

1 IN THE CIRCUIT COURT
2 TWENTIETH JUDICIAL CIRCUIT OF ILLINOIS
ST. CLAIR COUNTY

3 FRANCES E. KEMNER, et. al.)
4 Plaintiffs,)
5 VS.) NO: 80-L-970
6 MONSANTO COMPANY,)
7 Defendant.)

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9
10 REPORT OF PROCEEDINGS

11 Before the HON. RICHARD P. GOLDENHERSH

12 JURY TRIAL

13 January 9, 1985

14
15 APPEARANCES:

16 Mr. Rex Carr
17 Mr. Jerome Seigfreid
On Behalf of the Plaintiffs;

18 Mr. J. William Newbold (a.m.)
19 Ms. Felicia Orth (a.m.)
20 Mr. Kenneth Heineman (p.m.)
Mr. Joseph Nassif (p.m.)

On Behalf of the Defendant.

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24 Debra M. Musielak, CSR, CM

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1. DR. LOURENS ZANEVELD

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1. RENATE KIMBROUGH

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Official Court Reporter

BE IT REMEMBERED, that on the 9th day of January, 1986, the same being one of the regular judicial days of said court, the above-styled cause came on regularly for hearing before the HONORABLE RICHARD P. GOLDENHERSH, one of the Judges at the St. Clair County Building, 10 Public Square, in the City of Belleville, County of St. Clair, State of Illinois. Whereupon the following proceedings were had:

COURT CONVENED:

THE COURT: Good morning.

DR. LOURENS ZANEVELD

(being called as a witness on behalf of the Defendant, having resumed the stand, having been previously sworn, continued to testify as follows)

RECROSS EXAMINATION

BY MR. REX CARR

Q. Dr. Zaneveld, you testified as to the table number II that was contained in the chapter in the book, that you contributed to that book, do you recall that, Plaintiff's Exhibit 1682, and you have a copy of that there?

A. No, I don't.

MR. CARR: And also we will need Monsanto Exhibit 1406, which is the Grant Lab for comprehensive semen

1 analysis.

2 A. I have a copy of that one.

3 Q. All right. He has a copy of that.

4 A. Yes, sir.

5 Q. Now, Doctor, I think you testified as to the
6 Plaintiff's Exhibit 1682, that is a table number II from your
7 chapter, is that you -- that that was up-dated at the time it
8 was -- that it was current knowledge at the time it was
9 published and that you subsequently changed values in
10 accordance with what you learned thereafter, or an opinion
11 that was changed thereafter and that your Grant chart, that
12 is Monsanto Exhibit 1406 was prepared in 1985, and that it
13 contained your current opinions and beliefs as to those
14 normals, is that correct, sir?

15 A. Yes, sir.

16 Q. I'd like to have marked, if I might, this chart.
17 It's 1716, Doctor, and, as you can see, it's a comparison of
18 your Table II, 1977 values with your Grant 1985 values.

19 MR. NEWBOLD: May I see that, Mr. Carr?

20 MR. CARR: Yes, surely.

21 Q. And I'd like to ask you some questions relative to
22 that. Can you see it that way, Doctor?

23 A. Closely, yeah, that's better, much better. Yes.

24 Q. All right. Doctor, the Table II values appear in

1 the left-hand column and the Grant 1985 values appear in the
2 right-hand column, is that correct, sir?

3 A. Yes, I have a little -- I have a little trouble
4 with your heading, but let me check that.

5 Q. Well, I'll go over each one individually.

6 A. Okay, fine, I thought you wanted me to check the
7 chart.

8 Q. I ask -- I'm not asking you to agree to the values
9 at this point, but I'll cover it with you. And if you would
10 look to your Table II for your complete liquefaction time of
11 five to twenty minutes, that is correct, isn't it, sir, in
12 your Table II?

13 A. It was normal data.

14 Q. I'm sorry, could you look at Table II that you have
15 before you and see if it's not entered there from your normal
16 data that it was five to twenty minutes of complete
17 liquefaction?

18 A. No, sir, your chart says normal average, not normal
19 data.

20 Q. Well, didn't you testify that normal datum was in
21 fact normal averages?

22 A. I don't -- I said what you usually find in the
23 population, so I would not say that's an average per se, it's
24 what you usually find. I don't know what the outliers are.

1 What I explained --

2 Q. Doctor, I'm not asking for another explanation.
3 You have explained it and you have used the term normal
4 averages, have you not, sir?

5 A. I have used the term normal average in a Grant
6 chart, yes, sir.

7 Q. And with respect to the liquefaction time, that
8 would be your Table II, that would be what you would call
9 your normal datum, correct, sir?

10 A. That's correct.

11 Q. In 1977 you expected that a normal semen sample
12 would liquefy in five to twenty minutes?

13 A. Yes, sir, normal semen sample could liquefy within
14 one hour, that's what I explained in the text.

15 Q. I'll get to that in a moment, but what you said in
16 19 -- your normal datum for liquefaction time was 5 to 20
17 minutes, was it not, sir?

18 A. That's correct, sir.

19 Q. Now, in Grant, in 1985, you changed that rather
20 than 5 to 20 minutes, you now say that your normal, and you
21 don't use the word normal averages as I will agree, but your
22 normal is less than one hour, correct, sir, or equal to, less
23 or equal to one hour?

24 A. May I clarify this, sir?

1 Q. If you could just answer my question.

2 A. No, sir.

3 Q. Have you not got complete liquefaction time in

4 minutes to be less than or equal to 60 minutes?

5 A. That's correct, sir.

6 Q. All right. And to be completely correct, we should

7 have entered here in that column equal to or less than,

8 correct, sir?

9 A. That's correct, sir. Again that's not an average,

10 that's a normal range. However, that's what I wanted to

11 state.

12 Q. Doctor, if you don't mind, we will never finish

13 with you if you volunteer answers where I haven't asked for.

14 If I mislead you in any way, the Court will sit on me, Mr.

15 Newbold will object, and Mr. Newbold can bring out that which

16 I have misled you in. Do you understand that, Doctor?

17 A. Yes, sir.

18 Q. The -- I'll put here in parenthesis, so there won't

19 be any misunderstanding about it, the language that you've

20 used, normal datum?

21 A. Okay, yes, sir.

22 Q. All right, Doctor?

23 A. Yes, sir.

24 Q. Now, Dr. Zaneveld, so you did make, and you did

1 believe, that there was a change in what would be normal for
2 complete liquefaction, you extended it in effect to about one
3 hour, did you not, sir?

4 A. No, sir.

5 Q. Five to twenty minutes is less than an hour, isn't
6 it, sir?

7 A. Yes, sir.

8 Q. But it's -- and you have -- you eliminated the five
9 to twenty minutes in your Grant report, didn't you, sir?

10 A. You mean I did not state it?

11 Q. Sir?

12 A. You mean I did not state it in the Grant report?

13 Q. No, what I said, what you put in your Grant report
14 you eliminated the reference to, or did not put in, five to
15 twenty minutes, you said simply equal to or less than one
16 hour, didn't you, sir?

17 A. That's correct, sir.

18 Q. And that is a modification, isn't it, sir?

19 A. From the previous table?

20 Q. Yes, that's what we are comparing it to.

21 A. Certainly.

22 Q. That is a modification?

23 A. Yes, but not in my opinion.

24 Q. Sir?

1 A. Not in my opinion.

2 Q. Doctor, I'm not asking you your opinion. Your
3 counsel has the right to ask you your opinion. I'm simply
4 asking you what you have published, not what you said in this
5 courtroom, but what you have published for us to read, sir.

6 A. Okay.

7 Q. What you published for us to read, for the doctors
8 to read, and the doctors at Grant to read, is the Chapter in
9 the book and the Grant laboratory sheet, correct, sir?

10 A. Yes, sir.

11 Q. All right. Now, Doctor, the next thing that we
12 have entered here is volume, and the volume in your Table II
13 you report the normal datum for volume, well, you say it
14 averages 3.5 milliliters, don't you, sir?

15 A. That's correct, sir.

16 Q. And in your Grant sheet, you say normal averages
17 3.5 milliliters?

18 A. That's correct, sir.

19 Q. So you are saying basically the same thing, aren't
20 you, sir?

21 A. That's correct.

22 Q. The next item is the pH factor, is it not, sir?

23 A. That's correct.

24 Q. In your table you say the normal datum for the pH

1 is 7.2 to 7.8, did you not, sir?

2 A. That's correct, sir.

3 Q. And in your Grant table you say the normal average
4 is 7.2 to 7.8, don't you, sir?

5 A. Yes, sir.

6 Q. You say the same thing with basically no change,
7 did you not, sir? For your normal averages?

8 A. No, sir.

9 Q. Doctor, did you use the word normal average 7.2 to
10 7.8 in your Grant?

11 A. Yes, sir.

12 Q. 1406. And did you use the words normal datum, 7.2
13 to 7.8 in your Grant, in your Table II?

14 A. That's correct, sir.

15 Q. And Doctor, on sperm concentration, if you will,
16 sir, in your table for sperm concentration, you have an
17 averaging in your normal datum column of 90 million per
18 milliliter, do you not, sir?

19 A. That's correct, sir.

20 Q. And, in your Grant table for your sperm count per
21 milliliter, under normal average, in a -- you have 50 million
22 per milliliter, do you not, sir?

23 A. That's correct, sir.

24 Q. So you have reduced your normal average in your

1 table from 90 million milliliters in 1977 to 50 million
2 milliliters in 1985, have you not, sir?

3 A. That's correct, sir.

4 Q. Now, Doctor, over on the other side in your Grant
5 table, do you have in a column marked normal, greater than or
6 equal to 20 million sperm per milliliter, do you not, sir?

7 A. Yes, sir.

8 Q. And, Doctor, that is your reference for your
9 expectation of fertility, isn't that correct, sir?

10 A. No, sir, normal infertility are not necessarily
11 related. We have discussed that.

12 Q. We have discussed it, Doctor. Your greater than
13 twenty -- greater or equal to 20 million milliliters per
14 million sperm per milliliter is based upon the studies that
15 you described earlier, that some 20 percent of men can get
16 their wives pregnant having less, having equal to or less
17 than 20 million milliliters, have you not, sir?

18 A. That was a primary reason, yes, sir.

19 Q. And that is the datum upon which that normal column
20 entry is made, isn't it, sir?

21 A. Correct.

22 Q. But now that doesn't take away from the normal
23 average for sperm count, concentration, does it, sir?

24 A. No, sir.

1 Q. You are describing two different things, aren't
2 you, sir?

3 A. If you mean that one is a range and the other is
4 the average, you are correct, sir.

5 Q. No, one is what you believe it would take to get
6 someone pregnant, and the other is what you believe to be the
7 normal average count of sperm per milliliter?

8 A. No, sir.

9 Q. Do you not use the word normal average, sir, for 50
10 million?

11 A. Yes, sir.

12 Q. And, isn't normal average the mean? You've
13 described it earlier?

14 A. Yes, sir.

15 Q. And this is your interpretation of the data
16 available to you, that the normal average sperm count is 50
17 million sperm per milliliter, isn't that correct, sir?

18 A. Absolutely correct, yes, sir.

19 Q. Yes, sir. And now, Doctor, the change that went
20 from 90 million in your Table II, your 1977 table, to your 50
21 million count was based, if I understand you correctly, or at
22 least it started you thinking, was the Nelson and Bunge
23 report that you described earlier?

24 A. That was the first that had come to my attention,

1 yes, sir.

2 Q. And, Doctor, the next item that is entered here is
3 the total count, you see that, sir? The total count in your
4 Table II listed under the word or opposite the word sperm
5 count was averaging 300 million per ejaculate, correct, sir?

6 A. That's correct, sir.

7 Q. And, in your Grant table, you dropped that sperm
8 count down to a normal average of 90 million per ejaculate,
9 did you not, sir?

10 A. That's correct, sir.

11 Q. And, Doctor, that is a significant drop, is it not,
12 sir?

13 A. I would think so, yes, sir.

14 Q. There is no question about it. It went from 300
15 million in '77, to 90 million -- down to 90 million in '85.
16 That is indeed a significant drop, isn't it, sir?

17 A. I would think so, yes, sir.

18 Q. Did you find from -- did you find up to the time in
19 '77 when you published your chapter, that in fact the normal
20 average sperm count was 300 million sperm per ejaculate? Was
21 that a true statement that is put in your Table II in your
22 exhibit, in the exhibit, Plaintiff's Exhibit 1682?

23 A. It had come to my attention --

24 Q. Excuse me, my question is, sir, was that a true

1 - statement that you put in that Table II, that is that the
2 ejaculate averaged 300 million sperm per ejaculate?

3 A. Based open the best of my knowledge at that time.

4 Q. Yes. Now, that was your best knowledge based upon
5 -- and you have been an andrologist for how many years at
6 that time in 1977?

7 A. Seven years.

8 Q. And before you ever heard of this case, before this
9 case even occurred, right, sir?

10 A. Absolutely correct, sir.

11 Q. You had already written extensively and studied
12 extensively and you considered yourself at that time an
13 expert andrologist, knowledgeable in the field concerning
14 sperm count, did you not, sir?

15 A. No, sir.

16 Q. You didn't consider yourself an expert at that
17 time?

18 A. At that time I was -- at that time I was becoming
19 an expert. I had not had as much clinical experience as I
20 have today.

21 Q. Tomorrow you will have more experience than today,
22 as well, but did you not have your Ph.D., were you not a
23 professor, were you not teaching, and were you not a
24 consultant, were you not being utilized, and did you not in

1 fact right write a book as an expert that other doctors not
2 as expert as you can use and rely upon?

3 A. Um, you ask many questions all at once. Let me try
4 to remember.

5 Q. Weren't all those things that I said true, sir?

6 A. I'm sorry?

7 Q. Wasn't it all true that I stated to you, sir?

8 A. Could I hear that restated just to make sure?

9 Q. Were you not considered an expert not only by
10 yourself but by others in this field in 1977?

11 A. In the clinical field of adrology?

12 Q. In the field that you published in, this book that
13 was accepted by your peers as authoritative?

14 A. Uh-huh.

15 Q. Were you not considered an expert in the field at
16 that time, sir?

17 A. I guess so, yes.

18 Q. Doctor, do you really believe that they would
19 accept your chapter for this book if they didn't think you
20 were an expert in the field?

21 A. There are degrees, sir.

22 Q. Doctor, I know that there is all kinds of degrees
23 of experts. We have seen different experts in this
24 courtroom.

1 A. I already said --

2 Q. Experts with different knowledge. My question is
3 quite clear and specific, Doctor, were you not a Ph.D. at
4 that time? Did you not write a Chapter at that time that was
5 accepted and published and recognized and taken to be
6 authoritative?

7 A. Yes, sir.

8 Q. And did you not -- was it not your expert opinion
9 in 1977 that the normal datum for sperm count, that it
10 averaged 300 million per ejaculate?

11 A. Actually in 1976 when the chapter was written,
12 that's correct, sir.

13 Q. And, Doctor, you dramatically and significantly
14 changed that opinion in 1985, by 1985, did you not, sir?

15 A. That's correct, sir.

16 Q. You broke it down to less than one-third of what
17 you had previously said was the sperm count, average sperm
18 count, did you not, sir?

19 A. Yes, sir.

20 Q. And, Doctor, you had used at that time, for that
21 new opinion, the material and publication that came out since
22 the last time you had evaluated the average normal sperm
23 count, did you not, sir?

24 A. Also some before that time, sir.

1 Q. Did you not, sir?

2 A. I used that, yes, used that as well.

3 Q. Yes, and did you not, based upon more recent, as
4 well as your -- you had to use your earlier knowledge as
5 well, did you not change your opinion, then, sir, in that
6 intervening period of some six years?

7 A. Yes, that's correct.

8 Q. And, Doctor, was there anything that you are aware
9 of that happened, or is it your opinion that in that period
10 of time, as you have stated earlier before, that the
11 psychological stress, or that the bald and assertive male, or
12 that one of those other factors that we have gone through,
13 was the cause of this dramatic drop in reported sperm count?

14 A. No, sir.

15 Q. You did not. You, in fact, considered that this
16 was a real drop in sperm count, did you not, sir?

17 A. No, sir.

18 Q. You did not. You nevertheless reported it as such,
19 did you not, sir?

20 A. What do you mean by real drop in sperm count?

21 Q. You said the normal average for the sperm that had
22 been analyzed up to the data that you considered reliable and
23 useful, the normal sperm count was 300 million per ejaculate
24 as of 1977, but you changed your opinion and based on

1 subsequent datum and reanalysis of our datum -- data, you
2 determined that the sperm count was no longer 300 sperm per
3 ejaculate, but was now averaging 90, did you not, sir?

4 A. That's correct. It was not a real drop, real being
5 of involving people.

6 Q. Doctor, did you examine any literature or anything
7 else other than what we have discussed in this courtroom the
8 last several days?

9 A. Yes, sir.

10 Q. And did you use some other figures to base that
11 upon, sir?

12 A. Yes, sir. I gave you an entire stack of material
13 --

14 Q. I know that. We discussed that material.

15 A. Not all of -- but not everything that's in there,
16 sir. But I think a significant amount of the material we
17 discussed in court with the exception of Steinberger in 1984,
18 which we only discussed one page of, and probably Hommonai,
19 DeCastro and Wyrobek, and a few people like that, we covered
20 most of the others.

21 Q. Well, Steinberger 1984 was based upon a 1977 count,
22 which we did discuss in Zukerman at some length?

23 A. Are you referring to sperm count only now, sir?

24 Q. That's what I'm referring to. That's the topic

1 here.

2 A. Well, you had not identified that. Okay. Yes.

3 Q. Isn't that right, sir? All right, now, Doctor, the
4 next item on this list is the motility. In your chapter, in
5 your book you put the motility at 70 percent in one hour, 35
6 percent in seven hours, did you not, sir?

7 A. Yes, I did.

8 Q. And in the Grant table you put 70 percent one hour,
9 and you changed the -- no, you didn't, you said 35 percent at
10 seven hours, did you not, sir?

11 A. That's correct, sir.

12 Q. Actually to be fair, what you said in your table
13 wasn't that it would be 35 percent in seven hours but that it
14 would be one half of original motility seven hours after
15 ejaculation, did you not, sir?

16 A. That's correct, sir.

17 Q. And, of course, if the normal datum is 70 percent,
18 one half of that would in fact be 35 percent?

19 A. That's correct, sir.

20 Q. So basically you made no change from 1977 to 1985
21 other than a method of expressing the same thing, isn't that
22 correct, sir?

23 A. In the averages?

24 Q. That's what I'm talking about, sir. That's what

1 this exhibit is charted as averages, is it not, sir?

2 A. Yes, I just clarify this because sometimes things
3 get confusing.

4 Q. Doctor, the only confusion that's going to be here
5 is if you introduce it by volunteering statements I didn't
6 ask you about.

7 A. Okay. Yes, sir.

8 Q. I'm asking you about normal averages. That's what
9 this chart is, sir. Doctor, the -- on the forward
10 progression, you said in 1977 in your table that it should be
11 75 percent, should have moving sperm of forward progression,
12 did you not, sir?

13 A. That's correct, sir.

14 Q. And in your Grant table you said it should be equal
15 to or more than 75 percent, did you not, sir?

16 A. Would you clarify that, sir?

17 Q. Did you not say in your column percent of moving
18 sperm with forward progression, and in your normal column did
19 you not have the symbol for equal to or -- what did I say
20 less than?

21 A. No. No.

22 Q. You have the symbol for equal to or more than 75
23 percent, did you not, sir?

24 A. That's correct, sir.

1 Q. That's basically the same thing as you said in '77,
2 isn't it, sir?

3 A. The numbers are identical, yes, sir.

4 Q. Not just the numbers identical, Dr. Zaneveld, you
5 are saying basically the same thing, aren't you, sir, more
6 precise in 1985?

7 A. Yes, sir.

8 Q. The morphology in 1977 in your table, you say that
9 there should be 30 to 40 percent abnormal forms expressed in
10 a different way, it would be 60 to 70 percent would be normal
11 forms, correct, sir?

12 A. That's correct, sir.

13 Q. And in your Grant table, you said that it should be
14 equal to or more than 50 percent, isn't that correct?

15 A. That's correct, sir.

16 Q. And we need that equal to in this chart -- that's
17 not in here, is it, sir? Now, Doctor, you testified at some
18 length on redirect examination that you had made significant
19 and substantial changes from 1977 to 1985 and in point of
20 fact the substantial changes that you said in your normal
21 averages you dropped the sperm concentration from 90 million
22 to 50 million and you dropped the total count from 300
23 million to 90 million, did you not, sir?

24 A. You have a two-part question, sir, which part would

1 you like me to answer?

2 Q. Both, sir.

3 A. No, sir.

4 Q. That isn't correct? Did you, in fact, have any
5 changes in your Grant normal average values as opposed to the
6 Table II normal average value, sir, other than what I listed?

7 A. Okay, I forgot which one you listed.

8 Q. The 90 million per milliliter change had went down
9 to 50 million per milliliter. The 300 million total count
10 went down to 90 million?

11 A. That's correct, sir, as you stated now.

12 Q. Yes. And Doctor, -- well, we have already
13 discussed the reason for those changes, have we not, sir?

14 A. That's correct, sir.

15 MR. CARR: Your Honor, I'd like to offer this
16 exhibit into evidence, that's 1716.

17 THE COURT: Any objection?

18 MR. NEWBOLD: No objection.

19 THE COURT: Admitted without objection.

20 MR. CARR: Can I have another exhibit marker?

21 MR. NEWBOLD: Can I see that, please?

22 MR. CARR: 1717.

23 Q. (by Mr. Carr) Doctor, I'd now like to show you
24 what's been marked Exhibit 1717, and as you can see, it's

1 - captioned plaintiffs with less than normal averages in 1983
2 as set out in Grant lab values in 1985. I would like for you
3 to take the conclusions where you have the data lined up.

4 A. Those -- my conclusions.

5 Q. Rather easy to use. Or you can use this sperm
6 count exhibit right here that we -- that's in evidence,
7 1705.

8 A. Okay, that's even easier.

9 Q. Yes, it is easier to check whether or not the
10 values put in the top board are correct.

11 A. Okay, you don't want me to eliminate Michael Burks
12 or -- because he was too young, and --

13 Q. 1983 -- what's the age, Doctor, 16?

14 A. Under 18.

15 Q. Under 18. I thought you said yesterday if they
16 were 16 they could go in there?

17 A. I said 16, 17, they are too young. The values we
18 get at 19 they -- the sperm concentration will be normal
19 again.

20 Q. Well, in any event whether what you have said is
21 correct or not, it is true, and I'll certainly accept that
22 you believe what you are saying, that it is your opinion it
23 is true that those people are on this, had such a count, that
24 is Michael Burks, correct, sir?

1 A. Okay. In -- okay.

2 Q. 1983?

3 A. 1983. That's correct. And James Vaught is
4 abstinent for only one day.

5 Q. All right, in '83?

6 A. In '83, that's correct, sir. So now if -- that is
7 your choice.

8 Q. In fairness to your testimony, let me put a mark by
9 the ones that you challenge, all right?

10 A. Michael Burks and James Vaught.

11 Q. In both columns.

12 A. And James Vaught in both columns, 1983, correct.

13 Q. So there would be no question about that. I'll put
14 a "Z" by it so later on we will know that you are the one
15 that challenged it, all right?

16 A. Fine.

17 Q. All right. Now, Doctor, other than with those
18 changes there, is it correct, sir?

19 A. I'm checking, sir. Okay. It's difficult for me to
20 check the totals without the volumes.

21 Q. I'm sorry?

22 A. I can check the concentrations from this particular
23 chart but not the totals, of course, because I don't have the
24 volumes.

1 Q. Oh, all right. You are correct. You'll have to
2 use your statistical analysis for that, because I don't think
3 I've got an exhibit. I don't believe I've got an exhibit
4 that sets out the totals, have I?

5 A. You had one, I thought. But, oh, then we had to
6 make those changes in it.

7 Q. That's all right whether we changed it or not. No,
8 I apparently don't have one. We have the percent but not the
9 identifications?

10 A. I can look it up.

11 Q. Why don't you check that, if you can, for me.

12 A. Okay. The concentration, I believe, is correct.
13 I'll check it at this point.

14 Q. On your count I would suggest the easiest way to do
15 it is look at the ones that are above 90 rather than --

16 A. Right, I shall do so. In 1983. All right, Loren
17 Alton was less --

18 MR. CARR: I'll tell you Jerry, 13 out of 21. It
19 will be 13 out of 19, we are excluding two of them.

20 MR. SEIGFREID: 68.

21 MR. CARR: 68 percent? And then calculate for me,
22 please, 16 out of 18. How many we got in 81, Doctor?

23 A. In '83, you mean? I got --

24 MR. CARR: We got 21. So it will be --

1 A. I had 22.

2 MR. CARR: You've got Kidwell and he's no longer a
3 plaintiff in this case.

4 A. Okay.

5 MR. CARR: So we will have 16 out of --

6 A. 19.

7 MR. SEIGFREID: 84.

8 MR. CARR: 84?

9 MR. SEIGFREID: (indicates affirmatively.)

10 Q. (by Mr. Carr) Then is that chart correct as it is
11 there, Doctor?

12 A. Yes, as a matter of fact.

13 Q. And it shows that of the plaintiffs in the 1983,
14 Dr. Kulakauskas' assessment, 68 percent had less than the 50
15 million concentration per milliliter in the concentration
16 that you set out in your latest -- your 1985 table as being
17 the normal average, does it not, sir?

18 A. Yes, sir.

19 Q. And it also shows that 84 percent have less than
20 the 90 million total count that you set out in 1985 as the
21 normal average in the Grant laboratory, correct, sir?

22 A. Yes, sir.

23 Q. All right.

24 MR. CARR: Offer Exhibit 1717, Your Honor.

1 MR. NEWBOLD: No objection, Your Honor.

2 THE COURT: Admitted without objection. Thank
3 you.

4 Q. (by Mr. Carr) Now, Doctor, I'd like to hand you --
5 after I get it marked. I hand you Plaintiff's Exhibit 1718,
6 which we have discussed at some length earlier, which is the
7 study from which the table, tables marked in Plaintiff's
8 Exhibit 1681, I believe, is.

9 MR. SEIGFREID: 85.

10 Q. Yes, 1685 in which it was taken, correct, sir?

11 A. Correct.

12 MR. CARR: Offer Exhibit 1718 into evidence, please
13 the Court.

14 MR. NEWBOLD: That's the big board?

15 MR. CARR: No, that's the original work.

16 MR. NEWBOLD: Object as to hearsay, Your Honor.

17 THE COURT: It's admitted over objection.

18 Q. (by Mr. Carr) Now Doctor, this MacLeod -- for the
19 benefit of the jury, this exhibit is a long, oh, it runs 14
20 pages, does it not, sir, in length, article written by Dr.
21 John MacLeod and an associate, Dr. Ying Wang?

22 A. Could you explain something? An objection, was
23 that sustained or overruled? Can I look at the article, in
24 other words?

1 THE COURT: Yes, you can look at the article.

2 A. I can comment on it.

3 THE COURT: Yes, you may.

4 A. I wasn't sure.

5 Q. I can't ask you any questions if you can't look at
6 the article, Doctor.

7 A. Well, okay, 14 pages was your question? Yes.

8 Q. Written by Dr. MacLeod and Dr. Wang?

9 A. Yes, sir.

10 Q. And it was published in '79 in the authoritative
11 journal called Fertility and Sterility published by the
12 American Fertility Society, correct, sir?

13 A. That's correct.

14 Q. And MacLeod, rather, has been publishing in the
15 area of fertility and been working in this area for, well,
16 today it would be at least since 1945, apparently, when he
17 first started collecting his data, be some forty years now
18 he's been working in the field, correct, sir?

19 A. Yes, sir.

20 Q. And up to the time of this publication, it would
21 have been some 39 years?

22 A. That's correct, sir.

23 Q. And he is probably, is he not, considered to be the
24 most eminent andrologist in the field of fertility and

1 sterility?

2 A. No, sir.

3 Q. You don't think so?

4 A. Oh, no, sir.

5 Q. Well, is he one of the most?

6 A. No, he's well known for this particular work on
7 semen analyses, per e, but not as an andrologist.

8 Q. Okay, I was too broad. All right. He is the
9 premier world authority in the work that's exhibited here,
10 that is semen analysis, is he not?

11 A. Could you define the word premier?

12 Q. Well, considered to be the top man, or at least the
13 one that's done the most work?

14 A. No, sir, not even that.

15 Q. No on either of those?

16 A. He's a well-recognized person, I'll grant that.

17 Q. And that is as much as you are going to say for Dr.
18 John MacLeod?

19 A. Yes, I think that is what most people would agree
20 to.

21 Q. Doctor, do you know of any scientific paper in the
22 field of semen analysis that does not use and rely upon work
23 of Dr. John MacLeod?

24 A. You mean in 1951 data?

1 Q. This '79 data he talks about -- my question is
2 pretty simple. Is there anybody, you, yourself, when you
3 came to this courtroom -- this table, by the way, is one that
4 -- this exhibit, by the way, is one that you pulled out and
5 used. This is a blow-up of what you gave me?

6 A. That's correct. There were several tables from his
7 article, yes.

8 Q. And you used more than one article by MacLeod to
9 come to the opinions that you have given in this courtroom,
10 did you not, sir?

11 A. I testified he was a well-recognized person in the
12 field.

13 Q. But, Doctor, I wanted more than that. He is used
14 and relied upon by anybody that does anything in this field
15 of semen analysis?

16 A. No, sir, I can't say that.

17 Q. You can't say that, but you do know that you
18 personally use him and rely upon him?

19 A. I certainly use him. He's one of the people I rely
20 upon.

21 Q. Yes, all right. Now, Doctor, this work in '79, he
22 analyzes the changes that others have said have taken place
23 over the period of time and I think we have already gone into
24 the article as to the significance of it. But he discusses

1 the changes and he talks about them and makes tables and
2 analyzes them, and this article is a long analysis of
3 purported changes in counts that have taken place since the
4 30's and the 20's, correct, sir?

5 A. That's correct, sir.

6 Q. And we have already seen that change in his article
7 that we have discussed and used and relied upon it, and
8 analyzed it as well, and even talked to Dr. MacLeod, correct,
9 sir?

10 A. It appeared like it from his article, yes, sir.

11 Q. Yes. Doctor, the table that we have here, is it
12 the largest -- the nine thousand men that were studied and
13 referred to in this publication, 1979, is that the largest
14 group that have ever been reported upon in one document?

15 A. Yes, sir.

16 Q. And, the 5,476 group that he also reports on in
17 this document would be certainly the second largest group,
18 wouldn't it, sir?

19 A. Yes, sir.

20 Q. And the combined total of fourteen thousand people
21 that he reports on in this study, certainly several times
22 larger than anybody else's group, isn't it, sir, anybody
23 else's work?

24 A. Yes, sir.

1 Q. Yes.— And, it is the latest in point of time of
2 publication for any group of, oh, what 500 or a thousand or
3 better? There is nothing later than this, is there, sir?

4 A. No, sir, not more than a thousand, no, sir, I don't
5 think so.

6 Q. Even the work that's put in Dr. Steinberger's study
7 that was published in 1984. He in fact uses a study that was
8 published in 1977, doesn't he, sir?

9 A. That's correct, sir.

10 Q. Yes. So as far as large population analysis, the
11 MacLeod and Wang study is the latest that we have, isn't it,
12 sir?

13 A. That's I believe so, sir.

14 Q. Yes. All right, now, Doctor, there is a table
15 there that -- where the doctor has put the -- he's got a mean
16 and a median for his nine thousand people, hasn't he?

17 A. Yes, sir.

18 Q. He's got a mean count of 95.7 and he's got a median
19 --

20 A. Correct.

21 Q. 76.5?

22 A. That's correct, sir.

23 Q. And you told us yesterday that you considered the
24 median count of some -- well, you said it was better to use

1 it or would be of more value to use it than the mean, didn't
2 you, sir?

3 A. I said more value when setting up your normal
4 ranges.

5 Q. And we have the benefit of his very latest large
6 population for that, don't we, sir?

7 A. You mean both the 9,000 and the 5,000 group?

8 Q. Well, the 9,000 is the one?

9 A. You wish to use the 9,000 one?

10 Q. Yes, that's the one he's described in his table as
11 being infertile marriages and which he did himself. Somebody
12 else did the semen examination in the other ones, so I want
13 to use just the one that he -- I'd like to have this exhibit
14 marked if you might. Doctor, handing you what's been marked
15 Plaintiff's Exhibit 1719. The blow-up is 1719 a?

16 MR. CARR: Your Honor, I'll represent those figures
17 on this exhibit are correct. If they are incorrect, I can
18 take them back from the jury, but I'd like the jury to be
19 able to go along with it as I examine the doctor as to the
20 correctness of it?

21 THE COURT: Any objections?

22 MR. NEWBOLD: I'm sorry, I was reading this thing.

23 THE COURT: Do you have any objections to the
24 admission of 1719?

1 MR. NEWBOLD: We haven't computed -- we are trying
2 to compute the medians right now as fast as we can. I guess
3 subject to its accuracy --

4 MR. CARR: That's what I'm saying.

5 THE COURT: All right, subject to its accuracy,
6 it's admitted.

7 MR. CARR: We will pass it to the jury, Your Honor.

8 THE COURT: Yes, you may.

9 (Exhibit passed to the jury.)

10 A. May I -- not my turn.

11 Q. No, not yet. You'll have a chance momentarily.

12 MR. NEWBOLD: Your Honor, I have another objection
13 to this, having looked at it. May I approach the bench?

14 THE COURT: Sure.

15 (The following Side Bar conversation was had outside the
16 hearing of the jury.)

17 MR. NEWBOLD: It's really more. Let me get my
18 thoughts straight before I start talking.

19 THE COURT: Don't get too close.

20 MR. NEWBOLD: It's an extension of my earlier
21 objection where I objected to the article as being hearsay.
22 And I'm further objecting to this exhibit being hearsay
23 because what we are doing here is he's taking MacLeod, a man
24 who has not testified and who is --

1 THE COURT: Because he's adopting the values that
2 are established in there. Fine, I'll extend your objection
3 to that and incorporate both your argument and your argument
4 on the matter, and it will be a continuing objection.

5 MR. NEWBOLD: Okay. That we are using his values
6 and he hasn't been on the stand. I haven't be able to cross
7 examine. He hasn't been able to vouch for the values,
8 compare the values with --

9 THE COURT: No, I understand that.

10 MR. NEWBOLD: Okay.

11 (The following proceedings were had in open court.)

12 Q. (by Mr. Carr) Now, Doctor, I'd like first of all
13 to direct your attention to the sperm counts. Are the counts
14 correct there, sir?

15 A. Didn't you ask me to assume that they were?

16 Q. Well, no, I'd like for you to be satisfied.

17 A. Would you like me to check them?

18 Q. Yes, I'd like you to also note that Michael Burks
19 has been eliminated from the table as you have -- well, we
20 don't agree with it, but for the purposes of this examination
21 to do so. We have also, if you will note, because you did
22 not use him in your table, I think 1416, 1417, you eliminated
23 Gerald Vaught in one study, and you eliminated James Vaught
24 in another.

1 A. Yes, that's correct, I noted that. I think that's
2 good.

3 Q. You will note those two individuals have been
4 eliminated from this table so that we have conformed this
5 table to the parameters set out by you and Mr. Newbold for
6 those purposes?

7 A. That's correct, sir. Okay, you rounded the values
8 off and that's okay too, as compared to what I had here.

9 Q. Are the values correct, sir?

10 A. It will take some time to check them. I apologize
11 for that. I can assume they are correct.

12 Q. If you are satisfied by now that we have put it
13 down correctly, those values, and I represent to you that we
14 have and there is, we certainly may be capable of making
15 mistakes. As I pointed out yesterday, we are far from
16 perfect, but Mr. Seigfreid did this and since he's a Dutchman
17 he's more perfect than I.

18 A. In that case I don't need to check it.

19 Q. You better check it double, Dr. Zaneveld, check it
20 twice. I didn't have time to check it this morning myself.

21 A. Okay, I checked the right-hand column and except
22 for some decimal errors on George Rush, should be 120.8 and
23 16., 6 which don't have any significance.

24 Q. That's an error on George Rush?

1 A. I said except for some decimal, should be 120.8
2 instead of 120.0, which is a very minor.

3 Q. 120.8, that would make no difference for the
4 purpose of this chart?

5 A. That's what I'm saying, making no difference,
6 therefore, 1983 is right, I'm going to assume 1982 is right.

7 MR. NEWBOLD: Hold it, I'm not sure you should make
8 that assumption. I want to check them myself.

9 A. Yes, sir, I'll check them then.

10 MR. NEWBOLD: Check Joe Robinson for 1982.

11 A. The values we had here were not always entirely
12 accurate. Am I allowed to talk to --

13 MR. NEWBOLD: Not really.

14 THE COURT: I would prefer not to.

15 MR. NEWBOLD: Check Joe -- just check Joe Robinson
16 '82, that's the one I have a question about.

17 A. I got a 106.8 in my chart. I'm not sure it's Joe
18 or whoever it might be.

19 MR. NEWBOLD: That's what I have, too. What does
20 the exhibit say?

21 A. 106.8 on Joe Robinson.

22 MR. CARR: You've got Joe Robinson in there twice,
23 Jerry. That should be Tim Robinson.

24 MR. NEWBOLD: I've got Joe Robinson --

1 MR. CARR: Should be Gary Robinson. See, you are
2 right, Mr. Seigfreid did make a mistake.

3 MR. NEWBOLD: Never assume.

4 MR. CARR: Number 12 should be Gary Robinson.
5 Makes absolutely no difference in the outcome.

6 A. I checked the right-hand column.

7 MR. NEWBOLD: Never assume.

8 MR. CARR: But it makes no difference.

9 THE COURT: Same number?

10 MR. CARR: Same number, just the names change and
11 the names are meaningless for the purpose of this exhibit
12 anyway, Your Honor.

13 MR. NEWBOLD: Let's check the rest of them.

14 MR. SEIGFREID: The jury should change theirs.

15 A. Okay, I will change it, also. Would it be okay to
16 allow Mr. Newbold to check so that I don't have to do it?

17 THE COURT: Sure.

18 A. So when he's done then --

19 THE COURT: Mr. Carr, you may proceed.

20 MR. CARR: I want to confess something, Your Honor,
21 for the sake of keeping the record straight, looking at some
22 rough material that I gave Mr. Seigfreid, and in fact the
23 error in the name is mine and not his. So I misled him. I
24 gave him wrong data.

1 A. That speaks for Dutchmen, I guess. Back to that.

2 MR. CARR: I was hoping it wasn't that way. Mr.
3 Seigfreid and I have something of a feud going on, but --
4 he's one up on me, now. Where were we, Dr. Z?

5 A. We were right here checking the chart.

6 Q. Are we all clear on those values?

7 A. I asked the Judge was okay for Mr. Bill Newbold to
8 check the figures so you and I could continue.

9 Q. All right, fine. For 198 -- first of all, you will
10 note that while the exhibits that you used to, more than one
11 year to compare, you used the Moberly clinic results, and we
12 have not used the Moberly clinic results. You see that,
13 don't you, sir?

14 A. Yes, sir.

15 Q. And you have said, though, however, that the
16 Moberly clinic did not -- or the Medical Center did not
17 follow their protocol, didn't you, sir, in one or more?

18 A. That's correct, sir.

19 Q. They did not report liquefaction time?

20 A. That's correct.

21 MR. NEWBOLD: Object, Your Honor, repetitive.

22 MR. CARR: I want to establish this point.

23 THE COURT: I think it can be established in this
24 area. Overruled.

1 Q. That they did not report the history for the last
2 date of ejaculation?

3 A. Yes, sir.

4 Q. They gave no history, and that all their pH's are
5 above the normal averages that you have listed for normal
6 averages?

7 A. That's correct.

8 Q. All the pH results, except for one, which is way
9 below, and that you have also said with regard to their sperm
10 counts that such high sperm concentrations are hardly ever
11 found in a regular population?

12 A. Yes, I said that, sir.

13 Q. All right. And so we have not used the Moberly
14 clinic in arriving at those medians, and as the exhibit
15 shows, we have, have we not, used both 1982 and 1983 results
16 of Dr. Kulakauskas?

17 A. That's correct, sir.

18 Q. And as far as the median is concerned, the way we
19 arrived at the median was to take the person who fell half
20 way between the top and the bottom count and said that
21 person, or if it was an even number of people, and in this
22 case it would be in 1982, there is 18 -- so there would be 9
23 above and 9 below, falls right between Glen Rush and Delbert
24 Curl, so we split the difference between those two values,

1 which would be 50?

2 A. That's correct, sir.

3 Q. All right. And use that as a median. And then for
4 1983, we took the person -- there is one more. There is an
5 odd number in 1983, there is 19. So we took the value of
6 that person, who was -- who fell in between, that is we took
7 the value of person number 10, who was Loren Alton?

8 A. Okay.

9 Q. And using that as a median, is that the correct way
10 to do it, sir?

11 A. That's perfectly satisfactory, yes, sir.

12 Q. So that we have a 1982 median of 50 million, this
13 is total count per milliliter?

14 A. This is per milliliter.

15 Q. Per milliliter, all right.

16 Q. We have a 50 million per milliliter for 1982, 33.4
17 for 1983?

18 A. Yes, sir.

19 Q. If you take those two, put them together, divide
20 them by two, we get the combined median, correct, sir, of
21 341.7?

22 A. Yeah. I don't know if you can actually divide
23 medians by two. I'm not that good in that area, but we can
24 do it.

1 Q. You did it for--the -- in the tables that you put on
2 for the means?

3 A. Means is different. There is actually figures, not
4 numbers of people, but, okay.

5 Q. At least you understand?

6 A. I understand that point.

7 Q. What the word combined median means, did you not,
8 sir?

9 A. That's correct, sir.

10 Q. And MacLeod -- and that's 41.7, and MacLeod and
11 Wang table for infertile marriages, and we use the same that
12 he used, certain aspects of semen quality in infertile
13 marriage populations?

14 A. Uh-huh.

15 Q. He used the classification for -- he said 1938 to
16 1977, but in point of fact, what he used for that study of
17 the figure that we used for that study was the 9,000 men
18 examined in the ten-year per or eleven-year period from '66
19 through '76?

20 A. Yes, I understand that.

21 Q. Which the median is 76.5, correct, sir?

22 A. That's correct, sir.

23 Q. And we have listed that as the median here,
24 correct, sir?

1 A. Yes, sir.

2 Q. So, in comparing the median between the Sturgeon
3 plaintiffs and the 9,000 men examined by Dr. MacLeod and
4 Wang, the medians are widely widely apart, aren't they, sir?

5 A. You mean they are much less or less than the --

6 Q. That's correct?

7 A. Yes, I would agree.

8 Q. And for instance in 1982, there are only seven
9 plaintiffs who are above the Wang median, in 1983 there are
10 only two plaintiffs that are above the MacLeod and Wang
11 median, correct, sir?

12 A. In 1982 you said there was seven, let me count
13 them.

14 A. Yes, that's correct. And in 1983 --

15 Q. Only two?

16 A. Only two, that's also correct, sir.

17 Q. So as far as this table is concerned, in comparing
18 the men in infertile marriages with the plaintiffs in this
19 case, the plaintiffs' median is much much lower than the
20 9,000 husbands in those infertile marriages?

21 A. Well, I wouldn't agree to much much lower. I would
22 definitely agree to lower.

23 Q. Doctor, 76.5 is 35 decimal points higher than the
24 41?

1 A. 35 decimal points?

2 Q. Yes.

3 A. That would be .000 --

4 Q. No, 35 decimal points -- 35 places, I'm not -- not
5 35 places, percentage points is what I meant to say.

6 A. Oh, percentage points.

7 Q. Percentage points above the plaintiffs in this
8 case?

9 A. That could be correct, sir.

10 Q. And those are infertile marriages, not fertile
11 marriages but infertile marriages, correct, sir?

12 A. That's correct, sir.

13 Q. So according to this table, the plaintiffs are
14 significantly lower than men who are in infertile marriages?

15 A. It is statistically significant or --

16 Q. Yes?

17 A. That I couldn't tell you.

18 Q. Statistical significance is ordinarily, isn't it
19 Dr. Zaneveld? You say five percent different that
20 statistically significant?

21 A. Well --

22 Q. Didn't you say that, sir?

23 A. 5 percent less, but it depends on the distribution
24 curve, sir. When you do the statistical comparisons, when

1 you actually do your calculations --

2 Q. Doctor, I'll accept that, and I really want to get
3 you off the stand. I promised that you would be on not
4 significantly more than an hour. I'm trying to do that.
5 Whatever it's called, it is a significant difference between
6 those infertile marriage partners and the plaintiffs for
7 medians, is it not, sir?

8 A. With significant meaning the more colloquial term of
9 -- usual term --

10 Q. Yes.

11 A. Okay, sir.

12 Q. As far as the mean is concerned, we got the 1982
13 mean by adding those values in 1982 and dividing by 18, and
14 that is a proper method to get the mean, is it not, sir?

15 A. That's correct, sir.

16 Q. And in 1983 we did the same thing, we added those
17 values in the 1983 and divided by 19 in that case, and that
18 too is proper, is it not, sir?

19 A. That's correct, sir.

20 Q. And then we combined the two as we did before, got
21 a combined mean that is an average of 50 million sperm per
22 milliliter, did we not, sir?

23 A. Yes, sir.

24 Q. And as compared to the MacLeod and Wang 95.7,

1 that's nearly twice as much as the Sturgeon plaintiffs in
2 those infertile marriages, isn't that correct, sir?

3 A. That's correct.

4 MR. CARR: Your Honor, that does conclude our
5 recross examination, if I have offered those exhibits. I
6 think I just asked permission that the jury could see them.
7 I now offer exhibits --

8 THE COURT: They were admitted without objection.

9 MR. NEWBOLD: Over my objection.

10 THE COURT: They were both admitted subject to the
11 mathematical accuracy. You are finished with recross?

12 MR. CARR: I am, Your Honor.

13 THE COURT: Mr. Newbold?

14 MR. NEWBOLD: I can't believe it. I've been
15 sitting here waiting to go, now I've misplaced the pad that I
16 need to start. Your Honor, this is Defendant's Exhibit 1418,
17 which is one page of Delbert Curl's fertility testing for the
18 year of 1982. I would move its admission and ask --

19 MR. CARR: It's already in evidence, Your Honor, as
20 a Plaintiff's Exhibit. If you want the number I can give it
21 to you. Certainly no point in making --

22 THE COURT: Whatever number we use it's without
23 objection,

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REDIRECT EXAMINATION

BY MR. J. WILLIAM NEWBOLD

Q. Dr. Zaneveld, the reason I gave you that --

MR. CARR: I object to the reason he gave it, Your Honor.

THE COURT: Would you rephrase that please?

Q. Directing your attention, sir, to what has been marked as Defendant's Exhibit 1418, have you reviewed that prior to today, sir? Do you recall Mr. Carr cross examining you about whether or not you knew whether Dr. Kulakauskas had used that speeding up technique to speed up liquefaction time of semen so that he could do a count at 30 minutes and one hour?

A. Yes, sir.

Q. And, looking at that, this page, can you show the jury where the liquefaction time is shown on the exhibit?

A. When you look -- take the sheet, look on the microscopic, it's number one, microscopic ejaculate investigation, listed are volume, liquefaction time and pH, B, liquefaction time. That's where it's listed.

Q. What was the liquefaction time for Delbert Cecil Curl?

A. Seventy-five minutes.

Q. If Dr. Kulakauskas had used this speedy, this speed

1 up for the liquefaction time, would this have said 75
2 minutes?

3 A. Not unless he used it after 75 minutes.

4 Q. Well, can you explain that for us?

5 A. Well, if he would have used a liquefying agent and
6 he would have liquefied the sample before the 30 minutes that
7 he did his motility examination, then he would have put down
8 29 minutes for liquefaction, or 25 minutes, or 15 minutes.

9 Q. So that by looking at this exhibit right here, can
10 you tell whether or not Dr. Kulakauskas used this speed up
11 method for liquefying the semen sample?

12 A. Not before 75 minutes, sir.

13 Q. Then in your opinion was the semen sample fully
14 liquefied for a semen analysis for Dr. Kulakauskas and Dr.
15 Carnow at 30 minutes?

16 A. Could not have been, sir.

17 Q. Could it have been fully liquefied at one hour?

18 A. No, sir.

19 Q. Using the exhibits that Mr. Carr has already
20 questioned you about -- strike that. Do you recall Mr. Carr
21 cross examining you over the fact that there were high sperm
22 count reports in New York, like MacLeod and Wang, but low
23 sperm count results in Iowa City and in Houston, Texas?

24 A. That's correct, sir.

1 Q. And using the literature that has already been
2 provided to you and introduced into evidence, were there also
3 any low sperm count reports coming out of New York City?

4 A. Definitely lower sperm counts than those in
5 MacLeod, yes.

6 Q. What were they?

7 A. Rehan et al. published a median of 65 million sperm
8 per milliliter and a mean of 79 million sperm per milliliter.
9 Santomauro reported a median of 40 million sperm per
10 milliliter and a mean count of 50 million sperm per
11 milliliter.

12 Q. In your opinion then have the reported values only
13 fallen in Iowa City and Houston or have they also fallen in
14 New York City?

15 A. The answer to that is that the reported values in
16 general have decreased from those originally reported by
17 McLeod and Wang or MacLeod and Gold. I have no idea why
18 MacLeod and Gold in general have higher sperm concentration
19 values than the rest of the country, but they do. In their
20 repeat study in 1979 they again found higher values, much
21 higher than most people in the rest of the country, including
22 New York.

23 Q. Dr. Zaneveld, Mr. Carr cross examined you on
24 Plaintiff's Exhibit 1717, which were plaintiffs with less

1 than the normal averages in 1983 as set out in your Grant Lab
2 values in 1985, and the one column he has less than 50
3 million, which has to do with concentration, and less than 90
4 million, which has to do with total count. Do you recall
5 that, sir?

6 A. Yes, sir.

7 Q. I hand you what has been marked as Defendant's
8 Exhibit 1419 and ask you whether or not we did not do the
9 exact same chart but including Moberly and excluding various
10 plaintiffs for various reasons and containing an overall
11 average for total count?

12 A. What is done here is you listed the percent of
13 people that -- that's correct, the percent of people that are
14 less than the 90 million per milliliter.

15 Q. In Carnow I, Carnow II and Moberly and overall, is
16 that correct?

17 A. And overall, that's correct.

18 Q. And we -- and in Carnow I you eliminated Michael
19 Dominguez, and why is that, sir?

20 A. Because he was too young too make a definitive
21 diagnosis on him.

22 Q. And you also eliminated in 19 -- Carnow I, Gerald
23 Vaught, why is that, sir?

24 A. In 1982 he was abstinent for only one day.

1 Q. And then in Carnow II you eliminated Robert W.
2 Vaught, why is that, sir.

3 Q. In Carnow II?

4 A. He had no analyses at that time.

5 Q. Okay. And in Carnow II you also eliminated James
6 Vaught, why is that, sir?

7 A. Because he had not been abstinent for more than one
8 day.

9 Q. All right. And then in the Moberly results, you
10 eliminated Gerald Vaught, why was that, sir?

11 A. Again, no analyses was made. He did not produce a
12 sample.

13 Q. And in Moberly, you also eliminated James Vaught,
14 why is that, sir?

15 A. He was abstinent for only one day.

16 MR. NEWBOLD: I would like to move the admission of
17 Defendant's Exhibit 1419, Your Honor, and pass it to the
18 jury.

19 THE COURT: Any objections?

20 MR. CARR: None, Your Honor.

21 THE COURT: It's admitted without objection.

22 (Exhibit passed to the jury.)

23 Q. (by Mr. Newbold) Now, Dr. Zaneveld, I'd like to
24 hand you Defendant's Exhibit 1420, and ask you whether or not

1 you did the exact same thing for the other side of Mr. Carr's
2 chart having to do with concentration and less than 50
3 million?

4 A. Yes, that's correct, sir.

5 Q. And that including Carnow I, Carnow II, Moberly had
6 an overall average, is that correct?

7 A. Yes, sir.

8 MR. NEWBOLD: I would move its admission, Your
9 Honor.

10 MR. CARR: No objection, Your Honor.

11 THE COURT: You said no objection? Admitted
12 without objection.

13 (Exhibit passed to the jury.)

14 Q. (by Mr. Newbold) Now, Dr. Zaneveld, first
15 directing your attention to concentration, and can you show
16 the ladies and gentlemen which one of the two copies that
17 they have would be concentration?

18 A. The one headed by concentration.

19 Q. Okay. And when you did your averages, deleting the
20 people that you thought should have been deleted, what was
21 the average for Carnow I?

22 A. I can remember it was 47 percent having less than
23 50 million sperm per milliliter.

24 Q. And do you consider that to be significant, Dr.

1 Zaneveld?

2 A. No. No. Not at all. The only reason why I'm
3 hesitating somewhat is that I don't know exactly what you
4 meant by significant. In what regard?

5 Q. Clinically significant insofar as reviewing sperm
6 parameters?

7 A. No, particularly not because the 50 million is an
8 average. In my clinical opinion, looking at people less than
9 50 million is not really what we do, we look at people above
10 20 million. 20 million is the cutoff point of normality. As
11 long as the people fall above 20 million they are in the
12 normal range and as long as the averages fall above 20
13 million in the normal range, the rest is looking at the
14 smaller values, higher values, unless the groups are very
15 very large. It is very difficult to compare such averages,
16 but, in particular there were 47 percent, from that
17 standpoint not significant.

18 Q. Now, Mr. Carr only had -- he doesn't have 1982 up
19 here, all he has is 1983, and we have done 1983, too, and we
20 agree with Mr. Carr's second number here, that 68 percent of
21 the people fell below 50 million, is that correct?

22 A. That's correct, sir.

23 Q. And do you consider that to be clinically
24 significant?

1 A. No, again not, sir.

2 THE COURT: Okay --

3 MR. NEWBOLD: I'd say two more minutes I'll have
4 this one done.

5 THE COURT: Okay, go ahead.

6 Q. Now, Mr. Carr, did not include the Moberly
7 analysis. We did include the Moberly analysis, is that not
8 correct, sir?

9 A. That's correct, sir.

10 Q. And do you believe that even though the -- strike
11 that. Do you believe that the Moberly analysis is valid
12 insofar as sperm concentration is concerned?

13 A. That's correct, sir. As far as I understand, they
14 were done on exactly the same conditions as the Carnow
15 examination.

16 Q. And when you looked at the Moberly results, what
17 percent of the people fell below 50 million in concentration?

18 A. None, sir, so --

19 Q. So that would be totally normal?

20 A. Absolutely.

21 MR. NEWBOLD: Good time for a break.

22 THE COURT: All right, fine. We will take a break
23 at this point in time. I would remind you you are not to
24 discuss this matter among yourselves, with anyone outside the

1 jury panel, or as of yet form any opinions about the matters
2 and conclusions in the trial.

3 (Following a recess, these proceedings were had in open
4 court.)

5 Q. (by Mr. Newbold) Now, Dr. Zaneveld, directing your
6 attention to Defendant's Exhibit 1419, which is the total
7 count, is that correct, sir?

8 A. That's correct, sir.

9 Q. And can you --

10 A. I think it was on the right-hand side of that.

11 Q. And Mr. Carr showed you Plaintiff's Exhibit 1717,
12 which was total count of less than 90 million, is that
13 correct, sir?

14 A. That's correct, sir.

15 Q. And that was for the 1983 averages, which is what
16 we call Carnow II, is that correct, sir?

17 A. That's correct, sir.

18 Q. And we show that as 84 percent of the people who
19 had less than 90 million total count?

20 A. Yes, sir. That's exactly what Mr. Carr showed,
21 too.

22 Q. And, insofar as what Mr. Carr showed, Doctor, what
23 clinical significance does it have insofar as normality or
24 abnormality is concerned of those people?

1 A. Well, as we testified yesterday, many of those
2 people -- most of those people still have above 50 percent,
3 I'm sorry, above 50 million sperm total, which is the cutoff
4 point for normality and abnormality. However, as a group,
5 and as I stated in my preliminary conclusions, 84 percent of
6 the men having below 90 million sperm per milliliter is a bit
7 skewed, and therefore, not as usual as one would normally
8 find in a large population. We have to consider this is
9 relatively small population, however, but I would say 84
10 percent of less than 90 million per milliliter is a bit
11 unusual in this particular case, but not meaning that it's
12 clinically abnormal.

13 Q. Now, we also looked at what percentage of men, not
14 only in 1983 Carnow II, but we looked at it at Carnow I, did
15 we not, sir?

16 A. That's correct.

17 Q. And what percentage is that for Carnow I?

18 A. That's 37 percent, which means that 63 percent of
19 the Carnow I examined people were above normal, so more than
20 half were above the average range, which was again perfectly
21 normal or better than normal.

22 Q. We also looked at the Moberly, did we not, sir?

23 A. That's correct.

24 Q. What did the Moberly data tell us about total

1 count?

2 A. The Moberly total count and the Carnow total count
3 on the average was very similar, however, the Moberly total
4 count only 12 percent of the men fell below 90 million per
5 milliliter, so that 88 percent of the men were above in
6 normal average of 90 million per milliliter, which is the
7 large majority of the men.

8 Q. Then when you look at all three, not just one, but
9 look at all three semen analysis, what is your opinion
10 insofar as total count is concerned?

11 A. Well, since two out of three are better than
12 average, I would consider this normal.

13 Q. Okay. Now, Doctor, I want to talk about medians
14 briefly. Dr. Zaneveld, I hand you what has been marked as
15 Defendant's Exhibit 1421, which is really, is the same chart
16 as 1419 except on that chart we figured what the Moberly
17 median is and the overall median, is that correct, sir?

18 A. Yes, sir.

19 Q. What is the Moberly median?

20 A. It's 126, sir.

21 Q. And what is the overall median?

22 A. The average of the various media, which as I said
23 we take them with a bit of grain of salt, is 70.

24 Q. Now, on Plaintiff's Exhibit 1719 Mr. Carr set out

1 some medians from MacLeod and Wang of infertile marriages of
2 76.5, and then MacLeod and Wang of infertile marriages of
3 95.7, you recall that, sir?

4 A. That's correct, sir.

5 Q. Now, is there other literature that is already in
6 evidence that would indicate much lower medians?

7 A. That's correct, sir.

8 Q. And what are they?

9 A. Well, first of all, the medians which actually are
10 of fertile people, if I remember, all we have to remember
11 that the infertile marriages means half of the men is still
12 fertile, doesn't mean all the men are infertile, only half
13 the list on the bottom group. If you look at only the
14 fertile population, of course, the population consists of
15 infertile and fertile people. Looking only at fertile
16 population, Nelson and Bunge --

17 Q. Right here on this big chart?

18 A. That's correct, sir. Reported a medium of 38.

19 Q. Right here?

20 A. That's correct.

21 Q. Okay. Rehan et al. from New York reported a median
22 of 65.

23 Q. Okay, that's right here?

24 A. That's correct. Right there And, then Sobrero,

1 Rehan, same authors, reported a median of 68. Okay. And, of
2 course, Smith and Steinberger reported a median of 50.

3 Q. Okay. Is that data indicated on the exhibit that
4 you have before you?

5 A. Yes, sir.

6 Q. And those medians are much lower than the MacLeod
7 and Wang medians of 76.5 and 95.7, is that correct, sir?

8 A. Yes, sir. I would also like to point out when
9 MacLeod and Wang in a study of 5,40000 men, their own study,
10 sent out the analysis by another -- by other people, they
11 obtained only a median of 55 million sperm per milliliter
12 rather than the 76.5. It appears their clinic is high in
13 their sperm concentration estimates, for whatever reason, I
14 would not know why.

15 MR. NEWBOLD: Your Honor, I would like to move into
16 evidence Exhibit 1421 and pass copies to the jury.

17 THE COURT: Any objections?

18 MR. CARR: No objection, Your Honor.

19 THE COURT: Admitted without objection.

20 (Exhibit passed to the jury.)

21 Q. Now, Mr. Carr's -- strike that. The median as
22 shown in 1982 for Carnow II is 50, and we agreed with that,
23 did we not?

24 A. Yes, we agreed with that.

1 Q. And how does that 1952 median compare with the
2 Nelson and Bunge median?

3 A. It was higher.

4 Q. And is that normal? Is that what it should be?

5 A. Yes. Yes. Actually better than normal, if you
6 want to consider normal the average.

7 Q. Okay. And how does the 1982 median that Mr. Carr
8 shows on his chart, 1719 A, compare with Smith and
9 Steinberger?

10 A. It's the same.

11 Q. Exactly the same. Mr. Carr has a median in 1983 of
12 33.4, and that does fall below the MacLeod and Wang and the
13 Nelson and Bunge -- oh, no, it doesn't.

14 Q. How does the 1983 median of 41, of 43.4, compare to
15 the other medians that you've set forth in your exhibit?

16 A. It is somewhat lower than the lowest value that is
17 reported. I should remark, however, that it's not lower than
18 the lowest value reported on this particular chart that you
19 had up.

20 Q. Was there another median that's even lower than the
21 ones I've listed?

22 A. Yes, sir.

23 Q. What is that?

24 A. If you look on the bottom of that chart on the

1 Smith and Steinberger, Houston, you see a median of 17
2 percent.

3 Q. Oh, I see.

4 A. 70 million per milliliter. That's for people in
5 infertile marriages.

6 Q. Are Smith and Steinberger a well recognized
7 andrology group or is Steinberger a well-recognized
8 andrologist?

9 A. As I've testified, I consider him the best in the
10 United States.

11 Q. You consider him to be better than MacLeod and
12 Wang?

13 A. That's correct, sir.

14 Q. So that if we used Steinberger's median of 17
15 percent, instead of MacLeod and Wang's, then the 1982 median
16 and the 1983 median --

17 A. Would be high.

18 Q. Would be higher, is that correct?

19 A. That's correct.

20 Q. Okay. Now we have also calculated what the Moberly
21 median would be, and that's on the exhibit that the jury
22 has. What would the median be?

23 A. 126.

24 Q. And, of course, that's above any of the medians

1 that we have set forth here, is that correct, sir?

2 A. That's correct, sir.

3 Q. Now, we have also taken a look at all three of the
4 test results and did an overall median, and what is that?

5 A. That came out to 70. It is the mathematical
6 average of all three calculations.

7 Q. And if we have an overall median of 70 for all
8 three exams, not just one but all three, is that better than
9 the Nelson and Bunge median?

10 A. Yes.

11 Q. Better than Rehan et al. median?

12 A. That's correct, sir.

13 Q. Is it better than Sobrero and Rehan?

14 A. Slightly, yes, sir.

15 Q. Better than the Smith and Steinberger median?

16 A. That's correct, sir.

17 Q. If you are looking at medians, is it better to look
18 at all three or just the two that Mr. Carr has up here?

19 A. Well, any time you have information, you need to
20 take all the information into consideration.

21 Q. Now, finally, Dr. Zaneveld, when you are making a
22 determination about fertility, do medians and means really
23 mean anything at all?

24 A. No. When you try to determine that a group falls,

1 is normal or abnormal, one does not look at the average only,
2 particularly not of the group as relatively small. What you
3 look for is if the group as a whole in a majority of the
4 individuals fall into a normal range.

5 Q. And have you looked at this group as a whole?

6 A. Yes, as we presented yesterday the --

7 MR. CARR: Your Honor, this is all repetition and I
8 object to it. If I have to go into recross of the doctor on
9 what he's saying now, we will --

10 MR. NEWBOLD: I'll withdraw the objection and close
11 my re-redirect.

12 THE COURT: Okay. It's withdrawn. Did you have
13 any recross?

14 MR. CARR: Yes, I do.

15

16 RECROSS EXAMINATION

17 BY MR. REX CARR

18 Q. Doctor, with regard to the Kulakauskas exhibit on
19 Delbert Curl, your Defendant's 1418, you can do a quickie
20 analysis, can you not, by taking a portion that has already
21 liquefied and analyze it without adding a lytic agent?

22 A. Well, you can do it.

23 Q. Or as a matter of fact, what you can do, also you
24 can take a portion of that ejaculate that is still solid and

1 liquefy it, can you not, sir, and look at that portion, can
2 you not do that, sir?

3 A. It's very difficult. It can be done. .

4 Q. It can be done, but experienced people can do that,
5 can they not, sir?

6 A. I don't know of any clinic that does that. If Dr.
7 Kulakauskas does it --

8 Q. Are you familiar with what the Cook County Clinic
9 is capable of doing?

10 A. No, sir.

11 Q. Now, Doctor, you either have to conclude -- you
12 have here, do you not, a definite statement for the world to
13 see that complete liquefaction took place in 75 minutes,
14 correct, sir?

15 A. That's correct, sir.

16 Q. And there is no question about that. He could have
17 put down complete liquefaction in 30 minutes, couldn't he,
18 sir, if he wanted to? Nobody is looking over his shoulder?

19 A. That's correct, sir.

20 Q. And you accept that as a real value of 75 minutes,
21 don't you, sir?

22 A. Yes, sir.

23 Q. But now you accept that as a real value but you
24 reject the total count as a real value -- you reject the

1 activity as a real value, don't you, sir?

2 A. No, I did not reject the total count as a real
3 value; the activity, I did.

4 Q. Yes. And, Doctor, because you said, well, how
5 could he possibly know the activity if it's not liquefied
6 yesterday, correct, sir?

7 A. That's correct, sir.

8 Q. So what you are doing, you are saying Dr.
9 Kulakauskas made up that data, aren't you, sir?

10 A. No, sir, I'm not saying that.

11 Q. That's what you are implying?

12 A. No, I said his measurement was not valid.

13 Q. In point of fact, though, he could do it, in his
14 experience, by taking a portion of it for the purpose of
15 making that 30 minute observation if someone wanted him to
16 make that 30 minute observation, could he not?

17 A. Not a valid one, sir.

18 Q. Doctor, would it be -- you don't need that value
19 for the -- what about the hour?

20 A. What hour?

21 Q. The hour valuation, he could not make a valid one
22 for that either, is that what you are saying?

23 A. That is correct.

24 Q. Dr. Kulakauskas could in fact take a drop of the

1 semen and liquefy it, could he not?

2 A. That's correct.

3 Q. Or he could in fact take a drop of the semen that
4 had already liquefied, couldn't he, sir?

5 A. Yes, but neither one would be valid observations.

6 Q. By your judgment?

7 A. No, by anybody's judgment. I don't know of a
8 clinic that would do that.

9 Q. Doctor, you have put in your book that you can do a
10 quickie?

11 A. I didn't say quickie. I say you can quickly --

12 Q. No, you put in your book that you could have a
13 quickie analyses by taking the semend and looking at it.

14 A. I never used the term quickie analysis, I think,
15 but if I did, it doesn't matter because the point is taken
16 that you can liquefy a semen sample.

17 Q. What you said, Doctor, was you could do -- "A
18 quickie method may be performed where a drop of semen is
19 placed," you used quickie not me on Page 154, "where a drop
20 of semen is placed on the slide."

21 A. After it's liquefied, sir.

22 Q. Doctor, a portion of it is liquefied, isn't it,
23 sir?

24 A. But that would be a biased portion of the sample.

1 You cannot do a valid analysis that way.

2 Q. Doctor, it might be invalid by your standards,
3 might be valid by Dr. Kulakauskas if he knows someone wants a
4 report on that. You either have to assume that Dr.
5 Kulakauskas lied when he gave those activities, or he
6 performed an analysis on a portion that was liquefied, one
7 way or the other, isn't that correct, sir?

8 A. Either he lied or performed --

9 Q. Either he lied or he did in fact perform an
10 analysis on a liquefied portion of this ejaculate?

11 A. No, there is one other option.

12 Q. What's the other option?

13 A. That a portion was not liquefied. He looked at a
14 sperm moving within that coagulated portion.

15 Q. Well, can you do that?

16 A. Yes, you can do that.

17 Q. Is it valid to do that?

18 A. No, sir.

19 Q. One of those three things he did, correct, sir?

20 A. That's what I would assume.

21 Q. A person looking at this, knowing that the
22 liquefaction time is clearly set out, a person would know
23 that he did one of those three things, wouldn't he, sir?

24 A. Yeah, I can't think of anything else that it could

1 be.

2 Q. And, Doctor, the next thing I'd like to ask you
3 about is the testimony that you gave relative to Plaintiff's
4 -- Defendant's Exhibit 1419 and 1420, do you have those in
5 front of you, sir?

6 A. 1719 you mean?

7 Q. 1419 and 1420.

8 A. I'm sorry, I got 1419 and 1420.

9 Q. Defendant's, sir?

10 A. Okay.

11 Q. When did you do those tables, Doctor?

12 A. They were done last night and this morning.

13 Q. And were they done at your request?

14 A. No, they were done at a lawyer's request, but also
15 my suggestion.

16 Q. You did those, did you not, sir?

17 A. I'm sorry?

18 Q. You did those, did you not, sir?

19 A. That's correct.

20 Q. And you apparently considered significant because
21 you used the normal averages, didn't you, sir?

22 A. That's correct, sir.

23 Q. And you used the normal averages because you and
24 Mr. Newbold believe that it has a bearing on this case, did

1 you not, sir?

2 MR. NEWBOLD: Object, Your Honor, may we approach
3 the bench?

4 THE COURT: Sure.

5 (The following Side Bar conversation was had outside the
6 hearing of the jury.)

7 MR. NEWBOLD: I object, Your Honor. This is
8 totally misleading to ask this witness what I think has a
9 bearing on this case. The reason we prepared those things is
10 because Mr. Carr used normal values during his presentation.
11 Obviously if he used normal values, I was going to use them
12 in mine. But he has no right to question this witness as to
13 what I think is going to happen or what is or isn't
14 significant. That's totally improper.

15 MR. CARR: I don't think it's improper to asking if
16 the witness and Mr. Newbold consider something significant.
17 He can make an admission by his actions by the questions that
18 he asked, as well as making a statement in front of a jury,
19 by what he does in front of the jury. What counsel does can
20 be considered significant. He is a representative of
21 Monsanto here.

22 MR. NEWBOLD: Absolutely.

23 MR. CARR: If they take the position --

24 MR. NEWBOLD: The only reason that we prepare --

1 MR. CARR: Whatever reason makes no difference.

2 MR. NEWBOLD: Mr. Carr thought they were
3 significant, makes all those charts for the jury that were
4 misleading.

5 THE COURT: I'll overrule the objection. You can
6 take your position in redirect if you wish.

7 MR. NEWBOLD: Well --

8 (The following proceedings were had in open court.)

9 Q. (by Mr. Carr) Doctor, you did use the terminology,
10 did you not, or used the symbol which stands for normal
11 averages, didn't you, sir?

12 A. Yes, sir, that's correct.

13 Q. And you prepared those charts using the words
14 normal averages before the plaintiffs ever used that
15 terminology, isn't that correct, sir?

16 A. Before the plaintiffs --

17 Q. Before the plaintiffs prepared anything or even
18 asked any question about normal averages, sir?

19 A. Plaintiffs, you mean yourself?

20 Q. That's correct.

21 A. That's correct, sir.

22 Q. So the first time before the word normal average
23 had been used by the plaintiffs in this case, you and Mr.
24 Newbold prepared those exhibits using normal averages as

1 criteria, did you not, sir?

2 A. That's correct, sir.

3 Q. And, therefore, you came to the judgment, you and
4 Mr. Newbold jointly came to the judgment, that normal
5 averages did have some significance insofar as the plaintiffs
6 in this case were concerned, did you not, sir?

7 A. Yes -- well --

8 Q. Now, the exhibits that we had here, sir; the first
9 time we referred to the words normal averages -- the normal
10 averages appeared, by the way, the first time we saw the
11 words normal averages, when you brought to the courtroom the
12 exhibit with the Grant Hospital standards using the words
13 normal averages, isn't that correct, sir?

14 A. I don't know when you first saw it, sir, but I
15 think that's when we first --

16 Q. When we first saw it was when you produced it here
17 three or four days after you started on the stand.

18 A. Is that the first time you saw it?

19 Q. That's indeed the first time.

20 A. Correct, sir.

21 Q. And, the normal averages then which you consider in
22 the way that you have, and point of fact, the values that you
23 found compared against your normal averages was exactly the
24 same as set out in our chart for 1983, was it not, sir?

1 A. I believe so, sir.

2 Q. Yes, and the normal averages set out in the -- we
3 don't use the word normal averages in the MacLeod and Wang
4 table, but there is no doubt in your mind but when those
5 normal averages of 50 million per milliliter in less than 90
6 million total are the normal averages that's referred to on
7 Defendant's Exhibit 1419 and 1420, isn't that correct, sir?

8 A. Yes, sir.

9 Q. And insofar as the exhibit is concerned, 47 percent
10 of the plaintiffs in 1982 had less than the normal average,
11 isn't that correct, sir, of sperm concentration?

12 A. That's correct, sir.

13 Q. And, when you combine those two, that would be
14 approximately 58 percent had less than the normal average,
15 won't that be correct?

16 A. If you combine Carnow I and Carnow II?

17 Q. That's correct.

18 A. That's correct, sir.

19 Q. So we could write in your chart for those two, for
20 the combined of 58 percent, couldn't we, sir?

21 A. Yes, sir.

22 Q. And when you combine the total sperm count, we come
23 to about 62 percent, that's below your normal average when
24 you combine those two, don't we, sir?

1 A. That's correct, sir.

2 Q. Now, Doctor, what that means is from the normal
3 average samples that you use as a standard for those normal
4 averages at the Grant Hospital, 58 percent of those
5 plaintiffs on those combined Carnow tests would have abnormal
6 results in one instance and 62 percent in the other instance,
7 isn't that correct, sir?

8 A. No, sir.

9 Q. Didn't we --

10 A. He used the term abnormal results and that's
11 incorrect.

12 Q. Abnormal the way you and Mr. Newbold used it. I
13 thought you just got through saying if you use the words
14 normal averages as being normal, I wrote you down correctly,
15 I thought. If you use the normal averages as normal.
16 Exactly what you said, sir.

17 A. Well, that was referring --

18 Q. In response to Mr. Newbold's question, isn't that
19 correct, sir?

20 A. I can't remember anymore what I said, but I can
21 explain what I meant.

22 Q. If the normal average is normal, then something
23 other than the normal average is abnormal, isn't it, sir?

24 A. No, sir.

1 Q. Or subnormal?

2 A. No.

3 Q. Or not normal?

4 A. No, sir. Not at all.

5 Q. Doctor, if it's not normal, it isn't normal, is it,
6 sir, by definition?

7 A. Is your question strictly that question, not
8 relating to anything else? If it's not normal, is it not
9 normal? Yes, sir, I would agree with that.

10 Q. No doubt about it, is there, sir?

11 A. That's correct.

12 Q. And 62 percent of those plaintiffs in the one
13 instance and 58 percent in the other instance on both Carnow
14 examinations had those not normal samples, did they not, sir?

15 A. No, sir, not at all.

16 Q. According to what you told Mr. Newbold, if you
17 consider the normal average normal, isn't that correct, sir,
18 if you consider the normal averages as normal, as you just
19 responded to Mr. Newbold, then what I suggested to you on
20 those percentages is true given that, isn't that correct,
21 sir?

22 A. You taking my statement to --

23 Q. I am taking your statement --

24 A. -- to Mr. Newbold totally out of context and --

1 Q. The jury has heard it. I've heard it. What you
2 said was if you used normal averages as normal, then this is
3 so.

4 A. Could I --

5 Q. I'm asking you the same thing. If you used the
6 normal averages as normal, this is so, isn't it, sir?

7 A. Could I ask the Court Recorder to see exactly what
8 I said? We are arguing over terminology.

9 Q. No, we simply don't have time, Dr. Zaneveld. If
10 you don't agree with it just say so.

11 A. I don't agree with it, sir.

12 Q. You don't agree that you used that terminology with
13 Mr. Newbold?

14 A. I don't remember that, sir.

15 Q. Well, we will leave it up to the jury to decide
16 whether you did or did not say that. All right. We will
17 pass to something else.

18 A. But I will not say that anything less than the
19 average is abnormal. I've never said that.

20 Q. I know that, Doctor. I'm not suggesting that you
21 did.

22 A. Yes, you did, sir.

23 Q. What I'm saying to you is that when you responded
24 to Mr. Newbold's questions about normalcy, that if you use

1 the normal averages as normal, then this is so, X, Y, and Z.
2 That's what you said. So I'm saying if you used the average
3 normal averages as normal, then 52, 58 percent of the
4 plaintiffs in the one instance and 62 percent in the other
5 instance have what could be termed normal by that, not normal
6 results by that definition, isn't that correct, sir?

7 A. No, sir.

8 Q. Well, that's what the figures show, isn't it, sir,
9 if you assume that?

10 A. No, sir. You are using --

11 Q. Are you assuming, sir, that not having a normal
12 average is not normal? Are you making that assumption as I
13 gave it to you?

14 A. That's correct.

15 Q. All right, if --

16 A. Wait a second. I misunderstood what you said
17 there.

18 Q. Are you assuming for the sake of my question, so
19 that we don't need to go back and quarrel on this all day,
20 are you assuming, as I asked you, that what you said was if
21 the normal average is not normal then this percent would be
22 thusly so, so I would like for you to assume that you did say
23 in fact, sir --

24 A. I never said that anything below the normal average

1 is not normal.

2 Q. I haven't asked you that, sir.

3 A. Yes, you did.

4 Q. Not yet I haven't asked you that.

5 A. Oh, okay.

6 Q. Assume, if you will, sir, that --

7 A. Assume.

8 Q. That the normal average is the same as saying
9 normal. Will you assume that, sir?

10 A. My understanding is --

11 Q. Would you?

12 A. I must assume the things you ask me to assume,
13 okay, we will assume that the normal average is normal.

14 Q. Assuming that to be true, that 62 percent --

15 MR. NEWBOLD: Your Honor, may we approach the -- I
16 think I can say this from here. May the jury be instructed
17 that the witness is under court orders by normal procedure
18 that he must assume that when the attorney --

19 MR. CARR: Your Honor, the jury knows that better
20 than we do.

21 THE COURT: I've stated to the jury a number of
22 times, it goes for questioning both by plaintiffs' counsel
23 and defense counsel that when someone is ordered to assume
24 something, and assuming that, and given the fact if there is

1 an objection, that the objection has been overruled, that
2 they are to assume it. That is from either counsel,
3 plaintiff or defense.

4 Q. If you assume that to be the case, Dr. Zaneveld, 62
5 percent of the Kline-Carnow results in one instance and 58
6 percent of the Carnow results in another instance did not
7 have normal count nor concentration, isn't that correct, sir?

8 A. May I ask for clarification?

9 Q. Surely.

10 A. One more point, if I assume that a normal average,
11 which we agreed upon was 50 million per milliliter is the
12 only-normal value, does that mean anything above it or below
13 is considered not normal then?

14 Q. Doctor, I think my question is pretty clear.

15 MR. NEWBOLD: I think he has a right to have that
16 clarified. That's really a simple question.

17 THE COURT: Objection is overruled. I think it's
18 clear.

19 Q. If you assume as the Court has directed you to
20 assume, that normal average means normal, then 62 percent of
21 the plaintiffs do not have that normal count, do they, sir,
22 in the combined totals?

23 A. That's correct, sir.

24 Q. And in the case of the concentration, 58 percent do

1 not have that normal concentration, do they, sir?

2 A. That's correct, sir.

3 Q. All right. Now, Doctor, with regard to the Moberly
4 results that you put down, Doctor, when you look at the
5 concentration, taking Exhibit 14 -- Defendant's Exhibit 1420,
6 if you will, sir, and the Moberly results.

7 A. That was the concentration one, yes, sir.

8 Q. According to the Moberly results, not a single
9 plaintiff had less than 50 million sperm per milliliter,
10 isn't that correct, sir?

11 A. I'm sorry. That's correct, sir.

12 Q. And did not have the -- what you have described as
13 the normal average amount, all of those plaintiffs, not a
14 single one had that average count, they all had much in
15 excess of the normal count, didn't they, sir?

16 A. Yes, sir.

17 Q. As a matter of fact, the mean on the Moberly count,
18 the average sperm count for the Moberly analysis is 134
19 million milliliters per -- million sperm per milliliter,
20 isn't it, sir?

21 A. I believe so.

22 Q. Now, Doctor --

23 A. It's in that range.

24 Q. Now, Doctor, that's 230 percent higher than a

1 normal average, isn't it, sir?

2 A. That's correct, sir.

3 Q. Doctor, wouldn't you consider it very strange if in
4 your laboratory in walked seventeen people in a row and not a
5 single one had an average or a normal average concentration?

6 A. As I stated in my conclusions --

7 Q. Excuse me, wouldn't you consider that very very
8 strange.

9 MR. NEWBOLD: Object, this is repetitive. This was
10 covered, almost the same question about being very strange.

11 MR. CARR: Not at all.

12 THE COURT: I don't believe so. I don't think it
13 is repetitive.

14 A. Yes.

15 Q. Wouldn't you think that very very strange?

16 A. It's unusual.

17 Q. So strange, Doctor, have you ever seen it occur
18 that 17 people in a row came in that had so much higher than
19 the normal average, normal sperm count copncentration?

20 A. I personally have never checked.

21 Q. You've never seen it in your entire career, have
22 you, sir?

23 A. I can't say that, sir. I've never checked. We
24 normally don't worry about those things. They happen to come

1 in, they come in.

2 Q. Doctor, as a statistician, what would be the odds
3 of you taking a random sample of people, who are all supposed
4 to be average, or were all supposed to be within the average
5 parameters, and there is going to be some higher and some
6 lower, and you come in with every single -- not a one of them
7 below the average, not a single one. The closest you'd get
8 to the average is one that's 72, what is that, 46 percent
9 higher than your normal average, the one that even comes
10 closest? Wouldn't you consider that the odds of that
11 occurring to be astronomical?

12 A. Again, I could not comment on that, but I think it
13 is --

14 Q. Doctor, my question is you can't comment that the
15 odds of this occurring in real life being astronomical?

16 A. No, of course not.

17 Q. Doctor, the -- not a single one of those people
18 according to Moberly is average. You must -- if you were to
19 conclude, if you had just that sample to look at and you know
20 that we are involved with dioxin here, you could come to a
21 conclusion if you wanted to build a case on it, come to a
22 conclusion that dioxin assists in making spermatozoa,
23 couldn't you, sir.

24 MR. NEWBOLD: Object, Your Honor. May we approach

1 the bench?

2 THE COURT: Sure.

3 (The following Side Bar conversation was had outside the
4 hearing of the jury.)

5 MR. NEWBOLD: Your Honor, this is totally outside
6 the line of any redirect, recross, or anything that's ever
7 been gone into. We could be here for another three weeks.
8 Those Moberly results --

9 MR. CARR: You brought in those Moberly exhibits.
10 You are the one that brought them in.

11 THE COURT: One at a time.

12 MR. NEWBOLD: I object. This is totally outside
13 the line of direct, cross, redirect, recross, re-redirect, or
14 anything.

15 THE COURT: What is your position?

16 MR. CARR: He's talked about he's considered those
17 results normal, combined them all, taken them separately.
18 Asked every question in the book in his redirect examination.

19 THE COURT: Okay. Objection is overruled.

20 (The following proceedings were had in open court.)

21 Q. (by Mr. Carr) Doctor, could you make a case that
22 dioxin has contributed to the sperm, spermatozoa construction
23 and concentration, of those plaintiffs if you just looked --

24 A. No, sir, because the total sperm count in Moberly

1 and Carnow I are identical or very similar.

2 Q. I'm talking about just the Moberly group, if you
3 wouldn't mind. Could you?

4 A. Yes.

5 Q. So we can finish this, I'm talking about the
6 Moberly people that have come in, sir?

7 A. So do I, sir.

8 Q. Well, you didn't, because you added Carnow in. We
9 have asked you about Carnow before. I want to ask about
10 Moberly, Doctor, if you would permit me.

11 A. You asked me if dioxin made sperm and I'm
12 commenting.

13 Q. Doctor, my question to you, if someone wanted to
14 make a case and had just the Moberly results to look at --

15 A. Uh-huh.

16 Q. One might indeed make a case that dioxin promotes
17 spermatogenesis, could they not?

18 A. No, sir, because the total sperm count is not -- it
19 is high, but apparently for this group --

20 Q. Let's look at the total sperm count, Doctor,
21 because I was asking about concentration and my question
22 again, looking at just the concentration, sir, one could make
23 a case that dioxin assists in the formation of sperm, could
24 they not, sir?

1 A. No, sir, can't do that from the concentration,
2 because that included volume. Concentration is an average in
3 the course of volume. Spermatogenesis --

4 Q. Now you are going to total sperm count, aren't you,
5 sir?

6 A. To answer your question, I would have to do that
7 because you asked sperm production.

8 Q. Doctor, I'll go to the total sperm count, if you
9 would like. If you look at that one, sir, the total sperm
10 count, the mean is 236, sir, for the Moberly group, how many,
11 there is only two people in the entire Moberly group that has
12 the average sperm count and one of those is not a value
13 given. It's a value that you put in there. There wasn't any
14 87, approximate, you put that in there, did you not, sir?

15 A. I'm sorry, let me --

16 Q. Defendant's Exhibit 1419.

17 A. All I got is concentrations here all of the sudden,
18 ah, here it is. Okay, there was an estimation, that's
19 correct.

20 Q. Indeed it was. Doctor, is it scientific for you to
21 estimate that somebody has got a normal sperm count?

22 A. When you qualify it as we did, same as we did with
23 motility and the morphology --

24 Q. Doctor, we are now looking at the sperm count, if

1 you will. You put in a figure that didn't even exist, didn't
2 you, sir?

3 A. That's correct, sir.

4 Q. Did you see Dr. Kulakauskas do that in any exhibit
5 that you saw? Did he report figures that in fact existed?

6 A. I don't remember Dr. Kulakauskas making up any
7 exhibits, sir.

8 Q. The sperm count you saw made by Dr. Kulakauskas,
9 you saw all those results, sir?

10 A. That's correct.

11 Q. Did he ever put in approximately, or an estimate,
12 or I guess? He put in what was the count, didn't he, sir?

13 A. That's correct.

14 Q. But you put in here something that didn't exist,
15 didn't you, sir?

16 A. That's what I did, sir.

17 Q. Yes, sir. Now, Doctor, eliminating that one that
18 doesn't exist, you've got a single -- no, you have one --,
19 you've got one person Michael Dominguez who at that time was
20 indeed 16, 17 years of age, who has the normal sperm count.
21 Every other plaintiff that is listed here has above your
22 normal sperm count, do they not, sir?

23 A. You are referring strictly to the Moberly?

24 Q. That's what I'm referring to, sir.

1 A. That's correct, sir.

2 Q. Doctor, wouldn't you think it passing strange that
3 every single person that comes in and has above the average
4 sperm count?

5 A. Not so much so because a year ago they had a
6 similar thing.

7 Q. Doctor, please eliminate the reference to the year
8 ago, would you, sir, so that I can pass on?

9 A. Well, when you --

10 Q. Doctor -- Your Honor, would you direct the witness
11 to answer the questions in confines to the question I'm
12 asking so I don't get --

13 MR. NEWBOLD: Object. Object. May we approach the
14 bench?

15 THE COURT: Yes, you may.

16 (The following Side Bar conversation was had outside the
17 hearing of the jury.)

18 MR. NEWBOLD: The question was whether he thought
19 it was passing strange to find this and his answer was no
20 because the same thing was found by Carnow I.

21 THE COURT: No. No. No, the whole context of the
22 last five minutes has been with Moberly and Moberly alone. I
23 think it's perfectly clear.

24 MR. NEWBOLD: Your Honor --

1 THE-COURT: Just wait a second.

2 MR. NEWBOLD: Sure.

3 THE COURT: I think it's perfectly clear that all
4 of those questions were restricted to consideration of
5 Moberly and Moberly alone. He was drawn back to Moberly
6 alone, within that period of time, he tried to explain his
7 answer to include the Carnow, one of the Carnow --

8 MR. NEWBOLD: Carnow I examinations.

9 THE COURT: And it is obvious that this entire line
10 of questions that were in there is based on Moberly and
11 Moberly alone. I think that the request for the admonition
12 is absolutely proper.

13 MR. NEWBOLD: Let me say this. If you ask a
14 witness what you think something is strange, what he did,
15 what you think is passing strange --

16 MR. CARR: I said in the people that walk in.

17 MR. NEWBOLD: In Moberly.

18 THE COURT: Right.

19 MR. NEWBOLD: Okay. He has the right to say no
20 because one year ago they found the same thing.

21 THE COURT: Without the context, that's correct.
22 Within the context, not at all. Objection is overruled.
23 (The following proceedings were had in open court.)

24 THE COURT: Doctor, you have to confine your answer

1 to the question that's asked. The question has been
2 restricted to the Moberly group.

3 Q. (by Mr. Carr) We know your point about the prior
4 examinations, you've made it several times, but my question
5 is this: Would you consider it strange to find 17 people,
6 well, in this case would be 16 people, come in and only one,
7 and that being a young boy, who would have a total sperm
8 count of below what you consider the average?

9 A. No, sir.

10 Q. You don't?

11 A. No, sir.

12 Q. Then your definition of average doesn't mean, sir,
13 does it, average?

14 A. Yes, sir.

15 Q. Now, Doctor, with regard to this total sperm count,
16 if you took the total sperm count including the one that you
17 estimated, you'd have a mean of 236, wouldn't you, sir?

18 A. No, sir.

19 Q. Doctor, you take 4,016 divided by 17 you get 236,
20 don't you, sir?

21 A. We did not, sir.

22 Q. What did you get, sir?

23 A. 230.6.

24 Q. 230.6. I won't quarrel with that. You get 230

1 then, wouldn't you?

2 A. I would round it off to 231, sir.

3 Q. Well, then 231, won't quarrel with that. That is
4 how many times the average sperm count, sir?

5 A. I'm calculating, sir --

6 Q. Doctor, it's approximately 250 percent higher,
7 isn't it, sir?

8 A. I would have to calculate it also, sir. It's about
9 20.5 -- well, I think you are correct. It's about 200
10 percent higher.

11 Q. Well, 180 would be 200 percent. This is 230. It's
12 about 250 percent higher, isn't it, sir?

13 A. Yes, sir.

14 Q. 90 being average?

15 A. Yes, sir.

16 Q. Doctor, the mean, or the median rather, in the case
17 of the count is George Rush and that is 224, isn't it, sir?

18 A. Is the question the median George Rush, and is it
19 224? I would have to see exactly where the median was, but
20 that is probably correct, sir.

21 Q. And, Doctor, in the case of the sperm
22 concentration, 125 is the median there, is it not, sir? That
23 would be the case of Felix Dominguez.

24 A. I would again have to check, sir. I don't know

1 exactly.

2 Q. And --

3 A. I will assume I if you would like me to.

4 Q. Please, sir, that's two and a half times higher
5 than the normal sperm concentration, isn't it, sir?

6 A. That's correct, sir.

7 Q. Now, Doctor, I'd like to direct your attention to
8 the Defendant's Exhibit 1421, which you have testified with
9 reference to.

10 A. That's correct, sir.

11 Q. The values that you've used for Nelson and Bunge is
12 an extrapolated value, isn't it, sir, for your median, not a
13 value reported by Nelson and Bunge, is it, sir?

14 A. No, it was --

15 Q. Again, it's one that was extrapolated because there
16 were no values given, isn't that right, sir?

17 A. No, sir, values were given, just no median value.

18 Q. No value given for the mean or the median?

19 A. For the median, that's correct, sir.

20 Q. And, Doctor, the same thing is true for another one
21 that you've got, Smith and Steinberger, that is another
22 extrapolated value, isn't it, sir?

23 A. Yes, sir.

24 Q. So, Doctor, what you did, and you didn't tell this

1 jury that this was a calculated or extrapolation, did you,
2 sir, so the only two that you've got lower than the
3 plaintiffs' in this case happened to be two extrapolated
4 values, isn't it, sir, the Nelson and Bunge and Smith and
5 Steinberger count, isn't that right, sir?

6 A. You want me -- you will need to clarify that
7 question.

8 Q. Doctor, what I want you to do is answer the
9 question, you used extrapolated values, didn't you, sir?

10 A. I used values that were extrapolated by others,
11 that's correct, sir.

12 Q. And, Doctor, the values that we use, we could have
13 taken, Doctor, if we had wanted to in the exhibit that we
14 have given you before, we could have taken extrapolated
15 values because they are right there, aren't they, sir?

16 A. That's correct, sir.

17 Q. And Doctor, the Santomauro results that you
18 discussed, the plaintiffs in this case have a median, and the
19 Santomauro result is New York, which is a median of 40 and a
20 mean of 50, correct, sir?

21 A. In this chart, that's correct, sir.

22 Q. And our plaintiffs -- and that's in an infertile
23 population, isn't it, sir?

24 A. No, sir.

1 Q. Doctor, does it appear in the table, "Certain
2 Aspects of Semen Quality in Infertile Marriage Populations?"

3 A. Yes, sir.

4 Q. Then it is an infertile marriage population, isn't
5 it, sir?

6 A. No, sir.

7 Q. Does the table so describe it?

8 A. Yes, sir.

9 Q. Do you have any first-hand knowledge that this is
10 incorrect, sir?

11 A. Yes, sir.

12 Q. What is your first-hand knowledge?

13 A. Santomauro article itself, sir.

14 Q. Doctor, then you are differing with the way Dr.
15 MacLeod and the way Dr. Wang interpreted that article, is
16 that right, sir?

17 A. That's correct, sir.

18 Q. And, you have the right, of course, to differ, but
19 it is treated in this table that you pulled out, that you
20 considered authoritative, that you put in your list of
21 documents as in the infertile marriage population, isn't it,
22 sir?

23 A. That's correct, sir.

24 MR. CARR: Yes. I have no further questions.

1 THE COURT: You have any further questions?

2 MR. NEWBOLD: Yes, I would. I'll be as quick about
3 this as I can.

4

5 REDIRECT EXAMINATION

6 BY MR. J. WILLIAM NEWBOLD

7 Q. Dr. Zaneveld, insofar as extrapolated values, those
8 studies, those medians that you used, that you used on your
9 exhibit that Mr. Carr characterizes extrapolated values, you
10 admitted they were, isn't that correct?

11 A. That's correct.

12 Q. Are they valid?

13 A. Yes, sir.

14 Q. And those studies came out of this exact exhibit
15 that Mr. Carr introduced with those extrapolated values?

16 A. Yes.

17 MR. CARR: I suggest that counsel is suggesting --

18 MR. NEWBOLD: May we approach the bench, Your
19 Honor?

20 THE COURT: Sure.

21 (The following Side Bar conversation was had outside the
22 hearing of the jury.)

23 THE COURT: That was a leading question. You
24 really should rephrase it.

1 MR. NEWBOLD: Okay. I'll rephrase it.

2 (The following proceedings were had in open court.)

3 Q. (by Mr. Newbold) Where did you obtain the median
4 value numbers that you placed on your exhibit? Where did you
5 get the numbers?

6 A. Which exhibits are you referring to, the one --

7 Q. Where we did our medians.

8 A. I obtained that from this particular chart.

9 Q. From Plaintiff's Exhibit 1685?

10 A. That's correct, sir.

11 Q. Okay. Insofar as Mr. Carr's cross examination
12 about those high total counts in the Moberly clinic, you
13 recall that?

14 A. Yes, sir.

15 Q. How do those high total counts in the Moberly
16 clinic compare with the total counts done by Dr. Kulakauskas
17 in Carnow I?

18 A. They are very similar, sir.

19 Q. They are pretty high, too -- strike that. Doctor,
20 insofar as normal and abnormal is concerned, but above it or
21 below it, does it mean anything insofar as the fertility of
22 those plaintiffs are concerned?

23 MR. CARR: Your Honor, this is all repetition.

24 THE COURT: Objection is sustained.

1 MR. NEWBOLD: No further questions, Your Honor.

2 THE COURT: Do you have any further cross

3 examination?

4 MR. CARR: Yes, Your Honor, in view of what the
5 witness said.

6

7

RECROSS EXAMINATION

8

BY MR. REX CARR

9 Q. Doctor, could you look at the Dwayne Embree results

10 in the Carnow I, or strike that. Start out with John

11 Dominguez. Look at the John Dominguez results and then the

12 Moberly results.

13 A. Yes, sir.

14 Q. John Dominguez in Carnow I is 50 and Moberly is

15 241, isn't it, sir?

16 A. I'm sorry, I was looking at concentration. You

17 meant the total count chart?

18 Q. Yes.

19 A. John Dominguez?

20 Q. Yes.

21 A. That's correct.

22 Q. 50 and 241, a significant difference there, isn't
23 there?

24 A. Yes.

1 Q. Dwayne Embree is 89 in Carnow I and Moberly is 254,
2 isn't it?

3 A. Yes.

4 Q. Bill Kemner is 230 in Carnow I and Moberly 378
5 isn't it, sir?

6 A. That's correct.

7 Q. Gary Mason is close to the same. Joe Robinson --
8 well, Joe Robinson you've estimated the Moberly so we don't
9 really know. Gary Robinson is close to the same. Tim
10 Robinson is 51 and Moberly is 164, isn't it, sir?

11 A. That's correct.

12 Q. George Rush we have the contrary. We have Carnow I
13 296 and Moberly 224, don't we, sir?

14 A. That's correct.

15 Q. Glenn Rush 280 and Carnow I and Moberly 115?

16 A. Yes, sir.

17 Q. Robert W. Vaught in Carnow I is 56 and the Moberly
18 got him down for 615, doesn't he, sir?

19 A. Yes, sir.

20 Q. Is that anywhere close together, sir?

21 A. No, sir.

22 Q. And, Doctor, look at the concentrations, if you
23 will.

24 A. Yes, sir.

1 Q. Greg Ballard 24 in the Carnow I and Moberly 89,
2 correct, sir?

3 A. Yes, sir.

4 Q. Larry Bolles 92.

5 MR. NEWBOLD: Objection, Your Honor. May we
6 approach the bench, I didn't cover this, I covered total
7 count.

8 THE COURT: Come on up.

9 (The following Side Bar conversation was had outside the
10 hearing of the jury.)

11 MR. NEWBOLD: I covered total count. I compared
12 the Moberly one with Carnow I in total count. Which he has
13 the right to go back over. Now we are going into
14 concentration, which I did not cover.

15 MR. CARR: I think I have the right because you
16 have made the inference Moberly and Carnow are the same.

17 MR. NEWBOLD: Insofar as --

18 MR. CARR: That's trying to take something out of
19 context and make it mislead the jury.

20 THE COURT: He used total counts. I think the
21 inference was in totality they are the same, I think.

22 MR. NEWBOLD: My goodness, I said total counts to
23 him, how much clearer can I be?

24 THE COURT: Wait a second. You said that they are

1 the same and you used the example of total counts.

2 MR. NEWBOLD: I said --

3 THE COURT: I don't think.

4 MR. NEWBOLD: Cross examining you about total
5 counts in Moberly. That's exactly what I said. You remember
6 Mr. Carr cross examining --

7 MR. CARR: Your Honor, doesn't make any difference,
8 he has made the inference --

9 MR. NEWBOLD: I know I did.

10 THE COURT: I interrupted you, I'm sorry.

11 MR. CARR: He made the inference that Moberly and
12 Carnow results were the same and he's made that implication.

13 MR. NEWBOLD: I talked about the total counts. I
14 know I did. Has to be on your notes. Do you remember Mr.
15 Carr questioning you about the total counts.

16 THE COURT: My notes indicate my impression was
17 similarity to two

18 (The following proceedings were had in open court.)

19 Q. (by Mr. Carr) Doctor, I don't know where we were,
20 but at Larry Bolles 92 in Kulakauskas I and Moberly 153.
21 They are not together, are they, sir?

22 A. No, sir. You talking about concentration now?

23 Q. Sir? -

24 A. Concentration?

1 Q. That's correct. Larry Burks was 32 at Carnow I and
2 103 at the Moberly. That's not close, is it, sir?

3 A. No, sir.

4 Q. Delbert Curl was 47 in Carnow I and 72 in Moberly.
5 That's not close, is it, sir?

6 A. Not really.

7 Q. Felix Dominguez was 86 in Carnow I and 125 at
8 Moberly -- 125 at Moberly. That's not close?

9 A. What do you mean by not close? Figuratively
10 speaking?

11 Q. The 125 is 50 percent higher than the 86, isn't it,
12 sir?

13 A. So you mean mathematically close?

14 Q. Yes.

15 A. That's correct.

16 Q. John Dominguez 14.6, Moberly 161?

17 A. That's correct, sir.

18 Q. And Dwayne Embree 42 at Carnow I and 127 at
19 Moberly, correct, sir?

20 A. Yes, sir.

21 Q. Bill Kemner 88 and Moberly 126?

22 A. Yes, sir.

23 Q. Gary Mason 58 at Carnow and Moberly 120?

24 A. Yes, sir.

1 Q. Joe Robinson 106 and Moberly 175?

2 A. Yes, sir.

3 Q. Is that correct?

4 A. Yes.

5 Q. 37 for Gary Mason at Carnow and 109 at Moberly, and
6 on down the list they are all dissimilar, aren't they, sir?

7 A. They are all dissimilar, that's certainly true,
8 sir.

9 Q. And Robert W. Vaught again 8.6 at Carnow I and 123
10 at Moberly. Now, Doctor -- well, that's all the questions I
11 have.

12 MR. NEWBOLD: I have no further questions, Your
13 Honor.

14 THE COURT: Okay. Doctor, you may step down.
15 Thank you. Ladies and gentlemen, I appreciate your patience
16 and cooperation. As far as I explained to you earlier, there
17 are some matters that we have to take up outside the presence
18 of the jury. So, as far as your attendance, we are going to
19 adjourn at this time. We will resume again Monday morning at
20 9:30. I want to remind you that you are not to read, listen
21 to, or watch anything about this case in particular or
22 subject matter in general in any of the media. Thank you for
23 your attention and cooperation this week. We will see you
24 Monday morning. Court is adjourned.

1 controls.

2 Q. Doctor, did you not -- could you give Monsanto
3 Exhibit 55 to the witness. Could you turn to Page 26, Dr.
4 Kimbrough?

5 MR. HEINEMAN: Excuse me, is 55 the right --

6 MR. CARR: Yes, Monsanto Exhibit 55. Are you
7 ready?

8 MR. HEINEMAN: No, I'm not.

9 MR. CARR: Missouri Pilot Health Study.

10 Q. (by Mr. Carr) Page 26. Does it describe the
11 medical cares and methods used?

12 A. Yes.

13 Q. And does it say in the middle of that paragraph,
14 "We administered the questionnaire to the individuals (or
15 nearest relatives) believed to be at risk of exposure based
16 on residence near, occupation at, or frequent activities in
17 proximity to contaminated sites."

18 A. Yes.

19 Q. And did you in fact do that?

20 A. Yes.

21 Q. And now, Doctor, the high-risk group is described
22 on the next page, is it not, that you --

23 A. I would like to continue reading the end of this.

24 Q. You would like to read it for yourself or --

1 A. Yes.

2 Q. Or for some other purpose?

3 A. Well, in order to be able to explain what I was
4 trying to explain --

5 Q. Doctor, I'm really not asking for an explanation
6 right now, I'm asking you specific questions and I'd like to
7 have specific answers. Did you in fact administer the
8 questionnaire to individuals who were believed to be at risk
9 of exposure? Is that a true statement, Dr. Kimbrough?

10 A. Well, if you read at the bottom of Page 26, that
11 explains what I was trying to say. It says, "This process
12 has since been continued with more active efforts being taken
13 to find and interview all potentially-exposed individuals as
14 well as comparison populations from uncontaminated areas."

15 Q. I understand that. I'm not asking about that,
16 Doctor. Is what I read to you true? Did you in fact do
17 that, ma'am?

18 A. Yes, but that wasn't -- that was a survey.

19 Q. Now, that's correct, no doubt about it. Now, would
20 you turn to the next page, ma'am.

21 A. All right.

22 Q. You selected your high-risk group from that group
23 of the people that completed the 800, the 800 questionnaires,
24 did you not, ma'am? Is that correct, ma'am?

1 A. This was how the high-risk group was selected.

2 Q. They were selected from those people that completed
3 the questionnaires, were they not, ma'am?

4 A. The high-risk group, yes.

5 Q. All right. Now, would you turn to the next page,
6 ma'am? And on the next page, you say, "We also selected a
7 low-risk comparison group of individuals most of whom were
8 from the group of 800 who had completed the questionnaires."
9 Correct, ma'am?

10 A. Yes.

11 Q. Now, the questionnaires were sent to people who you
12 believed to be at risk of exposure, is that right, ma'am, as
13 stated, as you said was the truth as stated on Page 26?

14 A. Yes.

15 Q. And you selected from that group of 800 the
16 low-risk group -- I'm sorry. You selected for your low-risk
17 group most of the people were from the group of 800 who
18 completed the questionnaire, correct, ma'am?

19 A. Yes.

20 Q. And the questionnaire was sent to people who were
21 believed to be at risk of exposure based on residence near,
22 occupation at, or frequent activities in proximity to
23 contaminated sites, correct, ma'am?

24 A. Yes.

1 Q. Is that correct, ma'am?

2 A. That's correct, but then we also -- Sorry.

3 Q. Most of your low-risk comparison group was selected
4 from those people who were described in that sentence I just
5 read to you, were they not, ma'am?

6 A. Yes.

7 Q. And, your low-risk group, most of them, not all,
8 but most of them were selected from people who were believed
9 to be at risk of exposure based on residence near, occupation
10 at, or frequent activities in proximity to contaminated
11 sites, is that correct, ma'am?

12 A. They were selected because --

13 Q. Could you answer that question, please, ma'am?

14 A. They were selected out of that group because they
15 didn't have all of those criteria.

16 MR. CARR: I wonder if you would direct the witness
17 to answer the question as I framed it?

18 THE COURT: Dr. Kimbrough, you have to answer it as
19 the attorney frames it.

20 A. Well, I can't.

21 THE COURT: Well --

22 A. I mean, you can't --

23 THE COURT: It's a clear question, and you've shown
24 yourself obviously capable of understanding any question

1 that's been asked in this courtroom so far. I would ask that
2 you answer it as it's asked. If there is anything else that
3 you feel needs to be brought out or that Mr. Heineman feels
4 needs to be brought out, he'll have an opportunity for
5 redirect examination where he can bring that out. But at
6 this point in time, you answer the questions of the attorney
7 who's asking you the questions.

8 A. Could you repeat the question, please?

9 (Question was read back by the Court Reporter.)

10 A. No.

11 Q. Was it the truth, as you said it was the truth,
12 that the low-risk group, most of it were taken from the group
13 of 800 who completed the questionnaire? Is that the truth,
14 ma'am?

15 A. Yes.

16 Q. It is the truth that most of your low-risk group
17 were taken from the group of 800 who had completed the
18 questionnaire?

19 A. Yes.

20 Q. And the questionnaires were administered to
21 individuals who were believed to be at risk of exposure, were
22 they not, ma'am?

23 A. Yes.

24 Q. And therefore the low-risk group was selected from

1 that group of people who were believed to be at risk of
2 exposure, isn't that correct, ma'am?

3 A. No.

4 Q. Doctor, how can one be the truth and not the
5 other? If you selected it from the people who completed the
6 questionnaires, and the questionnaires were sent to people
7 believed to be at risk, of necessary, if I put eggs in this
8 basket, and if I take eggs out of that basket, I'm obviously
9 selecting people -- eggs that had previously been put in that
10 basket?

11 A. Maybe those eggs weren't eggs.

12 Q. But it describes them as eggs, says individuals
13 believed to be at risk. That's the people you administered
14 the questionnaires to, isn't it, ma'am?

15 A. Yes.

16 Q. And that's the same group of people as described in
17 the second paragraph on Page 28, isn't it sir, the group of
18 800 who completed the questionnaire?

19 A. Yes.

20 Q. And those were the people who had the lowest risk
21 of exposure, correct, sir -- ma'am?

22 A. I don't --

23 Q. Doesn't it describe that those were the people with
24 the lowest risk of exposure?

1 A. No.

2 Q. Doesn't it say that -- am I reading that wrong?
3 Aren't the words with the lowest risk of exposure based on
4 exposure site, doesn't that appear there, ma'am?

5 A. On which page are we now?

6 Q. Page 28. Doesn't it say that they selected the
7 low-risk group, most of them were from the group of 800 with
8 the lowest risk of exposure based on type exposure, site,
9 age, risk, etcetera?

10 A. Yes.

11 Q. Then they had a risk of exposure but it was the
12 lowest risk of exposure, this group of people, correct,
13 ma'am?

14 A. Yes.

15 Q. And those were people who resided near, had an
16 occupation at, or frequent activities in proximity to
17 contaminated sites, correct, ma'am?

18 A. No.

19 Q. That is incorrect?

20 A. Yes.

21 Q. Now, Doctor, the only way I suppose that we can
22 test that is to find out if you're -- you don't call them --
23 maybe there is another way. You don't call them no-risk
24 group, do you, ma'am?

1 A. They virtually had no exposure.

2 Q. Excuse me, that's not my question. You don't call
3 this group a no-risk or unexposed group, do you, ma'am?

4 A. To be conservative we call it a low-risk group.

5 Q. Could you answer my question, ma'am?

6 A. We called it a low-risk group.

7 Q. Dr. Kimbrough, you are not answering my question.
8 Would you read the question to her again.

9 (Question was read by the Court Reporter)

10 Q. You don't call this a no-risk or unexposed group,
11 do you, ma'am?

12 A. No.

13 Q. You called them low-risk?

14 A. Yes.

15 Q. Low-risk means that there is some risk, albeit low,
16 correct, ma'am?

17 A. Yes.

18 Q. Now, no-risk or unexposed would mean that they have
19 no risk of any problems related to dioxin, wouldn't that be
20 correct, ma'am?

21 A. No.

22 Q. That wouldn't be correct?

23 A. No.

24 Q. What's incorrect about that, Dr. Kimbrough?

1 A. Because the general population, everybody has trace
2 amounts of exposure to very low levels.

3 Q. Now, Doctor, you really don't know that to be a
4 fact, and I'm not going to quarrel with that, but that's not
5 responsive to my question. The best way to put it then,
6 ma'am, is you did not select a group of controls that you
7 believed to have no exposure to this particular episode of
8 dioxin contamination, isn't that correct, ma'am.

9 MR. HEINEMAN: Excuse me, Your Honor, I'd like to
10 object to the question of Mr. Carr. He's arguing with the
11 witness and I'd like to have his statement about what she
12 knows and doesn't know be stricken from the record. It's not
13 a question and she has answered specifically the question
14 that he did ask her.

15 THE COURT: Objection is overruled.

16 Q. (by Mr. Carr) Is that correct, ma'am?

17 A. Could you repeat the question?

18 (Question read back by the Court Reporter)

19 A. No, that's not true.

20 Q. You did select a group of people who did not reside
21 in the contaminated site areas?

22 A. They did --

23 Q. They did reside, didn't they, ma'am?

24 A. Yes.

1 Q. And if somebody resides in Times Beach they may on
2 occasion use the streets of Times Beach, might they not,
3 ma'am?

4 A. Yes.

5 Q. Ma'am?

6 A. Yes.

7 Q. And, if they use the streets of Times Beach, they
8 are going to have some risk of exposure to dioxin, aren't
9 they, ma'am, from the dioxin that's in the soil in the
10 streets of Times Beach?

11 A. They may.

12 Q. Yes. And that is what your low-risk group
13 consisted of, didn't it, ma'am?

14 A. Yes.

15 Q. Yes.

16 THE COURT: Mr. Carr, is this a good point for a
17 short break?

18 MR. CARR: Yes, Your Honor.

19 THE COURT: We will take a short recess at this
20 time.

21 (Following a recess, these proceedings continued outside the
22 presence of the jury.)

23 Q. (by Mr. Carr) Dr. Kimbrough, is the Missouri
24 Health Study the only human health study of which you are

1 aware and which the effects of low-dose exposure to dioxin
2 was the subject of the study?

3 A. There have been studies in Seveso, Italy.

4 Q. Well, Seveso. All right.

5 A. And then there was a study of the Ranch Hand -- the
6 Ranch Handlers in the Air Force.

7 Q. Well, the Ranch Handlers, some people questioned
8 whether or not it was a study of exposure at all. But those
9 three then, Seveso, Ranch Hand and Missouri?

10 A. And then we looked at birth defects on Viet Nam
11 veterans that has been reported. There was a mixed exposure
12 in Binghamton where some people were looked at.

13 Q. Well, that was a lot of other chemicals involved
14 there, a lot of other furans and everything else involved
15 there. It would be extremely difficult to isolate, would it
16 not, what effects, if any, the TCDD at the Binghamton Office
17 Building may have had upon the people?

18 A. Yes.

19 Q. Impossible to tell, would it not?

20 A. There was a mixed exposure.

21 THE COURT: I'm sorry, I didn't hear your answer.

22 A. There was a mixed exposure. There were a number of
23 chemicals.

24 THE COURT: Okay. Thank you.

1 Q. And do you subscribe to the theory that when
2 chemicals are mixed that way, there can be synergistic
3 effects, one toxic chemical added to another toxic chemical,
4 the sum of the toxicity would be greater than if they were
5 just individually exposed?

6 A. That occurs sometimes, and the opposite can also be
7 true. It varies.

8 Q. Sometimes one can tend to neutralize the other so
9 that the two chemicals mixed together would be less toxic
10 than the sum of the two individually, and the opposite is
11 true, they add to one another's toxicity in some instances?

12 A. Yes.

13 Q. All right. And that could be, could it not, a
14 cause of some of the serious problems that were found at the
15 Binghamton Office Building, synergistic effect?

16 A. I'm not aware of any serious problems.

17 Q. You are not?

18 A. No.

19 Q. Have you read -- I don't know whether he's a
20 doctor, Dr. Schecter's work on this area?

21 A. Yes, Schecter.

22 Q. Have you read that?

23 A. Yes. I'm on the -- I'm a member of the group of
24 consultants that has advised the New York State Health

1 Department.

2 Q. Weren't there a number of serious health effects
3 described in the Binghamton Office Building?

4 A. No.

5 Q. Then perhaps you are not, and I don't have the
6 particular document with me to show it to you, but you don't
7 recall reading in the book that was put out that the
8 Plaintiff's Exhibit here, the exact number I don't know, in
9 which there were -- the people seen at the clinic were,
10 following exposure were found to have a number of serious
11 problems?

12 A. I'm aware of --

13 Q. Suicide and things of that sort?

14 A. I'm aware of Dr. Schecter's reports. They are
15 individual case reports and those people may have had
16 problems, but whether or not that was related to the exposure
17 is not clear.

18 Q. Well, it's not clear that it wasn't related to
19 exposure. They had the exposure and they had those problems,
20 isn't that right, ma'am?

21 A. The exposure hasn't been established all that well,
22 either.

23 Q. Well, that's another problem, Doctor, but they were
24 in the office building, they had potential exposure, they had

1 those problems, did they not, ma'am?

2 A. They claimed to have problems.

3 Q. Well, did a doctor upon examination confirm that
4 they did have those problems?

5 A. I'm not sure what problems we are talking about.

6 Q. Well, maybe I better take the time to look up the
7 exhibit. Would you Jerry? I don't think I brought that file
8 with me. Here, it is. Article -- Plaintiff's Exhibit 1534,
9 1534 A, 1534 B, I'll hand our copy to her.

10 THE CLERK: I have them.

11 Q. Give her 1534 B, that would be the easiest thing
12 for her to use. Now, what was my -- Doctor, have you had a
13 chance to look at Page 8?

14 A. Not really.

15 Q. Now have you had a chance to look at it?

16 A. Uh-huh.

17 Q. Doctor, there is a number of significant problems
18 described in that exhibit, are there not, ma'am?

19 A. Yes, but I'm not sure that they have anything to do
20 with the Binghamton building.

21 Q. Doctor, I didn't ask you that, did I? What I asked
22 you was in this document there was a number of significant
23 problems, aren't there, Doctor?

24 A. There are a number of conditions listed.

1 Q. Do you not consider those conditions significant
2 problems?

3 A. Yes, they may be.

4 Q. Well not maybe, they are if they exist, they are
5 significant problems, aren't they, Dr. Kimbrough?

6 A. Yes, if they exist.

7 Q. And, do you have any reason to doubt the truth of
8 what's reported by Schecter as having been found in this
9 occupational medical clinic?

10 A. Yes.

11 Q. You have reason to doubt the truthfulness of it?

12 A. Yes.

13 Q. Do you -- is Dr. Schecter a -- do you have some
14 knowledge that he lies and cheats and tells tales?

15 A. No, but there are studies that were also done by
16 the New York Health Department, there are other studies that
17 looked at the same group of people.

18 Q. How do you know that, Doctor?

19 A. Because I am an advisor to the New York State
20 Health Department.

21 Q. What other health studies are you talking about at
22 New York?

23 A. They surveyed the population.

24 Q. Who surveyed, Doctor?

1 A. Some physicians at the State Health Department.

2 Q. Physicians, Doctor, are you sure it was physicians?

3 A. Yes.

4 Q. Was it not -- and did they publish it, Doctor?

5 A. There are reports that are available which you can

6 obtain by writing to the New York State Health Department.

7 Q. Doctor, we have some reports and what we have is

8 Dr. Roush referred to them and they were -- he originally

9 said it was by a doctor but when we got to it, we found out

10 it was some technician made a report. Is that what you are

11 referring to, sir -- ma'am?

12 A. No, it's a woman physician and I can't recall her

13 name right now, and Doctor Axelrod, who is also a physician.

14 Q. And they have published those, Schecter's reports

15 untrue?

16 A. They have not published his reports are untrue,

17 they have examined the people and they have summarized their

18 findings.

19 Q. Well then, what you've done is you've selected and

20 chose to believe the report of this group you've mentioned,

21 Axelrod and others and not what Schecter says, is that right?

22 A. What I'm saying is that there seems to be --

23 Q. Excuse me, could you answer that question?

24 A. Yes, because there is a discrepancy.

1 Q. And you selected the one that you wanted to believe
2 and rejected the one that you did not want to believe,
3 correct?

4 A. I have been several times in Binghamton, many
5 times.

6 Q. Could you answer that question, ma'am?

7 A. Yes.

8 Q. The answer is yes, you did reject the Schecter
9 view, did you not?

10 A. Yes.

11 Q. Now, Schecter's book was -- his article was
12 subscribed by as a co-author, Dr. Tiernan, do you believe him
13 to be a reputable scientist?

14 A. He is a chemist.

15 Q. Do you believe him to be a reputable scientist?

16 A. Yes.

17 Q. M. L. Taylor, do you believe him to be a reputable
18 scientist?

19 A. I don't know who M. L. Taylor is.

20 Q. Isn't Taylor from the Wright State University, the
21 laboratory? Don't you know he's in the Department of
22 Pharmacology and Toxicology?

23 A. I guess I did know that.

24 Q. Yes, you did. Do you consider him to be a

1 reputable scientist?

2 A. I really don't know much about him.

3 Q. Do you believe the laboratory at Wright State
4 University, reputable scientists?

5 A. Yes.

6 Q. Do you think they would say something that was not
7 true if they knew it was untrue?

8 A. They might not know.

9 Q. I know that, but that's not what I said, is it?

10 A. Their contribution was to the tissue levels.

11 Q. Excuse me, could you answer my -- Could you read
12 it?

13 (Question read back by the Court Reporter.)

14 A. No, I don't think so.

15 Q. If they reported dioxin in blood, would you believe
16 them, that they were telling the truth?

17 A. I would wonder about that.

18 Q. Whether they are telling the truth?

19 A. They may know it -- as they see the truth they
20 would be telling the truth.

21 Q. Well, that's what I'm asking you.

22 A. But it may not be the real truth.

23 Q. The truth is always in the eye of the beholder, may
24 not be a fact but I could believe this world is flat and if I

1 tell you this world is flat and believe it to be so, I'm
2 telling you the truth, am I not?

3 A. But that's not the way things are.

4 Q. But it's not a fact that the world is flat, is it,
5 ma'am?

6 A. No.

7 Q. You understand when I ask you whether it's a fact
8 or whether it's a truth I'm asking you two different things,
9 what a person is saying? Because I'm asking you based upon
10 the reputation, what you know of Dr. Taylor, Tiernan. Would
11 they report the truth as they saw it to be the truth?

12 A. As they saw it, yes.

13 Q. Would they do that?

14 A. Yes.

15 Q. So the rest of those people from the Department of
16 Surgery at the clinical campus of the Upstate Medical Center,
17 New York at Binghamton, do you know him, this is G. Gitlitz,
18 I suppose?

19 A. No.

20 Q. You don't know him?

21 A. No.

22 Q. Do you believe then, ma'am, that those people did
23 not have skin cancer as described here?

24 A. They may have skin cancer, yes.

1 Q. Do you believe that they had liver pathology, three
2 cases of liver pathology?

3 A. They had some changes in their liver. Pathology is
4 a little strong.

5 Q. Well, do you believe they had liver pathology?

6 A. No, I don't believe that.

7 Q. Did you look at the slides?

8 A. I also saw the --

9 Q. Excuse me, did you look at the slides?

10 A. I saw the pictures of the ultra structures.

11 Q. I'm sorry?

12 A. Yes, I did look at some pictures that he had.

13 Q. That Schecter had?

14 A. Yes.

15 Q. And that were published as a matter of fact in the
16 book, you saw those, didn't you?

17 A. I didn't see the book but I saw the -- I saw some
18 pictures of the liver.

19 Q. And it is your judgment I forgot -- forgive me, are
20 you a pathologist?

21 A. Yes.

22 Q. It's your judgment as a pathologist, that those
23 pictures did not show any pathology?

24 A. They show some changes.

1 Q. That isn't what I asked you?

2 A. They don't show what I would consider pathology.

3 Q. All right. They show changes but you did not
4 consider those changes to be pathological?

5 A. Right.

6 Q. Do you believe them when they say they had
7 hypertension or they discovered associated with this fire,
8 case of hypertension, or doesn't say a case but just
9 hypertension, do you believe that?

10 A. Not the association, no.

11 Q. Dr. Kimbrough, I'm going to get to that in a
12 moment, but I'm asking you now whether or not you believe
13 those cases existed and that Schecter is telling the truth
14 when he says they were from people that had been working in
15 that building?

16 A. That's possible.

17 Q. I'm not even asking you that. Do you believe it
18 could be the truth? Do you think the man is lying when he
19 says it was reported to him that those people were working in
20 this building and at the occupational clinic those records
21 showed those things? Do you think Schecter is lying?

22 A. You find those things in the general population.

23 Q. Dr. Kimbrough, every ailment on earth you find in
24 the general population?

1 A. Uh-huh, yes.

2 Q. You can have somebody laying in the street and he
3 says I just got run over by a car, I got these broken legs,
4 and you can say, well, you find that in the general
5 population. You can say that about anything and everything,
6 can you not? That's not an answer to my question, did you
7 believe that, is it, Dr. Kimbrough?

8 A. I think it is.

9 Q. Dr. Kimbrough, do you believe the man is telling
10 the truth when he says it was reported to him he found in
11 those records, in those clinical records, a case of
12 hypertension, suicide, nervousness, irritability, insomnia,
13 impotence, fatigue, elevated serum cholesterol and
14 triglyceride levels, psychoneurotic illness leading to time
15 off from work and psychiatric treatment, headaches, and
16 peripheral nerve impairment and other findings? Do you
17 believe that, believe that he's telling the truth that those
18 were facts that he believes, those are things that he
19 believes to be facts and are shown in the records that he's
20 examined?

21 A. I don't really believe that.

22 Q. Do you have any information of your own to cause
23 you to come to a disbelief that Schecter is telling the
24 truth?

1 A. The -- the New York State Health Department
2 reviewed the --

3 Q. I know that somebody did the reviewing. I'm asking
4 you whether or not you have any information of your own to
5 support your statement that Dr. Schecter is not telling the
6 truth when he reports those things?

7 A. There weren't -- there aren't that many abnormal
8 health effects in those findings in this population.

9 Q. Doctor, you still didn't answer my question.

10 A. No, I don't.

11 Q. Now, Doctor, what -- why would Schecter -- what
12 would motivate him to tell something that he doesn't believe
13 is the truth?

14 A. I don't know.

15 Q. Have you associated with him in the past?

16 A. Yeah.

17 Q. Does he have a financial or monetary interest in
18 telling something that isn't true?

19 A. Not as far as I know.

20 Q. Is there any reason that you know of that he would
21 not report the truth as he sees it?

22 A. He may be overstating the facts. Some people do
23 that.

24 Q. I know that. Some people don't do it. My question

1 is, any reason that you know of at all why he would not be
2 telling the truth?

3 A. I don't know of any reason, no.

4 Q. All right. Then -- he is then, unless -- do you
5 simply believe he made it up, just for fun?

6 A. I think he's overstating the fact, and we have
7 argued about this in public, at meetings. I've told him so.

8 Q. Well, by overstating the facts, do you mean that
9 somebody that he -- when he -- there was not three cases of
10 skin cancer?

11 A. There may have been three cases of skin cancer.

12 Q. Excuse me, if there may have been three cases of
13 skin cancer, he's not overstating the fact that those three
14 cases of skin cancer exist, isn't that correct, ma'am?

15 A. Yes, but they had nothing to do with the exposure.

16 Q. Doctor, that may be. That's the next point that
17 I'll get to, if I ever get to it. That may be. What I'm
18 asking you is whether or not there were -- there were cases
19 of skin cancer. Do you have any reason to dispute or doubt
20 that there were three cases of skin cancer as reported by Dr.
21 Schecter?

22 A. No.

23 Q. Do you have any reason to doubt that there were
24 three cases of liver pathology with those changes, although

1 you don't call them, with liver changes as described by Dr.
2 Schechter?

3 A. There were liver changes.

4 Q. And I adopted, do you have any reason to believe
5 that he's not telling the truth there, if we call those liver
6 changes rather than liver pathology?

7 A. It is my recollection that there were two people
8 with liver changes, but I may be wrong.

9 Q. And he may be right?

10 A. Right.

11 Q. Now, this is not only published, given before the
12 some chemical society, if my memory serves me right, also
13 published in a book, wasn't it? Chapter in a book? This was
14 the follow up of the ACS meeting in Miami?

15 A. Yes.

16 Q. Yes.

17 A. Yes, just the proceedings are published.

18 Q. Those other things, to save me going into one at a
19 time, do you believe that those other cases exist but that he
20 has in each instance tried to connect them to the Binghamton
21 fire and you don't believe such a connection exists? What
22 I'm trying to do is separate, Dr. Kimbrough, whether or not
23 those cases exist from a connection with the, causal
24 connection with the fire, that's what I'm trying to do. Do

1 those cases exist in your opinion?

2 A. I don't know.

3 Q. You don't have any reason to doubt that they exist,
4 do you, ma'am? He would not make them up, would he, ma'am?

5 A. I do, sir, have some reason to doubt, but I don't
6 know whether he made them up.

7 Q. You think he might have made them up?

8 A. I don't know.

9 Q. I know what you said, you don't know, I'm asking
10 you to put it on the record. Do you think that he might have
11 made them up?

12 A. I just don't know.

13 Q. Do you understand the difference between think and
14 know?

15 A. I don't know.

16 Q. I know you don't know whether he made them up, Dr.
17 Kimbrough, do you believe that he made them up? Do you think
18 that he made them up?

19 A. I don't know that either.

20 Q. You don't know what you think or what you believe?
21 I'm asking you what you think or believe, Dr. Kimbrough.

22 A. Some of them may be there and some of them the
23 evidence may really not be there. The only way I would have
24 to be able to do that would be to look at the records.

1 Q. That isn't what I'm asking you, again, Dr.
2 Kimbrough. Do you believe that he made those cases up or any
3 of those cases up?

4 A. I can't answer that question.

5 Q. Is it because you have no belief one way or the
6 other?

7 A. That's one part of it, and I'm not really sure what
8 we are talking about, what cases and what of those parts.

9 Q. I can help you with the latter part, the cases that
10 he has described in here. Are those fictitious cases that he
11 has made up for whatever purpose he might have? Are those
12 cases, or are those cases, do they in fact exist as far as
13 you -- do you have any information to believe that they do
14 not exist, that this is something manufactured by Dr.
15 Schecter or by somebody else?

16 A. There are other possibilities.

17 Q. And those are --

18 A. For instance, you don't know whether all of this
19 occurred in just a few people, whether with each of those
20 things you are talking about a separate person --

21 Q. Maybe, I'm not quarreling with that.

22 A. So I don't know.

23 Q. I'm not trying to tell you each of those are
24 separate episodes. I'm simply trying to find out from you

1 whether or not you believe those are symptoms accurately, or
2 not accurately even, but truthfully reported by Dr. Schechter?

3 A. I just don't know.

4 Q. I know that. I'm asking you what you believe.

5 A. I believe that they are not accurately reported.

6 Q. No, and I asked you whether or not you believe they
7 are truthfully reported. Left the accurate out.

8 A. As Dr. Schechter sees the truth, they may be
9 truthful.

10 Q. All right.

11 A. I don't know.

12 Q. Well, that's what I'm asking you. Do you believe
13 that he is telling the truth as he sees it?

14 A. I don't know.

15 Q. Doctor -- Doctor, you do understand the difference
16 between the word believe and know, don't you, ma'am? I would
17 like to move on to another point. It is an elementary thing,
18 what you believe. Why are you reluctant to tell me whether
19 or not you believe the man is telling the truth? That's all
20 I'm asking you. Do you believe the man is telling the truth
21 as he sees it? He may be seeing imaginary things, may be
22 seeing things that do not exist, but is he relating the truth
23 as he sees it in your belief, ma'am?

24 A. The truth as he sees it, yes.

1 Q. All right. Now, Doctor, the next point to ask is
2 whether or not the truth as he sees it was in fact associated
3 with the Binghamton Office Building. Do you believe that
4 those people that he -- not accurately, truthfully reporting
5 his belief, that those people had a connection with the
6 Binghamton Office Building fire?

7 A. I -- you stated your question in two ways. Which
8 one should I answer?

9 Q. Do you believe that he is telling the truth that as
10 he sees it that those cases of those problems listed here
11 were associated with people who had been in the building
12 after the explosion, after the fire?

13 A. I can't answer that question.

14 Q. Why not?

15 A. Because I don't know what people he's talking
16 about.

17 Q. He's talking about those people that he's described
18 here, those cases that he says were people, cases of people
19 that were in the building.

20 A. He's talking about a subset of patients followed in
21 an occupational clinic, and I'm not sure what this subset of
22 patients represents, whether they actually were all in the
23 building.

24 Q. It represents a group of people that he believes

1 were in the building, doesn't it, ma'am?

2 A. Yeah, but I don't know that.

3 Q. I know you don't know it, ma'am. I'm talking about
4 -- everything that you read in an article, you don't know
5 that it exists. What I'm asking you, is do you believe that
6 he's reporting what he thinks is the case, that those people
7 were in the building?

8 A. That had those symptoms, problems, I don't know.

9 Q. Dr. Kimbrough, you do know what the word believe
10 means, don't you, ma'am? You do know that it's different
11 from the answer you are giving me, you know that, don't you?
12 Why are you coming here and doing this?

13 A. I'm trying to answer your questions and I can't
14 answer this question, not this way.

15 Q. You can answer the question as to what you believe,
16 Doctor. If you believe the man is a liar, say so.

17 A. I don't know that he's a liar.

18 Q. You are protected by the privilege of testifying in
19 this case. You can call the President, you can call your
20 boss, you can call the Judge, you can call me, you can call
21 anybody you want any kind of name that you want. Anything
22 that you say in this courtroom is absolutely privileged. You
23 may not be liable for anything that you say here, absolutely
24 privileged. Now, is it that you simply believe the man is a

1 phony and a fraud and a liar?

2 A. No, I don't believe that.

3 Q. All right. Do you believe that he's telling the
4 truth as he sees it?

5 A. I don't believe anything. Why should I believe
6 something?

7 Q. Because you are a lady that's coming here, that is
8 represented to be an expert in the area of human health
9 effects associated with dioxin. Because you have read this,
10 because you are part of the counsel that is responsible for
11 the Binghamton office health effects, because you are
12 obviously an intelligent young lady and you must have a
13 belief. Because you are not a fool, Dr. Kimbrough. Because
14 I don't believe that you are telling me the truth when you
15 say you don't have a belief. You have already said that you
16 argued with Dr. Schecter on other occasions.

17 A. Uh-huh. And I have some problems with this, but I
18 can't explain them.

19 Q. Why can't you explain them?

20 A. Not in the way we are conversing.

21 Q. Well, explain then, ma'am.

22 A. Okay. One of the -- as I said earlier, a lot of
23 those things occur normally in the population. Some of them
24 are chronic health effects that you would not get following

1 an acute exposure. For instance, hypertension is something
2 that comes on very gradual. Cancer, incubation period or the
3 latency period for the development of cancer is usually many
4 many years --

5 Q. Doctor, all of those things I agree with.

6 A. So all of this has nothing to do with each other.

7 Q. We are not arguing that point. Apparently you do
8 not understand what I'm asking you.

9 MR. HEINEMAN: Object, Your Honor, he asked the
10 witness to explain.

11 MR. CARR: I know it. I'm trying to save us some
12 time because we are not at issue on this point.

13 MR. HEINEMAN: He interrupted her and I object to
14 it.

15 THE COURT: Objection is overruled. I don't think
16 -- there is some lack of understanding somewhere along the
17 line because I don't think that -- first of all, she said
18 those things already. Secondly, I don't think it was
19 responsive to his question. Mr. Carr, go ahead.

20 Q. (by Mr. Carr) Doctor, you are talking about
21 whether or not the Binghamton fire indeed caused those
22 problems which are all problems found in the general
23 population and that the cancer or latency period is certainly
24 a long time. This fire was in '79 and the article was

1 written in '81 or something, whatever the date is. That
2 isn't what I'm asking you about. I'm not trying to get you
3 to concede that those problems were in fact caused by the
4 Binghamton fire, not at this point as yet. All I'm trying to
5 do is to get some kind of framework that I can ask you about,
6 because if you absolutely believe there were no cases of skin
7 cancer, there was no liver changes, there wasn't any
8 hypertension, any suicide, then it's silly for me to even
9 talk to you about it. But if you think that there may have
10 been those cases but not caused by this fire and are not
11 caused by exposure or some other reason, then we can talk
12 about it. I'm simply trying to find out whether or not you
13 believe those cases existed; whether or not the man is
14 telling the truth. I'm not asking you to agree that his
15 conclusion is correct. Do you understand that, Dr.
16 Kimbrough?

17 A. Yes.

18 Q. All right. Now, with that in mind, do you think
19 the man is reporting the truth as he sees it insofar as those
20 problems are concerned?

21 A. Yes.

22 Q. All right. Now, it is your belief, as I understand
23 it, whether the problems exist or don't exist, they were not
24 caused by exposure to the chemicals in that -- associated

1 with that fire, is that right?

2 A. I'm sorry. I didn't pay attention. Can you read
3 the question back?

4 Q. Why didn't you pay attention, Dr. Kimbrough?

5 A. I don't know. I'm getting tired.

6 THE COURT: Would you like to take a short break?

7 A. It's okay. But I just, see, I'm one hour ahead.

8 Q. It's ten after five your time.

9 A. That's right.

10 Q. All right. But, they have been reported as
11 associated by those people named, have they not, ma'am, or by
12 this one person named, if you have problems with that, Dr.
13 Schecter?

14 A. He also states etiology of those medical findings
15 is not always clear.

16 Q. Yeah. Nobody --

17 A. That's on the same --

18 Q. Nobody is quarreling with that, Dr. Kimbrough, you
19 are fighting a straw man that doesn't exist. You are
20 advocating a position, Dr. Kimbrough, that I'm not contesting
21 at this point.

22 A. He's making those reports but he's not necessarily
23 making this association.

24 Q. That's right. He isn't. Did I say that he was?

1 A. I thought that was what I said.

2 Q. I know, but that's not -- he's reported those
3 things in this paper, hasn't he, ma'am?

4 A. He has a sentence in this paper which says,
5 etiology of those medical findings is not always clear.
6 It's on the page you gave me.

7 Q. He says that, doesn't he?

8 A. That's what he says on this page that you gave me.

9 Q. Right, he says that. Nobody is quarreling with
10 that, so, whatever it is, he reports those things, doesn't
11 he, ma'am?

12 A. Yes.

13 Q. And, Doctor, are there any other reports of health
14 effects that somebody has said may be associated with
15 exposure to dioxin other than the ones you've named?
16 Mentioned Seveso, Binghamton possibility, I don't know, I
17 can't remember myself, you mentioned, I thought, three,
18 Seveso, Binghamton, and the Missouri -- Ranch Hand. Right?

19 A. Ranch Hand.

20 Q. All right. Any other human health effects study of
21 which you are aware?

22 A. Of low-level exposure?

23 Q. Yes.

24 A. I can't think of anything at the moment, it was

1 some other surveys, but --

2 Q. There were other surveys?

3 A. Well, there was a suspicion of exposure, which
4 doesn't bear out.

5 Q. I'm sorry, I can't hear you.

6 A. Where there was a suspicion of exposure, but there
7 really wasn't any exposure.

8 Q. What surveys were those?

9 A. For instance a survey that was done around Dow
10 Chemical Company.

11 Q. In Midland, you mean?

12 A. In Midland, Michigan.

13 Q. And Cook reported those in their works? Or is
14 there -- has it been published?

15 A. I think it's only a report that you can get from
16 the Michigan Department of Health. They were involved in
17 that.

18 Q. Wasn't a CDC work?

19 A. No.

20 Q. Anything else?

21 A. Nothing that I can think of at the moment.

22 Q. All right. Then the Missouri Health Study then at
23 the very least is one of at the most a half a dozen studies
24 that may be related to low-dose effects of exposure, human

1 health effects associated with low-dose exposure of dioxin,
2 correct, ma'am?

3 A. Yes.

4 Q. All right. Now, do you still have the Missouri
5 Health Study in front of you?

6 A. Yes.

7 Q. Would you turn to table C-2 on Page 61, if you
8 would. Now, Dr. Kimbrough, in the normal population, what
9 percent of people would you believe as a pathologist, as a
10 doctor, would have swelling in hands or feet?

11 A. Somewhere up to about 25 percent. It depends on
12 the age and the -- what you call swelling.

13 Q. I noted you were looking directly at the result
14 here. Did the number that reported that abnormality --, I
15 directed your attention to it, did the number that reported
16 that abnormality influence your opinion?

17 A. No.

18 Q. Doctor, do you really believe that 25 percent of
19 the normal population has swelling in hands or feet? Do you
20 really sincerely, honestly believe that?

21 A. It's a very common complaint.

22 Q. That's not what I asked you.

23 A. Yeah.

24 Q. You believe that we have got, of the eight people

1 in this room, that two of us have swelling hands or feet?

2 A. Not all the time, but sometimes.

3 Q. Doctor, anybody will have a swollen foot if they
4 hit it on something or if they get injured. This isn't the
5 questionnaire. When you ask the questionnaire -- did you
6 bring a copy of the questionnaire with you by any chance?

7 A. No.

8 Q. How was the question posed? Swelling in hands or
9 feet, or did you see -- you helped design the question, did
10 you not?

11 A. I saw the questions but I don't remember anymore
12 exactly how it was posed.

13 Q. You helped design the question, did you not, ma'am?

14 A. Yeah, most of the questions that had more to do
15 with toxicology.

16 Q. My question is, did you help design those
17 questions?

18 A. Yes.

19 Q. Now, the purpose of those questions were to find
20 out whether or not they had some things that would be caused,
21 called ailments, not just an occasional occurrence, isn't
22 that right, ma'am?

23 A. Not all of the questions. You put some questions
24 in there to see how valid the answers are that you get.

1 Q. How about the swelling in hands or feet, was that
2 question put in there to see if they were honest?

3 A. No.

4 Q. It was a question designed to find out whether or
5 not there was an unusual, if you will, health effect, or a
6 real health effect associated with this population, isn't
7 that correct, ma'am?

8 A. Whether there was a difference between the two
9 groups.

10 Q. Doctor --

11 A. No, that's how you analyzed it later on.

12 Q. You wanted to find out -- just suppose that you
13 found out that 15 percent of the people in the high-risk
14 group had swelling in hands or feet and only one percent of
15 the people in the low-risk group had such swelling, what
16 would you have concluded from that?

17 A. Nothing.

18 Q. Nothing at all?

19 A. No. I would have to analyze other things.

20 Q. Well, other things along with it, when your
21 questionnaires came out that way, the high-risk group had
22 this abnormality or this generalized disorder and the
23 low-risk group did not. What would you conclude from that?

24 A. That would be something I would register and I

1 would do other things, but I wouldn't make any conclusions
2 based on it?

3 Q. What would that help you, what kind of evidence
4 that would be toward coming to a conclusion?

5 A. I wouldn't -- just based on that, I wouldn't come
6 to any conclusion.

7 Q. I didn't ask you that. I asked you how would you
8 consider that evidence in helping you to come to your
9 conclusion?

10 A. It's only an indicator.

11 Q. I understand that, ma'am. I'm not asking you
12 that. You would consider that, would you not, as something
13 that would indicate that the people with the swollen hands or
14 feet are having a health effect that the people in the
15 low-risk group are not having. That was the purpose for
16 putting it in, was it not?

17 A. It suggests that they might have some fluid
18 retention.

19 Q. Associated with dioxin exposure?

20 A. No.

21 Q. Well, Doctor, didn't you design those questions to
22 try to find out whether or not they had health effects
23 associated with dioxin exposure? Wasn't all of your
24 questions except your test questions designed by CDC or

1 helped by CDC for the express purpose of finding out whether
2 or not there were health effects associated with dioxin
3 exposure?

4 A. This is only a preliminary --

5 Q. Could you answer my question, Dr. Kimbrough?

6 A. No.

7 Q. Then, Doctor, your entire study is a fraud, isn't
8 it, ma'am?

9 A. No.

10 Q. If you didn't design -- did you really tell those
11 Missouri people that those questions are not designed to help
12 you find out whether or not there are harmful consequences
13 from dioxin exposure? Did you tell them that when they
14 started this study?

15 A. To help us find out whether -- yes.

16 Q. Those questions were designed to help you find out
17 whether or not there are harmful health effects from exposure
18 to dioxin, isn't that correct, ma'am?

19 A. Yes.

20 Q. Yes. That's the reason you put that question in
21 about swelling in hands or feet, to aid you to come to that
22 conclusion, isn't that right, ma'am?

23 A. To obtain some information.

24 Q. To aid you in coming to that conclusion, isn't that

1 right?

2 A. To obtain information.

3 Q. I'm sorry?

4 A. To obtain information.

5 Q. That's not what I asked you. To aid you to come to
6 the conclusion whether or not there are health effects from
7 exposure to dioxin, isn't that right, ma'am?

8 A. That's not quite right.

9 Q. Well, did you put it in there for any purpose other
10 than to help you come to that conclusion along with the other
11 evidence? What other reason would you have for putting it in
12 there, Dr. Kimbrough, except to aid you in arriving at a
13 conclusion of whether or not there are health effects
14 associated with dioxin exposure?

15 A. To be able to focus more on specific things, and
16 then once you do that, you then arrive at conclusions as to
17 whether some of those effects might be associated with
18 exposure.

19 Q. Doctor, isn't that all part of the process of
20 aiding you to come to the conclusion of whether or not dioxin
21 has harmful health effects?

22 A. It's all part of the process, yes.

23 Q. Yes, indeed. This question was put in there for
24 that purpose, otherwise, it would be stupid to put it in

1 there, wouldn't it be, ma'am, a 'useless thing?

2 A. It's part of the process, yes.

3 Q. And it had a useful purpose, did it not, ma'am?

4 A. Yes.

5 Q. And you wouldn't have put it in there if you had
6 not expected to use that, along with other things, in helping
7 you arrive at a scientific opinion, if you will, or
8 conclusion as to the health effects as to dioxin, isn't that
9 correct, ma'am?

10 A. Yes, it's part of the process.

11 Q. And that's true of all those questions that you've
12 asked those people except some that you may have put in as a
13 test or a catch question, right, ma'am?

14 A. Yes.

15 Q. Now, you would not expect the normal population to
16 have swelling in hands or feet, would you, ma'am?

17 A. Yes.

18 Q. You would?

19 A. Yes.

20 Q. Dr. Kimbrough, I'll remind you that you are under
21 oath. Do you really think that 25 percent of the people
22 responding to that question that you asked that would say,
23 yes, I have swollen hands or feet?

24 A. Yes.

1 Q. Now, Doctor, your question then is worthless, isn't
2 it?

3 A. No. If everybody had responded that they had
4 swelling then it depends on the number, and it also depends
5 on the age.

6 Q. How many people would you have to have respond that
7 they have swollen hands or feet before you would consider
8 that that is an aid in arriving at your conclusion?

9 A. If more than half of the people would say that they
10 would have swelling of hands and feet all of the time then I
11 would get concerned.

12 Q. No, I'm not asking concerned, Dr. Kimbrough. Maybe
13 we are going at the wrong thing, because this is not to find
14 out whether or not you should have concern, this is to find
15 out, is it not, ma'am, are there health effects, and, if so,
16 are they from exposure to dioxin. Isn't that the whole
17 purpose of the study?

18 A. Yes, that's the purpose of the study.

19 Q. And, Doctor, you designed the study to be able to
20 pinpoint problems that people are having. You really don't
21 think that 49 percent of the population have swollen hands or
22 feet, do you, ma'am?

23 A. Sometimes, depending on the age.

24 Q. Doctor, how did you phrase the question?

1 A. I don't specifically know. I would have to go back
2 to the questionnaire.

3 Q. The swelling of the hands and feet depend upon age,
4 doesn't it, ma'am?

5 A. And whether or not you are pregnant, and whether or
6 not --

7 Q. Did you take -- did you finish your answer?

8 A. And whether or not you have eaten a lot of salt. I
9 mean there are a lot of things that can affect that.

10 Q. I'm sure there is. Did you take those things into
11 consideration when you selected your population?

12 A. No, not all of those things, because you can't take
13 those things into consideration.

14 Q. Why can't you?

15 A. When you select the population --

16 Q. Why can't you?

17 A. You can't select a population for all of those
18 factors. That's part of epidemiology.

19 Q. Well, you wouldn't expect to have 25 percent
20 pregnant women, would you?

21 A. No, but there may be a few.

22 Q. Sure, there may be a few. But certainly not 25
23 percent or 49 percent?

24 A. There may be a few that ate a lot of salt. There

1 may be a few that sit a lot.

2 Q. Doctor, in your general population, taking a group
3 at random, as you did here, you tried to get a random group,
4 didn't you, ma'am, except exposure, low risk or high risk?

5 A. Uh-huh.

6 Q. Now, that's the population that I'm talking about.
7 This population here in this room where Mr. Seigfreid is the
8 very oldest of us all.

9 MR. NASSIF: By far

10 Q. (by Mr. Carr) Months at least older than most of
11 us. And we have Court Reporter and the Clerk who are by all
12 odds the youngest. And we have a cross section here. Do you
13 really think that half of those people, or part of those
14 people, are going to have swollen hands or feet in the
15 parameters of your question?

16 A. Some of the time, I do.

17 Q. And, Doctor, then your question, if you ask do you
18 have some swollen hands or feet, a hundred percent of the
19 population some of the time, a hundred percent is going to
20 answer question. Because surely you didn't frame the
21 question that way. If you did, it was a stupid question.

22 A. Well, maybe it was.

23 Q. Well, was it framed that way, Dr. Kimbrough? I'm
24 not going to accept that.

1 A. I don't know specifically how it was framed.

2 Q. Doctor, you know good and well it wasn't framed
3 that way to get a yes response from a hundred percent of the
4 people. Dr. Kimbrough, I suggest to you that you are playing
5 games with me.

6 A. No, I am not.

7 Q. Did you design the question in such away that you
8 would get an affirmative response from everybody? Do you
9 believe that everybody has swollen hands or feet at some time
10 or another in their life?

11 A. Yes.

12 Q. Yes. Then if you ask that question that way, you
13 should have got a hundred percent yeses, shouldn't you,
14 ma'am?

15 A. Yes.

16 Q. That question framed that way would be worthless,
17 wouldn't it, ma'am?

18 A. Yes.

19 Q. Therefore, you did not frame it that way, did you,
20 ma'am, because you framed it in a fashion to get information
21 that you could use, isn't that correct, ma'am?

22 A. Yeah, we tried.

23 Q. So that question wasn't framed that way, was it,
24 ma'am?

1 A. Yeah, but I don't know exactly how it was framed.

2 Q. I'm excluding, eliminating something that would --
3 swelling on occasion?

4 A. Uh-huh.

5 Q. Now, Doctor, this question was designed to elicit
6 whether or not swelling in hands or feet was a real problem
7 to the person being asked that question, that is the truth of
8 the matter, isn't it, ma'am?

9 A. I assume so.

10 Q. Now, Dr. Kimbrough, what percent of the population
11 do you think has a real propose with swelling in the hands or
12 feet?

13 A. I still believe that about 25 percent of the
14 population, if you talk about a cross section, taking all
15 ages, does have that problem.

16 Q. Has a real problem with swollen hands or feet?

17 A. Uh-huh.

18 Q. Do you have such a problem?

19 A. Yes.

20 Q. When, do you have it, now?

21 A. At night after I've been on an airplane. I just --
22 I'm very sensitive to salt. I try to eat very little salt,
23 for instance.

24 Q. Isn't that unusual to be very sensitive to salt?

1 A. No.

2 Q. What percent of the population do you believe are
3 very sensitive to salt?

4 A. Probably more than we realize, but --

5 Q. That may be, but what percentage do you believe,
6 ma'am?

7 A. I would think maybe 25 percent of the people.

8 Q. 25 percent of the people are sensitive to salt,
9 too?

10 A. Uh-huh.

11 Q. Dr. Kimbrough, is it your opinion, and we can save
12 a lot of trouble here, that 25 percent of the population are
13 afflicted with every problem known to man?

14 A. I don't understand what -- some time in their lives
15 they will have some problems, I don't --

16 Q. No, in the framework of a question you are going to
17 ask to elicit health effects?

18 A. Some people will have. Some problems are more
19 prevalent than other problems.

20 Q. What problems do you think that 25 percent of the
21 population had?

22 A. Things like headaches, since they are more frequent
23 than that.

24 Q. I'm sorry?

1 A. Headaches and those sorts of things would be even
2 more frequent.

3 Q. You think that 25 percent of the population have
4 persistent headaches?

5 A. Well, they are also different --

6 Q. Excuse me. Do you think that 25 percent of the
7 population have persistent headaches?

8 A. Depends on what a persistent headaches is, what you
9 mean by that.

10 Q. How you all used the word and expected to use the
11 word when you used the phrase in your questionnaire. Do you
12 think 25 percent of the population have persistent headaches
13 in that framework?

14 A. They have frequent headaches, that's what I
15 believe.

16 Q. My question is persistent headaches, isn't it?

17 A. 24 hours a day, every day of the year?

18 Q. Doctor, within the parameters -- within the
19 framework of the way you all designed the question and
20 administered the question to the people in the Missouri Pilot
21 Health Study?

22 A. I personally feel that the term persistent, the way
23 it's used here, is a very poor choice of words.

24 Q. Well, that may be, but you chose the wording, I

1 didn't?

2 A. I didn't necessarily choose that word.

3 Q. You were a part of the group that chose the word?

4 A. I was part of the group, but I wasn't necessarily
5 the one that used that term.

6 Q. Well, in any event, do you think that 25 percent of
7 the population have persistent headaches?

8 A. That's one of the afflictions that people have a
9 lot, yes, I do believe that.

10 Q. You believe that 25 percent of the American
11 population have got persistent headaches?

12 A. It depends on -- unless the term persistent is
13 defined to me, I can't answer that question.

14 Q. Well, did you define it to the people that you gave
15 the questionnaire to?

16 A. I wasn't involved in administering the
17 questionnaires, so I don't know.

18 Q. Well, you would have given -- did you define it in
19 writing to the people you gave the questionnaire to?

20 A. No.

21 Q. What kind of question did you ask them? Are you
22 afflicted with persistent headaches?

23 A. I was not involved in that part of the study. You
24 would have to --

1 Q. You read it, you designed the study, including the
2 questionnaire. What was the question that you asked?

3 A. I helped design the study, but I was not involved
4 in the details of it.

5 Q. Did you read the details of it? Did you read the
6 study before it went out from CDC or before it went out to
7 the public?

8 A. I was involved in the clinical laboratory side,
9 what types of tests to do, and in the question of exposure
10 assessment.

11 Q. Would you answer my question, Dr. Kimbrough, did
12 you read it, ma'am?

13 A. I read the draft, yes.

14 Q. Now, did you see the questions on headaches?

15 A. Yes.

16 Q. Did you criticize or did you send any criticism or
17 make any comment to anybody about the question on persistent
18 headaches?

19 A. No, not specifically.

20 Q. Doctor, here 41 percent of the people with the
21 low-risk exposure have got persistent headaches according to
22 what they say, isn't that correct?

23 A. Yes.

24 Q. Do you think that 41 percent of the population have

1 got persistent headaches?

2 A. It depends on how they interpret persistent. I
3 just can't answer that question.

4 Q. Doctor, how would you consider persistent
5 headaches, one that you have and you cannot get rid of, that
6 it stays with you, it persists? Isn't that what persistent
7 means?

8 A. It could mean to a person that he has a headache
9 that starts in the morning and he still has it at night, and
10 I would think that there are maybe as many as 50 percent of
11 the people that could have such headaches.

12 Q. 50 percent of the population have such headaches?

13 A. Yes, not every day, but --

14 Q. God, Dr. Kimbrough, what population do you
15 associate with?

16 A. This type of information also is in other health
17 surveys.

18 Q. Doctor, if that amount of the population have got
19 persistent headaches do you think it might be associated with
20 the fact that the population have got dioxin in their tissue,
21 is that a possibility?

22 A. No, it's always -- people always have suffered from
23 headaches.

24 Q. How do you know that?

1 A. If you look at all the headache remedies that are
2 sold.

3 Q. Dr. Kimbrough, how do you know that they had -- 50
4 percent of the population have persistent headaches before
5 the onset of chemical contamination of our environment,
6 including dioxin?

7 A. If you go back to the old medical literature, there
8 is evidence that people -- that's one of the problems.

9 Q. What medical literature says 50 percent of the
10 population has got persistent headaches?

11 A. It's just a very common problem.

12 Q. How about joint and muscle pains, without looking
13 at the -- unless you've already read it recently, what
14 percent of the population have joint and muscle pains,
15 ordinary cross section of a healthy population?

16 A. Well, there were two healthy people outside that
17 were complaining about muscle pain at the remission that we
18 had.

19 Q. How do you know they weren't plaintiffs in the
20 lawsuit?

21 MR. SEIGFREID: No, Ken Heineman, he's not
22 healthy.

23 MR. CARR: Heineman has never been healthy a day
24 during this trial.

1 MR. NASSIF: Seigfreid was the other one.

2 MR. CARR: I'm not talking about old men.

3 MR. NASSIF: Your Honor, there were three. Jane
4 Rudolph also complained.

5 MR. CARR: She is a pregnant lady.

6 A. She is not pregnant.

7 THE COURT: It's from exposure to toxic chemical
8 trials.

9 MR. NASSIF: Three out of the five in the hallway.

10 Q. What population would have joint and muscle pains
11 in your judgment?

12 A. It's again depends on the age.

13 Q. Well, the cross section that you have, people that
14 you use in the Missouri Pilot Health Study?

15 A. It could have up to 30, 40 percent.

16 Q. Up to -- That starts out at one. Do you think that
17 30 or 40 percent of the general population have got a
18 disorder known as joint and muscle pains?

19 A. Yeah. Unless you primarily look at children, they
20 don't seem to complain as much.

21 Q. Doctor, then your health study, as you designed it
22 here, in your judgment, could not possibly elicit health
23 effects, could it? If you expect 40 or 50 percent of the
24 people answering the question to have the problem, there is

1 no point in asking the question, is there, ma'am? You are
2 never going to find out whether or not dioxin caused the
3 problem, are you, ma'am?

4 A. I think some of the questions were unnecessary.

5 Q. Could you answer my question, please, ma'am?

6 A. Yes, you can still find that out.

7 Q. What you'd have to do, I suppose, agree on what the
8 base is and say all right, 50 percent of the people are going
9 to have headaches, therefore, if we get a result that shows
10 70 percent of the headaches, we can say that that might be
11 associated with the dioxin, is that what you are saying?

12 A. Yes.

13 Q. And, since 70 percent of the people do not have
14 complaints of persistent headaches, it's your judgment as a
15 pathologist and toxicologist that dioxin doesn't cause
16 headaches, is that right, Dr. Kimbrough?

17 A. Not in this situation.

18 Q. That is to low-dose exposure?

19 A. Uh-huh.

20 Q. There isn't anything in your judgment, and if I
21 went through those other findings here, there isn't anything
22 in your judgment that could possibly be caused by dioxin, is
23 there, ma'am? If 50 percent of the population is going to
24 have the afflictions anyway, you don't leave much for dioxin

1 to cause, do you, ma'am?

2 A. That's one purpose in epidemiology studies. It's
3 very difficult to sort those things out.

4 Q. You sure don't sort it out by asking questions
5 where you expect 50 percent of the population to respond yes
6 to start out with, do you, ma'am?

7 A. If you do have a high background noise then that's
8 the best you can do.

9 Q. Doctor, are there any publications that you use or
10 used in designing this study, do you know, were used to set
11 up the baseline that you are going to start out with for
12 swelling in hands or feet, or persistent headaches, or joint
13 and muscle pains?

14 A. We reviewed the literature on the problems that the
15 workers had reported. We also looked at the Ranch Hand
16 questionnaires. We are also aware of studies that have been
17 -- surveys that have been done, National Center for Health
18 Statisticians of the general population.

19 Q. And the survey showed what? Are those available?

20 A. Those surveys?

21 Q. Uh-huh.

22 A. Yes, the Haines studies, which are nutrition
23 studies, and they are, they just give you information on what
24 the background complaints and --

1 Q. And did you -- did you look at those, and by you, I
2 mean the Missouri Pilot Health Group when you designed the
3 questionnaire?

4 A. I don't think everybody in Missouri did, no, but
5 I'm aware of those.

6 Q. But you do, so if I wanted to cross examine you as
7 I'm trying to, to test whether or not you are accurately
8 stating the number of people that have headaches, or
9 persistent headaches and joint and muscle pain, swelling
10 hands, I could have that? If I had an opportunity to get
11 that data from you, I could use it to test your statements,
12 couldn't I, ma'am?

13 A. Uh-huh.

14 Q. But you didn't bring that data with you, ma'am, and
15 you weren't asked to do so, were you, ma'am?

16 A. No.

17 Q. You knew that, though, that you were going to
18 testify and did testify in direct examination about the
19 Missouri Pilot Health Group, you did know that?

20 A. I simply said that --

21 Q. I'm sorry?

22 A. Yes, I did.

23 Q. You did know in advance of the time that we have
24 used the Missouri Health Study, because the answer to your

1 questions indicated that we had used the Missouri Health
2 Study to suggest ailments caused by dioxin? You knew that,
3 too, didn't you?

4 A. No.

5 Q. You didn't?

6 A. No.

7 Q. You didn't know that we combined the two groups?

8 A. No.

9 Q. Nobody told you that?

10 A. No.

11 Q. Doctor, how did you come to know that we were going
12 to ask you about the Missouri Pilot Health Test?

13 A. I didn't know that you were going to ask me.

14 Q. I thought you just said you did.

15 A. The only thing I said was that I talked about the
16 study in my previous testimony.

17 Q. But you didn't know before you got here that you
18 were going to be asked about it?

19 A. No.

20 Q. All right. And for that reason then -- well,
21 nobody asked you to bring your documentation?

22 A. No.

23 Q. Doctor, what about the loss of ten pounds a month?
24 How many people do you believe lose ten pounds a month not

1 being on a diet?

2 A. They don't.

3 Q. I'm sorry?

4 A. That's a very low incidence, unless they have a
5 health problem.

6 Q. My question is how many people, in your judgment,
7 lose ten pounds in a month's time when they are not on a
8 diet?

9 A. None.

10 Q. Or more than ten pounds?

11 A. None, unless you are pregnant and have a baby.

12 Q. All right, and we have got 6 percent in the
13 high-risk group that report that, don't we?

14 A. Yes.

15 Q. And we have got 4 percent in the low-risk group
16 that report that, don't we, ma'am?

17 A. 3 percent.

18 Q. 2.9. What did I say?

19 A. You said 4.

20 Q. I'm sorry. 2.9. We have got 3 percent?

21 A. Uh-huh.

22 Q. So, well, we would have then about 5 percent of the
23 population here that has lost ten pounds or more in one month
24 and not on a diet, correct?

1 A. Uh-huh.

2 Q. That would be then certainly significant to you,
3 wouldn't it?

4 A. Uh-huh.

5 Q. Did you consider the significance of that when you
6 reviewed this study?

7 A. One possibility would be anxiety.

8 Q. I'm sorry?

9 A. Anxiety would be one reason.

10 Q. That could be one possibility, so the answer is
11 yes, you did consider that, did you?

12 A. Uh-huh.

13 Q. And did you just put it off on anxiety?

14 A. We are going to look at more people and try and get
15 further information from an additional study.

16 Q. Would you answer my question?

17 A. We didn't know how to interpret it.

18 Q. You made no conclusions based upon that whatsoever?

19 A. Not yet.

20 Q. It's possible that it could be a health effect from
21 dioxin exposure, however, isn't it, ma'am?

22 A. Yes, we just have not made any conclusions.

23 Q. Is the answer to my question, yes, it is possible?

24 A. It would be possible, yes.

1 Q. What about the blood problems that show up here,
2 Doctor, how many people would you expect to have those kind
3 of blood problems that are listed here, anemia, leukopenia,
4 blood clotting problems, and other blood problems?

5 A. Again it would vary with the people that you would
6 look at, but, you could have those problems in people up to
7 about ten percent or so. For instance, some people are on
8 anticoagulants. I mean, just depends on what you are looking
9 at.

10 Q. What are those other blood problems that are listed
11 there?

12 A. You mean leukopenia?

13 Q. There is a category of other blood problems, got
14 anemia, leukopenia, blood clotting problems and other blood
15 problems. What is that?

16 A. That was a catch-all question, and we really
17 couldn't analyze it and --

18 Q. What did you do, just ask them if they had other
19 blood problems?

20 A. Yes.

21 Q. Not specifying what they mean?

22 A. Yes.

23 Q. And you had no idea at all what you were asking
24 them?

1 A. No.

2 Q. Doctor --

3 A. No. Sometimes people will get information from
4 their physician and they may not understand that something
5 called leukopenia is a blood problem, so then in order to
6 catch that, you put in a general phrase. If you then find
7 that many people in the population that you are concerned
8 with have a problem, you may have to go back. That was --
9 it was --

10 Q. I understand your question now. And you've got --
11 you add those up, you've got 25 percent in your high-risk
12 group that have got some kind of blood problem, do you not,
13 ma'am?

14 A. I -- it's possible that some of those people were
15 the same people.

16 Q. Well, it would be possible they might be included
17 in the other blood problems but anemia, leukopenia and blood
18 clotting problems are all three separate problems that you
19 would not have in one individual?

20 A. If somebody has a blood clotting problem he could
21 also very well have an anemia. So I can't answer that.

22 Q. What about leukopenia?

23 A. That wouldn't necessarily -- that could be
24 associated with anemia, but --

1 Q. It's a distinct and different disease?

2 A. In a way it's different.

3 Q. Sorry?

4 A. It is different.

5 Q. Those four questions here were not meant to be
6 duplicative, were they, ma'am?

7 A. They were meant in a way to be duplicated so that
8 if people didn't understand one thing we might still catch it
9 by something asking another question.

10 Q. You've got from 22 to 25 percent then of people,
11 let's even say 20 to 25 percent of people in the high-risk
12 group that have got some kind of blood problems, correct,
13 ma'am?

14 A. We don't know that. This is what they said they
15 did.

16 Q. That's what they said. Isn't that an
17 extraordinarily high number, Dr. Kimbrough?

18 A. Not necessarily, since most of them seem to be
19 anemias.

20 Q. I'm sorry?

21 A. Since most of them seem to be anemias.

22 Q. It would have to be anemia that they'd know about
23 and had treated for, Doctor. Don't you consider that to be
24 an extraordinarily high amount of people to have anemia, 15

1 percent?

2 A. If people answer questionnaires like this and they
3 may say they have anemia, and when we then check the records,
4 it may be that they at one point had anemia or that they
5 really just have a slightly --

6 Q. Well, did you do that, Doctor?

7 A. No, that wasn't done.

8 Q. Well, Doctor, taking this at face value, isn't that
9 an extraordinarily high number of 20 to 25 percent to have
10 blood problems?

11 A. Not if the anemia is very mild.

12 Q. Well, you've added the caveat there, Doctor, you
13 didn't make it whether it was severe or mild anemia, did
14 you? And I'm not asking the question that way. Do you not
15 consider this to be an extraordinary number of people to
16 report on blood problems?

17 A. No.

18 Q. I thought you told me before you would expect about
19 what, ten percent, five, ten percent, that had those
20 problems? Didn't you tell me that, ten percent?

21 A. Then I was talking about documented problems.

22 Q. You weren't talking about what you were asking, you
23 didn't understand that I was asking about those questions?

24 A. No, I thought you were asking about documented

1 cases, what you would find if I did a blood survey in a
2 population. By actually doing the tests on a group of
3 people, I might get that in a general population, but,
4 looking at this questionnaire, it wouldn't necessarily be
5 very high, because --

6 Q. Here again --

7 A. It would depend on how the people interpreted the
8 questionnaire.

9 Q. Again, the only way I could test that would be if
10 you brought your questionnaire here, if you brought the
11 documents that you studied in trying to determine how many
12 people would have reports of the anemia problems, is that
13 correct, ma'am?

14 A. This would be the Missouri State Health Department
15 where all this would be.

16 THE COURT: I'm sorry?

17 A. It's basically a study that was funded by CDC. We
18 consulted on it. But basically the study was done out of the
19 Missouri State Health Department and out of the group of
20 physicians in St. Louis.

21 Q. Dr. Kimbrough, those questions weren't just sent to
22 the subject and asked to fill it out and send back, was it?
23 Those were questions that were administered by trained health
24 people, isn't that correct?

1 A. Yes.

2 Q. So they would ask not just one question, do you
3 have persistent headaches, or do you have blood problems, but
4 they would ask as many questions as they need to get
5 meaningful information, isn't that right?

6 A. No.

7 Q. No? What's wrong with that?

8 A. They will just ask the questions on the
9 questionnaire, otherwise you would introduce a bias, because
10 everybody would do that differently then, if you have more
11 than one person doing it.

12 Q. Weren't they given instructions as to how they were
13 to respond and the way they were -- the language they would
14 use, and the method they would use, were to use to respond to
15 questions and to explain the meaning of these?

16 A. No, they were simply told how to introduce
17 themselves and how to word the questions that were in the
18 questionnaire.

19 Q. Doctor, you could just as easily then send them out
20 by mail, you didn't need a train personnel to do that, did
21 you, ma'am?

22 A. Some of the questionnaires were -- well, that's the
23 other survey. Never mind.

24 Q. That's the other one, Doctor. I'm talking about

1 the ones you selected and then you surveyed their health.
2 You had trained health people ask the questions and
3 administer the review of their systems, didn't you, ma'am?

4 A. Yes.

5 Q. And, weren't they -- they did more than just simply
6 take a response to a question given, didn't they, ma'am?

7 A. They took the response given to the question. You
8 can't do it any other way.

9 Q. Didn't they even have -- didn't they use some
10 doctors to do that, administer those questionnaires?

11 A. I don't think so, not physicians.

12 Q. What kind of people did they actually use?

13 A. Normally -- and I'm not quite sure really what
14 those people were that administered the questions, but
15 normally we use people that are public health advisors that
16 usually have a Bachelor's Degree, and sometimes we use
17 nurses.

18 Q. You were talking about who you use at CDC. Do you
19 know whether or not you used those people in this pilot
20 health study?

21 A. I don't.

22 Q. You have no knowledge?

23 A. No.

24 MR. CARR: Your Honor, how long do you want to go

1 tonight?

2 THE COURT: Well, I was thinking five, but do you
3 want to go --

4 Q. (by Mr. Carr) Doctor, before we close for the day
5 I'd like to ask you the question about those problems that
6 were related on -- what page is it, Table C-6 on Page 67.
7 What is your expectation on the number of people that were
8 going to report peripheral neuropathies? You are reading
9 before the answer, but it's all right. You want to give me
10 your own judgment before you read it? No, you don't. Okay.
11 Shall I just ask you a lot of questions, you want to give me
12 your answer? Do you want to look at the answer first to see?

13 A. I thought -- I'm sorry. I thought you had directed
14 me to look at peripheral neuropathy.

15 Q. I want to know first of all what is your judgment
16 as to the ordinary.

17 A. I shouldn't look at this table?

18 Q. It's all right. Ordinary random population, expect
19 to have peripheral neuropathy?

20 A. I really probably shouldn't answer this question
21 anymore now.

22 Q. I'm sorry?

23 A. I probably shouldn't answer this question anymore.

24 Q. Sure, you should.

1 A. I would have said somewhere between 5 and 10
2 percent, if I had to take a guess. It against depends on the
3 age group.

4 Q. Well actually, Dr. Kimbrough, what you've been
5 doing in giving me those percentages of people that you would
6 expect to have those particular problems, you have in fact
7 been giving me your guesses, haven't you?

8 A. Yes.

9 Q. Yeah. And not really based upon any considered or
10 reflective analysis of the population in general?

11 A. They are based on -- partly on my experience and
12 partly on the information that we got in those Haines
13 studies. But I can't specifically remember exact numbers.

14 Q. Doctor, you couldn't even actually, as far as those
15 Haines studies are concerned, you really couldn't tell me
16 within 10, 15, or 20 percent of the results of the Haines
17 study without having them here on any particular ailments?

18 A. Well, one specific thing that sticks in my mind was
19 that about 50 percent of the population said that they had
20 skin problems.

21 Q. Is that the only thing?

22 A. I was impressed --

23 Q. I'm sorry?

24 A. I was impressed by that.

1 Q. Is that the only thing that sticks in your mind?

2 A. And that a lot of things like headaches were very
3 frequent.

4 Q. Yes, but you don't really remember the percentage
5 of the frequency, do you, ma'am?

6 A. Not the exact percentage.

7 Q. No, not within 10 percent, do you, ma'am?

8 A. Maybe not.

9 Q. I'm sorry?

10 A. Not within -- whether something is 50 percent or 40
11 percent, you just know it's high.

12 Q. What you are doing when you give me the
13 percentages, you are just guessing, aren't you?

14 A. To some extent.

15 MR. CARR: Your Honor, I think it's five o'clock
16 now and I know the lady is tired. It's six o'clock her
17 time. I'd be shooting somebody if you had me asking
18 questions, answering -- see, I'm in bad shape at five --
19 answering questions at six o'clock tonight.

20 THE COURT: Okay, we will break. Any problem with
21 starting at nine o'clock?

22 MR. CARR: None from us.

23 THE COURT: Any problem.

24 MR. HEINEMAN: (indicates negatively.)

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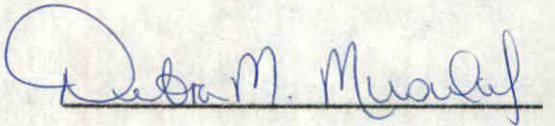
THE COURT: Okay, start at nine o'clock.

-- COURT ADJOURNED:

1 STATE OF ILLINOIS)
2 TWENTIETH JUDICIAL CIRCUIT) SS
3 COUNTY OF ST. CLAIR)
4

5 I, DEBRA M. MUSIELAK, certify the foregoing to be a
6 true and accurate transcript of the testimony and proceedings
7 in the above-entitled cause.

8 Dated this 14 day of January, 1986.
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Debra M. Musielak

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STATE OF ILLINOIS)
)
TWENTIETH JUDICIAL CIRCUIT) SS
)
COUNTY OF ST. CLAIR)

I, RICHARD P. GOLDENHERSH, one of the Judges in and
for the Twentieth Judicial Circuit, do hereby certify that I
have examined the aforesaid transcript of proceedings, and
certify the foregoing to be a true and accurate transcript of
the testimony and proceedings in the above-styled cause.

Dated this ____ day of January, 1986.



HON. RICHARD P. GOLDENHERSH

1 Q. Now, Dr. Kimbrough, are you familiar with the
2 findings in the original Nitro employees who were exposed in
3 the accident in '49, did they not have neurotoxic syndrome?

4 A. In the workers that were in the explosion?

5 Q. Yes.

6 A. Yes. Dr. Suskind reported that also.

7 Q. Now, you didn't mention that, did you, ma'am?

8 A. No, I --

9 Q. Or do you know in this case that there are
10 neurotoxic syndromes reported in this case?

11 A. No.

12 Q. Are you familiar with the Suskind morbidity study
13 as to what he reported there?

14 A. I read the study, yes.

15 Q. Now, Dr. Kimbrough, I got somewhat aside there. On
16 the Lysol content, what was your understanding the level of
17 the Lysol contaminant was with TCDD?

18 A. The concentrations were very low.

19 Q. Well, that doesn't help me, ma'am. You've said
20 that already.

21 A. I don't remember.

22 Q. Were you told by anybody in behalf of Monsanto that
23 their 2,4-dichlorophenol also was found to contain TCDD?

24 A. Yes.

1 Q. And at what levels do they tell you the
2 2,4-dichlorophenol contained?

3 A. I think it was also in parts per billion.

4 Q. Was the first time that you learned that Monsanto
5 had products that it was selling commercially containing TCDD
6 -- was the first time you learned it when counsel for
7 Monsanto told you that fact?

8 A. When there was a lot of publicity about TCDD, the
9 EPA decided to look at production processes --

10 Q. I wonder if you could answer my question.

11 A. No, it wasn't the first time that I was aware --

12 Q. When did you first learn that Monsanto products
13 contained, that is 2,4-dichlorophenol or Lysol or some other
14 Monsanto product, other than 2,4,5-T, which is well known,
15 contained TCDD?

16 A. I first learned that those types of products can
17 contain trace amounts of TCDD some time in the past, maybe a
18 year ago or so.

19 Q. About a year ago?

20 A. Uh-huh.

21 Q. And from whom did you learn that?

22 A. It was from the EPA.

23 Q. You know where they learned it?

24 A. They asked the manufacturers to give them

1 information on production processes and in what production
2 processes you might have contamination with those types of
3 compounds.

4 Q. Now, do you know whether or not Monsanto, other
5 than telling you, has ever told anybody associated with the
6 government that their products are coming out of the Sauget,
7 Illinois, plant contained TCDD?

8 A. I don't know.

9 Q. Did Monsanto's representatives, any of them, ever
10 tell you that they had notified the government, the FDA, or
11 the EPA, or the CDC, or any other governmental agency that
12 their products that they were producing here at Sauget,
13 Illinois, contained TCDD?

14 A. They would not have any reason to tell me.

15 Q. That may be or may not be, Dr. Kimbrough, but that
16 isn't what I asked you.

17 A. I would imagine they tell the EPA, but --

18 Q. Again, I didn't ask you for imagination. I asked
19 you, did they tell you that they ever told anybody?

20 A. No.

21 Q. All right.

22 A. No.

23 Q. Did any representative of Monsanto, including Dr.
24 Roush, ever tell you that they considered one part per

1 billion in their Santophen, which is -- do you know what
2 Santophen is?

3 A. It's a germicide.

4 Q. Well, it's the base that goes in to make the Lysol?

5 A. Uh-huh.

6 Q. Same thing?

7 A. Uh-huh.

8 Q. And did they ever tell you that they considered one
9 part per billion in the Santophen as medically acceptable?

10 A. No.

11 Q. Have you ever attempted to make a determination as
12 to what amount of the, 2,3,7,8-TCDD, not just TCDD, but
13 2,3,7,8 would be medically acceptable in Lysol?

14 A. No.

15 Q. Do you have any judgment as you sit there as to
16 what levels would be, if any, medically acceptable in
17 Santophen or in Lysol.

18 MR. HEINEMAN: Your Honor, object, beyond the scope
19 of the direct examination.

20 THE COURT: Overruled.

21 A. Not for this particular product, but I did for
22 hexachlorophene.

23 Q. And what was the level for hexachlorophene that you
24 determined would be medically acceptable for 2,3,7,8-TCDD?

1 (Following a recess for the lunch period, the following offer
2 of proof was made outside the presence of the jury.)

3

4

RENATE KIMBROUGH

5

6

(being called as a witness on behalf of the Defendant, having
been previously sworn, continued to testify as follows)

7

CROSS EXAMINATION

8

BY MR. REX CARR

9

10

11

Q. Dr. Kimbrough, you understand that you need not be
resworn today, that your oath carries over to today's
testimony as well, do you not?

12

A. I do.

13

14

15

Q. Doctor, we have been given some information just
recently that Dr. George Roush from Monsanto visited you
relative to this case, is that correct?

16

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A. No, he actually wanted to visit Dr. Vern Hauk who
is my supervisor and, he wanted to discuss with him medical
records from the Nitro plant, and Dr. Hauk had some -- Dr.
Hauk asked me then to meet with Dr. Roush and Dr. Hauk, but,
Dr. Hauk had another commitment and had to go -- sent me over
to another part of the Centers for Disease Control, so it
ended up that Dr. Hauk and Dr. Paul Stair who is also a
scientist at the Centers for Disease Control met with Dr.
Roush at CDC. I don't remember exactly when the date was to

1 discuss those records.

2 Q. And are you saying that you did not meet with Dr.
3 Roush?

4 A. Yes, I did.

5 Q. And when did you meet with Dr. Roush?

6 A. At the -- it was -- I can't remember the exact
7 date. It was a few months ago.

8 Q. Was it about the time that you agreed to
9 participate, be a witness in behalf of Monsanto?

10 A. I'm not sure whether the request preceded -- I
11 would have to check my records about the dates. I can't
12 really answer. It was about the time, but I may have agreed
13 first and then Roush may have come and visited. It may have
14 been the other way around. I just don't know.

15 Q. Would you check your records, please?

16 A. I would have to do that once I get back to Atlanta.

17 Q. You did not bring any records?

18 A. No -- I mean, I didn't know that was a question
19 that was going to be asked of me.

20 Q. Well, your best judgment it would have been in the
21 fall of this year?

22 A. Um, yeah.

23 Q. And was that the first time that you discussed any
24 of the facts about this case with any Monsanto employee,

1 attorney, or representative?

2 A. I didn't discuss this case at all. He came -- he
3 has collected, and I guess because of some of the litigation
4 that took place with the Nitro workers, he now has records,
5 medical records, of all of the workers, and he wanted to find
6 out whether we would be interested in those records, because
7 he didn't really have anything that he could do with them,
8 nor did he have anyplace to put them. And he wanted to know
9 whether, because we were in Missouri and were doing studies
10 there, whether we would be interested in getting those
11 records and having them made available to us so that we could
12 examine the details of the medical findings and whatever else
13 was in those records to get a better idea of what the
14 toxicity of TCDD might be.

15 Q. And you did not discuss that. That is only
16 inferentially connected or remotely connected with this
17 case. But you did not discuss this case at all with Dr.
18 Roush?

19 A. That wasn't the purpose of his visit.

20 Q. That may be, but my question is did you discuss
21 this case with Dr. Roush?

22 A. I didn't discuss this case. I have -- I have
23 previously at meetings and so on prior to that mentioned the
24 fact that I did those rabbit ear tests and things like that.

1 Q. What I'm interested not so much when you said to
2 Dr. Roush, but what was the subject matter and what was
3 discussed with Dr. Roush with you?

4 A. We only --

5 Q. Was this case mentioned during that conversation?

6 A. Not that I can remember. We were talking about the
7 medical records and I pointed out to him that I would have to
8 talk to NIOSH about it since we are really responsible for
9 environmental health and not for occupational health.

10 Q. Dr. Kimbrough, if you don't mind I understand that
11 you have a limited amount of time here, I would, if at all
12 possible -- if you've got an unlimited amount of time it may
13 be different. While I don't want this examination to go on
14 forever, if it would be at all possible for you to listen to
15 my question and try to answer my question as best you can, so
16 that we could move on. My question is, did you discuss this
17 case with Dr. Roush? By that I mean the medical facts, the
18 physical facts, the occurrence facts, or any facts connected
19 with this case with Dr. Roush at the time you met with him?

20 A. No.

21 Q. Were you ever advised or did you ever discuss Dr.
22 Bertram Carnow with Dr. Roush?

23 A. Not as far as this -- he may have mentioned his
24 name or -- but, no, didn't have a discussion about him.

1 Q. Did Dr. Roush -- and subsequent to that meeting,
2 how long first of all did that meeting take place Dr.
3 Kimbrough?

4 A. He was there for part of the afternoon.

5 Q. It would take a couple of hours perhaps?

6 A. Maybe. Maybe not even that much.

7 Q. Well, I'd like to have your best judgment.

8 A. Maybe a couple of hours.

9 Q. And during that period of time you discussed only
10 the issue of whether or not the CDC would take over the Nitro
11 health records?

12 A. In the condition --

13 Q. Is that correct?

14 A. Yes.

15 Q. And did you, following that meeting, have another
16 meeting with Dr. Roush?

17 A. No, I just had a telephone conversation with her.

18 Q. In that telephone conversation did you discuss this
19 case or any of the facts and the medical problems associated
20 with this case with Dr. Roush?

21 A. No, we discussed the, again, the previous problem,
22 the records and the Nitro workers.

23 Q. Records about Nitro?

24 A. Yes.

1 Q. All right. Now, have you had -- and is it only the
2 two conversations, the one in person and the one by telephone
3 you've had with Dr. Roush?

4 A. During this time I knew Dr. Roush previously.

5 Q. Well, have you been in the past, from '83 up to the
6 present time, discussed any of the facts of this case or any
7 of the medical problems or medical conditions associated with
8 this case with Dr. Roush?

9 A. Not that I can remember, not specifically.

10 Q. Have you had such conversations with anybody else
11 associated with, working for, or employed by Monsanto?

12 A. I'm not quite sure what you mean by those
13 discussions. I did not specifically. I have come several
14 times to St. Louis and to other places and given talks, and I
15 -- people from Monsanto were in the audience and they have
16 sometimes asked me questions, but, I have not had any private
17 discussion.

18 Q. I mean any conversation where you had directly with
19 Monsanto people about this case or the facts of this case?

20 A. (indicates negatively.)

21 Q. Ma'am?

22 A. No.

23 Q. Were you never asked -- when were you first asked
24 to appear in this case or to give testimony in this case?

1 A. As far as I recall, I was just recently asked. I
2 was told this morning that apparently I was asked previously.

3 Q. You say you were told this morning? Somebody from
4 Monsanto told you that they have signed an affidavit or have
5 represented to the Court that you were contacted at some
6 earlier time, is that correct?

7 A. Yes, but I don't remember.

8 Q. You have no memory of it yourself, is that correct?

9 A. No.

10 Q. The first memory you have of any contact with
11 reference to this case would have taken place in the fall of
12 1985, is that correct, ma'am?

13 A. Yes.

14 Q. Were you ever asked, to the best of your knowledge
15 at any time including the fall of 1985, to give a deposition
16 relative to this case?

17 A. What I normally do, and I get --

18 Q. Excuse me. Could you answer that question, Dr.
19 Kimbrough I'm really not interested in what you normally do.
20 I want to know what you know.

21 A. I was asked, I guess, whether I would either
22 testify or give a deposition. I don't really remember.

23 Q. That was in the fall of this year?

24 A. Yes.

1 Q. Did you -- and you have no memory, and I take it
2 you brought no -- since you have no memory you would have no
3 records of any such meeting, telephone conversation or any
4 contact by Monsanto before September of 1985 relative to this
5 case, is that correct?

6 A. That's correct. I don't make any of those records.

7 Q. All right. Now, Dr. Kimbrough, have you given
8 depositions in other matters before administrative hearings,
9 for use in administrative hearings or in trials in the past?

10 A. Just in general or in connection with Monsanto?

11 Q. No. No. In general. Not in connection with
12 Monsanto?

13 A. Yes.

14 Q. And how does one go about getting you to testify by
15 way of deposition?

16 A. Usually they -- we have a legal counsel, and if
17 somebody calls me, I send that person to our legal counsel.
18 I usually tell them that I don't testify in private
19 litigation but they can take it up with our legal counsel and
20 then whatever else they want to do they should go through
21 them. Simply because it would take an awful lot of my time
22 if I would have to deal with that, and also because they
23 would be the ones that would decide whether I should testify
24 or not.

1 Q. Well, have you ever expressed to the counsel for
2 the health department that you had no objection to or would
3 in fact testify in particular so-called private litigation?

4 A. No, I have not specifically said that.

5 Q. But you have given such depositions in the past.
6 How many cases have you given such depositions?

7 A. It's usually when it involves the Federal
8 Government in some way. There have been several.

9 Q. Well, have you given deposition litigation where
10 the Federal Government is not involved?

11 A. For instance I gave a deposition in Missouri
12 concerning the riding arenas and the contamination of the
13 horse arenas because we had done all of the --

14 Q. When did you give that?

15 A. That was maybe '74, '75.

16 Q. And that was in a private litigated matter, was it
17 not?

18 A. Yes.

19 Q. Yes. And did the -- was there any problem in the
20 persons that wanted your deposition, did they encounter any
21 problems in getting your deposition?

22 A. I don't know. I was told by our lawyer to appear
23 for this deposition which was held at CDC.

24 Q. Do you know whether or not a subpoena was, CDC does

1 honor subpoenas, does it not?

2 A. Yes.

3 Q. Do you know whether or not were you ever served in
4 this case with a subpoena to give an evidence deposition?

5 A. In this particular case here?

6 Q. Yes.

7 A. No.

8 Q. Have you been served with a subpoena in other cases
9 to give depositions?

10 A. Yes.

11 Q. And have you always honored those subpoenas?

12 A. I think at one point a subpoena was -- what you
13 call that, squashed?

14 Q. Quashed?

15 A. Yeah.

16 Q. And somebody filed a motion to quash a subpoena
17 because it was not regular, and it was quashed, is that
18 correct?

19 A. Yes, but I don't remember the details.

20 Q. All right. But other than that, to the best of
21 your knowledge, any type of subpoena to give an evidence
22 deposition has been served upon you, or the health
23 department, or the CDC relative to your testimony, you have
24 honored that subpoena, have you not?

1 A. I haven't -- I haven't -- except in a murder case,
2 I haven't been served a lot of subpoenas. That wouldn't be
3 private litigation, I guess.

4 Q. Well, really, not so much -- the subpoena isn't so
5 much served on you as it is served upon the department. My
6 question is really not directed to you personally as such,
7 but as to the department. So far as you know, has the
8 department of health always honored subpoenas and obeyed
9 subpoenas when proper and served on you or the appropriate
10 personnel in the health department?

11 A. I couldn't answer that question. You would have to
12 ask our legal counsel.

13 Q. Well, you have always responded when you've been so
14 advised by the legal counsel, are you not?

15 A. Yes, but I've always done that on their --

16 Q. I'm sorry.

17 A. I've always done that on their advice and I have
18 never paid any attention to all this other stuff.

19 Q. In any event, to your knowledge, no such subpoena
20 was ever served upon the department in this case, in 1982 or
21 '83, is that correct?

22 A. Not as far as I know.

23 Q. All right. Now, ma'am, back to the conversations
24 that you have had with Monsanto personally, have you had,

1 after the two that you mentioned with Dr. Roush, have you had
2 conversations relative to this case with other Monsanto
3 employees, agents, or attorneys up to the time you are
4 testifying here today?

5 A. I was visited by the -- by Mr. Heineman and by Jane
6 Rudolph.

7 Q. And was the visit by Mr. Heineman and Ms. Rudolph
8 the first contact that you had other than the ones you've
9 mentioned to Doctor, with Dr. Roush by Monsanto or of
10 Monsanto employees, agents, or attorneys?

11 A. Jane Rudolph called me.

12 Q. When did she first call you?

13 A. That was some time in the fall.

14 Q. Of this year?

15 A. I just unfortunately don't have any dates.

16 Q. The date isn't important, just so that it's this
17 fall, is all that -- I have some letters that -- and other
18 dates, so I don't need that. And that contact was the first
19 contact with Miss Rudolph that you had, is that correct?

20 A. Yes.

21 Q. Now, did she advise you at that time as to some of
22 the facts or some of the circumstances of this case?

23 A. She asked me whether I would testify and I told her
24 to get in touch with Martin Siegel.

1 Q. Did she give you any of the facts at that time?

2 A. I-cut her short because very often --

3 Q. Dr. Kimbrough, all I really want to know whether
4 she gave you any facts at that time?

5 A. Not really.

6 Q. All right. Now, when did you first get some facts
7 from either Miss Rudolph or Mr. Heineman or somebody else
8 connected with this case?

9 A. That was during the visit.

10 Q. All right. That would be when Mr. Heineman and
11 Mrs. Rudolph came to see you?

12 A. Uh-huh.

13 Q. You were never told by that time about any of the
14 possible health problems of the people of Sturgeon,
15 plaintiffs in this case?

16 A. No.

17 Q. And you were never told by Mr. Rudolph or Mr.
18 Heineman about the level of dioxin contaminant that was
19 involved in this case?

20 A. That was discussed during the visit, but of course
21 it was also -- most of the information, what information I
22 had, was in the memos that we had written in our staff, and I
23 went back and read that.

24 Q. I understand that, but I'm trying to isolate the

1 information given to you by Heineman, Rudolph, or others at
2 Monsanto. I have all the letters and reports that you
3 brought, that you sent out. I have those already and I've
4 read those, Dr. Kimbrough. I'd like to direct your attention
5 to the conversations that you had with people from Monsanto
6 and what they told you.

7 A. I haven't really had any such conversations.

8 Q. My question is did they tell you the level of
9 dioxin in the tank car?

10 A. Only what the levels that we discussed were the
11 levels that were in the memos and what was talked about here
12 when I gave my direct examination.

13 Q. I know, but I want to know when were you given that
14 information that you testified about in direct examination,
15 about the levels in the tank car?

16 A. Not quite sure what levels in the tank car we have
17 talked about, but the only time we talked about levels in
18 soil and in the OCP-crude product was at the meeting when the
19 Monsanto attorneys came to CDC to visit me.

20 Q. What did they tell you was the level of TCDD
21 contamination in the tank car?

22 A. They told me that there was one measurement with
23 the OCP, in the OCP-crude which contain 45 parts per
24 billion. It was also a measurement of, I think, 67 parts per

1 billion and there was --

2 Q. Who did they tell you measured it at 67 parts per
3 billion?

4 A. To be honest, I don't remember. One of the
5 measurements was done by Monsanto themselves, and the EPA
6 tried to do a measurement and they couldn't find anything at
7 first.

8 Q. Now, Monsanto told you that there were two
9 measurements contained in the car, one was 45 parts per
10 billion and another was 67 parts per billion, is that
11 correct, Dr. Kimbrough?

12 A. I think those were the numbers.

13 Q. All right. Now, when did they tell you that the 45
14 part per billion contaminant was discovered by them?

15 A. I don't think they specifically said.

16 Q. Did they tell you who reported it or who found it?

17 A. It was a chemist at Monsanto.

18 Q. Dr. Rappe, does that ring a bell with you, Doctor
19 Christopher Rappe?

20 A. Yeah, they mentioned him also.

21 Q. Now, who did they tell you -- when did they tell
22 you they discovered the 67 parts per billion in the tank car?

23 A. I don't know whether they didn't say or I just
24 don't remember. I don't know.

1 Q. I'm sorry -- and did they tell you that it was a
2 Monsanto chemist that found the 67 parts per billion of TCDD?

3 A. I don't remember.

4 Q. Did you make notes of that conversation?

5 A. No.

6 Q. Did you get from them any kind of report or summary
7 or factual statement about this case in writing?

8 A. No.

9 Q. And what you are giving us today is your best
10 memory of what you were told at the time of this visit, is
11 that correct?

12 A. Yes.

13 Q. And it is not reflected by any kind of memo that
14 you may have in your possession either here or back at
15 Atlanta, is that correct?

16 A. Yes.

17 Q. All right. What did they tell you as far as the
18 health effects of the plaintiffs in this case were concerned?

19 A. We didn't discuss the health effects.

20 Q. They didn't advise you of any findings by the
21 immunologists, or by Mayos, or by SmithKline, or by anybody
22 else?

23 A. No.

24 Q. And is the testimony that you gave on direct

1 examination completely with no knowledge as to what
2 laboratories may have found, and what doctors may have
3 related as their opinion as to the medical conditions of
4 those plaintiffs?

5 A. Yes.

6 Q. Is that correct?

7 A. Yes.

8 Q. Were you told by Doctor -- by Mr. Heineman or Miss
9 Rudolph that the plaintiffs had been examined by Dr. Carnow?

10 A. They may have mentioned that.

11 Q. Do you know Dr. Carnow?

12 A. Not personally.

13 Q. And do you know of his reputation?

14 A. I have heard his name.

15 Q. Well, my question is do you know of his reputation?

16 A. Not really.

17 Q. Did Mr. Heineman or Miss Rudolph make any remarks
18 to you about Dr. Carnow?

19 A. They may have said that Dr. Carnow was involved in
20 testifying, and so on.

21 Q. You mean they may have said -- you have no memory,
22 Dr. Kimbrough, whether they did or not?

23 A. Not specifically. We primarily discussed the work
24 that CDC had done, and that they wanted to use that as

1 evidence.

2 Q. And what work was that?

3 A. Those were the -- partly the memos that were
4 written, the advice that I had given, the other -- other
5 government officials in the discussions, the rabbit ear
6 tests. The whole thing.

7 Q. As far as what had been discovered about the
8 toxicological effects of the TCDD in Sturgeon or are claimed
9 to have been discovered, you know nothing about that, is that
10 correct, ma'am?

11 A. Yeah.

12 Q. All right. And the approximate date of the
13 Heineman and Rudolph visit was what, Dr. Kimbrough?

14 A. It was before I went to China, which --

15 Q. Before you went to China?

16 A. Yeah, which would have put it probably in October.
17 But Mr. Siegel, our legal counsel, would be able to give you
18 those dates.

19 Q. I know, but he isn't here.

20 A. I'm sorry, he was the one. He was also at this
21 meeting.

22 Q. Your best judgment as to the time, ma'am?

23 A. Of this visit? It could have been the beginning of
24 October.

1 Q. Now, did you ever have any contact from some person
2 not employed by Monsanto but intervening for, or speaking
3 for, or interceding for, or in behalf of Monsanto?

4 A. Not that I specifically remember. I get an awful
5 lot of telephone calls and people wanting me to do all sorts
6 of things.

7 Q. And it is -- does the name Dr. Wayland Hayes mean
8 anything to you?

9 A. Yes, he used to be my supervisor.

10 Q. And did he talk with you about Monsanto's needs and
11 necessities or desires in this case?

12 A. It's possible, but I don't remember.

13 Q. You don't have any memory of any conversations in
14 the past where Hayes asked you to testify in behalf of
15 Monsanto?

16 A. (nc response)

17 Q. If you don't, it's all right, Dr. Kimbrough.

18 A. I just don't. I mean --

19 Q. Now, how about Colonel Young, did you ever discuss
20 your appearance or possible appearance here with Colonel
21 Young with the Air Force?

22 A. He called me recently and asked me whether I had
23 any problems with testifying in court in general and whether
24 I was completely against doing -- giving testimony, and I

1 told him I wasn't.

2 Q. I'm sorry?

3 A. I told him I was not.

4 Q. You were not. Did he tell you why he was asking
5 whether or not you had any problems of that nature?

6 A. He was-- he mentioned the Monsanto litigation and
7 the fact that we had information at CDC which should be part
8 of the evidence.

9 Q. He mentioned that to you?

10 A. Yes.

11 Q. And, is that one of the reasons you've agreed to
12 testify here in behalf of Monsanto, because of that contact?

13 A. No.

14 Q. All right. Now, at any meetings that you had from
15 your first contact with Dr. Roush up to the time you
16 testified today, has Monsanto advised you of the dioxin
17 content of other chlorinated phenols other than the
18 orthochlorophenol-crude which you have mentioned already?

19 A. They told me that their Lysol contained trace
20 amounts of 2,3,7,8-tetrachlorodibenzo-dioxin.

21 Q. And who was it that told you that?

22 A. The attorneys at this same meeting in Atlanta.

23 Q. And when they described trace amounts, did they
24 tell you at what levels, parts per billion?

1 A. They did, but they were low parts per billion and

2 ---

3 Q. I'm sorry?

4 A. They were low parts per billion. They were lower
5 than what's in hexachlorophene, or parts per trillion, I'm not

6 --

7 Q. What's the level?

8 A. The highest that has ever been measured was 20
9 parts per billion.

10 Q. And they told you that it was lower than 20 parts
11 per billion?

12 A. Yeah, but --

13 Q. Of course you know that hexachlorophene has been
14 taken from the market?

15 A. But not because of the TCDD, because it has -- it's
16 not toxic in itself. I did that work.

17 Q. Didn't the TCDD add to the toxicity of the
18 hexachlorophene?

19 A. No.

20 Q. Ma'am?

21 A. No.

22 Q. How did you establish that?

23 A. Because the effect that was caused by
24 hexachlorophene is entirely different, and the two are

1 unrelated.

2 Q. They may be unrelated but you can get disability
3 from two separate sources, may you not?

4 A. In this case, the neurotoxicity was definitely
5 caused by the hexachlorophene itself.

6 Q. Well, can you -- do you know that no neurotoxicity
7 is caused by the TCDD?

8 A. Not this type of neurotoxicity.

9 Q. You know that TCDD has caused neurotoxicity in the
10 past in others? You know that, don't you, ma'am?

11 A. TCDD effects the, if it does anything, it affects
12 the sensory nerves at high dosage levels. In this case, it
13 was the motor nerves and the white matter of the brain that
14 was affected by hexachlorophene.

15 Q. Now, Doctor, upon what did you make your statement
16 that TCDD affects only the sensory nerves?

17 A. Because the only thing that has been described in
18 the literature and has been found in workers has been an
19 effect on the sensory nerves.

20 Q. Well, I'm asking you what literature or what study
21 is it upon which you base that opinion?

22 A. Part of that -- those are reports that came out of
23 Germany and then the I did some of this really by
24 extrapolation from another compound which is closely related.

1 Q. Well, Doctor, the extrapolation I'm not -- what was
2 the other compound?

3 A. It's -- those are the chlorinated dibenzo-furans.

4 Q. Well, the furans are indeed closely related. And
5 you have worked with furans?

6 A. I have not done any specific work on it.

7 Q. Well, you said you extrapolated from work that you
8 did on -- maybe I'm jumping to conclusions when I say that
9 you did on furans, is it work that others have done on
10 furans?

11 A. Yes. I'm referring to the poisoning in Japan and
12 Taiwan.

13 Q. You are dealing with the food poisoning case there?

14 A. Yes.

15 Q. Well, you haven't done any independent research of
16 your own?

17 A. No, but I've seen those patients.

18 Q. I'm sorry?

19 A. I have seen the patients.

20 Q. Well, you can see somebody with their legs cut off,
21 doesn't mean a thing, does it, Dr. Kimbrough?

22 A. That's true.

23 Q. Have you done any research in the case of the
24 Japanese people that were damaged by the substance in

1 question?

2 A. No.

3 Q. All right. And, the German work, was it from BASF
4 or was it the Czechoslovakian work, Jirasek, Pazderova?

5 A. I simply reviewed the literature, the German
6 literature, and that was in part the BASF --

7 Q. And other than BASF literature, did you see
8 associated with neurotoxicity or lack of neurotoxicity of
9 TCDD from Germany?

10 A. There are a number of old reports in the literature
11 and --

12 Q. Such as?

13 A. There is one paper about Baur, and there is a paper
14 of Kimmig, and those were really different plants.

15 Q. Well, part of BASF, are they not?

16 A. No. No, some of those some of that was in
17 Rheinland-Westphalen.

18 Q. Pardon me?

19 A. I'm sorry, that's a German -- I don't know how to
20 pronounce that in English.

21 Q. I have -- I don't have trouble with the
22 pronunciation. I have trouble hearing your voice, ma'am.

23 A. In Rheinland-Westphalen. There was also a plant in
24 Hamburg.

1 A. I never determined that something was medically
2 acceptable, but I felt it would not add or contribute to the
3 body burden that people were getting anyway.

4 Q. When did you decide that people were getting a body
5 burden of TCDD?

6 A. A few years ago and then --

7 Q. Well, a few years ago is how many, Dr. Kimbrough?

8 A. In the late '70's, the early '80's.

9 Q. Well, your hexachlorophene decision was made when?

10 A. I was asked that question around that time whether
11 that could appreciably contribute to tissue levels that we
12 were finding in adipose tissue, and then I calculated what
13 the dose might be that somebody would get by using things
14 like PhisoHex or the --

15 Q. I'm sorry?

16 A. Things like PhisoHex or Dial soap that also had
17 hexachlorophene in it and decided that because of the dilution
18 factor that you would get, and the amount you would use it,
19 would not appreciably contribute to the body burdens that
20 people were getting.

21 Q. And, Doctor, when did you first determine that
22 there was a body burden of 2,3,7,8-TCDD in adipose tissue?

23 A. I decided that once we -- the chemical methods were
24 going to be able to detect smaller and smaller amounts that

1 we would eventually find it, and then the first time it was
2 reported was in some adipose tissue samples that the veterans
3 administration had taken both from Viet Nam veterans but also
4 from some control people.

5 Q. You are talking about the Gross, Dr. Gross work
6 from University of Nebraska?

7 A. That was some of it, yes.

8 Q. Well, is there anything other than that?

9 A. Well, since then, Dr. Rappe has done -- has
10 conducted some analysis with tissues. We are doing adipose
11 tissue analysis at the Centers for Disease Control.

12 Q. And are you basing -- well, that's recently you are
13 doing that. My question is when did you decide what the body
14 burden was, and is your answer that all you did was read Dr.
15 Gross' report on the veterans and the controls and the
16 veterans?

17 A. No, I -- that's not the only -- that was not the
18 only reason why I felt that there would be body burdens -- I
19 predicted that, in other words.

20 Q. I'm looking for knowledge. What knowledge did you
21 have, Doctor, as to the levels of TCDD in adipose tissue in
22 addition to Gross' work?

23 A. I can't really remember when that came out, but at
24 about -- at about the same time several things happened. One

1 was that the methodology was improving so you could detect
2 lower levels.

3 Q. Doctor, I'm trying to accelerate your appearance
4 here, and if you could just answer my question. I know the
5 methodology came out. I'm interested in knowing what your
6 knowledge was and when you had it.

7 MR. HEINEMAN: Objection, the witness was trying to
8 answer that question and he interrupted her.

9 THE COURT: Overruled. Not responsive.

10 Q. (by Mr. Carr) Do you understand my question, Dr.
11 Kimbrough?

12 A. I'm trying to answer it and it's -- there was some
13 information that those materials were in the environment that
14 came out in the middle and late '70's, and so I assumed if
15 you have something that's very -- that's present in the
16 environment, people would have occasion to be exposed. And I
17 predicted in a paper which I wrote in the '70's that we would
18 probably be able to detect those levels at very low
19 concentrations, and then pretty soon people started
20 publishing and showing those.

21 Q. There are only two publications we know of, one
22 from Canada, Kingston and Ottawa, the people living in that
23 area around the Great Lakes, and the Viet Nam study by Dr.
24 Gross, is there another study published.

1 A. There are papers by Rappe, who is a Swedish --
2 Q. I know who Rappe is. But his papers did not
3 mention levels of TCDD in the fat.
4 A. He mentions --
5 Q. He mentions it in the combustion?
6 A. No, he also -- he presented, I think, a paper at
7 the last Banbury -- one of the Banbury conferences --
8 Q. That may be, and has that been published?
9 A. The Banbury conference has been published.
10 Q. Okay. Doctor, I don't want to spend a lot of time
11 on that. Is that the extent of the knowledge of adipose
12 tissue?
13 A. And our own results, which we haven't published.
14 Q. You haven't brought those results here?
15 A. No.
16 Q. And you have not furnished those to us ahead of
17 time?
18 A. No.
19 Q. And could you produce those for us?
20 A. No, we haven't finished our analysis.
21 Q. But you've used the knowledge you've gained there
22 in your testimony you are giving here, have you not, ma'am?
23 A. I haven't really used it.
24 Q. I'm sorry?

1 A. I haven't -- I expect -- I mean that's -- I
2 expected that.

3 Q. Expected what?

4 A. That if you started analyzing fat tissue of humans
5 --

6 Q. That isn't really what I asked you. You have used
7 the knowledge you've gained in those studies in the testimony
8 that you will not or cannot bring to us in your testimony,
9 have you not, ma'am?

10 A. You asked about my experience, yes.

11 Q. And, Doctor, insofar as you mentioned in your
12 direct examination testimony, studies that were ongoing as to
13 health effects, I think you mentioned birth defects, and I
14 made a note somewhere if I can find it, you worked with
15 porphyria, screened populations, birth defects, and you had a
16 number of programs going on relative to TCDD, you recall
17 that, ma'am?

18 A. Some of those statements are made in respect to
19 what you find normally in the general population, rather than
20 any specific study with TCDD.

21 Q. I understand that, ma'am, but you mentioned that
22 you have done a number of studies screening people, things of
23 that sort. Are those -- and birth defects. Are those
24 ongoing studies at the CDC? Are those studies that have

1 already been done?

2 A. The Centers for Disease Control did a birth defect
3 study in Viet Nam veterans and that's been published in the
4 Journal of American Medical Association.

5 Q. All right, but I'm interested in your -- are there
6 any other surveys CDC is doing relative to birth defects?

7 A. Not at the moment.

8 Q. Are there any that you've done in the past that
9 have not been published?

10 A. Is this only in relation to TCDD now? We have a
11 birth defects program.

12 Q. I would only be interested if it's knowledge that
13 you have used in your testimony or in coming to your opinion
14 about the toxicity of the TCDD and its health effects.
15 That's all I'm interested in.

16 A. No, except for the study that's been published by
17 Dr. Eriksson, which is the study on the Viet Nam veterans.

18 Q. Well, that's been published?

19 A. Yes.

20 Q. All right. But there are no other CDC ongoing
21 programs dealing with that?

22 A. No.

23 Q. Birth defects and TCDD?

24 A. No, but we do have this broad birth defects

1 surveillance program.

2 Q. And are the results of that program available?

3 A. Of the birth defects surveillance program?

4 Q. Yes.

5 A. Yes.

6 Q. And you didn't bring any of that with you?

7 A. No.

8 Q. What about the other studies you mentioned, you had
9 something ongoing on screening for porphyrias, porphyrin
10 cutanea tarda, hematic porphyria?

11 A. We have looked, for instance, at people in Michigan
12 in connection with other exposures, where we have measured
13 porphyrins in urine.

14 Q. Now, is that study available?

15 A. It hasn't been published yet.

16 Q. Is it available?

17 A. It's not in a form where it would be -- in other
18 words, it has not been summarized, but there was a report
19 made by a Dr. Robert Hill in a conference, and that has been
20 published in Environmental Health Perspective.

21 Q. What about work that you've done? Are you working
22 with TCDD now, ma'am?

23 A. No.

24 Q. Have you done any TCDD work other than your -- the

1 one article that you published, and I think you wrote, not a
2 chapter, but at least an article for a book relative to
3 occupational exposure to TCDD, anything besides that?

4 A. That was -- I also edited that book. Yes, I have
5 recently written a review for a book that will be published
6 to the Veterans Administration.

7 Q. Is it dealing with TCDD?

8 A. Yes.

9 Q. Is it available for us?

10 A. Yes.

11 Q. Have you -- did you bring it with you, ma'am?

12 A. No.

13 Q. Did Monsanto advise you that any documents or
14 material that you were going to use for opinions that you
15 were going to express in this case, did they advise you that
16 those must be produced to us?

17 A. No, I mean this is all my --

18 Q. I'm sorry?

19 A. This is all my information and my knowledge and my
20 experience. But any papers that you want, I'll be glad to
21 send you.

22 Q. But were you advised that we should have that
23 before you testified? Were you given any information at all
24 by Monsanto as to what to bring, what documents to bring,

1 what documents not to bring?

2 A. No.

3 Q. All right. Doctor, you have in your CV a large
4 number of papers that you've done, as well as reviewed, and
5 talks given, couple hundred of both things, I suppose, put
6 together, have you not, that are related to toxic substances
7 and the effect of toxic substance upon human populations?

8 A. Yes, animal studies.

9 Q. How many thousands of pages would you reckon you've
10 written in the area of effect of toxic substances on things
11 that may be associated with human health?

12 A. I don't really know.

13 Q. Well --

14 A. If you have a hundred papers and you have fifteen
15 pages a paper, that would be 1,500 pages.

16 Q. And none of those -- we got your CF on the day you
17 testified, I think, came here to testify. None of those
18 publications have been brought to us, have they, ma'am?

19 A. No.

20 Q. And, there is probably 20 lectures or -- they are
21 all listed as lectures on starting out with halogenated
22 compounds in February of '83 down to October the 2nd, '85,
23 lecture of hazard of chemicals in indoor air. All of those
24 are lectures that you have given in the past two years,

1 ma'am?

2 A. Yes.

3 Q. And many of them, if not -- well, the dominant
4 majority of those lectures that we have given involve dioxin
5 or polycyclic, polyhalogenated materials, do they not, ma'am?

6 A. Yes.

7 Q. And, are those -- can we get those in the public
8 area or must we get those from you if we needed to review
9 those to cross examine you?

10 A. Most of them are not available in any form.

11 Q. You have copies of all of those, though, did you
12 not?

13 A. No. You see, I don't write any talks. I just go
14 and give them.

15 Q. Well, do they take -- do you know what you say,
16 ma'am?

17 A. No. I think I gave one in St. Louis that was taped
18 and then later published.

19 Q. Ma'am, in any event, the works that you have
20 written and spoken in the past on the subject, some are
21 available and some are not, is that correct?

22 A. Yes, but the background information would be
23 available in articles that I have also written.

24 Q. I understand that, ma'am, but you understand what I

1 maybe don't understand, but when we undertake to cross
2 examine someone, we like to have, in advance of the time we
3 see them, the work that they have done that we can get either
4 from them when we take their prior deposition or order of
5 Court to produce them so that we can cross examine
6 intelligently on your views on particular subjects. None of
7 that material you have brought here in this case, isn't that
8 correct, ma'am?

9 A. No.

10 Q. That is correct, isn't it?

11 A. Yes. I'm sorry.

12 Q. I thought that's what you meant. Now, Dr.
13 Kimbrough, with regard to the Missouri Health Study you did,
14 I think you testified that you designed, or at least
15 participated in the design of the Missouri Pilot Health
16 Study, did you not?

17 A. Yes.

18 Q. And you have in your possession at CDC or available
19 to you the original health records and questionnaires that
20 were a part of that study, did you not, ma'am?

21 A. That is located at the Missouri State Health
22 Department.

23 Q. Well, as one of the participants in the study, it
24 is available to you, is it not, ma'am?

1 A. Yes.

2 Q. And if the Court were to order you to bring in the
3 raw data, all of those laboratory reports, you could do so,
4 could you not, ma'am?

5 A. This would be -- would have to be checked with the
6 Missouri State Health Department, because even though we were
7 involved in the study, it is the State Health Department
8 Study. You see, we gave the funding and some technical
9 expertise, but it is a -- the Missouri State Health
10 Department Study. It's not a CDC study.

11 Q. Well, you understand that most of the reports given
12 in that, in the published or reported results of the Missouri
13 Pilot Health Study, most of the lab reports were in the
14 nature of means and not actual values, you know that, don't
15 you, ma'am?

16 A. Yes.

17 Q. And in order to really know what people had, you
18 would need to see the lab reports themselves, wouldn't you?

19 A. Yes.

20 Q. Just, for instance, you could have a hundred people
21 who had abnormally high results in given tests and other
22 people who had abnormally low results in a given test and
23 your mean would come out in the normal range, would it not,
24 ma'am?

1 A. If you had very high and very low --

2 Q. Could you answer that question, Dr. Kimbrough?

3 A. Yes, but if you also give the range, then that
4 would give you some idea.

5 Q. All you've got is a range. You could have one
6 high, one very high and one very low, you've got the range,
7 doesn't tell you at all what the actual values were, does it,
8 ma'am? All you'd have is a range?

9 A. But it would tell you the extent of the
10 distribution.

11 Q. But that wouldn't tell me whether people are sick
12 or not, would it, based upon a laboratory result? All it
13 would give me is you would have a range of 500 parts at the
14 high and another range of five parts at the low, and all
15 cluster either high or low under that range, and you would
16 come up with a normal, if normal were halfway between the 5
17 and the 500, would you not, ma'am?

18 A. Yeah, but if you had this very high value and that
19 was extremely abnormal, that would tell you that that person
20 was sick. If you have a range, it would give you the extent
21 of the distribution of all of the values.

22 Q. But all it would give you is there is one -- if
23 you've got the range, all you'd get is that there is one
24 high, which could well be a variant, an outlier, and you've

1 got one low, which very well could be a variant or outlier.
2 The point that I'm making, ma'am, is that to properly assess
3 whether you and others connected with that Missouri Health
4 Study did in fact evaluate the lab results properly, one has
5 to see the lab results, doesn't one?

6 A. Not necessarily, but one could do that, though, and
7 could review them. Now, whether they are available would be
8 something you would have to discuss with our legal
9 department.

10 Q. I know, ma'am, but what you have here and
11 testifying, I'm sure you understand, you have an advantage in
12 that you've seen those lab reports. If you wanted to, you
13 could see them, if you haven't seen them, and when you
14 testify here, you say my opinion is thus and so. If I don't
15 have the material upon which you base your opinion, I've got
16 no option but to accept what you say, isn't that correct, Dr.
17 Kimbrough?

18 A. I've also had training and experience.

19 Q. Excuse me, Dr. Kimbrough, could you answer that
20 question for me, please?

21 A. Yes, and I also have training and experience.

22 Q. Of course you have. No question about that, Dr.
23 Kimbrough, but, when you as a scientist go in and want to
24 find out the truth, you look, or try to discover the facts

1 leading up to truth, don't you, ma'am?

2 A. Yes.

3 Q. And part of the facts leading up to the truth, you
4 don't necessarily -- well, I know you are famous for it, you
5 don't necessarily accept what someone else says, even though
6 they may be trained and experienced, do you, ma'am?

7 A. Yes.

8 Q. Isn't that correct?

9 A. Yes, that's right.

10 Q. You dig into it because you know that even though,
11 most best-intentioned people can misinterpret results, there
12 are biases, aren't there, ma'am, that can color somebody's
13 conclusions or opinions and interpretations of particular
14 tests, you know that, don't you?

15 A. The tests themselves may be biased, doesn't
16 necessarily mean how you took it, though.

17 Q. That's another element. You have to see the test
18 in order to see how it is biased, isn't that true, ma'am?
19 Now, in the case just for example for the Missouri Pilot
20 Health Study, you've given on direct testimony that those
21 people weren't sick, haven't you, ma'am?

22 A. I didn't say they weren't sick, I said that we
23 didn't find anything that we could associate with exposure to
24 TCDD.

1 Q. No, and that's because you looked at a group of
2 people that all of whom were exposed to some extent, isn't
3 that correct, Dr. Kimbrough?

4 A. We had really two groups of people --

5 Q. Could you answer that question, please?

6 A. No, I didn't.

7 Q. Doctor, did you not take 800 questionnaires as --
8 and separate those people in those questionnaires into the
9 high-risk group and the low-risk group?

10 A. Yes.

11 Q. And did you not send those questionnaires to the
12 people that live in the vicinity of the contaminated sites?

13 A. That lived in that area, yes.

14 Q. And by living in that area, isn't there a
15 possibility of exposure, albeit low, in some instances?

16 A. The possibility that the low-risk group would have
17 had any --

18 Q. I wonder if you would answer my question, Dr.
19 Kimbrough.

20 A. It's very remote.

21 Q. Dr. Kimbrough, you took people that live in Times
22 Beach, and put some of those people in your low-risk group,
23 did you not, ma'am?

24 A. We evaluated the possibility --

1 Q. Could you answer my question, ma'am?

2 A. I would have to go back and I can't answer that
3 question right now. I would have to go back and --

4 Q. Doctor, the questionnaires that you received back
5 in response were all from people who lived in the
6 contaminated -- who had addresses in the contaminated area,
7 isn't that correct, ma'am?

8 A. I can't answer that question.

9 Q. Aren't you familiar with this study that you sent
10 the questionnaires to people that lived in those areas?

11 A. We did, but I would have to -- I would have to
12 check with Richard Hoffman who was actually the one who was
13 conducting the study.

14 Q. Doctor, what you are saying now in point of fact
15 you don't know whether you did or did not have exposed people
16 in your low-risk group, is that what you are saying, if you
17 have to check?

18 A. We discussed the --

19 Q. I know you discussed it, but could you answer my
20 question?

21 A. The low and high-risk group, I don't recall that
22 the addresses of the people.

23 Q. Doctor, you do know that the 800 questionnaires
24 from which the high-risk group and the low-risk group were

1 selected -- well, strike that. You do know that your
2 high-risk group and low-risk group were selected from those
3 800 questionnaires that were received, did you not, ma'am?

4 A. Yes.

5 Q. And you do know that those questionnaires were sent
6 to people who responded to media announcements if you live in
7 an area, one of those contaminated, alleged to be
8 contaminated areas and want to participate in this study,
9 please give us your name and address. You know that's the
10 way you got the people, you know that, too, don't you, ma'am?

11 A. Yes, but not all of the questionnaires and not all
12 of that information that was collected was actually used for
13 the studies. There have been a number of effort --

14 Q. Doctor, please, we know that you didn't study 800
15 people. You selected a high-risk group from the 800 and a
16 low-risk group from the 800, did you not, ma'am?

17 A. Yes, we selected a high and low-risk group.

18 Q. But they were all from people who responded to your
19 public announcements if you lived in one of those
20 contaminated area, please let us know your identity, and if
21 possible, participate in this study, isn't that correct,
22 ma'am?

23 A. The --

24 Q. Could you answer that question?

1 A. No, that's not quite correct.

2 Q. Well, how is it incorrect?

3 A. In that there were two efforts ongoing. One was to
4 simply have a registry of, and register all of the people
5 that had had exposure. And that is what some of us
6 collection of people and so on, that was done by the Missouri
7 State Health Department and then in addition to that we
8 specifically tried to get two groups of people for the
9 studies, and we did the same thing with Quail Run. In other
10 words, one is simply a registry -- a registry of all of those
11 people.

12 Q. Yes.

13 A. That's one event which is separate from the
14 studies.

15 Q. All right. Go ahead.

16 A. And the people that were selected for the studies
17 were from the area with the highest contamination at Times
18 Beach, and then we tried to match them with controls from an
19 area that had really no contamination.

20 Q. Oh, now, Dr. Kimbrough, you did not send
21 questionnaires to areas that were not contaminated, did you,
22 ma'am?

23 A. Well, this is not -- the -- this is not the -- the
24 study of the small group of people where we also picked