

EXHIBIT

B



Deposition of
Richard Cavalli

Volume II

Date: August 23, 2022

Case: IN RE: PARAQUAT PRODUCTS LIABILITY LITIGATION

No. 3:21-md-3004-NJR

Court Reporter: Angela M. Taylor, RPR, IL-CSR, MO-CCR,
LA-CCR, WA-CCR

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IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF ILLINOIS

IN RE: PARAQUAT PRODUCTS)
 LIABILITY LITIGATION)
)
) Case Number
) 3:21-md-3004-NJR
)
) MDL No. 3004
)
)
 THIS DOCUMENT RELATES TO)
 ALL CASES.)

* * HIGHLY CONFIDENTIAL - ATTORNEYS EYES ONLY * *

30(b)(6) VIDEOTAPED DEPOSITION OF
CHEVRON BY: RICHARD CAVALLI, VOLUME II
AUGUST 23, 2022

Angela M. Taylor, RPR, IL-CSR, MO-CCR, LA-CCR, WA-CCR
 CSR No. 084.004538
 CCR No. 1067

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August 23, 2022

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<p>1 PURSUANT TO WRITTEN NOTICE AND 26 AND</p> <p>2 30(B)(6) OF THE FEDERAL RULES OF CIVIL PROCEDURE, the</p> <p>3 30(b)(6) videotaped deposition of CHEVRON BY:</p> <p>4 RICHARD CAVALLI, VOLUME II, called by Plaintiffs, was</p> <p>5 taken commencing at 8:41 a.m. Pacific Time Zone on</p> <p>6 August 23, 2022, at 14811 Kruse Oaks Drive, Lake</p> <p>7 Oswego, Oregon, 97035, before Angela M. Taylor, CSR,</p> <p>8 CCR, RPR.</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p>1 APPEARANCES (CONTINUED):</p> <p>2 Also Present:</p> <p>3 Devin Williams</p> <p>4 Videographer</p> <p>5 Scott Sill</p> <p>6 Audio-Video Tech Team Manager</p> <p>7 Paszkiewicz Reporting</p> <p>8</p> <p>9 APPEARANCES VIA VIDEOCONFERENCE:</p> <p>10</p> <p>11 For the MDL Plaintiffs:</p> <p>12 Sarah Shoemake Doles, Esq.</p> <p>13 Alyson M. Petrick, Esq.</p> <p>14 Levin Papanonio Rafferty Proctor</p> <p>15 Buchanan Oaë™Brien Barr & Mougey P.A</p> <p>16 316 South Baylen Street</p> <p>17 Pensacola, Florida 32502</p> <p>18 and</p> <p>19 Chad Finley, Esq.</p> <p>20 Tor Hoerman Law, LLC</p> <p>21 210 South Main Street</p> <p>22 Edwardsville, Illinois 62025</p> <p>23</p> <p>24 and</p> <p>25 Khaldoun A. Baghdadi, Esq.</p> <p>Walkup Melodia Kelly + Schoenberger</p> <p>650 California Street</p> <p>San Francisco California 94108</p> <p>For the Defendant Chevron U.S.A. Inc.:</p> <p>Jennifer Cecil, Esq.</p> <p>Husch Blackwell, LLP</p> <p>190 Carondelet Plaza, Suite 600</p> <p>St. Louis, MO 63105</p> <p>and</p>
Page 3	Page 5
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25 (Exhibits are attached to transcript.)

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1 TUESDAY, AUGUST 23, 2022

2 8:41 A.M. PACIFIC TIME

3 -----

4

5 VIDEOGRAPHER: Stand by. Good morning. We

6 are now on the record. This is Volume II of the

7 videotaped deposition of Richard Cavalli. Today's

8 date is Tuesday, August 23, 2022. The time is

9 8:41 a.m.

10 The witness has been previously sworn. You

11 may begin.

12 MR. KELLY: Thank you.

13 [EXAMINATION]

14 QUESTIONS BY MR. KELLY:

15 Q Good morning, Mr. Cavalli.

16 A **Good morning.**

17 Q Are you good to go this morning?

18 A **Yes, I am.**

19 Q Terrific.

20 MR. KELLY: Let me just -- small piece of

21 housekeeping from yesterday I intended to do but

22 didn't. Let me mark and attach the disclosure of

23 nonretained expert that was served in the case for use

24 in both the California JCCP and the MDL, just so we

25 have that as part of our record.

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1 And I'm going to continue this morning

2 talking about topics that were raised in the direct

3 yesterday, and then as I mentioned yesterday, my

4 colleague has questions as well that may be different

5 and independent of that.

6 MS. REISMAN: Mr. Kelly, I just have a

7 question. You handed each of us a copy. Is one of

8 these intended for the court reporter or --

9 MR. KELLY: Oh, I thought the court reporter

10 would get them. Sure. Why don't you give it to the

11 court reporter, please.

12 MS. REISMAN: That's okay.

13 MR. KELLY: Yeah. You have your own, I

14 assume. Sorry.

15 THE WITNESS: Am I supposed --

16 MS. REISMAN: Nothing you need to do.

17 MR. KELLY: I have -- I have a third one.

18 You don't have to do anything with it, sir.

19 THE WITNESS: Excellent.

20 Q (By Mr. Kelly) Okay. In the direct

21 examination yesterday when you were asked what you did

22 to learn about what other scientists and researchers

23 were doing and learning about paraquat, you mentioned

24 that you had access to the toxicology literature and

25 the medical literature from all over the world; is that

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1 true?

2 A **I did have access to that.**

3 Q And then that you had a system that would

4 flag papers and publications about paraquat, and your

5 library would get copies of those?

6 A **Yes.**

7 Q And was it a purposeful -- that's actually

8 not a good question. Let me back up.

9 Was the purpose for doing that so that you

10 could keep abreast of the relevant scholarly

11 literature that dealt with, among other things, the

12 risk to human health of exposure to paraquat?

13 MS. REISMAN: Objection to form.

14 A **Yes.**

15 Q (By Mr. Kelly) Let me show you what we've

16 marked as Exhibit 24.

17 MS. REISMAN: Can we go off the record for

18 one minute?

19 VIDEOGRAPHER: Going off the record at

20 8:43 a.m.

21 (A break was taken.)

22 VIDEOGRAPHER: Okay. We're back on the

23 record at 8:44 a.m.

24 (Exhibit 24 has been marked and now

25 identified for the record.)

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1 Q (By Mr. Kelly) And I've handed you Exhibit 24
2 and a couple of questions just about the front page of
3 Exhibit 24.
4 Do you recognize any of these authors, most
5 particularly Leon Roizin, R-O-I-Z-I-N, MD, by name?
6 **A I do not.**
7 Q And did you -- were you -- excuse me -- were
8 you in this '73 through '86 time frame familiar with
9 who the most prominent specialists were in the field
10 of neurotoxicology?
11 MS. REISMAN: Objection to form.
12 **A I don't. I can't say one way or the other.**
13 Q (By Mr. Kelly) Okay. As you sit here now, do
14 you have recollection of actually having gotten this
15 article which begins on the next page through the
16 process of having your librarian pull relevant
17 toxicology literature from the worldwide literature
18 base?
19 **A You know, I don't remember one way or the**
20 **other.**
21 Q Would cerebral changes in human beings
22 secondary to paraquat -- paraquat poisoning have been
23 a topic in which you were interested in at 1977?
24 MS. REISMAN: Objection to form.
25 **A Long time ago. I don't remember one way or**

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1 **the other.**
2 Q (By Mr. Kelly) Just to refresh, in '73,
3 '74 when you were asked to focus in the area through
4 '86, was it your custom and practice to read relevant
5 literature about the health effects on the human brain
6 of paraquat exposure?
7 **A Yes.**
8 Q Okay. Were there any topics in the
9 toxicology literature relating to human health effects
10 of paraquat exposure that you asked the librarian not
11 to pull and share with you?
12 **A No.**
13 Q If we go just to the front page, the title
14 "Cerebral Changes in Paraquat Poisoning," you can see
15 up in the right-hand corner this is 1977.
16 Are you with me?
17 **A I am.**
18 Q Come down the right-hand side and the
19 paragraph that begins with the word "we." Do you see
20 that?
21 **A I think so, yes.**
22 Q All right. It says: "We have had the
23 opportunity to examine the brain of two patients who
24 died of paraquat poisoning. And since they showed
25 certain pathological changes that might indicate the

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1 direct or indirect neurotoxicity of this compound, we
2 considered them interesting for presentation and
3 discussion."
4 Have I read that correctly?
5 **A That's what it says on the page.**
6 Q As you sit here now, do you remember in '73,
7 '74 reading scholarly texts or treatises or monographs
8 or textbook chapters that had as their subject matter
9 the pathological changes that might indicate the
10 direct or indirect neurotoxicity of paraquat?
11 **A I can't say one way or the other.**
12 Q Would that, given the nature of your work,
13 have been a topic in which you would have been
14 interested?
15 MS. REISMAN: Objection to form.
16 **A In general, yes.**
17 Q (By Mr. Kelly) As of 1977, had Chevron shared
18 with any pathologists anywhere what it believed was an
19 appropriate pathological examination to be conducted in
20 a postmortem exam to identify brain changes in humans
21 thought to be due to paraquat?
22 MS. REISMAN: Objection to form.
23 Foundation.
24 **A Could you repeat that?**
25 MS. REISMAN: And the only thing, I would

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1 remind you, Mr. Kelly, and the witness is he's here in
2 his individual capacity and can testify to his
3 recollection. He's not here testifying on behalf of
4 Chevron Corporation. That's a corporation in terms of
5 its person most knowledgeable of 30(b)(6).
6 MR. KELLY: Then let me rephrase that so
7 there's no ambiguity.
8 Q (By Mr. Kelly) As of 1977, Mr. Cavalli, as
9 the person who was directing paraquat inquiries,
10 research in toxicology from '77 to 1980 had you and any
11 members of the team that you identified yesterday ever
12 shared with pathologists what you and your group
13 thought should be an appropriate postmortem exam from a
14 histopathological point of view to identify brain
15 changes in human beings thought to be related to
16 paraquat exposure?
17 MS. REISMAN: Objection to form.
18 **A I -- I'm sorry. I just don't remember one**
19 **way or the other.**
20 Q (By Mr. Kelly) Okay. Did your group -- and
21 again, the group is the persons you identified for me
22 yesterday and yourself -- at any time author in writing
23 any kind of an outline or template intended to be read
24 by pathologists who were doing postmortem exams on
25 patients who died from paraquat exposure explaining

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1 what the brain examination should consist of?
 2 MS. REISMAN: Objection to form.
 3 **A No. I don't think we did.**
 4 Q (By Mr. Kelly) Did you ever discuss whether
 5 that would be helpful or of assistance to you and your
 6 group in trying to identify whether or not there was on
 7 postmortem examinations changes in the human brain that
 8 were thought to be paraquat-related?
 9 MS. REISMAN: Objection to form.
 10 **A Could you repeat? I'm sorry.**
 11 Q (By Mr. Kelly) Yes, sir.
 12 **A Long question.**
 13 Q Yeah, yeah.
 14 Did you and your group ever discuss whether
 15 you thought it would be helpful or of assistance to
 16 you in trying to identify whether or not there was on
 17 postmortem examination changes in human beings that
 18 were thought to be due to paraquat exposure to give
 19 pathologists doing postmortems a template or outline
 20 of what should be done?
 21 MS. REISMAN: Objection to form.
 22 **A I don't recall one way or the other.**
 23 Q (By Mr. Kelly) Okay. I'm -- lower right-hand
 24 corner, there was some numbers. I'm all the way over
 25 to page 4700.

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1 Do you see that, sir?
 2 **A 4700?**
 3 Q Yes, sir.
 4 **A Yes.**
 5 Q And I'm in the left-hand column under the
 6 heading "Results."
 7 Do you see that?
 8 **A I do.**
 9 Q And then it says: "Light Microscopic
 10 Examination, Case 1." And I'm in the paragraph that
 11 begins with the word "histological examination."
 12 Okay?
 13 "Histological examination, in addition to
 14 severe edema and congestion showed a number of quite
 15 marked morphological changes."
 16 Does the phrase "morphological changes" have
 17 significance to you, sir?
 18 MS. REISMAN: Objection to form.
 19 **A I think it does.**
 20 Q (By Mr. Kelly) Okay. What is a morphological
 21 change in your mind?
 22 **A Change in structure of something.**
 23 Q Okay.
 24 MS. REISMAN: Again, Mr. Kelly, I'd ask --
 25 you're popping back and forth in time. If you're

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1 asking him about his current recollection --
 2 MR. KELLY: Counsel -- Counsel, let me
 3 just --
 4 MS. REISMAN: Mr. Kelly, let me -- let me
 5 finish my objection, and then you can --
 6 MR. KELLY: Let me just tell you something.
 7 No.
 8 MS. REISMAN: For the record, I think we
 9 should make it clear as to whether you're asking for
 10 current understanding or his understanding back then.
 11 MR. KELLY: Fine. I'm going to proceed with
 12 my questions, and if there's confusion, I'll depend on
 13 the witness to ask me.
 14 Q (By Mr. Kelly) Sir, the next sentence says:
 15 "The most striking was a very pronounced accumulation
 16 of lipofuscin-like material in the ganglion cells
 17 throughout the brain but most marked in the pallidum
 18 intralaminar nuclei of the thalamus, corpus geniculatum
 19 laterale, substantia nigra, dentate and fastigial
 20 nuclei of the cerebellum."
 21 Did I get that right? Maybe not so much
 22 with the Latin.
 23 **A It's what it says on the page.**
 24 Q I want to ask you a couple questions about
 25 this sentence, sir. Do you know what lipofuscin--

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1 L-I-P-O-F-U-S-C-I-N -- like material is?
 2 MS. REISMAN: Objection. Form.
 3 **A As I sit here, I don't know.**
 4 Q (By Mr. Kelly) Do you --
 5 **A I mean, I don't know. No.**
 6 Q Have you ever known what lipofuscin-like
 7 material is?
 8 **A Can't say one way or the other.**
 9 Q Do you know whether lipofuscin is caused by
 10 oxidative stress?
 11 MS. REISMAN: Objection to form.
 12 **A Since I sit here, I'm not sure what the word**
 13 **means. I have no opinion as to whether -- where it**
 14 **comes from.**
 15 Q (By Mr. Kelly) Does paraquat kill human cells
 16 by oxidative stress?
 17 MS. REISMAN: Objection to form.
 18 **A I'm not exactly sure what that term means.**
 19 Q (By Mr. Kelly) All right. Have you ever
 20 known whether or not paraquat kills plant or human
 21 cells by oxidative stress?
 22 MS. REISMAN: Objection. Form.
 23 **A I'm not sure what oxidative stress means.**
 24 Q (By Mr. Kelly) All right. And in your
 25 training, experience, and reading, have you ever known

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<p>1 what oxidative stress means? 2 MS. REISMAN: Objection to form. 3 A Specifically as oxidative stress, no, I 4 don't. 5 Q (By Mr. Kelly) In your study of paraquat from 6 '73 through '86, have -- did you ever learn that the 7 process of oxidative stress was in any way related to 8 how paraquat operated as a nonselective herbicide? 9 MS. REISMAN: Objection. Form. 10 A I'm having trouble -- I'm sorry -- with 11 oxidative stress. 12 Q (By Mr. Kelly) Okay. 13 A You have another name for it? 14 Q Do you know what a reactive oxygen species 15 is? 16 A Yes, I do. 17 Q Is a paraquat a reactive oxygen species -- 18 MS. REISMAN: Objection. Form. 19 Q (By Mr. Kelly) -- or does it produce a 20 reactive oxygen species? 21 MS. REISMAN: Objection. Form. 22 A Which question? 23 Q (By Mr. Kelly) And how about we do it in 24 order. Is paraquat an oxidative species? 25 MS. REISMAN: Objection to form.</p>	<p>1 through 1986 have a person on your staff who educated 2 you about the course of development to end stage of 3 Parkinson's disease in human beings? 4 MS. REISMAN: Objection to form. 5 A I don't recall either way. 6 Q (By Mr. Kelly) Okay. Did you at any time 7 undertake to educate yourself on how Parkinson's 8 disease begins and how it ends in human beings? 9 MS. REISMAN: Objection to form. 10 A I didn't. 11 Q (By Mr. Kelly) Do you know what the 12 relationship is, if any, between the substantia nigra 13 and Parkinson's disease? 14 A I do have a vague understanding of that. 15 Q And did you have a vague understanding of 16 what that was in the period 1973 to 1986? 17 A I can't pin it down by date either way. 18 Q During the period of time during which you 19 were charged with making an assessment as to whether 20 or not there was a risk to human health in terms of 21 injury in the brain between 1973 and 1986, did you 22 have any understanding of the role of the substantia 23 nigra in Parkinson's disease? 24 MS. REISMAN: Objection to form. 25 A Only vaguely in a general way.</p>
Page 19	Page 21
<p>1 A No. 2 Q (By Mr. Kelly) Does paraquat produce a 3 reactive oxygen species? 4 MS. REISMAN: Objection to form. 5 A I believe it does. 6 Q (By Mr. Kelly) Does a reactive oxygen species 7 contribute to the production of lipofuscin? 8 MS. REISMAN: Objection to form. 9 A I don't know the definition of that word, so 10 I can't say. 11 Q (By Mr. Kelly) Is the pathological 12 accumulation of lipofuscin implicated in Parkinson's 13 disease? 14 A I have -- 15 MS. REISMAN: Objection. Form. Lack of 16 foundation. 17 Q (By Mr. Kelly) Go ahead, sir. 18 A I don't know -- 19 Q All right. 20 A -- very much about Parkinson's disease. 21 Q When in -- did you at any time in the 22 '73 through 1986 period educate yourself on how 23 Parkinson's disease was thought to begin? 24 A No. 25 Q All right. Did you at any time in 1973</p>	<p>1 Q (By Mr. Kelly) And what was the vague general 2 way that you had some understanding about the 3 relationship of the substantia nigra to Parkinson's 4 disease? 5 A I can't say for certain. 6 Q Okay. So we go back, and I want to read 7 this paragraph again. "Histological examination, in 8 addition to severe edema and congestion, showed a 9 number of quite marked morphological changes. The 10 most striking was a very pronounced accumulation of 11 lipofuscin-like material in the ganglion cells 12 throughout the brain but most marked in the pallidum 13 intralaminar nuclei of the thalamus, the corpus 14 geniculatum laterale, substantia nigra -- excuse me -- 15 substantia nigra, dentate and fastigial nuclei of the 16 cerebellum." 17 Having that paragraph in mind, do you know 18 whether any part of those brain structures articulated 19 by the authors have anything to do with Parkinson's 20 disease? 21 MS. REISMAN: Objection to form. 22 A Again, the only one that stands out is a 23 vague memory of the substantia nigra have something to 24 do with it. 25 Q (By Mr. Kelly) In the period 1973 to 1986,</p>

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<p>1 did your group under your direction at any time</p> <p>2 commission any consultation with a neurotoxicologist to</p> <p>3 evaluate whether or not a substantia nigra was or was</p> <p>4 not something that would be affected negatively by</p> <p>5 exposure to paraquat?</p> <p>6 MS. REISMAN: Objection to form.</p> <p>7 A I don't recall any such discussion.</p> <p>8 MS. REISMAN: One way or the other, or you</p> <p>9 don't recall a discussion?</p> <p>10 THE WITNESS: Well, one way or the other.</p> <p>11 MR. KELLY: Excuse me. Counsel, that's not</p> <p>12 appropriate to coach the witness.</p> <p>13 MS. REISMAN: I was not -- Mr. Kelly, I am</p> <p>14 not coaching the witness. I've sat here as you've</p> <p>15 asked question after question, some very unclear that</p> <p>16 the witness is confused about. I was making sure that</p> <p>17 the record was clear as to whether he didn't recall it</p> <p>18 happening or whether he didn't recall it -- whether he</p> <p>19 didn't recall it either way, that it happened or not.</p> <p>20 You can continue with your questioning. I</p> <p>21 was not coaching the witness. I was making sure that</p> <p>22 his answer was clear.</p> <p>23 MR. KELLY: May I just say that the process</p> <p>24 of exam and redirect is for the benefit of</p> <p>25 clarification, and to the extent that this is</p>	<p>1 Q (By Mr. Kelly) All right. And does addition</p> <p>2 of this modifying language "PAS positive, mostly</p> <p>3 granular, partly brownish lipo- -- lipofuscin-like</p> <p>4 material," does that bring any more clarity to mind as</p> <p>5 to what lipofuscin is?</p> <p>6 MS. REISMAN: Objection to form.</p> <p>7 A No, it doesn't.</p> <p>8 Q (By Mr. Kelly) Okay. Let's just go to</p> <p>9 page 4711. And on -- on the left-hand column, sir,</p> <p>10 60 percent of the way down, a sentence begins</p> <p>11 "Hypoxia..."</p> <p>12 Do you see that? "Hypoxia has also..."?</p> <p>13 A Not yet.</p> <p>14 Q Okay. Take -- take your time, sir.</p> <p>15 A You said on the left side?</p> <p>16 Q Yes, sir. On the column on the left just</p> <p>17 down here.</p> <p>18 A Okay. Second -- yeah. First -- the far</p> <p>19 left word is "system"?</p> <p>20 Q Yes, sir.</p> <p>21 A Okay. I see.</p> <p>22 Q "Hypoxia has also been indicated by some</p> <p>23 authors as a possible cause of excessive production of</p> <p>24 lipofuscin. Pathological changes in the lungs of our</p> <p>25 cases, as well as in many cases from the literature,</p>
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<p>1 testimony to potentially be played in court, I don't</p> <p>2 believe it is appropriate for you to interject your</p> <p>3 thoughts or comments. They wouldn't be permitted in</p> <p>4 court. That's all I'm saying.</p> <p>5 MS. REISMAN: Thank you, Mr. Kelly.</p> <p>6 Q (By Mr. Kelly) Mr. Cavalli, turn, if you</p> <p>7 will, for me to -- in the lower right-hand corner,</p> <p>8 page 4702. And on the left-hand side at the top, you</p> <p>9 see it's the heading "Case 2"?</p> <p>10 A Yes, I see it.</p> <p>11 Q All right. I'm just going to read the first</p> <p>12 paragraph to make sure you and I are on the same page</p> <p>13 here. It says: "Gross and histological examination of</p> <p>14 the brain showed a strikingly similar picture of that</p> <p>15 of Case 1. Here also, the most pronounced</p> <p>16 pathological change was an accumulation of PAS</p> <p>17 positive, mostly granular, partly brownish,</p> <p>18 lipofuscin-like material in the ganglion cells with</p> <p>19 the same pattern of predilection as in the previous</p> <p>20 case."</p> <p>21 Do you understand that sentence to say in</p> <p>22 the second person who was being studied they saw</p> <p>23 essentially what we just described in Case No. 1?</p> <p>24 MS. REISMAN: Objection to form.</p> <p>25 A Yes, I do understand that.</p>	<p>1 seemed to have developed rather late in the course of</p> <p>2 the disease with blockage of alveolar space being</p> <p>3 produced mostly by acute hemorrhages and hyaline</p> <p>4 membranes."</p> <p>5 Do you understand what the authors are</p> <p>6 talking about there?</p> <p>7 MS. REISMAN: Objection. Form.</p> <p>8 A I do.</p> <p>9 Q (By Mr. Kelly) All right. And do you</p> <p>10 understand that hypoxic changes causing acute</p> <p>11 hemorrhage and hyaline membranes is something that</p> <p>12 these authors say happens late in the course of someone</p> <p>13 poisoned by paraquat?</p> <p>14 MS. REISMAN: Objection to form.</p> <p>15 A That's what's on the page.</p> <p>16 Q (By Mr. Kelly) Okay. Do you agree with that,</p> <p>17 sir?</p> <p>18 A I have no -- I mean, I don't know what</p> <p>19 "late" means in this context.</p> <p>20 Q All right. And that's true --</p> <p>21 A Perhaps it's elsewhere in the paper.</p> <p>22 Q Okay.</p> <p>23 MS. REISMAN: And if you need to read the</p> <p>24 paper to answer these questions, please feel free to</p> <p>25 do so given that response.</p>

7 (Pages 22 to 25)

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1 Q (By Mr. Kelly) So the next sentence begins:
2 "Clinically, both of our patients developed breathing
3 difficulties quite terminally."
4 You understand what that means?
5 MS. REISMAN: Objection to form.
6 **A Yes, I do.**
7 Q (By Mr. Kelly) "Quite terminally" means at or
8 near the end of life, correct?
9 **A Yes.**
10 Q And then the authors conclude "Thus, one
11 would presume that hypoxia of respiratory origin could
12 not have played a decisive role in influencing
13 formulation of lipofuscin-like material in our cases."
14 Do you understand what that means?
15 MS. REISMAN: Objection to form.
16 **A I understand that's what's on the page.**
17 Q (By Mr. Kelly) Well, do you understand what
18 these authors are saying is the lipofuscin-like
19 materials they saw were not in any way produced by
20 terminal hypoxia?
21 MS. REISMAN: Objection to form.
22 **A The sentence reads "Thus, one would
23 presume..."**
24 Q (By Mr. Kelly) Yes, sir.
25 **A So that -- that's...**

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1 Q This is the presumption of the authors,
2 correct?
3 **A It -- it is their presumption. Not -- not
4 having the case histories, the -- I don't know. You
5 ask the questions.**
6 Q You yourself have never published in a
7 journal of neurology or neurotoxicology, correct?
8 **A That is correct.**
9 Q And do you understand that the purpose of
10 journal publications and peer-reviewed journals is to
11 educate other members of the profession?
12 MS. REISMAN: Objection to form.
13 **A I would have said to share experiences.**
14 Q (By Mr. Kelly) Is the purpose of sharing
15 experiences in medical journals so that all members of
16 the medical community in a particular discipline have a
17 better understanding of what their sisters and brothers
18 in the medical profession are learning in the treatment
19 of a given disease?
20 MS. REISMAN: Objection. Form.
21 **A Yes.**
22 Q (By Mr. Kelly) And would you expect these
23 physicians publishing in neurotoxicology to be not more
24 knowledgeable than yourself in that field?
25 MS. REISMAN: Objection to form.

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1 **A More knowledgeable in neurotoxicity than I,
2 likely.**
3 Q (By Mr. Kelly) And not just limiting to you,
4 Mr. Cavalli, but in your group of five and in the
5 people whom you interacted with at ICI, was there a
6 neurotoxicologist who regularly participated in the
7 meetings you had with ICI?
8 **A I don't recall that one way or the other.**
9 Q In the period 1973, '74, through 1986, did
10 you yourself or any members of your group that we
11 talked about yesterday ever suggest that you should
12 get a board-certified neurotoxicologist involved with
13 your team?
14 MS. REISMAN: Objection. Form.
15 **A No, we did not.**
16 Q (By Mr. Kelly) Did -- 1973 to 1986, did
17 anyone in your group or yourself suggest that you
18 should economically underwrite research on the
19 potential of brain injury as a result of paraquat
20 exposure by hiring a neurotoxicologist to research and
21 write on the topic?
22 MS. REISMAN: Objection to form.
23 **A I -- I don't recall.**
24 Q (By Mr. Kelly) As a person who had attended
25 three classes at UCSF, did you at any point think --

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1 putting aside the other five people in the group -- it
2 would be helpful to you to have a better understanding
3 of the potential neurotoxicity of paraquat on human
4 beings to have somebody from the UCSF
5 neurotoxicological department consult with you?
6 MS. REISMAN: Objection to form.
7 **A No.**
8 Q (By Mr. Kelly) Let me change -- change
9 topics, change subjects here for a minute, if we can.
10 Yesterday there were questions asked that had -- find
11 the right place here -- had to do with your interaction
12 with the people at ICI.
13 Was there a period of time that came --
14 actually, let me withdraw that.
15 When you were asked to focus more of your
16 efforts on paraquat issues, was that the point in
17 which you became involved interacting with the ICI
18 team?
19 **A Yes.**
20 Q Okay. Let me show you what we'll mark as
21 Exhibit 51.
22 (Exhibit 51 has been marked and now
23 identified for the record.
24 Q (By Mr. Kelly) And can I ask you to look at
25 the last page first because I think it's helpful for

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1 orienting us.
2 Do you see the last page, sir?
3 **A I think I do, yes.**
4 Q Okay. And this is written by J.N. Ospenson?
5 MS. REISMAN: This being the last page is
6 written by J.N. Ospenson?
7 MR. KELLY: Yes.
8 Q (By Mr. Kelly) So it's a letter, correct?
9 **A Yes.**
10 Q And it contains an agenda, if we believe the
11 top, for a March 27, 1974, paraquat conference ICI and
12 Chevron Chemical Company, correct?
13 **A That's what it says.**
14 MS. REISMAN: Object to the form.
15 Q (By Mr. Kelly) And this is to be held at
16 555 Market Street. Was that at the time a Chevron
17 Chemical Company address?
18 **A It was a Chevron address.**
19 Q Okay. And among the addressees, you are
20 listed as Number 1?
21 **A I see that.**
22 Q And under the agenda topics, 2-B,
23 toxicological aspects, you are listed with -- looks
24 like Dr. Kinoshita, K-I-N-O-S-H-I-T-A. Right?
25 **A That's correct.**

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1 MS. REISMAN: Mr. Kelly, just a correction
2 so the record's clear. You noted that this agenda was
3 for a meeting taking place on March 27. I believe
4 that last page --
5 MR. KELLY: No.
6 MS. REISMAN: -- indicates that it's an
7 agenda for meetings being held on March 28 and 29.
8 MR. KELLY: Yeah. I'm sorry. I should have
9 said "it's dated."
10 Q (By Mr. Kelly) This letter is dated March 27,
11 1974. And when we go to the front page, we see the
12 meeting report, correct?
13 **A I'm sorry.**
14 Q Let's go to the front page of the exhibit --
15 **A Yes.**
16 Q -- which is page 10 -- 1060?
17 **A Yes.**
18 Q Okay. And you are listed here in the second
19 line from the bottom, says "SOCAL-R.D. Cavalli." Do
20 you know what the "SOCAL" stands for?
21 **A Standard Oil California.**
22 Q This is, as counsel was discussing
23 yesterday, before the name changed? Is that right?
24 **A Apparently so.**
25 Q If you go to the next page which -- in the

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1 lower right-hand corner, 1061, under the heading
2 "Toxicology," this is one of the topics you're listed
3 on for the addenda, correct?
4 **A Yes.**
5 Q It begins and says: "It was felt that the
6 lack of chronic inhalation toxicity information and
7 epidemiological surveys were a definite weakness in
8 properly evaluating the safety of paraquat use or
9 properly defending the safety of paraquat."
10 Did I read that correctly?
11 **A You did. That's what's on the page.**
12 Q And were those opinions that you shared with
13 all of the people in attendance at this conference?
14 MS. REISMAN: Objection to form.
15 **A I have to say I do not have a specific
16 recollection of this conference.**
17 Q (By Mr. Kelly) Okay. Were those your
18 opinions in 1974?
19 MS. REISMAN: Objection to form.
20 **A I would not consider -- I mean, again, I
21 can't -- can't go back to '74. The -- no, I -- I
22 can't say one way or another.**
23 Q (By Mr. Kelly) In your history of attending
24 these meetings, was it your understanding that the
25 purpose of generating minutes or a meeting report was

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1 to accurately document what had happened?
2 MS. REISMAN: Objection to form.
3 **A Yes.**
4 Q (By Mr. Kelly) And would you yourself keep a
5 binder or a collection of meeting reports or minutes so
6 that you could keep track of what happened
7 historically?
8 MS. REISMAN: Objection to form.
9 **A No.**
10 Q (By Mr. Kelly) Do you have reason to believe
11 that these minutes are inaccurate in documenting what
12 your thoughts were toxicologically in 1974?
13 MS. REISMAN: Objection to form.
14 **A I can't say one way or the other.**
15 Q (By Mr. Kelly) In 1974, was there, in your
16 opinion, a lack of chronic inhalation toxicity
17 information?
18 MS. REISMAN: Objection to form.
19 **A There was not a specific study, but we have
20 large collection of studies and data that supported a
21 view that chronic inhalation was not a significant
22 risk in the field if the product was used according to
23 the precautionary label.**
24 Q (By Mr. Kelly) Let me ask my question.
25 Was -- in 1974 did you believe there was a

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<p style="text-align: right;">Page 34</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">CONFIDENTIAL</p> <p>1 lack of chronic inhalation toxicity information? 2 MS. REISMAN: Objection to form. Asked and 3 answered. 4 A Not information, no. 5 Q (By Mr. Kelly) Yesterday you told us you 6 would be -- you were in favor of doing an inhalation 7 study. 8 Do you recall that? 9 A I do. 10 Q And were you in favor of doing an inhalation 11 study because there was a lack of chronic inhalation 12 toxicity information? 13 MS. REISMAN: Objection to form. Asked and 14 answered. 15 A I have to give you the same answer. There 16 wasn't a study, but there was information. 17 Q (By Mr. Kelly) In 1974, was it your opinion 18 that the lack of epidemiological surveys were a 19 definite weakness in properly evaluating the safety of 20 paraquat use or properly defending the safety of 21 paraquat? 22 MS. REISMAN: Objection to form. 23 A Once again, I don't recall what I said. 24 Those are not my words. 25 Q (By Mr. Kelly) In 1974, did you believe that</p>	<p style="text-align: right;">Page 36</p> <p>1 felt that the lack of chronic inhalation toxicity 2 information and epidemiological surveys were a definite 3 weakness in properly evaluating the safety of paraquat 4 use or properly defending the safety of paraquat." 5 My question to you is, was it part of your 6 job at any time between 1973 and 1986 to properly 7 defend the safety of paraquat? 8 MS. REISMAN: Objection to form. 9 A Again, those aren't my words, but I 10 certainly believed at the time that it would be useful 11 in understanding the toxicity of paraquat to have 12 several different kinds of studies, among the two 13 mentioned here. 14 Q (By Mr. Kelly) But with reference to the 15 specific phrase "defending the safety of paraquat," did 16 you understand that that was part of your job between 17 1973 and 1986? 18 MS. REISMAN: Objection to form. Asked and 19 answered. 20 A Part of my job in those years, as I recall, 21 was to study the toxicity of paraquat, make 22 recommendations for its safe use, and review the work 23 of -- of others. I -- I personally don't think of 24 that as defending. 25 Q (By Mr. Kelly) Was it any part of your work</p>
<p style="text-align: right;">Page 35</p> <p>1 the lack of epidemiological surveys were a definite 2 weakness in properly evaluating the safety of paraquat 3 use? 4 MS. REISMAN: Objection to form. 5 A As I say, there was a large body of 6 information in supporting that an epidemiology study 7 would have been a good thing to do but not because of 8 any weakness on -- on my part. 9 Again, I don't recall the discussions we 10 had, and I didn't write this. 11 Q (By Mr. Kelly) From 1974 to 1986, did you at 12 any point personally commission one or more 13 epidemiological surveys in order to properly evaluate 14 the safety of paraquat use? 15 MS. REISMAN: Objection to form. 16 A If I understood your question, no. 17 Q (By Mr. Kelly) Okay. From 1974 to 1986, did 18 any member of your group either individually or 19 together commission one or more epidemiological surveys 20 in order to properly evaluate the safety of paraquat 21 use in the United States? 22 MS. REISMAN: Objection to form. 23 A I don't believe so. 24 Q (By Mr. Kelly) The balance of that sentence 25 says that -- and I put in context fairly -- "It was</p>	<p style="text-align: right;">Page 37</p> <p>1 in 1973 through 1986 or the work of anybody in your 2 group to defend paraquat's safety to the state of 3 California? 4 MS. REISMAN: Objection to form. Asked and 5 answered. 6 A To share to the extent that we did that, it 7 would have been a sharing of data and information, and 8 I mean, that's what we did. 9 Q (By Mr. Kelly) Okay. Was it any part of your 10 job or other members of the group to defend paraquat's 11 safety in lawsuits against Chevron or workers' 12 compensation claims against Chevron from 1973 through 13 1986? 14 MS. REISMAN: Objection to form. 15 A Yes, it was. 16 Q (By Mr. Kelly) Okay. When the phrase 17 "defending the safety of paraquat" -- when you look at 18 that phrase, do you look at that with the connotation 19 of defending the safety of paraquat in legal 20 proceedings? 21 MS. REISMAN: Objection to form. 22 A You know, I don't have a specific 23 recollection of this. I have no idea what the author 24 meant by that phrase. 25 Q (By Mr. Kelly) With respect to your group in</p>

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1 the 1973 through 1986 period, were there any persons
 2 besides yourself who had as part of their job defending
 3 the safety of paraquat in either lawsuits against
 4 Chevron or workers' compensation claims?
 5 MS. REISMAN: Objection to form.
 6 **A We did provide assistance in -- in those**
 7 **cases from a factual standpoint.**
 8 Q (By Mr. Kelly) And when you say "we," which
 9 persons in your group are you referring to?
 10 **A Myself, John Ford. I think it was just the**
 11 **two of us.**
 12 MR. KELLY: I want to move to the next
 13 thing. Exhibit 49.
 14 (Exhibit 49 has been marked and now
 15 identified for the record.
 16 MS. REISMAN: When you get to a convenient
 17 stopping point, Mike, it's probably a good time for a
 18 break. I think we've been going a bit over an hour.
 19 MR. KELLY: Okay. We can stop.
 20 VIDEOGRAPHER: Okay. We're going off the
 21 record at 9:26 a.m.
 22 (A break was taken.)
 23 VIDEOGRAPHER: We're back on the record at
 24 9:42 a.m.
 25 Q (By Mr. Kelly) Mr. Cavalli, we're back on the

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1 record here. Are you good to continue forward?
 2 **A Yes, I am.**
 3 Q Okay. Just before we took this break, I
 4 think I handed you Exhibit 49; is that right?
 5 **A Yes, you did.**
 6 Q Okay. This has a date stamped on it of
 7 24 November 1975, but I think that's -- these are
 8 "Notes on Meetings Held at CTL 6-9 October '75."
 9 Do you see that on the front page?
 10 **A Yes, I do.**
 11 Q And do you know that CTL is part of ICI?
 12 **A Yes.**
 13 Q That's the Central -- is it the Central
 14 Toxicology Laboratory?
 15 **A Yes.**
 16 Q And during this period of time '73,
 17 '74 through '86, you had more than one opportunity to
 18 go and meet on this biannual program with folks at
 19 ICI?
 20 MS. REISMAN: Objection to form.
 21 Q (By Mr. Kelly) Is that correct?
 22 **A Yes.**
 23 Q Okay. And if we go to page -- the numbers
 24 are at the bottom in the midpage -- page 4, this
 25 confirms under Roman Numeral II that you were present?

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1 **A I'm not there yet.**
 2 Q Oh, I'm sorry. At the top of the page to
 3 make it easier for you.
 4 **A Page 4 of the document.**
 5 Q Yes. And way up at the top,
 6 Roman Numeral II, it says "Meetings With"?
 7 **A Yes.**
 8 Q Can you see that you are present with
 9 Dr. Ospenson?
 10 **A I am. I was.**
 11 Q And is it also correct that the other folks
 12 on the list Swan, Fletcher, and Waitt were ICI people?
 13 MS. REISMAN: Objection to form.
 14 **A Yes.**
 15 Q (By Mr. Kelly) Do you recognize PPD next to
 16 Mr. Waitt's name as the plant protection division of
 17 ICI?
 18 **A I -- I think that's what PPD was.**
 19 Q Okay. If you'll turn to the next page,
 20 No. 5, heading "Chronic Toxicity."
 21 Do you see that?
 22 **A Not yet.**
 23 Q Okay.
 24 **A Yes, I do.**
 25 Q It says: "Chevron are concerned on the

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1 chronic effects of paraquat sprays resulting from
 2 four cases reported to the state of California. The
 3 syndrome is reported as injury to the CNS,
 4 nonspecific liver/kidney injury."
 5 Just stopping right there, do you have a
 6 memory of in 1975 in the fall carrying that concern on
 7 behalf of Chevron to this meeting?
 8 MS. REISMAN: Objection to form.
 9 **A No. I don't remember the meeting. I don't**
 10 **remember the document.**
 11 Q (By Mr. Kelly) Okay.
 12 **A I can't say one way or the other.**
 13 Q And in 1975, it was still part of your job
 14 to assist in the defense of lawsuits against Chevron
 15 alleging injury from paraquat exposure?
 16 MS. REISMAN: Objection to form.
 17 Q (By Mr. Kelly) Is that right?
 18 **A It was.**
 19 Q Okay. If you just come down towards the
 20 bottom of that paragraph, do you see the sentence that
 21 begins: "Refutation of this claim..."
 22 Do you see that sentence?
 23 **A I do.**
 24 Q It says: "Refutation of this claim is
 25 extremely difficult, and Chevron would like more

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1 positive data to use in litigation cases."
 2 Did you on behalf of Chevron reach out to
 3 ICI for information, witnesses, or data to use in
 4 defending litigation cases?
 5 MS. REISMAN: Objection to form.
 6 **A I don't recall one way or the other.**
 7 Q (By Mr. Kelly) In 19- -- November of --
 8 excuse me.
 9 In October of 1975 -- and I'm looking at the
 10 next sentence -- it says: "It is suggested that a
 11 critical epidemiology study is carried out and a
 12 long-term toxicity study using sprays on animals."
 13 Was it your belief in the fall of 1975 that
 14 both an epidemiology study and a long-term toxicity
 15 study using sprays on animals was necessary to assist
 16 in defending lawsuits against Chevron?
 17 MS. REISMAN: Objection to form.
 18 **A Specifically with regard to lawsuits, I -- I**
 19 **don't know one way or the other.**
 20 Q (By Mr. Kelly) The question of a critical
 21 epidemiology study -- actually, let me rephrase it.
 22 Was there any time in 1975 that you
 23 suggested to ICI an epidemiology study should be
 24 carried out as well as a long-term study using sprays
 25 on animals?

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1 MS. REISMAN: Objection to form.
 2 **A There were such discussions.**
 3 Q (By Mr. Kelly) Okay. And was there a
 4 decision made that ICI would provide Chevron with a --
 5 using the phraseology here -- "critical epidemiology
 6 study and a long-term toxicity study using sprays on
 7 animals"?
 8 MS. REISMAN: Objection to form.
 9 **A One more time for me, please.**
 10 Q (By Mr. Kelly) Yes, sir.
 11 Was there a decision made that ICI would
 12 provide Chevron with a critical epidemiological study
 13 and a long-term toxicity -- toxicity study using
 14 sprays on animals?
 15 MS. REISMAN: Objection to form.
 16 **A I don't recall one way or the other.**
 17 Q (By Mr. Kelly) Did Chevron itself ever do an
 18 epidemiology study for the purpose of defending
 19 lawsuits?
 20 MS. REISMAN: Objection to form.
 21 **A We didn't -- Chevron did not do an**
 22 **epidemiology study. That's all I can say.**
 23 Q (By Mr. Kelly) All right. Did Chevron at any
 24 time do a long-term toxicity study using sprays on
 25 animals for purposes of defending lawsuits?

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1 MS. REISMAN: Objection to form.
 2 **A The -- we did not do such a study.**
 3 Q (By Mr. Kelly) Going down to the next
 4 paragraph there, it says: "Activity of paraquat on
 5 CNS."
 6 Do you understand that CNS in this context
 7 refers to the nervous system?
 8 MS. REISMAN: Objection to form.
 9 **A Yes.**
 10 Q (By Mr. Kelly) Did you or your team at any
 11 time investigate central nervous system effects on
 12 human beings as reflected in autopsy data that you
 13 collected?
 14 MS. REISMAN: Objection to form.
 15 **A You lost me somewhere.**
 16 Q (By Mr. Kelly) Yes, sir. I'm wondering if
 17 you at -- and we have -- I think we'll get to some
 18 autopsies here before we finish.
 19 Over time you, Mr. Ford, and others
 20 collected autopsies from victims of paraquat
 21 poisoning, correct?
 22 MS. REISMAN: Objection to form.
 23 Q (By Mr. Kelly) Is that right?
 24 **A Yes.**
 25 Q All right. Was discussion of the autopsies,

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1 of paraquat poisoning autopsies done in the
 2 United States, something that was ever discussed at
 3 the Chevron ICI meetings?
 4 **A Again, specifically I don't recall one way**
 5 **or the other.**
 6 Q Do you generally remember whether you set in
 7 place a protocol or process for exchanging all of the
 8 autopsies that you obtained between you and ICI on
 9 victims of paraquat poisoning?
 10 MS. REISMAN: Objection to form.
 11 **A We did exchange information.**
 12 Q (By Mr. Kelly) Okay. Going back to this
 13 paragraph just for a second. It says: "In a recent
 14 autopsy on a paraquat poisoning, the pathologist
 15 discovered lesions on the motor neurons."
 16 Do you remember discussing that with ICI?
 17 **A I do not one way or another.**
 18 Q It goes on to say: "The lesions were
 19 sufficient to cause debilitation." Do you see that
 20 sentence?
 21 **A I do.**
 22 Q Does that refresh your memory at all as to
 23 whether or not the discussion of autopsy-discovered
 24 motor neuron lesions in a paraquat victim were
 25 discussed with ICI?

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1 MS. REISMAN: Objection to form.
 2 **A You know, again, I don't remember the**
 3 **specific meeting.**
 4 Q (By Mr. Kelly) Okay.
 5 **A So...**
 6 Q I'm wondering more generally in the '73 to
 7 '86 period, do you have a memory of discussing that
 8 topic?
 9 MS. REISMAN: Objection to form.
 10 **A We discussed numerous topics, this may or**
 11 **may not have been among them. I just -- that was a**
 12 **long time ago.**
 13 Q (By Mr. Kelly) Well, I understand it was a
 14 long time ago, sir, but was potential central nervous
 15 system effects of paraquat on human beings a topic of
 16 importance for the ICI Chevron group?
 17 MS. REISMAN: Objection to form.
 18 **A Yes.**
 19 Q (By Mr. Kelly) Okay. If we continue down
 20 this paragraph, do you see -- I'm starting with the
 21 sentence that begins with "Fisher..."
 22 Do you see that?
 23 **A Uh-huh.**
 24 Q Just the word "Fisher." That's someone's
 25 name?

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1 **A I see that, yes.**
 2 Q And do you know who that refers to where it
 3 says "Fisher has also reported ataxia"?
 4 MS. REISMAN: Wait. What's the question?
 5 Are you asking if he sees that?
 6 MR. KELLY: I'm ask- -- no. I'm asking if
 7 he knows who Fisher is.
 8 **A Well, I may have at one point, but I don't**
 9 **recall.**
 10 Q (By Mr. Kelly) All right. The full sentence
 11 says: "Fisher has also reported ataxia from paraquat
 12 administered by any route." Just focusing on that part
 13 of it.
 14 Do you know what ataxia is?
 15 **A Yes, I do.**
 16 Q Is that a CNS effect?
 17 MS. REISMAN: Objection to form.
 18 **A It can be.**
 19 Q (By Mr. Kelly) And with reference to studying
 20 the CNS effect of ataxia in people exposed to paraquat,
 21 did you or your group ever endeavor to study that
 22 focused topic?
 23 MS. REISMAN: Objection to form.
 24 **A I think -- again, you know, we had a lot of**
 25 **information, a lot of data. Basically, it -- it just**

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1 **didn't support involvement of the central nervous**
 2 **system.**
 3 Q (By Mr. Kelly) Okay. My question,
 4 Mr. Cavalli, was a little bit different. It's a
 5 little -- just a discreet question.
 6 With reference to studying the CNS effect of
 7 ataxia in people exposed to paraquat, did you or your
 8 group ever endeavor to study that focused topic?
 9 MS. REISMAN: Objection to form. Asked and
 10 answered.
 11 **A In human beings?**
 12 Q (By Mr. Kelly) Yes, sir.
 13 **A Don't believe so.**
 14 Q Okay. And then the sentence continues:
 15 "And Fletcher has received a few inquiries on
 16 peripheral neurites."
 17 Do you see that part of the sentence?
 18 **A Yes, I do.**
 19 Q Do you know Dr. Fletcher?
 20 **A I do.**
 21 Q He was your primary contact at ICI?
 22 **A Yes.**
 23 MS. REISMAN: Objection to the form.
 24 Q (By Mr. Kelly) And did you and Dr. Fletcher
 25 at any time investigate or commission any analysis of

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1 the link between paraquat exposure and the development
 2 of peripheral neuritis?
 3 MS. REISMAN: Objection to form.
 4 **A Don't recall one way or the other.**
 5 Q (By Mr. Kelly) And the next sentence says:
 6 "It was agreed that this effect was difficult to check,
 7 but evidence might be obtained from an epidemiological
 8 study."
 9 Do you see that?
 10 **A Yes.**
 11 Q Did anyone ever do an epidemiological study
 12 to investigate the relationship or lack of a
 13 relationship between paraquat exposure and the
 14 development of peripheral neuritis in human beings?
 15 MS. REISMAN: Objection to form.
 16 **A Yes.**
 17 Q (By Mr. Kelly) Who did that study?
 18 **A Dr. Howard of ICI and a Dr. Sabapathy.**
 19 Q Is the -- the Howard-Sabapathy study you're
 20 talking about the one you also referenced yesterday in
 21 your direct?
 22 MS. REISMAN: Objection. Form.
 23 **A I -- probably, yeah.**
 24 Q (By Mr. Kelly) Okay. Did they do one that
 25 was focused exclusively on peripheral neuritis?

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1 MS. REISMAN: Objection to form. Asked and
2 answered.

3 **A It would have included -- their examination**
4 **would have found peripheral neuritis -- neuritis --**
5 **excuse me -- had it been there.**

6 Q (By Mr. Kelly) Okay. I'm going to try and
7 move with some dispatch. I'm moving to my next
8 exhibit. Mr. Cavalli, if you would put that aside.
9 Thank you, sir.

10 (Exhibit 48 has been marked and now
11 identified for the record.

12 Q (By Mr. Kelly) This particular exhibit is
13 marked No. 48. This -- as you can see on the -- on the
14 first page, appears to be directed to Mr. J.N. Ospenson
15 [as pronounced]?

16 MS. REISMAN: Ospenson.

17 Q (By Mr. Kelly) Ospenson.
18 This is an internal Chevron document; is
19 that right?

20 **A Yes, it is.**

21 MS. REISMAN: Now, I'm just going to object
22 because the copy that you've put in front of the
23 witness, Mr. Kelly, is a Syngenta document. So I
24 don't know what your question is actually asking
25 but...

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1 MR. KELLY: My question is -- you'll find
2 out if you wait.

3 MS. REISMAN: No, no, no. My point is
4 you -- you said that this document, this particular
5 document is not a Chevron document. It is -- so I
6 just wanted to make that clear. You can go on with
7 your questions.

8 Q (By Mr. Kelly) Do you see the last page, sir,
9 and where you are the signature on this document?

10 **A Yes, I do.**

11 MS. REISMAN: Just so there's no --
12 Mr. Kelly, I'm objecting because this is not from
13 Syngenta and are handwritten notes -- I mean, this is
14 not from Chevron files, and there are handwritten
15 notes on it. So -- at least on mine. So go ahead.

16 Q (By Mr. Kelly) Let's focus on Exhibit 48
17 here. You see it bears the date March 29, 1976,
18 directed to Mr. J.N. Ospenson.

19 You know who that is, correct?

20 **A Yes.**

21 Q And do you see the last page says: "Original
22 Signed R.D. Cavalli -- Cavalli." Excuse me.

23 **A Yes, I see that.**

24 Q And this would indicate to you, then, that
25 this in whatever form it was originally before anybody

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1 wrote on it was something you authored for review by
2 the person who was your superior, correct?

3 **A Yes.**

4 Q All right. I just want to focus on two
5 things. First -- the first sentence says: "The
6 following is a summary of the meetings held between
7 myself and Ken Fletcher of CTL on February 17 and 18,
8 1976."

9 Did I read that correctly?

10 **A That's what's on the page.**

11 Q And in this context, "myself" was you,
12 Mr. Richard Cavalli, right?

13 **A Yes.**

14 Q Okay. And -- and this would have been
15 consistent with the arrangement that was struck where
16 Fletcher would be the primary contact for ICI, you
17 would be the primary contact for Chevron; is that
18 true?

19 MS. REISMAN: Objection to form.

20 **A In matters pertaining to health effects,**
21 **yes.**

22 Q (By Mr. Kelly) Okay. I'm looking exclusively
23 here at Paragraph 3. This is in 1976. It begins: "We
24 discussed at some length the gaps in our knowledge of
25 the chronic effects of paraquat exposure."

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1 Did I read that correctly?

2 **A Yes, you did.**

3 Q And so in 1976, were both you and
4 Dr. Fletcher acknowledging there were gaps in your
5 knowledge regarding the effects of paraquat exposure?

6 MS. REISMAN: Objection to form.

7 **A You know, I -- I -- I don't recall this**
8 **specific document. I don't recall what Ken and I**
9 **discussed, and I don't know -- we may have discussed**
10 **gaps, but it doesn't say that we found gaps. But I**
11 **have very poor recollection of this.**

12 Q (By Mr. Kelly) Well, you do recall that at
13 this particular time in history, it would have both
14 been part of your personal practice and your job
15 responsibilities to accurately report to Dr. Ospenson
16 what transpired between you and Dr. Fletcher, correct?

17 MS. REISMAN: Objection. Objection to form.

18 **A Yes. It would have been.**

19 Q (By Mr. Kelly) There would be no incentive,
20 purpose, or reason to mislead Dr. Ospenson, would
21 there?

22 **A No.**

23 Q The second sentence says: "The animal
24 studies available are old and do not meet current
25 standards."

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1 That was a statement that you made here as
2 of 1976, correct?
3 **A Correct.**
4 Q And you go on to say: "Some are poorly
5 done." Right?
6 MS. REISMAN: Objection to form.
7 What are you asking him?
8 Q (By Mr. Kelly) You report here that with
9 reference to the animal studies that are available,
10 "some are poorly done." Correct?
11 **A That's what it says.**
12 Q And are "poorly done studies" studies that
13 you regularly rely on?
14 MS. REISMAN: Objection to form.
15 **A Could you --**
16 Q (By Mr. Kelly) Yes, sir. My question was,
17 are "poorly done studies" studies that you regularly
18 rely on?
19 MS. REISMAN: Objection to form.
20 **A That's -- you know, I -- I -- I don't**
21 **remember what studies I had in mind at that time. It**
22 **says "some," not "all," on the paper. I just don't**
23 **remember one way or the other.**
24 Q (By Mr. Kelly) The next sentence says: "In
25 fact, the cause of death from chronic exposure to

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1 paraquat could not be determined from these studies."
2 Do you see that sentence?
3 **A I do.**
4 Q And it would be important to have current,
5 valid, reliable studies from which the cause of death
6 from chronic exposure to paraquat could be determined;
7 isn't that correct?
8 MS. REISMAN: Objection to form.
9 **A Yes.**
10 Q (By Mr. Kelly) Then you go on to say:
11 "Dr. Fletcher agreed to review those and to consider
12 repeating certain of the studies."
13 Did I get that right?
14 **A You did.**
15 Q And does this reflect that you, in fact,
16 asked ICI to get current studies that were not poorly
17 done?
18 MS. REISMAN: Objection to form.
19 **A You know, I don't recall one way or the**
20 **other.**
21 Q (By Mr. Kelly) The next sentence says then:
22 "I have recently received a letter from him,
23 enclosed" -- and here you're referencing Dr. Fletcher,
24 correct?
25 **A Yes.**

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1 Q -- "in which he states that he has reviewed
2 this area with Allen Calderbank and Arthur Waitt, and
3 they do not believe it warranted to repeat any of this
4 work."
5 Did I say that correctly?
6 **A You did.**
7 Q And to repeat any of this work was asking
8 them to repeat the animal studies to bring them up to
9 date and to make sure they were not poorly done,
10 right?
11 MS. REISMAN: Objection to form.
12 **A Again, I don't remember the meeting.**
13 Q (By Mr. Kelly) And you are unable to
14 ascertain -- actually, I'll withdraw that.
15 You then write as follows: "I agree with
16 this" -- and this -- that phrase, "I agree with this"
17 references not redoing the studies, correct?
18 MS. REISMAN: Objection to form.
19 **A I believe so.**
20 Q (By Mr. Kelly) Okay. "I agree with this only
21 if we can do the proposed epidemiology study. If not,
22 our only recourse will be to have good animal studies
23 in this area."
24 Did I read that correctly?
25 **A Yes, you did.**

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1 Q What is the proposed epidemiology study to
2 which you reference in the March 29, 1976
3 correspondence to Ospenson?
4 **A The -- it would have been the study that was**
5 **ultimately conducted in Malaysia by Dr. Howard and**
6 **Dr. Sabapathy.**
7 Q And so were you for Chevron proposing an
8 epidemiology study in Malaysia rather than a study in
9 the United States to substitute for the poorly done
10 animal studies referred to here?
11 MS. REISMAN: Objection to form.
12 **A There -- there were -- I mean, basically,**
13 **yes.**
14 Q (By Mr. Kelly) Okay. Okay.
15 I'm going to next my exhibit, sir, which is
16 Exhibit 50.
17 **A Thank you.**
18 **(Exhibit 50 has been marked and now**
19 **identified for the record.**
20 Q (By Mr. Kelly) This Exhibit 50 at the top
21 says September of 1976, and on the second page, it is
22 headed: "Minutes of Chevron/CTL Liaison Meeting 8-9
23 September 1976." Correct?
24 **A That's what it -- what it says.**
25 Q And earlier, I reference this as -- I don't

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1 think I was clear enough.
 2 Was it correct that there were twice yearly
 3 meetings, once in the US in California and once in
 4 London with the ICI people?
 5 MS. REISMAN: Objection to form.
 6 **A Minor point, the meetings were held in**
 7 **Manchester.**
 8 Q (By Mr. Kelly) Once a year in Manchester,
 9 once a year in California?
 10 MS. REISMAN: Objection to form.
 11 Q (By Mr. Kelly) Is that right?
 12 **A Yes.**
 13 Q And beginning in 1973? Or had they already
 14 begun before you were tasked with your paraquat
 15 responsibilities?
 16 **A My recollection is that those meetings were**
 17 **held before I got involved.**
 18 Q And for how long did they continue? Did
 19 they continue all the way until 1986 when Chevron
 20 withdrew from the business?
 21 MS. REISMAN: Objection to form.
 22 **A I believe they did.**
 23 Q (By Mr. Kelly) Okay. I just have one small
 24 piece of this that involves you that I wanted to speak
 25 about, and so if you will turn to the one, two,

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1 third page of text. In the lower right-hand corner,
 2 the number is 1160.
 3 **A Okay.**
 4 Q And at the very bottom, it says:
 5 "Litigation USA."
 6 Do you see that?
 7 **A I do.**
 8 Q It says: "The four cases involving
 9 litigation against paraquat were summarized by
 10 Dr. Cavalli." Stop there.
 11 Was it a regular part of these meetings from
 12 '73 forward for you to report on the status of
 13 litigation between Chevron and American litigants at
 14 the joint meetings?
 15 MS. REISMAN: Objection to form.
 16 **A I don't know if it was regular, but I think**
 17 **it was among the things we talked about.**
 18 Q (By Mr. Kelly) Did the ICI scientists and
 19 professionals assist in the defense of the litigation
 20 against Chevron?
 21 MS. REISMAN: Objection to form.
 22 **A Not to my knowledge.**
 23 Q (By Mr. Kelly) Continuing with that
 24 paragraph, it says: "Two of these involved
 25 hematological disorders and two generalized organ

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1 damage. Chevron believe that more work should be
 2 carried out on the effects of chronic exposure to
 3 paraquat to help in the defense of these actions.
 4 Two approaches were seen to be possible - experimental
 5 and epidemiological."
 6 Now, this was the report you gave, right?
 7 MS. REISMAN: Objection to form.
 8 **A No. Again, I don't specifically recall the**
 9 **document or the meeting, but that's what's written on**
 10 **the page.**
 11 Q (By Mr. Kelly) Okay. In the September of
 12 1976 which is ten years plus or minus since Chevron had
 13 been selling paraquat, did you and your group have in
 14 mind experimental or epidemiological work to assist in
 15 the defense of litigation?
 16 MS. REISMAN: Objection to form.
 17 **A One more time, please.**
 18 Q (By Mr. Kelly) Sure.
 19 Did you and your group in 1976 ten years
 20 after you had started -- or not you -- but Chevron had
 21 started selling paraquat in the US have in mind what
 22 kind of experimental or epidemiological reach would be
 23 necessary to assist in the defense of litigation
 24 alleging injury from paraquat exposure?
 25 MS. REISMAN: Objection to form.

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1 **A Specifically to defend litigation?**
 2 Q (By Mr. Kelly) Yes.
 3 **A I don't recall.**
 4 Q Okay. The -- your presentation here is
 5 reported as you saying: "Chevron believe that more
 6 work should be carried out on the effects of chronic
 7 exposure to paraquat to help in the defense of these
 8 actions."
 9 Did I read that correctly?
 10 MS. REISMAN: Objection to form.
 11 **A You did read it correctly.**
 12 Q (By Mr. Kelly) And did Chevron ultimately
 13 undertake work on the effects of chronic exposure to
 14 paraquat to help in the defense of litigation against
 15 it?
 16 MS. REISMAN: Objection to form.
 17 **A To -- you know, I don't -- I don't recall**
 18 **one way or the other whether we did work to defend**
 19 **litigation as opposed to doing work to further**
 20 **understand the toxicity of paraquat and its use.**
 21 Q (By Mr. Kelly) This particular little piece
 22 of the report says: "There are four cases involving
 23 hematological disorders."
 24 Do you understand what hematological
 25 disorders are?

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<p>1 A I do.</p> <p>2 Q This would be some blood-related injury,</p> <p>3 disease, or ailment; is that right?</p> <p>4 A Yes.</p> <p>5 Q And/or some organ damage of some kind. We</p> <p>6 don't know which organ, correct?</p> <p>7 A Doesn't say that here.</p> <p>8 Q Which organ?</p> <p>9 A No, it doesn't.</p> <p>10 Q Okay. Focusing just on that, do you have a</p> <p>11 memory of Chevron undertaking work that had as its</p> <p>12 focus hematological disorders or organ damage where it</p> <p>13 studied the effect of chronic exposure to help defend</p> <p>14 those lawsuits?</p> <p>15 MS. REISMAN: Objection to form. Asked and</p> <p>16 answered.</p> <p>17 A Again, the work would have been done for the</p> <p>18 overall assessment of paraquat and its risks but as</p> <p>19 opposed to being done for litigation purposes.</p> <p>20 Q (By Mr. Kelly) Was that done?</p> <p>21 MS. REISMAN: Objection to form.</p> <p>22 A I lost the paragraph. Oh, there it is.</p> <p>23 MS. REISMAN: Objection to form.</p> <p>24 Do you know what he's asking?</p> <p>25 MR. KELLY: No. You don't have to ask him.</p>	<p>1 Q (By Mr. Kelly) And this -- I will tell you,</p> <p>2 it's not on here, Mr. Cavalli, but the computer says</p> <p>3 this is from December 12 of 1978, if it makes any</p> <p>4 difference, the way these documents are produced.</p> <p>5 And this is simply headed: "Paraquat Worker</p> <p>6 Safety." If we go to the end of it, is this your name</p> <p>7 with your initials?</p> <p>8 A Yes.</p> <p>9 Q All right. And can we, therefore, be</p> <p>10 assured that this is something that you authored,</p> <p>11 read, and then initialed as accurate?</p> <p>12 A It would have been.</p> <p>13 Q If you would just go to the page in the</p> <p>14 lower, the third -- the second page, I'm sorry. 3320.</p> <p>15 MS. REISMAN: I don't have a 3320.</p> <p>16 MR. KELLY: 2320. I'm sorry. I need to get</p> <p>17 my lenses refracted.</p> <p>18 Q (By Mr. Kelly) The last paragraph on</p> <p>19 page 32320.</p> <p>20 A Oh, okay. Looking at the wrong number.</p> <p>21 Q Oh, yeah. I'm sorry. I see there's another</p> <p>22 one at the bottom.</p> <p>23 The paragraph begins: "Due to paraquat's</p> <p>24 extremely low vapor pressure..." Do you see that?</p> <p>25 A Yes.</p>
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<p>1 He can tell me. It's not your job, Counsel. This is</p> <p>2 trial -- this is trial testimony. Stop pretending</p> <p>3 it's not. Please.</p> <p>4 MS. REISMAN: Mr. Kelly, please. The</p> <p>5 witness looks confused to you and me.</p> <p>6 MR. KELLY: The witness does not look</p> <p>7 confused. The witness looks no more confused than</p> <p>8 he's been for two days which is not confused.</p> <p>9 MS. REISMAN: Well, the record will -- is</p> <p>10 what it is. Why don't you continue with your</p> <p>11 questioning.</p> <p>12 MR. KELLY: Goodness gracious.</p> <p>13 Q (By Mr. Kelly) Did your group at any time do</p> <p>14 studies or analysis on the effect of paraquat exposure</p> <p>15 in causing hematological or organ disorders?</p> <p>16 A Those end points would have been -- would</p> <p>17 have been part of any subchronic or chronic study.</p> <p>18 MR. KELLY: Okay. I have just a couple more</p> <p>19 things. Then I'm going to pass this. Let me --</p> <p>20 apparently, I had two of these. So giving one to</p> <p>21 counsel and one to the witness.</p> <p>22 This is Exhibit 43. Oh, I do have one more.</p> <p>23 Here you go, Counsel.</p> <p>24 (Exhibit 43 has been marked and now</p> <p>25 identified for the record.</p>	<p>1 Q Okay. I'm focused on the sentence that</p> <p>2 begins: "A requirement to use a full-face</p> <p>3 respirator..."</p> <p>4 Are you there?</p> <p>5 A I am.</p> <p>6 Q Okay. Let me read this, please.</p> <p>7 "A requirement to use a full-face respirator</p> <p>8 will only lessen the effectiveness of these directions</p> <p>9 with regard to chemicals for which they should be</p> <p>10 worn."</p> <p>11 Do you have in mind what that refers to,</p> <p>12 sir?</p> <p>13 A You know, I don't remember the meeting. I</p> <p>14 don't remember what this -- as I sit here, what this</p> <p>15 inspired that.</p> <p>16 Q Okay.</p> <p>17 A I just know what it says.</p> <p>18 Q All right. Well, in 1978, sir, did you</p> <p>19 oppose the utilization of a full-face respirator</p> <p>20 because it would lessen the effectiveness of the use</p> <p>21 of full-face respirators for other chemicals for which</p> <p>22 they should be worn?</p> <p>23 MS. REISMAN: Objection the form. Objection</p> <p>24 to form.</p> <p>25 A Yeah. I can't remember one way or another</p>

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1 **whether that was my view or a view I carried for**
 2 **others.**
 3 Q (By Mr. Kelly) All right. Did you ever carry
 4 the view for others or for yourself that workers
 5 utilizing paraquat sold by Chevron should be wearing
 6 full-face respirators?
 7 MS. REISMAN: Objection to form.
 8 **A I don't recall one way or the other.**
 9 Q (By Mr. Kelly) Continuing in that paragraph,
 10 sir. You go on to say -- in this document you wrote
 11 and initialed -- "Likewise, there is no reason to
 12 protect the entire body with waterproof gear since
 13 there is no evidence which indicates that the
 14 incidental exposure to skin from dilute paraquat is
 15 detrimental."
 16 Did I read that correctly?
 17 **A Yes, you did.**
 18 Q Was that the opinion that you held or
 19 carried or both in December of 1978?
 20 MS. REISMAN: Object to form.
 21 **A Again, I -- I don't have a specific**
 22 **recollection of this. It just -- long ago.**
 23 Q (By Mr. Kelly) Okay. Sir, at any time
 24 between 1973 and 1986, did you, the sig- -- signature
 25 of this document, R.D. Cavalli, ever hold the opinion

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1 that there is no reason to protect the entire body with
 2 waterproof gear since there is no evidence which
 3 indicates that the incidental exposure to skin from
 4 dilute paraquat is detrimental?
 5 MS. REISMAN: Objection to form. Asked and
 6 answered.
 7 **A You know, again, I just don't remember one**
 8 **way or the other.**
 9 Q (By Mr. Kelly) Sir, was there a period of
 10 time in 1978 where you had it as part of your job
 11 responsibilities to articulate what the company's
 12 position was with reference to wearing either full-face
 13 respirators or protecting the entire body with
 14 waterproof gear?
 15 MS. REISMAN: Objection to form.
 16 **A You know, I just can't say.**
 17 Q (By Mr. Kelly) Was there in 1978 any person
 18 other than yourself who was a spokesperson for the
 19 company on what the appropriate use was of either
 20 full-face respirators or waterproof gear to protect
 21 from paraquat exposure?
 22 MS. REISMAN: Objection to form.
 23 **A There was an industrial hygiene group**
 24 **that -- whose business it was to recommend protective**
 25 **equipment or approve protective equipment.**

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1 Q (By Mr. Kelly) And was it part of your job to
 2 respond on behalf of Chevron to the State of California
 3 Worker Health and Safety Unit regarding what was
 4 appropriate protective gear in 1978?
 5 MS. REISMAN: Objection to form.
 6 **A I -- I may have done so. I just don't**
 7 **recall.**
 8 Q (By Mr. Kelly) And would that have been a
 9 task that would have been within the job description of
 10 the position you held at that time?
 11 MS. REISMAN: Objection to form.
 12 **A Yes, it would have been.**
 13 Q (By Mr. Kelly) I have one last thing, sir,
 14 and then we're going to take a break and Mr. Kennedy is
 15 going to conclude our work for the day.
 16 MR. KELLY: I'm going to mark Exhibit 45, if
 17 I can.
 18 (Exhibit 45 has been marked and now
 19 identified for the record.
 20 Q (By Mr. Kelly) Yesterday in the questioning,
 21 there were questions for you about an article in
 22 ScienceDirect linking -- proposing that there was a
 23 link between Parkinson's and exposure to paraquat.
 24 Do you remember that?
 25 MS. REISMAN: Give me one second. Go ahead.

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1 Q (By Mr. Kelly) Do you remember that?
 2 **A Yes, I do.**
 3 Q Okay. And -- and I think you talked about a
 4 study by somebody named Barbeau. Do you remember
 5 talk- -- talking about that?
 6 **A Yes, I do.**
 7 Q So I've handed you Exhibit 45, and this is a
 8 piece of correspondence from J.N. Oспенson to J.N.
 9 Sullivan where you are copied here.
 10 Do you see that?
 11 **A I do.**
 12 Q And as you look at this and you go to -- go
 13 two pages in, if you will. The Bates number in the
 14 corner is 3004.
 15 **A Yes.**
 16 Q And -- in the upper right-hand portion, I
 17 don't know what you call these. I do recall when I
 18 started practice we had these where you stamped
 19 everybody's name on something and you circulated and
 20 you read it.
 21 Do you see that box of folks?
 22 **A Yes, I do.**
 23 Q And your name is on there?
 24 MS. REISMAN: Objection to form.
 25 **A Yeah. That's our -- our department stamp,**

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1 so.
2 Q (By Mr. Kelly) Great. And that's what -- my
3 next question. Are these the folks in your department?
4 MS. REISMAN: Objection to form.
5 A Yes.
6 Q (By Mr. Kelly) Okay. Do you know who R. Gwin
7 Follis is?
8 A He --
9 Q Was I think is the correct way to say it.
10 A He was chairman of the board of Chevron for
11 many years.
12 Q And in 1985, who was Mr. Keller?
13 A George Keller was the chairman of the board
14 at that time.
15 Q And Mr. Follis, after his retirement, did he
16 remain in contact with the executives there at
17 Chevron?
18 MS. REISMAN: Objection to form.
19 Foundation.
20 A I have no idea.
21 Q (By Mr. Kelly) On -- on this page 3004,
22 Mr. Follis's letter to Mr. Keller talks about an
23 article about paraquat. And the second paragraph says:
24 "Since we don't want to take any chance of facing an
25 asbestos situation down the road, I am sure your people

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1 are following this aspect of the matter most closely."
2 Do you actually remember seeing this letter,
3 sir?
4 A I do not.
5 Q Okay. Do you remember being consulted with
6 respect to the response to Mr. Follis?
7 A I don't.
8 Q Do you remember any discussion about this
9 correspondence and this article and the question of a
10 long period of latency after exposure to paraquat
11 resulting in a "asbestos"-like problem?
12 MS. REISMAN: Objection to form.
13 A No. I have no recollection of having seen
14 this at the time.
15 Q (By Mr. Kelly) And the -- back to the front
16 page for a moment, the transmittal from Ospenson to
17 Sullivan.
18 Would a response regarding the toxicological
19 effects of asbestos exposure in 1985 been the kind of
20 correspondence that you necessarily would have
21 received copies of in your position?
22 MS. REISMAN: Objection to form.
23 A I don't recall any discussion of asbestos.
24 Q (By Mr. Kelly) This cover letter says:
25 "Files with attachment." And if we go to page 006, one

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1 of the attachments is the article you discussed
2 yesterday; is that correct?
3 A What was the number -- page number?
4 Q Yes, sir.
5 A 6?
6 Q Yeah. 006 in the lower right-hand corner.
7 A Yes.
8 Q This is the article you were discussing
9 yesterday with counsel, right?
10 MS. REISMAN: Objection to form.
11 A I believe it is.
12 Q (By Mr. Kelly) Does this refresh your memory
13 that this is how you saw this article, you saw it when
14 it was forwarded to the company by the former chairman?
15 MS. REISMAN: Objection to form.
16 A No. I saw this article that other people
17 sent to me. I -- I just -- I have no memory of
18 letters between chairman and vice chairmans and all
19 that.
20 Q (By Mr. Kelly) And when you say I have a
21 memory of it from other people sending it to me, are
22 you referring to people within the company?
23 A You know, I can't say one way or the other.
24 Q Okay. Okay.
25 MR. KELLY: Mr. Cavalli, thank you for your

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1 courtesy. I don't have additional questions at this
2 time. And I think we'll take a break and let
3 Mr. Kennedy change chairs here.
4 VIDEOGRAPHER: Okay. We're going off the
5 record at 10:28 a.m.
6 (A break was taken.)
7 VIDEOGRAPHER: Stand by. We're back on the
8 record at 10:33 a.m.
9 [EXAMINATION]
10 QUESTIONS BY MR. KENNEDY:
11 Q Mr. Cavalli, my name's Eric Kennedy, and I
12 represent the plaintiffs in various lawsuits brought
13 against Chevron. All right?
14 A All right.
15 Q And I want to focus my questioning today on
16 your testimony given in response to the questions
17 asked to you by the Chevron attorney. All right?
18 A All right.
19 Q Before I do that, though, so the jury has an
20 understanding of -- of just how toxic paraquat is,
21 just how dangerous it is, would I be correct in saying
22 that if an applicator were to get as little as an
23 ounce of paraquat on their skin and not wash it off
24 for 24 hours, that could cause their death, correct?
25 MS. REISMAN: Objection to form.

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1 **A That would depend on the circumstances.**
2 Q (By Mr. Kennedy) Sir, you remember -- and I
3 know it's a long time ago -- giving testimony all the
4 way back in -- in 1982 directly addressing the toxicity
5 of -- of paraquat.
6 Do you recall that back in 1982?
7 **A Do you have the name of the --**
8 Q I'm going to -- let me bring that up.
9 MR. KENNEDY: If you can bring up
10 Mr. Cavalli's testimony from 4/29/1982, please.
11 Q (By Mr. Kennedy) This was the case of
12 Ferebee. Do you recall that, sir?
13 **A Yes. Thank you.**
14 MS. REISMAN: Mr. Kennedy, do you have hard
15 copies of this?
16 MR. KENNEDY: Pardon me?
17 MS. REISMAN: Do you have hard copies of
18 your exhibits?
19 MR. KENNEDY: I do not.
20 MS. REISMAN: Can we -- does anybody have
21 hard copies?
22 MR. KENNEDY: This is transcript. This is
23 not --
24 Q (By Mr. Kennedy) If you can go to page 1545,
25 please. And if you --

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1 MS. REISMAN: Let me just have a standing
2 objection to the use of this testimony without a hard
3 copy or a full transcript and having -- directing this
4 witness to one single response.
5 With that objection, please proceed.
6 Q (By Mr. Kennedy) If you go to line 17, this
7 was sworn testimony in the Ferebee case, was it not?
8 **A If you say so.**
9 Q Question asked you --
10 MS. REISMAN: Do you know whether it was
11 sworn testimony?
12 THE WITNESS: Well, looks like it.
13 MS. REISMAN: Okay.
14 Q (By Mr. Kennedy) "QUESTION: Doctor, can you
15 answer my question once again, or can you answer it
16 once?
17 "If you put an ounce of paraquat on your
18 skin, it will kill you, won't it, if you leave it on,
19 if you don't wash it off?"
20 Your answer: "If you leave it on and if the
21 skin breaks down, I would guess that might be a
22 sufficient amount."
23 Do you recall that testimony under oath?
24 **A I don't specifically recall it, but I see it**
25 **on the page.**

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1 Q This was 1982 when you were still working at
2 Chevron, true?
3 **A Uh-huh. Yes.**
4 Q Before you gave testimony yesterday in
5 response to the questioning of the Chevron attorney,
6 can you tell me about what meetings to prepare you for
7 your testimony you had with the Chevron attorneys?
8 MS. REISMAN: Objection to form.
9 **A In this -- in this matter?**
10 Q (By Mr. Kennedy) Yes, sir.
11 **A Okay.**
12 MS. REISMAN: What are you asking?
13 MR. KENNEDY: Let him answer.
14 MS. REISMAN: Are you asking for the number
15 of times? I'm not going to allow him to testify with
16 respect to the content of those minutes.
17 Q (By Mr. Kennedy) Sir, if you can please
18 answer my question.
19 MS. REISMAN: Could you answer it without
20 revealing any of the content of your meetings and
21 conversations with counsel.
22 THE WITNESS: Okay.
23 Could you repeat your question?
24 Q (By Mr. Kennedy) Can you tell me about the
25 preparation that you had by the attorneys for Chevron

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1 prior to your testimony here today?
2 MS. REISMAN: And again, you can answer
3 other than with respect to the content of the meetings
4 that you have had with counsel.
5 MR. KENNEDY: Do we have a Special Master
6 available?
7 MR. FLOWERS: We can try.
8 MR. KENNEDY: Check it out.
9 Q (By Mr. Kennedy) Please answer my question,
10 sir.
11 MS. REISMAN: You can -- you can answer
12 without revealing the content of the conversations.
13 MR. KENNEDY: That's the third time. Once
14 is enough. No?
15 MS. REISMAN: Well, I just -- I'm directing
16 him not to answer with the respect to the content of
17 conversation.
18 MR. KENNEDY: You've don't it three times.
19 MS. REISMAN: You've asked the question
20 three times in an unclear way.
21 Q (By Mr. Kennedy) Go ahead, sir.
22 **A I did meet with attorneys representing**
23 **Chevron on several occasions.**
24 Q How many occasions?
25 **A I don't recall.**

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1 Q More than once?

2 A **Several implies more than once, yes.**

3 Q Where did those meetings take place?

4 A **They took place at my residence.**

5 Q When was the last time you had a meeting at

6 your residence?

7 A **Last week, I believe, was.**

8 Q And prior to last week, did you have a

9 meeting at your residence with the attorneys from

10 Chevron?

11 A **Prior to that, yes.**

12 Q And more than one occasion?

13 A **On more than one occasion.**

14 Q On more than two occasions prior to last

15 week?

16 A **More than two occasions.**

17 Q Would you say that you met with the

18 attorneys from Chevron more or less than

19 five occasions?

20 A **I couldn't say.**

21 Q At each of those meetings, how long did

22 those meetings last at your home?

23 MS. REISMAN: Objection to form.

24 A **They varied from couple of hours to four or**

25 **five hours.**

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1 Q (By Mr. Kennedy) And were you shown any

2 medical literature, published articles, in any of these

3 meetings?

4 MS. REISMAN: I'm going to object to you

5 asking him what he was shown until you establish that

6 those documents refreshed his recollection.

7 You can answer to the extent any of the

8 documents refreshed your recollection.

9 A **I -- I don't remember specifically.**

10 Q (By Mr. Kennedy) Were you shown any Chevron

11 documents during those -- those meetings?

12 MS. REISMAN: Same objection. And object to

13 the extent that those documents didn't refresh your

14 recollection. If any of the documents refreshed your

15 recollection, please do testify.

16 A **None of the documents that I looked at**

17 **refreshed my memory.**

18 Q (By Mr. Kennedy) That wasn't my question. My

19 question was, did you review any documents provided you

20 by the lawyers from Chevron?

21 MS. REISMAN: You can answer yes or no.

22 A **Yes.**

23 Q (By Mr. Kennedy) You're being paid for your

24 time to testify and the time for your preparation by

25 Chevron?

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1 MS. REISMAN: Objection to form.

2 A **I am being paid for my time.**

3 Q (By Mr. Kennedy) And how much are you being

4 paid, sir?

5 A **Being paid \$500 an hour.**

6 Q Today how many hours have you billed Chevron

7 for your time to testify?

8 MS. REISMAN: Objection to form.

9 A **I don't have that number in mind.**

10 Q (By Mr. Kennedy) And last evening after the

11 questioning by Mr. Kelly and before the commencement of

12 his questioning today, did you meet with the Chevron

13 lawyers to discuss this case?

14 MS. REISMAN: Objection to form.

15 A **I did.**

16 Q (By Mr. Kennedy) And did you meet again

17 between Mr. Kelly's questioning last night and the

18 beginning of his questioning today? Did you meet this

19 morning in talking to Chevron lawyers about this case?

20 MS. REISMAN: Objection to form.

21 A **Yes.**

22 Q (By Mr. Kennedy) Let's talk about some of the

23 testimony of -- let's talk about some of the testimony

24 that you gave in response to the -- to the Chevron

25 questioning.

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1 You testified, sir, that -- that the

2 scientific studies that you have reviewed led you to

3 believe that paraquat does not get into the brains of

4 paraquat applicators.

5 Do you remember stating that?

6 A **I probably did, yeah.**

7 Q And that's your -- your belief and was your

8 belief when you were at Chevron in studying paraquat?

9 A **Yes. That was my belief at the time.**

10 Q And because it was your belief that paraquat

11 did not get into the brains of paraquat applicators,

12 you concluded that paraquat was a safe for

13 applicators.

14 Is that what you believed?

15 MS. REISMAN: Objection to form.

16 A **I believe that paraquat was safe for use if**

17 **the label precautions were followed.**

18 Q (By Mr. Kennedy) And, sir, you told us

19 yesterday that you believe that paraquat did not get

20 into the brains of applicators, number one, because of

21 the animal studies that you reviewed, correct?

22 A **That -- that's correct.**

23 Q Back at the time that you were -- were at

24 Chevron and you were studying this topic, you looked

25 at the animal studies that had been done by Chevron

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<p style="text-align: center;">Page 82</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">CONFIDENTIAL</p> <p>1 and -- and the IBT laboratory in ICI, correct?</p> <p>2 A Yes.</p> <p>3 Q And based upon those animal studies you came</p> <p>4 to the belief that paraquat did not get into the</p> <p>5 brains of applicators, correct?</p> <p>6 MS. REISMAN: Objection to form.</p> <p>7 A That paraquat appeared to have no effect on</p> <p>8 the central nervous system.</p> <p>9 Q (By Mr. Kennedy) Well, we're talking about</p> <p>10 paraquat getting into the brain. That's what we're</p> <p>11 focused on. And yesterday you testified that you</p> <p>12 believe paraquat did not get into the brains of</p> <p>13 applicators, correct?</p> <p>14 A I do. I do remember, and I do believe that.</p> <p>15 Q And the second thing beside the animal</p> <p>16 studies that you -- you were relying upon were the</p> <p>17 autopsies, correct?</p> <p>18 MS. REISMAN: Objection to form.</p> <p>19 Q (By Mr. Kennedy) You reviewed the autopsies</p> <p>20 while you were at Chevron, did you not, sir? Autopsies</p> <p>21 of folks that had been poisoned by paraquat and died?</p> <p>22 A Okay. I didn't catch the jump from animals</p> <p>23 to people. Sorry.</p> <p>24 Yes. I did review those.</p> <p>25 Q And the third thing that you based this</p>	<p style="text-align: center;">Page 84</p> <p>1 Q And when I say "rat studies," I'm talking</p> <p>2 about either Chevron, or ICI, or the independent</p> <p>3 laboratory exposing or intoxicating rats with</p> <p>4 paraquat, correct?</p> <p>5 MS. REISMAN: Objection to form.</p> <p>6 A Exposing them to it, yes.</p> <p>7 Q (By Mr. Kennedy) Okay. So they're either</p> <p>8 intraperitoneal exposure; there's dermal exposure;</p> <p>9 there's inhalation exposure; there's feeding studies.</p> <p>10 Correct?</p> <p>11 A Yes.</p> <p>12 Q And the rat studies that were done, when you</p> <p>13 looked, you found paraquat in the brain, correct?</p> <p>14 MS. REISMAN: Objection to form.</p> <p>15 A You know, I don't specifically recall.</p> <p>16 Q (By Mr. Kennedy) When you did mice studies,</p> <p>17 you found paraquat in the brain, correct?</p> <p>18 MS. REISMAN: Objection to form.</p> <p>19 A Again, I don't recall one way or the other.</p> <p>20 Q (By Mr. Kennedy) When you studied hens in</p> <p>21 paraquat, you found paraquat in the brain, correct?</p> <p>22 MS. REISMAN: Objection to form.</p> <p>23 A Same thing. I don't remember one way or the</p> <p>24 other.</p> <p>25 Q (By Mr. Kennedy) When you studied monkeys,</p>
<p style="text-align: center;">Page 83</p> <p>1 opinion on that paraquat was not getting into the</p> <p>2 brains of applicators were the human applicator</p> <p>3 studies which you talked about yesterday and today,</p> <p>4 correct?</p> <p>5 MS. REISMAN: Objection to form.</p> <p>6 A I missed something.</p> <p>7 Q (By Mr. Kennedy) You also looked at the human</p> <p>8 studies, the applicator human studies, particularly in</p> <p>9 Malaysia, correct?</p> <p>10 A Yes.</p> <p>11 Q And that was the third body of evidence that</p> <p>12 you told us that you looked at to conclude that</p> <p>13 paraquat does not get into the brains of applicators,</p> <p>14 correct?</p> <p>15 A Yes.</p> <p>16 Q All right. What I want to do with you is</p> <p>17 look at those three bodies of studies, the animals,</p> <p>18 brain tissue, and the human studies, and try to</p> <p>19 understand how those led you to conclude that paraquat</p> <p>20 does not get into the brains of applicators.</p> <p>21 Can we do that?</p> <p>22 A Yes.</p> <p>23 Q Okay. Let's start with the animal studies.</p> <p>24 Rat studies were done, correct?</p> <p>25 A Yes.</p>	<p style="text-align: center;">Page 85</p> <p>1 you found paraquat in the brain, true?</p> <p>2 MS. REISMAN: Objection. Form.</p> <p>3 A I don't recall one way or the other.</p> <p>4 Q (By Mr. Kennedy) When you studied goats, you</p> <p>5 found paraquat in the brain, did you not?</p> <p>6 MS. REISMAN: Objection. Form.</p> <p>7 A Same answer. I don't have specific</p> <p>8 recollection.</p> <p>9 Q (By Mr. Kennedy) When you studied pigs, you</p> <p>10 found paraquat in the brain, did you not?</p> <p>11 MS. REISMAN: Objection to form.</p> <p>12 A I don't recall.</p> <p>13 Q (By Mr. Kennedy) When you studied dogs, you</p> <p>14 found paraquat in the brain, did you not, sir?</p> <p>15 MS. REISMAN: Objection to form.</p> <p>16 A You know, I don't -- I don't have a</p> <p>17 recollection of that either way. If you have</p> <p>18 documents...</p> <p>19 Q (By Mr. Kennedy) I'm going to show you</p> <p>20 Exhibit 135, if we could. Sir, this the testimony of</p> <p>21 Dr. Philip Botham. Dr. Botham gave testimony in this</p> <p>22 case as the representative of ICI. All right? Have</p> <p>23 you ever reviewed this?</p> <p>24 A I don't recall reviewing this.</p> <p>25 Q And -- and again, ICI, that's the company</p>

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<p>1 that was manufacturing paraquat, correct?</p> <p>2 A Yes.</p> <p>3 MS. REISMAN: During the time that --</p> <p>4 A During -- during --</p> <p>5 Q (By Mr. Kennedy) During the time that you</p> <p>6 folks were selling it from 1965 to '86, correct?</p> <p>7 A Yes.</p> <p>8 Q Okay. And you understand Mr. Botham was</p> <p>9 chosen by ICI to represent them and make statements of</p> <p>10 their behalf in this case. All right?</p> <p>11 MS. REISMAN: Objection.</p> <p>12 Q (By Mr. Kennedy) And assume that. All right?</p> <p>13 MS. REISMAN: Object -- object to form and</p> <p>14 foundation.</p> <p>15 Q (By Mr. Kennedy) All right. Again, ICI was</p> <p>16 the company that Chevron was working with to understand</p> <p>17 the risks of paraquat, correct?</p> <p>18 MS. REISMAN: Objection to form.</p> <p>19 A Yes.</p> <p>20 Q (By Mr. Kennedy) And when they did a study,</p> <p>21 they would share it with you, true?</p> <p>22 MS. REISMAN: Objection to form.</p> <p>23 Foundation.</p> <p>24 A They shared with us. I -- I have no idea</p> <p>25 how complete that sharing was.</p>	<p>1 looked, they found paraquat in the brain?</p> <p>2 MS. REISMAN: Objection to form.</p> <p>3 Foundation.</p> <p>4 A Again, if I could see the studies again, it</p> <p>5 might refresh my memory, but I don't recall one way or</p> <p>6 the other.</p> <p>7 Q (By Mr. Kennedy) Sir, can we agree that in</p> <p>8 every animal study where they looked showed paraquat in</p> <p>9 the brain? Can we agree that that doesn't support the</p> <p>10 conclusion that paraquat can never get into the brain</p> <p>11 of an applicator, true?</p> <p>12 MS. REISMAN: Objection to form.</p> <p>13 Foundation.</p> <p>14 A You know, it -- it depends on the --</p> <p>15 the circumstances under which these animals were</p> <p>16 exposed, and I just don't have that in my mind.</p> <p>17 Q (By Mr. Kennedy) Well, you told us yesterday</p> <p>18 that a lot of these studies were high-dose studies,</p> <p>19 correct?</p> <p>20 MS. REISMAN: Objection. Form.</p> <p>21 Q (By Mr. Kennedy) Is that correct?</p> <p>22 MS. REISMAN: Objection to form.</p> <p>23 A Oh.</p> <p>24 MS. REISMAN: Objection to form.</p> <p>25 Q (By Mr. Kennedy) Is that correct, sir?</p>
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<p>1 Q (By Mr. Kennedy) Go to page 239. It's the</p> <p>2 last page of -- of Dr. Botham from ICI, his testimony.</p> <p>3 A Where are the numbers?</p> <p>4 Q 239 up in the top right. The very last</p> <p>5 page, sir.</p> <p>6 A Okay. This page 239 of the report?</p> <p>7 Q Yes, sir.</p> <p>8 A Yes.</p> <p>9 Q Go to -- starting at line 3, Dr. Botham, who</p> <p>10 gave testimony on behalf of ICI, he was asked: "So</p> <p>11 can I add pigs to that list I gave you before, rats,</p> <p>12 mice, hens, monkeys, man, goats, pigs, all found after</p> <p>13 either injection or feeding studies where they were</p> <p>14 slaughtered to have accumulated residual paraquat in</p> <p>15 the brain?"</p> <p>16 "ANSWER: Yes. Very low levels of paraquat</p> <p>17 found in the brain, yes."</p> <p>18 "QUESTION: And although I don't have the</p> <p>19 study here, can dogs also be added to that list by</p> <p>20 1976?"</p> <p>21 "ANSWER: I think they can, yes."</p> <p>22 Did you have any memory that -- that</p> <p>23 disagrees with the testimony here of -- of Dr. Botham</p> <p>24 on behalf of ICI that every single one of these animal</p> <p>25 studies, each of these types of animals, when they</p>	<p>1 A Could you repeat that?</p> <p>2 Q A lot of these studies were high-dose</p> <p>3 studies, correct?</p> <p>4 MS. REISMAN: Objection to form.</p> <p>5 A These studies generally included at least</p> <p>6 one high dose.</p> <p>7 Q (By Mr. Kennedy) And if high-dose paraquat</p> <p>8 study leads to paraquat in the brain, that certainly</p> <p>9 doesn't prove that a lesser dose will not get in the</p> <p>10 brain, correct?</p> <p>11 MS. REISMAN: Objection to form.</p> <p>12 A I -- I don't follow you.</p> <p>13 Q (By Mr. Kennedy) Sir, the -- the type of dose</p> <p>14 that -- that an applicator gets is -- is probably a</p> <p>15 low-dose, long-term chronic, correct?</p> <p>16 MS. REISMAN: Objection to form.</p> <p>17 A I would agree with low dose.</p> <p>18 Q (By Mr. Kennedy) Okay. And they can be</p> <p>19 exposed over years, correct?</p> <p>20 MS. REISMAN: Objection to form.</p> <p>21 A Yeah. Yes. Possible.</p> <p>22 Q (By Mr. Kennedy) And if they're exposed over</p> <p>23 years, that would fit the definition of a chronic long</p> <p>24 term, correct?</p> <p>25 MS. REISMAN: Objection to form.</p>

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1 **A It could, yes.**

2 Q (By Mr. Kennedy) And if you -- if you wanted

3 to know -- if you wanted to know whether or not

4 paraquat could get into the brain of an applicator, the

5 best study to do would be a low-dose, long-term chronic

6 study, correct?

7 MS. REISMAN: Objection to form. I assume

8 you're asking about his recollections from back then.

9 He's not identified as an expert today.

10 **A I mean, there were chronic studies on -- on**

11 **paraquat.**

12 Q (By Mr. Kennedy) Sir, my question is: If you

13 want to try to understand through animal studies

14 whether paraquat is going to get into the brain of an

15 applicator, the best studies to do would be low-dose,

16 long-term chronic studies, true?

17 MS. REISMAN: Objection to form and

18 foundation.

19 **A I think that's what was done.**

20 Q (By Mr. Kennedy) Sir, the fact of the matter

21 is neither Chevron nor ICI ever, ever did a long-term

22 chronic study to determine whether or not paraquat got

23 into the brain. That's the truth, correct?

24 MS. REISMAN: Objection to form.

25 **A We -- we had body of data that suggested**

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1 **that it didn't, and we didn't do such a study.**

2 Q (By Mr. Kennedy) Never. You never did what

3 would be the best study to determine whether or not

4 paraquat would get into the brain of an applicator,

5 correct?

6 MS. REISMAN: Objection to form.

7 **A You know, again, there were so many studies**

8 **on paraquat, exposure studies in the field that was**

9 **the evaluation of the health of the Malaysian**

10 **sprayers, and at the time I was of the opinion that**

11 **there was a very low risk to applicators in the**

12 **United States following the labeled precautions.**

13 Q (By Mr. Kennedy) Sir, we're -- we're going to

14 talk about the Malaysia study. We're going one group

15 of studies at a time. We're talking about the animal

16 studies right now. And the purpose of doing animal

17 studies is try to determine what happens in human

18 beings, true?

19 MS. REISMAN: Objection. Form.

20 Q (By Mr. Kennedy) That's the purpose?

21 **A Yes.**

22 Q Because you can't do an applicator study and

23 look into their brain to determine whether or not

24 there's paraquat in their brain, that wouldn't be a

25 good thing for applicators, correct to -- to look into

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1 their brains because that would mean you would have to

2 do an autopsy, correct?

3 MS. REISMAN: Objection to form.

4 Q (By Mr. Kennedy) Is that true, sir?

5 **A Yes. That's correct.**

6 Q So with the animal studies -- with the

7 animal studies it would be true that Chevron never did

8 a long-term study to look to see whether or not

9 paraquat got into the brain, true?

10 MS. REISMAN: Objection to form.

11 **A We did not, as I recall, any studies that --**

12 **in which the paraquat level in the brain was measured.**

13 **The chronic studies we did did look at behavioral**

14 **effects and any pathology in the brain.**

15 Q (By Mr. Kennedy) So the best study to

16 determine whether paraquat would actually get into the

17 brain was never done with respect to animals, true?

18 MS. REISMAN: Objection to form. Asked and

19 answered.

20 Q (By Mr. Kennedy) Is that true, sir?

21 MS. REISMAN: Objection to form. Asked and

22 answered.

23 **A That study wasn't done.**

24 Q (By Mr. Kennedy) Sir, you also testified

25 with -- with respect to these animal studies that the

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1 primary target of paraquat seemed to be the lung.

2 Do you remember that?

3 **A Yes.**

4 Q And so we could be clear for the jury, just

5 because the lung was the primary target, that

6 certainly doesn't mean that the brain can't also be

7 damaged by paraquat, correct?

8 MS. REISMAN: Objection to form.

9 **A No. No, it doesn't exclude any other organ**

10 **from...**

11 Q (By Mr. Kennedy) If we look at alcohol, the

12 primary target of alcohol would be the brain, true?

13 MS. REISMAN: Objection to form.

14 Foundation.

15 **A It certainly affects neuro function, yes.**

16 Q (By Mr. Kennedy) But that certainly doesn't

17 mean that the liver in the long term can't be damaged

18 by alcohol, true?

19 MS. REISMAN: Objection to form.

20 Foundation.

21 **A Yeah. As I said, the damage to the lung**

22 **does not preclude consideration of other organs.**

23 Q (By Mr. Kennedy) You needed to consider other

24 organs with respect to paraquat, like the brain; would

25 that be right?

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1 MS. REISMAN: Objection. Form.
 2 **A And I believe we did.**
 3 Q (By Mr. Kennedy) Stereology. Was stereology
 4 available in the 1970s and the 1980s?
 5 MS. REISMAN: Objection to form.
 6 **A What was the word?**
 7 Q (By Mr. Kennedy) Stereology. Was that
 8 available in -- in examining tissues of animal or human
 9 beings? Was stereology available in the 1970s or '80s?
 10 MS. REISMAN: Objection -- object to form.
 11 **A I'm not sure --**
 12 MS. REISMAN: Hold on. Let me just -- I'm
 13 sorry -- let me just get an objection. Objection to
 14 form.
 15 Go ahead.
 16 **A I'm not sure I understand what you mean.**
 17 Q (By Mr. Kennedy) Was cell counting available?
 18 Could you -- could you count the cells in tissue in the
 19 1970s and '80s to evaluate in animal studies? Could
 20 you count cells?
 21 MS. REISMAN: Objection to form.
 22 **A You -- you could count red cells and white**
 23 **cells and mass cells and any other kind of cell in the**
 24 **blood. I don't -- I don't know about counting**
 25 **cells -- cells of the organ.**

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1 MS. REISMAN: Mr. Kennedy, when you get to a
 2 good stopping point, we've been going about --
 3 MR. KENNEDY: Fine's right now.
 4 MS. REISMAN: You want to stop now?
 5 VIDEOGRAPHER: We're going off the record at
 6 11:01 a.m.
 7 (A break was taken.)
 8 VIDEOGRAPHER: We're back on the record at
 9 11:22 a.m.
 10 Q (By Mr. Kennedy) So, Mr. Cavalli, we are --
 11 we had been talking about your belief that paraquat did
 12 not get into the brain of applicators, and before we --
 13 let me ask you this:
 14 Was there anybody else at Chevron who shared
 15 your opinion and your belief that paraquat could not
 16 get into the brains of applicators?
 17 MS. REISMAN: Objection to form.
 18 Foundation.
 19 **A Yes, there were.**
 20 Q (By Mr. Kennedy) And who was that?
 21 **A Dr. Ford, Dr. White. I -- I'm sorry.**
 22 Q And did you communicate your -- your belief
 23 that paraquat could not get into the brains of
 24 applicators? Did you communicate and share that
 25 belief with -- with any of the people at Chevron that

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1 were involved with warnings and education of
 2 applicators?
 3 MS. REISMAN: Objection to form.
 4 **A One more time, please.**
 5 Q (By Mr. Kennedy) Your belief that paraquat
 6 could not get into the brains of applicators, did you
 7 share that belief with anyone at Chevron that was
 8 involved with communicating with applicators by way of
 9 labels, warnings?
 10 MS. REISMAN: Objection to form.
 11 **A We shared the data that we had that was the**
 12 **basis of my opinion that paraquat would not harm the**
 13 **brain.**
 14 Q (By Mr. Kennedy) And that's not my question.
 15 My question: Did you share your belief that paraquat
 16 could not get into the brain of an applicator?
 17 Did you share that belief with any of the
 18 folks at Chevron that had responsibility for creating
 19 labels and warnings and communicating with workers?
 20 MS. REISMAN: Objection to form. Asked and
 21 answered.
 22 **A I don't have a recollection of specific**
 23 **discussions about paraquat getting into the brain.**
 24 **The discussions were on whether paraquat affected**
 25 **various organs including the brain.**

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1 Q (By Mr. Kennedy) We looked at animal studies
 2 as to how you got to this conclusion that paraquat did
 3 not get into the brain of applicators. I want to ask
 4 you about autopsies. All right?
 5 **A Okay.**
 6 Q When someone would intentionally or
 7 unintentionally drink paraquat and it would cause them
 8 to die, autopsies were done on some of these folks,
 9 right?
 10 **A Yes, they were.**
 11 Q And that information and sometimes brain
 12 tissue would be sent to Chevron, true?
 13 **A Yes.**
 14 Q And you were aware of -- of those autopsies
 15 and that brain tissue while you were at Chevron; would
 16 that be accurate?
 17 MS. REISMAN: Objection to form.
 18 **A Yes.**
 19 Q (By Mr. Kennedy) And Chevron, when they would
 20 receive tissue from the brain of a patient that died
 21 from paraquat poisoning, Chevron at times would do its
 22 own analysis of that tissue, true?
 23 **A At the request of the physician, yes.**
 24 Q And one of the things that the Chevron would
 25 do would be to look to determine whether or not there

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1 was paraquat in the brains of these people that had
2 been poisoned with paraquat, true?
3 **A Yes.**
4 Q Now, Chevron and -- and ICI have sent us --
5 lawyers for -- for these applicators -- have sent us
6 26 reports.
7 MS. REISMAN: I'm sorry. You said the
8 lawyers of the applicators?
9 MR. KENNEDY: Let me repeat my question.
10 Q (By Mr. Kennedy) Chevron and ICI have sent us
11 reports, 26 reports, showing paraquat in the brains of
12 poison victims.
13 Can you explain to me how does that support
14 your conclusion that paraquat cannot get into the
15 brain of a human applicator?
16 MS. REISMAN: Objection to form.
17 **A All of those persons died from pulmonary**
18 **complications, pulmonary congestion, pulmonary**
19 **fibrosis. They were all in a state of hypoxia. The**
20 **gross findings in the brain were suggestive and**
21 **supportive of the kind of damage that occurs in a**
22 **hypoxic person or animal.**
23 **In all of the studies done at lower doses**
24 **where animals were not in extremis, people -- not**
25 **people. I'm sorry.**

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1 **The animals that were not in extremis did**
2 **not show damage to the brain.**
3 Q (By Mr. Kennedy) I'm asking you about the
4 presence of paraquat in the brain. And, sir, the fact
5 of the matter is, as we just discussed, Chevron never
6 did a study with lower doses long term and looked to
7 see whether there was paraquat in the brain, correct?
8 MS. REISMAN: Objection to form.
9 Q (By Mr. Kennedy) Never did?
10 **A No.**
11 Q And, sir, let me -- if you are looking at
12 brain tissue and the amount of paraquat in the tissue
13 sample is greater than the amount of paraquat in the
14 blood, does that mean that the paraquat has gotten
15 outside of the capillary and into the brain tissue?
16 MS. REISMAN: Objection to form.
17 **A In those terminal cases?**
18 Q (By Mr. Kennedy) Yes.
19 **A Yes.**
20 Q Let's look to worker studies. Again, it is
21 your belief that the worker studies -- and the one you
22 talked about was the Malaysian study -- it was your
23 belief that the Malaysian studies supported your
24 belief that paraquat did not get into the brains of
25 applicators, correct?

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1 **A It supported that there were no neurological**
2 **effects.**
3 Q Again, I'm focused on paraquat in the brains
4 of workers. One of the things that you told us
5 supports your opinion and belief back in the '80s that
6 paraquat did not get into the brain of applicators was
7 these worker studies, true?
8 MS. REISMAN: Objection to form.
9 **A Yes. It was supportive of that.**
10 Q (By Mr. Kennedy) And the worker study you
11 talked about was the Malaysian study, right, by Howard?
12 **A Yes. Excuse me. Yes.**
13 Q And in that study, they found paraquat in
14 the urine of these workers, did they not?
15 MS. REISMAN: Objection to form.
16 **A In the paper by Howard and Sabapathy, I**
17 **don't recall.**
18 Q (By Mr. Kennedy) Well, the Chester paper that
19 dealt with the same group of Malaysian workers
20 evaluated as to whether or not they had paraquat in
21 their urine, did it not?
22 MS. REISMAN: Objection to form.
23 **A Yes.**
24 Q (By Mr. Kennedy) That's the same Malaysian
25 study we've been talking about, but this is by Chester

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1 who's looking to see whether or not they have paraquat
2 in their urine?
3 MS. REISMAN: Objection to form.
4 Q (By Mr. Kennedy) True?
5 MS. REISMAN: Objection to form.
6 **A Yes. That was done.**
7 Q (By Mr. Kennedy) And indeed, they found
8 paraquat in the urine of these applicators, did they
9 not?
10 MS. REISMAN: Objection to form.
11 **A Of some of them, at least.**
12 Q (By Mr. Kennedy) Well, they found it in 9 out
13 of 19, do you remember that?
14 MS. REISMAN: Objection to form.
15 Q (By Mr. Kennedy) Sir, if a worker has
16 paraquat in their urine, that means they have paraquat
17 in their blood, true?
18 **A True.**
19 Q And blood circulates through the entire
20 body, does it not?
21 **A It does.**
22 Q And it circulates through the entire body
23 including the brain, true?
24 MS. REISMAN: Objection to form.
25 **A Yes.**

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<p>1 Q (By Mr. Kennedy) Now, you testified in this</p> <p>2 Malaysian study by Dr. Howard that examinations were</p> <p>3 done, and these workers with paraquat in their blood</p> <p>4 circulating through their brains were -- were perfectly</p> <p>5 fine, perfectly healthy on examination.</p> <p>6 Do you recall that testimony?</p> <p>7 A Yes, sir.</p> <p>8 MS. REISMAN: Objection.</p> <p>9 Mr. Cavalli, I know it's been a while since</p> <p>10 we've been going this morning. You just need to give</p> <p>11 me a minute before you respond.</p> <p>12 A I'm sorry.</p> <p>13 MS. REISMAN: Give me a moment to object</p> <p>14 when I need to.</p> <p>15 Objection to form on that question.</p> <p>16 Q (By Mr. Kennedy) Oh. Sir, do you have an</p> <p>17 answer to my question?</p> <p>18 A Can you repeat it?</p> <p>19 Q Question: You testified in the Malaysian</p> <p>20 study by Dr. Howard that examinations were done and</p> <p>21 these workers with paraquat in their blood circulating</p> <p>22 through their brains were perfectly -- were perfectly</p> <p>23 normal and healthy on examination?</p> <p>24 MS. REISMAN: Objection to form.</p> <p>25 Q (By Mr. Kennedy) Correct? Remember that</p>	<p>1 True?</p> <p>2 A That's what it says.</p> <p>3 Q It's a 1981 study, right?</p> <p>4 A Published in '81.</p> <p>5 Q Would have been done earlier than that?</p> <p>6 A It would have.</p> <p>7 Q Go to the next page, 36.</p> <p>8 See in that right-hand column right above</p> <p>9 "Exposure to Paraquat"? Look right above that. I</p> <p>10 think it indicates that this involved 27 paraquat</p> <p>11 spraymen.</p> <p>12 Do you see that right-hand column?</p> <p>13 A Yes.</p> <p>14 Q Right above "Exposure to Paraquat,"</p> <p>15 27 workers, true?</p> <p>16 A Yes.</p> <p>17 Q All right. If you'll go to the next page,</p> <p>18 37. You see where it says "Clinical Examination"?</p> <p>19 Could you take a look at that?</p> <p>20 MR. KENNEDY: Could you pull that up,</p> <p>21 please, and --</p> <p>22 A Yes.</p> <p>23 MR. KENNEDY: -- highlight "Clinical</p> <p>24 Examination."</p> <p>25 A Yes. I see it.</p>
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<p>1 testimony?</p> <p>2 A Yes, I do.</p> <p>3 Q And I think you testified that on</p> <p>4 examination that there were neurological or central</p> <p>5 nervous system findings. Do you recall that?</p> <p>6 A I do.</p> <p>7 Q And what I want to ask you about is how you</p> <p>8 arrived at this conclusion that there were no</p> <p>9 neurologic findings and that they were perfectly</p> <p>10 healthy on exam. All right?</p> <p>11 MR. KENNEDY: If you can give us</p> <p>12 Exhibit 111.</p> <p>13 (Exhibit 111 has been marked and now</p> <p>14 identified for the record.</p> <p>15 A Can I get a -- I'm supposed to look at it?</p> <p>16 Q (By Mr. Kennedy) Yes.</p> <p>17 Now, Exhibit 111, this is a publication of</p> <p>18 the study, the Malaysia study that we've been talking</p> <p>19 about; is that right?</p> <p>20 A Yes, it is.</p> <p>21 Q It says it's by Dr. Howard. You see that?</p> <p>22 A Yes.</p> <p>23 Q And the study title: "A Study of the Health</p> <p>24 of Malaysian Plantation Workers With Particular</p> <p>25 Reference to Paraquat Spraymen."</p>	<p>1 Q (By Mr. Kennedy) It says "Clinical</p> <p>2 Examination." Again, I'm trying to understand how you</p> <p>3 are drawing the conclusion there were no neurologic</p> <p>4 findings on -- on examination. All right?</p> <p>5 The paper says: "All workers were given a</p> <p>6 full clinical examination, particular attention being</p> <p>7 paid to the respiratory system and the skin."</p> <p>8 Did I read that right?</p> <p>9 A You did.</p> <p>10 Q So they're paying closer attention to the</p> <p>11 respiratory system in the skin, that seemed to be</p> <p>12 their primary focus.</p> <p>13 Would you agree?</p> <p>14 MS. REISMAN: Objection to form.</p> <p>15 A That's what the paper says.</p> <p>16 Q (By Mr. Kennedy) No mention of a neurologic</p> <p>17 examination, true?</p> <p>18 MS. REISMAN: Objection to form.</p> <p>19 A No mention here, yes.</p> <p>20 Q (By Mr. Kennedy) And there's no mention</p> <p>21 anywhere in this paper as to what examinations were</p> <p>22 actually done.</p> <p>23 Would that be right?</p> <p>24 MS. REISMAN: Objection to form.</p> <p>25 A Not in the paper.</p>

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<p>1 Q (By Mr. Kennedy) And there's no mention 2 anywhere in this paper as to what their finding were on 3 examination. 4 Would that be true? 5 MS. REISMAN: Objection to form. 6 A I'd have to read it. 7 Q (By Mr. Kennedy) And, sir, the physician 8 that -- that did -- did these examinations was -- was 9 the physician even a neurologist? Do you know? 10 MS. REISMAN: Objection to form. 11 Foundation. 12 A I don't believe either one was, but I don't 13 remember. 14 Q (By Mr. Kennedy) And were you provided 15 with -- with any kind of a data or documents at any 16 time that would tell you what examinations were 17 actually done and what the findings actually were? 18 A They -- the discussions that we had leading 19 up to this study, the full clinical examination meant 20 the kind of evaluation of the function of the nervous 21 system that you would get by looking at an intact 22 person. It's part of the clinical examination. 23 Q Was that anywhere in the -- were you 24 provided with a protocol that told you specifically 25 and can you tell us here today what examinations were</p>	<p>1 upon any education or any training or ever the 2 performance of such an examination, true? 3 MS. REISMAN: Objection to form. 4 A Except for the examinations I underwent 5 myself. 6 Q (By Mr. Kennedy) All right. You continued 7 and your testified also on -- on questioning from 8 Chevron's counsel that this Howard study did not show 9 any signs of -- of Parkinson's disease amongst these 10 patients. 11 Do you recall that testimony? 12 A I do. 13 Q Do you know the early signs of Parkinson's 14 disease? 15 MS. REISMAN: Objection to form. 16 A I know relatively little about Parkinson's 17 disease. 18 Q (By Mr. Kennedy) Well, let me ask you. These 19 examinations that were done, did -- did they look for 20 orthostatic changes in blood pressure? Do you know? 21 MS. REISMAN: Objection to form. 22 A No, I don't. I don't know that. 23 Q (By Mr. Kennedy) Do you know that that's an 24 early sign of Parkinson's disease? 25 MS. REISMAN: Objection to form.</p>
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<p>1 done and what the findings were? 2 MS. REISMAN: Objection to form. 3 A I don't recall the protocol as we sit here. 4 Q (By Mr. Kennedy) And I think when you -- when 5 you testified in response to the -- to the questions 6 asked by Chevron's counsel and I think here today 7 you -- you testified that a standard clinical exam 8 was -- was done? 9 A That -- correct. 10 Q Well, you're not a medical doctor? 11 A I am not. 12 Q Have you ever performed what -- what you're 13 calling a standard clinical exam on any patients at 14 all? 15 A No. 16 Q In -- in your training in biology, zoology, 17 toxicology, did you take a course in what a standard 18 clinical examination is for a patient? 19 A I did not. 20 Q Were you ever trained as to what a standard 21 clinical examination includes? 22 MS. REISMAN: Objection to form. 23 A I think I did gain over the years a concept 24 of what constituted a physical exam. 25 Q (By Mr. Kennedy) Okay. And that wasn't based</p>	<p>1 Foundation. 2 A I do not. 3 Q (By Mr. Kennedy) Did these examinations and 4 evaluations look into dream enactment, do you know? 5 A Say that again. 6 Q Dream enactment? 7 MS. REISMAN: Objection. Form. 8 Q (By Mr. Kennedy) Did they look into that 9 during these valuation of these 27 Malaysian workers? 10 MS. REISMAN: Objection to form. 11 A I don't -- I don't understand the term. 12 Q (By Mr. Kennedy) Then I would assume you 13 don't understand that that's an early sign of 14 Parkinson's disease also, correct? 15 MS. REISMAN: Objection to form. 16 Foundation. 17 Q (By Mr. Kennedy) Did they look for that? Do 18 you know? 19 MS. REISMAN: Same objection. 20 A I -- I -- I can't say one way or another. 21 Q (By Mr. Kennedy) The ability to -- to smell 22 an olfactory manifestation, did they look for that in 23 these evaluations of these Malaysian workers? Did they 24 look for that? 25 A Again, I would have to read the whole paper,</p>

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1 **but I don't recall anything like that.**

2 Q What about retropulsion and propulsion? Was

3 that evaluated?

4 MS. REISMAN: Objection to form.

5 **A I don't -- I don't recognize those terms.**

6 Q (By Mr. Kennedy) Those are early

7 manifestations of Parkinson's disease. Did you

8 understand that?

9 MS. REISMAN: Objection to form.

10 Foundation.

11 **A No. But everything you've mentioned can be**

12 **caused by many things. But no, I don't -- I don't**

13 **even know what you mean by those terms.**

14 Q (By Mr. Kennedy) What about cogwheel

15 rigidity? Was that evaluated in this study of the

16 27 workers?

17 **A Again, I -- not familiar with the term.**

18 Q That's an early or a manifestation of

19 Parkinson's disease. Did you understand that?

20 MS. REISMAN: Objection to form.

21 Foundation.

22 **A No. I -- I don't.**

23 Q (By Mr. Kennedy) Other than the statement in

24 the article that the exam focused on the lungs and the

25 skin, can you tell us anything about the specific exams

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1 done and the specific findings done in any one of these

2 27 workers?

3 MS. REISMAN: Objection to form.

4 **A First of all, it doesn't say it focused. It**

5 **just says particular attention was paid. And again, a**

6 **clinical examination would include looking for**

7 **neurologic signs and symptoms.**

8 Q (By Mr. Kennedy) Where does it say that in

9 the paper?

10 MS. REISMAN: Objection to form.

11 **A It's under the -- I mean, specifically it**

12 **doesn't, but it would be part of clinical examination.**

13 Q (By Mr. Kennedy) Such an examination that you

14 have never performed in your career, true?

15 MS. REISMAN: Objection to form.

16 Argumentative.

17 Q (By Mr. Kennedy) True?

18 MS. REISMAN: Same objection.

19 **A I have never performed one. I've seen them**

20 **performed on my children. I have had the experience**

21 **of having physical examinations myself, and they all**

22 **included that.**

23 Q (By Mr. Kennedy) So the extent of your

24 experience is what exams you have undergone and what

25 your kids have undergone.

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1 Would that be the extent of your experience?

2 MS. REISMAN: Objection to form.

3 **A You know, other than perhaps reading about**

4 **them, but I don't recall that.**

5 Q (By Mr. Kennedy) And, sir, the workers in

6 this -- in this -- in this study, this Howard study,

7 they were examined on a single occasion; is that true?

8 MS. REISMAN: Objection. Form.

9 **A I believe so. But again, I would have to**

10 **read it.**

11 Q (By Mr. Kennedy) I think you testified to

12 that yesterday, a single examination?

13 MS. REISMAN: Objection to form.

14 Q (By Mr. Kennedy) Does that refresh your

15 recollection?

16 **A Yes. I think it was a single exam.**

17 Q So Chevron ICI had no idea how these workers

18 were doing five years later, ten years later,

19 fifteen years later, true?

20 MS. REISMAN: Objection. Form.

21 **A Well, we -- they weren't followed up.**

22 Q (By Mr. Kennedy) And do you understand that

23 half of these workers were under 35 years of age when

24 they had this single, one occasion examination.

25 Do you understand that?

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1 MS. REISMAN: Objection to form.

2 **A Yeah. Again, I would have to look.**

3 Q (By Mr. Kennedy) Well, assuming that's

4 true -- and I read the article again this morning -- if

5 half of them were under 35, Chevron had no idea how any

6 of these workers were doing at the age of -- of 40, 45,

7 50, true?

8 MS. REISMAN: Objection to form.

9 Q (By Mr. Kennedy) Because there's no

10 follow-up?

11 MS. REISMAN: Objection to form.

12 **A That is true.**

13 Q (By Mr. Kennedy) And you testified in

14 response to the questions by -- by Chevron's lawyer

15 that you did not believe that there was a need for

16 follow-up examinations because paraquat rapidly is

17 eliminated from the body.

18 Do you remember stating that as the reason

19 why there was no need for follow-up examinations?

20 MS. REISMAN: Objection to form.

21 **A Yes. That was -- that was my belief and**

22 **opinion at the time.**

23 Q (By Mr. Kennedy) But, sir, the fact is

24 Chevron had no idea how long paraquat stayed in the

25 brain, true?

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<p style="text-align: center;">Page 114</p> <p>1 MS. REISMAN: Objection to form. And he's 2 testifying as -- in his individual capacity, not on 3 behalf of Chevron. 4 You can give your response to the extent you 5 have personal knowledge subject to my objection to 6 form of the question. 7 A I -- I -- I don't specifically -- well, 8 would you ask the question again. I'm sorry. 9 Q (By Mr. Kennedy) Sir, you told us there was 10 no need for follow-up examinations because paraquat was 11 rapidly eliminated from the body, and my question is 12 isn't it true that neither you nor anyone at Chevron 13 knew how long paraquat remained in the brain? 14 MS. REISMAN: Objection to form. 15 Foundation. 16 A I -- I don't have a specific memory one way 17 or the other. There was a lot of information 18 available how long paraquat stayed in the body. 19 MR. KENNEDY: Pull up the testimony of 20 McMillen taken on April 27, '22, if you could, please. 21 MS. REISMAN: Do you have a hard copy of 22 this, Mr. Kennedy? 23 MR. KENNEDY: No. 24 MS. REISMAN: I'm just going to object to 25 the extent you're going to pull out a single question</p>	<p style="text-align: center;">Page 116</p> <p>1 how long paraquat would stay in the brain of a dog? 2 "ANSWER: I don't recall that a study like 3 that was done. 4 "QUESTION: At any time between 1960 and 5 1986, did ICI or Chevron do any studies to determine 6 how long paraquat would stay in the brain of a monkey? 7 "ANSWER: I don't recall seeing that 8 study -- a study like that. 9 "QUESTION: Between 1960 and 1986, with 10 respect to any animal, did ICI or Chevron do a study 11 to determine how long paraquat would stay in the brain 12 after exposure? 13 "ANSWER: I think we already discussed 14 earlier, we couldn't find a study where they analyzed 15 paraquat in the brain. So that -- so -- that it 16 stayed in the brain or that it was there. So far as I 17 know, there's no data about paraquat in the brain." 18 Do you have any recollection, sir, that 19 would dispute the accuracy of the testimony of the 20 person representing Chevron on that issue? 21 MS. REISMAN: Standing objection for pulling 22 out portion of this testimony without all the 23 testimony present to be able to see context for this 24 and other statements made during the deposition. 25 Object to form.</p>
<p style="text-align: center;">Page 115</p> <p>1 and answer that there's context, I suspect, for 2 everything. So we're going to have a standing 3 objection on not having a full transcript here. 4 Q (By Mr. Kennedy) This is the deposition of 5 Sara McMillen. Sara McMillen was -- was chosen by 6 Chevron to speak in their behalf about the issues -- 7 certain issues in this case. All right? You can 8 assume that, that she is representing Chevron in this 9 case with respect to their position on various topics. 10 All right? 11 MS. REISMAN: Objection to foundation, an 12 understatement. 13 Q (By Mr. Kennedy) If you go to page 258. 14 258, line 2, McMillen representative of Chevron. 15 "QUESTION: I'm not interested in the lungs. 16 I'm trying to finish. 17 "ANSWER: I have already said they did not 18 analyze the brain. 19 "QUESTION: Okay. Between 1960 and 1986, 20 did ICI or Chevron do any rat studies where they 21 determined how long paraquat would stay in the brain 22 of a rat that was exposed to paraquat. 23 "ANSWER: I don't recall that that was done. 24 "QUESTION: At any time between 1960 and 25 1986, did Chevron or ICI do any studies to determine</p>	<p style="text-align: center;">Page 117</p> <p>1 Subject to that, you can answer if you have 2 an answer. 3 A Could you re-ask it, please? 4 MR. KENNEDY: Your objection is noted. When 5 I ask the question again, I don't want the objection 6 again for five minutes so that I have to ask it again. 7 This is completely inappropriate, and you understand 8 it and know it, but you've been doing it for two days. 9 MS. REISMAN: That's completely an 10 inappropriate comment, and please don't point your 11 finger at me as you're -- as you're -- 12 MR. KENNEDY: Completely inappropriate. 13 MS. REISMAN: It is not. If we were at 14 trial, you would be required to have a full transcript 15 there so we could check the -- the -- the portions 16 that you're reading. Go ahead. I have a standing 17 objection to this. 18 Q (By Mr. Kennedy) Do you have any recollection 19 that in any way would disagree with that testimony of 20 the representative of Chevron? 21 MS. REISMAN: Objection to form. 22 A No. 23 Q (By Mr. Kennedy) Was there any reason -- any 24 reason why Chevron could not have done a study to make 25 a determination as to how long paraquat stayed in the</p>

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<p style="text-align: right;">Page 118</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">CONFIDENTIAL</p> <p>1 animal?</p> <p>2 MS. REISMAN: Objection to form.</p> <p>3 Q (By Mr. Kennedy) A rat, a mouse, a dog, a</p> <p>4 monkey. Any reason why they couldn't have done that</p> <p>5 prior to 1986?</p> <p>6 MS. REISMAN: Objection to form.</p> <p>7 A In the whole animal or in the brain?</p> <p>8 Q (By Mr. Kennedy) The brain.</p> <p>9 MS. REISMAN: Same objection.</p> <p>10 A No. There's no reason why.</p> <p>11 Q (By Mr. Kennedy) Had Chevron done studies and</p> <p>12 come to understand that paraquat stayed in the brain of</p> <p>13 a monkey for seven to ten months, would that have</p> <p>14 changed your approach?</p> <p>15 MS. REISMAN: Objection to form.</p> <p>16 A I'm not aware of the -- of that finding.</p> <p>17 Q (By Mr. Kennedy) I'll ask you to assume that</p> <p>18 the first time anybody ever looked into a monkey brain,</p> <p>19 they found that paraquat persisted for a minimum of</p> <p>20 seven to ten months in the brain of a monkey. You can</p> <p>21 assume that.</p> <p>22 Had you known that back in 1980, 1985, would</p> <p>23 that have changed your -- your position with respect</p> <p>24 to how paraquat needs to be evaluated to confirm its</p> <p>25 safety?</p>	<p style="text-align: right;">Page 120</p> <p>1 follow-ups of those survivors, correct?</p> <p>2 MS. REISMAN: Objection to form.</p> <p>3 A We did not.</p> <p>4 Q (By Mr. Kennedy) And with respect to the</p> <p>5 animal studies, Chevron never determined how long</p> <p>6 paraquat stayed in the brain, correct?</p> <p>7 MS. REISMAN: Objection to form.</p> <p>8 A Yes.</p> <p>9 Q (By Mr. Kennedy) And with respect to the</p> <p>10 animal studies, the long-term chronic low-dose exposure</p> <p>11 studies, Chevron never did those type studies to see if</p> <p>12 paraquat got into the brain, correct?</p> <p>13 MS. REISMAN: Objection to form.</p> <p>14 A Specifically, no. But we did do</p> <p>15 observations during the lifetime of the animals, a</p> <p>16 determination that showed that accepted very, very</p> <p>17 high doses. The lung was compromised. There was no</p> <p>18 change in brain anatomy or function to the extent it</p> <p>19 could be noted.</p> <p>20 MR. KENNEDY: I would move to strike.</p> <p>21 Q (By Mr. Kennedy) I'm going to ask you a</p> <p>22 question again. Would it be true that Chevron never</p> <p>23 did long-term low-dose studies to determine whether or</p> <p>24 not paraquat was in the brain?</p> <p>25 MS. REISMAN: Objection to form. Asked and</p>
<p style="text-align: right;">Page 119</p> <p>1 MS. REISMAN: Objection. Form. Asked and</p> <p>2 answered.</p> <p>3 A You know, it would depend on the</p> <p>4 circumstances. I just -- I have no information to --</p> <p>5 to make a judgment on that.</p> <p>6 Q (By Mr. Kennedy) Can we agree from a basic</p> <p>7 toxicological standpoint that the amount of the dose is</p> <p>8 very important in determining whether or not a toxin or</p> <p>9 a substance will be harmful, correct, the amount?</p> <p>10 MS. REISMAN: Objection. Form.</p> <p>11 A That is correct.</p> <p>12 Q (By Mr. Kennedy) And it's equally true that</p> <p>13 not just the amount is important in determining</p> <p>14 toxicity and harm, but also the length of the exposure</p> <p>15 is also important in determining whether or not a toxin</p> <p>16 will cause harm, true?</p> <p>17 MS. REISMAN: Objection. Form.</p> <p>18 A Generally speaking, yes.</p> <p>19 Q (By Mr. Kennedy) I just want to kind of sum</p> <p>20 up here if we can. With respect to the studies, the</p> <p>21 Malaysian study and the applicators, that was a study</p> <p>22 of 27 workers with a single examination, correct?</p> <p>23 A Yes.</p> <p>24 Q With respect to the poisoning cases when the</p> <p>25 person poisoned survived, Chevron never did long-term</p>	<p style="text-align: right;">Page 121</p> <p>1 answer.</p> <p>2 Q (By Mr. Kennedy) True? It never looked to</p> <p>3 see if it got into the brain in a rat, a mouse, a dog,</p> <p>4 a monkey, a hen, a dog, or a goat, true?</p> <p>5 MS. REISMAN: Same objection.</p> <p>6 A I -- no. I don't believe we did.</p> <p>7 Q (By Mr. Kennedy) And Chevron never did an</p> <p>8 epidemiology study in the United States of America, did</p> <p>9 they?</p> <p>10 MS. REISMAN: Objection to form.</p> <p>11 A No.</p> <p>12 Q (By Mr. Kennedy) And Chevron never did an</p> <p>13 epidemiology that specifically looked to see whether or</p> <p>14 not workers were developing early signs and symptoms</p> <p>15 with Parkinson's, correct?</p> <p>16 MS. REISMAN: Same objection. Form.</p> <p>17 A No.</p> <p>18 Q (By Mr. Kennedy) And when you folks received</p> <p>19 brain tissue from -- from people that had been poisoned</p> <p>20 by paraquat and had died, when you received that brain</p> <p>21 tissue, you evaluated it to determine whether or not</p> <p>22 there was paraquat. But you never did detailed</p> <p>23 histopathological examinations of that brain tissue,</p> <p>24 correct?</p> <p>25 A We did not, but at the autopsies, there were</p>

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1 **certainly -- well, certainly -- probably would have**
 2 **been done by the pathologist.**
 3 Q Chevron never did it, and you never retained
 4 anybody to do it, true?
 5 **A True.**
 6 Q And could we agree just in the general
 7 scientific sense, sir, if you don't look for
 8 something, you're not going to find it, true?
 9 MS. REISMAN: Objection to form.
 10 **A Referring to paraquat in the brain, it**
 11 **didn't manifest itself as causing anything. So, you**
 12 **know, we -- we looked -- maybe we didn't look for it,**
 13 **but we looked at it.**
 14 MR. KENNEDY: I have nothing further.
 15 MR. FLOWERS: Take a 2-minute break.
 16 MR. KENNEDY: Yeah. Take a 2-minute break.
 17 I probably missed something.
 18 VIDEOGRAPHER: We're going off the record at
 19 11:58 a.m.
 20 (A break was taken.)
 21 VIDEOGRAPHER: We're back on the record at
 22 12:01 p.m.
 23 MR. KENNEDY: Still Eric Kennedy. I'm
 24 simply making a record with respect to materials that
 25 Mr. Cavalli reviewed in preparation for his testimony

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1 today.
 2 Q (By Mr. Kennedy) Mr. Cavalli, could you give
 3 me a list and tell me the documents -- first, the
 4 documents, paper documents, that you reviewed in
 5 preparation for your deposition?
 6 MS. REISMAN: And I'm going to assert an
 7 objection, and this was a discussion we've already had
 8 off the record. We're going to assert privilege over
 9 the documents and -- work product over the documents
 10 that were shown to Mr. Cavalli.
 11 We have disclosed him out of an abundance of
 12 caution as a nonretained expert, and we have disclosed
 13 within there the materials that he reviewed and the
 14 context of his work at Chevron back in the '80s. As
 15 is clear from today, he doesn't have a recollection of
 16 that he's testified, that nothing refreshed his
 17 recollection.
 18 But we have disclosed to you that his
 19 opinions were based on animal data, worker exposure
 20 data, and human autopsy data, all of which has been
 21 produced to you. Subject to that disclosure, I'm not
 22 going to permit Mr. Cavalli to talk about and reveal
 23 the documents that he reviewed in preparation for this
 24 deposition.
 25 I have said to the witness and to you,

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1 Mr. Kennedy, that he is free to tell you the documents
 2 that he reviewed that refreshed his recollection. But
 3 other than that, and if -- if he recalls specific
 4 worker exposure studies or animal studies that he
 5 reviewed or autopsy reports that he reviewed in the
 6 context of his review, he can reveal those to you.
 7 But past those specific limited materials,
 8 I'm going to instruct him not to answer.
 9 MR. KENNEDY: Okay.
 10 MS. REISMAN: And we are not waiving
 11 privilege or work product even with respect to those
 12 animal studies or autopsy reports or worker exposure
 13 data that he does recall reviewing. But I'm fine with
 14 he -- with Mr. Cavalli testifying with respect to the
 15 animal studies, the worker exposure studies, and the
 16 human autopsy reports that he reviewed.
 17 Q (By Mr. Kennedy) Okay. And so that I'm
 18 clear, I'm asking you to identify any -- any documents,
 19 written or electronic, any medical literature, or any
 20 other publication or any deposition testimony that you
 21 reviewed -- the totality of what you reviewed, whether
 22 it was provided to you by counsel or that you went and
 23 got it on your own. All right?
 24 Are you able to -- to give us that
 25 information?

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1 MS. REISMAN: Without waiving privilege or
 2 attorney work product, if you recall the animal
 3 studies or the worker exposure studies, the human
 4 autopsy reports that you reviewed in the context of
 5 your preparation, you can testify as to those.
 6 As to the other materials, we are asserting
 7 privilege under work product, and we are not waiving
 8 either of those with respect to the limited set of
 9 materials that I've described that you can testify
 10 about.
 11 **A I cannot give you a list of the documents**
 12 **that -- or other material that I looked at.**
 13 Q (By Mr. Kennedy) Did you review any summaries
 14 of materials or memorandum?
 15 MS. REISMAN: I'm going to object on
 16 privilege and work product basis, but I will also
 17 represent that the only materials that were shown to
 18 Mr. Cavalli were produced in this litigation,
 19 documents from Chevron's files.
 20 Q (By Mr. Kennedy) Did you review any medical
 21 literature?
 22 MS. REISMAN: Again, subject to my
 23 objections, if you recall specific worker exposure or
 24 animal studies or human autopsy reports that are
 25 published in the medical literature you can testify

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1 with respect to those.

2 Q (By Mr. Kennedy) And other than counsel, the

3 attorneys representing Chevron, did you speak with

4 anybody else in preparation for your deposition?

5 A No.

6 MR. KENNEDY: I don't think I have any

7 further questions unless I missed something?

8 MR. FLOWERS: No.

9 MR. KENNEDY: All good here.

10 MS. REISMAN: Thank you.

11 Why don't we break for lunch and come back

12 at 1:00, 1:15? What do you think? Good? 1:15.

13 VIDEOGRAPHER: Okay. We're going off the

14 record at 12:05 p.m.

15 (A break was taken.)

16 VIDEOGRAPHER: Stand by. We're back on the

17 record at 1:27 p.m.

18 [EXAMINATION]

19 QUESTIONS BY MS. REISMAN:

20 Q Good afternoon, Mr. Cavalli.

21 A Good afternoon.

22 Q We're back from a break for lunch, and the

23 same rules apply to my questioning as those that apply

24 to Mr. Kelly's, Mr. Kennedy's and my own yesterday.

25 Can you hear me, Mr. Cavalli?

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1 A I can.

2 Q Are you having difficulty hearing me?

3 A Well, the air conditioner is competing with

4 you.

5 MS. REISMAN: Can we shut -- let's go off

6 the record.

7 VIDEOGRAPHER: Going off the record at

8 1:27 p.m.

9 (A break was taken.)

10 VIDEOGRAPHER: Stand by. We're back on the

11 record at 1:28 p.m.

12 Q (By Ms. Reisman) Good afternoon, Mr. Cavalli.

13 A Good afternoon.

14 Q I was just saying we're back from lunch, and

15 I just wanted to remind you that the same rules apply

16 to my questioning as -- as -- as did apply when

17 Mr. Kelly, Mr. Kennedy were asking you questions.

18 That is if you don't understand my question, just let

19 me know. And if you get fatigued and are losing

20 focus, let me know and we can take a quick break.

21 A Okay.

22 Q I want to talk to you, Mr. Cavalli, first

23 about your appearances here today and the basis for

24 your testimony. I believe you testified yesterday

25 that you left Chevron in 1999; is that correct?

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1 A Yes.

2 Q Do you still practice toxicology?

3 A I do not.

4 Q Have you practiced toxicology since you

5 retired in 1999?

6 A I have not. Excuse me.

7 Q Have you kept abreast with the -- with the

8 literature? Have you kept up with the scientific

9 literature on any topic since 1999?

10 A Not really.

11 Q And with respect to paraquat specifically,

12 have you done anything to keep up with the literature

13 on paraquat since Chevron left the business in 1986?

14 A I have not.

15 Q Now, you've testified several times over the

16 last couple of days that no document that you have

17 seen has refreshed your recollection.

18 So is it correct that your testimony here

19 today and yesterday is based only on your

20 recollections of your understandings prior to when

21 Chevron exited the paraquat business in 1986?

22 MR. KENNEDY: Objection. Form. Leading.

23 A That's correct.

24 Q (By Ms. Reisman) Now, you testified that you

25 believe that paraquat applicators had low-dose

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1 exposures over several years. I believe that was

2 something that you testified to earlier today, and you

3 agreed with Mr. Kennedy that the same -- that that was

4 the same, that low-dose exposure over several years was

5 the same as chronic low-dose exposure?

6 MR. KENNEDY: Objection. Leading.

7 Q (By Ms. Reisman) Mr. Kelly, I'm just setting

8 the stage and reminding him of testimony. I haven't

9 even gotten to my question.

10 MR. KENNEDY: I'm going to object to the

11 speeches prior to the question being asked.

12 MS. REISMAN: I'm going to ask you to please

13 hold your objections until there is a question on the

14 table. I'm reminding the witness where we are.

15 Q (By Ms. Reisman) You agreed with Mr. Kennedy

16 earlier that low-dose exposures over several years was

17 the same as chronic low-dose exposure.

18 Do you recall that testimony?

19 MR. KENNEDY: Objection. Leading.

20 A Yeah, I think so.

21 Q (By Ms. Reisman) Did you have an

22 understanding as to how many times a year a field

23 worker in the US would apply paraquat?

24 A My impression at -- at the time, I believe,

25 was that in the United States, paraquat was sprayed

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<p style="text-align: center;">Page 130</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">CONFIDENTIAL</p> <p>1 intermittently and only for short periods of time 2 during the year. 3 Q Do you recall how many times a year a 4 paraquat -- a field worker would apply paraquat? 5 A No, I don't. 6 Q Do you remember if it was a few times or 7 many times during a year? 8 A I really couldn't say. 9 Q To the best of your knowledge and 10 understanding when you worked on paraquat issues, was 11 the frequency of a farmer/field worker's exposure more 12 akin to -- I think you just called it a intermittent, 13 sporadic exposure? 14 MR. KENNEDY: Objection. Leading. 15 Q (By Ms. Reisman) Would you characterize 16 farmer/field worker exposure as inter- -- intermittent 17 exposure? 18 A That was my understanding. 19 MR. KENNEDY: Objection. Leading. 20 Q (By Ms. Reisman) Did you understand -- did -- 21 did you have an understanding as to whether it was 22 sporadic? 23 MR. KENNEDY: Objection. Leading. 24 A That was my impression. 25 Q (By Ms. Reisman) Well, let me ask you. How</p>	<p style="text-align: center;">Page 132</p> <p>1 yesterday about the central nervous system effects 2 listed in that study. So I want to talk to you about 3 that study and those questions now. 4 If you would turn to page 128 of that study, 5 Mr. Cavalli, which has Bates No. 879 on the bottom and 6 tell me when you are with me. 7 A We're getting there. Okay. Yes, I am. 8 Q In the left column of that page, there is a 9 paragraph that begins "Signs of Poisoning after 10 Intraperitoneal Dosing." 11 Do you see that? 12 A I do. 13 Q And Mr. Kelly read you several sentences 14 from that paragraph. I recall him reading, I think, 15 through the first sentence, second sentence, third 16 sentence, and fourth sentence. And I want to read to 17 you a sentence that follows the passage that Mr. Kelly 18 read to you yesterday. 19 Do you see a sentence that begins 20 "Additionally..." in the middle of that -- two-thirds 21 of the way through that paragraph? 22 A Yes, I do. 23 Q I'm going to begin reading there. 24 "Additionally, in the earlier stages breathing might 25 be gasping or, alternatively, deep and fast."</p>
<p style="text-align: center;">Page 131</p> <p>1 would you describe farmer/field worker exposure to 2 paraquat in the US? 3 A The -- my understanding is that it would be 4 used for weed control maybe once, maybe twice a year. 5 Q What type of animal study would that be most 6 similar to? 7 A Say probably a subacute study or, depending 8 on the frequency, of just acute studies. 9 Q Would you liken the exposure that you just 10 described that paraquat workers in the US had as akin 11 to chronic studies in animals? 12 A Not exactly, no. 13 Q I want to switch gears now, Mr. Cavalli, and 14 talk to you about a -- an exhibit that was marked 15 by -- I actually think it was Mr. Kelly yesterday. 16 You should have it in front of you. It's Cavalli 40. 17 (Exhibit 40 has been marked and now 18 identified for the record. 19 A Yes, I have it. 20 Q (By Ms. Reisman) Cavalli 40 -- Cavalli 40 is 21 an article entitled "The Toxicity of Paraquat," authors 22 Clark -- D.G. Clark, T.F. McElligott, and Weston Hurst. 23 Are you with me, Mr. Cavalli? 24 A Yes, I am. 25 Q Mr. Kelly asked you several questions</p>	<p style="text-align: center;">Page 133</p> <p>1 Do you see that? 2 A Yes, I do. 3 Q What does that indicate to you as to what 4 was occurring in these rats? 5 A That indicates that the rats' pulmonary 6 system, the lungs were not working well. 7 Q Does that indicate some lung damage? 8 A Yes. That's better way to put it. 9 Q Yesterday you said -- you mentioned that you 10 disagree with the author's statement of findings with 11 respect to these CNS -- central nervous system effects 12 in this study. How so? 13 A Well, again, the animals were having 14 difficulty exchanging oxygen, and it would be in a 15 mildly to severe hypoxic state and a secondary effect 16 of that would occur in the nervous system. 17 Q In the next paragraph of that study, 18 Mr. Cavalli, Mr. Kelly read you the first sentence of 19 that paragraph, and I'd like to read to you a sentence 20 that follows. 21 "In animals which survived for a number of 22 days after the last of a series of ascending doses, 23 the later signs of illness were chiefly difficulty 24 breathing" and it goes on. 25 What does that passage indicate to you about</p>

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1 the animals?

2 **A Again, pulmonary damage.**

3 Q Yesterday you testified that there were no

4 reports -- and it may have been this morning. It was

5 during Mr. Kelly's questioning. You testified that

6 there were no reports of CNS effects, central nervous

7 system effects in the animal studies you reviewed.

8 Did you mean that you didn't recall any

9 studies reporting primary effects of paraquat in the

10 brain and central nervous system?

11 MR. KENNEDY: Objection. Leading.

12 **A Yes.**

13 Q (By Ms. Reisman) Let me ask it this way:

14 What did you mean when you said you did not recall any

15 studies reporting central nervous system effects in

16 animal studies that you reviewed?

17 **A That I was not aware of any study that**

18 **showed a primary effect on the nervous system.**

19 Q Okay. Switch gears with you again,

20 Mr. Cavalli. Following up on another area of

21 questions by the plaintiff's counsel.

22 Mr. Kelly asked you yesterday who you

23 considered most knowledgeable about paraquat at

24 Chevron when you became more involved in the 1973 and

25 1974 time period, and you answered "no one."

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1 Now, I understand you didn't think any one

2 person was most knowledgeable. Were there people at

3 Chevron who you believe had knowledge and understood

4 the toxicity of paraquat prior to your more focused

5 involvement in 1973 and 1974?

6 **A Yes, I do.**

7 Q And who were they?

8 **A That would have been Nils Ospenson, Lauren**

9 **Stelzer, T.W. Reed, Dick Wessel. I think that's the**

10 **list of people.**

11 Q During your testimony -- testimony yesterday

12 or, again, may have been this morning, you mentioned

13 that there was a more senior toxicologist at the

14 company at that time. Who was that?

15 **A That was Dr. Duane Hallesy.**

16 Q Do you remember if he had any involvement in

17 paraquat issues?

18 **A Specifically, no.**

19 Q Do you know one way or the other?

20 **A I don't know one way or the other.**

21 Q You also mentioned that you recall folks at

22 Chevron working with Joe Calandra prior to 1973, 1974,

23 and specifically on paraquat work.

24 Were the IBT studies that -- that were done

25 by Joe Calandra and his -- his people at IBT, were

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1 those the only animal studies that Chevron and you

2 relied on in the early years?

3 **A I believe there were other -- other animal**

4 **studies.**

5 Q Were the results of Dr. Calandra's studies

6 on paraquat consistent with the other animal data that

7 you had at the time?

8 **A Yes, they were.**

9 Q And were those studies conducted by IBT on

10 paraquat repeated at a later time?

11 **A They were.**

12 Q Did the results of those studies that were

13 repeated at a later time, that is, when those studies

14 were done, did those studies change your understanding

15 of the toxicity of paraquat?

16 MR. KENNEDY: Objection. Leading.

17 **A No, they did not.**

18 Q (By Ms. Reisman) Did you learn anything new

19 from those -- strike that.

20 You've testified several times the last

21 couple days about a body of knowledge that you relied

22 on for your understanding as to the toxicity of

23 paraquat and your belief and understanding that could

24 be used safely when it was used in accordance with the

25 label.

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1 Were there non-IBT animal studies and other

2 data that you relied on as part of that body of

3 knowledge that --

4 **A There were certainly other -- other data,**

5 **some of which was from animal studies.**

6 Q You were asked yesterday about whether you

7 or your group conducted a formal study on the adverse

8 health effects of paraquat in farm-related workers,

9 and it may have been different words, but that was

10 basically the gist of the question.

11 And you said you had not conducted such a

12 formal study. Why didn't you or anyone in your group

13 conduct such a formal study of those workers?

14 **A Because over time we had a large body of**

15 **knowledge about paraquat's toxicity. We had a lot of**

16 **information on the exposure levels that were occurring**

17 **among workers. We -- we had -- you know, if they**

18 **followed the precautionary labels, it all added up to**

19 **exposure would be very low.**

20 Q And did you believe that you had sufficient

21 data to believe that if agricultural workers used

22 paraquat according to the labels and instructions for

23 use that paraquat was safe to use?

24 MR. KENNEDY: Objection. Leading.

25 **A Yes.**

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<p>1 Q (By Ms. Reisman) Same question that I asked</p> <p>2 you about the study on the health effects of paraquat</p> <p>3 on farm-related workers. Mr. Kelly asked you the same</p> <p>4 question as to agricultural workers in the US; that is,</p> <p>5 you were asked yesterday about whether you or your</p> <p>6 group conducted a formal study of risks to</p> <p>7 US agricultural workers applying paraquat.</p> <p>8 Why didn't you or anyone in your group</p> <p>9 conduct a formal study of those workers with respect</p> <p>10 to health risks --</p> <p>11 A Well, there were --</p> <p>12 Q -- to those workers?</p> <p>13 A There were former -- there were formal</p> <p>14 studies available to us that had been done by others</p> <p>15 that showed, again, very low exposure to paraquat.</p> <p>16 Q And what did that low exposure to paraquat</p> <p>17 tell you about the risk to those workers?</p> <p>18 A Low exposure, low risk.</p> <p>19 Q Did Chevron sponsor any of those US studies</p> <p>20 done on worker exposure in the US, if you recall?</p> <p>21 A I believe we did one, at least.</p> <p>22 Q You were asked whether you or anyone in your</p> <p>23 group commissioned an epidemiologic survey to evaluate</p> <p>24 the safety of paraquat use, and you were also asked</p> <p>25 whether Chevron ever conducted such an epidemiologic</p>	<p>1 urine that it was circulating in their blood, and you</p> <p>2 answered "yes" --</p> <p>3 A Yes.</p> <p>4 Q -- is that correct?</p> <p>5 A Yes, I did.</p> <p>6 Q He then asked you if that blood circulated</p> <p>7 through the brain, and you said "yes."</p> <p>8 Do you recall that?</p> <p>9 A Yes, I do.</p> <p>10 Q What part of the brain was that blood</p> <p>11 circulating through?</p> <p>12 A It would have been in the major blood</p> <p>13 vessels and smaller blood vessels and the capillaries.</p> <p>14 Q Was it circulating through brain tissue</p> <p>15 under those circumstances?</p> <p>16 A I don't believe so.</p> <p>17 Q Switching gears once again, Mr. Cavalli,</p> <p>18 bear with me. I want about training.</p> <p>19 You were asked a series of questions on</p> <p>20 whether you have ever trained paraquat applicators, or</p> <p>21 field workers, or farmers, I think the question was.</p> <p>22 And you said you had never personally done</p> <p>23 that training, but you mentioned that you had trained</p> <p>24 field representatives, and that's what I want to talk</p> <p>25 to you about today.</p>
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<p>1 survey, and you answered "no" to both questions.</p> <p>2 Did you support such a study being done,</p> <p>3 even if Chevron itself did not technically commission</p> <p>4 or conduct it?</p> <p>5 A Yes.</p> <p>6 Q Was such an epidemiologic study ever done?</p> <p>7 A Yes.</p> <p>8 Q And was that the Howard study that you've</p> <p>9 testified about?</p> <p>10 A Yes.</p> <p>11 Q Mr. Cavalli, I'm jumping around quite a bit</p> <p>12 because I'm trying to hit various issues that came up,</p> <p>13 so bear with me. And if you need more background as I</p> <p>14 switch topics, please let me know.</p> <p>15 During Mr. Kennedy's questioning, he asked</p> <p>16 you whether if paraquat -- strike that.</p> <p>17 During Mr. Kennedy's questions --</p> <p>18 questioning, he asked you about the Howard study and</p> <p>19 noted urine found in -- paraquat found in some of the</p> <p>20 workers' urine.</p> <p>21 Do you remember that line of questioning?</p> <p>22 A Yes, I do.</p> <p>23 Q He asked you, then, if paraquat was found in</p> <p>24 the urine in those workers' samples, did it mean that</p> <p>25 for those workers where it was circulating in their</p>	<p>1 Do you recall doing training of field</p> <p>2 representatives with respect to paraquat?</p> <p>3 A Yes, I do.</p> <p>4 Q And what did you train them on?</p> <p>5 A We trained them on, of course, the toxicity</p> <p>6 of paraquat, the value of the precautionary labels.</p> <p>7 Tried to answer questions that they may have received</p> <p>8 from the field.</p> <p>9 Q When you said that you trained them on the</p> <p>10 value of the precautionary labels, what did you mean</p> <p>11 by that?</p> <p>12 A Just that if the precautionary labels are --</p> <p>13 are followed, the exposure to paraquat, hence risk,</p> <p>14 would be very low.</p> <p>15 Q Did part of the training include discussing</p> <p>16 the labels and instructions for use?</p> <p>17 A I'm -- I'm pretty sure it did, yes.</p> <p>18 Q What was the purpose of training these field</p> <p>19 representatives?</p> <p>20 A These were what we -- what were called</p> <p>21 technical field representatives, and they -- they</p> <p>22 actually went out into fields. They -- they met with</p> <p>23 agricultural extension professors from universities.</p> <p>24 They went to meetings of farmers. They went to what</p> <p>25 used to be called "Grange meetings." I don't know if</p>

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<p style="text-align: right;">Page 142</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">CONFIDENTIAL</p> <p>1 there are anymore -- and to essentially do what I did</p> <p>2 for them.</p> <p>3 Q Did you have an understanding as to whether</p> <p>4 those field representatives went out in the field and</p> <p>5 conveyed the information that you trained them on?</p> <p>6 A That is my understanding.</p> <p>7 Q I want to go back to your role at Chevron as</p> <p>8 a toxicologist. In general, Mr. Kelly asked you</p> <p>9 yesterday about other Chevron products that you worked</p> <p>10 on over time, and he named to you various petroleum</p> <p>11 products and lubricants and solvents.</p> <p>12 Did you also work on nonpetroleum products</p> <p>13 including specifically other pesticides and insecti-</p> <p>14 -- insecticides?</p> <p>15 A Yes, I did.</p> <p>16 Q And had you worked on those other</p> <p>17 pesticides, insecticides, and herbicides before you</p> <p>18 began your focus on paraquat in 1973, 1974 time frame?</p> <p>19 A Yes.</p> <p>20 Q Were any of those pesticides and,</p> <p>21 specifically, some of the insecticides known to be</p> <p>22 neurotoxic?</p> <p>23 A Yes.</p> <p>24 Q So did you and others at Chevron have some</p> <p>25 experience researching, identifying, evaluating</p>	<p style="text-align: right;">Page 144</p> <p>1 portion that Mr. Kennedy asked you about, and I want</p> <p>2 to read the full question and answer into the record.</p> <p>3 The question was: "Doctor, can you answer</p> <p>4 my question once again or can you answer it once? If</p> <p>5 you put an ounce of paraquat on your skin, it will</p> <p>6 kill you, won't it? If you leave it on, if you don't</p> <p>7 wash it off.</p> <p>8 "ANSWER: If you leave it on and if the skin</p> <p>9 breaks down, I would guess that that might be a</p> <p>10 sufficient amount."</p> <p>11 Was that your testimony -- your sworn</p> <p>12 testimony in the Ferebee case?</p> <p>13 A Yes, it was.</p> <p>14 Q And is that consistent with your response</p> <p>15 here today that it depends on the circumstances to</p> <p>16 know whether such an amount would have any harmful</p> <p>17 effect let alone kill you?</p> <p>18 A Yes.</p> <p>19 MS. REISMAN: Let's go off the record for</p> <p>20 one minute.</p> <p>21 VIDEOGRAPHER: Going off the record at</p> <p>22 1:50 p.m.</p> <p>23 (A break was taken.)</p> <p>24 VIDEOGRAPHER: We're back on the record at</p> <p>25 1:53 p.m.</p>
<p style="text-align: right;">Page 143</p> <p>1 neurotoxic substances prior to 1973 or 1974?</p> <p>2 A Yes.</p> <p>3 MS. REISMAN: Switching topics once again,</p> <p>4 and I'm going to ask if our colleague here can pull up</p> <p>5 the Ferebee transcript. This was a transcript -- if</p> <p>6 you just put up the front page first.</p> <p>7 Q (By Ms. Reisman) Mr. Cavalli, Mr. Kennedy</p> <p>8 asked you some questions about your testimony in a case</p> <p>9 called Ferebee.</p> <p>10 Do you recall that you answered some</p> <p>11 questions on some testimony you gave in Ferebee?</p> <p>12 A Yes, I do.</p> <p>13 Q And that testimony was given in 1982; is</p> <p>14 that correct?</p> <p>15 A That's what the document says, yes.</p> <p>16 Q Do you have a specific recollection as you</p> <p>17 sit here today?</p> <p>18 A No. Not the exact date, no.</p> <p>19 Q And -- and with respect to your testimony,</p> <p>20 do you have any specific recollections about giving</p> <p>21 this testimony and the specifics of that testimony or</p> <p>22 only that you gave testimony?</p> <p>23 A Onl- -- basically, I gave testimony.</p> <p>24 Q I'd like to turn to page 1545 -- 1545 of</p> <p>25 that transcript line 17 through 22 which was the</p>	<p style="text-align: right;">Page 145</p> <p>1 Q (By Ms. Reisman) Just one last question of</p> <p>2 you, Mr. Cavalli. Mr. Kelly asked you yesterday about</p> <p>3 your undergraduate degree, and he asked you whether it</p> <p>4 could have been in zoology as opposed to biology.</p> <p>5 So I'm going to ask you to take a look at --</p> <p>6 at a document we'll pull up on the screen which is a</p> <p>7 yearbook picture we found of you from the University</p> <p>8 of San Francisco, year 1962.</p> <p>9 Is that you in the lower row, four people</p> <p>10 from the left, I guess it is?</p> <p>11 A I believe it is.</p> <p>12 Q Can you see? Is that you, Richard D.</p> <p>13 Cavalli?</p> <p>14 A Yes.</p> <p>15 Q Does this help remind you that you actually</p> <p>16 got your degree in biology?</p> <p>17 A Yes, it does.</p> <p>18 Q Okay. Thank you.</p> <p>19 MS. REISMAN: Pull that down. I have no</p> <p>20 further questions at this time.</p> <p>21 MR. KENNEDY: Yeah, I can ask -- I can ask</p> <p>22 them from here.</p> <p>23 [EXAMINATION]</p> <p>24 QUESTIONS BY MR. KENNEDY:</p> <p>25 Q Mr. Cavalli, again, this is Eric Kennedy</p>

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1 representing the plaintiffs in this case.
 2 You testified just now that it was your
 3 understanding that paraquat applicators only applied
 4 paraquat once or twice a year; is that your testimony?
 5 MS. REISMAN: Objection. Form.
 6 **A That was my -- did I specifically say once**
 7 **or twice a year?**
 8 Q (By Mr. Kennedy) Yes.
 9 **A That was my understanding at the time, yes.**
 10 Q And so is it your testimony that the entire
 11 time that you were at Chevron and you were evaluating
 12 the risk of paraquat on applicators, you were always
 13 assuming that they would never apply paraquat more
 14 than once or twice a year?
 15 MS. REISMAN: Objection to form.
 16 **A No. That's not correct.**
 17 Q (By Mr. Kennedy) Then your testimony is you
 18 don't know whether it's only once or twice a year?
 19 MS. REISMAN: Objection to form.
 20 Q (By Mr. Kennedy) Is that your testimony?
 21 **A My -- my testimony is that we had a large**
 22 **database which we were able to apply to paraquat**
 23 **workers in the field without -- without consideration**
 24 **of it being just once or twice a year.**
 25 Q So you understand some apply 20 times a

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1 year, 30 times a year?
 2 MS. REISMAN: Objection to form.
 3 Q (By Mr. Kennedy) You understand that?
 4 **A I -- I don't. I don't have any reason to**
 5 **say either way.**
 6 Q All right. Then you were talking about the
 7 difference between chronic and subacute. How many
 8 times a year does an applicator have to apply paraquat
 9 to be considered chronically exposed? What's that
 10 line?
 11 MS. REISMAN: Objection to form.
 12 Q (By Mr. Kennedy) Do you know?
 13 **A No. No, I don't.**
 14 Q And how many years does a paraquat worker
 15 have to apply paraquat to be considered a chronically
 16 exposed worker? Do you know where that line is?
 17 MS. REISMAN: Objection to form. Calls for
 18 expert opinion.
 19 **A In the abstract, no.**
 20 Q (By Mr. Kennedy) And then just -- just
 21 finally, you -- I think you just testified that you
 22 would actually meet with field reps; is that correct?
 23 **A Yes.**
 24 Q What's the job of a field rep?
 25 MS. REISMAN: Objection to form.

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1 **A The -- as I understood it, the technical**
 2 **field rep's job was to assist -- assist understanding**
 3 **how to use paraquat, what it did, what it didn't do.**
 4 **They also did a lot of work on crops. But they were**
 5 **in contact with, as I said, the ag extension agents**
 6 **and quite often with groups of farmers.**
 7 Q (By Mr. Kennedy) Well, when you would meet
 8 with them, and knowing and understanding that they
 9 would be talking to farmers and applicators, did you
 10 ever tell them that every time Chevron or ICI did an
 11 animal study, whether it was rats, mice, dogs, pigs,
 12 goat, hens, or monkeys, every time they found paraquat
 13 in their brain, did you tell that to the -- to the
 14 field reps?
 15 MS. REISMAN: Objection to form.
 16 **A No. I don't -- I don't remember that.**
 17 Q (By Mr. Kennedy) Did you tell the field reps
 18 that you folks had received brain tissue on autopsy and
 19 26 times you found paraquat in the brains on autopsies?
 20 Did you tell the field reps that so they could
 21 communicate that to the farmers and applicators?
 22 MS. REISMAN: Objection to form.
 23 **A No.**
 24 Q (By Mr. Kennedy) Did you tell them at all
 25 about the -- the 1966 Clark study that we talked so

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1 much about where there were stated signs of brain
 2 involvement, did you tell them about the '66 study?
 3 MS. REISMAN: Objection to form.
 4 **A No.**
 5 Q (By Mr. Kennedy) Did you tell them in 1983,
 6 these field reps, knowing that they're going to be
 7 meeting with farmers and applicators, did you tell them
 8 about the 1983 Barbeau epidemiology study that found an
 9 association between Parkinson's disease and pesticides?
 10 Did you tell them about that study?
 11 MS. REISMAN: Objection to form. Assumes
 12 facts not in evidence.
 13 Q (By Mr. Kennedy) Did you tell them about
 14 that?
 15 MS. REISMAN: Objection to form.
 16 **A You know, I was not meeting with them that**
 17 **late in the day. I can't answer for my colleagues.**
 18 Q (By Mr. Kennedy) Let me ask you this. Then
 19 did you tell these field representatives who
 20 communicated with farmers, did you tell them that
 21 Chevron and ICI had never done a study to determine how
 22 long paraquat stays in the brain? Did you tell them
 23 that?
 24 MS. REISMAN: Objection to form.
 25 Q (By Mr. Kennedy) We don't know, did you tell

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<p style="text-align: right;">Page 150</p> <p>1 them that?</p> <p>2 MS. REISMAN: Objection to form.</p> <p>3 Argumentative.</p> <p>4 A No.</p> <p>5 Q (By Mr. Kennedy) And finally, did you tell</p> <p>6 the field representatives that even if workers follow</p> <p>7 all of the instructions, all of the precautions, they</p> <p>8 can still get paraquat in their blood that runs through</p> <p>9 their brain? Did you tell them that?</p> <p>10 MS. REISMAN: Objection to form.</p> <p>11 A Could you repeat that?</p> <p>12 Q (By Mr. Kennedy) Did you tell the field</p> <p>13 representatives that even if an applicator follows all</p> <p>14 the instructions, all of the precautions, they can</p> <p>15 still get paraquat in their urine, meaning in their</p> <p>16 blood that runs through the brain? Did you tell them</p> <p>17 that?</p> <p>18 MS. REISMAN: Objection to form.</p> <p>19 A No. I wouldn't have told them that because</p> <p>20 I don't believe that.</p> <p>21 MR. KENNEDY: Nothing further. Thank you.</p> <p>22 MS. REISMAN: Nothing further here. Thank</p> <p>23 you.</p> <p>24 Thank you, Mr. Cavalli.</p> <p>25 VIDEOGRAPHER: Okay. This concludes the</p>	<p style="text-align: right;">Page 152</p> <p style="text-align: center;">CONFIDENTIAL</p> <p style="text-align: center;">REPORTER CERTIFICATE</p> <p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5 I, Angela M. Taylor, RPR, MO-CCR, IL-CSR, do</p> <p>6 hereby certify that there came before me at 14811</p> <p>7 Kruse Oaks Drive, Lake Oswego, OR 97035,</p> <p>8</p> <p>9 RICHARD CAVALLI,</p> <p>10 who was by me first duly sworn; that the witness was</p> <p>11 carefully examined, that said examination was reported</p> <p>12 by myself, translated and proofread using</p> <p>13 computer-aided transcription, and the above transcript</p> <p>14 of proceedings is a true and accurate transcript of my</p> <p>15 notes as taken at the time of the examination of this</p> <p>16 witness.</p> <p>17 I further certify that I am neither attorney</p> <p>18 nor counsel for nor related nor employed by any of the</p> <p>19 parties to the action in which this examination is</p> <p>20 taken; further, that I am not a relative or employee</p> <p>21 of any attorney or counsel employed by the parties</p> <p>22 hereto or financially interested in this action.</p> <p>23</p> <p>24 Dated this 6th day September, 2022.</p> <p>25</p> <p style="text-align: center;"><i>Angela Taylor</i> ANGELA M. TAYLOR, RPR, MO-CCR, IL-CSR</p> 
<p style="text-align: right;">Page 151</p> <p>1 deposition of Richard Cavalli. We're now going off</p> <p>2 the record at 2:01 p.m.</p> <p>3 (Whereupon the deposition ended, and</p> <p>4 the witness was excused.)</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	