific  
17 causation based on a risk assessment?

18 MS. PLATT: Objection.

19 THE WITNESS: I haven't and  
20 the reason I haven't is because EPA and  
21 ATSDR specifically indicate that risk  
22 assessment values, including those for  
23 cancer, cannot be used to assess the  
24 quantified risk above an exposure or the

1 true risk of cancer.

2 MR. MICELI: Thank you.

3 All right. How long have we  
4 been going? I don't know what you want  
5 to do for lunch.

6 MS. PLATT: We've been on the  
7 record since 11:33. So about a little  
8 over an hour.

9 MR. MICELI: I am going to  
10 move to a different section. Do we  
11 want -- it's 12:40. Do you want to break  
12 for lunch? How much time do you want?

13 THE WITNESS: Yeah, that would  
14 be great. I'd take -- take a short lunch  
15 break.

16 MR. MICELI: Okay. Let's do  
17 that then.

18 THE VIDEOGRAPHER: All right.  
19 Off the record at 12:41.

20 (Whereupon, at 12:41 p.m., a  
21 luncheon recess was taken.)  
22  
23  
24

1 AFTERNOON SESSION

2 (1:36 PM)

3 JOHN C. LIPSCOMB, PHD

4 called for continued examination and, having been  
5 previously duly sworn, was examined and testified  
6 further as follows:

7 EXAMINATION (CONTINUED).

8 THE VIDEOGRAPHER: Back on the  
9 record at 1:36.

10 BY MR. MICELI:

11 Q. All right. Doctor, you ready to  
12 continue?

13 A. I am.

14 Q. Okay. I believe the last place we  
15 left off was Section 5.1 of your report and hold  
16 on. There's a couple people. I want to make sure  
17 they're in.

18 Okay. 5.1 of your report, which was  
19 at, I believe, page 15, and we talked about that  
20 being a more background information. And I want  
21 to jump ahead.

22 Actually, before we jump ahead, when  
23 you were talking about the aspects of not being  
24 -- I was asking questions about the ability or

1 inability to use risk assessment for purposes of  
2 proving that something caused an injury or a  
3 disease, and we've discussed it. We don't need to  
4 go back there.

5 But you had mentioned a number of  
6 different factors that you would want to know  
7 about somebody, and in that list you didn't  
8 include interperson variability.

9 That's an issue with toxicology,  
10 isn't it?

11 MS. PLATT: Objection.

12 THE WITNESS: I didn't give  
13 you an exhaustive list.

14 BY MR. MICELI:

15 Q. Right.

16 A. I just gave you some for instances.

17 Q. Exactly. I'm not -- I'm not trying  
18 to say that you didn't do that, but interperson  
19 variability is one thing you have to be concerned  
20 about?

21 A. It is. As a matter of fact, the  
22 USEPA recognizes that that's such an important  
23 topic that they assign a very specific uncertainty  
24 factor to it, which accounts for the increased

1 sensitivity of individuals with, for example,  
2 different enzymatic backgrounds or polymorphisms.

3 Q. And how many specific types of  
4 uncertainty do you have to account for in a  
5 risk -- regulatory risk assessment?

6 A. There are so many areas of  
7 uncertainty that it's difficult to answer your  
8 question directly.

9 There are five uncertainty factors  
10 that categorize the uncertainty in areas.

11 The first would be animal to human  
12 extrapolation, and there's a default numerical  
13 value assigned for that. So that when we have  
14 studies that are developed in animals and we need  
15 to extrapolate them from the animals to the  
16 humans, we use that.

17 The second factor that almost always  
18 applies, and that's human variability, as you  
19 mentioned. The default value for that is 10. And  
20 when we have data in humans, but the data don't  
21 describe the nature of the effect in a population  
22 or type of population that might be susceptible in  
23 general, like the very young or the very old or  
24 the diseased or those with genetic polymorphisms,

1 we add that factor.

2           The third factor is called UFL and L  
3 stands for LOAEL, lowest observed adverse effect  
4 level. We use that and we, I'm speaking in my  
5 former capacity as a risk assessor for the USEPA.  
6 That in the -- that uncertainty factor is used  
7 when the point of departure defines an actual  
8 effect level rather than a dose that is -- does  
9 not result in an effect. That dose we call the no  
10 observed adverse effect level, or NOAEL.

11           The other uncertainty factor -- and  
12 there are only two left -- is called UFS and  
13 that's used for subchronic to chronic  
14 extrapolation. Again, a default value of 10, just  
15 like UFL is. So when we don't have information  
16 from a chronic duration study, we -- and when we  
17 have to develop a risk value for chronic  
18 exposures, we add that uncertainty factor in and,  
19 again, with a value of 10.

20           The final area that's been treated  
21 by a formal uncertainty factor is that called the  
22 database uncertainty factor, UFD. Has a default  
23 value of 10. UFD applies to the general risk  
24 value and not any specific study or any specific

1 effect.

2 UFD is unique from the other four in  
3 that it applies when the overall database for a  
4 chemical, like does it have a 2 generation  
5 reproductive and developmental tox study? Does it  
6 have two long-term studies in animals? That sort  
7 of thing. When overall database for the chemical  
8 lacks those studies, it's assigned a database  
9 uncertainty factor.

10 Those are the uncertainties that we  
11 address quantitatively. There are other  
12 uncertainties and risk values that are not  
13 addressed quantitatively. They're numerous. Some  
14 of them are the uncertainties that accompany  
15 measuring an effect in animals.

16 So there's often uncertainty that  
17 the effect that you actually measure represents an  
18 adverse health condition because of what we call  
19 the continuum of biological responses treated in  
20 my report as the toxicity pathway.

21 Q. Okay.

22 A. Just because we measure an effect in  
23 animals doesn't mean that it's adverse. Doesn't  
24 mean that with a continued exposure or exposure to

1 higher doses it would progress to an adverse  
2 effect.

3 Q. Okay.

4 A. That's an example of some of the  
5 many uncertainties that accompany the risk  
6 assessment value determination that aren't  
7 quantified.

8 These uncertainties contribute to  
9 the margin of safety that is recognized by EPA and  
10 ATSDR to accompany their reference values, and it  
11 is this margin of safety representing the  
12 unquantified, uncertainties, assumptions, and  
13 extrapolations that contribute to the protective  
14 nature of risk values.

15 Meaning that, when we use these  
16 values for their intended purpose to protect  
17 against future harm, an exceedance of these values  
18 cannot be interpreted as an indication of risk or  
19 causality.

20 Q. Okay. You gave me the factor of 10  
21 for UF database, UFS, interpersonal variability.

22 Is the animal to human factor 10 as  
23 well?

24 MS. PLATT: Objection.

1 THE WITNESS: The default  
2 value is 10.

3 BY MR. MICELI:

4 Q. Okay.

5 A. The uncertainty factors for animal  
6 to human variability and human variability have  
7 been further separated, and there are two  
8 components respectively: toxicokinetics, how the  
9 chemical moves through the body, and  
10 toxicodynamics, which is how the body reacts to  
11 the chemicals. That uncertainty factor for UFA  
12 and UFH has been divided into those two  
13 subcomponents valued at 3.16 each.

14 Q. Okay. If you look at page 19 of  
15 your report, I think we're still in Section 5  
16 here. The second full paragraph that starts with  
17 the word "Necessary."

18 You see that?

19 A. I see "Necessary."

20 Q. Okay. "Necessary testing of  
21 proposed modes of action requires careful  
22 development of whole animal experiments to  
23 determine whether they actually operate under real  
24 world conditions."

1 Correct?

2 A. That's what that sentence reads.

3 Q. All right. And in that, you don't  
4 offer a citation there.

5 Is that because that's just basic  
6 information for you?

7 MS. PLATT: Objection.

8 THE WITNESS: I could have  
9 offered some citations. It's fundamental  
10 information for risk assessment  
11 professionals.

12 BY MR. MICELI:

13 Q. Okay.

14 A. The reason being and the reason for  
15 the whole animal experiments is because there are  
16 numerous studies called mechanistic studies  
17 broadly, and a mechanistic study can -- can be  
18 undertaken to prove what's possible.

19 Now, mechanistic studies are often  
20 conducted with subcellular preparations, with  
21 isolation -- isolated parts of tissues, white  
22 blood cells, etc., taken from outside the body,  
23 where an experimentalist can expose those cells to  
24 any concentration or any amount of a toxicant

1 without regard to what might be feasibly attained  
2 within the body.

3 So there can be huge differences in  
4 the concentrations.

5 Q. Okay.

6 A. And just because a mechanism is  
7 shown in a preparation outside the body, we have  
8 to develop an understanding of the relationship of  
9 those concentrations used outside the body to the  
10 concentrations that can be used inside the body.

11 The International Programme on  
12 Chemical Safety has published guidance on how to  
13 do this, and those documents were published in the  
14 open literature by an author named Boobis,  
15 B-o-o-b-i-s.

16 MR. MICELI: Okay. And I've  
17 actually got one of his here with me.

18 (Document marked for  
19 identification as Lipscomb Exhibit 10.)

20 BY MR. MICELI:

21 Q. Show you what I marked as Exhibit 10  
22 to this depo.

23 This is the Dr. Boobis that you're  
24 referring to; correct?

1           A.           That is the person. This may not be  
2 the publication I was referring to, though.

3           Q.           I think it is.

4                        If you look down at the bottom in  
5 Footnote 1, it says:

6                        "This article, to which WHO owns  
7 copyright, was originally published in 2006 in  
8 Critical Reviews in Toxicology, Volume 36," pages  
9 871 to 892, which is what you reference in your  
10 reference, I believe.

11           A.           There's also another report that  
12 Boobis co-authored on long cancer effects.

13           Q.           Right and that's --

14                        MS. PLATT: I would just note  
15 for the record that you read the page  
16 numbers wrong. It's 781 to 792.

17                        MR. MICELI: What did I say?

18                        MS. PLATT: You said 871.

19                        MR. MICELI: Sorry. 781. I  
20 stand corrected. Thank you.

21 BY MR. MICELI:

22           Q.           Now, I want to look first at the --  
23 at the abstract at the top where it says --

24           A.           Uh-huh.

1 Q. Well, first of all, this was -- this  
2 paper was put together by the IPCS, which is  
3 the -- what is IPCS?

4 A. IPCS is a World Health Organization  
5 based organization called the International  
6 Programme on Chemical Safety.

7 Q. Okay. And you see up top here, it  
8 says "Harmonization Project Document 4"?

9 A. I do.

10 Q. Okay. And this was -- this project  
11 was to harmonize regulatory risk assessment and  
12 how it was done; correct?

13 MS. PLATT: Objection.

14 THE WITNESS: I'm not  
15 familiar with the background or the  
16 fundamental principles of this particular  
17 project.

18 BY MR. MICELI:

19 Q. Okay. If you look at the abstract,  
20 it says the international -- second sentence says:

21 "The International Programme on  
22 Chemical Safety has therefore updated and extended  
23 its Mode of Action Framework for cancer to address  
24 the issue of human relevance of a carcinogenic

1 response observed in an experimental study."

2 Do you see that?

3 A. I see that.

4 Q. And the experimental study they're  
5 talking about are animal studies; correct?

6 A. Not necessarily.

7 Q. Okay. The next one says:

8 "The first stage is to determine  
9 whether it is possible to establish an MOA."

10 Right?

11 A. That's correct.

12 Q. "This comprises several key events  
13 along the causal pathway to cancer, identified  
14 using a weight-of-the-evidence approach based on  
15 the Bradford Hill criteria."

16 Correct?

17 A. Not completely. "This comprises a  
18 series of key events along the causal pathway"  
19 etc.

20 Q. Okay. You don't address the  
21 Bradford Hill criteria at all in your report, do  
22 you?

23 A. That's correct.

24 Q. All right.

1           A.           Addressing the Bradford Hill  
2 criteria in the nature of my report was  
3 unnecessary.

4           Q.           Okay. All right. And is that  
5 because -- and we can look at this document if  
6 you'd like, but -- but he's talking about  
7 establishing and selecting a mode of action in the  
8 context of risk assessment.

9                       And you don't have to do that  
10 because you didn't do an actual risk assessment  
11 linking a chemical to a particular disease or a  
12 cancer in your report; right?

13                       MS. PLATT: Objection.

14                       THE WITNESS: The scope of my  
15 report did not involve activities to  
16 which a Bradford Hill consideration would  
17 have proved valuable --

18 BY MR. MICELI:

19           Q.           Okay.

20           A.           Or relevant.

21           Q.           -- but in the context of a risk  
22 assessment, what Boobis talks about is doing a  
23 Bradford Hill simply on selecting the mode of  
24 action to be used in a risk assessment; correct?

1 MS. PLATT: Objection.

2 THE WITNESS: It has been so  
3 long since I've read this paper, I would  
4 have to go back in to see what his  
5 intentions were.

6 BY MR. MICELI:

7 Q. Okay. But -- and we may be done  
8 with that one.

9 But would it be a fair statement to  
10 say that you did not do a risk assessment that  
11 attempts to assess a particular chemical like TCE  
12 with a particular disease and let's just say  
13 kidney cancer?

14 MS. PLATT: Objection.

15 BY MR. MICELI:

16 Q. You didn't do that for your report;  
17 correct?

18 MS. PLATT: Objection.

19 THE WITNESS: I've been very  
20 clear that I was not addressing causality  
21 in my reports. Instead, I was evaluating  
22 the nature of risk assessment guidance  
23 and their characteristics.

24 BY MR. MICELI:

1 Q. Yeah.

2 A. Including the purpose for which  
3 those guidance documents say the risk values are  
4 to be developed for, and causation is not a  
5 purpose for the development of the risk assessment  
6 values that I cover in my report.

7 Q. You actually, I think, jumped ahead  
8 to my next question, and I appreciate that.

9 You do not -- you do not attempt to  
10 use risk assessment to establish causation for  
11 anything --

12 MS. PLATT: Objection.

13 BY MR. MICELI:

14 Q. -- in your report?

15 A. I do not address causation in my  
16 report.

17 Q. Thank you.

18 And you don't address in your report  
19 that any of our experts -- any of plaintiffs'  
20 experts failed to establish mode or mechanism of  
21 action through valid scientific evidence, do you?

22 MS. PLATT: Objection.

23 THE WITNESS: Say that again,  
24 please.

1 BY MR. MICELI:

2 Q. Sure.

3 A. Or maybe another way.

4 Q. Yeah.

5 In your report, you don't point  
6 out -- I mean, you do name a couple of people in  
7 your report, but you don't specifically identify  
8 any of the plaintiffs group's various  
9 toxicologists to address in your report how they  
10 went about describing mechanism or mode of action  
11 in their toxicological review?

12 MS. PLATT: Objection.

13 THE WITNESS: You've used two  
14 terms that have technical meanings. One  
15 is "mechanism of action" and one is "mode  
16 of action." It's important to  
17 distinguish between the two.

18 BY MR. MICELI:

19 Q. Okay. Explain. What is mode of  
20 action?

21 A. Mode of action is a generalized  
22 conceptual understanding of the events that happen  
23 at the cellular or organ level of function.

24 Mechanistic understanding goes into

1 the particular biochemical molecular interactions  
2 that can occur as part of the mode of action.

3 Q. Okay. And do you address either of  
4 those two as they relate to the opinions of  
5 plaintiffs' experts in the reports that you  
6 reviewed?

7 MS. PLATT: Objection.

8 THE WITNESS: (Pause). I'm  
9 afraid I still don't understand.

10 BY MR. MICELI:

11 Q. Sure.

12 A. How technically you want an answer.

13 Q. Well --

14 A. What you mean by address.

15 Q. First of all, you don't identify in  
16 your report -- I'll deal with them separately.

17 You don't identify in your report  
18 anywhere that any of plaintiffs' experts failed to  
19 appropriately consider mode of action?

20 MS. PLATT: Objection.

21 THE WITNESS: (Pause).

22 Again, that's a difficult question to  
23 answer, and here's my answer.

24 In evaluating the mode of

1           action, it's important to demonstrate the  
2           linkage and the quantitative relationship  
3           between multiple mechanistic steps in the  
4           process.

5                         There are experts who have  
6           studied very specific molecular level  
7           steps. Some of those would include  
8           mitochondrial dysfunction, the  
9           unspecified production of cytokines and  
10          molecular signaling agents that result in  
11          the production of oxidative stress via  
12          the recruitment of cells, often as part  
13          of the normal cellular homeostatic  
14          mechanism.

15                        Recognizing that oxidative  
16          stress is a normal part of homeostatic  
17          mechanisms in, for example, the brain and  
18          that there is always some level of  
19          oxidative stress in part of the body.

20                        So in that, some of these  
21          experts have failed to demonstrate the  
22          biochemical linkage between the events  
23          that they've studied and the  
24          concentrations of parent compound,

1 metabolite, hypothesized metabolite,  
2 postulated metabolite that cause these.

3 It's hard for me as a  
4 scientist to accept that a mode of action  
5 has been put forward beyond put forward  
6 as a testable hypothesis in the  
7 evaluations of the plaintiffs' experts  
8 that I've read.

9 BY MR. MICELI:

10 Q. Okay. Thank you for that answer.

11 You have read the reports, and I  
12 think I understand what you just said in your  
13 answer.

14 However, when I read your report --  
15 and I'm going to use one of our experts as an  
16 example -- you do not say that Dr. De Miranda  
17 fails to appropriately address mode of action for  
18 mitochondrial dysfunction, oxidative stress that  
19 lead to Parkinson's disease at any point in your  
20 report, do you?

21 MS. PLATT: Objection.

22 THE WITNESS: I'd have to  
23 review my report to refresh myself with  
24 exactly what I said about Dr. De

1 Miranda's report.

2 BY MR. MICELI:

3 Q. Okay. When was the last time you  
4 read your report?

5 A. Two days ago.

6 Q. And you don't recall whether or not  
7 you address any experts specifically and the  
8 opinions they have with regard to mode of action  
9 of the VOCs we're dealing with in this case?

10 A. (Reviews document).

11 Q. I mean, that's just a question of a  
12 yes or no, and then if you want to go back and  
13 look at it, let me know.

14 A. Okay.

15 Q. Well, is it a yes or no? As we sit  
16 here today, you don't recall addressing any of our  
17 experts' --

18 A. No.

19 Q. -- evaluation of mode of action?

20 A. My report was restricted to risk  
21 assessment documents pertinent to -- to Camp  
22 Lejeune contamination as it may have occurred.

23 Q. Okay. So we've talked about the  
24 first part of Section 5, but would it be fair to

1 characterize the remainder of Section 5 as  
2 background information?

3 MS. PLATT: Objection.

4 THE WITNESS: That's too  
5 general a characterization.

6 BY MR. MICELI:

7 Q. Okay. Let's look at page 20 of your  
8 report, which was the beginning of Section 6.  
9 Title of this is "What is Risk Assessment?"  
10 Correct?

11 A. That's correct.

12 Q. Okay. And do you consider -- you've  
13 reviewed plaintiffs' experts' depo or experts'  
14 reports; correct?

15 A. Yes.

16 Q. Okay. Have you reviewed any rough  
17 drafts or final drafts of depositions of  
18 plaintiffs' experts?

19 A. Not to date.

20 Q. Okay. Do you consider what any of  
21 the plaintiffs' experts have done to be offering  
22 opinions with respect to regulatory risk  
23 assessment in the way that you do risk assessment  
24 or have done risk assessment for the last 34

1 years?

2 MS. PLATT: Objection.

3 THE WITNESS: That requires a  
4 subtle answer in that the work that has  
5 been done by Dr. De Miranda and others  
6 has certainly been intended to  
7 investigate the molecular mechanisms by  
8 which, for example, Parkinson's disease  
9 may become manifest in some animals at  
10 some doses and under some conditions of  
11 exposure.

12 Understanding the mode of  
13 action at least, and perhaps the  
14 mechanism of action, under those  
15 conditions helps risk assessors better  
16 understand the likelihood of the  
17 relationship of those data to the human  
18 condition.

19 BY MR. MICELI:

20 Q. Okay.

21 A. It's -- that's a long answer.

22 Q. I understand, but you said that  
23 understanding the mode of action, and perhaps the  
24 mechanism of action, under those conditions helps

1 risk assessors better understand the likelihood of  
2 a relationship between the data and the human  
3 condition.

4 But my question was: Do you --  
5 you're reading of the plaintiffs' toxicology  
6 experts, do you take -- do you understand or  
7 believe that their reports are intended to be risk  
8 assessments along the lines of how you have done  
9 risk assessments for the vast majority of your  
10 career?

11 MS. PLATT: Objection.

12 THE WITNESS: I understand  
13 the reports delivered by the plaintiffs'  
14 expert to be a different type of report  
15 than a regulatory risk assessment, which  
16 is what I have done.

17 BY MR. MICELI:

18 Q. Thank you.

19 A. They have done a different type of  
20 assessment and, therefore, the Bradford Hill  
21 criteria are more important to them than they are  
22 to me and my work.

23 Q. Thank you.

24 In the middle of page 21, you have

1 the risk assessment paradigm.

2 Do you see that?

3 A. I do.

4 Q. And when you look at that paradigm,  
5 you have the green circle that discusses Hazard  
6 Identification, Dose-Response Assessment, Exposure  
7 Assessment, Risk Characterization, and then the  
8 arrow moving to the right says "Risk Management  
9 Decisions"; right?

10 A. That's right.

11 Q. Okay. Is that an explanation or a  
12 pictorial description that the purpose of risk  
13 assessment is to guide regulatory and policy risk  
14 management decisions?

15 MS. PLATT: Objection.

16 THE WITNESS: Policy  
17 decisions are based on risk  
18 characterization and risk assessment as  
19 one component.

20 Risk assessments can be done  
21 for different purposes and risk  
22 management relies on information beyond  
23 risk assessment.

24 BY MR. MICELI:

1 Q. Okay. Thank you. Okay.

2 But we can agree that risk  
3 assessment is not the same as epidemiology?

4 MS. PLATT: Objection.

5 BY MR. MICELI:

6 Q. Correct?

7 A. Yes.

8 Q. And risk assessment is not  
9 equivalent to a Bradford Hill analysis?

10 MS. PLATT: Objection.

11 THE WITNESS: Yes.

12 BY MR. MICELI:

13 Q. And risk assessment is not a  
14 causation analysis?

15 MS. PLATT: Objection.

16 THE WITNESS: Yes.

17 BY MR. MICELI:

18 Q. Okay. And then at the top of page I  
19 believe it's 24 culminates in the -- not  
20 culminates, but is the title of Section 7 of your  
21 report that "Risk Assessment Is Not a Measure of  
22 True Risk"; right?

23 MS. PLATT: Objection. That's  
24 not the full title.

1 MR. MICELI: I understand it's  
2 not the full title, but I'm the master of  
3 my question.

4 THE WITNESS: Ask me the  
5 question again.

6 BY MR. MICELI:

7 Q. Okay. "Risk Assessment Is Not a  
8 Measure of True Risk"?

9 A. The regulatory risk assessment  
10 process that's pertinent to the matters of this  
11 case is not a true measure of risk.

12 Q. Thank you.

13 A. It is upper bound estimate of risk,  
14 and for cancer it's specified that the true risk  
15 may be as low as zero.

16 Q. Okay. The sentence that begins  
17 at -- well, it may be as low as zero, but true  
18 risk may also be higher than what's estimated;  
19 correct?

20 MS. PLATT: Objection.

21 THE WITNESS: We talked about  
22 this before when you asked me about the  
23 superlinear relationship, and the  
24 superlinear relationship has no bearing

1 on whether the risk computed according to  
2 an oral slope factor or inhalation unit  
3 risk is higher or lower.

4 The point of departure used to  
5 calculate the inhalation unit risk and  
6 the oral slope factor is typically the 95  
7 percent upper confidence bound or lower  
8 confidence bound on the dose that  
9 produces a slope factor.

10 This produces a slope factor  
11 which runs from -- which is defined as  
12 the slope of the line that runs from the  
13 point of departure, or the upper 95th  
14 confidence, the lower 95th confidence  
15 bound on dose, to produce the upper 95th  
16 confidence bound on slope factor.

17 So there's only a 5 percent  
18 chance that the slope factor would be  
19 above the 95th percent confidence limit  
20 by definition.

21 BY MR. MICELI:

22 Q. Right.

23 But we've already established a  
24 couple of times in this deposition that risk

1 assessment does not equal or is not the same as  
2 epidemiology; correct?

3 MS. PLATT: Objection.

4 THE WITNESS: Yes, we have.

5 BY MR. MICELI:

6 Q. Okay. And so if an epidemiology  
7 study or a meta-analysis of epidemiology studies  
8 demonstrates a higher risk than is depicted in the  
9 95th upper bound of a slope -- cancer slope  
10 factor, you wouldn't say to an epidemiologist,  
11 "That can't be true because look at my risk  
12 estimate"?

13 MS. PLATT: Objection.

14 BY MR. MICELI:

15 Q. My risk assessment.

16 That wouldn't happen, would it?

17 MS. PLATT: Objection.

18 THE WITNESS: I'm not an  
19 epidemiologist and can't make that  
20 comparison. Neither would I expect a  
21 reasonable toxicologist or risk assessor  
22 to ever attempt to make such a  
23 comparison.

24 BY MR. MICELI:

1 Q. Right.

2 They're two different things.

3 That's why; right?

4 MS. PLATT: Objection.

5 THE WITNESS: Repeat that

6 question, please.

7 BY MR. MICELI:

8 Q. Sure.

9 Risk assessment and epidemiology  
10 studies are very different investigations?

11 MS. PLATT: Objection. You've  
12 asked and answered this.

13 MR. MICELI: Okay. In every  
14 deposition I've been in thus far, you  
15 have told people: You're allowed to say  
16 object to the form, foundation, but  
17 you're not allowed to coach the witness  
18 that I've asked this before.

19 You can say object to the form  
20 or object to the form, foundation. You  
21 want us to play by the protocol, we're  
22 asking you to play by the protocol. We  
23 understand each other?

24 MS. PLATT: I understand.

1 MR. MICELI: Okay.

2 MS. PLATT: You've asked this  
3 question multiple times.

4 MR. MICELI: In different  
5 context.

6 MS. PLATT: You get the same  
7 answer every time.

8 MR. MICELI: No, I didn't, and  
9 I need to clarify because it's a very  
10 different discussion. We're discussing  
11 risk assessment not being a measure of  
12 true risk.

13 So can you go back to my last  
14 question, please?

15 BY MR. MICELI:

16 Q. Risk assessments and epidemiology  
17 studies are very different investigations;  
18 correct?

19 MS. PLATT: Objection.

20 THE WITNESS: Yes, they are  
21 in -- in several aspects, and I'm not  
22 qualified to answer the technical aspects  
23 of epidemiology. But risk assessments  
24 are done for other purposes than

1 epidemiology studies, and epidemiology  
2 studies are only one aspect that informs  
3 a risk assessment.

4 BY MR. MICELI:

5 Q. Okay. And the very first sentence  
6 of the very first paragraph in Section 7 reads:

7 "A toxicological risk assessment  
8 does not represent a true measure of risk."

9 Correct?

10 A. That is correct.

11 Q. Okay.

12 A. Further, the second sentence says:

13 "Instead, it applies certain health  
14 protective assumptions so that the true risk is,  
15 in all likelihood, well below the values derived  
16 in the risk assessment."

17 Q. Okay. On the page 25, your indented  
18 quoted sentence from EPA 2022a reads:

19 "'Reference values are not  
20 predictive risk values; they provide no  
21 information about risks at higher level -- higher  
22 exposure levels.'"

23 Correct?

24 A. Yes, that quote was taken from the

1 USEPA's document titled "ORD Staff Handbook for  
2 the Completion of IRIS Risk Assessments."

3 Q. Right.

4 And if you flip the page to page 27  
5 of your report, you quote this same phrase two  
6 other times at the top of page 27, the last  
7 sentence of the paragraph, first paragraph or --  
8 excuse me -- second paragraph on page 27 and then  
9 you put it in a box in quotes; correct?

10 A. I'll have to do the comparison  
11 whether it's exactly the same quote or not, but  
12 it's a sentiment that runs generally through not  
13 only this 2022 document but other documents in  
14 other reports as well.

15 Q. Okay. Are they the same quote?

16 A. Oh, I didn't -- I didn't check.

17 (Reviews document.)

18 Yes, that quote appears in those  
19 three instances.

20 Q. All right. Within two paragraphs --  
21 not two paragraphs. Yeah, two paragraphs of each  
22 other, you quoted the same language three times;  
23 right?

24 A. It's because it is important.

1 Q. It is important. It's "reference  
2 values are not predictive risk values," and I'm  
3 going to change it up a little bit.

4 Reference values are not intended to  
5 establish causation in any level; correct?

6 MS. PLATT: Objection.

7 THE WITNESS: I have not been  
8 asked to opine on causation but it's  
9 clear that reference values according to  
10 the USEPA do not provide information  
11 about risk at other concentrations at  
12 higher concentrations.

13 BY MR. MICELI:

14 Q. Okay. And they cannot be used to  
15 disprove causation either can they?

16 MS. PLATT: Objection.

17 THE WITNESS: The reference  
18 value, which is the subject of what we're  
19 talking about here is a reference value,  
20 is, generally speaking, the dose below  
21 which adverse effects are unanticipated.

22 So whether unanticipated is a  
23 prediction or not I won't go into, but  
24 when exposures are below the reference

1 doses, EPA is very clear, as is ATSDR, in  
2 their definition of the minimum risk  
3 level that exposures below those doses  
4 are anticipated to be without risk.

5 BY MR. MICELI:

6 Q. I know that they say they anticipate  
7 them, but they do not -- reference values do not  
8 and they are not intended to establish causation;  
9 correct?

10 MS. PLATT: Objection.

11 THE WITNESS: I think the  
12 purpose of the reference value has been  
13 very clearly presented by EPA and ATSDR.  
14 I don't wish to -- to supplant their  
15 definition with something that might not  
16 be relevant.

17 BY MR. MICELI:

18 Q. Well, you're the expert that's been  
19 identified in this case. So I have to ask you.  
20 Are you going to offer an opinion  
21 that reference values can establish causation?

22 MS. PLATT: Objection.

23 THE WITNESS: No, I am not  
24 opining on causation at all, and the EPA

1           has been very clear that these reference  
2           values cannot be used as estimators of  
3           risk or causation.

4 BY MR. MICELI:

5           Q.           Okay. And they cannot be used to  
6           refute causation; correct?

7                       MS. PLATT: Objection.

8                       THE WITNESS: EPA has not  
9           established that. EPA has not  
10          established these values neither has  
11          ATSDR established their values with any  
12          eye toward causation at all, as far as  
13          I'm aware.

14 BY MR. MICELI:

15          Q.           Okay. I understand that.

16                       My question to you as the expert  
17          identified by the Department of Justice is: Are  
18          you going to come into court and say that  
19          reference values can be used to refute causation?

20                       MS. PLATT: Objection.

21                       THE WITNESS: I don't know  
22          what I'll say if asked that in court.

23 BY MR. MICELI:

24          Q.           Well, I'm asking you today.

1 Will you say it today that reference  
2 values can refute causation?

3 MS. PLATT: Objection.

4 THE WITNESS: I've been very  
5 clear in my definitions that reference  
6 values have no place in the estimation of  
7 causation.

8 BY MR. MICELI:

9 Q. Thank you. Thank you. Thank you.  
10 All right. Let's go to page 31.

11 At the top of that page -- let you  
12 get a drink. I'll take one too. (Laugh).

13 At the top of page 31, the first  
14 sentence begins with:

15 "Second, ATSDR's exposure duration  
16 categories do not align with those of EPA."

17 You see that?

18 A. I see that.

19 Q. Okay. And then if you come down to  
20 about halfway down that paragraph, there's a  
21 sentence that begins:

22 "Because EPA defines 'chronic' as a  
23 human duration only as short as seven years, the  
24 application of these values to durations shorter

1 than seven years violates the application for  
2 which they were derived. This is problematic --  
3 excuse me -- because EPA deems chronic value to  
4 apply to exposure durations of seven years or  
5 longer, but ATSDR applies their chronic values to  
6 exposure durations as short as one year."

7 Did I read that correctly?

8 A. I believe that you did.

9 Q. Okay. If you hold your finger on  
10 that page and go back to page 22 with me.

11 Remember we talked about the Hallman  
12 paper that you cite to in this report?

13 A. We have not talked about that paper  
14 today.

15 Q. I believe we made reference to it  
16 earlier, but let me go back to it.

17 There's a sentence that says:

18 "Agencies develop risk values on the  
19 basis of science policy and quantitative methods,  
20 which can and do differ between agencies (Holman  
21 et al., 2017a and b). And different agencies (and  
22 different parts of the same agency, even) practice  
23 risk assessment differently."

24 Do you see that?

1           A.           I see that.

2           Q.           So it is possible for people to or  
3 for either persons or the ATSDR to use definitions  
4 and words with definitions different than what the  
5 EPA defines as chronic.

6                       MS. PLATT:  Objection.

7 BY MR. MICELI:

8           Q.           Agreed?

9                       MS. PLATT:  Objection.

10                      THE WITNESS:  I don't know  
11 how to answer that question, except to  
12 put it in the context of the word  
13 "chronic."

14                      The passage that we read  
15 before from page 31 -- was it 31?

16 BY MR. MICELI:

17           Q.           Yep.

18           A.           Indicates that ATSDR treats a  
19 chronic duration differently, much shorter than  
20 EPA duration.

21                      EPA treats a chronic duration or  
22 defines a chronic duration as a human exposure  
23 duration of from seven years to lifetime.

24                      ATSDR, on the other hand, uses the

1 same word to define chronic as an exposure  
2 duration of from one year to lifetime.

3 Both agencies develop risk  
4 assessment values that they call chronic, which is  
5 really troubling in this -- in this use.

6 Okay. So what ATSDR has done in  
7 some instances -- and what we have not discussed  
8 within the past three minutes -- is that ATSDR has  
9 actually taken chronic risk values developed by  
10 the USEPA for application to a duration of seven  
11 years to life and have applied that as a chronic  
12 duration, same name, to exposures that may happen  
13 of a duration from one year to life. That leaves  
14 a discrepancy in the duration of between one year  
15 and seven years.

16 ATSDR is very clear in their  
17 toxicological profiles for some chemicals of  
18 interest at Camp Lejeune that they have adopted or  
19 used -- I forget the technical word they've  
20 used -- but they have used there the chronic  
21 reference doses or reference concentrations from  
22 the USEPA as the ATSDR's MRL value.

23 So in that way they've, quote, used  
24 a chronic value to assess, quote, a chronic

1 exposure, but they have not considered the  
2 underpinnings of the value. In this way, ATSDR  
3 has for some chemicals of interest at Camp Lejeune  
4 used a risk value developed by another agency for  
5 a longer duration to assess a shorter duration by  
6 another agency, namely, ATSDR. That's a huge  
7 disconnect.

8 Q. Understood.

9 What we're saying is two different  
10 agencies use the same word and they mean two  
11 different things?

12 MS. PLATT: Objection.

13 THE WITNESS: I wouldn't put  
14 it that way at all.

15 BY MR. MICELI:

16 Q. Okay. All right. Now, from -- from  
17 pages 27 to 51 of your report -- it's 24 pages --  
18 you discuss risk assessment and quantitative  
19 methods; correct?

20 A. I'll have to verify that.

21 Q. Sure.

22 A. I'll accept that as perhaps an  
23 overgeneralization of the content of that section  
24 but --

1 Q. Okay.

2 A. -- for the purposes of today --

3 Q. Right.

4 A. -- it's acceptable.

5 Q. And what it does and what you've  
6 done in that section in discussing risk assessment  
7 and the quantitative methods is to educate on the  
8 process of risk assessment; correct?

9 MS. PLATT: Objection.

10 BY MR. MICELI:

11 Q. You're not trying to trick us, are  
12 you? You're explaining it?

13 MS. PLATT: Objection.

14 THE WITNESS: I have laid out  
15 some of the aspects of conservatism of  
16 the risk assessment supportive of the  
17 conclusions reached in my report and of  
18 my opinions.

19 BY MR. MICELI:

20 Q. Right.

21 And in doing so and in the  
22 discussion that we've had thus far, but  
23 particularly about that section of your report,  
24 we've come to the agreement that that does

1 not -- that process that you discuss here does not  
2 go to the issue of causation for any disease  
3 related to any of the chemicals at Camp Lejeune  
4 that are of interest in this litigation; correct?

5 MS. PLATT: Objection.

6 THE WITNESS: We've talked  
7 about that before, and there's one thing  
8 I would like to clarify relative to my  
9 answer to your question about would I or  
10 would not testify about the value of  
11 reference doses or reference  
12 concentrations or minimum risk levels in  
13 the issue of causation.

14 When an exposure is lower than  
15 the RFC, the RFD, or the MRL, risk is  
16 unlikely. Whether that can or cannot be  
17 used in causation is something that I  
18 can't address.

19 BY MR. MICELI:

20 Q. Okay.

21 A. I can only address that it's not  
22 there.

23 Now, the purpose of this multiple  
24 page section was to lay out and provide an

1 understanding of not only whether but how and to  
2 what extent risk assessment processes as practiced  
3 by EPA and ATSDR can overestimate the risk of a  
4 chemical.

5 And in overestimating the risk of a  
6 chemical, it's meaning that there is a margin of  
7 safety inherent in that risk value that they've  
8 come up with, and so that means that they can be  
9 extra sure or health protective when the exposures  
10 are below those values that risk has been avoided.

11 Q. Okay. But with regard to the actual  
12 proof of causation, whether it's at, above or  
13 below the reference value, you're not here to  
14 offer an opinion about causation in this  
15 litigation; correct?

16 MS. PLATT: Objection.

17 THE WITNESS: I am not  
18 offering any opinions on causation in  
19 this litigation.

20 BY MR. MICELI:

21 Q. Thank you.

22 I can write myself a note.

23 A. I'd like to take a break if that's  
24 all right.

1 MR. MICELI: Yeah. We can  
2 take a break. Sure. Thanks.

3 THE VIDEOGRAPHER: Off the  
4 record at 2:22.

5 (A recess was taken.)

6 THE VIDEOGRAPHER: Back on the  
7 record at 2:31.

8 BY MR. MICELI:

9 Q. Ready to continue?

10 A. I am.

11 Q. All right. I want to turn to page  
12 52 of your report very quickly, and Section 9 is  
13 titled "Hazard Quotation and Hazard Index Values."

14 Do you see that?

15 A. I do.

16 Q. All right. You've -- because you  
17 devote six pages of explanation about hazard  
18 quotients and hazard index, I have to ask some  
19 questions about it.

20 But is your discussion of this more  
21 informational again -- excuse me -- about the  
22 process of risk assessment and the product of risk  
23 assessments being, in part, hazard quotients and  
24 hazard indexes -- indices?

1 MS. PLATT: Objection.

2 THE WITNESS: Part of it was  
3 educational and there are other parts and  
4 components and reasons for the section,  
5 but the reason for this section, this  
6 particular section, Section 9, as well as  
7 Section 8, is to guide a further analysis  
8 of risk assessments and their point  
9 estimates, their risk values.

10 And what's not been done to  
11 date in the Public Health Assessment is  
12 that the numerical values that are  
13 presented in the Public Health Assessment  
14 have not been what I would call  
15 dissected.

16 We haven't evaluated the  
17 toxicological basis of the risk values  
18 speaking in terms of the hazard quotient,  
19 which is a ratio of the exposure, whether  
20 it's measured or estimated, to the  
21 acceptable limit shown in the first box  
22 on page 9. "HQ = E/AL."

23 So the exposures in Camp  
24 Lejeune can't be known. They have to be

1           estimated as according to what I  
2           understand from reading on background,  
3           the exposure reports, and knowing that  
4           there are no drinking water sampling data  
5           available prior to 1982, as is said in  
6           the Public Health Assessment.

7                       We have to estimate the  
8           exposures and the acceptable limit in the  
9           case of the ATSDR's Public Health  
10          Assessment are either ATSDR MRL values or  
11          EPA reference values, which would be  
12          reference dose values for orally  
13          encountered substances and reference  
14          concentration values for inhalation  
15          exposures.

16                      So we have another full  
17          section or two in the paper that defines  
18          how these risk values are developed, and  
19          that information plays into how we  
20          interpret hazard index and hazard  
21          quotient values, with the hazard index  
22          value being the sum of all the hazard  
23          quotient values for the chemicals in the  
24          mixture.

1                   But one point that's made is  
2                   that we need to recognize that the Public  
3                   Health Assessment is and is acknowledged  
4                   by ATSDR to be a screening level  
5                   assessment and, thus, in keeping with  
6                   ATSDR guidance, including that available  
7                   in the Public Health Assessment Guidance  
8                   Manual, screen value risk assessments  
9                   identify situations, exposures, and  
10                  science that require further evaluation.

11                  A part of the flaws in the  
12                  Public Health Assessment is that they  
13                  have overinterpreted the values used in  
14                  this screening analysis, including values  
15                  developed as hazard quotient values.

16                  So to understand what's  
17                  implied by hazard quotient value, we have  
18                  to know whether the exposure is measured  
19                  or estimated. Need to know the values of  
20                  the exposure. We need to know the  
21                  methods that were used when the exposure  
22                  was estimated. We need to know the  
23                  confidence that we have in the components  
24                  that went into that exposure estimation.

1                   We need to understand whether  
2                   the parameter values chosen for use in  
3                   the exposure model were central tendency  
4                   measures, meaning that they're most  
5                   likely, or if they're extreme values,  
6                   whether they're upper bound confidence  
7                   limits or lower bound confidence limits.

8                   Regarding the acceptable level  
9                   of exposure and taking the reference dose  
10                  as an example, we need to know what is  
11                  the actual effect that serves as the  
12                  basis for the risk value.

13                  Is it the number of dead mice,  
14                  for example, or is it the number of mice  
15                  that might show some subtle biochemical  
16                  change in a parameter that can only be  
17                  measured at the microscopic level whose  
18                  relationship to the adverse effect may or  
19                  may not be quantifiably known.

20                  Further, we need evaluate the  
21                  uncertainty factors, the quantifiable  
22                  uncertainty and the unquantifiable  
23                  uncertainty that accompanies the value,  
24                  the reference value, the reference dose

1           that's developed on the basis of that,  
2           through the conservative application of  
3           risk methods, which I am sure we will get  
4           to momentarily.

5 BY MR. MICELI:

6           Q.           Yep. What was my last question?

7           A.           Your last question was, was the  
8           purpose of this section intended as an educational  
9           piece.

10          Q.           Is that a yes or a no?

11                       MS. PLATT: Objection.

12                       THE WITNESS: It is an  
13           educational piece, but that's not the  
14           sole purpose. My explanation was of the  
15           purpose of the document.

16 BY MR. MICELI:

17          Q.           All right. Look at page 53 with me.

18          A.           Okay.

19          Q.           Okay? The second half of the  
20          paragraph that extends almost to the middle of the  
21          page that includes the ATSDR 2017a citation.

22                       Do you see that?

23          A.           I do.

24          Q.           Okay. And that's about six lines?

1 A. What's about six lines?

2 Q. That portion of the paragraph that  
3 starts with "However, the PHA" down to the bottom  
4 of the -- that paragraph.

5 A. (Reviews document.)

6 Q. You see that six lines?

7 A. I'm not being difficult. Where are  
8 you?

9 Q. I'm right -- right there where it  
10 starts with "However."

11 A. Oh, yes.

12 Q. Yeah. That's six lines where you  
13 discuss the PHA, the 2017a; correct?

14 A. That is the Public Health Assessment  
15 published by ATSDR 2017.

16 Q. Right.

17 A. Yeah.

18 Q. You devote six lines of this section  
19 to the Public Health Assessment in that portion of  
20 the 9.1; correct?

21 MS. PLATT: Objection.

22 THE WITNESS: This six-line  
23 section directly addresses the Public  
24 Health Assessment.

1 BY MR. MICELI:

2 Q. Okay. And then if you flip to page  
3 56, you have reference to the chronic duration  
4 reference values in ATSDR 2017a, tables 5A and B,  
5 and then you have an indented margin paragraph  
6 that extends two lines onto page 57. So a dozen  
7 or so lines.

8 Do you see that?

9 A. I see that.

10 MS. PLATT: Objection.

11 BY MR. MICELI:

12 Q. And you just gave me a five-minute  
13 explanation about everything that would need to be  
14 done at Camp Lejeune to figure out and determine  
15 additional information from the Public Health  
16 Assessment that was not described in your report;  
17 correct?

18 MS. PLATT: Objection.

19 THE WITNESS: The information  
20 that I was referencing should have been  
21 available in the public -- Public Health  
22 Assessment. The Public Health Assessment  
23 cites ATSDR's 2005 Public Health  
24 Assessment Guidance Manual in identifying

1           some of the additional evaluations that  
2           should have been conducted.

3 BY MR. MICELI:

4           Q.           I understand that, but what I'm  
5 trying to draw here is that we have five pages  
6 talking about hazard quotient and hazard index  
7 values that include, at best, 20 lines about the  
8 2017 health assessment.

9                       And you gave me a five-minute  
10 explanation about what else needs to be done to  
11 understand the findings of that health assessment,  
12 and your explanation that you gave me in this  
13 deposition is found nowhere in your report.

14                       MS. PLATT:   Objection.

15 BY MR. MICELI:

16           Q.           Can we agree that your explanation  
17 that you gave me moments ago is not included in  
18 your report?

19                       MS. PLATT:   Objection.

20                       THE WITNESS:   No.

21 BY MR. MICELI:

22           Q.           Okay.

23           A.           The explanation that I gave you is  
24 taken from references that are cited in my report

1 and are cited by ATSDR, as well as developed by  
2 ATSDR and referenced in the Public Health  
3 Assessment.

4 Q. Right.

5 And if I want to know what ATSDR has  
6 to say, I can go look at what ATSDR has said;  
7 right?

8 MS. PLATT: Objection.

9 THE WITNESS: I don't know  
10 what you mean by "what ATSDR said."

11 BY MR. MICELI:

12 Q. Well, you're interpreting some of  
13 ATSDR reports and explaining them slightly here in  
14 your report, and you gave me a longer explanation  
15 in this deposition.

16 And all I'm saying is: ATSDR has  
17 published reports that you and I can both go read;  
18 correct?

19 MS. PLATT: Objection.

20 THE WITNESS: I've referenced  
21 the published reports that are available  
22 from ATSDR.

23 BY MR. MICELI:

24 Q. Okay. Do you see -- in your review

1 of any of the plaintiffs' expert reports, did you  
2 see any expert that bases their opinions on hazard  
3 quotients or hazard indices from a regulatory --  
4 generated from a regulatory risk assessment?

5 MS. PLATT: Objection.

6 THE WITNESS: Multiple  
7 plaintiffs' experts -- including those as  
8 Hatten, Freeman, Costa, Felsher,  
9 Plunkett, and Gilbert -- have each  
10 referenced the Public Health Assessment  
11 in that the Public Health Assessment uses  
12 hazard index and hazard quotient values  
13 and presents itself as a screening value.

14 The public -- it's important  
15 to note that the Public Health Assessment  
16 has, quote, overstepped its bounds in  
17 drawing conclusions of risk from the  
18 conducting and presenting of a screening  
19 exercise, which ATSDR notes and  
20 identifies specifically as an exercise to  
21 identify sites, exposures, and conditions  
22 that warrant further evaluations.

23 BY MR. MICELI:

24 Q. Okay. Is your opinion or are you

1 going to offer an opinion that any of plaintiffs'  
2 experts rely solely upon the Public Health  
3 Assessment of 2017 in offering their opinions?

4 MS. PLATT: Objection.

5 THE WITNESS: I would have to  
6 read the plaintiffs' reports again,  
7 especially with that question in mind, to  
8 be able to answer it.

9 BY MR. MICELI:

10 Q. Okay. All right. If -- if the 2017  
11 health assessment is only one of several bases for  
12 their opinions or even all of their opinions,  
13 would you agree that -- well, strike that. I'm  
14 not even going to ask it that way.

15 As we sit here today, you said you  
16 would have to reread every one of their reports to  
17 determine how much value or reliance they put into  
18 the 2017 health assessment before you could answer  
19 my question?

20 MS. PLATT: Objection.

21 THE WITNESS: That is what I  
22 said because that was not one of the  
23 primary topics that I was keeping in mind  
24 as I read their reports.

1 BY MR. MICELI:

2 Q. Okay.

3 A. It has been some time since I've  
4 read their reports.

5 Q. Understood.

6 But the -- do you have enough  
7 recollection about plaintiffs' expert reports to  
8 recall that no plaintiffs' expert relies solely  
9 upon the 2017 ATSDR publication in rendering their  
10 opinions?

11 MS. PLATT: Objection.

12 THE WITNESS: I don't have  
13 recollection of that, as we sit here  
14 right now.

15 BY MR. MICELI:

16 Q. Okay.

17 A. Meaning to clarify, I don't have  
18 enough recollection to answer that question in the  
19 affirmative or the negative right now.

20 Q. Right.

21 Turn to page 70, please, of your  
22 report. Let me know when you're there with me.

23 A. Yeah.

24 Q. All right. That bottom paragraph

1 there --

2 A. Wait.

3 Q. Okay. I'm sorry.

4 A. Yeah. Page 70, bottom paragraph  
5 beginning "Another limitation"?

6 Q. Yes. Okay. Flipped my page too  
7 quickly.

8 In this paragraph, you discuss the  
9 Rosenfeld publication 2024; correct?

10 A. Yes.

11 MS. PLATT: Objection.

12 THE WITNESS: Yes, I do.

13 That's the topic of the paragraph.

14 BY MR. MICELI:

15 Q. Okay. And one of the limitations or  
16 one of the comments you make is that Rosenfeld and  
17 the other authors reference to the one in a  
18 million risk does not comport -- actually, where  
19 you say down towards the bottom:

20 "First, a '1 in a million de minimis  
21 risk value' is not a risk value recognized by EPA  
22 for Superfund sites including Camp Lejeune."

23 Do you see your sentence in that  
24 regard?

1 A. No, I don't see that.

2 Q. Okay.

3 A. Where is that?

4 Q. It is about seven up from the bottom  
5 starting on the right-hand side of the page.

6 Beginning -- sentence begins "First" comma and  
7 then it begins a quote.

8 MS. PLATT: On page 70?

9 THE WITNESS: No, I'm on page  
10 71. That explains a lot.

11 MR. MICELI: Thank you.

12 (Laugh).

13 THE WITNESS:

14 (Reviews document.)

15 Yeah, the sentence reads:

16 "First, a '1 in a million de  
17 minimis risk value' is not a risk value  
18 recognized by EPA for Superfund sites  
19 including Camp Lejeune."

20 BY MR. MICELI:

21 Q. Right.

22 And now Rosenfeld is not doing a  
23 risk assessment for purposes of EPA regulatory  
24 decision-making.

1 We can agree to that; right?

2 MS. PLATT: Objection.

3 THE WITNESS: I'm not sure we  
4 can agree to that.

5 Rosenfeld's purposes indicate  
6 that his goal was to present a novel way  
7 of looking at data.

8 BY MR. MICELI:

9 Q. Okay. You would disagree with  
10 Dr. Rosenfeld's mechanism or means of his  
11 investigation?

12 MS. PLATT: Objection.

13 THE WITNESS: I would  
14 disagree with some of the decisions that  
15 Dr. Rosenfeld and his coauthors have --  
16 have made in the paper.

17 BY MR. MICELI:

18 Q. Okay. Have you attempted to speak  
19 with him?

20 A. No.

21 Q. Have you -- have you written a  
22 letter to the editor of the journal?

23 A. No, I have not.

24 Q. Okay. I want to look at the

1 Rosenfeld paper for other purposes with you for  
2 one moment.

3 A. I would note that, regarding the  
4 letter to the editor, the only reason I'm aware of  
5 Rosenfeld is because of the activities in my case.  
6 I did not suggest to my attorneys nor did they  
7 suggest that I consider writing a letter to the  
8 editor.

9 Q. Okay.

10 A. Because the only reason I knew of  
11 Rosenfeld is from this case, I felt it would be  
12 inappropriate for me to write a letter to the  
13 editor regarding the study.

14 Q. Okay.

15 MS. PLATT: What number is  
16 this?

17 MR. MICELI: What's that?

18 MS. PLATT: What number  
19 exhibit?

20 MR. MICELI: 11. Is that  
21 correct? I'm just dealing with stickers.  
22 (Laugh).

23 (Document marked for  
24 identification as Lipscomb Exhibit 11.)

1 BY MR. MICELI:

2 Q. Okay. I'm going to hand you the  
3 Rosenfeld publication.

4 A. Uh-huh.

5 Q. That's the publication you were  
6 referring to; correct?

7 A. It appears to be so.

8 Q. Okay. Take your time if you need to  
9 familiarize yourself with it, but I want to start  
10 my questions with beginning at Section 2.2 of the  
11 Rosenfeld paper.

12 Are you there with me?

13 A. You asked me to familiarize myself  
14 with the paper.

15 Q. Sure.

16 A. So I don't know how you want to do  
17 that.

18 Q. Well, I just -- I want to ask you  
19 questions beginning at page 2.2. If there's  
20 something you feel you need to look at beforehand,  
21 you can take some time to do that.

22 A. (Reviews document.)

23 Q. Is it okay if I go to Section 2.2?

24 A. Yeah, Section 2.2.

1 Q. Yeah. It begins reading public --  
2 or excuse me.

3 "Multiple public health agencies  
4 have provided evidence that links exposure to  
5 chemicals -- to the chemicals found in Camp  
6 Lejeune drinking water to cancer (ATSDR, 2014b)."

7 Correct?

8 A. Right. I don't know what that  
9 reference is without looking.

10 Q. Okay. Let's look back and see.  
11 2014b is the --

12 A. I see it. Okay.

13 Q. -- "Health effects linked with  
14 trichloroethylene (TCE), tetrachloroethylene  
15 (PCE), benzene, and vinyl chloride exposure.  
16 Accessed November 2022."

17 A. Yeah.

18 Q. Okay. Then if you drop down  
19 farther, it says:

20 "In the past 15 years, the USEPA,  
21 the National Toxicology -- Toxicity Program, and  
22 the International Agency for Research on Cancer  
23 (IARC) have concluded that TCE is a human  
24 carcinogen."

1 Do you see that?

2 A. I see that.

3 I believe the author is referencing  
4 the National Toxicology Program.

5 Q. Right.

6 A. That's the NTP, not toxicity.

7 Q. Right.

8 Do you agree with the comment "TCE  
9 is a human carcinogen"?

10 A. In the context of this passage,  
11 which indicates that several agencies with  
12 different goals, missions, methods, policies, and  
13 interpretative methods have determined that a  
14 chemical is known, may be, possibly, or is a human  
15 carcinogen are the result of the evaluations that  
16 are conducted under conditions that differ from  
17 those that may have existed at Camp Lejeune.

18 So whether an agency has conducted  
19 -- has concluded, rather, under some unspecified  
20 conditions of exposure at some doses in some  
21 species, strains, and sexes a chemical is or may  
22 be carcinogenic is difficult to interpret relative  
23 to a given human exposure or the likelihood of  
24 cancer in human.

1 Q. Okay. Okay. My question was: Do  
2 you agree with the comment that "TCE is a human  
3 carcinogen"?

4 Is it possible to answer that one  
5 with a yes or no, or take the answer that you gave  
6 me?

7 MS. PLATT: Objection.

8 THE WITNESS: It's not  
9 possible to answer that with a yes or no  
10 because we have to understand, as I just  
11 said, the conditions of exposure, the  
12 doses, routes, species, sex, strains, and  
13 conditions of exposure that resulted in  
14 the effects that were noted in order to  
15 begin an evaluation of whether we can  
16 extrapolate those findings to humans.

17 BY MR. MICELI:

18 Q. Okay.

19 A. It is known that under some doses  
20 and some conditions of exposure that some  
21 chemicals can produce some types of tumors in some  
22 animals.

23 Q. In preparing to give your opinions  
24 in this case -- and can you go scroll up to that?

1           Okay. In preparing to give your  
2 testimony -- I was going to read that. (Laugh).  
3 I'm sorry.

4           Did you investigate the references  
5 here to determine under what circumstances, sexes,  
6 doses cancer was determined to be or that TCE was  
7 determined to be a carcinogen?

8           MS. PLATT: Objection.

9           THE WITNESS: In some cases  
10 yes and in some cases no. It's difficult  
11 to answer further because USEPA is not --  
12 not fully referenced there.

13 BY MR. MICELI:

14           Q.        Okay. The next sentence full,  
15 sentence reads:

16                    "There is ample evidence to  
17 demonstrate TCE exposure can cause cancer,  
18 specifically renal cell carcinoma."

19                    Do you see that?

20           A.        I see that.

21                    And this is an example of an  
22 interpretation and a conclusion reached by an  
23 author that bears further consideration.

24           Q.        Okay.

1           A.           I'm very familiar with the EPA's  
2 risk assessment for TCE, having received a gold  
3 medal for my contributions to that assessment and  
4 to with the background information available for  
5 renal cell carcinoma.

6                   The authors of the original studies  
7 of renal cell carcinoma -- and it's interesting  
8 that -- that this paper doesn't reference the  
9 cancer dose-response study used by the EPA to  
10 determine that TCE is carcinogenic, namely, the  
11 study by Sharbatel et al.

12                   These authors and others have  
13 indicated that TCE's renal cell carcinogenicity is  
14 a high dose effect. Some of the human exposures  
15 that resulted in the types of exposures to humans  
16 included occupational activities, including moving  
17 boiling vats of trichloroethylene and the dunking  
18 of hands into liquid trichloroethylene.

19                   These are not the types of exposures  
20 that can be anticipated for any human exposure  
21 today, even occupational settings.

22           Q.           All right. My question was, did I  
23 read that correctly, and you just gave me that  
24 explanation.

1 MS. PLATT: Objection.

2 BY MR. MICELI:

3 Q. Did I read that correctly?

4 MS. PLATT: Objection.

5 THE WITNESS: You read that  
6 correctly, and my point was to indicate  
7 that it's important to understand the  
8 background information behind this.

9 BY MR. MICELI:

10 Q. Right.

11 A. Just because an author says  
12 something in a peer-reviewed publication doesn't  
13 often provide the context behind the statement --

14 Q. Sure.

15 A. -- which is important.

16 Q. And you just gave us an explanation  
17 previously about boiling running vats of TCE.

18 You don't -- you don't cite anything  
19 in your report that talks about the epidemiology  
20 or the toxicology studies concerning boiling  
21 running vats of TCE, do you?

22 MS. PLATT: Objection.

23 THE WITNESS: No. That comes  
24 from the analysis that any reasonable

1 scientist would do to interpret  
2 statements like this made by an author.  
3 Those are statements made by the  
4 individuals that publish the underlying  
5 studies upon which the cancer risk  
6 assessment conducted by EPA and finalized  
7 in 2011 was developed.

8 BY MR. MICELI:

9 Q. Right.

10 But you don't -- you don't give any  
11 reference in your report about the high dose  
12 exposure to TCE being the result of bubbling  
13 boiling caldrons and running rivers of TCE as the  
14 high dose exposure you're referring to when you  
15 refer to renal cell carcinoma being a high dose  
16 toxicity --

17 MS. PLATT: Objection.

18 BY MR. MICELI:

19 Q. -- do you?

20 MS. PLATT: Objection. I'm  
21 going to step in here. If you're going  
22 to restate his testimony, do not add such  
23 exaggeration to it.

24 THE WITNESS: I have

1           indicated in my report that EPA authors  
2           and others have characterized the risk of  
3           renal cell carcinoma to humans as "a high  
4           dose effect."

5       BY MR. MICELI:

6           Q.           Right.

7           A.           That high dose effect as I  
8       researched that in the underlying studies and  
9       provided to you a description of the activities  
10      that covered those high dose exposures in the  
11      underlying studies.

12          Q.           Okay. The fact that TCE causes  
13      cancer at high doses, does that somehow suggest  
14      that TCE cannot cause cancer at lower doses?

15                      MS. PLATT: Objection.

16                      THE WITNESS:    Some  
17      information to answer that question is  
18      available from the animal studies and the  
19      studies with humans, which do indicate  
20      that at lower occupational exposures, the  
21      incidence of cancer renal cell carcinoma  
22      is not increased.

23                      It's important to understand  
24      toxicology and mode mechanism of action

1 to fully appreciate the impact that dose  
2 has on toxicity.

3 BY MR. MICELI:

4 Q. Which -- which studies are you  
5 referring to that demonstrate that low dose TCE  
6 does not cause renal cell carcinoma?

7 MS. PLATT: Objection.

8 THE WITNESS: Those -- in  
9 humans, those are epidemiology studies,  
10 and that question is best forwarded to  
11 Dr. Goodman.

12 BY MR. MICELI:

13 Q. Okay. They're not in your report,  
14 are they?

15 MS. PLATT: Objection.

16 THE WITNESS: I don't address  
17 epidemiology in my report.

18 BY MR. MICELI:

19 Q. And you don't address low dose TCE  
20 exposure's inability to cause renal cell  
21 carcinoma, do you?

22 MS. PLATT: Objection.

23 THE WITNESS: I have not been  
24 asked to do that, but part of my report

1           that is pertinent to answering that  
2           question is very clear that we need to  
3           understand the dose-response relationship  
4           for all toxicities because, as is  
5           understood by toxicologists, as the dose  
6           increases, several things occur.

7                     The likelihood of an effect  
8           occurs, the number of individuals in a  
9           population exposed at that level occurs,  
10          and, importantly, the severity of the  
11          toxicity increases.

12                    The severity of the toxicity  
13          can be a function of a couple of things.  
14          One can be the recruitment of more modes  
15          of action into the operation of  
16          toxicology.

17                    In that increasing doses can  
18          increase the number of modes of action of  
19          operative -- increase the number of modes  
20          of action operative, it follows that a  
21          reduction in the exposure would decrease  
22          the number of modes of action operative,  
23          would decrease the severity of the  
24          insult, and decrease the number of

1 individuals in a population that would  
2 respond.

3 MR. MICELI: Okay. Can you  
4 tell me what my last question was?

5 (The reporter read the record  
6 on page 207 lines 19-21.)

7 BY MR. MICELI:

8 Q. You didn't give me a yes or no. You  
9 gave me that two-page explanation.

10 A. It's not a yes-or-no question.

11 MS. PLATT: Objection. Just  
12 as you have noted multiple times that  
13 you're the master of your own question,  
14 Dr. Lipscomb is the master of his answer  
15 and he is answering your question.

16 MR. MICELI: Is that an  
17 objection?

18 MS. PLATT: That is an  
19 objection.

20 MR. MICELI: Okay. Object to  
21 form.

22 BY MR. MICELI:

23 Q. What study shows -- what toxicology  
24 study shows TCE doesn't cause a kidney cancer --

1 doesn't cause kidney cancer at low doses?

2 A. The dose-response relationship  
3 between human exposures and renal cell carcinoma  
4 has been estimated in studies cited by the EPA and  
5 in studies cited here. Those are epidemiology  
6 studies, and so that's a question better asked of  
7 Dr. Goodman.

8 Q. Can you name one for me today?

9 MS. PLATT: Objection.

10 THE WITNESS: I can't.

11 BY MR. MICELI:

12 Q. Okay. If you could, please turn to  
13 page 77 of your report.

14 I want to refer you to page 76  
15 first.

16 At the top of page 76, the very  
17 first line, do I read this correctly:

18 "The Plaintiffs' Experts  
19 inappropriately assume the mixture causes an  
20 interaction."

21 Did I read that correctly?

22 MS. PLATT: Objection.

23 BY MR. MICELI:

24 Q. Top of the page.

1 A. What page are you on?

2 Q. 76.

3 A. No, you did not read that correctly.  
4 That does not appear on page 76.

5 Q. Excuse me. 77. I apologize.

6 MS. PLATT: Could you read it  
7 one more time, please?

8 MR. MICELI: Sure.

9 BY MR. MICELI:

10 Q. "The Plaintiffs' Experts  
11 inappropriately assume the mixture causes an  
12 interaction."

13 Do you see that statement?

14 A. I see that and I stand behind it.

15 Q. Okay. Which plaintiffs' experts  
16 assume that the chemicals of interest at Camp  
17 Lejeune create a mixture in which the toxicity is  
18 greater than the sum of toxicities of the  
19 individual chemicals?

20 A. I will read from my report at the  
21 very top of page 76 where it says:

22 "Several Plaintiffs' Experts,  
23 including Drs. Hatten, Bird, Gondek, Felsher, Hu,  
24 and De Miranda, inappropriately assume that the

1 chemicals of interest at Camp Lejeune create a  
2 mixture that in which the toxicity is greater than  
3 the additive sum of the toxicities of the  
4 individual chemicals."

5 Q. Okay. Where in their reports did  
6 you find that?

7 A. I would have to go back through  
8 their reports to give you page and reference  
9 numbers.

10 Q. Okay. What you don't do here is you  
11 don't give us their page -- the page and line  
12 reference to their reports where you say they  
13 assume this?

14 MS. PLATT: Objection.

15 THE WITNESS: No. They're  
16 plaintiffs' reports.

17 BY MR. MICELI:

18 Q. I understand that. I understand  
19 that.

20 You do not cite to any plaintiffs'  
21 reports here?

22 MS. PLATT: Objection.

23 THE WITNESS: I do cite to  
24 plaintiffs' reports.

1 BY MR. MICELI:

2 Q. You don't cite to references in  
3 particular parts of their reports; correct?

4 MS. PLATT: Objection.

5 THE WITNESS: I don't see  
6 that on this page.

7 BY MR. MICELI:

8 Q. Okay.

9 A. I can't tell you that I haven't  
10 cited to page and paragraph in other parts of my  
11 report.

12 Q. My question is then: Do you -- is  
13 it your testimony that the plaintiffs' experts  
14 assume -- is it okay if I say synergy? Is that a  
15 term that is appropriate for what you're saying  
16 here?

17 A. It's an extremely technical term,  
18 and I'll ask you to define it.

19 Q. Well, I won't define it then --

20 A. Okay.

21 Q. -- because I'm not the technician  
22 here.

23 But you're saying that they assume  
24 an interaction that causes the toxicity to be

1 greater than the sum of toxicities for the  
2 individual chemicals; correct?

3 A. That's what that sentence says.

4 Q. Okay.

5 A. That's correct.

6 Q. Do plaintiffs' experts make that  
7 assumption to the exclusion of simply being an  
8 additive effect by adding the individual  
9 toxicities together?

10 MS. PLATT: Objection.

11 THE WITNESS: Many of the  
12 plaintiffs have in their reports verbiage  
13 that reads like synergy cannot be  
14 excluded.

15 BY MR. MICELI:

16 Q. Okay. So it's additive and synergy  
17 cannot be excluded; correct?

18 MS. PLATT: Objection.

19 THE WITNESS: That's what  
20 they say. Yet, the synergy that cannot  
21 be excluded is actually contraindicated  
22 by ATSDR for these chemicals in these  
23 exposures and in these pairs of  
24 interactions --

1 BY MR. MICELI:

2 Q. That's not my question.

3 A. -- in both their toxicological  
4 profiles and their interaction profiles, which are  
5 referenced by Dr. Gilbert.

6 Q. My question was: Do they say they  
7 are additive and possibly synergistic, or do they  
8 just say, "I assume they are synergistic"?

9 MS. PLATT: Objection.

10 THE WITNESS: I can't recall  
11 exactly the verbiage they used.

12 BY MR. MICELI:

13 Q. Right.

14 You can't recall it. One of the  
15 reasons you can't recall it is you don't recite it  
16 in your report; right?

17 MS. PLATT: Objection.

18 BY MR. MICELI:

19 Q. You don't cite their language? You  
20 don't repeat their language in your report?

21 A. Oh.

22 MS. PLATT: Objection.

23 THE WITNESS: That's correct.

24 I don't.

1 BY MR. MICELI:

2 Q. Okay. You don't.

3 So if -- if their testimony is that  
4 toxicity of multiple chemicals being exposed at  
5 one time that it is additive and possibly  
6 synergistic, they would not simply be assuming  
7 only synergy; correct?

8 MS. PLATT: Objection.

9 THE WITNESS: I don't know  
10 what they would assume.

11 The passages are very  
12 interesting in light of these experts  
13 citing to the Public Health Assessment,  
14 and the Public Health Assessment itself  
15 saying that synergy is not liable.

16 BY MR. MICELI:

17 Q. Which of the experts that you're  
18 referring to with this paragraph refer to synergy  
19 and the Public Health Assessment?

20 MS. PLATT: Objection.

21 THE WITNESS: Without going  
22 through the paper -- the reports, I  
23 believe it would be Drs. Hatten, Bird,  
24 Felsher, and that's what I can think of

1 from these.

2 BY MR. MICELI:

3 Q. Okay. Would you agree with this  
4 statement:

5 When exposed to more than one  
6 chemical, there's a potential for three types of  
7 interaction: additive, less than additive, or  
8 synergistic.

9 Is that an accurate statement?

10 MS. PLATT: Objection.

11 THE WITNESS: That's not an  
12 easy question to answer because you're  
13 not using the terms correctly. Those are  
14 technical terms used in mixtures  
15 assessment.

16 If you could define for me  
17 what an interaction is, I can answer that  
18 question.

19 BY MR. MICELI:

20 Q. You can't answer it -- without  
21 redefining or defining for you interaction, you  
22 can't say whether or not when multiple chemical  
23 exposures -- in multiple chemical exposures, the  
24 possibilities are additive, less than additive, or

1 synergistic?

2 MS. PLATT: Objection.

3 THE WITNESS: I don't recall  
4 that that's the way you read the sentence  
5 to begin with.

6 BY MR. MICELI:

7 Q. I'll rephrase the question.

8 Is it accurate to say in multiple  
9 exposure situations that the possibilities are  
10 additive, less than additive, or synergistic?

11 MS. PLATT: Objection.

12 THE WITNESS: Additive is not  
13 interaction. So no one knowledgeable in  
14 mixtures risk assessment would say that.

15 BY MR. MICELI:

16 Q. I didn't use the word "interaction"  
17 because you told me not to, Doctor.

18 I'm asking you the question: In  
19 multiple exposure situations, is it accurate to  
20 say the result could be additive, not additive, or  
21 synergistic?

22 MS. PLATT: Objection.

23 THE WITNESS: Your question  
24 is not phrased in a way that I can answer

1           it.  What do you mean by "multiple  
2           exposures"?

3  BY MR. MICELI:

4           Q.           More than one.  Multiple is a word  
5  that means more than one.

6                        Are you familiar with the word  
7  "multiple"?

8                               MS. PLATT:  Objection.

9  BY MR. MICELI:

10          Q.           Are you familiar with the word  
11  "multiple"?

12          A.           I'm familiar with a lot of words  
13  including "multiple."

14          Q.           Okay.

15          A.           Okay.  So you have not told me  
16  whether the chemicals were exposed simultaneously,  
17  in series, what was the nature of the exposure.  I  
18  can't answer the question.

19          Q.           Okay.

20          A.           You have not asked an answerable  
21  question.

22          Q.           Oh, I haven't.  Okay.

23                        Multiple exposures at one time.  
24  Somebody is exposed to PCE and TCE at the same

1 time.

2 A. Now you're talking.

3 Q. Okay.

4 A. Yeah, it's possible that the one  
5 chemical may decrease the toxicity of the other,  
6 there may be no interaction, or one chemical may  
7 increase the toxicity of the other ones.

8 Q. Okay. So you have additive, less  
9 than additive, or synergistic?

10 MS. PLATT: Objection.

11 THE WITNESS: Those are the  
12 three most commonly identified  
13 situations.

14 BY MR. MICELI:

15 Q. And the four --

16 A. There are five altogether.

17 Q. Okay.

18 A. One being much, much less than  
19 additive, which would be antagonistic, and the  
20 other one would be much, much more than additive,  
21 which I forget the term for that one.

22 Q. Okay. So, and if -- all right.

23 That's... Rosenfeld. Okay. Go back to that. I  
24 apologize.

1                   Would you agree with the comment  
2 that benzene has been demonstrated to increase the  
3 risk of multiple cancers?

4                   MS. PLATT:  Objection.

5                   THE WITNESS:  I'd have to  
6 know who said that and the basis they  
7 said that.

8 BY MR. MICELI:

9                   Q.           Okay.  It's a comment from  
10 Dr. Rosenfeld's paper.

11                   MS. PLATT:  Are you reading  
12 from somewhere?

13                   MR. MICELI:  Uh-huh.  It's at  
14 the bottom of page 4, first column.

15                   THE WITNESS:  
16 (Reviews document.)

17                   The sentence that says:  
18 "Exposure to benzene has also been  
19 demonstrated to increase the risk of  
20 multiple cancers"?

21 BY MR. MICELI:

22                   Q.           Yes, sir.

23                   A.           I agree that that's what  
24 Dr. Rosenfeld wrote.  The validity of that

1 statement would have to be verified by reading the  
2 references that he cited.

3 Q. Okay. And then on the next column  
4 about three lines down, it says:

5 "Studies have also linked benzene  
6 exposure to an increased risk of NHL."

7 Do you see that?

8 A. No.

9 Q. Okay. Right here.

10 A. I see it. I see it. Thank you.

11 Q. Okay.

12 A. "Studies have also linked benzene  
13 exposure to an increased risk of NHL,"  
14 non-Hodgkin's lymphoma.

15 I'd have to look at those studies to  
16 see what kind of studies they were and what the  
17 opinions were and how those studies were  
18 interpreted by Dr. Rosenfeld to indicate that  
19 there is a linkage.

20 Q. Okay. And then at the bottom of  
21 that column, it says:

22 "PCE exposure has been demonstrated  
23 to result in increased -- in an increased risk of  
24 bladder cancer."

1           A.           It's the same thing.  These  
2 sentences don't say whether he's talking about  
3 humans or animals or the conditions of exposure  
4 and whether the risk of bladder cancer was based  
5 on findings of bladder cancer or an effect that  
6 may be indicative in some circumstances of bladder  
7 cancer.  There's really not enough information  
8 presented to -- to reliably evaluate those  
9 sentences.

10           Q.           Okay.

11                       MS. PLATT:  Are you changing  
12 to a new topic soon?

13                       I need a bathroom break.

14                       MR. MICELI:  Yeah, that's  
15 fine.  We can stop now.  That's good.

16                       MS. PLATT:  All right.

17                       THE VIDEOGRAPHER:  Off the  
18 record at 3:13.

19                       (A recess was taken.)

20                       THE VIDEOGRAPHER:  Back on the  
21 record at 3:26.

22 BY MR. MICELI:

23           Q.           All right.  Are we ready to  
24 continue, Doctor?

1 A. Yes, sir.

2 Q. Thank you.

3 I want to go next to Section 13 of  
4 your report and page 81.

5 Are you there with me, Doctor?

6 A. I am.

7 Q. Okay. I need to check something out  
8 real quick. We've already marked your  
9 supplemental report. I need to continue to get  
10 some other things ready. I should already have  
11 it.

12 You had said at page 81, the top:  
13 "EPA's Ban of TCE Does Not Apply to  
14 Drinking Water Contamination at Camp Lejeune."

15 That's the title of Section 13;  
16 correct?

17 A. Yes, that's correct.

18 Q. Because the Office of Chemical  
19 Safety and Pollution Prevention is the division of  
20 EPA that -- that I guess was in charge of the  
21 Final Rule, is it your opinion that the ban does  
22 not apply to drinking water?

23 MS. PLATT: Objection.

24 THE WITNESS: It is not only

1           my opinion, it is the opinion of the  
2           USEPA's Office of Chemical Safety and  
3           Pollution Prevention that the ban does  
4           not apply to drinking water.

5 BY MR. MICELI:

6           Q.           When you say it doesn't apply to  
7           drinking water, what exactly do you mean?

8           A.           EPA's TSCA program has said that the  
9           ban does not apply to drinking water. That's what  
10          that statement means is that it does not apply to  
11          drinking water.

12          Q.           So we can put, say, TCE into the  
13          municipal water supplies of cities around the  
14          country?

15                           MS. PLATT: Objection.

16                           THE WITNESS: Why would you  
17          ask such a question as that?

18 BY MR. MICELI:

19          Q.           Well, if it's not -- if it doesn't  
20          apply to drinking water, is it okay for TCE to be  
21          in drinking water?

22          A.           No. The Office of Water regulates  
23          the concentration of TCE that can be in the water.

24          Q.           Okay. All right. Do you agree that

1 the ban was instituted due to serious health  
2 concerns?

3 MS. PLATT: Objection.

4 THE WITNESS: I would have to  
5 read the litigation to understand exactly  
6 why the ban was introduced.

7 BY MR. MICELI:

8 Q. When you say "the litigation," what  
9 litigation are you referring to?

10 A. That may have not been a right word.

11 EPA's ban of TCE by TSCA is what I  
12 was referring to.

13 Q. Okay. I'm going to show you what I  
14 marked as Exhibit -- it's clean. It's just not  
15 one -- it's one that has a binder and not a  
16 staple.

17 (Document marked for  
18 identification as Lipscomb Exhibit 12.)

19 MS. PLATT: I apologize. What  
20 is the number of that one?

21 MR. MICELI: 12 I believe.

22 MS. PLATT: Thank you.

23 BY MR. MICELI:

24 Q. Okay. If you could, please direct

1 us in the -- you understand the rulemaking process  
2 and what a Final Rule is; correct?

3 MS. PLATT: Objection.

4 THE WITNESS: To some extent.

5 BY MR. MICELI:

6 Q. Okay. There's -- there's a proposed  
7 rule, there's a period of public comment, and then  
8 there's a Final Rule; correct?

9 A. Yeah. To best of my understanding,  
10 yeah.

11 Q. Okay. Were you part -- did you have  
12 any part when you were at EPA in rulemaking?

13 A. I don't know what you mean by "any  
14 part."

15 Q. That's a fair concern. Poor  
16 question.

17 Did you have any direct involvement  
18 in presenting or providing materials to EPA to  
19 justify a Final Rule? That you were aware of.

20 A. I was certainly involved in the  
21 TCE's original risk assessment under the IRIS  
22 program in 2011. That program and the risk values  
23 from that assessment were used in the TSCA 2020  
24 risk evaluation and, therefore, into the Final

1 Rule for TCE. To the extent that I had  
2 involvement in developing the 2011 IRIS risk  
3 assessment for TCE is the closest I can come to  
4 answering in the affirmative.

5 Q. Okay. Have you reviewed this Final  
6 Rule document in the past?

7 A. I have.

8 Q. Okay. When was the last time you  
9 reviewed it?

10 A. During the development of my report,  
11 probably as recently as developing my response to  
12 Dr. Bird's supplemental report.

13 Q. Okay. Do you remember when the  
14 first time was that you reviewed the Final Rule?

15 A. Well, given this Final Rule came out  
16 in December, it couldn't have been much before  
17 that.

18 Q. Okay. If you don't mind, look back  
19 at your references with me for a second. The  
20 references would be Exhibit 5.

21 And if you could, look -- look there  
22 and see if you see where you list this Final Rule  
23 on materials that you include as references to  
24 your initial report.

1           A.           (Reviews document.)

2                        I don't see the report referenced,  
3 but it was certainly in my purview of knowledge  
4 from my activities.

5                               (Document marked for  
6                        identification as Lipscomb Exhibit 13.)

7 BY MR. MICELI:

8           Q.           Okay. And while you were reviewing  
9 that, just for completeness, I marked as Exhibit  
10 13 the PCE Final Rule, which came out the next  
11 day.

12                               I didn't see that on your reference  
13 material either.

14           A.           No, I don't believe that the PCE ban  
15 was part of my original report. It was part of my  
16 supplemental report which references, I believe,  
17 the PCE ban and the TCE ban as published in the  
18 Federal Register.

19           Q.           Right.

20                               But your report -- your initial  
21 report at page 81 in the title says the "EPA's Ban  
22 of TCE Does Not Apply to Drinking Water  
23 Contamination at Camp Lejeune," but if you review  
24 that section, I don't see in here where you

1 reference even by way of a parenthetical of EPA  
2 2024 or by page number that you actually reference  
3 anything that was said by or in the Federal  
4 Register of the Final Rule.

5 Did I miss something? Can you point  
6 me to that?

7 A. (Reviews document.)

8 I don't see a reference to the Final  
9 Rule, but I do see a reference to the final risk  
10 evaluation EPA published in 2020.

11 Q. Right. I did see that, but I didn't  
12 see the Final Rule.

13 Can you point to me in the Final  
14 Rule where EPA states that this ban excludes  
15 drinking water?

16 A. I can. You will have to give me  
17 some minutes to find the exact passage.

18 Q. Okay.

19 A. It would be easier to search  
20 electronically, if that's possible.

21 Q. Do you want to take a quick break  
22 and do that?

23 MS. PLATT: That's fine with  
24 us.

1 THE WITNESS: Can we do that?

2 MR. MICELI: Sure.

3 THE VIDEOGRAPHER: Off the  
4 record at 3:37.

5 (A recess was taken.)

6 THE VIDEOGRAPHER: Back on the  
7 record at 3:45.

8 BY MR. MICELI:

9 Q. Okay. Have you had the opportunity  
10 to review both electronically and I guess on paper  
11 the --

12 A. Yeah, I did look --

13 Q. -- Final Rule?

14 A. I did look at the Final Rule. Can  
15 you repeat the question?

16 Q. Sure.

17 Can you show us where in the Final  
18 Rule there's a specific exclusion for drinking  
19 water?

20 A. The Final Rule evaluates drinking  
21 water, which I had highlighted in a passage on the  
22 computer that I returned to Ms. Ellison.

23 Q. Okay.

24 A. And I didn't write the page number

1 down.

2 MS. ELLISON: I still have it  
3 highlighted. I haven't touched it.

4 THE WITNESS: Okay.

5 MS. ELLISON: Let me have you  
6 confirm that this is what you have.

7 THE WITNESS:

8 (Reviews document.)

9 That's -- that's it. I can't  
10 see the page number, but you could scroll  
11 up and identify that maybe.

12 MS. PLATT: 102583.

13 BY MR. MICELI:

14 Q. All right.

15 A. Okay. What I found in the Final  
16 Rule and regulation is on page 102583 the middle  
17 column.

18 Q. Yep.

19 A. It is addressed in the first full  
20 paragraph that begins:

21 "The water screening requirement  
22 that EPA is finalizing follows the methodology in  
23 the 1992 guidance," etc.

24 It follows down:

1            "This screening level is specific to  
2 TSCA, to regulate unreasonable risk to workers  
3 performing wastewater disposal that are exposed to  
4 TCE. This differs from maximum contaminant levels  
5 which regulate public water systems under a  
6 different federal statute and do not address  
7 exposures to TCE through wastewater."

8            It further follows that in the EPA  
9 2020 risk assessment that serves as the basis for  
10 this regulation that drinking water was not one of  
11 the conditions of exposure that were evaluated in  
12 the assessment, and that document further  
13 specifies that wastewater -- that drinking water  
14 is not covered by the TSCA evaluation.

15           Q.            Okay. You started the first part  
16 talking about the what's on page 102 --

17           A.            583.

18           Q.            -- 583 and then you segued into what  
19 was stated in the 2020 assessment.

20                        And what I want to know is: Is  
21 there a specific exclusion where it says drinking  
22 water is excluded from the TCE ban?

23                        MS. PLATT: Objection.

24 BY MR. MICELI:

1 Q. Is that in the Final Rule?

2 MS. PLATT: Objection.

3 THE WITNESS: Whether  
4 specific verbiage is in the Final Rule is  
5 a difficult question to answer, and it  
6 presumes that the sentiment by the  
7 specific verbiage that you state may or  
8 may not be contained in the Final Rule.

9 I think the Final Rule is very  
10 clear in separating the TSCA evaluation  
11 from the Office of Water's regulation of  
12 TCE in water.

13 BY MR. MICELI:

14 Q. Okay. All right. Turn with me to  
15 page 102574. Okay? Let me know when you're there  
16 with me.

17 A. Okay.

18 Q. Okay. At the bottom of that second  
19 column, so middle text, there's a paragraph that  
20 begins two lines up that says "Additionally.

21 Do you see that?

22 A. I see that.

23 Q. Okay. It says:

24 "Additionally, to the extent that

1 the rule reduces the amount of TCE in drinking  
2 water systems and thereby exposures to populations  
3 using those drinking water sources, there could be  
4 potential health-related benefits related to  
5 improved drinking water quality that EPA was  
6 unable to quantify."

7 Did I read that correctly?

8 A. You did, but I don't understand how  
9 the rule reduces the amount of TCE in drinking  
10 water.

11 Q. Well, it doesn't say that it does.  
12 It says "to the extent that the rule reduces the  
13 amount of TCE in drinking water."

14 It's open to the possibility; right?

15 MS. PLATT: Objection.

16 THE WITNESS: I don't know  
17 the answer to that.

18 BY MR. MICELI:

19 Q. Okay. EPA is less than clear to you  
20 here then?

21 MS. PLATT: Objection.

22 THE WITNESS: EPA is clear to  
23 me in this passage that they are not  
24 regulating under TSCA the amount of TCE

1 present in the drinking water.

2 BY MR. MICELI:

3 Q. Okay. Under -- if you go to the  
4 first column on that page 50 or -- excuse  
5 me -- 102574 under the paragraph that starts, just  
6 after Reference 5. The sentence that starts right  
7 after Reference 5. If you see the Reference 5 in  
8 the close paren period.

9 Do you see where I am, sir?

10 A. No.

11 Q. Okay. It says:

12 "The actions in this Final Rule are  
13 expected to achieve health benefits for the  
14 American public, some of which can be monetized  
15 and others that, while tangible and significant,  
16 cannot be monetized due to data and methodology  
17 limitations."

18 MS. PLATT: Sorry. Where are  
19 you at?

20 MR. MICELI: (Indicates). 5.  
21 Right here. The top of that.

22 MS. PLATT: Okay. Do you see  
23 where he's at, Dr. Lipscomb?

24 THE WITNESS: I do.

1 BY MR. MICELI:

2 Q. Okay. And then it goes on to state  
3 that:

4 "The monetized benefits of this rule  
5 are approximately \$22.9 million to \$23.2 million  
6 annualized over 20 years at a 2% discount rate,  
7 \$18.2 million to \$18.3 million annualized over 20  
8 years at 3%, and \$8.7 million to \$8.9 million  
9 annualized over 20 years at 7% -- at a 7% discount  
10 rate."

11 Do you see that?

12 A. I see that.

13 Q. Okay. And these are the benefits to  
14 the American public, the cost savings of  
15 healthcare related to the problems that are caused  
16 by TCE causing cancers; correct?

17 MS. PLATT: Objection.

18 THE WITNESS: I wouldn't say  
19 it that way. I think you've been a  
20 little bit broad with that.

21 This is a TSCA regulations and  
22 it applies mostly to the working public.

23 Further, it's not clear that  
24 EPA/TSCA evaluated the cancer risk to

1           anybody other than those that worked  
2           directly with actual TCE.

3 BY MR. MICELI:

4           Q.           Okay. That's what you take the  
5 statement to mean when they state there in the  
6 first column that "The actions in this Final Rule  
7 are expected to achieve health benefits for the  
8 American public," you take that to mean only those  
9 people in the American public who work directly  
10 with TCE?

11                           MS. PLATT: Objection.

12                           THE WITNESS: Interpreting  
13 that passage within the context of this  
14 Final Rule regulating workplace exposures  
15 to TCE, I think it's clear that the  
16 American public they're talking about is  
17 the worker public.

18 BY MR. MICELI:

19           Q.           Okay. And then if you go back to  
20 that second column, come down to here.  
21 (Indicates). There's a sentence that begins  
22 "Several."

23                           Do you see that?

24           A.           Right.

1 Q. "Several newer epidemiological  
2 studies have found an association between TCE  
3 exposure and neurodegenerative disorders such as  
4 amyotrophic lateral sclerosis and Parkinson's  
5 disease."

6 You see that?

7 A. I do see that.

8 And I'll point out that the  
9 reference in other documentation has led me to  
10 understand that the newer epidemiological studies  
11 refers to studies that were published since EPA's  
12 2011 IRIS risk assessment for trichloroethylene  
13 and before EPA's 2020 TSCA evaluation.

14 So while they are newer studies,  
15 that does not mean that they were unavailable for  
16 evaluation during the TSCA evaluation.

17 Q. Are you saying that as a -- because  
18 reference number 1 is the November 2020 TCE EPA  
19 risk evaluation?

20 MS. PLATT: Objection.

21 THE WITNESS: That is one  
22 reason I am saying that.

23 BY MR. MICELI:

24 Q. Okay. All right. We're going to

1 move on a little bit.

2 Let's take a look at your  
3 supplemental report. That's Exhibit 4.

4 I think I got a little bit ahead of  
5 myself when I was questioning you earlier.

6 Do you have your supplemental report  
7 in front of you?

8 A. I do.

9 Q. And I'm going to start at Section  
10 2.1 of your supplemental report. The first  
11 sentence of that says -- do you pronounce the TSCA  
12 "TSCA"?

13 A. TSCA.

14 Q. "TSCA's evaluation of TCE  
15 specifically excluded exposure via drinking  
16 water."

17 And there's no cite there, and  
18 that's why I asked if you could point to the  
19 specific exclusion that is referenced that  
20 specifically excluded language that was in your  
21 supplemental report.

22 We've already discussed that. So I  
23 want to look here for one second at this -- this  
24 language is.

1                   When you cite, you cite to the EPA  
2                   2020 language that because "drinking water  
3                   exposure pathway for trichloroethylene is  
4                   currently addressed in Safe Drinking Water  
5                   Act -- in the [Safe Drinking Water Act] regulatory  
6                   analytical process for public water systems, EPA  
7                   is not evaluating exposures to the general  
8                   population from the drinking water exposure  
9                   pathway in the Risk Evaluation for  
10                  trichloroethylene under TSCA."

11                  That's from the 2020 TCE evaluation;  
12                  correct? Or assessment.

13                  MS. PLATT: Objection.

14                  THE WITNESS: Yes.

15                  BY MR. MICELI:

16                  Q.            That's what you're quoting from?

17                  A.            Yes.

18                  Q.            Okay. And then you end that  
19                  paragraph by saying:

20                                "This is further clarified in the  
21                                Final Rule (89 Fed. Reg. 102568-102635)," which is  
22                                the entirety of the Final Rule; correct?

23                  A.            I can check if you don't mind.

24                  Q.            Yeah, if you don't mind look. I

1 mean, I think it is. I just want to make sure  
2 we're -- I don't want to misstate something, but  
3 102568 is the first page and actually by my  
4 count --

5 MS. PLATT: It's Exhibit 12.

6 THE WITNESS: Hmm?

7 MS. PLATT: Exhibit 12.

8 BY MR. MICELI:

9 Q. I don't even go as high as what  
10 you've cited to.

11 A. (Reviews document.)

12 What was your question?

13 Q. What you cite to, the 89 Fed. Reg.  
14 102568 to 102635, that second number is higher  
15 than the number of pages I gave you, isn't it?  
16 (Laugh).

17 A. No.

18 Q. It's not?

19 A. No.

20 Q. You have 1025 -- 102635?

21 A. I do.

22 Q. You mind if I look at your exhibit  
23 for a second?

24 A. Certainly.

1 MS. PLATT: It's also on mine.

2 MR. MICELI: Okay. Well, it  
3 wasn't on mine for some reason. I  
4 cheated myself.

5 BY MR. MICELI:

6 Q. So you cite to the entirety of  
7 the -- of the Final Rule; correct?

8 A. Yes.

9 Q. Okay. In the Final Rule, it doesn't  
10 have the language of a specific exclusion for  
11 drinking water?

12 MS. PLATT: Objection.

13 BY MR. MICELI:

14 Q. Can we agree with that?

15 MS. PLATT: Objection.

16 THE WITNESS: The Final Rule  
17 is based on the risk evaluation of 2020,  
18 and in 2020 there is specific language  
19 that says drinking water is not one of  
20 the -- one of the conditions of use  
21 evaluated.

22 BY MR. MICELI:

23 Q. Okay.

24 A. And as I indicated before, reading

1 the passage from one of those pages, it's clear  
2 that TSCA differentiates the evaluation of risk in  
3 publicly owned treatment works from the risk from  
4 water by specifically differentiating their values  
5 from maximum contaminant level values.

6 Q. Okay. The maximum contaminant level  
7 values -- and I think we went over this possibly  
8 earlier this morning -- are not meant to imply  
9 causation; correct?

10 A. That is --

11 MS. PLATT: Objection.

12 THE WITNESS: That is  
13 correct.

14 BY MR. MICELI:

15 Q. All right. Let's then look at  
16 Section 1 of your supplemental report.

17 Okay. And you might want to keep  
18 that Final Rule handy because we're going to be  
19 going back and forth to it.

20 You said: "Dr. Bird Improperly  
21 Relied on a Press Release and Disregarded the  
22 Underlying Scientific Determination."

23 That's the title of Section 1;  
24 correct?

1 A. That is correct.

2 Q. All right. You claim:

3 "Dr. Bird has been misled by  
4 statements made by EPA's Press Office (EPA Press  
5 Office, 2024). A scientist would not rely upon a  
6 press release to reach scientific conclusions."

7 That's your comment; correct?

8 A. That's a passage read from my  
9 report.

10 Q. Right. That you authored?

11 A. That I authored.

12 Q. Okay. "There is no evidence that  
13 EPA's Press Release was reviewed or endorsed by  
14 scientists knowledgeable in toxicology or  
15 medicine."

16 Again, that's a correct statement  
17 from your report?

18 MS. PLATT: I would just note  
19 the beginning of that sentence starts  
20 "Here, there is."

21 BY MR. MICELI:

22 Q. Oh. "Here, there is no evidence  
23 that EPA's Press Release was reviewed or endorsed  
24 by scientists knowledgeable in toxicology or

1 medicine."

2 Correct?

3 A. That's correct.

4 Q. All right. In your time at EPA, was  
5 it the practice of EPA to put out false  
6 information in press releases?

7 MS. PLATT: Objection.

8 THE WITNESS: I can't answer  
9 questions about the truth or falseness or  
10 potentially misleading content of press  
11 releases.

12 MR. MICELI: Okay. I'm going  
13 to mark as Exhibit 14 the EPA Press  
14 Release.

15 It feels so good to get rid of  
16 all this paper.

17 (Document marked for  
18 identification as Lipscomb Exhibit 14.)

19 BY MR. MICELI:

20 Q. All right. And this is the press  
21 release you're referring to when you make the  
22 comment about Dr. Bird inappropriately relying  
23 upon or being misled by a press release; correct?

24 A. This is the press release of which I

1 spoke.

2 Q. Okay. And on the second page of  
3 that press release, first full paragraph, it says:

4 "TCE is an extremely toxic chemical  
5 known to cause liver cancer, kidney cancer, and  
6 non-Hodgkin's lymphoma."

7 Correct?

8 A. That's what the press release says.

9 Q. Okay. And do you disagree with that  
10 statement?

11 A. I have not been asked nor have I  
12 developed opinions on causation.

13 Q. Right. Okay.

14 So you don't have an opinion on  
15 whether or not the EPA was accurate in making this  
16 statement?

17 MS. PLATT: Objection.

18 THE WITNESS: There are  
19 multiple points in that statement that  
20 bear scrutiny.

21 BY MR. MICELI:

22 Q. Okay.

23 A. This is the only document that I  
24 have seen that uses the terms "known to cause

1 cancer."

2 Q. Okay. Would you hold the same  
3 opinion if it said known to be associated with  
4 liver cancer, kidney cancer, and non-Hodgkin's  
5 lymphoma?

6 MS. PLATT: Objection.

7 THE WITNESS: Associated is  
8 another technical term in science and in  
9 epidemiology. So I can't answer  
10 questions about epidemiology.

11 BY MR. MICELI:

12 Q. Okay. As a toxicologist, if we  
13 substituted the word "association" for "cause"  
14 under known to be associated with rather than  
15 known to cause liver cancer, kidney cancer, and  
16 non-Hodgkin's lymphoma, as a toxicologist, would  
17 you disagree with that?

18 MS. PLATT: Objection.

19 THE WITNESS: I have not been  
20 asked to opine on causation as part of my  
21 work in this case.

22 BY MR. MICELI:

23 Q. Understand, but I'm asking a  
24 different question.

1           Because you're commenting on what  
2 Dr. Bird may have relied upon or commented upon, I  
3 wanted to ask -- I need to ask you these questions  
4 as a toxicologist and a risk assessor about this  
5 comment.

6           If it were known to be associated  
7 with versus known to cause liver, kidney, and  
8 non-Hodgkin's lymphoma cancers, would you hold the  
9 same opinion of Dr. Bird's comment?

10           MS. PLATT:   Objection.

11           THE WITNESS:   That's a long  
12 question and hard for me to understand  
13 the multiple different working parts of  
14 it. Can you simplify that for me,  
15 please?

16 BY MR. MICELI:

17           Q.           Sure.

18           If Dr. Bird simply said that TCE is  
19 an extremely toxic chemical known to be associated  
20 with liver cancer, kidney cancer, and  
21 non-Hodgkin's lymphoma, could you agree with that  
22 statement as a toxicologist?

23           MS. PLATT:   Objection.

24           THE WITNESS:   Again, I have

1 not been asked to look at causality or  
2 associations in this case.

3 As a toxicologist, if I were  
4 asked whether I were to agree with that  
5 statement, I would say: On the strength  
6 of the information presented in that  
7 statement, I can neither agree with it  
8 nor disagree with it.

9 BY MR. MICELI:

10 Q. And you've never taken such a  
11 position yourself?

12 A. A position as what?

13 MS. PLATT: Objection.

14 BY MR. MICELI:

15 Q. On the association or cause of liver  
16 cancer, kidney cancer, non-Hodgkin's lymphoma with  
17 TCE.

18 MS. PLATT: Objection.

19 THE WITNESS: I have never  
20 taken that position. However, I'm the  
21 coauthor on a paper by Weihsueh Chiu et  
22 al. in 2013, in which there are passages  
23 that do say TCE causes this or TCE causes  
24 that.

1                   While I am a coauthor on that  
2                   paper, my contributions to that paper  
3                   were in other areas, namely, related to  
4                   pharmacokinetics and metabolism. I had  
5                   no role in crafting those statements in  
6                   that paper.

7                   MR. MICELI: I tell you what.  
8                   Since you brought up the Chiu paper,  
9                   let's chew on it for a little bit.  
10                  (Laugh). Nobody liked my pun.

11                  (Document marked for  
12                  identification as Lipscomb Exhibit 15.)

13 BY MR. MICELI:

14                  Q. I'm going to show you what I marked  
15                  as Exhibit 15 to your depo.

16                  And this is the Chiu paper you're  
17                  referring to?

18                  A. Let's see.

19                  I believe that it is. I haven't  
20                  thumbed through every page of it.

21                  Q. Sure.

22                  A. The date is right, and I don't know  
23                  of another one that has my name on it.

24                  Q. I'm going to -- I'm going to jump

1 ahead and ask some questions.

2 Before I do, let me ask.

3 Have you reviewed the IARC  
4 classification or monograph for TCE?

5 A. I've reviewed it for background  
6 information.

7 Q. Okay. Did you review it for  
8 background information for giving your opinions in  
9 this case?

10 A. Yes.

11 Q. Okay. Good.

12 I'm going to -- we're going to come  
13 back to the -- to the report here in a second, but  
14 since we mentioned Chiu, I wanted to go.

15 This is the Chiu et al. which you're  
16 a coauthor on "Human Health Effects of TCE: Key  
17 Findings and Scientific Issues"?

18 A. I am one of what looks like to be 18  
19 or so authors on that paper. Correct.

20 Q. Right.

21 And yourself, Dr. Chiu, Dr. -- I'm  
22 assuming these are all doctors?

23 A. You would not be correct.

24 Q. Well, okay. Well, I will just use

1 last name then.

2 Authors Chiu, Jinot, Scott, Makris,  
3 Cooper, Bale, Guyton, Keshava, yourself, Fox,  
4 Gwinn, and Caldwell were all employed by or  
5 affiliated with the National Center for  
6 Environmental Safety, which is part of the EPA?

7 A. That's not right.

8 Q. What is it part of?

9 A. National Center for Environmental  
10 Assessment, which is part of EPA.

11 Q. Okay. Thank you. Late in the day.  
12 I guess I'm just jumbling my words. I'm sorry.

13 And this is an article, as you said,  
14 you're a coauthor on this one; right?

15 A. That's correct.

16 Q. And that means you before it went to  
17 press, you reviewed and had input into what was  
18 going to be presented in the scientific --  
19 peer-reviewed scientific literature; correct?

20 MS. PLATT: Objection.

21 THE WITNESS: I was provided  
22 that opportunity relative to the parts of  
23 the assessment that I was responsible for  
24 or contributed to.

1                   It's important to note that  
2                   being a coauthor on a paper can be the  
3                   result of multiple different activities,  
4                   some of which include the actual writing  
5                   of the paper, but other activities do not  
6                   include the actual writing of the paper.

7 BY MR. MICELI:

8                   Q.           Where -- where in the disclosures on  
9                   this paper does it reference that you had limited  
10                  access or limited involvement with what was  
11                  presented?

12                  MS. PLATT:   Objection.

13                  THE WITNESS:   There are lots  
14                  of things that aren't listed in that  
15                  paper.   That's probably one of them.

16 BY MR. MICELI:

17                  Q.           Okay.   So as a coauthor on this  
18                  paper, if you flip with me to page 306.   Bottom  
19                  right-hand column, there's a subsection that's  
20                  titled "Experimental animal studies, analysis of  
21                  mode of action, and toxicokinetic considerations."

22                  Do you see that?

23                  A.           No.

24                  Q.           Right here in the italics?

1 (Indicates).

2 A. Oh, yes.

3 Q. Okay. And you just mentioned that  
4 toxicokinetics were one of the areas that you were  
5 involved in in this article; right?

6 A. That's right. I was involved in the  
7 development of the toxicokinetic model that served  
8 as the basis for understandings of tissue  
9 distribution, differences between species  
10 relationship to dose, and etc.

11 Q. Okay. This subsection begins with  
12 the following two sentences:

13 "There is clear evidence of TCE  
14 carcinogenicity in rodents. Particularly notable  
15 is the site-concordant finding of TCE-induced  
16 kidney tumors in multiple strains and both sexes  
17 of rats exposed by inhalation or gavage."

18 Correct?

19 A. You read that correct.

20 The statement does not include any  
21 indications of dose, magnitude of dose, or the  
22 particulars of dosing beyond inhalation or gavage.

23 Q. Okay. Understand.

24 If you go to the first page, in

1 the -- in the abstract under Methods, it says:

2 "In this assessment we synthesized  
3 and characterized thousands of epidemiologic,  
4 experimental animal, and mechanistic studies, and  
5 addressed several key scientific issues through  
6 modeling of TCE toxicokinetics, meta-analyses of  
7 epidemiologic studies, and analysis -- analyses of  
8 mechanistic data."

9 Correct?

10 A. You read that correctly.

11 Q. Okay. And you explained just  
12 moments ago that you were involved in the  
13 toxicokinetic evaluation and mechanistic  
14 evaluations; correct?

15 MS. PLATT: Objection.

16 THE WITNESS: How I explain  
17 that would be a matter of the subject of  
18 the record in this deposition.

19 BY MR. MICELI:

20 Q. Okay.

21 A. I believe I clarified that I was  
22 responsible for the development of the  
23 pharmacokinetic models that were used to better  
24 understand the particulars of metabolism.

1 Q. Sure.

2 But toxicokinetics and mechanistic  
3 data -- mechanistic portions of the analysis deal  
4 with mode of action; correct?

5 A. That's fair to say.

6 Q. Okay. And that's an area that's  
7 particularly specialized to toxicology; correct?

8 A. Mode of action? Is that your  
9 question?

10 Q. Mode of action and pharmacokinetics  
11 or toxicokinetics.

12 A. Whether it's restricted to  
13 toxicology is probably a matter of debate and the  
14 particular use of terms. It's important in other  
15 disciplines like clinical medicine and  
16 pharmacology.

17 Q. Okay. Let's continue on that first  
18 column there. Down at the bottom, the last  
19 sentence on the page.

20 A. Are we on page 303?

21 Q. 306. I apologize. I went back to  
22 that "Experimental animal studies" section.

23 A. Where on page 6, please?

24 Q. Bottom right.

1 A. Bottom right. Very good.

2 Q. We've already talked about kidney  
3 cancer and now I want to talk about  
4 lymphohematopoietic -- just as it sounds --  
5 cancers. It says:

6 "The evidence was more limited for  
7 TCE-induced lymphohematopoietic cancers in rats  
8 and mice."

9 Continues on to the next page.

10 "TCE inhalation bioassays have  
11 demonstrated a statistically significant increase  
12 in pulmonary tumors in mice but not other  
13 species."

14 Correct?

15 A. That's -- that's what it reads and  
16 that's not surprising in that many of these tumors  
17 and cancers are specific to one mouse or rodent,  
18 one of the two species, whether it's one strain or  
19 another strain.

20 Q. Okay.

21 A. Often the sex, and it's certainly  
22 dependent upon the dose, which is not treated in  
23 this sentence.

24 Q. Well, because this is a review of

1 multiple articles, as it said, the authors,  
2 including yourself, reviewed -- reviewed or "In  
3 this assessment, we synthesized and characterized  
4 thousands of epidemiologic, experimental animal,  
5 and mechanistic studies."

6 So it's not one single dose study;  
7 correct?

8 MS. PLATT: Objection.

9 THE WITNESS: The way -- I  
10 was not part of that analysis of  
11 thousands of articles. I can presume  
12 that it was not a single study because it  
13 says thousands of studies.

14 BY MR. MICELI:

15 Q. Right.

16 And if you go back to page 307,  
17 first column, last sentence of the first paragraph  
18 that continued from the previous page, it says:

19 "Overall, the rodent cancer data add  
20 substantial biological plausibility for TCE,  
21 carcinogenicity in humans, particularly  
22 combined -- when combined with the mechanistic  
23 data findings."

24 Did I read that correctly?

1 A. (Reviews document).

2 Q. Do you see that?

3 A. Where?

4 Q. Right here. (Indicates).

5 A. "Overall, the rodent cancer data add  
6 substantial biological plausibility for TCE  
7 carcinogenicity in humans, particularly when  
8 combined with the mechanistic data findings."

9 So in interpreting the validity of  
10 this statement and to separate opinion from fact,  
11 we need to go back to the underlying studies.

12 It is clearly stated in this paper  
13 that they add substantial biological plausibility.  
14 So what's meant by substantial is something that's  
15 hard to interpret, and biological plausibility  
16 does not mean biological probability. It just  
17 means that what we see in the animals might show  
18 up in humans. We wouldn't be surprised if it did,  
19 but it has not been confirmed.

20 Q. Right.

21 Again back in the Methods section,  
22 when it says "we synthesized and characterized  
23 thousands of epidemiologic, experimental animal,  
24 and mechanistic studies," synthesized means that

1 the authors -- and you're one of them -- reviewed,  
2 digested, evaluated, and made conclusions based  
3 upon what was synthesized in the review; correct?

4 MS. PLATT: Objection.

5 THE WITNESS: Synthesize is a  
6 fairly broad term, but I'll succinctly  
7 answer your question by again repeating  
8 that that was not my role in this TCE  
9 investigation.

10 BY MR. MICELI:

11 Q. Okay. And if you go back to page  
12 307, "Conclusions as to carcinogenic hazard."

13 Do you see where I'm over here on  
14 the top?

15 A. On the right-hand column?

16 Q. Yeah.

17 "Supported by the analyses described  
18 above and following the U.S. EPA's Guidelines for  
19 Carcinogen Risk Assessment (U.S. EPA 2005), TCE is  
20 characterized as 'carcinogenic to humans' by all  
21 routes of exposure (U.S. EPA 2011d). This  
22 conclusion was based primarily on convincing  
23 evidence of a causal association between TCE  
24 exposure and kidney cancer in humans. The

1 epidemiologic evidence is strong for NHL, although  
2 less convincing than for kidney cancer."

3 Did I read that correctly?

4 A. You did read that correctly.

5 And I'll point out that the EPA's  
6 Guidelines for Carcinogen Risk Assessment that  
7 were used to characterize TCE as carcinogenic to  
8 humans was interpreted by EPA managers and not by  
9 technical scientists like Dr. Chiu and myself.

10 Q. Where -- Dr. Chiu and yourself were  
11 authors on this article, though; right?

12 A. We certainly are and we've cited to  
13 the assessment itself, and the managers in that  
14 department were the ones that were responsible for  
15 developing and providing endorsement for the  
16 characterization of TCE.

17 Q. And then subject to the  
18 qualification of your noninvolvement in this that  
19 you've explained today, or your limited  
20 involvement in this study, what is demonstrated or  
21 represented in this article is that the authors,  
22 unrestricted by the comments of who did what, the  
23 authors synthesized thousands of articles on  
24 toxicology, epidemiology, and mechanistic studies;

1 right?

2 MS. PLATT: Objection.

3 THE WITNESS: I got lost in  
4 there somewhere.

5 BY MR. MICELI:

6 Q. Sure.

7 A. Can you repeat that, please?

8 Q. Sure.

9 You said that the -- that the  
10 decision by EPA back in I think it was 2011 was  
11 made by managers and not by scientists like  
12 yourself and Dr. Chiu.

13 A. I did say that.

14 Q. And all I pointed out was that you  
15 and Dr. Chiu are part of the "we" that did all of  
16 the synthesizing of the thousands of pieces of  
17 evidence that went into publishing this 2013  
18 article.

19 MS. PLATT: Objection.

20 THE WITNESS: The article --  
21 it's important that we draw a distinction  
22 between who did what, where, and when.

23 Dr. Chiu and others, some of  
24 the others that are authors of this

1 paper, contributed to the risk  
2 assessment.

3 My contribution was in the  
4 area of pharmacokinetics and metabolism.  
5 We're clear on that. I did not  
6 contribute to assessments of  
7 carcinogenicity.

8 Dr. Chiu and others, including  
9 myself, have offered this paper as what I  
10 have previously characterized as a PR  
11 piece during the times in which the IRIS  
12 production of human health risk  
13 assessments was coming to slow down.

14 We published this to gain  
15 interest -- stimulate interest in the  
16 work that we had done and put the work  
17 into the open literature where others  
18 could find it that might not have access  
19 to EPA documents.

20 In no way does this statement  
21 in the conclusions as to carcinogenic  
22 hazard indicate anything other than that  
23 conclusion of carcinogenicity was reached  
24 in the EPA's assessment.

1 I have related that the  
2 attribution of a carcinogenic  
3 classification was one that was overseen  
4 by the managers.

5 I did contribute to the EPA's  
6 2011 assessment and I did contribute to  
7 this Weihsueh Chiu et al. publication in  
8 March of 2013. My contributions and my  
9 involvement did not include carcinogenic  
10 assessments.

11 BY MR. MICELI:

12 Q. This article is not just about what  
13 was presented or described by the EPA in its 2011  
14 guidance document.

15 It was based upon -- this published  
16 peer-reviewed piece that you're a coauthor on was  
17 based upon the review of thousands of  
18 epidemiologic, experimental animal, and  
19 mechanistic studies.

20 That's what's represented here;  
21 correct?

22 A. And --

23 MS. PLATT: Objection.

24 THE WITNESS: And those

1 studies were conducted. The thousands of  
2 studies were evaluated and synthesized as  
3 part of the 2011 risk assessment.

4 BY MR. MICELI:

5 Q. Okay. Do you claim that your  
6 publication here is somehow invalid science?

7 MS. PLATT: Objection.

8 THE WITNESS: Interesting  
9 that you would choose that word. Why  
10 would you choose that?

11 BY MR. MICELI:

12 Q. Well, I get to ask the questions.  
13 I'm just asking you.

14 A. Okay.

15 Q. Do you believe that your  
16 publication, your 2013 publication on TCE, "Human  
17 Health Effects of Trichloroethylene: Key Findings  
18 and Scientific Issues," is an invalid piece of  
19 scientific work?

20 MS. PLATT: Objection.

21 THE WITNESS: I believe that  
22 I have made no utterance during this  
23 deposition that would lead you to  
24 conclude such a statement.

1 BY MR. MICELI:

2 Q. Okay. I don't make that conclusion.  
3 I don't.

4 Just -- just so we're clear, I mean  
5 the conclusion at the top of page 308 on the  
6 cancer section says:

7 "Finally, animal bioassay,  
8 mechanistic, and toxicokinetic data provide  
9 further corroboration and biological plausibility  
10 to the epidemiologic findings, thus supporting a  
11 causal link between TCE exposure and cancer."

12 MS. PLATT: Can you give  
13 Dr. Lipscomb a chance to get to that  
14 page?

15 BY MR. MICELI:

16 Q. Oh, I'm sorry. I thought --

17 A. Where did you read that?

18 Q. I apologize. I'll read it back  
19 again, but at the top of page 308. We're just  
20 going to put a final bow on the cancer section of  
21 this paper.

22 A. Section 308. Page 308.

23 Q. Right above where it says "Noncancer  
24 Toxicity," there's a final sentence that begins

1 "Finally."

2 Do you see that?

3 A. I see that.

4 Q. Okay.

5 "Finally, animal bioassay,  
6 mechanistic, and toxicokinetic data provide  
7 further corroboration and biological plausibility  
8 to the epidemiologic findings, thus supporting a  
9 causal link between TCE exposure and cancer."

10 Do you see that?

11 A. I see that.

12 Q. Okay. And that's the conclusion on  
13 carcinogenicity of TCE by these authors and their  
14 review of thousands of pieces of evidence;  
15 correct?

16 MS. PLATT: Objection.

17 THE WITNESS: That's the  
18 conclusion that appears in the cancer  
19 section. Again, a section to which I had  
20 no input.

21 And it says "biological  
22 plausibility" rather than "biological  
23 probability or likelihood" and it says  
24 that they support "the epidemiologic

1 findings, thus supporting a causal link  
2 between TCE exposure and cancer."

3 It doesn't say that they  
4 provide a causal link, show a causal  
5 link, demonstrate a causal link, or  
6 establish a causal link. I think the  
7 sentence -- well, I'll let the sentence  
8 stand for itself.

9 BY MR. MICELI:

10 Q. Okay. Is it your opinion that in  
11 order to establish causation, one must prove not  
12 just biologic plausibility, but biologic certainty  
13 of a mechanism?

14 MS. PLATT: Objection.

15 THE WITNESS: I don't offer  
16 any opinions on causality.

17 BY MR. MICELI:

18 Q. Okay. That's great. Thank you.  
19 Because you just made that comment  
20 and I know we've made it a number of times in this  
21 deposition that you're offering no opinions on  
22 causality, can you turn with me to page 10 of your  
23 report.

24 A. Is that my full report?

1 Q. Yes. I'm sorry. Yes. This -- this  
2 will be the only time. Hopefully, that's the last  
3 time we're going to go there.

4 I should have had my finger on this  
5 before.

6 Okay. Three lines from the bottom  
7 of the page. Page --

8 A. I'm almost there.

9 Q. Oh, I'm sorry. Thank you.

10 MR. MICELI: Just throw  
11 something at me if I'm not looking up,  
12 Elizabeth.

13 THE WITNESS: Page 10?

14 BY MR. MICELI:

15 Q. Yes. Are you there with me?

16 A. I'm on page 10.

17 Q. Okay. Three lines from the bottom,  
18 there's -- there's a line that reads  
19 "Toxicologists."

20 Do you see where I'm reading from?

21 A. No.

22 Q. Okay. Three lines up.

23 A. Yes.

24 Q. Okay.

1 "Toxicologists and risk assessors  
2 also provide expert opinions with respect to  
3 causation in toxic tort litigation."

4 Now, that's a comment from your  
5 report, but we have confirmed a number of times  
6 today you are not offering an opinion on  
7 causation; correct?

8 MS. PLATT: Objection.

9 THE WITNESS: That is  
10 correct.

11 MR. MICELI: Okay. That's all  
12 I wanted to do on that -- on that right  
13 there.

14 Okay. How long have we been  
15 going on this? Because I think I may  
16 take a break and we'll be able to  
17 shorten.

18 THE VIDEOGRAPHER: 43 minutes.

19 MR. MICELI: Let's go ahead  
20 and take a break real quick and I can  
21 assure you we will not be long.

22 THE VIDEOGRAPHER: Off the  
23 record at 4:29.

24 (A recess was taken.)

1 THE VIDEOGRAPHER: Back on the  
2 record at 4:41.

3 BY MR. MICELI:

4 Q. Dr. Lipscomb, thank you for your  
5 time today. I have no further questions for you.

6 A. Thank you.

7 MR. MICELI: You?

8 MS. PLATT: Yes. One quick  
9 question here for you, Dr. Lipscomb.

10 I want to enter this as  
11 Exhibit Number 16. Is that what we're  
12 on?

13 MR. MICELI: Is this the -- is  
14 this the --

15 MS. PLATT: This is the  
16 amended notice.

17 MR. MICELI: -- amended one?

18 MS. PLATT: Yes.

19 MR. MICELI: Okay. Thank you.

20 (Document marked for  
21 identification as Lipscomb Exhibit 16.)

22 EXAMINATION

23 BY MS. PLATT:

24 Q. I'm going to hand you the amended

1 notice there. Copies for you-all.

2 Dr. Lipscomb, can you read me the  
3 title of this document that begins "Plaintiffs' "?

4 A. "Plaintiffs' Amended Notice of  
5 Deposition and Request for Production of Documents  
6 (John Lipscomb, Ph.D)."

7 MS. PLATT: Thank you. No  
8 further questions for the United States.

9 MR. MICELI: All right. And I  
10 apologize. I meant no -- no aspersions  
11 to be cast on failing to have this one  
12 with me. So.

13 MS. PLATT: No problem.

14 MR. MICELI: Thank you,  
15 Doctor.

16 THE VIDEOGRAPHER: All right.  
17 If that is everything, off the record on  
18 May 14, 2025 at 4:42 PM.

19 MR. MICELI: Denise, we would  
20 like to have a rough of this transcript  
21 as soon as possible.

22 (Signature not waived, the  
23 deposition concluded at 4:42 PM.)

24 \* \* \*

ERRATA SHEET

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DECLARATION UNDER PENALTY OF PERJURY

I declare under penalty of perjury that I have read the entire transcript of my Deposition taken in the captioned matter or the same has been read to me, and the same is true and accurate, save and except for changes and/or corrections, if any, as indicated by me on the DEPOSITION ERRATA SHEET hereof, with the understanding that I offer these changes as if still under oath.

Signed on the \_\_\_\_\_ day of \_\_\_\_\_, 2025.

\_\_\_\_\_

JOHN C. LIPSCOMB, PHD

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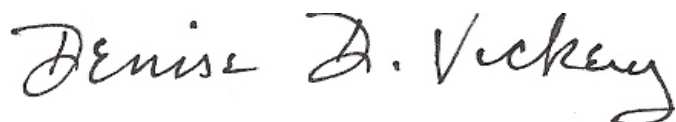
CERTIFICATE OF REPORTER

DISTRICT OF COLUMBIA )

I, Denise Dobner Vickery, a Registered Court Reporter and Notary Public of the District of Columbia, do hereby certify that the witness was first duly sworn by me.

I do further certify that the foregoing is a verbatim transcript of the testimony as taken stenographically by me at the time, place and on the date herein set forth, to the best of my ability.

I do further certify that I am neither a relative nor employee nor counsel of any of the parties to this action, and that I am neither a relative nor employee of such counsel, and that I am not financially interested in the outcome of this action.



DENISE DOBNER VICKERY, CRR, RMR  
Notary Public in and for the  
District of Columbia

My Commission expires: March 14, 2028

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Federal Rules of Civil Procedure

Rule 30

(e) Review By the Witness; Changes.

(1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:

(A) to review the transcript or recording; and

(B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.

(2) Changes Indicated in the Officer's Certificate.

The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

DISCLAIMER: THE FOREGOING FEDERAL PROCEDURE RULES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1, 2019. PLEASE REFER TO THE APPLICABLE FEDERAL RULES OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

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COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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