

CECIL SCOTT, ET AL]
v.] No. B-84-1103-CA
MONSANTO COMPANY]

VIDEOTAPE DEPOSITION

HARTOLDMON0021092

APPEARANCES

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18
19
20 Video operator:

21
22 Johnna Coalson

1 Deposition of R. Emmet Kelly, M.D., taken on
2 April 29, 1987, at 1300 Post Oak Boulevard, Houston,
3 Texas, between the hours of 9 a.m. and 5:15 p.m. before
4 Jerry Kelley, CSR No. 2004 and Notary Public in and for
5 the State of Texas.

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11 VIDEO OPERATOR: This deposition is being
12 taken in Cause No. B-84-1103-CA and is filed in the
13 United States District Court for the Eastern District of
14 Texas, Beaumont Division. The style of the case is
15 Cecil Scott, et al versus Monsanto Company.

16 For identification purposes, the video
17 technician is Johnna Coalson of the firm Executive
18 Services, and the certified court reporter present today
19 is Jerry Kelley of the firm Nell McCallum & Associates.

20 Today's date is April 29, 1987, and the time
21 is approximately 9:15 a.m.

22 We are here today to take the oral and video
23 deposition of the witness Dr. R. Emmet Kelly. We are
24 located at 1300 Post Oak Boulevard, Houston, Texas.

25 At this time will counsel please state their

1 appearances for the record?

2 MR. LACEY: David Lacey representing the
3 plaintiffs.

4 MR. HENDERSON: Thomas Henderson for the
5 plaintiffs.

6 MR. SHOEBOOTHAM: Jon Shoebotham representing
7 Monsanto Company.

8 MR. CRAWFORD: Walter Crawford representing
9 Monsanto.

10 VIDEO OPERATOR: Will the court reporter
11 please swear in the witness.

12

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18

R. EMMET KELLY, M.D.,

19

being duly sworn, testified as follows:

20

21

EXAMINATION BY

22

MR. LACEY:

23

Q Will you state your full name for the record,

24

please, sir?

25

A R., for Robert, Emmet Kelly, MD.

1 Q And where do you live, Dr. Kelly?

2 A 665 South Skinker, S k i n k e r, Boulevard,
3 St. Louis, Missouri, 63105.

4 Q If you would, give me a very brief summary of
5 your education after high school.

6 A I graduated from St. Louis University with a
7 bachelor of science in medicine in 1930. It was a
8 combined course. And I received my MD from St. Louis
9 University Medical School in 1932. And I spent three
10 years in training at St. Louis City Hospital.

11 Q Was that an internship and residency?

12 A That is correct.

13 Q And did that result in any particular
14 specialty?

15 A Internal medicine.

16 Q Okay. And are you board certified in
17 internal medicine?

18 A Yes, I'm board certified in internal
19 medicine, recertified in internal medicine, and board
20 -certified in occupational medicine under Preventive
21 Medicine Board.

22 Q When did you become board certified in
23 internal medicine?

24 A 1955 or 1956.

25 Q And when did you become board certified in

1 occupational medicine?

2 A One of those two years also.

3 Q Have you had any subsequent formal
4 educational training since the completion of your
5 residency in approximately 1935?

6 A Yes. I had quite a few one- and two-week
7 courses in internal medicine during the course of those
8 subsequent years.

9 Q Is this continuing medical education of the
10 type required to maintain your certification?

11 A In the internal medicine it's not required to
12 take continuing medical education courses. But it is of
13 that type.

14 Q Okay.

15 After you completed your residency, did you
16 go into private practice?

17 A Yes.

18 Q And where was that?

19 A In St. Louis, Missouri.

20 Q And that would be beginning in about 1935?

21 A January -- no, July of 1935.

22 Q And in that private practice, how long did
23 you remain employed full time in private practice?

24 A Approximately six months full time.

25 Q What did you do after that?

1 A I continued private practice until I went in
2 the service in 1942, but in January of 1936 I became
3 engaged part-time with the Monsanto Company.

4 Q They were located in St. Louis primarily?

5 A Yes.

6 Q And what did you do for Monsanto Company?

7 A Well, I took care of the large plant they had
8 in St. Louis. I was their company physician to take
9 care of occupational conditions as well as to establish
10 a preventive medical program in the plant.

11 Q Approximately how much time did you devote to
12 that part-time employment from January 1936 until you
13 entered the service in World War II?

14 A Approximately four hours a day.

15 Q And would that be half time for the work load
16 you had at that point, or a third time? What was that?

17 A Probably between 30 to 40 percent.

18 Q I understand that you left that part-time
19 employment, I guess also your private practice, when
20 World War II came along.

21 A That is correct.

22 Q And did you serve in the military in a
23 medical capacity?

24 A Yes. I was in the Army Medical Corps and was
25 associated with the chemical warfare service in their

1 installations at Pine Bluff Arsenal and Edgewood,
2 Maryland.

3 Q And what years did that encompass?

4 A Approximately March of '42 until January of
5 '46, give or take a couple of months.

6 Q All right.

7 Upon your discharge from the service, what
8 did you do?

9 A Well, I came back then geographically full
10 time with the Monsanto Company as head of their
11 newly-formed medical department.

12 Q Did you have any private practice at all on
13 the side?

14 A No. I might have had an occasional
15 consultation with an occupational case, but it was
16 relatively minor. I had no private office.

17 Q Okay. When was this medical department
18 formed that you became the head of?

19 A January of -- January or February of 1946.

20 Q So it was contemporaneous with your return to
21 Monsanto?

22 A That's correct.

23 Q And how long did you remain employed full
24 time by Monsanto?

25 A Until December the 1st, 1974.

1 Q And was that a normal retirement date for
2 you?

3 A At 65.

4 Q Do you currently receive any retirement
5 benefits from Monsanto?

6 A Yes; I have a pension.

7 Q About how much is that?

8 A Well, it's deposited in the bank, so I'm not
9 so sure, but it's approximately \$30,000 a year.

10 Q In the course of your employment with
11 Monsanto, did you ever get any stock options or anything
12 like that that allowed you to buy stock in the company?

13 A Yes, I did.

14 Q Did you exercise those options?

15 A Yes, I did.

16 Q Are you currently a stockholder in Monsanto?

17 A Yes.

18 Q Do you know approximately how many shares you
19 own at this point?

20 A Well, that's a little confusing, because I
21 own in my own name probably 200, but in a trust that I
22 have set up approximately 1700 shares.

23 Q The trust benefits members of your family?

24 A Well, it really -- it's a living trust that
25 benefits the trustees.

1 Q Are you one of the trustees?

2 A That's correct.

3 Q Okay. So you are the beneficiary, then, of
4 almost 2,000 shares of Monsanto stock?

5 A That's correct.

6 Q What sort of dividends do you get each year
7 from Monsanto on that stock?

8 A I don't remember. Two dollars and something
9 a share. I don't know what it is.

10 Q So we would be talking something on the order
11 of \$4,000 or so?

12 A Three to four thousand, yes.

13 Q Okay. Do you have any other financial
14 relationships with Monsanto other than your retirement
15 pay and your stock ownership?

16 A No, with the exception that I've been called
17 in consultation on various matters from time to time
18 during the last three, four, five years.

19 Q Called by Monsanto?

20 A That's correct.

21 Q When you are called in on a consultation
22 basis, are you compensated for your time?

23 A Yes, I am.

24 Q And how are you compensated for your time?

25 A Do you mean the amount or --

1 Q Yes.

2 A With either \$100 to a \$125 an hour, depending
3 on where is the location of the services and how long
4 the services last.

5 Q Could you give me an approximation of how
6 much money you've earned in, say, the last three years
7 from Monsanto in this consultation business?

8 A Well, that varies a great deal, because about
9 three years ago, at the time of the Agent Orange
10 problems, I was quite involved. Last year I think it
11 was almost nothing. So I think it's varied from \$30,000
12 to zero.

13 Q Okay. And is that consultation primarily in
14 connection with lawsuits in which Monsanto finds itself
15 a defendant?

16 A Not -- I can't under -- make out exactly what
17 you mean by primarily. Some of the ones -- some of the
18 work was going over records of their employees, not for
19 lawsuits. Some of the work was going over various
20 problems that they may have had in their department that
21 I might have had specific expertise on. But a good part
22 of it was in lawsuits.

23 Q I guess what I was asking you is whether 50
24 percent or more of it would be in connection with
25 lawsuits, either preparation for defense of them or

1 actually involved in reviewing documents and giving
2 testimony.

3 A Probably that's correct.

4 Q Okay.

5 You mentioned \$30,000 or so that you thought
6 you got the year you were working on -- or one of the
7 years you were working on Agent Orange. Was that in
8 connection with that lawsuit?

9 A Yes, that's correct.

10 Q Okay.

11 And are you consulting with Monsanto in
12 connection with this particular lawsuit?

13 A Yes.

14 Q Okay.

15 You are here today to give your testimony in
16 connection with this lawsuit where the plaintiffs have
17 claims against Monsanto arising out of its production of
18 PCBs. Are you familiar with that?

19 A Yes.

20 Q Have you had occasion to meet with either
21 Monsanto employees, Monsanto in-house lawyers or
22 Monsanto retained trial counsel regarding this lawsuit?

23 A Let's break it down, Mr. Lacey. If you mean
24 by Monsanto employees the plaintiffs in this case, I
25 have not. If you mean by Monsanto employees their

1 in-house counsel, I have talked to them on two
2 occasions. I spent yesterday afternoon with outside
3 counsel.

4 Q Which plaintiffs do you understand are
5 employees of Monsanto or ever were?

6 A I don't know.

7 Q Okay.

8 A I have to correct myself. I presume these
9 plaintiffs are not. I have not gone over their medical
10 records, but I remember now they are not Monsanto
11 employees.

12 Q So the only -- am I correct in understanding
13 the only Monsanto employees you've met with are in-house
14 lawyers for Monsanto?

15 A Yes, with the exception of the secretarial
16 people.

17 Q Who work for those lawyers?

18 A That's right.

19 Q When did you first start consulting with
20 Monsanto about this case?

21 A I may have had a telephone call or something
22 six or eight months ago, but I think it was only in the
23 last three to four weeks that I did any consultation
24 with them.

25 Q Have you reviewed any documents whatsoever in

1 preparation for or in connection with your consultation
2 work?

3 A Yes, sir.

4 Q When did you first start reviewing documents?

5 A Within the last three weeks.

6 Q Okay. And who provided you the documents to
7 review?

8 A Both the in-house counsel and the outside
9 counsel.

10 Q Can you tell me generically what type of
11 documents you reviewed?

12 A Yes. I thought they were -- to the best of
13 my impression, they were documents that were submitted
14 by the plaintiffs' counsel.

15 Q Well, can you tell me what they were?

16 A Yes. They were reprints of various
17 toxicological and medical articles relating to the PCBs
18 and chlorinated naphthalenes.

19 Q Okay. Any other documents reviewed besides
20 reprints of articles?

21 A Well, there were probably reviews that were
22 collected by or authored by various people, either
23 government agencies or individuals who did reviews on
24 their own that I reviewed, yes, sir.

25 Q Were any of the documents that you reviewed

1 documents from Monsanto's files?

2 A It's hard to say whether they were from
3 Monsanto's file for this particular -- for this
4 particular case. I had some documents or reviews that I
5 had collected in the literature the last three or four
6 years that I had as far as myself was concerned.

7 Q What I'm asking is whether you were provided
8 any documents for your review by either in-house or
9 trial counsel for Monsanto that came from the files of
10 Monsanto.

11 A Yes. I said that. They gave me some
12 documents, yes.

13 Q That came from Monsanto's files?

14 A Yes.

15 Q What documents did you review that came from
16 Monsanto's files?

17 A Well, the reprints came from Monsanto's file.
18 The reprints of medical articles presumably came from
19 Monsanto's file. There were some bits of correspondence
20 that I had signed or that I was a -- were copied to me,
21 carbon copied to me during my time at Monsanto.

22 Q In this case, and let me just show you a
23 document to illustrate what I'm talking about, Monsanto
24 has produced various documents and they all have on them
25 a number at the bottom that begins with the initials SCM

1 and then various digits. Documents that you reviewed
2 from Monsanto, did they all have those numbers on them?

3 A I can't remember.

4 Q You didn't notice whether they did or did
5 not?

6 A No, I didn't pay any attention. Some had
7 them, but I can't say all of them did.

8 Q I see.

9 What documents did you review that you
10 understood were from the plaintiffs in this case?

11 A Reprints of medical articles dating back to
12 1936.

13 Q And did you find those also in the files of
14 Monsanto as well?

15 A I didn't find them in the files, Mr. Lacey.
16 They were given to me by the in-house counsel or given
17 to me by the outside counsel.

18 Q I believe you told me that you reviewed some
19 reprints of articles that were from Monsanto's files.
20 Correct?

21 A Yes, if I told you that. But that is -- if
22 we mean the same thing by files. They were given to me
23 by Monsanto. So whether they came from their files or
24 whether the Monsanto people photostated them and never
25 put them in their files and gave them to me, I don't

1 know, but I got them from Monsanto.

2 Q I see. But you don't know where any of the
3 documents came from, then. Is that correct?

4 A Well, they came from Monsanto, as far as I
5 was concerned. They were given to me by Monsanto. They
6 were reprints of published medical articles.

7 Q My question to you is: You don't know
8 whether they were documents that were found in
9 Monsanto's files initially, that is, files maintained by
10 the company, or whether they came from some other
11 source. Is that correct?

12 A I do not know whether they were documents
13 that were physically based in Monsanto's files. They
14 were documents that were handed to me by Monsanto
15 personnel.

16 Q Okay. Did you have a set of documents for
17 your own use and review to keep with you in connection
18 with your consultation in this matter?

19 A No. But during the course of the last few
20 years I had various PCB documents that were given to me
21 by Monsanto in various consultations that I had with
22 them that I kept, yes, sir.

23 MR. CRAWFORD: Doctor, he is just asking
24 about this case. So try to limit your answer to his
25 question, if you would, and we will get along a little

1 faster.

2 THE WITNESS: Okay, fine.

3 Would you repeat the question?

4 MR. LACEY: Yes. Let me see if I understand.

5 Q I'm trying to find out whether the documents
6 first that were given to you by counsel for Monsanto in
7 connection with this specific lawsuit were documents you
8 were able to keep and have for your reference in
9 connection with this consultation work.

10 A No.

11 Q They've all been returned to Monsanto
12 counsel?

13 A They either all have been returned or they're
14 sitting in the hotel room to be given back to them, yes,
15 sir.

16 Q Okay. That's the hotel room here in Houston?

17 A Yes.

18 Q Have any of them already been given back to
19 them?

20 A Some of -- yes, some of the ones that I have
21 seen I didn't take with me, yes, sir.

22 Q And the ones that you have seen are the ones
23 that are already in the files you have on PCBs.
24 Correct?

25 A They are not in my personal files, they are

1 in my attache case in the hotel room. And I was
2 instructed to give them back when I left Houston.
3 Because, as I understand, they are exhibits in this
4 case.

5 Q Well, let me -- let me see if I can sort this
6 out, though. You told me that you have consulted with
7 Monsanto previous to this case in other cases involving
8 PCBs. Correct?

9 A Correct.

10 Q And you have developed a file of documents
11 given to you by Monsanto in connection with those other
12 PCB cases that you maintained. Correct?

13 A Yes.

14 Q And if in connection with a new PCB
15 consultation like this case you are tendered an article
16 that you already have in your file from a previous case,
17 you don't take the article tendered to you in connection
18 with the new case, you just refer to the existing file
19 copy. Correct?

20 A Well, I don't need to refer to the existing
21 file copy, because they have given -- they have shown me
22 an article that is an exhibit in this case. So I don't
23 need to look back in any other file.

24 Q Well, I'm trying to find out whether or not
25 when you are given an article in connection with a

1 current consultation like this case and you already have
2 a copy of it in your file of articles previously given
3 you by Monsanto in connection with a prior PCB case you
4 retain the article given to you in this case.

5 A No, I do not.

6 Q If you obtain an article in connection with
7 this consultation that you do not already have in your
8 file which were given to you in connection with previous
9 PCB consultations, do you retain the new article for
10 your file?

11 A I have not retained them as yet, but if it
12 were an article that was important I would ask for a
13 copy.

14 Q Fine. And on each occasion when you've asked
15 for a copy of an article you've not previously had, has
16 Monsanto allowed you to have it?

17 A In this case I have not asked for any copies
18 as yet.

19 Q That's not my question.

20 A Oh. What is your question?

21 Q Have you ever previously asked Monsanto for
22 the privilege of retaining a copy of an article you
23 don't already have in your files and been denied that
24 privilege?

25 A Not to the best of my recollection.

1 Q Now, does that file of articles you already
2 have on PCBs provide you with a source of knowledge that
3 you draw on in rendering opinions and in testifying in
4 PCB cases?

5 A Yes.

6 Q And do you from time to time refer to that
7 file to refresh your recollection about the articles and
8 their contents?

9 A Yes.

10 Q You don't have a photographic memory, I take
11 it.

12 A That is correct.

13 Q Okay

14 A Could I have a glass of water, please?

15 MR. LACEY: Certainly.

16 Let's go off the record for a second and we
17 will get that.

18 VIDEO OPERATOR: We're going off the record.
19 The time is 9:36 a.m.

20 [Recess]

21 MR. LACEY: What was my last question and
22 answer?

23 COURT REPORTER:

24 "Q You don't have a photographic memory, I take
25 it.

1 "A That is correct."

2 VIDEO OPERATOR: We're now back on the
3 record. The time is 9:42 a.m.

4 MR. LACEY:

5 Q Dr. Kelly, you are appearing as a witness in
6 this case in several different capacities. Are you
7 aware of that fact?

8 A No, I'm not aware of how many different
9 capacities.

10 Q Okay. Let me see if I can clarify that. I
11 had asked for your deposition sometime back simply by
12 noticing it and arranging for you to come and testify.
13 Are you aware of that fact?

14 A All I -- no, I am not. I received a subpoena
15 to appear in St. Louis.

16 Q Right. That was my point. I subpoenaed you
17 for a deposition in St. Louis.

18 A That is correct. Someone did.

19 Q Yes.

20 A I don't recall who did.

21 Q Okay. And that deposition was moved as to
22 time and place by agreement and therefore you are here
23 today in my office. Correct?

24 A Correct.

25 Q In addition to simply being here as a witness

1 who I wanted to talk with about Monsanto's work with
2 PCBs, you have been retained as an expert witness in
3 this case, have you not?

4 A Yes.

5 MR. SHOEBOOTHAM: Just for purposes of
6 clarification, I'm not sure the word "retained" as an
7 expert witness is accurate. We have certainly
8 designated Dr. Kelly as an expert witness.

9 MR. LACEY:

10 Q Well, you've even written an expert witness's
11 report, have you not?

12 A When? About what?

13 MR. LACEY: Let me ask the court reporter to
14 mark this.

15 [Exhibit 1 marked]

16 MR. LACEY:

17 Q Dr. Kelly, let me show you what the court
18 reporter has marked as Exhibit No. 1.

19 A Well, this is a report of my qualifications.
20 I didn't -- didn't understand this to be a report as far
21 as the details of this case is concerned. Just as --
22 shows an abbreviated curriculum vitae and my knowledge
23 about Monsanto's experience with polychlorinated
24 biphenyls in the area of occupational health.

25 Q So there are other matters about which you

1 are going to be able to testify as an expert that are
2 not contained in your report that's marked as Exhibit 1.
3 Is that correct?

4 A I don't know.

5 Q Well, let me see if I can just understand
6 this. When were you retained as an expert witness in
7 this case?

8 A Well, again, I'm not sure that I have been
9 retained. There has been no contract, no statement as
10 far as what I am to testify about. I'm here as a
11 witness as far as facts are concerned, and my experience
12 with Monsanto. If that constitutes being an expert
13 witness, fine.

14 Q You don't know --

15 MR. SHOEBOOTHAM: Mr. Lacey, if I can clarify
16 this. We have designated --

17 MR. LACEY: No, I'll clarify it with the
18 witness. Let me clarify it with the witness.

19 MR. SHOEBOOTHAM: Well, I think Dr. Kelly may
20 not be aware --

21 MR. LACEY: I want to find out what he's
22 aware of, Jon. Just let me ask the question.

23 MR. SHOEBOOTHAM: Well, if I could, Mr. Lacey,
24 I'd like to tell you. We have designated Dr. Kelly as
25 an expert witness. We feel that many of his opinions

1 will be expert in nature. I'm not aware of any retainer
2 agreement. I wanted to clarify that on the record if
3 that's all right.

4 MR. LACEY:

5 Q Have you been paid for your consultation time
6 in this case?

7 A No.

8 Q I see. Do you anticipate being paid for your
9 consultation time in this case just as you have been on
10 other cases?

11 A Yes.

12 Q So, in terms of being paid for your work in
13 connection with this case, you expect to be paid for
14 your work, do you not?

15 A I expect to be paid for my time, yes, sir.

16 Q Okay. That's what you sell, your time.
17 Correct?

18 A Yes.

19 Q So what -- what we know there is you haven't
20 worked out the details of it yet, but you are going to
21 be paid for your time?

22 A I would hope so.

23 Q Okay.

24 Now, when did you learn that you were being
25 designated by the attorneys for Monsanto an expert

1 witness?

2 A Within the last week or ten days.

3 Q And in fact you wrote this report to Mr.
4 Hall. Do you understand Mr. Hall to be one of the trial
5 counsel for Monsanto?

6 A That's correct.

7 Q Did you talk with Mr. Hall before you wrote
8 him this report?

9 A No, I did not. I've never talked to Mr. Hall
10 about this report.

11 Q Well, how is it that you addressed a letter
12 to Mr. Hall that constituted your report to him in this
13 case? Let me show you Deposition Exhibit 1 again, then.

14 A Well, I was asked by Monsanto counsel to
15 write him a letter.

16 Q What Monsanto counsel?

17 A Mr. Bistline.

18 Q And who is Mr. Bistline?

19 A He's in-house counsel for Monsanto.

20 Q I see. Was it Mr. Bistline who called you
21 first about this case?

22 A Yes.

23 Q And what did Mr. Bistline ask that you
24 include in your report to Mr. Hall?

25 A He asked me to include a brief explanation or

1 history of my role with Monsanto while I was employed,
2 to list my knowledge concerning the health effects of
3 polybiphenyls as related to Monsanto employees.

4 Q And did you understand that the reason you
5 were writing that report was because you were being
6 designated as an expert witness?

7 A Yes.

8 Q And who told you that you were going to be an
9 expert witness for Monsanto, Mr. Bistline?

10 A Mr. Bistline.

11 Q I see. And did Mr. Bistline tell you what
12 the parameters of your testimony as an expert were going
13 to be?

14 A No, he did not.

15 Q Has anybody told you yet what the parameters
16 of your expert testimony are going to be?

17 A No, they have not.

18 Q Was it Mr. Bistline who provided you with the
19 documents about this case that you've been provided with
20 today?

21 A Mr. Bistline provided me some and Mr.
22 Crawford provided me some.

23 Q I see. When did you first talk with Mr.
24 Crawford?

25 A Probably in the last two weeks. He may have

1 talked to me sometime previously, but I don't recall.

2 Q Okay.

3 Did you make any notes of your first
4 conversations with Mr. Bistline?

5 A I made no notes of any correspondence.

6 Q I see.

7 A Communications with any lawyer.

8 Q I see. So all you have is your recollection
9 to go on there?

10 A That's correct.

11 Q Is that a habit or practice that you have, of
12 not making any notes of any correspondence or
13 communications you have?

14 A Communications rather. You said
15 correspondence and communications.

16 Q Yes.

17 A Any correspondence, obviously I would keep
18 the correspondence. But I do not make notes of
19 communications.

20 Q Why is that?

21 A I guess I'm not legally trained.

22 Q Well, you don't have a photographic memory.
23 Does it ever seem important to you to remember the
24 things that you were told?

25 A Yes.

1 Q And one of the ways people remember things
2 they're told if they don't have a photographic memory is
3 to write it down, isn't it?

4 A Some people do and some people don't.

5 Q Okay. It's your habit not to?

6 A That is correct.

7 Q Has it always been your habit not to make
8 notes of things that are told to you?

9 A That is correct.

10 Q So, for example, throughout your medical
11 practice, if a patient came in and reported his symptoms
12 to you, you would not write those symptoms down, you
13 would simply remember them in your head?

14 A No, that is not correct. We're talking about
15 two different things.

16 Q Okay. Well, let me ask about your employment
17 as an administrative person at Monsanto. Is it true
18 that if you received calls not about a patient and his
19 history but about administrative matters or people
20 inquiring about matters, you would make no written
21 record of those calls?

22 A That is not correct. I would make a written
23 record.

24 Q Well, why is it, then, you don't make written
25 records relating to your retention as a consultant by

1 Monsanto?

2 MR. SHOEBOOTHAM: Mr. Lacey, that question has
3 been asked and answered.

4 MR. LACEY: It has not been answered.

5 MR. SHOEBOOTHAM: I object to it on that
6 basis.

7 MR. LACEY: You can go ahead and answer the
8 question.

9 MR. SHOEBOOTHAM: I think you've already
10 answered the question, Dr. Kelly. If you have anything
11 different to add, feel free to do that.

12 THE WITNESS: Would you repeat the question,
13 please?

14 COURT REPORTER: "Well, why is it that you
15 don't make written records relating to your retention as
16 a consultant by Monsanto?"

17 A I've never thought it necessary.

18 MR. LACEY:

19 Q Have you ever been instructed by any lawyers
20 representing Monsanto that it's better not to make
21 written records of communications you have with them?

22 A No.

23 Q I see.

24 Did you obtain any documents from Mr.
25 Crawford regarding this matter?

1 Q What else do you draw upon besides the
2 information that you've been given by the counsel for
3 Monsanto in this case, the information you've previously
4 been given by Monsanto about PCBs that you draw upon for
5 your opinion which is expressed in Deposition Exhibit
6 No. 1?

7 A Forty years of experience with Monsanto,
8 forty years of reviewing current medical literature.

9 Q Okay.

10 Does your opinions that you hold and which
11 you've been retained to give have any bearing to the
12 documents that you maintain in your PCB files in
13 connection with your consulting business?

14 A [No reply]

15 MR. SHOEBOOTHAM: Do you understand the
16 question, Dr. Kelly?

17 THE WITNESS: No, I don't understand the
18 question.

19 MR. LACEY: I'm going to make it very clear.

20 Q Your review of documents and records while
21 you were with Monsanto stopped in 1974, when you
22 retired. Correct?

23 A My review of Monsanto records --

24 Q Yes.

25 A -- did not stop in 1974, because I have

1 reviewed some in the last two weeks.

2 Q Okay. But let me clarify my question. As an
3 employee of Monsanto, you've had no additional review of
4 Monsanto files in the ordinary course of Monsanto
5 business since your retirement in 1974. Correct?

6 A With the exception of other cases that I
7 might have been involved with.

8 Q I understand. You've also reviewed documents
9 specifically in connection with this case.

10 A Yes.

11 Q Correct?

12 A Yes.

13 Q And then there is a group of documents that
14 you have reviewed and medical literature that you have
15 reviewed between the time that you left employment with
16 Monsanto as medical director and the time that you got
17 the first documents in connection with this case.
18 Correct?

19 A Yes.

20 Q And your review of those documents form a
21 part of the basis for the opinions you express in this
22 case, do they not?

23 A If by documents you mean published medical
24 literature, yes.

25 Q Okay. And those things we would find in part

1 at least in the files that you maintain in your
2 consulting business. Correct?

3 A You would find a very small part.

4 Q But some of them would be there?

5 A They may.

6 Q Okay.

7 Now, one of the other hats that you are
8 wearing here today is -- I have a letter, and I don't
9 know if you've seen it or not, but I have a letter dated
10 April 28th from Mr. Hall designating you as a witness to
11 testify on behalf of Monsanto regarding certain matters
12 about which the company has been asked pursuant to the
13 Federal Rules of Civil Procedure to designate an expert
14 or a witness to testify about that. Are you aware of
15 that?

16 A Not until now.

17 Q Okay. Well, let me tell you the categories
18 of the notice that we call a 30(b) (6) notice that you
19 have been designated to testify about. This notice
20 asked Monsanto to designate a person or persons who have
21 the greatest knowledge within Monsanto and/or its
22 subsidiaries or affiliates about certain topics. And
23 you've been designated along with William Pappageorge.
24 Do you know Mr. Pappageorge?

25 A Yes.

1 Q You've been designated along with Mr.
2 Pappageorge on Topic No. 2. Let me read that topic to
3 you. "Those policies and practices Monsanto employed at
4 its PCB manufacturing and distribution facilities
5 regarding the handling of PCBs by Monsanto personnel and
6 any PCB-related health or other problems experienced by
7 Monsanto personnel at these facilities." Do you
8 understand the topic?

9 A Yes.

10 Q Have you made any review of any documents in
11 preparation to come here and testify on behalf of
12 Monsanto with regard to that matter?

13 A No.

14 Q I see.

15 Another topic for which you have been
16 designated is Topic No. 4. Let me read that topic to
17 you. "Any and all medical, toxicological and/or
18 epidemiological research conducted by or for Monsanto
19 regarding the use and hazards of PCBs, specifically the
20 individual, departmental and consulting research
21 assignments by Monsanto in this area, operating budgets
22 for such research, Monsanto's staffing for such
23 research, and input into this research provided by
24 Monsanto's management."

25 A Am I supposed to answer that yes or no? May

1 I read it?

2 Q Surely. Feel free to review Topic No. 4.

3 A Because there are quite a few different items
4 in that.

5 Q Yes, there are.

6 A Can I break them down?

7 Q Feel free to look at that. My whole purpose
8 of bringing this to your attention is that you have been
9 designated by Monsanto and its trial counsel to testify
10 as one of the two people that's indicated to have the
11 greatest knowledge about that area.

12 A Right.

13 Q And my real question to you is: Are you
14 aware that you are testifying as the corporate
15 representative, one of two people with the greatest
16 knowledge about that area?

17 A I am now.

18 Q But you were not before I showed this to you?

19 A I have not seen this before. But I will
20 answer.

21 Q Okay. Well, my question -- I'll ask you
22 specific questions about it. I wanted to know whether
23 you were aware of your designation on behalf of Monsanto
24 to testify about that area prior to this very moment.

25 A To all these areas?

1 Q To all those areas.

2 A No.

3 Q Okay. Have you made any preparation to
4 testify about that today?

5 A No.

6 MR. LACEY: Okay.

7 MR. SHOEBOTHAM: So the record is clear, we
8 have designated Dr. Kelly in response to your notice
9 pursuant to the Federal Rules of Civil Procedure as one
10 of two individuals to discuss these areas. We've done
11 that pursuant to the Federal Rules of Civil Procedure,
12 not necessarily adopting the language which I think you
13 included in your question. I think also Mr. Pappageorge
14 will be in a position to discuss the items that you have
15 just discussed with Dr. Kelly.

16 MR. LACEY: Well, you certainly --

17 Q You aren't prepared to discuss those areas
18 well today by having reviewed documents, are you?

19 A Which areas? There are several very --

20 Q Any of the areas in Topic 4.

21 MR. SHOEBOTHAM: Mr. Lacey, if I may, I think
22 your questions are confusing Dr. Kelly. He has been
23 designated as a person who can discuss the areas within
24 this topic. And we did that both by a telephone call to
25 Mr. Pohl about two weeks ago and by a letter which you

1 have in your hands right now,

2 MR. LACEY:

3 Q My question to you, Dr. Kelly, is: Some of
4 those areas are not easy to deal with off the top of
5 your head after being retired for 13 years, are they?

6 A That is correct.

7 Q And in order to testify accurately regarding
8 many of those areas it would be necessary for you to
9 review documents to prepare to testify, would it not?

10 A It would in some of them. Some of them would
11 not.

12 Q And yet --

13 A For example --

14 Q You've answered my question.

15 MR. SHOEBOTHAM: Let's let the witness finish
16 his answer if we could, Mr. Lacey.

17 MR. LACEY: Sure.

18 A Operating budgets for such research. That
19 did not come under my responsibility.

20 I have reviewed epidemiological research
21 conducted by Monsanto.

22 The input into research provided by
23 Monsanto's management, I don't know what that means.
24 I don't believe I had anything to do with that.

25 MR. LACEY:

1 Q And the very point of that is: For areas
2 that you don't know about now out of the top of your
3 head, if you were going to testify on Monsanto's behalf
4 about those matters it would be necessary to go and
5 review documents before you could testify about them,
6 would it not?

7 MR. SHOEBOOTHAM: Mr. Lacey, he has just told
8 you that may or may not be the case. Do you want him to
9 tell you that again?

10 MR. LACEY: About those specific areas, yes,
11 I do.

12 THE WITNESS: Which specific areas?

13 MR. LACEY: Budget, for example.

14 Q To testify about that on behalf of Monsanto,
15 since you don't know about it in your head right now, it
16 would be necessary for you look at documents, to
17 testify, would it not?

18 MR. SHOEBOOTHAM: Mr. Lacey, I would
19 appreciate it if you would show Dr. Kelly a little
20 courtesy in your questions. Dr. Kelly is doing the best
21 he can to answer your questions and answer them to the
22 best of his ability.

23 MR. LACEY: Well, if you'll let him answer
24 the question, I'm sure he's doing quite well.

25 MR. SHOEBOOTHAM: Would you restate the

1 question for him and ask it to him in a fashion that he
2 can understand and that will be --

3 MR. LACEY: Surely. Sure.

4 MR. SHOEBOTHAM: -- that will be fair?

5 MR. LACEY: May I see the notice, please?

6 Q Dr. Kelly, you indicated that with regard to
7 the specific topic under 4 of operating budgets for
8 research that you were not personally responsible for
9 that area. Correct?

10 A If you designate research into toxicological
11 matters, I was.

12 Q Okay.

13 A If you designate research into manufacturing
14 research or development research, I was not.

15 Q Well, let me go back and let's get very clear
16 with the notice. The notice on Topic 4 relates to
17 medical, toxicological and/or epidemiological research
18 conducted by or for Monsanto regarding the use and
19 hazards of PCBs.

20 Now, with regard to operating budgets for
21 that research, was that an area for which you were
22 responsible during your tenure as medical director of
23 Monsanto?

24 A Not all of them. We did not do
25 epidemiological research during my tenure with Monsanto.

1 Q But you were responsible for medical research
2 and toxicological research?

3 A That is correct.

4 Q And you had budget responsibility for those
5 areas?

6 A That is correct.

7 Q And yet you can certainly not tell me today,
8 can you, the budget that you had in any particular time
9 frame for those areas without first reviewing documents,
10 can you?

11 A I cannot.

12 Q And you can't have reviewed the documents
13 unless somebody told you you had been designated to
14 testify about that, can you?

15 MR. SHOEBOTHAM: Well, that's not necessarily
16 true. I think Dr. Kelly has told you, Mr. Lacey, that
17 he has reviewed a number of documents beginning, I
18 believe he said, three to four weeks ago up through
19 yesterday.

20 MR. LACEY:

21 Q Did you review any documents about the
22 operating budget for medical and toxicological research?

23 A No.

24 Q Are you prepared today to testify about what
25 those budgets were?

1 A No.

2 Q Okay. If you went back and reviewed Monsanto
3 records, you could refresh your memory about those
4 areas, could you not?

5 A If those -- yes, if those records were still
6 available.

7 Q And you didn't know until this very instance
8 that you might even need to ask for those records in
9 order to review them to testify, did you?

10 A I did not know.

11 Q Okay. And so you've not asked or reviewed
12 those records, have you?

13 A Which records? For the budgets?

14 Q The budgets.

15 A The budgets. No, I have not asked for a
16 review of the budgets.

17 Q Okay.

18 Now, additionally, you were responsible for
19 Monsanto's staffing for medical and toxicological
20 research, were you not?

21 A We did not have a research laboratory for
22 toxicological purposes while I was medical director of
23 Monsanto. I was responsible for staffing the
24 toxicological department with toxicologists.

25 Q Okay. And again in order to describe the

1 specific staffing it would be necessary to review
2 records, would it not?

3 A No. I remember the toxicologists that we
4 had.

5 Q I see. And you remember all the secretarial
6 staff and all the support staff that went with it?

7 A No.

8 Q So, again, in order to describe the staffing
9 it would be necessary to review records, would it not?

10 MR. SHOEBOOTHAM: I object to the question,
11 Mr. Lacey. He has told you he can remember the
12 toxicologists and he is prepared to testify on it.

13 MR. LACEY: And I --

14 Q And staffing includes more than just
15 toxicologists, does it not?

16 MR. SHOEBOOTHAM: Mr. Lacey, where in your
17 notice does it say that you want to discuss with Dr.
18 Kelly secretaries and staff in the toxicology
19 department?

20 MR. LACEY: It says staffing.

21 MR. SHOEBOOTHAM: Would you please point out
22 to me where it says --

23 MR. LACEY: I'll be happy to.

24 MR. SHOEBOOTHAM: -- you would like to discuss
25 with Dr. Kelly here today secretaries in the medical

1 department?

2 MR. LACEY:

3 Q Does staff include everybody that works for
4 the group?

5 A Usually staffing refers to professional
6 staff.

7 Q I see. I see. Okay. That's your
8 understanding of it. Correct?

9 A That's my understanding, yes, sir.

10 Q All right.

11 And with regard to the consulting research
12 assignments by Monsanto as to medical and toxicological
13 research, was that a matter for which you were
14 responsible?

15 A That is correct.

16 Q And would it be necessary for you to give
17 your best testimony on behalf of Monsanto with regard to
18 that, to review records?

19 A I could give you general information about
20 it. I could not give you costs, I could not give you
21 exact findings without reviewing the toxicological
22 reports that we received.

23 Q Okay. And again that would require some
24 review of Monsanto records for your best testimony on
25 those matters, would it not?

1 A For my complete testimony --

2 Q For your complete testimony?

3 A For my complete testimony, yes.

4 Q Okay.

5 You've also been designated in another area,
6 along again with Mr. Pappageorge, Area No. 5. Let me
7 address that one with you. It specifically is
8 Monsanto's efforts, if any, to monitor available medical
9 and scientific literature regarding the hazards to human
10 health associated with exposures to PCBs, including the
11 monitoring of animal studies, the amount of resources,
12 including funding, manpower and equipment, devoted by
13 Monsanto to such efforts, and Monsanto's efforts to
14 monitor and protect the health of its own employees,
15 their customers' employees and the general public from
16 any hazards of exposure to PCBs.

17 Again I take it you were not aware that you
18 were going to be Monsanto's designated representative
19 along with Mr. Pappageorge to testify about those
20 matters until just now. Is that correct?

21 A That is correct.

22 Q And again you've not reviewed any documents
23 of the company in preparation for giving testimony about
24 that. Is that correct?

25 A Well, no, it isn't correct. Because you have

1 listed a large variety of topics there. I have reviewed
2 some records of the company that are germane to
3 individual parts of that paragraph.

4 Q So as to some parts you have reviewed
5 appropriate records, as to others you have not?

6 A That is correct.

7 Q Okay.

8 And again in order to give your best
9 testimony with regard to all of those areas there are
10 additional records you would have needed to review
11 before today. Correct?

12 A May I see all those areas?

13 Q Certainly. It's Topic No. 5. And that's a
14 copy of the notice.

15 A There are statements in here that I have not
16 during my time with Monsanto carried out. Where it says
17 monitor the health of their customers' employees, I did
18 not monitor health of customers' employees. I would
19 have to review records about what available medical and
20 scientific literature I had reviewed.

21 Q So there are things you would need to look at
22 in order to give your best testimony about that?

23 A Yes.

24 Q Now, would the documents that you have back
25 in your hotel room assist you in testifying about these

1 areas in which you've been designated as corporate
2 representative of the company?

3 A It would assist me, but it would not be the
4 sole evidence of which I would base any testimony.

5 Q In fact, there would be other documents that
6 you have not even reviewed that you would want to review
7 before giving your best testimony?

8 A There would be other information that is
9 available to me, as I said, on the basis of my clinical
10 and occupational experience over these several decades.

11 Q And there would also be other Monsanto
12 documents you would specifically want to review before
13 you could give your best testimony about each --

14 MR. SHOEBOOTHAM: Mr. Lacey --

15 MR. LACEY:

16 Q -- of these areas. Is that correct?

17 MR. SHOEBOOTHAM: Mr. Lacey, if I could, what
18 do you mean when you say before he could give his best
19 testimony? Why don't you pose questions to him about
20 particular areas and see whether he needs to review
21 documents in order to -- to answer those particular
22 areas? Your question is pretty vague and ambiguous.

23 MR. LACEY: Let me just get the answer to the
24 question.

25 Q In addition to the documents you have back in

1 your hotel room, and your experience with the company,
2 in order to give your best testimony with regard to
3 these areas in which you've been designated as an expert
4 or a representative for the company, there are
5 additional company documents you would need to review.
6 Correct?

7 A No. I do not know what additional company
8 documents might be available.

9 Q But that's my point. You would need to
10 search for them and find out if they exist before you
11 could give your best testimony --

12 A No.

13 Q -- would you not?

14 A No, that's not correct.

15 MR. SHOEBOTHAM: Mr. Lacey, for the record,
16 too, you are sitting there with about 20,000 pages of
17 documents behind you that have been provided to you by
18 Monsanto. You are certainly free at any point in the
19 deposition and I'm sure that you will show him quite a
20 few documents that he can testify from or testify about.

21 MR. LACEY: Well, I'll endeavor to show him
22 some documents, Mr. Shoebotham. You sent me several
23 folders late yesterday evening that I saw for the first
24 time after we picked a jury in this case. I don't know
25 how many more documents you have in your office you

1 intend to dribble out to me over time. But I certainly
2 don't have all the Monsanto documents that this man
3 would have access to.

4 MR. SHOEBOTHAM: Mr. Lacey --

5 MR. LACEY: And he's here as a corporate
6 representative. And I'm trying to establish very
7 clearly that you didn't even bother to tell him he was
8 going to be a corporate representative or to assist him
9 in getting prepared to testify about areas where you
10 designated him as one of the people who could testify on
11 behalf of the corporation about those areas.

12 MR. SHOEBOTHAM: Mr. Lacey, I first of all
13 don't appreciate the insinuation that I have some
14 documents in my possession that you are entitled to that
15 I haven't produced to you. That has not occurred.

16 Secondly, I met, pursuant to your request by
17 telephone yesterday morning, with Dr. Kelly all day
18 yesterday and I showed him a vast number of documents.
19 Specifically, I showed him documents which you told me
20 on the telephone yesterday morning that you wanted to
21 have him review, particularly technical bulletins and
22 things of that nature. So I don't think that I have in
23 any way done anything improper.

24 MR. LACEY: I appreciate your assistance.
25 When did you first get the documents that you delivered

1 have given in other cases either by trial or deposition.
2 Can you tell me as best you can recall the other cases
3 in which you have testified by deposition?

4 A About what?

5 Q About anything.

6 A In the case of Monsanto. Is that correct?

7 Q Anybody. How many depositions have you given
8 in your life, Dr. Kelly?

9 A Between 10 and 40.

10 Q Okay. I want you to tell me as much as you
11 can currently recall about the depositions you've
12 previously given. I'm interested in particular in who
13 you were testifying for -- that is, who paid you to
14 testify, if anyone -- and what the case involved.

15 A Well, I can't recollect all of them. Some
16 were for plaintiffs, some were for defendants, some were
17 for Monsanto. I have no recollection of the depositions
18 that I have given since -- during my time with Monsanto
19 or afterwards. I --

20 Q Well, let's just start with the ones you do
21 recall.

22 A I gave depositions -- let me start with the
23 trials, because that is simpler.

24 Q Okay. Okay. Well, let's go with trials.
25 And let me ask you before you start that: How many

1 times have you testified at a trial?

2 A Probably in the neighborhood of five.

3 Q Okay. Tell me about those.

4 A One was a trial concerning allegations of
5 harm due to PCB in painted silos.

6 Q And where was that case pending?

7 A Bad Axe, Michigan.

8 COURT REPORTER: Would you say that again,
9 please, sir?

10 THE WITNESS: Bad Axe. Or Broken Ax. I'm
11 not exactly sure.

12 MR. LACEY: Okay.

13 Q And who called you as a witness in that case?

14 A The Monsanto defense lawyers.

15 Q Okay.

16 A The second one was a trial at Nitro, West
17 Virginia.

18 Q At where?

19 A Nitro, West Virginia. Charleston, West
20 Virginia.

21 Q Okay. And what did that involve?

22 A Exposure to herbicides.

23 Q Do you know specifically what herbicides?

24 A 2,4,5-T.

25 Q Okay. Does that have some trade name or

1 anything?

2 A It may -- any number of companies made it.
3 But I don't recall.

4 Q Is there any generic name under which it
5 went? We've used PCBs as sort of a generic name. Did
6 that have a generic name?

7 A Well, 2,4,5-T is the generic name. It's
8 2,4-Trichlorophenoxyacetic acid.

9 Q All right. And who called you to testify as
10 a witness in that case?

11 A The defendant's lawyers.

12 Q And the defendant was?

13 A Beg your pardon.

14 Q And the defendant was?

15 A Monsanto Company.

16 Q Okay.

17 A I testified as a defendant in an ammonium
18 nitrate case --

19 Q Where was that?

20 A -- in which I was called by American
21 Cyanamid.

22 Q Where was that pending?

23 A In St. Louis.

24 Q Okay. What else?

25 A I was called as a plaintiff's witness in a

1 trial of a railroad engineer who was exposed to diesel
2 fumes in St. Louis.

3 Q Okay. What else?

4 A I'm sure during the early days of 1935 to
5 1942 I was called in on various private patients who had
6 suffered injuries in automobile accidents or something
7 like that, but I don't recall the details.

8 Q Since World War II your recollection is
9 you've testified four times, then?

10 A I may have more, but those are the ones I can
11 recall right now.

12 Q Did Monsanto make diesel fuel?

13 A No. Whether or not at the time of the --
14 their Lyon Oil merger they had a diesel component in
15 their hydrocarbon stream I don't know.

16 Q Okay.

17 Now tell me about the depositions that you
18 recall.

19 A I gave depositions in the Agent Orange case.

20 Q Okay. And what was the chemical involved
21 there?

22 A 2,4,5-T.

23 Q Is that the same chemical that was involved
24 in this testimony for Monsanto at Charleston, West
25 Virginia?

1 A It was one of the components. There may have
2 been something else in the Agent Orange at that time.

3 Q Okay. And who called you to testify in the
4 Agent Orange case?

5 A The defendants' attorneys.

6 Q Was Monsanto a defendant?

7 A They were one of seven defendants.

8 Q Okay. Was there a particular attorney who
9 called you to testify?

10 A Yes. But I don't remember their name. They
11 were a New York firm. I don't remember their name.

12 Q Were they representing Monsanto?

13 A That's correct.

14 Q Okay.

15 What other depositions have you given?

16 A I've given a deposition in a case called the
17 Outboard Marine case, of which there was a question of
18 allegations of environmental damage from PCBs.

19 Q Okay. And who called you to testify there?

20 A The lawyer for the defendant. The defendant
21 was Monsanto.

22 Q What other cases?

23 A I gave a deposition in a case that involved
24 some plasticizer in dental wax, but I don't recall much
25 about it.

1 Q A plasticizer in dental wax?

2 A That's correct.

3 Q What is dental wax?

4 A That is something that you make impressions
5 for your -- when you are making false teeth. You take
6 an impression.

7 Q What was the plasticizer involved?

8 A I don't remember.

9 Q Who was the defendant that called you to
10 testify?

11 A Well, the ultimate defendant was Monsanto.
12 don't recall the lawyer.

13 Q Okay. But Monsanto was one of the
14 defendants?

15 A Yes.

16 Q You don't --

17 A I don't know if there were more than one
18 defendant, but I know Monsanto was a defendant.

19 Q Okay. You don't recall whether the
20 plasticizer involved there were PCBs?

21 A It was not.

22 Q Okay.

23 What other depositions?

24 A There may be more. I don't recall them. I
25 mean there were more, but I just don't recall them.

1 Q Okay.

2 Do you recall any depositions that you have
3 given for plaintiffs in a case involving exposure to
4 chemicals?

5 A Yes. Well, the diesel fuel. Fuel is a
6 chemical.

7 Q And you gave not only trial testimony but
8 also a deposition?

9 A That is correct.

10 Q Okay. Any others?

11 A I don't recall. But I know there have been
12 some, but I don't recall them.

13 Q Where you testified on behalf of plaintiffs
14 who had problems resulting from exposure to a chemical?

15 A Either to chemical or to mechanical injury.

16 Q Now let me separate out the mechanical
17 injury. I'm not interested in mechanical injury in my
18 question right now. I'm trying to find out in what
19 cases you have testified for a plaintiff, an injured
20 person who is claiming to have suffered problems as a
21 result of exposure to a chemical.

22 A I can't recall them, Mr. Lacey. I know I
23 have done one or two.

24 I've just recalled another case, trial, in --
25 where I was called by the lawyers for Ward Transformer

1 Company in a PCB case in North Carolina.

2 Q Okay. A case in North Carolina where

3 Warren --

4 A Ward Trans --

5 Q Ward Transformer called you?

6 A That's correct.

7 Q And they were the defendant?

8 A That's correct.

9 Q Involved PCBs?

10 A Correct.

11 Q Did they buy their PCBs from Monsanto?

12 A I don't know. Because they reclaimed
13 transformers. And I don't know where they got their
14 PCBs.

15 Q Okay.

16 Any other cases you can recall where you gave
17 depositions?

18 A There may be some, but I can't recall any
19 more off the top of my head.

20 Q Okay.

21 Let me ask you about this one case you do
22 recall where you testified for the plaintiff in a case
23 involving chemical exposure. That was the diesel fumes.
24 Correct?

25 A That's correct.

1 Q Did you find a particular pathology in that
2 patient that was related to that patient's exposure to
3 diesel fumes?

4 A Yes.

5 Q And what was the pathology?

6 A He had pulmonary problems.

7 Q Can you tell me specifically what they were?

8 A He wheezed.

9 Q I see. Anything else?

10 A He was short of breath.

11 Q Anything else?

12 A I think that's a good part of his problem.

13 Q Okay. And who was that patient suing? Or
14 that plaintiff suing.

15 A Some railroad. I don't know which one.

16 Q I see. Do you know what the basis for the
17 claim was?

18 A Yes. He was an engineer in the roundhouse,
19 and the diesel fumes, when he backed up the freight
20 engine, would blow into his cab.

21 Q I see. Was that a workmen's compensation
22 case?

23 A Yes.

24 Q During the course of the next day or so while
25 we're taking your deposition, if you think of any other

1 cases in which you've testified, will you let me know?

2 A Be happy to.

3 Q Okay.

4 Now I want to try to understand a little bit
5 about your medical background. Your training came at
6 St. Louis University?

7 A My medical education came at St. Louis
8 University. My postgraduate training was at St. Louis
9 City Hospital.

10 Q Is that associated somehow with the St. Louis
11 University Medical School?

12 A Well, they had a teaching facility at
13 their -- at the city hospital, yes.

14 Q So it was related?

15 A Well, no, it was a public institution.
16 St. Louis University staffed some of the services,
17 Washington University staffed some of the services.

18 Q Okay.

19 Did your training while you were at St. Louis
20 University involve occupational medicine specifically?

21 A During the years of my medical school, from
22 1932 to 1936, there was some mention made of specific
23 occupational diseases.

24 Q I see.

25 A There were no formal occupational medical

1 courses.

2 Q I have gotten the impression that a couple of
3 the leaders in working in the occupational industrial
4 hygiene areas were Harvard and University of Cincinnati.
5 Is that correct?

6 A Well, I -- there were people at Harvard and
7 at University of Cincinnati who did a great deal of work
8 in occupational medicine. But as far as Harvard was
9 concerned, they did more in industrial hygiene, whereas
10 the University of Cincinnati did both medical and
11 industrial hygiene.

12 Q My real question is whether those
13 institutions were two of the early leading institutions
14 in the area of occupational medicine and industrial
15 hygiene.

16 MR. SHOEBOOTHAM: Do you know what Mr. Lacey
17 means when he says leading institutions, Dr. Kelly?

18 THE WITNESS: No. I think because it all
19 depends who is -- in whose evaluation.

20 MR. LACEY: Well, let me -- let me see if I
21 can clarify that.

22 Q I don't have a medical background, Doctor,
23 but I had the privilege attending Duke in an artsy
24 program in the early Seventies. And Duke had a very
25 fine medical school, I understood. That's what I heard.

1 And I heard that -- from time to time that their medical
2 school was like third or fourth in the nation, and at
3 the top of the heap was Johns Hopkins that everybody was
4 shooting at. Do doctors kind of rank medical schools,
5 and is there some view of what's good and what's better
6 and what's best?

7 A Some doctors may. I don't.

8 Q You're not aware of anything about that?

9 A No. There is no ranking that I'm aware of.

10 Q I see.

11 Have you in your own mind ever reached any
12 conclusion about places that seemed to have the
13 outstanding programs in things like industrial hygiene
14 and occupational medicine and the like?

15 A Yes. I think Cincinnati had it and I think
16 University of Pittsburgh had it.

17 Q Okay. What about Harvard?

18 A Harvard did not have any occupational medical
19 courses.

20 Q I see. So the two schools that you would
21 place at the top of the heap, then, would have been
22 University of Cincinnati and University of Pittsburgh in
23 your own ranking?

24 A I said I didn't rank them. I said they had
25 good programs. Other schools may have had programs that

1 I was not familiar with.

2 Q I see.

3 In making decisions on behalf of Monsanto
4 about getting assistance from outside groups on matters
5 like occupational health and industrial hygiene, did you
6 have any particular institutions that you personally
7 favored because of what you considered to be their
8 prominent positions?

9 A University of Cincinnati.

10 Q Okay. And so at least your personal
11 selection for much of the outside work that you had done
12 from time to time revolved around their programs. Is
13 that correct?

14 A Outside work for what? Would you clarify
15 that again? You said industrial hygiene, occupational
16 medicine?

17 Q Yes.

18 A Yes, University of Cincinnati.

19 Q Okay. And you sent your matters there
20 because you thought that they were very well qualified
21 to do that work. Correct?

22 A Yes, sir.

23 Q In your own view today what would you
24 identify as the leading institutions with regard to
25 matters of industrial hygiene and occupational health?

1 A I'm not prepared to answer that question. I
2 don't know.

3 Q Do you still consider the University of
4 Cincinnati to be a good institution?

5 A Yes. I don't believe it's as good now as it
6 was then, but --

7 Q Okay. Other than that, you don't have any
8 idea of what institutions are in your opinion doing
9 better or worse in that area nowadays. Is that correct?

10 A That's correct. There may be some that I
11 don't know about.

12 Q Okay. And you aren't aware of any you do
13 know about that you would list as doing good work in
14 that area?

15 A I just don't know any, that's correct.

16 Q Okay. That's all I need to know.

17 Let me talk to you a little bit about your
18 actual part-time work for Monsanto from the mid-1930s, I
19 guess, July of 1935, through January or February of
20 1942. Okay?

21 A Yes, sir.

22 Q During that time frame from 1935 until
23 January or February 1942 --

24 A Pardon me. You said '45 the first --

25 Q I'm sorry. It should be -- didn't you go

1 into the service in '42?

2 A That's correct. But you said from '45 --

3 Q I appreciate you correcting me. Let me --
4 let me make my question clear. You worked part-time
5 with Monsanto from mid-1935 until January or February
6 1942. Correct?

7 A Yes.

8 Q Then you went into the service for a period
9 of time?

10 A Yes.

11 Q Okay. And you came back as the medical
12 director of the new medical department in 1946?

13 A Yes.

14 Q Okay. I want to focus right now on the work
15 that you did for Monsanto during your part-time
16 employment from '35 to '42. Okay?

17 A Yes. Okay.

18 Q Now, part of that work involved being the
19 company's plant physician. Correct?

20 A Yes, sir.

21 Q And what plant were you the plant physician
22 for?

23 A It was the St. Louis plant. At that time it
24 was called Plant A, and it was then -- the name was
25 changed sometime to the Queeny plant. I don't know when

1 that name change was inaugurated.

2 Q Did each company plant have a plant doctor in
3 the period that you were the plant doctor for the
4 St. Louis plant, also known as Plant A, also known as
5 the Queeny plant?

6 A Some did and some didn't.

7 Q Okay. Do you know how the distinction was
8 made between which plants had plant doctors and which
9 ones didn't?

10 A By size.

11 Q The larger plants had plant doctors?

12 A That is correct. And a plant of 30 or 40
13 just had the name of a plant physician that they sent
14 injuries to.

15 Q Okay.

16 Now, were there more than one plant in the
17 St. Louis area?

18 A Yes.

19 Q What other plants were in the St. Louis area?

20 A There was a plant called Plant B.

21 Q Okay.

22 A On the east side of the Mississippi River,
23 called Monsanto Illinois. The name of the plant has
24 been changed to Krummrich plant, K r u m m e r i c h.
25 The name of the city has been changed to Sauget,

1 S a u g e t.

2 Q You almost need a road map to follow that
3 one, don't you?

4 A Well, it's the same place.

5 Q Okay.

6 A Then there was a plant in the southern part
7 of the city of St. Louis called the Carondelet plant.

8 Q Would you spell that?

9 A C a r o n d e l e t.

10 Q Did that have a letter number associated with
11 it?

12 A I think it was Plant C. I'm not sure.

13 Q Okay. Any other plants in the St. Louis
14 area?

15 A No.

16 Q Who was the company physician for the Plant
17 B?

18 A There was a -- there were two doctors,
19 Dr. R. B. and Dr. B. E. Ellis, E l l i s.

20 Q And were they located in St. Louis or on the
21 other side of the river?

22 A In East St. Louis.

23 Q And that's --

24 A That's the other side of the river.

25 Q Okay. So they were in Illinois and you were

1 in Missouri?

2 A That's correct.

3 Q What about Plant C? Was there a company
4 doctor for that plant?

5 A No. At first when I first came there they
6 had just the name of neighboring physicians that they
7 sent injuries to. Later on, when we obtained part-time
8 physicians at the Queeny plant in addition to myself,
9 some of our part-time physicians serviced the Carondelet
10 plant.

11 Q Now, what were the specific duties of a
12 company plant physician or plant doctor?

13 A Specifically, they were to take care of any
14 occupational injuries or occupational conditions.

15 Q Does that mean if someone mashed his hand in
16 the door while at work you would see that person?

17 A I would see the person or he would be sent to
18 the hospital and I would arrange for specialized medical
19 care.

20 Q Okay. Were there any other duties that were
21 assigned to each plant doctor?

22 A Yes. Again it depended on the time the
23 doctor spent. He carried out physical examinations on
24 the employees.

25 Q Now, are these preemployment physicals or

1 post-employment physicals or what?

2 A These are preemployment physicals and
3 employment physicals during the course of his
4 employment.

5 Q Okay. It was customary for Monsanto to have
6 a preemployment physical on a new employee applying?

7 A Yes.

8 Q And what was the purpose of that
9 preemployment physical?

10 A To find out the state of his health and to
11 find out to see whether his health was in -- where he
12 could be placed in the plant that would not cause any
13 ill effects to the employee.

14 Q You would be screening out things like bad
15 backs, bad knees, things of that sort?

16 A Well, certainly there would be some
17 screening, depending on whether the man was going to be
18 doing heavy manual work. We would not want a person in
19 there with a bad back who couldn't do the heavy work.
20 So there would -- but it was really more of a placement
21 exam than a screening exam.

22 Q Well, what sort of --

23 A In other words, to turn the people down.

24 Q I'm sorry.

25 A In other words, the amount of people who were

1 rejected was relatively small. The amount of people who
2 were placed in various jobs with or without limitations
3 were so placed on the basis of their physical
4 examination.

5 Q Let me get you to give me some examples of
6 how you would screen an employee and have them placed in
7 a particular job based on limitations.

8 A Well, if a man gave an allergic history, he
9 would not be placed in an area where he would come in
10 contact with fumes or dusts.

11 Q Okay. And would you ever be in a situation
12 where you would turn down an employee because of an
13 allergic history so that he simply would not be able to
14 get a job with Monsanto?

15 A That could occur, yes, sir.

16 Q Okay.

17 Now, what sort of things went on in the
18 preemployment physical? Did you take a history from
19 them?

20 A Yes, sir.

21 Q Did you perform a physical examination?

22 A Yes, sir.

23 Q Did you do anything else?

24 A Yes, sir.

25 Q What else?

1 A We did urinalysis on all people; some people
2 we did x-rays on; and the scope of the physical
3 examination was widened as the years progressed.
4 From '36 to '74 there was an increase in sophistication
5 in examination procedures, and we went along with the
6 sophistication.

7 Q How long did you actually physically perform
8 these examinations yourself?

9 A I physically performed examinations until
10 1942, when I went in service. Then I performed physical
11 examinations on salaried people in the general office
12 off and on until 1974.

13 Q Do I understand that after 1942 you were no
14 longer doing these screening exams for people working in
15 the actual plants?

16 A Well, during the first four years, of course,
17 I was not with Monsanto at all, until '46. And then I
18 was not at the plant itself, no, sir; I was at the
19 general office.

20 Q So others then were doing the screening exams
21 of Monsanto plant employees after 1942?

22 A Yes, other people were.

23 Q Okay.

24 What was the purpose of conducting a
25 urinalysis?

1 A To see if they had any kidney or bladder
2 problems.

3 Q And what would you be looking for in that?
4 What sort of tests did you have performed?

5 A You test for diabetes, you test for red cells
6 in the urine, you test for albumin in the urine.

7 Q Okay. And the x-rays. What was x-rayed?

8 A That varied. In some plants where there was
9 heavy manual labor they did back x-rays. In the
10 majority of plants they did chest x-rays. Some plants
11 they did not do chest x-rays.

12 Q What was the difference between the plants
13 that did chest x-rays and the plants that did not do
14 chest x-rays?

15 A The presence or absence of chemical fumes or
16 dusts.

17 Q Now, you mentioned that in addition to doing
18 preemployment physicals from the period of 1935 up to
19 1942, when you went in the service, you also did
20 physicals on existing employees. Correct?

21 A Correct.

22 Q Was there a routine schedule by which all
23 employees had medical examinations?

24 A At which plant?

25 Q Whatever plants you worked at.

1 A Well, as I said, I was only a plant physician
2 at the Queeny plant.

3 Q Okay.

4 A There was a regular schedule there where the
5 employees had routine periodic examinations.

6 Q And do you recall what that schedule was?

7 A It varied between 12 months and 24 months.

8 Q Did it vary with the work people were doing
9 or just with the time frame?

10 A It varied with the work people were doing, it
11 varied with the age of the individual, it varied with
12 the doctor's hours available.

13 Q Okay. What was the variation that took place
14 with regard to the work that people were doing? What
15 factors suggested the more frequent versus the less
16 frequent examinations?

17 A If we had products that had a definite
18 possibility of affecting the worker, we examined them
19 more frequently. For example, if a person were exposed
20 to a compound that might cause nasal irritation, we
21 looked at the individual's nose every three months. If
22 a man were in the shipping room, he would be examined
23 every two years, two years and a half.

24 Q Okay. And what about the age factor? How
25 did that work?

1 A The older the man would be, the more likely
2 he would be suffering the consequences of getting old.
3 And he was examined from the standpoint of picking up
4 incipient nonoccupational conditions.

5 Q If you found an incipient nonoccupational
6 condition in an employment examination, what was done?

7 A He was referred to his family physician.

8 Q Anything else?

9 A Well, no, nothing else was done.

10 Q Did you ever conclude that advancing age made
11 people more likely to be sensitive to industrial
12 exposure problems?

13 A I never did.

14 Q And those types of considerations had nothing
15 to do with the more frequent exams for older employees?

16 A That is correct.

17 Q Now, in addition to actually performing these
18 examinations, what other functions, if any, did you have
19 in your part-time employment with Monsanto?

20 A There was an enormous amount of health
21 education and consultation on private medical matters on
22 the part of the employees.

23 Q Explain what you mean by that, if you would.

24 A Certainly. We had a doctor there four hours
25 a day. The employee was free to come in and talk to the

1 doctor about his health, his wife's health, his
2 children's health, whether they were getting the right
3 medical care, where they should go, any of these things.

4 Q You might advise them on their diet, things
5 like that?

6 A Yes. Stop smoking.

7 Q Okay. Anything else you did as a part-time
8 physician besides this private consultation with
9 employees at their discretion or desire?

10 A Yes. I went through the departments of the
11 plant at more or less regular intervals to check on what
12 exposures the men might conceivably be subject to and
13 what the general housekeeping of the plant was.

14 Q Was this a particular assignment that you
15 had, or did you take this duty upon yourself?

16 A I took it upon myself.

17 Q Did that ever get formalized into something
18 that you specifically had the right or the authority to
19 do?

20 A Well, I always had the right and the
21 authority. After we had industrial hygienists, I
22 believe it was formalized.

23 Q And that's -- that's after your part-time
24 employment, though, isn't it?

25 A Yes. Well, during my part-time employment,

1 no, but I must have had the right, because nobody ever
2 questioned it.

3 Q Okay. In connection with those periodic
4 trips through the plant -- and was this all at the
5 Queeny plant?

6 A That's correct.

7 Q During these periodic trips through the plant
8 where you checked on exposure and general housekeeping,
9 did you ever find any problems?

10 A Yes, we would find problems.

11 Q What did you do about them?

12 A Corrected them.

13 Q And how would you do that?

14 A By talking to the manufacturing
15 superintendent.

16 Q Did you ever have any trouble getting their
17 compliance?

18 A Not that I can recall.

19 I'll have to correct a statement that you
20 made. When I made these part-time -- as I was -- when I
21 was a part-time physician, at some times I went on
22 regular basis in the latter years from 1938 to '42 to
23 other plants and went through their -- those plants.

24 Q What other plants did you go to?

25 A We only had five or six at that time. There

1 was the Springfield plant, the Boston plant, the
2 Anniston plant, the Norfolk plant, the Nitro plant,
3 Carondelet plant.

4 MR. SHOEBOTHAM: Mr. Lacey, at a convenient
5 point in here for you, if we could give Dr. Kelly a
6 break I would appreciate it.

7 MR. LACEY: Why don't we just do it right
8 now.

9 VIDEO OPERATOR: The time is 10:46 a.m. We
10 are going off the record.

11 [Recess]

12 VIDEO OPERATOR: The time is 10:59. We are
13 now back on the record.

14 MR. LACEY:

15 Q Dr. Kelly, before we took a break, you
16 indicated that from sometime in around 1938 to 1942 you
17 went to plants other than the Queeny plant. Correct?

18 A Yes, sir. Correct.

19 Q And the purpose of those visits was what?

20 A To check on their medical staffing, to check
21 on what medical hazards might or might not exist, to
22 check on the environment in the plant itself.

23 Q And did you go to each one of the other
24 plants that you named?

25 A Yes, sir, I did.

1 Q Okay. On how many occasions, approximately,
2 did you visit each one of those plants? Was this one
3 grand tour or did you do it on a scheduled basis?

4 A I did it on a more or less scheduled basis.
5 I tried to see one of the plants -- each of the plants
6 every year. I was, in effect, a medical director
7 without portfolio.

8 Q Okay.
9 Can you recall generally what sort of
10 chemicals were made at the Springfield plant?

11 A Plastics.

12 Q At the Boston plant?

13 A Inorganic chemicals.

14 Q At the Anniston plant?

15 A That varied. They made abrasive compounds
16 for a while, they made chlorinated biphenyls --

17 Q That's PCBs?

18 A PCB. They made Parathion, which is a
19 phosphate-based insecticide.

20 Q Norfolk?

21 A They made caffeine and one or two other minor
22 chemicals that did not exist -- this plant did not exist
23 for a very long period of time.

24 Q Nitro?

25 A Rubber chemicals. And later on agricultural

1 chemicals.

2 Q And the Carondeleto?

3 A Carondelet.

4 Q Carondelet. Okay.

5 A They made food grade phosphate chemicals.

6 Q When you say food grade, what do you mean?

7 A Well, it was -- it goes into dentifrices, it
8 goes into phosphate baking powders and things of that
9 sort.

10 Q Okay.

11 And the Queeny plant?

12 A They made a large variety of organic
13 chemicals.

14 Q Did each department in each plant have
15 exactly the same requirements with regard to protections
16 to be provided to the workmen in that section of each
17 plant?

18 A No, sir.

19 Q Why not?

20 A Because in certain plants, in certain
21 departments of individual plants, there would be the
22 possibility of absorption of skin chemicals -- of
23 chemicals through the skin, and they would have
24 specialized coveralls and change of clothing provided
25 for them. In other departments where such a hazard did

1 not exist, they would not.

2 Q Were there any other differences between
3 departments and plants besides this skin absorption
4 problem you mentioned?

5 A I don't know what you mean by differences.

6 Q Well, was there some place that everybody had
7 an air line to them and others they didn't or anything
8 like that? I'm trying to find out protective measures
9 that might be needed in different sections of different
10 plants.

11 A Well, yes, some had areas where, because of
12 noise, ear protection had to be -- had to be worn if you
13 went in there; some had respirators available; some had
14 them where respirators were mandatory for certain parts
15 of a job; some places had to have protective aprons;
16 some people had to wear gloves at some time. Almost all
17 the plants had the same requirement for goggles and
18 safety shoes.

19 Q What were the requirements for goggles and
20 safety shoes that were generally true for all plants?

21 A Everybody had to wear them.

22 Q Okay. And safety shoe, we mean one that's
23 got a steel toe so if you drop something on it it won't
24 hurt your toe?

25 A That's correct.

1 Q And what was the requirement for goggles?

2 A In some plant -- in some departments it was
3 mandatory, in some departments the people just had them
4 in case there was a spill or sometime someone had to
5 wear goggles.

6 Q Not everybody wore goggles all the time?

7 A Some departments they did.

8 Q Okay. But in other departments they did not?

9 A They did not.

10 Q Okay.

11 And the level of protection provided varied
12 from departments within one plant depending on what
13 people were working with?

14 A Yes, sir.

15 Q And varied from plant to plant depending on
16 what people were working with?

17 A Yes, sir.

18 Q And you also mentioned in addition to looking
19 at the environment within the plants you looked at the
20 medical hazards. Do the medical hazards vary within
21 sections of the plant depending on what people were
22 working with?

23 A Well, yes, sir. Some people were working
24 with chemicals that were dangerous, some people were
25 working with chemicals like aspirin that was not

1 dangerous.

2 Q Okay.

3 And with regard to your review of medical
4 staffing, that was making sure you had an appropriate
5 plant doctor at each plant?

6 A Yes, sir.

7 Q Did those doctors also have the
8 responsibility to periodically review their own plants
9 to check on housekeeping and the like?

10 A Some did and some didn't.

11 Q To the extent that they were responsible for
12 those types of reviews, did they report to you even
13 though you didn't have the portfolio of medical
14 director?

15 A They were plant employees. They reported to
16 me if there were any occupational conditions that had
17 occurred that they had recognized. There again, we have
18 to state it depends on how much available doctor time we
19 could get.

20 Q And that was a function of and I guess in
21 part how much each plant could afford to pay for a
22 doctor to be there?

23 A No, sir. It was a question of how available
24 doctors were. Because in those days there was a doctor
25 shortage.

1 Q Okay. In some places it was less severe than
2 others and so you had more doctor time at the plant?

3 A That's correct.

4 Q Okay.

5 Did you from time to time in connection with
6 these plant reviews recommend greater levels of personal
7 protection for employees in a particular section of the
8 plant?

9 A Yes, sir.

10 Q That was within the scope of something you
11 could comment on?

12 A Yes, sir.

13 Q And to whom would those recommendations be
14 made?

15 A To whom?

16 Q Yes.

17 A They would be made to the plant manager and
18 to the manufacturing superintendent in St. Louis.

19 Q So you would tell both the person in charge
20 of the plant at the location you visited and his boss in
21 St. Louis?

22 A That's correct.

23 Q And were those recommendations generally
24 followed?

25 A Yes, sir.

1 Q Did you ever find any sections of any plant
2 where the precautions that were being taken were more
3 than you considered necessary?

4 A No, sir.

5 Q Okay. Would you have had the freedom to
6 suggest a lessening of protections if you thought that
7 was appropriate?

8 A Well, it never came up, so I can't answer
9 that.

10 Q Okay. I mean I guess my question is: Would
11 you -- if you found that, would you have felt
12 comfortable making a recommendation that you didn't need
13 something that was being done?

14 A No, sir. Because I would believe that they
15 had instituted those precautions for a particular reason
16 that I never knew when that particular reason might
17 become important again.

18 Q Okay. So your view would only be to add
19 precautions that you saw, not to remove any that you
20 felt were unnecessary?

21 A That's correct.

22 Q Okay. And in the business of working with
23 chemicals is it one of those things where it's better
24 safe than sorry? Is that what you are saying, in
25 essence?

1 A No. What I'm saying is that you recommend
2 the precaution that it's necessary to keep people from
3 having any ill effect from the chemical. Period.

4 Q Well, my question to you is: If there's a
5 question in your mind about whether a particular
6 precaution is necessary or not, it would be better to
7 institute the precaution and be on the safe side than
8 fail to institute it and then have a problem appear. Is
9 that correct?

10 A Well, that is a very broad question that I
11 think you would have to be more specific about.

12 Q You can't answer that question?

13 A Repeat it. Will you please?

14 COURT REPORTER: "Well, my question to you
15 is: If there is a question in your mind about whether a
16 particular precaution is necessary or not, it would be
17 better to institute the precaution and be on the safe
18 side than fail to institute it and then have a problem
19 appear. Is that correct?"

20 THE WITNESS: Yes, certainly. But -- yes,
21 the answer is yes. But it's a question: Is it one in a
22 million or is it one in ten? So a vague possibility
23 would not mean that precaution should be taken.

24 MR. LACEY:

25 Q Well, tell me about situations where you

1 actually did recommend additional precautions that were
2 not being taken in the plant before you made your
3 review.

4 A I recommended exhaust ventilation at -- spot
5 ventilation at various places in the manufacturing
6 installations. I recommended clothing and protective
7 clothing at various times in various departments. We're
8 still dealing now from 1936 to '42?

9 Q Yes.

10 A We did not have an industrial hygienist at
11 that time, so I made recommendations as far as
12 protection of the workers by engineering methods and
13 protection of the workers by personal protective
14 methods, yes, sir, I did that.

15 Q Okay. And my question to you is: By way of
16 telling us at what level it became important to you to
17 make recommendation if you thought the chances were one
18 out of a thousand there could be a problem did you make
19 the recommendation to go ahead and have the protection
20 or did it have to get to be one out of ten before you
21 worried about it?

22 A I can't quantify that between one and ten and
23 one and a thousand. If I thought there was a
24 foreseeable likelihood of ill effect, I would recommend
25 it.

1 Q Okay.

2 Now, when you talked about protective
3 clothing, what sort of protective clothing did you
4 recommend in particular locations?

5 A Some had daily change of coveralls, some had
6 aprons, some had gloves.

7 Q When you say coveralls, are you talking about
8 something that Monsanto itself provided?

9 A Yes, sir.

10 Q Did every employee in the plant have his own
11 coveralls supplied by the company?

12 A No, sir.

13 Q Those who didn't have company-supplied
14 coveralls, what did they do?

15 A That varied again with the plant. Some used
16 their clothes -- their work clothes they brought from --
17 from home, went home with them.

18 Q Okay.

19 A Some had company clothing, some had company
20 clothing provided daily, some had company clothing
21 provided weekly, some had company clothing provided
22 three times a year that they laundered at home
23 themselves.

24 Q If a person had company clothing that was
25 provided to them and they didn't have a daily change,

1 were they free to take it home or did they have to leave
2 it there at the plant?

3 A I don't know.

4 Q Okay.

5 A I don't remember that.

6 Q You don't know whether any employees actually
7 took company clothing home?

8 A I have no knowledge of it.

9 Q Okay. Were there employees with company
10 clothing who had laundry done for them by the company so
11 they didn't have to worry with that?

12 A Yes, sir, there were.

13 Q And that was in certain specific departments?

14 A That's correct.

15 Q For those employees that had company clothing
16 provided, were they provided paid time on their shift to
17 change into their company clothing at the beginning of
18 the shift and change out of it at the end of the shift?

19 A I think that varied. In some plants they may
20 have had 15 minutes, in some plants they did not.

21 Q Okay. Where people did make clothing
22 changes, were showers always provided for them to bathe
23 after the conclusion of the shift?

24 A Yes, sir.

25 Q Was that available at every plant?

1 A In the vast majority of plants locker rooms
2 and showers were available.

3 Q Okay.

4 A I can't say whether it was present at all
5 plants.

6 Q Okay. Were there any particular lines of
7 product for which taking a shower was something that was
8 required as a part of the safety precautions you put
9 into place?

10 A Yes, sir.

11 Q Were there other lines where that was not
12 required?

13 A Yes, sir.

14 Q And again that varied depending upon the
15 hazards of what was being worked with?

16 A Yes, sir. Potential hazards.

17 Q Okay. Did you ever recommend that a
18 particular -- or that the employees of a particular
19 section of a plant be provided with shower time where
20 they were not as a part of additional protection?

21 A No, sir.

22 Q Okay.

23 In terms of information given to employees,
24 and I'm talking again about the time frame from 1935 to
25 1942, about the hazards of anything they were working

1 with, what sort of information was given to Monsanto's
2 own employees?

3 A Monsanto had a safety department and had
4 safety meetings with the employees. The
5 manufacturing -- the plant manager and the manufacturing
6 superintendent were given information that included the
7 potential toxic effects, if any, of their products.
8 That then was given to the manufacturing
9 superintendents, to the superintendent of the individual
10 department, then he instructed the workers.

11 Q From whom did these people get the
12 information with which they instructed the workers?

13 A Either from the medical department in
14 St. Louis or the safety department.

15 Q Okay. Well, now, before 1942 there really
16 isn't a medical department except, I guess, you without
17 portfolio. Is that correct?

18 A That is correct. But it still -- from I
19 would say '38 to '42 we sent out quite a bit of
20 information on various products.

21 Q When you say "we," is that we you?

22 A I. I.

23 Q You're the "we"?

24 A I'm the "we."

25 Q Okay. So you were then the primary source of

1 information from 1938 to 1942 on the hazards of the
2 products being manufactured by Monsanto as that
3 information was supplied to your workmen?

4 A No, sir. I was the primary source for new
5 products. There was a body of information that had been
6 developed by plant experience over the years as to the
7 safe handling of the products, the raw materials and the
8 finished products that was available at each plant.

9 Q Did you have any input into that body of
10 knowledge with regard to existing products?

11 A I had some. I don't recall what it was.

12 Q I mean that in fact is why you would go
13 around to existing plants and review what was going on,
14 to see if they needed to be upgraded because of what you
15 could observe about hazards. Correct?

16 A Yes, sir.

17 Q When a presentation was going to be made, did
18 someone confirm with you the accuracy of what was to be
19 said to the workmen about the hazards of the particular
20 product?

21 A I don't believe that could be answered in a
22 yes or no. If a foreman is talking to his workers about
23 a -- a product to be used in a particular department, he
24 didn't check with me. I had given information to the
25 manufacturing superintendent, and the central medical

1 department accepted -- or realized it was a
2 manufacturing man's -- manufacturing superintendent's
3 responsibility to pass this information down to the
4 actual foreman who was in charge of the workers.

5 Q I guess what I'm trying to find out is the
6 original source of the information that was passed
7 along, whether to the manufacturing superintendent or
8 the plant manager, would he try to confirm the
9 information he was going to pass down to his foreman
10 with you before it was passed down the chain?

11 A Not necessarily. I mean I had convinced
12 myself that the manufacturing -- the plant manager and
13 the manufacturing superintendent knew what the hazards
14 were because at the conclusion of every one of my plant
15 visits I spoke both with the manufacturing
16 superintendent and the plant manager and said, "This is
17 what we have."

18 Q So you may have previously talked with them
19 and explained the hazards so they wouldn't contact you
20 before another presentation was to be made, then. Is
21 that what you are saying?

22 A That's correct.

23 Q Okay. But the original source of the
24 information that they would be passing out would be at
25 least screened and discussed by you with them?

1 A Yes. I don't know what you mean by
2 screening, but it was certainly discussed by me.

3 Q Well, let me see if I can be very specific.
4 If a particular plant manager at the time that you
5 completed your review of one of the plants asked you
6 about a specific recommendation to examine -- for
7 example, to add protective clothing and he indicated it
8 was unnecessary, you would explain to him why you
9 thought it was necessary, would you not?

10 A Yes, sir.

11 Q So his ideas would be checked against yours
12 on what hazards were potentially there and what steps
13 were appropriate to prevent them. Correct?

14 A Yes. But that -- you are implying that there
15 was a confrontation between the plant manager and myself
16 on what the safe handling procedures were. That was not
17 the case. I do not recall any plant manager disagreeing
18 with me on any safe handling procedures that I
19 recommended.

20 Q Okay. You were always the final word if
21 there was any question. Correct?

22 A As far as safe handling and medical hazards
23 was concerned. Now, there is a safety department in
24 each plant, there's a central safety department in the
25 St. Louis plant, there is very close correlation between

1 the medical department in St. Louis and the safety
2 department. The safety department in the plants is a
3 full-time man or men, so that they did a great deal of
4 the passing down of medical information.

5 Q The source, again, however, came back to you?

6 A That is correct.

7 Q Okay. There weren't two fountains of
8 knowledge of medical wisdom in Monsanto, there was one,
9 which came from the medical department and might be
10 passed down through line jobs like plant managers and
11 foremen and supervisors or might be passed down through
12 staff jobs like safety people. Correct?

13 A Or passed directly to the plant physician.

14 Q Which again would come from you to the plant
15 physician?

16 A Correct.

17 Q Okay.

18 Was there any effort to have any type of
19 written materials available to instruct workers about
20 hazards? Again I'm talking from 1935 to 1942.

21 A From whom? From the medical department?

22 Q From anybody within Monsanto.

23 A There were safety bulletins that instructed
24 workers about the safe handling of various products.
25 There were departmental rules that were posted in each

1 instructions posted in the plant was so that they could
2 be present to be reviewed from time to time and remind
3 workers of any oral instructions that had been given.

4 Correct?

5 A That was probably not the sole reason. In
6 other words --

7 Q I didn't say the sole reason.

8 A Huh?

9 Q I didn't say the sole reason.

10 A What did you say?

11 Q I said one of the reasons you had written
12 instructions and written documents in the plants telling
13 workers about hazards was to reinforce any oral
14 instructions or warnings that were given. Isn't that
15 correct?

16 A Well, no. Because there are sometimes that
17 we had oral instructions that we did not have written
18 instructions on. In other words, the safe handling
19 procedures and the safe -- the possible hazards were
20 instructed to the worker in his safety meetings and in
21 his meetings with his foreman, and he was -- may or may
22 not have been -- had a -- a written communication given
23 to him.

24 Q Are you telling me there may have been things
25 that the foreman said to the employee, "Listen up, I'm

1 gonna say it once and this is your chance to get it and
2 if you don't get it now you'll never hear it again"?

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

4 Q If you had oral instructions only about
5 environmental hazards or medical hazards, you would want
6 to repeat those from time to time to reinforce them,
7 would you not?

8 A Yes, sir.

9 Q And if you didn't repeat them orally from
10 time to time then you might reinforce them with things
11 in writing posted around the plant or given to the
12 workmen. Correct?

13 A Yes, sir.

14 Q There's a benefit in having warnings that are
15 repeated and reinforced, isn't there?

16 A That depends. Will you give me an example,
17 for example?

18 Q Sure. Sure. Let me go back and use
19 something you mentioned earlier. You mentioned that in
20 talking and counseling with these plant employees that
21 you would advise them to stop smoking. Correct?

22 A Yes, sir.

23 Q You had concluded, I take it, back in the
24 Thirties and early Forties that smoking wasn't
25 particularly good for people.

1 A Yes, sir.

2 Q You agree with the Surgeon General, I guess,
3 of the United States in his views on smoking and the
4 hazards of it.

5 A Yes, sir.

6 Q And one of the things that's been done to try
7 to reinforce that hazard is to require each pack of
8 cigarettes to have a warning on it. Correct?

9 A Yes, sir.

10 Q And each advertisement carries a warning,
11 doesn't it?

12 A Yes, sir.

13 Q And that reinforces the concern and the
14 warning that's been delivered orally by the Surgeon
15 General from time to time if you happen to watch the TV
16 when he's on. Correct?

17 A Not necessarily. I don't know if that keeps
18 anybody from buying a package of cigarettes, the fact
19 that there's this warning on this.

20 Q No. But it reinforces the warning, doesn't
21 it? It's kind of hard not to at least be aware of it
22 when it's there in writing in front of you, isn't it?

23 A Again, not necessarily. I don't know whether
24 that has kept any two-pack-a-day smoker from smoking.

25 Q That wasn't my question.

1 A What was --

2 Q My question is: When you have the warning
3 there in writing, it reinforces the existence of the
4 warning. I didn't say it made it effective. But it
5 reinforces the existence of it, doesn't it?

6 A If the man doesn't read it and if the man
7 doesn't pay any attention to it, it doesn't reinforce
8 any warning.

9 Q I suppose if you make a conscious effort not
10 to look at the pack of cigarettes on the side that says
11 anything about smoking, then you won't be reinforced
12 about it.

13 A Or if you ignore it.

14 Q Okay. Well, now, you can ignore it by still
15 knowing it's there and just choosing to not follow it,
16 can't you?

17 A Yes, sir.

18 Q But that doesn't mean the written warning
19 doesn't remind you of the warning, does it?

20 A No, sir it doesn't.

21 Q Okay. And so let me go back, then, with that
22 example. The written warnings help to reinforce the
23 presence or the existence of oral warnings, do they not?

24 A In some cases they may, yes, sir.

25 Q Now, if I understand correctly, in 1942 you

1 went into the military service in connection with
2 chemical warfare things for about four years?

3 A Yes, sir.

4 Q Did somebody replace you at Monsanto during
5 that period of time?

6 A Yes, sir.

7 Q Who was your replacement during the war
8 years?

9 A A Dr. Charles Metz.

10 Q And did Dr. Metz have the same duties that
11 you did?

12 A No, sir.

13 Q What were Dr. Metz's duties?

14 A Strictly plant physician.

15 Q So Dr. Metz didn't go from plant to plant
16 reviewing on a yearly basis safe procedures?

17 A Not that I know of.

18 Q Okay.

19 Now, did you also, prior to 1942, make an
20 effort to review published literature with regard to
21 matters like industrial hygiene, and in particular with
22 regard to chemicals that Monsanto might make?

23 A Yes, sir.

24 Q Do you know whether Dr. Metz had that
25 function during the war years?

1 A I do not know.

2 Q Okay.

3 What journals did you review, prior to World
4 War II, looking for articles of interest?

5 A There were magazines, there were about three
6 journals: The Journal of Industrial Hygiene and
7 Toxicology, which is now defunct; there was an
8 Industrial Medical Association Journal; there was a
9 British Journal of Industrial Hygiene; there were
10 various governmental publications that were available;
11 there were one or two textbooks on industrial medicine;
12 there have been bulletins from the Manufacturing
13 Chemists Association on specific products; and there may
14 have been bulletins from other organizations.

15 Q Did your review attempt to cover any
16 significant publication in the English language that
17 might bear on matters of industrial hygiene and
18 occupational health?

19 A Yes, sir.

20 Q Did you actually personally review the
21 periodic publications as they came through to see what
22 they had?

23 A Yes, sir.

24 Q And did you actually read articles that
25 appeared to be of interest?

1 A Yes, sir.

2 Q Would any article that dealt with a product
3 that Monsanto made be an article you deemed of interest?

4 A Yes, sir.

5 Q What would you do when you found an article
6 that dealt with a product Monsanto made?

7 A If it contained any new relevant material, I
8 would forward it to the plant doctor at that place, I
9 would forward it to the safety department, and I would
10 forward it to the plant manager at the particular
11 location.

12 Q Would you also keep a copy of that article
13 for your files?

14 A Yes, sir.

15 Q Did you actually keep the medical journals
16 themselves in some type of library?

17 A Yes, sir.

18 Q Did that library remain with Monsanto up
19 until the time of your retirement?

20 A Yes, sir.

21 Q And the journals that are in that Monsanto
22 library, would they have been reviewed by somebody at or
23 about the time they came in in order to determine if
24 there were any articles of interest to Monsanto
25 products?

1 A What time frame?

2 Q From the time you started doing that until
3 the time you retired.

4 A Oh, yes, there would be -- there were other
5 journals along the way.

6 Q That were added in?

7 A That were added in after 1946.

8 Q Certainly.

9 A And we had other people besides myself who
10 would be reviewing them.

11 Q I'm just trying to find out if whether
12 somebody at Monsanto during the period of time when you
13 started reviewing journals up until your retirement
14 would have had the responsibility to look at the
15 journals in the library and make sure that any articles
16 of interest to Monsanto had been appropriately noted and
17 distributed.

18 A Yes, sir.

19 MR. LACEY: Okay.

20 VIDEO OPERATOR: Excuse me. I need to take a
21 short pause.

22 [Recess]

23 VIDEO OPERATOR: Okay.

24 MR. LACEY:

25 Q With regard to your review of publications,

1 when you were I guess we would call it almost the
2 quasi-medical director without title, when did that
3 actually start? What year?

4 A As soon as -- it started sometime very
5 shortly after I became plant physician. It started very
6 shortly after 1936.

7 Q Okay.

8 Would other plant physicians also be
9 reviewing relevant articles on industrial hygiene and
10 the like?

11 A In 1936?

12 Q Yes. In the time frame when you were a plant
13 physician.

14 A I do not believe so.

15 Q Did someone specifically assign you the duty
16 on behalf of Monsanto to make that review? Or did you
17 take that upon yourself?

18 A I took it upon myself.

19 Q When you started your review, did you go back
20 in time to pick up earlier issues of these journals and
21 see if there were already published articles of interest
22 with regard to products that Monsanto was making?

23 A On some products, yes.

24 Q Other products no?

25 A Yes, sir. Aspirin, caffeine, vanolin, things

1 that were -- that were either pharmaceuticals or pro --
2 or food grade chemicals, I didn't go back and look and
3 see if there was anything on those.

4 Q Did you go back and look and see if there
5 were anything on those things which were not
6 pharmaceuticals and food grade chemicals?

7 A Some. If a question came up in my own mind
8 or in an employee's mind that a compound may or may not
9 be hazardous to him in his particular exposure, I would
10 check the past literature, yes, sir.

11 Q Did you go back and check the past literature
12 on PCBs?

13 A Yes, sir.

14 Q What was it that caused you to go back and
15 check past literature on PCBs?

16 A Two things. One was historically there had
17 been an epidemic of chloracne at a plant that had been
18 taken over by Monsanto. And, secondly, there was a
19 great amount of interest in ill effects from wire-
20 impregnating compounds that were mostly chlorinated
21 naphthalene and in some cases may have had a certain
22 percentage of chlorinated diphenyl or PCBs in it.

23 Q How far back did you go in reviewing
24 literature on PCBs?

25 A '34, '30, something of that sort.

1 Q This plant that was taken over by Monsanto,
2 that was the Anniston, Alabama, plant, was it not?

3 A Yes, sir.

4 Q And that had been a plant previously owned
5 and operated by the Swann Chemical Company?

6 A Yes, sir.

7 Q Monsanto bought it from Swann?

8 A Yes, sir.

9 Q Swann was the company that had started the
10 commercial manufacturing of PCBs?

11 A I don't know.

12 Q Do you know when the commercial manufacturing
13 of PCBs started?

14 A In the United States?

15 Q In the United States or anywhere else.

16 A No. I think it was something in the 1930s,
17 but I'm not sure.

18 Q Okay.

19 A Whether it was overseas before that or not I
20 don't know.

21 Q You think it was in the 1930s as far as the
22 United States goes? Is that what you are saying?

23 A To the best of my recollection.

24 Q And that's why you went back to literature
25 before 1936 to look for PCB materials?

1 A Well, I can't at this date state how far back
2 I went. Generally when you look up a search, you tell
3 the librarian at the medical library, you say, "Check."
4 And whether I told her to stop at '36 or '30 or '20
5 I don't remember 50 years later.

6 Q Certainly. The library that you refer to,
7 was that the Monsanto medical library or a medical
8 library belonging to some other institution in the
9 St. Louis area?

10 A Both. Because the medical library that we
11 had was right in our department. The medical library
12 that -- of the medical society had the indices, and they
13 would carry out a search for us. For me, rather.

14 Q All right.

15 In your review of materials from 1935 up till
16 the time that you left to go to the service in 1942, did
17 you ever find any articles on PCBs?

18 A Yes, sir.

19 Q And did you review those and pass along the
20 information in them?

21 A Yes, sir.

22 Q What other functions besides being the plant
23 doctor, making the plant inspections, reviewing
24 published literature about Monsanto products did you
25 have up till 1942?

1 A I answered customer inquiries about
2 toxicological products -- problems, and any -- and
3 reviewed any reports of possible ill effects that might
4 have occurred from using Monsanto products.

5 Q Now, when you talk about reports of possible
6 ill effects, are you talking about reports outside of
7 the plants themselves or in the plants?

8 A Both.

9 Q So this would be reports both during
10 manufacture and after sale?

11 A Yes, sir.

12 Q And with regard to customer inquiries, was
13 there somebody in St. Louis who knew if there were a
14 customer inquiry, an operator or somebody like that for
15 Monsanto who knew if there were customer inquiries about
16 the hazards of a product to direct that call to you?

17 A Yes, sir. At some time before 1942 it was a
18 company policy that all letters and telephone inquiries
19 relating to possible ill effects of individuals using or
20 exposed to Monsanto products would be -- such inquiries
21 would be passed on to the medical department.

22 Q And, again, the medical department meant you?

23 A Meant myself, yes, sir.

24 Q Who established that policy?

25 A I think I did.

1 Q Who was required to approve that policy?

2 A Well, at that particular time we had a
3 management committee of three people right underneath
4 the president. I believe I talked to one of them. And
5 they were happy to -- to oblige by sending the letters
6 and telephone communications to me.

7 Q Let me see if I understand the sequence. Did
8 this management committee act on your recommendation and
9 say, "We agree Dr. Kelly ought to review all of the
10 correspondence and field all of the inquiries about
11 possible ill effects"?

12 A He ought to field all the inquiries and he
13 ought to answer all the customer inquiries concerning
14 toxicological properties and/or possible ill effects
15 from Monsanto products, yes, sir.

16 Q Now, was that communication passed throughout
17 the country to all these plants that Monsanto had so
18 that a plant manager, for example, who might get a call
19 in Boston, Massachusetts, would know to give your name
20 and your phone number to the caller?

21 A Yes, sir.

22 Q All right. And about when did -- did you
23 acquire this particular job?

24 A [No reply]

25 Q In the Thirties?

1 A Sometime around 1938.

2 Q When you started getting these additional
3 responsibilities, did that up the amount of time you
4 were spending with Monsanto in your part-time
5 employment?

6 A Well, not necessarily. Because by that time
7 I had the operations at the Queeny plant running pretty
8 much at a -- more streamlined and there weren't all that
9 many letters and telephone calls.

10 Q Okay.

11 Now, in reviewing and commenting on customer
12 inquiries, did that also encompass reviewing any
13 literature that the company might issue with regard to
14 particular products?

15 A Yes, sir.

16 Q Was there also a directive that any
17 literature that the company sent out which related to
18 toxicology or health effects had to be approved by you
19 before it went out?

20 A Well, I can't answer whether it was a
21 directive in that form. The medical department wrote
22 the toxicological properties -- described the
23 toxicological properties and safe handling material for
24 products, then it was incorporated into various
25 bulletins. Whether I saw every final bulletin or not I

1 don't know. In other words, if a bulletin was reprinted
2 and they took the toxicological paragraph out of one
3 bulletin and put it in a new bulletin, I don't believe I
4 reviewed it.

5 Q Right. I think I understand. Let me see if
6 I understand correctly. The medical department would
7 write the section of any literature that went out to
8 customers about toxicology and safe handling.

9 A Yes, sir.

10 Q Correct?

11 A Yes, sir.

12 Q And that information would be given to
13 whoever was pulling the bulletin together, and they
14 would put that information verbatim into the bulletin.
15 Correct?

16 A I don't know about verbatim. They might,
17 because of space, do some slight editorializing. And
18 let me say also as far as safe handling is concerned
19 there was input from the safety department as far as
20 fire or explosion or something like that that was not a
21 medical department responsibility.

22 Q But if it had to do with health hazards from
23 exposure to chemicals as opposed to some mechanical
24 problem like fire or whatever, that was --

25 A Medical department responsibility.

1 Q -- medical department. And the information
2 the medical department provided would go out with
3 literature subject to space editing only?

4 A Yes, sir.

5 Q And it was certainly not the province of the
6 person editing it to change the substance of what was
7 said?

8 A No, sir.

9 Q And then if a bulletin were reprinted they
10 might not come back and ask you, "Is this the same
11 information you would give out today?" it might just get
12 reprinted?

13 A They might, they might not, yes, sir.

14 Q Okay.

15 Now, when we talk about the medical
16 department, up till 1942 we're talking about you?

17 A Me, correct.

18 Q Okay. What about the period from 1942 to
19 1946? Do you know if anybody was carrying out that
20 function?

21 A I would have to speculate. So I cannot
22 answer it. I do not know who might have been doing it.

23 Q Okay. Do you know even whether it was done
24 or not?

25 A I think it was done in some cases, it was not

1 done in some cases.

2 Q All right.

3 Now, you mentioned also fielding customer
4 inquiries or looking at information regarding medical
5 problems arising from Monsanto chemicals that had been
6 sold. What sort of inquiries would you get from
7 customers prior to 1942?

8 A They would either call up or write and say,
9 "We are going to start using product X. What -- can you
10 tell us something about the toxicological problems that
11 might be associated with it?"

12 Q Okay.

13 A Or they might say, "We have some employees
14 who are working with product X, who are exhibiting these
15 symptoms. Do you think this may be related to product
16 X?"

17 Q And the reason they would contact Monsanto
18 would be because Monsanto was the manufacturer of the
19 product they were calling about or writing about?

20 A Yes, sir.

21 Q And these people at least assumed that you
22 would be a good source of information about those sorts
23 of problems. Correct?

24 A Yes, sir.

25 Q And did you consider yourself a good source

1 to answer those sorts of questions?

2 A Yes, sir.

3 Q And did you always endeavor to provide them
4 with that information?

5 A Yes, sir.

6 Q In cases where a customer might call and say,
7 "We're having a particular problem with a product at
8 Monsanto we're using," did you go out and investigate
9 the problem?

10 A In which time frame again?

11 Q Up to 1942.

12 A I recall some cases that I did in that time
13 frame, yes, sir.

14 Q What can you tell me about those cases?

15 A Well, one case, to the best of my
16 recollection, was before the war. It was a PCB case in
17 which the people were filling a -- a thermometer bulb,
18 which is not the kind of a bulb that you put in an oral
19 thermometer, it was a sort of a thing about the size of
20 a golf ball, and it had something to do with ovens or
21 something of the sort, and the women were dipping this
22 into liquid aroclors and had developed chloracne. So I
23 went out to see the operation and told them, "This is in
24 contradistinction to all our warnings; don't do it." So
25 they stopped and started doing that with mechanical

1 means and the problem vanished.

2 I went to some cases with -- on wood-treating
3 chemicals where they had either skin problems or the
4 possibility of systemic absorption and I made
5 recommendations as to about being more strict and
6 following the safety precautions that we had outlined.

7 Q Prior to 1942 how did Monsanto outline safety
8 precautions to its customers?

9 A I can only speak from 1936 to '42. I do not
10 know how they did in the Twenties.

11 Q Fine.

12 A They had development bulletins, they had
13 product bulletins, they had -- which were printed, of
14 course, and distributed. They had the people in the
15 technical service departments who were trying to
16 introduce the product would advise the workers -- the
17 potential customer of any problems that might be
18 expected if the product were used unwisely.

19 Q Anything else?

20 A There may, but those are the ones that come
21 to mind right at present.

22 Q Would you expect that the customers, and
23 particularly the ones that you went and saw, would have
24 a copy of any of these development bulletins or product
25 bulletins so they could have it for a reference?

1 A Yes, I would expect that, yes, sir.

2 Q And you would expect them to read it and rely
3 on it?

4 A Yes, sir.

5 Q And therefore it would be important from
6 Monsanto's view that the information in there be
7 correct?

8 A Yes, sir. It should be correct, yes, sir.

9 Q The technical service representatives that
10 you mentioned, are these the same thing as salesmen?

11 A No.

12 Q What's the difference between a salesman and
13 a technical service representative?

14 A A technical service representative is more of
15 a research-oriented individual that has followed the
16 product from its developmental stage in the research
17 laboratory through its introduction into possible uses
18 by the trade. The salesman is the man who markets
19 established products that are -- have passed through
20 these earlier stages.

21 Q Well, is a technical service representative
22 the type of guy who tries to get a particular customer
23 to start using a product for a particular purpose the
24 first time, then the salesman keeps on supplying the
25 need? Is that what you are saying?

1 A Not in the sense that you've characterized
2 it. First, the technical serviceman is an individual
3 who explains the functions of the product and its
4 possible uses by the prospective buyer. Once the man
5 has used these small amounts, because they may be sent
6 to him for use in his research laboratory in pints,
7 pounds or something like that -- when he has found out
8 that he is -- has a use for this product and it is put
9 into our catalog, then the salesman goes out and tries
10 to continue selling it, yes, sir.

11 Q Would the salesmen actually themselves also
12 be a source of safety precaution information? Or would
13 they just hand out the bulletins that were prepared for
14 that purpose?

15 A They would hand out the bulletins that were
16 prepared for that purpose. And they would field any
17 inquiries as far as the safe handling precautions or the
18 possible toxic effects back to the medical department in
19 St. Louis.

20 Q Let me ask you if a salesman went out to make
21 a sales call on an established customer and in the
22 course of that discussion there was a question about the
23 safe handling of a Monsanto product, was the salesman
24 free to offer his view on that or did he simply have to
25 give him your name and number?

1 A No, he had all these -- the product bulletins
2 that had information in it. Certainly he was free to
3 quote these and hand him that literature.

4 Q Was he free to fill in any gaps, so to speak,
5 that might exist or offer his opinion of what that meant
6 in a particular application?

7 A That would be purely conjecture. I don't
8 know what you mean by that particular instance. Fill in
9 gaps of what?

10 A Well, let me -- let me try to be more
11 specific again. We have a salesman that goes to a plant
12 and he wants to sell a particular product. And the
13 customer there says, "Well, can I do this with it?" and
14 describes exactly how he plans to use it. Now, does the
15 salesman say, "Yes, you can do that, that's okay," or
16 does he say, "Well, you need to call the medical
17 department and ask them whether you can do that or not"?

18 A No. He certainly knows enough about his
19 product and he knows the use in other people's factories
20 rather than this prospective client's and he can say,
21 "Yes, this is safe to use in this manner."

22 Q Okay. So the salesman, then, would be a part
23 of the system for distributing information about the
24 appropriate handling of Monsanto products?

25 A Yes, sir.

1 Q Okay.

2 Now, in terms of the review of literature and
3 the fielding of customer inquiries and the like, you are
4 not certain what happened during the years of World War
5 II?

6 A No, sir, I'm not.

7 Q Okay.

8 When you came back to Monsanto in 1946, there
9 was a formal medical department?

10 A Yes, sir.

11 Q And you were the head of it?

12 A Yes, sir.

13 Q And were you still basically it again?

14 A For the first year or so, yes, sir.

15 Q Okay.

16 And when you came back to Monsanto after the
17 war, did you continue to have the same functions as the
18 now head of the medical department that you had
19 previously had in the three or four years preceding
20 World War II?

21 A Yes, sir, with one exception: There was more
22 of an interest in toxicology at the end of the war and
23 so that particular function was part of the medical
24 department's function when the department was
25 formalized.

1 Q And what is toxicology?

2 A Toxicology is the science that determines the
3 hazards of any particular substance.

4 Q Now, had you been doing that in fact before
5 the war?

6 A We did some testing. I'm not exactly sure
7 when we did it and how much we did. I can't answer
8 that. I think we did some at University of Cincinnati,
9 but I -- I'm not sure.

10 Q Okay.

11 How did the medical department go about
12 carrying out its assignment in toxicology?

13 A That varied with the time.

14 Q Well, immediately after World War II. 1946
15 and '47, let's say.

16 A If we had a product that I was uncertain
17 about the toxicology of or if customers had asked me for
18 information that I was not in a position to answer based
19 on my knowledge with the compound or the literature
20 references, we then proceeded to do some toxicological
21 work on animals.

22 Q And who did this work?

23 A It varied. If it were just acute dosing, it
24 was done at a local laboratory in St. Louis. If it were
25 more sophisticated, it was done at the University of

1 Cincinnati. As time went on, we used other
2 laboratories.

3 Q We'll come back to that in a second. But I
4 want to follow up on what happened with regard to other
5 matters that were in your portfolio, so to speak, during
6 the war. When you came back, did you ensure that all of
7 the publications that took place during the war years
8 had been appropriately reviewed and circulated within
9 Monsanto?

10 A All the publications on -- that might have
11 been published during the war? They were in the files
12 of -- any inquiries and there were files that related to
13 some of the products that were handed over to the
14 medical department.

15 Q Let me -- let me try to make -- maybe I
16 didn't make my question clear. Sometime in -- in the
17 mid-1930s you started reviewing the journals that had
18 information on industrial hygiene, occupational health
19 and the like.

20 A Yes, sir.

21 Q And you did that up until 1942, when you went
22 into the service.

23 A Yes, sir.

24 Q Now, when you came back in 1946 you continued
25 to do that?

1 A Yes, sir.

2 Q Now, what I'm trying to find out is whether
3 when you came back you made sure that anything that was
4 published between 1942 and 1946 that should have been
5 reviewed in accordance with the procedures you had
6 established had in fact been reviewed and disseminated
7 as necessary.

8 A I think in great part the answer to that is
9 yes. I cannot be positive on all particular products.
10 I do know that there were files that showed that some
11 information had been disseminated, there were files of
12 reprints that had occurred, been collected during those
13 war years.

14 Q So you attempted to assure yourself that that
15 had been done to a satisfactory basis?

16 A Yes, sir.

17 Q And you were satisfied with whatever you
18 concluded after you got through with checking that out?

19 A Yes, sir.

20 Q To the extent you weren't satisfied with a
21 particular product, you corrected the problem?

22 A If there were any reason to, yes, sir.

23 Q My point is, when you got through there
24 weren't any things left undone that you felt should have
25 been done. Correct?

1 A There always could be some things left undone
2 that I wouldn't know about or hadn't appreciated at the
3 time.

4 Q I understand that. But my point is, you made
5 an effort to make sure that things had been properly
6 done during that period of time you were gone, and if
7 you found a particular thing that you thought should
8 have been done that wasn't, you did it when you came
9 back?

10 A Yes, sir.

11 Q Okay.

12 Did you reinstitute the procedure of going to
13 the plants on an annual basis to review matters there
14 concerning health and environmental problems?

15 A Yes, sir.

16 Q And did you make those inspections yourself
17 personally?

18 A Yes, sir.

19 Q How long did you make the personal plant
20 inspections for Monsanto?

21 A Well, I made personal plant inspections up
22 till November of 1974.

23 Q Okay. Well, how long was it that you were
24 the only person really available for that purpose?

25 A Probably one or two years at the most.

1 Q So '48, '49, something like that?

2 A Yes, sir. Even might have been less than
3 '48.

4 Q And who did you get to assist you in doing
5 that?

6 A We had a part-time internist, a Dr. Mezera,
7 M e z e r a, who is dead; and we had an industrial
8 hygiene -- hygienist, Mr. Elmer Wheeler, who came aboard
9 early in the postwar years. I'm not exactly sure when
10 he came.

11 Q What is an industrial hygienist?

12 A An industrial hygienist is an individual who
13 has chemical or chemical engineering training who is
14 able to evaluate the work environment and assess whether
15 or not any particular exposure could be deleterious to
16 the worker.

17 Q And when Mr. Wheeler came on did he become
18 the person primarily responsible for these plant reviews
19 then?

20 A No, sir. He became responsible for the
21 industrial hygiene part of the plant. In other words,
22 he would go through the plant itself. But as far as the
23 medical department staffing and my medical visits to the
24 plant, I was responsible for that.

25 Q So am I to understand that you and Mr.

1 Wheeler, after he came, worked as a team?

2 A Yes, sir.

3 Q And would you both go to the plants and go
4 out and look around?

5 A Not at the same time, no, certainly not. He
6 would go with a different point of view in mind. He
7 would go with -- from an engineering point of view. I
8 was not an expert in industrial hygiene, so I was not
9 in -- had that qualification. I was, however, an expert
10 in plant exposures, and I knew where more obvious
11 chemical hazards were and I would go through the plants
12 myself when I went there because I wanted to be sure
13 that I knew what was being made in the plants in case
14 any inquiries came up to me.

15 Q Well, let me ask a question to kind of help
16 me understand the distinction. If, for example, you and
17 Mr. Wheeler went to a plant in, say, 1950 and someone
18 was going to conclude that a particular group within
19 that plant needed to start having protective clothing
20 issued on a daily basis, who would be the person who
21 probably would be making that determination and
22 recommendation?

23 A It would probably come from me, but I think
24 Mr. Wheeler may have given me a great amount of input
25 into it.

1 Q Okay. And if someone were going to recommend
2 a change in the piping in the unit, in the way the
3 chemical was made, was that a recommendation that was
4 likely going to come from you or from Mr. Wheeler?

5 A It would come from Mr. Wheeler, but it would
6 come through me. I mean I would say: Our industrial
7 hygiene department has evaluated this particular
8 situation and recommends this, and I agree it should be
9 done.

10 Q Besides making plant inspections, what other
11 functions would an industrial hygienist have?

12 A Well, it depends upon the particular
13 organization he works for.

14 Q Well, let's try to talk about Monsanto.

15 A Monsanto. He reviewed toxicological
16 information until we started engaging toxicologists.

17 Q Did that mean you no longer reviewed it?

18 A I didn't review it in depth as much as I did
19 before.

20 Q What else?

21 A He would also have responsibilities on giving
22 information to customers about whether or not exhaust
23 ventilation was needed, whether any particular
24 engineering problems had -- engineering procedures had
25 to be carried out when the product was being used. And

1 in our particular department he did write answers on --
2 he did write -- answer questions about toxicological
3 matters.

4 Q So within the function of the medical
5 department did he become the primary responder to
6 questions about toxicological problems?

7 A No, sir, I don't believe so. I think I -- we
8 sat -- our desks were -- our rooms were next to each
9 other. So it was not a -- we all had had carbons of any
10 correspondence. And he talked to me a great deal about
11 what should be answered on a particular inquiry. So if
12 it were the same inquiry that had been asked three or
13 four times, he obviously would go out and answer it
14 himself. But anything that was different, I was the
15 primary responsible individual.

16 Q You still made sure that what went out for
17 the first time from your department was subject to your
18 review?

19 A Yes, sir.

20 Q Was that true even if it went out over his
21 signature?

22 A Yes, sir.

23 Q And did that basic format remain all the way
24 through until your retirement, that you made sure things
25 that were new went out with your review even if it went

1 out over someone else's signature?

2 A Not necessarily. Because as the department
3 grew when we developed another full-time physician, he
4 was responsible for certain areas; when we developed
5 toxicologists, they would answer questions of their own.

6 Q Okay. Without consulting with you?

7 A There again, I -- I can't answer that
8 definitely. Again, we were all in one large department.
9 We were -- I mean not so large, a close department. And
10 we had weekly meetings and everyday contact and we saw
11 each other's carbons. So I think when it went out from
12 a toxicologist it reflected the views of the medical
13 department, including my own.

14 Q Okay.

15 When the medical department was formed
16 immediately after World War II, it had a staff of --
17 term it a professional staff, leave out any secretaries
18 or anything, just one, you.

19 A Right.

20 Q How big was the staff, talking about
21 professional staff, at the time that you retired from
22 Monsanto?

23 A We had two full-time physicians, two
24 part-time physicians, four industrial hygienists, three
25 or four toxicologists.

1 Q Anyone else?

2 A We had a librarian also. She was not a
3 technically-trained librarian, but she was a research
4 assistant who functioned as a librarian.

5 Q You mentioned to me earlier when the medical
6 department or the -- really, the beginning medical
7 department before World War II got its responsibilities
8 you could talk directly to the three-person
9 administrative committee and get something worked out.
10 Did you retain a close position to the top management of
11 Monsanto during the time that you were medical director?

12 A Yes, sir.

13 Q How did your reporting chain work within the
14 medical department?

15 A Well, we reported to a vice president for
16 administrative services. We sent a monthly -- either
17 monthly or quarterly medical report to him, and we sent
18 a yearly report to the executive committee of the
19 company, the top four or five people in the company.
20 And on any serious matters we would report -- we would
21 have frequent contacts with the vice presidents in
22 charge of the varying departments. I think -- well,
23 that's it.

24 Q The way the company was set up, you could
25 directly contact people who were at the vice president

1 level with regard to particular operations and speak to
2 them and work with them on problems?

3 A Oh, certainly. And I could speak directly
4 with the president and the chairman of the board.

5 Q Okay. And did that remain true throughout
6 your function as medical director?

7 A Yes, sir.

8 Q Now, going back to Mr. Wheeler, who joined
9 you as industrial hygienist in I guess the late 1940s --

10 A No, I think he came about a year, year and a
11 half after I came back in '46. So he came back, '46,
12 '47, I believe.

13 Q Okay. You mentioned that he would deal with
14 customer inquiries. Were you still getting customer
15 inquiries about the appropriate way to deal with
16 Monsanto-manufactured chemicals after the war?

17 A Yes, sir.

18 Q Is that something that happened throughout
19 the time that you were with the medical department?

20 A Did we get customer inquiries --

21 Q Yes.

22 A -- about safe handling? Yes.

23 Q That was just one of the regular functions
24 that the medical department had to carry out all the
25 time that you were there?

1 A Yes, sir.

2 Q And I take it from what you've told me Mr.
3 Wheeler would from time to time offer specific opinions
4 on the way a particular customer's facility should be
5 designed in order to handle materials safely. Is that
6 correct?

7 A No, sir, it isn't. Not design.

8 Q I see. Operated? What's the right word?

9 A He recommended what industrial hygiene
10 procedures should be used in an existing plant --

11 Q I see.

12 A -- as to afford their employees protection,
13 from any particular hazard.

14 Q Okay. And could that involve even
15 recommending constructing some type of additional
16 physical material to handle the problems?

17 A It might be a spot or general ventilation, it
18 might be changing a manually-operated centrifuge to a
19 self-emptying centrifuge. It could be suggestions of
20 that manner. But he did not design people's plants for
21 them.

22 Q Okay. Do you know if he ever consulted
23 anybody about a plant design, about which would be the
24 best way to do it to handle a particular Monsanto
25 product?

1 A Yes, I think he was in the insecticide field.

2 Q Okay. And again he was free to assist
3 customers in that way?

4 A Yes, sir, if they came to him, yes, sir.

5 Q Did Monsanto ever make customers aware of the
6 fact that it had someone on its staff who could consider
7 these matters and assist them in trying to solve any
8 potential problems?

9 A They must have, because they came to us with
10 problems.

11 Q Okay.

12 What do you mean when you use the term
13 "general ventilation"? What is general ventilation?

14 A Well, if you take this room and you have a
15 fan at one end and you get ten air changes a minute,
16 that's general ventilation.

17 If you have a smoking barbecue pit here and
18 you put a suction over it to take away the fumes, that's
19 spot ventilation.

20 Q Okay.

21 Did Mr. Wheeler or you, after World War II
22 I'm talking about now, ever go and visit any customer
23 facilities with regard to addressing a customer's use of
24 Monsanto chemicals?

25 A Yes, sir. Mr. Wheeler did quite often in the

1 insecticide operations.

2 Q What about you? Did you ever make any
3 customer visits after you became the medical director?

4 A Yes, I have. I don't know how many, but I
5 recall going to Boeing Aircraft when they had hydraulic
6 fluid problems. I've been to other plants. But I did
7 not make as many as Mr. Wheeler did.

8 Q Okay.

9 Now, what was the hydraulic problem that
10 Boeing Aircraft had?

11 A They had dermatitis from a Skydraul.

12 MR. HENDERSON: From a what?

13 THE WITNESS: Skydraul. S k y d r a u l.

14 MR. LACEY:

15 Q Dermatitis is an irritation of the skin?

16 A No, it's a sensitivity.

17 Q Sensitivity of the skin.

18 A In other words, if you put paint remover on
19 your skin, that's an irritation. If you put poison ivy
20 extract on your skin and you get blisters, that's a
21 sensitivity.

22 Q Okay. And the problem was --

23 A Sensitivity.

24 Q -- sensitivity. There was some reaction that
25 you could see on the skin?

1 A Yes, sir.

2 Q Were you ever able to help them determine
3 what the problem was --

4 A Yes, sir.

5 Q -- and how to deal with it?

6 A Yes, sir, we were.

7 Q What was the problem?

8 A We were able to determine that it was a
9 corrosion inhibitor that was present in one percent or
10 so of the fluid. And by changing that we eliminated the
11 problem.

12 Q Okay.

13 Do you recall any other customer visits that
14 you made besides Boeing Aircraft?

15 A I did some, but I don't recall them.

16 Q Okay.

17 Do you -- do you recall whether any of the
18 other visits you made or any visits that you did make
19 after the war related to PCBs?

20 A I don't think there were any visits that I
21 made after the war and -- to the best of my
22 recollection. Because also to the best of my
23 recollection we didn't have any inquiries or reports of
24 any ill effects from PCBs from our customers.

25 Q Did Mr. Wheeler report to you as his

1 supervisor who you checked his time and made sure he was
2 doing things he was supposed to be doing, et cetera?

3 A Yes, sir, he was under my -- he was in my
4 department.

5 Q Did you look at his expense account and make
6 sure it was in order and those sorts of things?

7 A I signed them. I didn't check to see whether
8 he took a cab rather than walked.

9 Q Well, I understand that. You would be
10 reviewing, though, where he was going and what he was
11 doing to make sure that you were carrying out your
12 administrative duties?

13 A Yes, sir.

14 Q Okay.

15 Now, what sort of visits was Mr. Wheeler, who
16 was apparently in the field much more than you, making
17 to customers?

18 A I can recall, as I said, quite a few on -- on
19 insecticides when we got into the insecticide field and
20 had very highly toxic insecticides. He made quite a few
21 on hydraulic fluids, he made some visits on heat
22 exchange visits and heat exchange products. And I'm
23 sure he made others, but I don't recall.

24 Q Okay. You used the word "highly toxic" to
25 discuss insecticides. What do you mean when you say

1 highly toxic?

2 A Well, that -- there are no standard
3 definitions of highly toxic, but if you have a product
4 that is toxic in milligrams per kilogram -- when I say
5 that, five, ten milligrams per kilogram -- that was
6 considered by me highly toxic.

7 Q Okay. What about moderately toxic? What
8 would be -- what would be your standard there?

9 A We had a list of about five gradations of
10 toxicity from highly toxic to moderately toxic to
11 slightly toxic to practically nontoxic. But I don't
12 recall what the parameters were in each group.

13 Q Were those parameters established by some
14 sort of quantitative measure, so many milligrams per
15 kilogram --

16 A Usually it was a -- usually these toxic
17 classifications referred to acute toxic dose, and those
18 were generally based on the LD 50, or lethal dose for 50
19 percent of the animals in rodents.

20 Q Okay.

21 Did you ever get down to a category of
22 anything you considered to be nontoxic?

23 A Well, I don't think anybody can state that
24 even plain table salt or water could be considered
25 nontoxic. Because if you take enough salt or you take

1 enough water things are going to happen to you. But for
2 all practical purposes, yes, some things could be
3 considered nontoxic, certainly.

4 Q You can go in a toy store today and pick up a
5 toy and it will say it's nontoxic. Is that a term that
6 you-all were using in this gradation of toxicity from
7 highly toxic down to nontoxic?

8 A I would think that term is a legal term
9 rather than really a medical term.

10 Q Okay. I guess my question still is: Did you
11 have a gradation that went down to nontoxic? Or were
12 they all toxic in some degree?

13 A We had practically nontoxic.

14 Q Okay.

15 And you indicated to me, I think, that the
16 gradation of toxicity was based on determining the acute
17 LD 50 for rodents.

18 A Yes, sir?

19 Q Now --

20 A Based largely on that. Now, there may be
21 other factors that might enter into it.

22 Q Who would assign the label to a chemical as
23 acutely toxic or moderately toxic or slightly toxic or
24 practically nontoxic? Was that you who made that final
25 call?

1 A You have to explain what you mean by the
2 label. Are you talking about a label that is on the
3 drum of the information or do you mean the designation
4 of calling it a toxic or slightly toxic or --

5 Q Let me -- let me see if I can give you an
6 example. I assume that the labels that might go on a
7 drum would be the same terminology you use within
8 Monsanto to describe the product. I mean I assume you
9 wouldn't have a label that went out that said it's
10 highly toxic if you internally considered it to only be
11 slightly toxic. Correct?

12 A We did not put these gradations on labels
13 that were put on containers.

14 Q Okay. Now, my question is if you've got --
15 you did use these labels what, internally within the
16 plant?

17 A These designations. Let's -- just not to
18 confuse me about labeling --

19 Q Okay.

20 A -- let's use the designation rather than the
21 term label.

22 Q Okay. There were places within Monsanto
23 where the designation of highly toxic, moderately toxic,
24 slightly toxic and practically nontoxic were used.
25 Correct?

1 A They were used primarily in bulletins and in
2 answers to inquiries from people inside Monsanto, yes,
3 sir.

4 Q Okay.

5 Now, if we have a particular inquiry that's
6 raised about a chemical X and the answer is going to
7 come back it's either highly toxic, moderately toxic,
8 slightly toxic or practically nontoxic, who would make
9 the final decision, after reviewing the relevant
10 information, "We're going to say this one is moderately
11 toxic"? Was that you?

12 A Either I or our toxicologists at that time..

13 Q Okay. When did you first acquire
14 toxicologists at Monsanto?

15 A I think sometime around the Fifties. I don't
16 recall when.

17 Q Late Fifties, early Sixties, something like
18 that?

19 A I -- I can't -- I don't believe it was the
20 Sixties. I think it was in the Fifties sometime. I
21 don't remember.

22 Q Who was the first toxicologist that you got?

23 A William Hunt.

24 Q Mr. Hunt is deceased, isn't he?

25 A Yes, he is.

1 Q Who was the next toxicologist you got?

2 A He was a Dr. Hunt. He was a Ph.D. from the
3 Food and Drug Administration. That was Dr. Hunt. Dr.
4 Levinskksas, L e v i n s k s a s.

5 Q L e v i n s k s a s?

6 A s a s.

7 Q And Dr. Levinskksas is still with Monsanto, is
8 he not?

9 A Yes, he is.

10 Q Do you know how much time elapsed between
11 your hiring of Dr. Hunt and your hiring of Dr.
12 Levinskksas?

13 A I can't be positive.

14 Q Who was the third toxicologist you got?

15 A Either a Dr. Paul Wright or a Dr. Fred
16 Yohannsen, Y o h a n n s e n.

17 Q And I guess the one who wasn't third was
18 fourth.

19 A That's correct.

20 Q Now, does that encompass all the
21 toxicologists you had while you were at Monsanto?

22 A Yes, sir.

23 Q Okay. There may have been others hired since
24 you retired?

25 A I know they have.

1 Q Okay. Do you know who the other
2 toxicologists that have been hired since you retired
3 are?

4 A They have a large number of toxicologists
5 now.

6 Q Okay.

7 Is Mr. or -- I'm sorry -- Dr. Wright still
8 with Monsanto?

9 A No, he isn't.

10 Q Has he retired?

11 A He resigned.

12 Q Was that near retirement age?

13 A No, it wasn't.

14 Q Why did he resign?

15 A He resigned because he was involved in a
16 criminal action that related to a laboratory that he had
17 worked with -- worked in before he came to work at
18 Monsanto.

19 Q What laboratory was that?

20 A Industrial Biotest Laboratory.

21 Q He had worked for Industrial Biotest before
22 he ever worked for Monsanto?

23 A No, sir. He worked for Monsanto as a
24 research chemist in the agricultural department. He
25 went to Industrial Biotest and worked there one or two

1 years and came back to work for Monsanto for -- I don't
2 know when he came back, but it was two or three years.
3 He resigned after I left Monsanto.

4 Q I see. Did you -- but you hired him in?

5 A Indirectly, yes. I mean the toxicological
6 department at that time reported to -- to Hunt, to
7 Wheeler, and so he was hired by -- I gave him the final
8 okay, yes, sir.

9 Q Okay. I mean the department was still small
10 enough you made the final decision. If a fellow was
11 proposed for hiring that you didn't like, you wouldn't
12 hire him?

13 A That's correct.

14 Q Now, the entire toxicological department
15 reported to Mr. Wheeler?

16 A Right.

17 Q Who in turn reported to you?

18 A Yes, sir.

19 Q Was Mr. Wheeler your right-hand man in
20 everything?

21 A No, sir. He reported -- Dr. Johnson, who
22 came in the Fifties, was the associate medical director
23 or the assistant medical director. The department --
24 toxicological department reported to Mr. Wheeler, but
25 that was more primarily for administrative reasons,

1 because he was not a toxicologist, whereas Dr. Hunt, Dr.
2 Levinskis, Dr. Yohannsen were Ph.D.s in toxicology and
3 Dr. Wright had worked as a Ph.D. in our research
4 department, had spent two years at Industrial Biotech.

5 MR. SHOEBOOTHAM: David, when you are at a
6 good stopping point can we take our lunch break?

7 MR. LACEY: Yeah. Let me just ask one other
8 question here.

9 MR. SHOEBOOTHAM: Sure. Whenever it's
10 convenient.

11 Q Dr. Johnson --

12 A Yohannsen. Oh, Johnson? Sorry.

13 Q Yes. Dr. Johnson was the second full-time
14 medical doctor you had on your staff?

15 A Yes, sir.

16 Q And did he remain there throughout your
17 entire employment as medical director?

18 A No, sir.

19 Q What happened to Dr. Johnson?

20 A He resigned and went to become director of
21 environmental health at B. F. Goodrich.

22 Q Okay. And about when did that happen?

23 A Two and a half years before I retired.

24 Q '71, '72?

25 A Something of that sort.

1 Q Now, the reporting -- I'm just trying to get
2 this clear in my mind. The toxicologists reported to
3 Mr. Wheeler?

4 A They --

5 Q At least administratively?

6 A Administratively, yes.

7 Q And Mr. Wheeler reported to Dr. Johnson or to
8 you?

9 A I don't think it was that formal.

10 Q Okay. It wasn't big enough it needed a lot
11 of structure?

12 A That's right.

13 Q Okay.

14 Did Dr. Johnson have any particular
15 responsibility over toxicology or industrial hygiene
16 separate and apart from yourself?

17 A No. But he shared a lot of my duties and
18 responsibilities, yes.

19 Q In other words, you shared with each other.
20 Instead of having clear delineations, you took care of
21 certain things and he took care of others?

22 A Yes. With the one exception that in textile
23 chemicals he had more experience and he handled textile
24 chemicals much more than I did because he came from our
25 Chemstrand operation.

1 Q And who replaced Dr. Johnson when he left?

2 A Dr. Roush, R o u s h.

3 Q Is he still there?

4 A Yes, he is still there.

5 Q Did he replace you when you left?

6 A Yes.

7 MR. LACEY: This is probably a good place to
8 stop for lunch.

9 What time do you want to come back?

10 MR. SHOEBOOTHAM: Maybe an hour or so.

11 MR. LACEY: About 1:30?

12 MR. SHOEBOOTHAM: That's sounds good.

13 VIDEO OPERATOR: We're now going off the
14 record. The time is 12:28 p.m.

15 [Recess]

16 VIDEO OPERATOR: We're now back on the
17 record. The time is 2:20 p.m.

18 MR. SHOEBOOTHAM: Just for the record, during
19 the lunch break we went to Dr. Kelly's hotel room and
20 got at Dr. Kelly's hotel room the documents that I and
21 Mr. Bistline had provided him which were discussed this
22 morning and provided those to Mr. Lacey before we
23 commenced this afternoon.

24 MR. LACEY:

25 Q Dr. Kelly, are all the documents that you

1 ever had provided to you in connection with this
2 particular lawsuit here on the coffee table for my
3 review?

4 A I can't be sure. I looked at an awful lot of
5 documents at their office yesterday. And I don't know
6 if any of those were duplicates of this or might have
7 been other ones. I don't know. But I have no other
8 documents.

9 Q So everything that you personally had in your
10 possession today came here?

11 A Yes.

12 Q And you may or may not have been shown other
13 documents by the Monsanto lawyers yesterday?

14 A I was shown other documents.

15 Q Was shown. Okay. Do you know whether any of
16 the documents that you were shown by the Monsanto
17 lawyers yesterday were documents that did not have one
18 of the numbers I've previously shown you at the bottom,
19 the SCM 0 numbers at the bottom?

20 A No, it was my belief that these were all
21 plaintiffs' exhibits.

22 Q That you were shown yesterday?

23 A Yes.

24 Q Can you describe for me the types of
25 documents that you were shown yesterday but you don't

1 have in your possession?

2 A Some were reprints of old medical articles,
3 some were technical bulletins, some were labels.

4 Q Were these labels Monsanto labels?

5 A Yes.

6 Q When you say plaintiffs' exhibits, you mean
7 documents produced to the plaintiffs, then?

8 A Yes.

9 Q Okay. I thought you meant documents that had
10 come originally from the plaintiff for some reason.
11 That isn't what you meant at all?

12 A I meant there were documents that I was told
13 had come from the plaintiffs' attorney.

14 MR. LACEY: Okay.

15 MR. SHOEBOOTHAM: I think what Dr. Kelly means
16 is documents that have been produced in connection with
17 the lawsuit.

18 THE WITNESS: That's what I mean.

19 MR. LACEY: Okay.

20 Q Well, you understand that the Monsanto
21 documents that have been produced have been produced by
22 Monsanto to me. Correct?

23 A I don't know.

24 Q I see. Okay.

25 During the period of time when you were not

1 with Monsanto but rather serving in the military, do you
2 know whether or not any inquiries were made to Monsanto
3 concerning problems with PCBs?

4 A I do not know that.

5 Q In your review of material after you came
6 back to Monsanto in 1946 as medical director you did
7 review literature to the extent it had not previously
8 been reviewed to make sure the relevant literature was
9 circulated. Correct?

10 A That is correct.

11 Q Did you review any records regarding
12 inquiries made to Monsanto during that period of time,
13 about its products or information provided by Monsanto
14 to others about its products?

15 A There were files that were related to some
16 inquiries about Monsanto products. I do not recall the
17 details of those files. I do not recall whether any had
18 any reference to PCBs.

19 Q Did you review those files, however, when you
20 came back, to bring yourself up to date?

21 A I reviewed the files that were given to me
22 that related to various products and various matters
23 that I had been carrying out before I went to the
24 service. Whether that was the extent of four years work
25 I don't know.

1 Q Okay. Was it your request that those files
2 be brought to you for your review so you could bring
3 yourself up to date?

4 A I can't answer that. I don't remember.

5 Q Were the files provided to you for the
6 purpose of allowing yourself to bring yourself up to
7 date?

8 A Well, and to be the repository of the files.

9 Q Well, I guess what I'm trying to find out is
10 why they were reviewed. Was it for the purpose of
11 bringing yourself up to date?

12 A I think that was one of the reasons. But the
13 other -- there may be other reasons why they were given
14 to me. They -- they knew somebody was back who would be
15 dealing with these matters.

16 Q Did somebody specifically give them to you
17 and say, "Review them"?

18 A No, they said, "Here are a bunch of files;
19 they're yours."

20 Q Okay. And then as you put them into your
21 filing system you reviewed them before you put them
22 there?

23 A That's correct.

24 Q All right.

25 I've seen the term "housekeeping" or "good

1 housekeeping" used in connection with the chemical
2 business. Does that involve keeping stuff up off the
3 floor and keeping it clean, basically?

4 A Keeping stuff inside the reactors, keeping
5 stuff inside the vessels and keeping the premises clean,
6 yes.

7 Q The chemical plant equivalent of having the
8 house dusted and the clothes in the dirty clothes
9 hamper?

10 A Yes, I --

11 Q And is good housekeeping something that any
12 chemical plant ought to perform in any section of the
13 plant?

14 A I can't comment on other people's chemical
15 plants, but I can comment on Monsanto's.

16 Q Will you, please?

17 A Yes. I think it should be kept as clean
18 as -- as feasible. Some operations inherently produce
19 dust and have to be taken care of at particular times
20 during the working day.

21 Q The need for good housekeeping would apply
22 even in a section of a chemical plant that made
23 something like aspirin, though, wouldn't it?

24 A Well, I would think it would be extremely
25 important in the case of a pharmaceutical like aspirin.

1 A That would depend on a variety of things.

2 Q Such as?

3 A Such as whether the people had any ill
4 effects, whether they had written us or called us or
5 communicated with us that they had any problems with our
6 product, any specific product.

7 Q If you hadn't gotten a specific notice of a
8 problem, you wouldn't want him doing that?

9 A Whether I would want him to or not, I don't
10 believe that -- I think it was a question of time and
11 priorities.

12 Q It would not be a priority, then, to do that
13 unless a problem had come to your attention?

14 A With the exception of insecticides in --
15 which were being made by relatively unsophisticated
16 people, insecticide formulators. He might have gone
17 into those plants before he was requested to by the --
18 the company. That would be because we had known that
19 similar plants had troubles. But I don't know how often
20 that was.

21 Q Okay. In that particular case that would be
22 because of some reason to have a question about whether
23 or not they were handling your product correctly?

24 A Whether they would be in a position to handle
25 it. That might have even been before they -- they were

1 sold the material. Remember now we're dealing with one
2 particular very toxic group of chemicals.

3 Q Those insecticides were what you considered
4 highly toxic?

5 A Yes, sir.

6 Q And, by the way, you mentioned to me that
7 that type of classification might involve five to ten
8 milligrams per kilogram of an LD 50 dose in a rat.

9 A Yes, sir.

10 Q Can you tell me what five to ten milligrams
11 per kilogram translates into in parts per million or
12 parts per billion?

13 A Of the diet?

14 Q Yes.

15 A Well, if you take a human being who weighs
16 60 kilograms or 70 kilograms, he has a diet of roughly
17 100 grams of carbohydrate, 150 grams of fat, 50 grams of
18 protein, 200 grams --

19 Q That would be 300 grams, wouldn't it? 100,
20 150 and 50.

21 A No, I didn't -- 100 is carbohydrate --

22 Q Right.

23 A -- 50 is protein and 50 is fat.

24 Q Oh, I'm sorry. Okay. Fifty and fifty. All
25 right.

1 A That would be 200 grams of dry weight. If he
2 has let's say ten milligrams per kilogram. He weighs 60
3 kilograms, he gets 600 milligrams per 200 grams. 200
4 grams is 200 times 1,000, that's 200,000 milligrams, and
5 he is taking 600 of them.

6 Q That's 200,000 --

7 A Milligrams.

8 Q -- milligrams and he's --

9 A In 200. In 200 grams of food. So he is
10 taking 600 milligrams in 200,000. So in parts per
11 million that's six over 20,000 times 50 would be 300
12 parts per million.

13 Q 300 parts per million?

14 A Please, I do not have a calculator with me
15 and I'm doing this.

16 Q Let's see if we can -- we've gotten a
17 calculator here, if we can get it turned on.

18 MR. SHOEBOTHAM: Why don't we do this --

19 MR. LACEY: Oh, there it is right there. It
20 said on. That was the tricky part.

21 THE WITNESS: We have 200 grams times 1,000
22 milligrams in a gram. That equals 200,000 milligrams.
23 He has -- he weighs 60 kilograms. Divide that by 60.
24 That's 3300 -- 3300 milligrams per kilo. He has 10
25 milligrams per kilogram of the compound that he is

1 taking. So we divide that by 10. That's 333 --
2 that's -- that's one milligram -- that's roughly 333 --
3 I'll need a pencil and paper on this. I can't really do
4 this.

5 MR. SHOEBOOTHAM: Why don't we -- why don't we
6 do this. Let's -- if you would like him to figure out
7 that problem, Mr. Lacey, why don't we save that for a
8 break or something.

9 MR. LACEY: That's fine.

10 MR. SHOEBOOTHAM: I'd be more than happy to
11 have him figure it out for you, but it sounds pretty
12 complicated.

13 MR. LACEY: Okay.

14 Q I thought we might get you to help us do
15 that. If you would do that at a break --

16 A Just write down what you want and I will do
17 my best.

18 Q Let me set down what I want, and maybe Mr.
19 Shoebotham can make note of it so you can do this at a
20 break. You've given me the approximate standard for a
21 highly toxic material, which I understood you told me
22 was five to ten milligrams per kilogram of body weight
23 for the acute toxic LD 50 for a rodent.

24 A Right.

25 Q And I'm trying to find out what that means in

1 parts per million.

2 A Of the diet?

3 Q Uh-huh. That's right. And let me just -- to
4 also help us kind of fill out this schedule, if you can
5 give me also what the parts per million would be of the
6 diet roughly of a moderately toxic substance as you use
7 that term.

8 Do we need to go off the record, Jon, for
9 you?

10 MR. SHOEBOOTHAM: I need to take a phone call,
11 if that's all right. If you wouldn't mind.

12 VIDEO OPERATOR: We're going off the record.
13 The time is 2:36 p.m.

14 [Recess]

15 VIDEO OPERATOR: We're now back on the
16 record. The time is 2:42 p.m.

17 MR. LACEY:

18 Q Let me ask you as we're filling out this
19 schedule to also give me the approximate quantity in
20 parts per million of the diet for what would be a
21 moderately toxic chemical and a slightly toxic chemical,
22 just to have an idea of how those things fit together.
23 And I trust Mr. Shoebbotham has written that down and
24 you-all can get together at a break and work out the
25 math and we can have that move pretty quickly.

1 Going back to the visiting of plants, I take
2 it from our discussion this morning that you would
3 anticipate that a customer of Monsanto would be supplied
4 with the appropriate technical literature on the
5 products that they bought so that they would know what
6 your department had to say about toxicology and safe
7 handling. Correct?

8 A Yes.

9 Q That was the intention of Monsanto that
10 customers have those technical bulletins and literature.
11 Correct?

12 A Correct.

13 Q And am I correct in understanding that when
14 you went into customers' plants you might from time to
15 time see customers who were not using your materials in
16 accordance with what you would have intended based on
17 what you wrote about toxicology and safe handling?

18 MR. SHOEBOTHAM: Are you specifically talking
19 about PCB products, Mr. Lacey?

20 — MR. LACEY: No, I'm talking about any
21 products.

22 MR. SHOEBOTHAM: Any other products?

23 A The few times that I went into customer
24 plants I went in on the basis of reports from them that
25 they had real or presumed health problems with their

1 employees. Where they had real health problems, I found
2 that they were not carrying out the safe handling
3 procedures that we had recommended.

4 MR. LACEY:

5 Q Did you obtain reports from Mr. Wheeler
6 indicating that he had some of the same experiences you
7 did, that is, going into plants and finding health
8 problems because they were not -- the customers were not
9 carrying out the procedures provided by Monsanto?

10 A Please -- we were interrupted.

11 COURT REPORTER: "Did you obtain reports from
12 Mr. Wheeler indicating that he had some of the same
13 experiences you did, that is, going into plants and
14 finding health problems because they were not -- the
15 customers were not carrying out the procedures provided
16 by Monsanto?"

17 MR. SHOEBOOTHAM: Again, as I understand his
18 question, this is any Monsanto products, not necessarily
19 PCB products.

20 MR. LACEY: That's correct.

21 A Yes, in some cases that is correct.

22 MR. LACEY:

23 Q Did that experience cause you and Mr. Wheeler
24 and others in your department to review your technical
25 literature and see if the problem might lay with the way

1 in which your warnings were worded, that they for some
2 reason weren't communicating what you meant to
3 communicate about safe handling practices and
4 toxicology?

5 A No, sir. Because when they did follow the
6 warnings and safe handling procedures that we had
7 recommended, they -- the problems vanished. And the
8 vast majority of the customers who were using the
9 product in concordance with our safe handling procedures
10 and warnings did not have any problems.

11 Q That wasn't my question. Let me make it
12 clearer. When you found a customer who was having
13 problems because they weren't handling the product in
14 the way in which you had intended that they should, did
15 you determine whether or not they had the technical
16 literature?

17 A I can't recollect whether I did or not. I
18 don't know whether -- I can't remember 40 years ago.

19 Q Okay.

20 A I don't remember.

21 Q Did you determine whether or not they simply
22 decided to ignore the technical literature?

23 A Again, I can't remember. But I know they
24 were not following what we had -- what had been
25 recommended.

1 Q And what I'm trying to find out is you
2 discovered a situation where there was some
3 misunderstanding in their interpretation of what you
4 meant to say or what you were trying to say.

5 A No, sir, there was no such misunderstanding.

6 Q In no case did you ever find that problem?

7 A None that I can recall.

8 Q Okay.

9 Now, from the time that you became
10 responsible for the general areas that fell under the
11 medical department, in particular reviewing information
12 that went out, that would be about 1938 or so?

13 A Yes, sir.

14 Q What sort of materials were being supplied to
15 customers with regard to PCBs?

16 A Materials that were supplied to the customer
17 regarding PCBs included technical bulletins, product
18 bulletins and letters in answers to inquiries.

19 Q Okay. So up to 1942 there would be technical
20 bulletins and there would be letters in response to
21 inquiry?

22 A Yes, sir.

23 Q Anything else?

24 A Product bulletins, if that was -- or
25 technical bulletins.

1 Q What's the difference between a technical
2 bulletin and a product bulletin?

3 A A technical bulletin is more oriented towards
4 a beginning use of a product, it is recommending various
5 uses for the product, whereas a product bulletin refers
6 to established uses of a product.

7 Q Did you have any warning labels that went out
8 with the products, PCB products, that were sold?

9 A We had labels on the containers of PCBs that
10 contained safe handling instructions.

11 Q Okay. Anything else that would communicate
12 to a customer anything about health hazards or safe
13 handling?

14 MR. SHOEBOTHAM: Do you mean that would have
15 come from Monsanto as opposed to what was available to
16 them in the published literature?

17 MR. LACEY: That came from the manufacturer.

18 A Well, I have told you that we had warnings on
19 the labels, I have told you that we had product and
20 technical bulletins that contained safe handling data, I
21 told you that we had letters from the medical department
22 in answer to any of the inquiries.

23 MR. LACEY:

24 Q That's what I'm asking. Is that it?

25 A That's all I can recollect right now. There

1 may be more. I don't think of it right now.

2 Q Let me ask you to -- at this point I'm going
3 to ask the reporter to leave a blank in your deposition.
4 If you think of anything else before you read and sign
5 your deposition, will you fill in the blank and let me
6 know about that?

7 A Yes, I will.

8 -----
9 -----
10 -----
11 -----

12 Q Okay.

13 Now I want to show you some documents that
14 have been provided to me by Monsanto and try to identify
15 these documents and get you to indicate to me, if you
16 can, what you know about the toxicology and safe
17 handling information in them. First I want to show you
18 a document 1508 through 1518 and ask if you have seen
19 that type of document before.

20 A I've seen it in the last couple of days.

21 Q Okay.

22 A I don't recall whether I saw it in the years
23 '36 to '42 or not.

24 Q Okay. Mr. Shoebotham showed it to you in the
25 last couple of days?

1 A That's correct.

2 Q Okay.

3 Let me show you another document, 1519
4 through 1528, and ask if you recognize that document.

5 A My answer to that is the same. I've seen it
6 a couple of days ago when shown by Mr. Shoebottom. I
7 don't recall whether I ever saw it in my days with
8 Monsanto.

9 Q I see. When you say a couple of days ago,
10 are you talking about yesterday or --

11 A Yesterday.

12 Q Yesterday. All right.

13 Now, those two documents that I have just
14 shown you have the name of Swann Chemical Company on
15 them. Correct?

16 A Yes, sir.

17 Q And Swann was the company that Monsanto
18 bought when it acquired the Anniston, Alabama, plant
19 that made PCBs. Correct?

20 A Yes, sir.

21 Q After Monsanto acquired that plant, did
22 Monsanto continue to send out technical bulletins with
23 the Swann name on them?

24 A I have no idea whether they did or not.

25 Q Okay. Are you aware from the time that you

1 came on at Monsanto and had responsibility for the
2 toxicology and safe handling literature in Monsanto
3 technical bulletins and product literature any use of
4 literature with the Swann name on it?

5 A I have no recollection of any such knowledge.

6 Q Okay.

7 Do you know whether or not Monsanto put out a
8 technical bulletin or product literature like those two
9 Swann documents with a Monsanto name on it?

10 A What do you mean by like? Do you mean --

11 Q Containing this same type of information.

12 A Do you mean -- well, the same type. But
13 again do you mean to say that they put out this bulletin
14 only they changed the name of Swann to Monsanto Company?
15 Is that what you are asking me?

16 Q That -- that would be a fine question. Do
17 you know the answer to that one?

18 A I don't know --

19 Q Okay.

20 A -- whether they did or not.

21 Q Okay.

22 A I never saw a Monsanto bulletin similar to
23 what you've described.

24 Q Okay. Did you see any -- strike that.

25 These bulletins that Swann put out, are those

1 what you call technical bulletins or are they what you
2 call product bulletins?

3 A I think what these would be would be
4 bulletins that describe the physical properties of
5 aroclors. That's the way they label them.

6 Q Right.

7 A If that were -- I would say they were
8 technical bulletins because they suggest means of
9 employing Aroclor as it's on the third paragraph of the
10 first page.

11 Q Now let me show you another document, 1559
12 through 1580, and ask if you've ever seen a document
13 like that.

14 A I've seen documents similar to it. I can't
15 say that I have seen this identical document. I've seen
16 an awful lot of documents. I may have been shown this
17 the last -- yesterday. I may have seen it during my
18 time at Monsanto, but I don't know whether I've seen
19 this identical document at that time.

20 Q Well, let me ask you about the documents,
21 either technical bulletins or product literature that
22 Monsanto did put out before 1942 on PCBs. Did they
23 contain information like that document in front of you?

24 A I can't answer that unless I'd see the
25 documents with the date on it. I don't remember.

1 Q Well, did Monsanto put out dated documents on
2 PCBs? Or were they undated?

3 A I don't know whether they put out dated
4 documents. I think some were dated, some may not have
5 been dated. But I don't know.

6 Q Do you know whether Monsanto in fact put out
7 any technical bulletins or product literature on PCBs at
8 all prior to 1942?

9 A They might very well have been. But I do not
10 recollect what the bulletin was. I have no recollection
11 of that.

12 Q Are you telling me, then, that it's possible
13 Monsanto put out no technical bulletins at all on PCBs
14 up until 1942?

15 A I think it would be extremely improbable if
16 they ever did, because they put out technical bulletins
17 on all their products and on all new developments of a
18 product. I cannot recall when they put one out or the
19 exact type of a document, but, as I say, they put it out
20 on almost all their chemicals and it would be extremely
21 remote if they didn't do it.

22 Q But you don't specifically remember a
23 document that was put out on PCBs? Is that correct?

24 A I don't specifically remember a document put
25 out in the 1930s, no, I don't. Fifty years ago, no.

1 Q Okay.

2 Let me ask you to look at the section of that
3 document that deals with toxicology and safe handling.

4 A Yes, sir.

5 Q Take a second to review that, if you would.

6 A Yes, sir.

7 Q Is that language that you approved?

8 A I may have.

9 Q What's the question about may have? What
10 would be --

11 A I don't know the date of this document. So I
12 don't know when I -- whether I approved it or not.

13 Q I see. Review the document, see if you can
14 find anything on there that would help you date the
15 document.

16 A Where they talk about experimental work on
17 animals shows that prolonged exposure to Aroclor vapors
18 evolved at high temperatures will lead to systemic toxic
19 effects, that may date it in the Fifties, but I do not
20 know whether that is the reference that they -- I know
21 we did some work in the Fifties on Aroclor vapors
22 evolved at high temperatures, but I do not know whether
23 that was the basis -- that work was the basis for this
24 statement, so I can't be sure that dates it.

25 Q Okay.

1 A They suggest the use of it in plastics as a
2 plasticizer, which puts it into the frame of whenever
3 they were selling it as a plasticizer. I'm not familiar
4 with the time frame of that.

5 Q Was that use as a plasticizer something that
6 was checked out with the medical department before the
7 use was approved?

8 A Yes.

9 Q And you approved the use of PCBs as a
10 plasticizer?

11 A Yes, in some areas, yes, sir.

12 Q Okay. Do you recall whether that was before
13 or after your service in World War II?

14 A I think it was after.

15 Q Okay.

16 A That's the only things I can think that might
17 date it, to answer your question.

18 Q How about that last page right there with
19 that received stamp on it?

20 A I don't know what that means.

21 Q Well, what does it say?

22 A It said, "Received June the 18th, 1945."

23 Q Is that a Monsanto date stamp?

24 A I can't make it out.

25 Q I see.

1 A But I would find that hard for me to use that
2 as a date if they refer to the evolution of animal work
3 at high temperatures, which to the best of my
4 recollection was done in '54, in the middle Fifties.

5 Q Well, can you explain to me, then, why
6 Monsanto would be producing that document to me with a
7 date stamp on it for 1945?

8 A I can't explain at all to you.

9 Q It doesn't make any sense to you?

10 A No. I just said I cannot explain why they
11 did it to you -- gave it to you.

12 Q But it's your opinion that document would
13 have to be in the 1950s?

14 A Not -- I said if they base that document --
15 if they base the toxicological statement on animal work
16 that we carried out in the 1950s, that would have to be
17 in the 1950s.

18 Q Well, that's your toxicological statement,
19 isn't it?

20 A I don't know if it is mine. I told you I do
21 not recollect whether that is my toxicological statement
22 or not.

23 Q I see.

24 Well, let me show you another document,
25 numbered 33 through 54, and ask you to take a look at

1 that.

2 A Yes, sir, I've looked at it.

3 Q All right. Is that document similar to the
4 preceding one?

5 A Yes, sir, it is.

6 Q Almost identical?

7 A Well, it doesn't have that 1945 stamp on the
8 back.

9 Q No, it doesn't, does it?

10 A I haven't seen it yet. I haven't come to it.

11 Q Look at the first page of that document. Do
12 you see what's penciled in there in hand as a date?

13 A It says 1946.

14 Q Again, would you doubt that that could be the
15 date of the document?

16 A I haven't the slightest idea whether that
17 date is correct or not.

18 Q Okay. If that's not a correct date for the
19 document, do you have any idea why somebody would have
20 penciled that in on that copy and then provided it to
21 me?

22 A I haven't the slightest idea whether this was
23 penciled in by parties unknown. I don't know who
24 penciled it in. I have no idea about how that date got
25 on there.

1 Q I see. Well, let me tell you it was on the
2 document when I received it from Monsanto, if that's of
3 any help to you in trying to date the document.

4 MR. SHOEBOOTHAM: Mr. Lacey, I think he has
5 told you very clearly he doesn't know anything about the
6 date that's written on the first page of the document.

7 MR. LACEY: I'm trying to date the document.

8 Q Is that a document -- you can review it as
9 much as you need -- that could have been prepared and
10 produced and sent out by Monsanto to customers in 1946?

11 A No, I would find that hard to believe.
12 Because I do not know of experimental work on animals at
13 prolonged exposure to Aroclor vapors evolved at high
14 temperatures. I thought that that work was done in 1954
15 and that was the first work done. Now, there may have
16 been others that I don't know about and that was the
17 basis for this statement. And if that was true,
18 conceivably it might have been in '46. But I don't
19 believe it.

20 Q Well, let me get real plain on that. If it
21 was done in 1946, that's your toxicological statement.
22 Correct?

23 A No. It may not be. Because I came back in
24 1946, in February or March. I don't know when that went
25 to the printer. So it may very well not have been my

1 toxicological statement.

2 Q Let me ask you to take a look at those first
3 two Swann documents, if you would. Can you date those
4 for me?

5 A Yes. Copyright 1932, Swann Chemical Company.
6 Copyright 1934, Swann Chemical Company.

7 Q That's a pretty good practice, to date
8 technical literature, isn't it?

9 A I don't believe I am an authority on dating
10 literature. So I can't answer your question.

11 Q Well, it's certainly helpful to have a date
12 on it, isn't it?

13 A Well, it's helpful in this particular
14 discussion today.

15 Q Well, let's go a little bit further. If you
16 had a piece of technical literature in your file that
17 was 30 years old, how much reliance would you want to
18 place on that?

19 A That would depend on the information in the
20 bulletin and that would depend on the product, that
21 would depend on a lot of varying things.

22 Q I see.

23 A Most of these bulletins are sent out with a
24 covering letter and conceivably the covering letters are
25 always dated.

1 Q Is it your testimony that typically there
2 would be cover letters that went out with each one of
3 these bulletins that were dated?

4 A No, I'm not saying that at all. I said most
5 of the bulletins that are sent out may be sent out with
6 a covering letter.

7 Q Well, if that's the case, we still would want
8 to know the date of the bulletin to make sure we sent
9 out the most current version to our customer, wouldn't
10 we?

11 A Yes, I'm sure we would.

12 Q And having a date would help ensure that the
13 person who was sending them out picked up the most
14 current version, wouldn't it?

15 A Yes, I think that's correct.

16 Q Can't we agree that then it would be a good
17 practice to at least have a date on the document?

18 A It would be helpful.

19 Q For a lot of reasons?

20 A Well, for just that one reason you said. You
21 would have the latest bulletin. You wouldn't be giving
22 a person an old bulletin.

23 Q And it would be helpful to the -- to the
24 customer to make sure he had current information on
25 which he was going to rely, too, wouldn't it?

1 A Well, conceivably when he received it from
2 Monsanto he knew that that was current as far as
3 Monsanto was giving it. As far as he was getting it
4 from Monsanto. If this resurrected in his file ten
5 years later I can see there might be a problem with no
6 date on it.

7 Q So, again, it would be good practice to date
8 them, for a lot of reasons, including reference
9 purposes. Correct?

10 MR. SHOEBOOTHAM: The question has been asked
11 and answered, Mr. Lacey. I'm going to have to object.
12 It's been asked and answered three or four times by Dr.
13 Kelly.

14 A I would say I could see the advantage of
15 having a date on a bulletin.

16 MR. LACEY: Okay.

17 Q Let me show you another document, 1581
18 through 1605, ask you to review that and see if you can
19 tell me the date of that document.

20 A I don't know what PL 847-71 is. I don't know
21 if that's a date or not. Somebody in the printing
22 department would have to decide whether that's a 1971
23 date or not. It appears to me that that's the common
24 way people express dates. But whether this is a code of
25 something else besides a date I can't say.

1 Q From the information in the document, what
2 does the apparent dating of it to you seem to be?

3 A Information in the document shows that it was
4 published after 1931. Because they referred to a paper
5 published in 1931. They -- under toxicity they refer to
6 the same prolonged experimental work in animals, that
7 prolonged exposure to Aroclor vapors evolved at high
8 temperatures would lead to systemic effects. That leads
9 me to believe it was after 1954. So we're left with
10 definitely after 1931. If this PL 8-47-71 refers to a
11 date, it could be 1971. In my belief, if they're
12 referring to animal work that was done in '54, it's
13 after 1954.

14 Q Would that document present appropriate
15 toxicological and safe handling information as it should
16 have in it was a 1954 document?

17 A I don't understand the question. Would
18 you --

19 Q Well, let me try to make it clearer. You
20 monitored or people in your department monitored the
21 literature about products that Monsanto made, didn't
22 you?

23 A Yes.

24 Q You specifically monitored the literature
25 about PCBs?

1 A Yes.

2 Q And developments in the literature might make
3 previous statements about dermatology, toxicology and
4 safe handling inappropriate, mighten they?

5 A They might. But they don't make these
6 inappropriate.

7 Q That's my question. In view of the state of
8 the knowledge of Monsanto and in particular your
9 knowledge as the medical director, and the literature,
10 would that be an appropriate statement for a 1954
11 document with regard to toxicology and safe handling?

12 A The statements that say how to control the
13 vapors as well as protection by suitable garments from
14 stints of bodily contact with liquid aroclors should
15 prevent any untoward respect would be appropriate prior
16 to, '54, after '54. Prior to '54, I do not know if that
17 statement about experimental work on animals was
18 available at that time.

19 Q It wouldn't be appropriate to make statements
20 that weren't based on the literature, would it?

21 A No. Or our own work.

22 Q Certainly.

23 A The statement is repeated bodily contact with
24 liquid aroclors may lead to an acneform skin eruption
25 would be appropriate prior to 1954, yes, sir.

1 Q Would those statements with regard to
2 toxicology and safe handling be appropriate if the
3 document were published in 1971?

4 A Yes, that would be appropriate.

5 Q Okay. Nothing would need to be added to it
6 to make it appropriate or nothing would need to be
7 subtracted from it if it were a '71 document. Is that
8 correct?

9 A Well, the safe handling data may be phrased
10 somewhat differently. In other words, in 1971, where we
11 had 14 more years of industrial experience with -- than
12 we had in 1954, we may not have had to -- to be -- to
13 delineate the occurrence of acneform skin eruption, we
14 would just be appropriate to say avoid repeated contact
15 or prolonged contact.

16 Q So you think the document could be even less
17 specific in '71 than it was as written?

18 A I said the industrial experience of 17 years
19 from the years 1954 to 1971 could -- would allow the
20 same -- would demand the same safe handling data, but in
21 the absence of a skin eruption it would not be necessary
22 to talk about conditions that were not occurring in
23 industry during those 17 years.

24 Q Who was responsible within Monsanto for
25 actually putting together the nontoxicology-dermatology-

1 safe handling portions of these bulletins?

2 - A The nontoxicology, nonsafe handling data?

3 Q Yeah.

4 A You mean --

5 Q The rest of the book.

6 A The rest of the book?

7 Q Yes.

8 A Somebody in the marketing department,
9 somebody in the research department, somebody in the
10 advertising department. I don't know who would be the
11 person. We did not have a department of bulletins.

12 Q Okay. My point is, I mean there's a lot of
13 information in that bulletin other than the part that
14 your department would have contributed?

15 A A great deal, yes, sir.

16 Q And your department simply made their
17 contribution and whoever it was that was responsibility
18 for getting that bulletin out got the rest of it
19 together and inserted what you said was appropriate and
20 got it out?

21 A Yes, sir.

22 Q Okay.

23 Let me hand you another document, 1606
24 through 1634, and ask that you review this document.

25 A Yes, sir, I've reviewed it.

1 Q What do you estimate the date of that
2 document to be?

3 A Well, there is no date on it. I do not find
4 that 4/17/71 -- oh, yes, I do. 10/48/71. That's back
5 there on the second-to-last page. Conceivably that may
6 be a date. I do not know what PGB means.

7 Q Okay.

8 A Printed general bulletin? I haven't the
9 slightest idea. They talk about --

10 MR. SHOEBOTHAM: Let me -- Dr. Kelly, does
11 the fact that it has 48 in it indicate to you that it is
12 not a date? 10/48/71.

13 THE WITNESS: Oh, yeah, I guess it is. There
14 are not 48 days in a month. So it probably is not a
15 date.

16 They talk about our skin testing with the
17 material. And if I had the report from our skin testing
18 for primary irritancy or sensitization, I could tell you
19 when -- I could put a floor under it. I couldn't put a
20 ceiling. I could tell you it was printed after he did
21 this, but I couldn't tell you how late, how long
22 afterwards it was done.

23 MR. LACEY:

24 Q So you can be sure it's after whatever date
25 you did your work on skin sensitization?

1 A Yes.

2 - Q But you can't tell how long after that?

3 A That's correct.

4 Q Is there anything that indicates to you from
5 any other discussion about toxicology and safe handling
6 a date before which it's not likely the document went
7 out?

8 A Well, then when they talk about allowable
9 limit of ten milligrams per cubic meter of air for
10 Aroclor 1268, if one were to get the book of the
11 American Government industrial hygienists and run
12 through the Fifties, Sixties, Seventies, or whenever
13 they started, and see when they put Aroclor 1268 as ten
14 milligrams per cubic meter, that might help fix a date.

15 Q Is there anything about that bulletin that
16 suggests a 1954 or later date in there, as you mentioned
17 on some of the others?

18 A '54 or later?

19 Q Yes. I know on some of the other ones you
20 indicated you thought they were '54 or later because of
21 certain information.

22 A Well, it -- here it talks about the
23 experimental work in animals indicates a max safe
24 concentration of vapors is at a range of .5 to 1
25 milligram per cubic meter. That presumably refers to

1 our middle Fifties work.

2 - Q Okay. So here we've got several things we
3 can look at. We know it's after the sensitization on
4 the skin work, we've got this work in the mid-Fifties on
5 the experimental work with animals, and we've got when
6 this -- what book was it that was published?

7 A Maximum or threshold limit values for
8 industrial substances put out by the American Conference
9 on Government and Industrial Hygienists.

10 Q Okay.

11 Let me hand you another bulletin. By the
12 way, all of these that you've been looking at, would you
13 consider all of those thus far to be technical
14 bulletins?

15 A I think so. Because they're suggested
16 applications.

17 Q In fact, they all wear the same technical
18 bulletin or application data bulletin number, don't
19 they, P-115?

20 A The last two I looked at were. I don't know
21 about all of them.

22 Q Well, if we go back and -- some of the
23 others -- they all bear that P-115, do they not?

24 A Yes, they do.

25 Q Even going back to the one that's got that

1 1945 received stamp on it. Correct?

2 - A I'll have to look and see if that's in here.
3 Yes, sir.

4 Q Okay.

5 Let me show you another bulletin, 1635
6 through 1663, also an application data bulletin P-115,
7 and ask that you take a look at that, see if you can
8 help us date it.

9 A Well, it was after September the 28th, 1944,
10 because they mention that date in here.

11 Q Okay.

12 A I don't know when Du Pont put Teflon in
13 general use. And if they found that out, that might
14 also be a floor. Because they mention about the
15 relationship of Aroclor to Teflon when used as a gasket.
16 But I don't know when Du Pont put out Teflon.

17 Skin patch tests are the same as before.

18 And the work on the concentrations allowable
19 limits are the same as the previous bulletin. As far as
20 dating is concerned. You would have to find out when
21 that was -- when the government industrial hygienist --
22 hygienists put that out.

23 They mention technical bulletin P-131.
24 Conceivably that may have something that might help date
25 it.

1 And they have that Code No. 44971, which I
2 don't know what that means. So that's all I can tell
3 you as far as dating is concerned.

4 Q Is that like the others, then, you think it
5 because of the toxicology and safe handling data is
6 after 1954?

7 A I would think so, yes, sir.

8 Q In the documents that you reviewed yesterday
9 with Mr. Shoebotham did you find any technical bulletins
10 or product bulletins that you thought were the ones that
11 Monsanto had issued about PCBs prior to 1954?

12 A I reviewed quite a lot of documents by
13 skimming over them. I didn't review them in depth. I
14 cannot answer whether any of those might have been
15 before -- when?

16 Q 1954.

17 A Before 1954? I can't recall whether they
18 were or not.

19 Q If I understand your testimony correctly, you
20 believe that each of the documents put out by Monsanto
21 that we've looked at thus far, and I'm talking here now
22 about the documents 1559 through 1580, 33 through 54,
23 1581 through 1605, 1606 through 1663, and 1635 through
24 1663, were all probably after 1954 due to the reference
25 to those tests. Correct?

1 A I said that I could be positive about the
2 ones that had referred to the skin testing of the
3 plasticize material. I could put a -- the early date if
4 I knew when those were done. I said that if that
5 reference to animal exposure at elevated temperatures
6 referred to our work at the University of Cincinnati in
7 the middle Fifties these bulletins would have to be done
8 after 1954.

9 Q And I believe you also told me you're not
10 aware of any other work previous to that date that would
11 account for those statements. Correct?

12 A That's correct.

13 VIDEO OPERATOR: Excuse me. I need to take a
14 short pause.

15 [Recess]

16 VIDEO OPERATOR: We're now back on the
17 record. The time is 3:43 p.m.

18 MR. LACEY:

19 Q Let me show you another document Application
20 Data Bulletin P-115, documents 1664 through 1692, and
21 ask you to take a look at that one.

22 A To take a look with what purpose?

23 Q Well, I wanted to ask you about the dating of
24 the document --

25 A Okay.

1 Q -- if I can.

2 A No, Mr. Lacey, I cannot see anything on there
3 that would allow me to date this bulletin, with the
4 exception of the same statements I made concerning the
5 experimental work on animals at elevated temperature.
6 If that refers to the works we did at the University of
7 Cincinnati, it's sometime after 1954.

8 Q Did the people in the medical department who
9 prepared and/or reviewed toxicological and
10 dermatological and safe handling discussions that went
11 into these bulletins maintain files that had the support
12 documents for the statements that were made at the time
13 they were prepared?

14 A Any toxicological reports that we had
15 received from any organization were kept. Letters that
16 might have had some influence on toxicological
17 statements may or may not have been kept, because we
18 had -- the company had a retention schedules for
19 correspondence which really was -- instead of retention,
20 it was a -- it was a destruction. We threw them out
21 every five years or so. But any reports we received
22 were always kept.

23 Q My question was slightly different. Maybe I
24 didn't phrase it well. What I want to know is whether,
25 for example, as you or a person in your department would

1 prepare information on toxicology and safe handling or
2 review information that you had previously approved,
3 would you prepare any sort of source or bibliography or
4 other backup material for the statement at the time it
5 was prepared so you could later determine the basis for
6 the statements that you had authorized?

7 A No, sir, we did not.

8 Q Was it the situation that each time you
9 reconsidered the issue of dermatology and toxicology and
10 safe handling statements you would go back and
11 completely review your entire files once again with
12 regard to what ought to be said?

13 A No, sir, we didn't have to review the files,
14 because I think we were pretty familiar with the
15 toxicological and dermatological effects of the majority
16 of our compounds on which we had to write bulletins.

17 Q So that you already pretty much had it in
18 your head?

19 A That's correct. Or readily available.

20 Q Let me show you another document, called
21 The Aroclor Compounds, document 84 through 131, and ask
22 if you can give me a date on that document.

23 A Well, I've come across one date that looks
24 like 11/29/45, but it's referring to a figure about the
25 dielectric constants. I don't know if that's a date or

1 not, but it would appear to be. But that would be a
2 lower limit date.

3 There's another reference for 1953, so this
4 is after 1953.

5 Q All right.

6 A They talk about the skin testing for
7 sensitization and primary irritancy. So it would be
8 after whenever we had those tests carried out at Barnard
9 Skin and Cancer Hospital.

10 COURT REPORTER: At where?

11 THE WITNESS: Barnard Skin and Cancer
12 Hospital.

13 COURT REPORTER: Thank you.

14 THE WITNESS: That's all I can tell you as
15 far as the dating is concerned.

16 MR. LACEY: Okay.

17 Q The references to the toxicology and safe
18 handling don't tell us anything more than that it was
19 after the work that you had done at Barnard?

20 A Barnard Skin and Cancer Hospital, right.

21 Q Okay.

22 Let me show you a document called a technical
23 bulletin No. P-137, document 17576 through 17588, that
24 does have a date on it, March 28th, 1949.

25 MR. SHOEBOTHAM: I'm sorry. The first page?

1 What was that?

2 - MR. LACEY:

3 Q Can you read the number there at the bottom,
4 Dr. Kelly?

5 A SCM 017576.

6 MR. SHOEBOTHAM: Thank you.

7 THE WITNESS: Yes, sir, it has a date on it.

8 MR. LACEY:

9 Q Very helpful, isn't it?

10 A Yes, it is, in this context.

11 Q Take a look at the document briefly. I'm
12 particularly going to ask you about the section that has
13 to do with toxicology and handling procedures.

14 A Yes, sir, I've read it.

15 Q Is that section information that you would
16 have reviewed prior to it being put in that bulletin?

17 A Yes, I believe it is.

18 Q And that deals with information on the use of
19 some PCB compounds for a specific purpose, does it not?

20 A Yes. In die-casting machines.

21 Q Does that information seem consistent with
22 what you believe was available to you at the time that
23 bulletin was written?

24 A Yes, sir.

25 Q Anything about that information that would

1 help us in any way date the rest of these documents that
2 we've previously looked at that don't have dates on
3 them?

4 A Well, there's still some stuff about Aroclor
5 1254 being used as a -- either -- neither a skin
6 irritant or a skin sensitizer. But that refers back to
7 bulletin P-115, which we have here, which we have had.
8 But we've had several different P-115s, so I don't know
9 how it helps us in here.

10 Q Well, that does tell us that there was some
11 bulletin P-115 --

12 A Yes.

13 Q -- that was in existence prior to this
14 document, doesn't it?

15 A That's correct, yes, sir. There are other
16 skin tests that were carried out that would have
17 different dates before 19 -- March the 28th, 1949.

18 Q And what impact does that have on helping us
19 date these other documents, if any?

20 A I don't think it has any help particularly.

21 Q Okay. So the only real help we get from this
22 and dating these other documents is to know that at
23 least some version of bulletin P-115 existed before the
24 date of that document?

25 A Yes, sir.

1 Q Okay.

2 Was there some group at Monsanto that kept
3 file copies of the various technical bulletins that went
4 out? And in particular I'm thinking whether you could
5 go and review what you had previously said about
6 dermatology and toxicology in a particular type of
7 bulletin.

8 A I believe that we kept -- to the best of my
9 recollection, we kept a copy of the latest technical
10 bulletin on products. I cannot be absolutely sure this
11 occurred on all the products, but I believe we had that
12 in our product file during my time at Monsanto.

13 Q When you say we, are you talking about the
14 medical department?

15 A The medical department, yes, sir.

16 Q My question was really whether Monsanto as a
17 larger entity maintained a permanent file of the various
18 bulletins it had sent out.

19 A I don't know.

20 Q The reason I ask that, I noted that on the
21 two Swann documents, one of them, document 1519 and
22 following, has a stamp on it that says To Be Retained In
23 Files and indicates it's to be retained permanently.

24 A I don't know who put that on. I don't
25 think -- I have no recollection of ever seeing that

1 while I was at Monsanto.

2 - Q The idea of keeping a copy of each version of
3 the technical bulletins that was sent out permanently in
4 the files is a pretty good idea, isn't it?

5 A I don't think so. The latest bulletins
6 always presumably have the more adequate information
7 that's based on experience that has been generated
8 either industrialwise or animalwise or literaturewise
9 since the previous bulletin.

10 Q I see.

11 The other Swann document, 1508 and following,
12 has a stamp on it that says: "From the files of the W GK
13 library. Please return." What is the W GK library?

14 A That is the -- presumably the Krummrich
15 plant, William G. Krummrich, for whom the plant was
16 named. That was called Plant B, and that was where
17 aroclors were made at some time during my stay at
18 Monsanto. I don't know the years when it was made.

19 Q Apparently that one that has that stamp is a
20 copy that actually came out of that library, is it not?

21 A At some time obviously it was in that
22 library. Whether -- whoever sent you these got it out
23 of a file someplace. I don't know where they got it.

24 Q Are you aware of any libraries at Monsanto
25 that preserved copies of the various technical bulletins

1 that went out for reference purposes?

2 - A No, I am not aware of any such action.

3 Q Do you know why these Swann bulletins would
4 not have been destroyed in the ordinary routine record
5 destruction at Monsanto?

6 A I haven't the slightest idea why they
7 weren't.

8 Q Okay.

9 Let me show you another document, labeled
10 Toxicology and Safe Handling of Monsanto Aroclor
11 Chlorinated Diphenyl, document --

12 COURT REPORTER: Excuse me. Toxicology --
13 and then I missed it.

14 MR. LACEY: Toxicology and Safe Handling of
15 Monsanto Aroclor Chlorinated Diphenyl.

16 Q That's PCBs, isn't it?

17 A That's correct.

18 Q No. 18731 through 18737. I'll first ask if
19 you've ever seen that document before.

20 A I may have. I don't know whether I did or
21 not. I may have.

22 Q Okay. Can you tell what the date of that
23 document is from anything contained in it?

24 A No. I can tell you it came from our English
25 operation.

1 Q How can you tell us that?

2 A It says -- if this attached sheet has been
3 there all the time, it says Monsanto House, 48 Victoria
4 Street, London SW1, which is Great Britain.

5 Q Why would your English operation have
6 documents on PCBs?

7 A They manufactured PCBs in one of the plants
8 in the United Kingdom.

9 Q Did your duties as medical director encompass
10 worldwide Monsanto?

11 A After 1954 they were worldwide, with the
12 exception of our Australian and Japanese plants.

13 Q What was manufactured in your Australian
14 plant?

15 A Pharmaceuticals. I've never been at the
16 Australian plant. So I know they manufactured
17 pharmaceuticals. I don't know what else they
18 manufactured. I did not believe they manufactured PCBs.

19 Q What was manufactured at your Japanese plant?

20 A Textiles. I don't know what else they
21 manufactured. I was not in our Japanese plants.

22 Q Okay.

23 So from after 1954 statements and literature
24 coming from operations in Europe regarding toxicology
25 and safe handling would have been subject to review and

1 approval or even creation by the medical department
2 prior to their issuance. Correct?

3 A Not exactly. Because we did not have as much
4 control over our European operations as we did in the
5 United States, just because of space, time and geography
6 and the difference of the two cultures. We didn't have
7 the same operation, control.

8 Q Well, do you know whether or not the medical
9 department, the corporate medical department, would have
10 reviewed that particular document on the toxicology and
11 safe handling of Monsanto aroclors, before it was
12 published, to approve what was said in it?

13 A I think we would have. But I can't be
14 positive.

15 Q Okay. Is there anything about the document
16 that will help you date it for us?

17 A Well, again, they limit -- it may be limited
18 by when they state the threshold limit was 1 milligram
19 of the lower-chlorinated aroclors and .5 milligrams of
20 the more highly-chlorinated compounds per cubic meter of
21 air. Whenever those values were originally promulgated,
22 that would show the earliest time.

23 Q That it could have been issued?

24 A Yes. And if they were ever changed
25 afterwards, it would show the interval in which it was

1 published.

2 Q With a document that came from your English
3 operations, would it be possible there would be
4 different values in England from those in the United
5 States for threshold limit values?

6 A Well, they may not even have had any values
7 established in England.

8 Q I guess my question is: Monsanto aroclors
9 are Monsanto aroclors and you would want to have the
10 same safe handling whether the plant and the customer
11 was in England or the United States or Australia or
12 Japan or wherever. Correct?

13 A You would want safe handling sufficient to
14 cause absence of any ill effect no matter where we sold
15 the stuff, yes.

16 Q Okay. Would you review those and tell me if
17 there's anything about those particular safe handling
18 procedures and toxicology that you think is
19 inappropriate for use in the United States?

20 A Well, I think on the page where it says the
21 higher the chlorine content the more toxic the material
22 is likely to be, if one gets up to 62 to 68 percent, the
23 toxicity drops down.

24 Q So you think that statement is inaccurate?

25 A It depends on how high the chlorine goes.

1 1254, which is 54 percent chlorine, is more toxic than
2 1242, but then as you get up higher it is not.

3 Q That's one of the problems with general
4 statements like that when you use words like high, low,
5 prompt, whatever, you don't know what you mean, do you?

6 A Well, you know what you mean. The question
7 is whether the other person knows what you mean. And
8 how much can you put into a statement that does not end
9 up with a whole litany of material?

10 Q Anything else about that document that you
11 don't think is correct?

12 A [No reply]

13 MR. CRAWFORD: Well, Doctor, you are not
14 saying that last statement was incorrect, are you?

15 THE WITNESS: No, no, it isn't incorrect.

16 MR. CRAWFORD: Okay.

17 THE WITNESS: But --

18 MR. CRAWFORD: Listen to the question, then.

19 MR. LACEY: Well, let me ask you.

20 Q Is it correct to say the higher the
21 chlorination the higher the toxicity?

22 A Up to a certain point, this is correct.

23 Q And then it becomes incorrect as you go
24 further up?

25 A That's correct.

1 Q So the statement that would suggest a linear
2 relationship between higher chlorination and higher
3 toxicity until the highest chlorination is incorrect,
4 isn't it?

5 A Well, it says the more -- the more toxic
6 material is likely to be. I do not know what he means
7 by likely to be means.

8 Q I see.

9 A He doesn't say that as a definite statement.

10 Q Okay. Well, it's a little bit confusing to
11 you what was meant by that?

12 A Well, I think he isn't as positive as a
13 statement might have been made in the basis of years
14 after this was printed. Because conceivably the
15 toxicological information was available at the time this
16 was published that didn't have toxicological data on
17 1262 and 1268.

18 And also one has to recognize to whom this is
19 going. I do not know what the situation of the
20 customers in the United Kingdom is. I do not know the
21 sophistication of the customers, I don't know whether
22 this went out to very small operations for various
23 things. So I do not know. So they are certainly
24 covering all bases in this particular statement.

25 Q Let me ask you, is there anything else in

1 that document like the higher chlorination that you have
2 any question about? I want you to review the entire
3 document.

4 A Now, you mean question about the accuracy of
5 the statements?

6 Q Yes. Or which you have difficulty
7 understanding and interpreting.

8 MR. CRAWFORD: David, while he's looking at
9 that, I want to mention one thing. You say statements
10 which are accurate or inaccurate. Of course, that's
11 going to depend on what was available during the time
12 frame. And I don't know if we've nailed that down yet.
13 So it may be a question that's impossible to really
14 answer without that information.

15 A I'm a little confused by the wording if
16 Aroclor is improperly handled and allowed to come into
17 continuous contact with the skin or otherwise is
18 ingested into the body. Usually in the United States
19 ingestion means taking orally. Whether or not the
20 people in England would use that term if the material
21 came into the body via breathing. So that would be
22 differences in our English language.

23 MR. LACEY:

24 Q Is that question about ingestion cleared up
25 on the next page there?

1 A I haven't got to it yet.

2 Q I see.

3 A Where it says here precautions, aroclors can
4 be handled with safety provided strict standard of
5 personal hygiene is observed, they can also be handled
6 with safety provided that proper engineering and proper
7 ventilation is provided. That isn't put in here.

8 Q So you think it needs to, in addition to
9 mentioning strict standards of personal hygiene, also
10 mention certain types of engineering?

11 A Well, if -- well, we will see if they cover
12 that down there. But strict standards of personal
13 hygiene would not be recommended if the material is
14 inside pipes.

15 Q And if it were not inside pipes then strict
16 standards of personal hygiene would be recommended?

17 A Yes, sir.

18 I think in certain -- where it says if
19 Aroclor is used at -- in certain circumstances confined
20 space work respirators should be worn, I believe that
21 other -- other methods could be added there.

22 Q For example?

23 A Ventilation, air line respirators, if you
24 needed it. Depends on how confining the confined space
25 is.

1 Q That's not clear from that document?

2 A Well, it said inhalation should be avoided,
3 adequate ventilation should always be supplied,
4 particularly if Aroclor is used at elevated
5 temperatures. In certain circumstances confined space
6 work respirators should be used. Now, respirators are
7 only temporary protective devices. If there's going to
8 be a repeated confined space operation, ventilation
9 would have to be provided.

10 Q And it's also, I take it, not clear to you
11 exactly what is meant by confined space.

12 A Well, confined space depends on how big the
13 space is. I don't know.

14 Q That's what I'm saying. It's not able to be
15 told from that, is it?

16 A No. But I would imagine the average
17 technical individual has this idea of what a confined
18 space is depending on his particular use of the product.

19 It's hard to quantify what's a fair exposure
20 to Aroclor. Ingestion. Aroclor obviously is not
21 intended to be taken orally. Inhalation. I have never
22 heard of a person being overcome with aroclors.

23 Q Does it warn about that?

24 A The patient should be taken out in fresh air
25 at once. If there's great difficulty in breathing, be

1 prepared to administer artificial respiration. I've
2 never heard of anybody being in that situation.

3 Q You don't think that's an appropriate warning
4 to be put in a book on toxicology and safe handling?

5 A Well, no fault with it. If the person isn't
6 breathing, be prepared to administer artificial
7 respiration, certainly. But I don't know that they have
8 to say this is -- but no documentation this has ever
9 occurred. I don't think they have to put that down.

10 Q It's more than what you think is needed?

11 A No. It depends on what -- what they wrote
12 this for and for whom they wrote it. And, as I say, the
13 people that they were sending this to. Because
14 obviously they're sending it to people where they say:
15 This is information for your health department. So
16 they're sending it to the management of customers. Yes,
17 sir.

18 Q Would you have any fault with anybody in your
19 department who reviewed that document and approved it to
20 go out like it is?

21 A No, I wouldn't. Depending on the time frame.

22 Q Well, after what date would you have fault
23 with that document had it gone out just like that?

24 A Whatever faults I have are very, very, very
25 small. I don't see much wrong with this document, for

1 goodness sakes, except little -- little items about the
2 higher the chlorine content, the more toxic it's liable
3 to be. I think I would say, well, when it reaches a
4 certain peak chloration, the toxicity lessens. I don't
5 think that's an important addition to this document. So
6 on the whole I wouldn't have had any -- any problems
7 approving this document.

8 Q Well, let me ask you again. After what date
9 would you have any questions at all about approving that
10 document for distribution to the medical departments of
11 Monsanto customers?

12 A If they needed this type of information, if
13 they were of the type of operation that needed this,
14 this is fine. But I would not have sent this out to
15 Monsanto medical departments -- I mean to the medical
16 departments of Monsanto customers, because these medical
17 departments were sophisticated medical departments, the
18 literature was present in the United States, rather
19 easily available, and we had enough information in our
20 handling and -- safe handling and precautionary
21 statements that had prevented any ill effects. So as of
22 up to right now those are the statements I'd have to
23 make about this.

24 Q Let me ask my question again. After what
25 date -- and maybe you're telling me you never would have

1 sent that document out to a customer that had a medical
2 department. If that's what you're saying, you can tell
3 me that. I'm just trying to find out the date after
4 which you would not have approved sending that document
5 to Monsanto customers for -- of PCBs who had medical
6 departments.

7 A Well, I cannot answer that question, because
8 I have to know what the customer was, what information
9 had already been sent the customer. I would not have
10 approved sending this data out to all Monsanto
11 customers, no, sir.

12 Q Let me ask you about some specific customers.
13 Would you have had any problems sending that document --
14 and what's the document number again, just so we can
15 identify it?

16 A 18731.

17 Q Through what's the last page number there?

18 A 18736.

19 Q Would you have had any problem sending that
20 document to the medical department of the Westinghouse
21 plant in Bloomington, Indiana?

22 A I wouldn't have any problem, but I think it
23 would be superfluous. The medical department of the
24 Westinghouse Company in Bloomington as well as in
25 Pittsburgh knew just as much about the chlorinated

1 biphenyls as Monsanto did.

2 Q Would you have approved sending that to the
3 medical department of the Tennessee Valley Authority?

4 A My answer is the same, because they are just
5 as sophisticated and they had all the knowledge that I
6 had of the toxicity of the chlorinated biphenyls.

7 Q What about the medical department of any
8 company in Texas that may have come into contact or used
9 products that contained PCBs? Are they all big
10 sophisticated companies that don't need that help?

11 A They were getting adequate help from our
12 technical bulletins that had adequate warnings and
13 adequate toxicological information in it.

14 Q The primary difference between that document
15 right there you are currently holding in your hand and
16 these technical bulletins we've previously looked at is
17 that has far more information than any of these
18 technical bulletins.

19 A This is six pages, yes. This is six pages.
20 And the other one is three or four paragraphs, yes, sir.
21 This is a lot more detailed information. Whether it's
22 necessary or not in England is one thing. Whether it's
23 necessary in the United States, I did not think it was.

24 Q Okay. And that's really the bottom line,
25 isn't it? You thought that far less information could

1 be submitted in the United States than apparently your
2 people in England thought needed to be submitted there.
3 Correct?

4 A We both had ideas of what information should
5 be submitted to accomplish the desired end, which was
6 the prevention of any ill effects in any of our users.

7 Q And I guess what you are telling me is those
8 are matters about which reasonable people could disagree
9 on what was needed. Correct?

10 A No, I don't think reasonable people could
11 disagree. Because if somebody looked at the warnings
12 and information we sent out in the United States and
13 equated that with the fact that we didn't have any
14 trouble in any of our customers for 30 years, with
15 extremely rare exceptions, I think reasonable people
16 would say: I think you're doing a good job on it.

17 Q Well, then, why would your people in England
18 be sending out far more detailed information if
19 reasonable people couldn't disagree but what the type of
20 information you submitted in the U. S. was sufficient?

21 A I said earlier that I do not know what the
22 sophistication of the English plants was at that time.
23 I do not know whether they were going to small cottage
24 industries or not. I just don't know.

25 Q I see.

1 Now, am I correct in understanding your
2 previous answers about why you wouldn't send this and
3 wouldn't think it appropriate to send it to people like
4 Westinghouse or TVA or other major companies in the
5 United States is because they had access to the same
6 information you did?

7 A No. First of all, let us take Westinghouse.

8 Q Fine.

9 A Westinghouse had a patented product which was
10 Inerteen, which was chlorinated biphenyl. They knew all
11 about the toxicity of -- of chlorinated biphenyls.

12 Q So Westinghouse never looked to Monsanto for
13 any information or help with regard to the toxicity and
14 safe handling of PCBs that Monsanto supplied to
15 Westinghouse. Is that what you're telling me?

16 A What I'm telling you is I have no
17 recollection of any contact with the Westinghouse
18 people. Whether or not they had sufficient knowledge
19 that was received from the product bulletins in some of
20 their operations, that may have occurred, but they had
21 a -- a central medical department that was -- knew just
22 as much about toxicity of PCBs as the Monsanto medical
23 department did.

24 Q And how do you know that?

25 A Because we have talked to industrial

1 hygienists in Westinghouse.

2 Q Who did you talk to, and when?

3 A The person's name is either Speicher or
4 Speicher. I believe that's the name.

5 Q And when did you talk to that person?

6 A I don't remember. I mean off and on we would
7 see -- at meetings we would see each other, Wheeler
8 would see him. So I can't tell you exactly when I
9 talked to him and when he said: Tell me something about
10 Aroclor 1254. But I do know that it's my firm
11 understanding that he was knowledgeable about all the
12 toxicological information about PCBs.

13 Q Did you talk to this person personally?

14 A I'm sure I did at some time. I can't tell
15 you when and I can't tell you what I said. But, as I
16 say, the industrial hygienists and the medical directors
17 used to meet at combined meetings. Afterwards, they
18 split up and Wheeler saw him more than I did.

19 Q And where was Mr. Speicher or Speicher
20 located?

21 A It was Pittsburgh.

22 Q Except for the duplication of providing,
23 in your view, Westinghouse with information it did not
24 need because it already had it, would there be any other
25 problem with providing them with that document that you

1 hold in your hand, document 18731 and following?

2 A Repeat it, please.

3 COURT REPORTER: "Except for the duplication
4 of providing, in your view, Westinghouse with
5 information it did not need because it already had it,
6 would there be any other problem with providing them
7 with that document that you hold in your hand, document
8 18731 and following?"

9 A No, I have no other reason.

10 MR. LACEY:

11 Q Wouldn't you agree with me it's better to err
12 on the side of caution and providing more information
13 than you think is necessary than run risk of not
14 providing enough?

15 A We were not -- that is not the option we had.

16 Q Could you answer the question?

17 A Well --

18 MR. CRAWFORD: Let him answer the question.

19 A I'll have to answer the question, Mr.
20 Speicher, by saying that you were giving me --

21 MR. CRAWFORD: Mr. Lacey.

22 A -- two different options and these are not
23 the two options. One is to provide them with
24 information like this, and the other is to provide them
25 with adequate information which we did in our own

1 bulletins to protect their workers.

2 MR. LACEY: Let me ask you this.

3 Q If Westinghouse was a sophisticated company
4 that knew as much about PCBs as Monsanto did, why did
5 you bother to provide them with any information at all?

6 A Well, I would imagine that the reason we
7 provided it was we had a standard practice of sending
8 our technical bulletins out with all shipments of
9 material, we had our safe handling data and
10 toxicological information in it, and we made no
11 exceptions to sophisticated companies or
12 nonsophisticated, so we sent it out to everyone.

13 Q That's exactly right. And the fact of the
14 matter is that the most sophisticated customer in the
15 United States and the least sophisticated customer in
16 the United States got exactly the same information,
17 didn't they?

18 A In the technical data sheets they did. In
19 some where there were inquiries from unsophisticated
20 companies they got detailed information and letters from
21 us.

22 Q What do you know --

23 A From me. What?

24 Q What do you know about that? What sort of
25 letters or documents did you send to unsophisticated

1 companies that you didn't send to sophisticated
2 companies?

3 A I cannot give you the actual details of the
4 letter -- letters, but I know that I got inquiries
5 concerning PCBs from various companies and I wrote them
6 letters about it.

7 Q Well, that's not my question. Are you
8 telling me it was the standard practice for small
9 customers to, with the sale and the technical bulletins
10 that went to them, to send them another additional
11 supplemental document that you didn't send to the big
12 customers?

13 A No. That is not correct, no.

14 Q It's only if they wrote and inquired or
15 called and inquired of you that they got any information
16 above and beyond what was in your standard technical
17 bulletins. Isn't that correct?

18 A Yes, sir.

19 Q And again in view of the fact that the same
20 technical literature went to every Monsanto customer,
21 big or small, wouldn't it be better to err on the side
22 of giving too much information rather than too little?

23 A We did not give too little. You are again
24 giving me an option that is not correct. We gave them
25 adequate information on the toxicity and adequate

1 information on the safe handling and precautions to be
2 used. And that has been proven by the absence of ill
3 effects by our customers.

4 Q Well, apparently your group in England didn't
5 think that, because they gave far more detailed
6 information to their customers, didn't they?

7 A This is far more detailed than we sent out,
8 yes, sir. I do not know, again, where this went to,
9 what type of operation it went to. I do not know the
10 background of information that the English customers had
11 on chlorinated -- on PCBs.

12 Q Well, is there some reason to believe that a
13 small, unsophisticated English customer of Monsanto PCBs
14 needed far more information than a small,
15 unsophisticated United States customer on PCBs?

16 A I think they both needed adequate
17 information. The Monsan -- the United States customer
18 got adequate information, the English customer got
19 adequate information according to their likes.

20 Q And apparently there was some disagreement
21 between the U. S. group and the English group about what
22 was necessary to constitute adequate information, as
23 witnessed by the fact that in the U. S. customers got
24 three or four paragraphs and in the UK they got what,
25 five or six pages?

1 MR. CRAWFORD: Well, David, he -- he -- he
2 says that that's sent out over there. And I don't think
3 you can draw the inference that you are drawing. I mean
4 if you want to argue with him, that's one thing. But
5 let's -- let's move on to something else.

6 MR. LACEY:

7 Q Will you answer the question, please?

8 A Let's have the question.

9 MR. LACEY: Certainly.

10 Will you read it back, please.

11 COURT REPORTER: "And apparently there was
12 some disagreement between the U. S. group and the
13 English group about what was necessary to constitute
14 adequate information, as witnessed by the fact that in
15 the U. S. customers got three or four paragraphs and in
16 the UK they got what, five or six pages?"

17 A First of all, I see no disagreement. There
18 were different methods of providing adequate safe
19 handling and toxicological data. There was a more
20 detailed one in the United Kingdom, and I do not know
21 what the basis for that was, I do not know the type of
22 operations that they had or contemplated having over
23 there. I do know that the information we supplied in
24 the United States was adequate to protect our customers.

25 MR. LACEY:

1 Q Would that same information supplied in the
2 UK have been adequate to protect Monsanto's customers in
3 the UK?

4 A If they followed it, yes.

5 Q Can you agree with me that the more detailed
6 information supplied in the UK had a higher probability
7 of alerting people to the dangers and the steps that
8 needed to be taken to avoid them than the corresponding
9 literature in the United States?

10 A No, I do not agree with you. Because I think
11 the corresponding literature in the United States says:
12 Do not breathe the fumes; avoid repeated or prolonged
13 skin contact; if it gets on your skin, wash it off; if
14 it gets on the clothes, launder them or discard them.
15 That protects people in the United States and England.

16 If the English people were used to that type
17 of information, fine. But I don't know if they are. I
18 do not recall seeing detailed information like this on
19 products in the United States. They may have some, but
20 I don't recall seeing them.

21 Q Do I understand it's your view as the medical
22 director of Monsanto who was responsible for the
23 warnings that went out in both the United States and the
24 United Kingdom that you believe both the U. S. warnings
25 and those UK warnings that you had there in front of you

1 are equally likely to provoke the proper response in
2 customers with regard to handling PCBs?

3 A I can only speak for the United States,
4 because I do not know what happened in England in our
5 customers. But I know that they were certainly --
6 evoked the correct response in the United States,
7 because we didn't have any trouble.

8 Q Do I understand, then, that you have no
9 quarrel with the handling of PCBs produced by Monsanto
10 by any of your customers in the United States?

11 A I have no quarrel with the handling of PCBs
12 by Monsanto's customers in the United States if they
13 follow the precautions that we have given them.

14 Q That's a different question you're answering.
15 My real question to you is this: If your U. S.
16 instructions didn't cause all of your customers to
17 understand the dangers of PCBs and therefore handle them
18 appropriately, you would be concerned about finding out
19 why they didn't follow the instructions, wouldn't you?

20 A Well, I do not agree with you with your first
21 premise, when you said if --

22 Read his first part of his statement.

23 COURT REPORTER: "That's a different question
24 you're answering. My real question to you is this: If
25 your U. S. instructions didn't cause all of your

1 customers to understand the dangers of PCBs" --

2 THE WITNESS: You can stop there.

3 I was satisfied that if our customers could
4 read our safe handling bulletins and follow our labels
5 they were protected. We did not go into every
6 customer's plant to see if they followed such
7 recommendations.

8 MR. LACEY:

9 Q So you don't know whether or not in fact your
10 recommendations were sufficient for the customer to
11 fully understand and appreciate the dangers of PCBs and
12 act accordingly, because you never checked it out.
13 Correct?

14 A No. That is not correct.

15 Q How did you check it out to determine?

16 A We checked it out by the absence of any
17 ill -- of any reports either in the medical literature
18 or by government agencies or by reports to our general
19 office or our salespeople.

20 In the chemical industry when any customers
21 develop any untoward signs in their men, they are very
22 active in calling it to the producer's attention. We
23 had numerous complaints or requests for information from
24 other compounds, not PCBs, and, as I said, with the
25 exception of some extremely rare cases we did not have

1 any of those from the -- our customers. And the people
2 in government who reviewed the use of PCBs in industry
3 have come to the same conclusion.

4 Q So it is your understanding as the medical
5 director of Monsanto that at least up till your
6 retirement in 1974 you know of no basis for Monsanto to
7 criticize the safe handling practices of your customers
8 with regard to PCBs. Correct?

9 MR. CRAWFORD: I don't think he said that,
10 David.

11 MR. LACEY: Well, that's my question.

12 MR. CRAWFORD: Well, you're trying to put
13 words in his mouth.

14 MR. LACEY: No, I'm trying to ask him a
15 question, Walter.

16 MR. CRAWFORD: Well, don't argue with him.

17 MR. LACEY:

18 Q Can you answer the question?

19 A Wait. We got a little off the --

20 Q Well, let me ask the question again, then.

21 A Okay.

22 Q Am I correct in understanding from what
23 you've just told me that you didn't get any complaints
24 back from customers about problems with PCBs, that you
25 know of no basis to say, at least up until your

1 retirement, that customers were not handling PCBs
2 correctly?

3 MR. CRAWFORD: David, that's two questions in
4 one. Let's answer one at a time. Let's start with the
5 first question.

6 MR. LACEY: Well, it's one question.

7 MR. CRAWFORD: It's not one question, it's
8 two questions.

9 MR. LACEY: Maybe you want to re-ask it for
10 me.

11 MR. CRAWFORD: Well, you can -- it's your
12 question. But you can read it. Ask the first one and
13 then ask the second one. You're asking two different
14 things.

15 MR. LACEY: Let me just try to break it down
16 if Mr. Crawford has got a problem with it.

17 MR. CRAWFORD: I do.

18 MR. LACEY: Okay.

19 Q Dr. Kelly, I take it you never got any
20 complaints at the medical department about problems with
21 workers at the Westinghouse plant in Bloomington,
22 Indiana. Correct?

23 A To the best of my knowledge, we did not.

24 Q You never got any complaints about workers at
25 the TVA at the medical department. Is that correct?

1 A That is correct.

2 Q You never got any complaints about workers at
3 Ford die casting plants. Is that correct?

4 A That is correct.

5 Q And you never got any complaints about any
6 workers who worked at any plants in Texas with PCBs. Is
7 that correct?

8 A To the best of my knowledge, that is correct.

9 Q Complaints of that sort at Monsanto were to
10 be directed and funneled to the medical department, were
11 they not?

12 A That is correct.

13 Q Therefore, if Monsanto followed the ordinary
14 course of its business, had any such complaints been
15 received, they would have come to your attention?

16 A Yes.

17 Q You are aware of no such complaints?

18 A That's correct.

19 Q And therefore we have to assume you didn't
20 get any such complaints.

21 A To the best of my recollection.

22 Q Now, given that, you assume that that means
23 that those companies were handling aroclors properly.
24 Correct?

25 A That was one of the bases that I assumed they

1 were handling it correctly. There were no reports in
2 the medical literature or in the government literature
3 of any ill effects of workers at the Westinghouse plant
4 in Bloomington or the Texas plants or at the Ford Motor
5 Company. So I assumed they were handling it correctly,
6 yes, sir.

7 Q And that was an assumption you made as the
8 medical director of Monsanto in determining how detailed
9 your literature regarding safe handling needed to be.
10 Correct?

11 A That's correct.

12 Q For example, had you had reports of problems
13 in those plants, then you might have determined you
14 needed more detail in your literature on toxicology and
15 safe handling. Correct?

16 A No, that isn't correct. I would -- it would
17 have shown that we had to check to find out if they were
18 following the recommendations in our literature; not
19 more detail, but whether they were following it or not.

20 Q Well, wouldn't you agree with me, Dr. Kelly,
21 that one of the things that a good warning will do is be
22 sufficient to motivate a person to follow it?

23 A It's hoped that is what somebody would --
24 would do. Whether it -- a person is better motivated by
25 six pages of detailed instructions or three paragraphs

1 of effective warnings and precautions is quite
2 questionable.

3 Q That's a matter about which reasonable minds
4 could differ?

5 A That's correct.

6 MR. LACEY: Okay.

7 MR. HENDERSON: How late are we going to go?

8 MR. CRAWFORD: Do you want to break? Not
9 much longer.

10 MR. LACEY: Do you want to go ahead and get
11 started on your --

12 MR. HENDERSON: I'd like to if you've reached
13 a convenient stopping --

14 MR. LACEY: Sure, we can -- we can stop at
15 this point.

16 MR. CRAWFORD: Well, we've only got -- I
17 would rather him -- you finish up and then we'll start
18 in the morning. Because I think he's getting a little
19 tired.

20 THE WITNESS: No -- no, I'm -- I'm happy.
21 All I want to -- are we off? Is this a break?

22 MR. LACEY: No, we're on the record right
23 now.

24 THE WITNESS: I want to say at what time I
25 have to leave tomorrow evening.

1 MR. LACEY:

2 Q What time do you have to leave tomorrow
3 evening?

4 A I have to get a 5:20 plane out of Hobby --

5 Q Okay.

6 A -- tomorrow. I can come as early as you
7 want. Instead of 9:00, I can get here at 8:00, I can
8 get here at 7:30, whatever you want, but I --

9 MR. CRAWFORD: Not seven -- not me.

10 MR. LACEY: Why don't we make it 8:00
11 tomorrow morning. And we will let Mr. Henderson begin
12 the expert portion of the examination now and go till
13 5:00.

14 MR. CRAWFORD: Are you sure you want to go
15 this afternoon? It's --

16 THE WITNESS: Fifteen minutes? Sure, I can
17 go.

18 MR. CRAWFORD: Okay. All right.

19 MR. HENDERSON: Thank you.

20 MR. LACEY: I have to give up my microphone
21 here.

22 MR. CRAWFORD: David -- well, I'll talk to
23 you after.

24

25

EXAMINATION BY

MR. HENDERSON:

Q Dr. Kelly, I'm Tom Henderson. Together with Mr. Lacey and members of his firm and our firm, we're representing the plaintiffs in the case that's going to be tried in Beaumont starting on June 8th. We haven't met before, have we?

A No, sir.

Q One of the -- you wrote a letter to Mr. Hall indicating the -- the parameters of the expert testimony that you were going to be offering, and that was reviewed briefly with you earlier today. Do you recall that?

A Yes, I do.

Q And that set forth in one paragraph your -- your background, educational background primarily, and your -- your tour of duty, so to speak, with Monsanto from 1936 to 1974, did it not?

A Yes, sir.

Q And in addition to that it also set out the areas that -- that you would otherwise be testifying to with respect to the presence or absence of PCB-related problems in -- in various Monsanto facilities that manufactured PCBs over that same period of time?

1 A Yes, sir.

2 Q Okay. Do you intend to offer other opinions,
3 specifically with respect to causation?

4 A [No reply]

5 Q That is, when I say causation, I'm talking
6 about what we have been characterizing throughout at
7 least this litigation of the relationship, the
8 cause-and-effect relationship between the exposure --
9 the presumed exposure in certain cases or indeed the
10 exposure in some cases to PCBs and resulting adverse
11 health effects of one form or another.

12 A In these claimants?

13 Q Yes.

14 A If I am going to be asked that, I will have
15 to review the medical records, all the medical records
16 of these claimants, which I have not done up to now.

17 Q Okay.

18 I notice that you have reviewed certain of
19 the medical records by virtue of those items that were
20 produced over the noon hour -- excuse me -- over the
21 noon hour that were provided -- copies of which were
22 provided to us about three hours ago or thereabouts. Is
23 that true?

24 A I have reviewed certain of the medical
25 records and I have made notations that there were an

1 enormous amount of medical information not furnished me,
2 i.e., hospital records, some of Dr. Teitlebaum's
3 laboratory work was not in the records I saw, and I did
4 not have the opportunity of reviewing the medical
5 records of the doctors who examined these plaintiffs on
6 the part of the defendant.

7 Q Okay.

8 What -- without going in, because from what I
9 understand it's the -- the -- you're uncertain as to
10 what you may be doing in that regard. And what I do
11 need to develop is what -- in case you may be called
12 upon after you've had an opportunity to review the
13 medical records and perhaps to provide some opinions in
14 that regard. What are your criteria for diagnosing a
15 medical problem induced by a chemical such as PCBs?

16 A If a person has a medical problem induced by
17 PCBs, it appears the hallmark of the illness is first
18 chloracne.

19 Q Let me stop you at each of these points
20 and -- and ask you what you mean by different things.
21 Because I assume you have a number of other areas that
22 you may want to talk about. When you say the first
23 indicator to you is the hallmark being chloracne, do I
24 take that to mean that -- that in the presence of a
25 chloracne diagnosis that you can -- that you can come to

1 a conclusion at least that there was sufficient exposure
2 to PCBs or a related chemical to have resulted in the
3 dermatological manifestation known as chloracne?

4 A If the diagnosis of chloracne is definite,
5 then a person has obviously been exposed to some
6 compound which is a chlorinated hydrocarbon that may
7 have -- that has given him this chloracne. Chloracne is
8 not a natural phenomenon, it is a response of the human
9 body to an outside chemical.

10 Q Okay.

11 What is the -- what is the second
12 criterion --

13 A Well --

14 Q -- beyond -- beyond chloracne?

15 A I must also state -- let me elaborate a
16 little farther on the first. In case of an acute
17 exposure to PCBs, for example, exposure to high
18 concentrations of vapor over a period of days or weeks,
19 systemic conditions may result before chloracne occurs.
20 So the second target organ is the liver, and the
21 chemical hepatitis, if that is the term, may occur.

22 Q Okay. And I -- I think you just indicated
23 that that could occur based upon the level of exposure
24 and particular the level of vapor type exposure could
25 occur even before a -- the -- the dermatological

1 reaction known as chloracne.

2 A If one had a very high exposure level, yes,
3 you could get the liver trouble within a matter of a
4 week, whereas chloracne might take weeks or months to
5 occur.

6 Q Now, what are the other criteria for
7 establishing a -- a -- a cause-and-effect relationship
8 insofar as a chemical such as PCBs?

9 A One has to take an accurate history to know
10 that the man is really -- has really been exposed to
11 the -- the compound in a particular fashion, one has
12 to -- if one wants to resort to some invasive
13 procedures, they can take fat biopsies or they can take
14 blood samples, which are not as invasive. And finally,
15 they have to equate this man's condition to
16 epidemiological evidence that may or may not be present.

17 Q When you say which may or may not be present,
18 would you tell me what you mean by that?

19 A Well, suppose a man has a brain tumor and he
20 says, "I believe I got this brain tumor from exposure to
21 PCBs," and people have done epidemiological studies on
22 workers who were exposed to PCBs and found no excess
23 brain tumors, then one would be safe in believing that
24 this particular brain tumor was not the result of any
25 real or fancied PCB exposure.

1 Q Let me go over these again so I'm clear.
2 You -- you consider the criteria for causation or
3 cause-and-effect relationship in respect to the
4 chemicals such as PCBs, and specifically in this case,
5 as you know, we're dealing with PCBs, to be, No. 1,
6 chloracne. Is that --

7 A Well --

8 Q I just -- I just want to get this down so
9 that -- so that I understand completely what you're
10 saying. And if you want to modify anything, you know,
11 please do it.

12 A Well, yes. I mentioned several things. That
13 in all medical cases first a history is taken. So I
14 didn't list all those in priorities. First a history is
15 taken.

16 Then a physical examination is taken. Now,
17 the physical examination then -- the history, of course,
18 includes exposure to PCBs and exposure to any other
19 conditions, whether it's alcoholism, virus, infections,
20 any other conditions that may or may not have some cause
21 as far as a man is -- man's illness is concerned. Then
22 the physical examination. Chloracne seems to be a
23 predominant physical findings in cases of PCB exposure,
24 with the exception of the acute liver episodes.

25 Then the next -- after the physical

1 examination, laboratory studies are carried out. These
2 laboratory studies can rule out other factors, they
3 could rule in other factors. Suppose a person has
4 diabetes. That has to enter into the equation.

5 Q Let me interrupt you there, if I might.
6 What -- what kinds of laboratory studies are you
7 referring to specifically?

8 A SMA 21s, 22s, in which various liver enzymes
9 are tested, triglycerides, the cholesterols, the sugars.
10 Then specific laboratory procedures, if one
11 wants to go as far as doing fat biopsies on individuals,
12 or blood PCBs.

13 And finally, the relationship of this man's
14 symptoms, physical findings to epidemiological studies
15 carried out on PCBs.

16 Q Okay. So if -- would -- would you require
17 all of these things in -- in -- in -- forgetting about
18 the -- the -- the exceptional situation of a -- of an
19 acute chemical hepatitis, let's keep that out of the
20 equation for a moment, would there be any other of these
21 four or five that you have mentioned -- five that you
22 have mentioned that one could do without from the
23 standpoint of a positive result in -- in terms of
24 ascribing cause and effect?

25 A I think if a man had a positive history that

1 was documented to show excessive PCB exposure and had
2 chloracne, one would consider that he had had enough PCB
3 exposure to give him chloracne. He may have other
4 medical conditions that are not the result of PCBs. He
5 may have cataracts.

6 Q Okay.

7 A There has been no documentation or
8 epidemiological studies that shows that PCBs have any
9 relationship to cataracts.

10 Q So let me understand that. If he has a
11 positive history of exposure to -- to PCBs and he has a
12 definitive -- let me finish -- and a definitive
13 diagnosis of chloracne, you would conclude that the
14 chloracne is a result of the PCBs exposure?

15 A If he had a positive documented history. You
16 can have a history that is not documented. It has to be
17 documented that he had a positive documented history.

18 Q Well, how do you define documented, then?

19 A By somewhat more than a man's statement.

20 Q Well, if you -- if you knew that the
21 individual was working in a transformer repair shop
22 where some substantial amounts of Askarel and/or
23 Inerteen and/or Pydraul had been used over a 10- to
24 20-year period while -- when the fluids were being
25 drained from and -- and reloaded into the transformer

1 after the repairs, you -- you wouldn't require that a
2 fat biopsy be taken to conclude that that person has a
3 positive documented history of exposure.

4 A Well, certainly if these are drained at
5 ambient temperatures, at room temperatures, there's no
6 volatilization of the material. If the man has not --
7 has carried out precautions as to avoid repeated or skin
8 contacts, that -- just the fact that he was there when
9 they drained transformers does not give him a positive
10 documented history of PCB exposure.

11 Q Let's assume that there was some -- some
12 amount over a period of time of -- of dermal contact
13 with the PCBs. Would that be sufficient, in your view,
14 to rise to the level of being a positive documented
15 history?

16 A There again, Mr. Henderson, you have to be
17 more precise about what is some dermal contact.

18 Q Okay. Well, we'll -- we'll leave that until
19 perhaps tomorrow. We can clarify some -- some more of
20 this.

21 Assume that -- assume that the person has a
22 positive documented history and also has a definitive
23 diagnosis of chloracne, and he has some other -- some
24 one or more other ailments or adverse health effects
25 that have been reported on in the literature from an

1 epidemiological standpoint, would that be sufficient, in
2 your view, in the absence of some significant
3 confounder, to conclude that the adverse health effect,
4 other than the chloracne, was related to the PCBs
5 exposure on a cause-and-effect relationship?

6 A If there was statistical evidence from
7 epidemiological studies that was repeated in various
8 epidemiological studies and this man had that particular
9 ailment, there is a possibility that he received that
10 ailment from his PCBs. But if -- may I finish? If it
11 has not been significant in epidemiological studies, if
12 it has not been repeated in various epidemiological
13 studies of workers who had had exposure of some sort to
14 PCBs, that would cast doubt on whether or not that
15 particular condition was due to his PCB exposure.

16 Q Well, when you say very possibly and casting
17 doubt and definite possibilities, these are really --
18 what you are saying, is it -- is it not, Dr. Kelly, that
19 these are impressions that are made based upon the --
20 the whole scope of the literature as -- as your ex -- as
21 your experience would -- would provide over nearly 50
22 years in -- in the business of dealing with Monsanto
23 employees exposed to a variety of chemicals, looking to
24 the literature, epidemiological literature and perhaps
25 other scientific literature, making the examination,

1 looking at the individual, taking an adequate history
2 which would not only include the occupational history
3 but also the -- the history of possible confounders like
4 diabetes, for example, and others that you've mentioned,
5 and -- and have an overall impression of what all this
6 means, plug it into the -- to the best known computer
7 known to man, mainly the brain, and come out with an
8 opinion? Isn't that -- isn't that the way it works?

9 MR. CRAWFORD: Do you understand the
10 question?

11 THE WITNESS: Well, no, that's a pretty
12 prolonged -- long question.

13 MR. HENDERSON:

14 Q Well, I know Mr. Crawford is trying to help
15 you in this. But you understood what I was saying, did
16 you not?

17 A Well, not exactly. What -- if I may say that
18 medical diagnoses are based on opinions gleaned from
19 examination of an individual, the clinical knowledge of
20 people who have had similar exposures, the clinical
21 knowledge of individuals who have had the same condition
22 and have had no similar exposure at all, and
23 epidemiological basis. That's where one comes up with
24 a -- a diagnosis. So if that is -- that's about as good
25 an answer I can give to that long question. I don't

1 know if that's -- that's the answer.

2 Q It's based upon -- you -- you answered me in
3 terms of medical diagnosis. And what my question was
4 was providing a -- a -- a cause-and-effect opinion of a
5 relationship between the exposure to PCBs and a
6 particular adverse health effect.

7 A Well, unless you have a -- a medical
8 diagnosis of PCB intoxication or PCB harm, it doesn't
9 make any difference what history he has unless -- if he
10 doesn't have any medical condition that would be
11 associated with PCBs.

12 MR. CRAWFORD: Tom, it's five after 5:00.

13 MR. HENDERSON: Let me ask -- let me ask one
14 other question so I can be -- one line of questions
15 that's not going to take more than a few minutes so I
16 can move on with the interrogation in the morning as
17 expeditiously as possible.

18 MR. CRAWFORD: Okay. Just don't make it too
19 long

20 MR. HENDERSON: I'm not going to extend it.

21 Q You -- Monsanto has done toxicology, that is,
22 animal toxicology work, since the Swann work that was
23 done in 1932, has it not?

24 A That wasn't Monsanto's, but Swann did work.
25 Monsanto started some work after I came. Whether they

1 did any before 1936 I don't know. But they did some
2 work from '36 on, yes.

3 Q At least -- at least 50 years ago Monsanto
4 had begun to -- to do some animal toxicology
5 specifically in the area of PCBs?

6 A Yes, sir.

7 Q And prior to 1936 Monsanto -- whether you
8 were there or not, you have some knowledge that Monsanto
9 had engaged in some amount of animal toxicology for
10 several years prior to 1936.

11 A No, I'm not sure of that.

12 Q Okay. In any event, the -- the purpose of --
13 of toxicology, specifically animal toxicology, is to
14 determine the mechanisms of -- of causation in
15 respective mechanisms and how diseases can be caused.
16 Is that true?

17 A The purpose of animal toxicity is --

18 Q Toxicology.

19 A -- toxicology is to provide a mechanism that
20 shows what ill effects occur in animals from certain
21 doses.

22 Q And that's --

23 A That's my belief of what --

24 Q Okay. And -- and the purpose of that, is it
25 not, is to utilize that data and the conclusions that

1 can be drawn from the animal toxicological data to -- to
2 predict what might happen in human beings? Is that
3 true?

4 A As well as -- yes. But as well as to predict
5 what are safe levels of the material for human exposure.

6 Q That's right. Because you know and I know
7 that we -- we would not want to experiment on our bodies
8 or anybody else's body. Is that true?

9 A Of course that's true.

10 Q So that the -- the principal reason for
11 animal toxicology is to determine two things: What a
12 safe level might be of a particular dose as -- as a
13 human may be exposed; and, secondly, to predict what the
14 -- what those exposures might do in terms of adverse
15 health effects to humans.

16 A Yes.

17 Q Is that true?

18 A True.

19 MR. HENDERSON: Thank you. That's all.

20 MR. LACEY: 8:00 in the morning. Correct?

21 MR. CRAWFORD: No, not 8:00. I can't --

22 MR. LACEY: That's what the doctor said and I
23 think that's a suitable time for us to begin.

24 MR. CRAWFORD: Not me. That's too early.

25 MR. LACEY: If you want to have him come back

1 another day. But, as you know, he has been identified
2 as an expert --

3 MR. CRAWFORD: Well, I think -- let's do it
4 at 8:30. That will give at least a little more time.

5 THE WITNESS: I'll meet you here at 8:30.

6 MR. CRAWFORD: Okay. Or --

7 THE WITNESS: I'll take a cab over from the
8 hotel to here.

9 VIDEO OPERATOR: We will now recess the
10 deposition. The time is 5:07 p.m.

11 [End of the day]
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CORRECTIONS

Page	Line	Explanation
14	22	'awe' should be 'at' mistranscription
50	14	'mesedicide' should be herbicide - wrong word
53	10	" " " " " "
62	24	PCB should be 'PPB' mistranscription

LAWYER'S NOTES

Page Line

168 19 I have found out subsequently
that work was done in the
30's with crackles vapors at
high temperatures and this would
invalidate my statement about
dating the bullet.

J. Kelly

STATE OF MISSOURI)
COUNTY OF ST. LOUIS) SS:

Subscribed and sworn to before me, a notary public,
this 24th day of June, 1987.

Josephine S. Niblock
Josephine S. Niblock
Notary Public

My Commission expires:

JOSEPHINE S. NIBLOCK
Notary Public - State of Missouri
St. Louis County
My Commission Expires January 15, 1991

deposition

LAWYER'S NOTES

R Emmet Kelly
4/30/87

Page Line

296 17 change and no list person To
" " "a known liver person"
314 10 writing should be reading mistakes
386 10 injection should be ingestion
392 9 fat should be well

STATE OF MISSOURI)

SS:

COUNTY OF ST. LOUIS)

Subscribed and sworn to before me, a notary public,
this 24th day of June, 1987.

Josephine S. Niblock

Josephine S. Niblock

My Commission expires:

Notary Public

JOSEPHINE S. NIBLOCK

Notary Public - State of Missouri

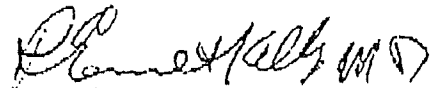
St. Louis County

My Commission Expires January 15, 1991

R Emmet Kelly 2000

SIGNATURE OF WITNESS

I, R. Emmet Kelly, M.D., solemnly swear or affirm, under the pains and penalties of perjury, that the foregoing 489 pages contain a true and correct transcript of the testimony given by me at the time and place stated, with the corrections, if any, and the reasons therefor noted on a separate sheet of paper and attached hereto, and that I am signing this before a Notary Public.

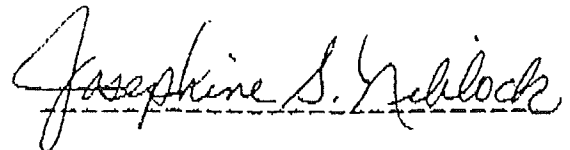


R. Emmet Kelly, M.D.

THE STATE OF *Missouri*
County of *St. Louis* } ss:

Subscribed and sworn to before me, the undersigned authority, by the said R. Emmet Kelly, M.D. on this the *2nd* day of *July*, 1987.

JOSEPHINE S. NIBLOCK
Notary Public - State of Missouri
St. Louis County
My Commission Expires January 15, 1991



Notary Public in and for
the State of *Missouri*

1 BY MR. HENDERSON:

2 Q On Page 261 of your deposition, going back,
3 to the area I asked you about earlier, it says
4 "Are chlorodiphenyls the same as polychlorinated
5 biphenyls or PCBs?"

6 "ANSWER: Yes, but all chlorinated, all PCBs
7 are not chlorinated diphenyls.

8 "QUESTION: Isn't the -- what are
9 chlorodiphenyls?

10 "ANSWER: There are two phenol rings
11 attached to each other with chlorine.
12 Chlorinated naphthalene is also two phenol rings
13 attached to carbon atoms, chlorinated. So,
14 chlorinated naphthalene is a PCB; chlorinated
15 diphenyl benzene is also a PCB. So, the work
16 that Dr. Drinker did was primarily with
17 chlorinated naphthalene."

18 Were those the questions that were asked of
19 you and you answered on April 30, 1987?

20 A May I see it?

21 Q I'm sorry. Did I say 261 --
22

23 MR. CRAWFORD Your Honor, there was an
24 errata sheet with that and we sent it in,
25 that corrected that. But I think the Doctor

1 can explain it.

2 MR. HENDERSON: I think Mr. Crawford ,
3 may want to have it explained on redirect.
4 I would like to move along, Your Honor.

5 THE COURT: All right.

6

7 BY MR. HENDERSON:

8 Q The purpose of the label itself, Dr. Kelly,
9 was to inform the user -- and when I say "the
10 user," I mean the customer's worker about the
11 possible harmful effects of exposure to any toxic
12 substance, such as PCBs; isn't that true?

13 A No. What the label is is to prevent any
14 harmful exposure. That is the purpose of a
15 cautionary statement on a label.

16 Q Well, perhaps it would be better if I just
17 read the question from the deposition rather than
18 to take the time to rephrase that one, because I
19 want to make it clear what you said in your
20 deposition. Okay.

21

22 THE COURT: Well, ask him what he said
23 in his deposition and then you can --

24 MR. HENDERSON: I will, Your Honor, as
25 soon as I find it.

REDIRECT EXAMINATION

BY MR. CRAWFORD:

Q Dr. Kelly, you wanted to explain a couple of things. Mr. Henderson cut you off. You were talking about the Greenberg article about the change. Did you want to explain something about that, the change of clothes?

A Yes. It was the Greenberg article.

Q Just very briefly, if you could.

A He was dealing with the hallowax cases.

Q All right. That's the substance --

A He was dealing with people that were cable pullers.

Q All right. And also in your deposition you changed that those -- that was a misstatement, was it not?

A Oh, yes, chlorinated naphthalene is not a PCB.

MR. CRAWFORD: Okay. Thank you very much, Your Honor.

MR. HENDERSON: Thank you.

THE COURT: All right.

THE WITNESS: Did you want some of these --