

1 THE COURT: Good morning, ladies and gentlemen.

2 THE JURORS: Good morning.

3 THE COURT: (Inaudible). We were delayed because
4 the attorneys and I were in chambers trying to talk about
5 matters that will shorten things up, so thanks for waiting.
6 Also, I have to go to a lunch meeting about 20 to 12, so
7 we'll take a little bit earlier lunch break than normal.
8 Mr. Kotoske, you may continue, sir.

9 MR. KOTOSKE: The plaintiffs call as their next
10 witness Dr. Emmet Kelly.

11 R. EMMET KELLY, M.D.,
12 of lawful age, having been first duly sworn, testified as
13 follows:

14 THE COURT: Now, sir, try to speak into that
15 microphone, if you would (inaudible).

16 THE WITNESS: Yes, sir. Your Honor, let me ask
17 counsel to speak a little loudly because I have a--somewhat
18 of a hearing impediment.

19 MR. KOTOSKE: Yes, sir, I will. Are you
20 comfortable?

21 THE WITNESS: Fine.

22 MR. KOTOSKE: I'll try to speak loud.

23 DIRECT EXAMINATION

24 QUESTIONS BY MR. KOTOSKE:

25 Q. Would you state your name for the record.

BROWN VS. MONSANTO

- 1 A. R. Emmet--E-m-m-e-t--Kelly--K-e-l-l-y, M.D.
- 2 Q. Can you hear me all right?
- 3 A. Perfectly.
- 4 Q. You were a Monsanto employee for several
- 5 years?
- 6 A. Quite a few, yes, sir.
- 7 Q. All right. Tell me a little bit about your
- 8 educational background, and I'm only interested in your
- 9 college and medical degree and so forth.
- 10 A. I went to St. Louis University and received a
- 11 Bachelor of Science degree in 1930 and received the M.D.
- 12 degree in 1932. It was a combined course in which you spend
- 13 six years following secondary high school.
- 14 Q. When did you first go to work for Monsanto?
- 15 A. In January of 1936. I had spent three years
- 16 at City Hospital before that.
- 17 Q. And after that, you went into the Service
- 18 there, did you?
- 19 A. Well, no. I went to work at Monsanto in '36.
- 20 Went into the Service in '42.
- 21 Q. All right. And then you stayed in the Service
- 22 till the end of the war?
- 23 A. A little bit after it until--
- 24 Q. All right?
- 25 A. --1946. March of '46. Then I returned to

BROWN VS. MONSANTO

1 Monsanto.

2 Q. (Inaudible)--in 1946 you returned to Monsanto?

3 A. Yes.

4 Q. How long--did you work continuously for

5 Monsanto for some period of time until you retired?

6 A. December the 1st, 1974.

7 Q. You retired from Monsanto?

8 A. That's correct.

9 Q. All right. That's the time frame. Now we'll

10 get into what you did there. At least we have the time

11 frame.

12 A. Yes.

13 Q. But after you left Monsanto, did you still

14 continue to consult for Monsanto?

15 A. I was on a consulting basis for one year. Then

16 following that, I would be consultant on individual cases.

17 Q. And were those litigation cases?

18 A. That is correct.

19 Q. And did you testify for Monsanto?

20 A. Yes, I was asked to testify by Monsanto. Are

21 you talking about court testimony or in--or by deposition?

22 Q. Well, let's just--by deposition. Start with

23 that. Did you do that for them--testify by deposition?

24 A. Yes, I did.

25 Q. And you also later testified in court?

BROWN VS. MONSANTO

- 1 A. Yes, sir.
- 2 Q. They paid you for your services?
- 3 A. That's correct.
- 4 Q. Do you recall roughly what they paid you?
- 5 A. Between 100 and \$200 an hour, varying with the
- 6 year.
- 7 Q. And was it the same for testimony in
- 8 deposition and trial both?
- 9 A. It varied for an out-of-town trial. It would
- 10 be by the day.
- 11 Q. Did you charge a little bit more?
- 12 A. Well, it was \$1,500.
- 13 Q. All right. And that was back--and you stopped
- 14 being a witness for Monsanto in what year?
- 15 A. I still am.
- 16 Q. All right. And you also collect a pension
- 17 from Monsanto?
- 18 A. I beg your pardon?
- 19 Q. And you also collect a pension from Monsanto?
- 20 A. Yes, I do.
- 21 Q. And that's still as of today?
- 22 A. That is correct.
- 23 Q. All right. Now I want to change the subject
- 24 to your duties at Monsanto, and I'm only interested in after
- 25 you returned to Monsanto after your service in the Military,

BROWN VS. MONSANTO

1 and so that puts us at about 1947?

2 A. '46.

3 Q. '46. I'll try to remember that. In 1946 you
4 returned to Monsanto, and what were your duties?

5 A. They formed a new central medical department.
6 Monsanto at that time was devoted--was split into divisions
7 which carried out the research, marketing and manufacturing,
8 and the central departments were staff departments such as
9 legal, medical, purchasing. Well, they formed the medical
10 department. The duties there were to see that all of the
11 Monsanto workers were given a preventive--preventive type of
12 medical care as well as treatment for any occupational
13 injuries or occupational conditions. That was one part of
14 the--of my duties. The second was to obtain toxicological
15 information on Monsanto products so that we could be in a
16 position to give first--to give safe-handling precautions to
17 our workers as well as our customers. A third was to
18 disseminate to our customers any toxicological information or
19 safe-handling data that we knew that we could avoid--have the
20 customers avoid ill effects of their workers. The fourth was
21 the development of an industrial hygiene program. Industrial
22 hygiene is the type of paramedical work that affords a safe
23 environment for the workers.

24 Q. As--how did you go about collecting
25 toxicological data?

BROWN VS. MONSANTO

1 A. Well, depends on the product, obviously. If
2 the product had--we would take a new product from Mansanto.
3 If the product had been manufactured by another company, then
4 this was a (inaudible) product. We were making a product
5 that already was on the market. I would call our medical
6 department or medical director and say Dow or DuPont had
7 manufactured this and say, George, what do you know about
8 this; do you have the unpublished data as far as any work you
9 have done? And it was very--it was very good cooperation
10 between the medical department and the various chemical
11 companies. Then I would also look through the medical
12 literature. In the early days, say in 1946, there were not a
13 great number of medical journals devoted to toxicology--one
14 or two in the English language. If there were no information
15 there, then we would run--then we would check on what
16 experience our chemists, our research people, our people in
17 the pilot plant had with this product, because it takes about
18 a year or two years before a product leaves a laboratory
19 bench and is sold to the customers. Then if all of these
20 avenues were--didn't give us the information we needed, we
21 ran toxicological tests on animals.

22 Q. You know, that's interesting. I want to talk
23 to you a minute about the animal testing. That is an
24 important--very important way to determine the toxicological
25 status of chemicals--animal testing.

BROWN VS. MONSANTO

1 A. Is there a question there? I didn't hear one.

2 Q. Yeah, as a proposition as a medical man
3 yourself, animal testing is a valuable tool for determining
4 toxicological status of certain chemicals?

5 A. Well, it is a tool, and it depends on how the
6 animal reacts. You obviously cannot test humans, so animals
7 are the next best.

8 Q. And that's been true for a long time, has it
9 not, and it is also true today?

10 A. It is true today. I don't know how long it's
11 been true. It's been true since '46, I believe.

12 Q. And animal testing provides a valuable index
13 to the toxicity of certain chemicals?

14 A. It may or may not.

15 Q. All right. Now, while you were there,
16 Monsanto spent several hundreds of thousands of dollars on
17 animal testing on its products, did it not?

18 A. Yes, it did.

19 Q. Monsanto didn't think the animal testing was
20 irrelevant or worthless, did they?

21 A. No. I didn't say it was irrelevant. I said
22 it's a tool that we have.

23 Q. It's a valuable tool, isn't it?

24 A. In some cases extremely valuable.

25 Q. I'm interested now, Dr. Kelly, in who you

BROWN VS. MONSANTO

1 reported to. What I'm trying to determine is how high up in
2 the company did your reports get? For example, if you
3 had--if Monsanto made a chemical that had an unusual toxicity
4 that could harm people, how high up in the--and you knew
5 about it, how high up in the company would you report to,
6 say, to relate that type of thing? I'm trying to determine
7 the chain of command.

8 A. Well, yes, but you've gotta qualify that first
9 statement. Monsanto made insecticides. (Inaudible) they
10 were very harmful to people if you didn't observe safe
11 handling precautions. So the fact that you made a toxic
12 compound does not mean it's going to be toxic to the users if
13 they avoid contact.

14 Q. No, that's not what I asked you.

15 A. Well, I was trying to straighten out the
16 statement.

17 Q. Who listens to you in the company? Did the
18 president--did you report to the president of Monsanto?

19 A. I reported to the executive committee. I was
20 on a first-name basis with all of the executive committee.

21 Q. That's what I wanted to find out. You
22 reported your information to the executive committee?

23 A. Not--

24 Q. Who was on the executive committee?

25 A. Not at all times. In the years from 1946 to

BROWN VS. MONSANTO

1 1974, Monsanto went through a number of reorganizations. I
2 reported sometimes directly to the executive committee,
3 sometimes to a manufacture--the director or one of the
4 members of the board of the directors. I don't know what the
5 title he had. There might have been a member of the board of
6 directors between me and the executive committee. But I
7 could go to the executive committee any time, and I--

8 Q. You had--

9 A. Huh?

10 Q. You had full access to the executive
11 committee?

12 A. No question about it.

13 Q. All right. Now, we need to know who sits on
14 the executive committee.

15 A. The people who run the company. The
16 president, the chair--who was--the chairman of the board--one
17 of those; maybe the C.E.O. or the chief executive officer;
18 the--probably the director of research and probably the
19 director of marketing and maybe the director of
20 manufacturing. There were probably about five or six on the
21 executive committee.

22 Q. I understand. Is it a fair statement--pardon
23 me. Is it a fair statement that the executive committee sets
24 the policy for Monsanto, or did set the policy for Monsanto?

25 A. Yes.

BROWN VS. MONSANTO

1 Q. And did the executive committee listen to you
2 when you talked to 'em?

3 A. Yes, they did.

4 Q. Did they follow your advice?

5 A. Well, they--a number of things--if I said I
6 wanted two more doctors, they may or may not.

7 Q. How about with respect to the toxicity of
8 chemicals? Did you ever discuss that with the executive
9 committee?

10 A. You mean in a general manner or about what?

11 Q. I mean with respect to--

12 A. A single chemical?

13 Q. --a specific chemical. Did you ever say
14 things like, listen, executive committee, we better warn
15 people that come into contact with this stuff about its toxic
16 nature? Did you ever give that kind of information?

17 A. I didn't need to give 'em that because I did
18 the warning myself. That was my responsibility.

19 Q. You were the fellow that prepared the
20 warnings?

21 A. Yes.

22 Q. Did you write 'em?

23 A. Yes, I wrote 'em. They may have been
24 (inaudible) from a grammatical point of view or put in a
25 brochure, but a substance was written by me to members of the

BROWN VS. MONSANTO

1 medical department.

2 Q. All right. Now, what was your position in the
3 company? Were you at the executive level?

4 A. No, but I was probably in the top 30.

5 Q. Okay. Of a company that must have had
6 what--several hundred executives?

7 A. Not if that's what you mean by an executive.
8 I mean--I mean--I--no--

9 Q. I'm talking about policy matters. People that
10 establish policy.

11 A. Well, there again, you could say a policy
12 might be who parks in the parking lot. That's a policy. But
13 if you want what the company does as far as being a good
14 neighbor is concerned, that is the executive committee's
15 policy.

16 Q. Who established the policy--and you may have
17 answered this already--with respect to the warnings on
18 chemicals as to their toxicity? Did you do that?

19 A. I did that.

20 Q. And did you consult with the legal department
21 or did you just do it?

22 A. I did it because I--I knew what it was.

23

24

25

BROWN VS. MONSANTO

1 Q. And you did that from -- for what period of
2 time?

3 A. Sometime in '46. And in 1946 the executive
4 committee put out a directive saying that all matters
5 relating to warnings, safe handling would be handled by
6 the medical department.

7 Q. Now, I want to change the subject a little
8 bit, and I'm going to ask you certain names of people.
9 I'm going to give you some names. I want you to tell me
10 who those people were out at Monsanto, if you can, and
11 what they did at Monsanto, and I hope you can remember
12 them. I think you'll know most of them.
13 William Papageorge?

14 A. Yes, I know William Papageorge.

15 Q. Is he sitting here in court?

16 A. Yes, he is.

17 Q. And you've known him for many years?

18 A. Yes, I have.

19 Q. How many years?

20 A. Twenty.

21 Q. What was his job at Monsanto?

22 A. Well, it varied. When I knew him he was a
23 plant manager at the Anniston, Alabama, plant. And then
24 from 1970 till 1974 he was head of our environmental
25 problems or our environmental aspect of chemicals.

BROWN VS. MONSANTO

1 Q. And did that relate to PCBs?

2 A. Among other things, yes.

3 Q. All right. Mr. E. P. Wheeler, W-h-e-e-l-e-r.

4 A. Yes, sir. Mr. Wheeler was an industrial
5 hygienist that I hired for the medical department in 1947,
6 I believe. He remained there until after I retired. He
7 retired later and is now dead. He was promoted to the
8 director -- the manager of the para-medical part of the
9 medical department, toxicologist, industrial hygienist,
10 librarians, and Wheeler in charge of that.

11 Q. How about Mr. -- and I don't know exactly how
12 to say his name, so I will spell it, B-e-n-i-g-n-u-s.

13 A. Benignus.

14 Q. How did you say that?

15 A. Benignus.

16 Q. What's his first name?

17 A. Paul.

18 Q. Who was he? All these people that I
19 mentioned are Monsanto employees?

20 A. Yes, up to now.

21 Q. Up to now?

22 A. Paul Benignus was an employee who worked in
23 the organic division. As I said, Monsanto is divided in
24 various divisions, and they changed organizations. So in
25 general, he was a development man in the fluid department

BROWN VS. MONSANTO

1 of which PCBs were part.

2 Q. And do you know about roughly how long he
3 worked out at Monsanto? I know it is hard.

4 A. Twenty-five years.

5 Q. He was not a pass (inaudible)?

6 A. Beg pardon?

7 Q. He was not somebody that was just passing
8 through? He worked there for a long time?

9 A. Yes.

10 Q. How about a Dr. Barrett, B-a-r-r-e-t-t?

11 A. He was a scientist in our English company,
12 and I do not know the details of his -- all the details of
13 his job.

14 Q. All right. How about a Dr. Harvy, H-a-r-v-y?

15 A. He was also in our English company. And,
16 again, I do not know all the details of his position.

17 Q. When you say English company, what do you
18 mean?

19 A. Well, we had a plant in @Rowan, Wales. We
20 had a plant in Newport, England.

21 MR. CARNEY: Your Honor, I am going to object
22 to this. I don't see any relevance to that. It doesn't
23 involve any issues.

24 MR. KOTOSKE: It does involve the issues.

25 THE COURT: I'll bear with it. Go ahead,

BROWN VS. MONSANTO

1 sir.

2 Q. (By Mr. Kotoske) Did you also have a plant
3 in Japan?

4 A. I -- We had a textile plant -- We had a -- I
5 don't know a subsidiary or a joint venture. We had a
6 textile plant. And we may have had a functional fluid
7 plant for a year or so, but I never visited them, and I
8 don't know.

9 Q. Who's Dr. Levinskas, L-e-v-i-n-s-k-a-s?

10 A. Dr. Levinskas is a Ph.D. who was a
11 toxicologist at one of the other chemical companies, and
12 he came with Monsanto in roughly '72 to head up our
13 toxicological department, and he retired last week.

14 Q. He was a Ph.D.?

15 A. Correct.

16 Q. He was not a medical doctor?

17 A. He was not. Those two other doctors were
18 Ph.D.s also, Harvy and Barrett.

19 Q. Who was Dr. Noone?

20 A. He was a plant physician at one of our plants
21 in England, eventually became head of the chemical -- he
22 became medical director for our English plants.

23 Q. Paul Wright?

24 A. Paul Wright was a Ph.D. who was a
25 toxicologist for Monsanto.

BROWN VS. MONSANTO

1 Q. Did you know him to work at IBT? And for
2 your information, and the jury's information, Industrial
3 Bio-Test is what I'm using (inaudible) short, IBT. Are
4 you familiar with that?

5 A. Yes.

6 Q. Did he work at IBT at some time?

7 A. Yes, he worked there for two years.

8 Q. And he worked for Monsanto before he worked
9 at IBT?

10 A. Yes, he did.

11 Q. And then he went to IBT?

12 A. Yes, he did.

13 Q. And then he came back to Monsanto?

14 A. Yes, but to a different position. He worked
15 at Monsanto as a research chemist in the agricultural
16 department. That job was abolished. He went up to IBT as
17 a toxicologist, to learn toxicology. After two years at
18 IBT, two years give or take a few months, he came back to
19 Monsanto and worked at the medical department.

20 Q. So when he learned about toxicology, his
21 purpose was to learn to --

22 A. Presumably. He did not talk to me before he
23 went up there. In fact, I did not know Paul before he
24 went up there.

25 Q. Did you know him when he came back?

BROWN VS. MONSANTO

1 A. Sure. We hired him in the medical
2 department.

3 Q. Then what? And you hired him as what?

4 A. Toxicologist. We had four toxicologists.

5 Q. Pardon?

6 A. We had four. He'd be the fourth.

7 Q. Did you know Dr. Calandra at IBT?

8 A. Yes, I did.

9 Q. Was he a Ph.D.?

10 A. No. He was both a Ph.D. and an M.D.

11 Q. Did you know a Renate Kimbrough?

12 A. Yes, not close. But I've met her several
13 times.

14 Q. And was she one of the world's renowned
15 scientists in PCBs?

16 A. I think she was a -- She had done a great
17 deal of work on it. I respect her very much. She also
18 did work in epidemiology. And she worked for the
19 government in various positions.

20 Q. Did you regard her as the world's renowned
21 authority on PCBs?

22 A. I never really made that distinction. She
23 was a knowledgeable woman and an honest woman.

24 Q. But did you regard her as the world's
25 renowned authority on PCB?

BROWN VS. MONSANTO

1 MR. CARNEY: Your Honor, objection. It's
2 asked and answered twice already.

3 Q. (By Mr. Kotoske) Just yes or no.

4 A. No, I -- I don't know who is.

5 Q. I don't either. But there's a suggestion
6 that Renate Kimbrough was the most renowned scientist on
7 PCBs in the United States. Do you accept that as true?

8 A. May, may not. People may. Other people may.
9 I say she is renowned. I don't say she is the most
10 renowned. I don't know.

11 Q. That's a hard decision to make, isn't it?

12 A. Well, I think so.

13 Q. What's your opinion?

14 A. It's a hard decision to make.

15 Q. I'm going to ask you about one fellow from
16 Westinghouse, see if you know him. His name was Wilbur --
17 and I'm going to have to spell it because I can't say it.

18 A. Speicher.

19 Q. You're exactly right, but let's spell it for
20 the record.

21 A. S-p-e-i-c-h-e-r.

22 Q. And who was he?

23 A. He was a chief industrial hygienist. I don't
24 know if he was the chieft, but he was a senior chief
25 industrial hygienist for the Westinghouse Electric

BROWN VS. MONSANTO

1 Company. I'm not sure of the years, but certainly through
2 the '50s and on.

3 Q. Did you talk with him?

4 A. I've talked with him, yes. I've talked with
5 him at meetings. He had more contacts with Elmer Wheeler
6 because they were both in the same -- they were both
7 industrial hygienists, but I knew him. I talked with him.

8 Q. Let's see if we can agree on certain things.

9 A. I'll try.

10 Q. This is a general proposition. Let's see if
11 we can agree on some things, and this all has to do with
12 PCBs.

13 A. Yes, sir.

14 Q. This is a PCB case?

15 A. That's what I understand.

16 Q. All right. And these are general
17 propositions, not related to any specific plaintiff in
18 this case. What are the known health effects from
19 exposure to PCBs?

20 A. They can vary from none to rather serious
21 problems. You have to equate the toxicity of a product
22 with the exposure.

23 Q. Exactly. Let us assume for the purpose of
24 this question there is heavy, massive exposure. What then
25 are the known health effects?

BROWN VS. MONSANTO

1 MR. CARNEY: I'm going to object to the
2 question as being vague. I don't know what he means by
3 "heavy" or "massive." I think you have to define dose.

4 THE COURT: Let's do it this way, can you be
5 any more specific? And if not, I think I'm just going to
6 let the doctor deal with it as best he can.

7 MR. KOTOSKE: I can't.

8 MR. KOTOSKE: You cannot. Well --

9 Q. (By Mr. Kotoske) What are the situations
10 that you know of where people have been heavily exposed
11 where there are known examples of the adverse health
12 effects on (inaudible) way on the other end (inaudible) of
13 the compendium of exposure is from none to massive, tell
14 me about those people and the known medical conditions
15 from massive exposure.

16 THE COURT: Again, you're speaking generally
17 without any reference to the facts in this case?

18 MR. KOTOSKE: That's right.

19 THE COURT: You may answer, sir.

20 A. Well, let's take the manner of exposure. If
21 you eat it, as has been done in Japan, you will get very
22 serious problems with the skin. You will get bronchitis.
23 You will get deformation of the nails. You'll get
24 pigmentation. You will get various pains and various
25 other complaints. There have been no cases where there

BROWN VS. MONSANTO

1 have been massive exposures so bad, massive by eating that
2 you would die, but I would imagine if you had a massive
3 exposure of (inaudible) PCBs, you might very well have an
4 extremely serious effect. And in industrial (inaudible)
5 it's not expected to be taken by mouth. If you take a
6 material and have prolonged skin exposure in massive
7 amounts, I presume by that you mean drenched from the
8 waist up to your neck, you could develop either an acute
9 episode of liver problems or if it were not great enough
10 to give you liver problems, one could get chloracne.
11 Now, then, the third exposure, massive exposure is if you
12 heat the material in an open vessel and breathe it, in a
13 large enough vessel, breathe it in a large enough amount,
14 you could develop a chemical hepatitis.

15 Q. Pardon me?

16 A. You could develop a chemical hepatitis.
17 Hepatitis is a liver disease, sort of like jaundice, but I
18 must say that in 40 years with Monsanto I have never had
19 any (inaudible).

20 MR. KOTOSKE: I'll move to strike. Your
21 lawyer will (inaudible).

22 MR. CARNEY: Your Honor (inaudible).

23 THE COURT: (inaudible) It will be stricken.

24 Q. (By Mr. Kotoske) What are the known health
25 effects to the lungs when breathing the fumes of PCBs?

BROWN VS. MONSANTO

- 1 A. In what manner? A massive exposure?
- 2 Q. All these are massive exposures.
- 3 A. Chemical bronchitis.
- 4 Q. Have you heard of a disease called chronic
- 5 obstructive pulmonary disease?
- 6 A. Yes.
- 7 Q. Can you get that from massive exposure to
- 8 PCBs?
- 9 A. If it (inaudible) enough, yes.
- 10 Q. How about small airway disease? As a medical
- 11 doctor you know what I mean by small airway disease?
- 12 A. Yes, I know what you mean.
- 13 Q. Can you get that condition from massive
- 14 exposure of PCBs?
- 15 A. I don't know. It hasn't been reported.
- 16 Q. You know of no medical articles reporting
- 17 that condition?
- 18 A. No, I didn't say that. I mean it's -- it has
- 19 not been shown epidemiologically that people get small
- 20 airway disease from exposure to PCBs. Now, this is not
- 21 your -- I don't know what would happen in your supposition
- 22 of a massive exposure over a long period of time because
- 23 that work hasn't been available. That information has not
- 24 been available.
- 25 Q. You are aware -- At least when you left

BROWN VS. MONSANTO

1 Monsanto you were aware of no medical study that reported
2 on small airway disease from exposure to PCBs?

3 A. In industrial operations, no.

4 Q. Now, I want to change the subject to the
5 nervous system. Are you aware the medical literature
6 reporting on neuropathies, dystonia and tremors from
7 exposure to PCBs?

8 A. Yes. They do show in the Japanese
9 (inaudible)

10 MR. CARNEY: Let me object to the question.
11 He asked about three things. It's compound. He asked
12 about tremors, dystonia and neuropathies.

13 Q. (By Mr. Kotoske) I'll break it all down. No
14 problem here. I'll break it down. I'm going to talk
15 about the nervous system of people exposed to PCB in
16 massive amounts. And you can assume I'm always talking
17 about the massive exposure. It was reported in the '60s
18 and early '70s, and you're quite correct in the Yusho
19 there were certain neurological disorders from exposure to
20 PCBs that included neuropathies.

21 MR. CARNEY: I'll object. The question is
22 unclear. He's talking about Yusho. There were furans
23 that were causing (inaudible) and I think that (inaudible)

24 MR. KOTOSKE: Let me (inaudible) this, Judge.

25 THE COURT: Overruled. We'll proceed.

BROWN VS. MONSANTO

1 Finish your question.

2 Q. (By Mr. Kotoske) I'm sorry. Where
3 neuropathies reported with respect to the people
4 (inaudible) Yusho?

5 A. The people in the Yusho incident were exposed
6 by ingestion, by eating material. They ate a Japanese PCB
7 that was manufactured by a different method than the
8 Monsanto PCB. It had (inaudible).

9 MR. KOTOSKE: Move to strike. It's not
10 responsive.

11 THE COURT: I'm not going to do (inaudible)
12 at this point. If you think he's off the point.

13 Q. (By Mr. Kotoske) The question is why. This
14 is the question I'm asking.

15 MR. CARNEY: Your Honor, he was in the middle
16 of an answer. And I object to this interrupting.

17 THE COURT: It wasn't responsive, but I'm not
18 going to strike it. Ask your question, Mr. Kotoske.

19 MR. KOTOSKE: I will.

20 Q. (By Mr. Kotoske) A nervous condition was
21 reported in connection with the Yusho incident where
22 people ate PCBs. What was that nervous condition?

23 A. Well, Your Honor, he's using PCBs, that
24 widespread term. As I understand in this particular trial
25 we are not talking about Japanese PCBs.

BROWN VS. MONSANTO

1 MR. KOTOSKE: Well, let's move to strike all
2 of that.

3 THE COURT: Doctor, if you can't answer it
4 the way it's asked, just tell us, and then it will be
5 rephrased.

6 A. Yes. Please explain what PCBs you're talking
7 about.

8 Q. (By Mr. Kotoske) The Japanese PCBs that were
9 eaten by people in Japan.

10 A. Containing various contaminants.

11 Q. Fine.

12 A. Huh?

13 Q. Yes. Fine. Put that in your supposition.
14 What neurological conditions did they exhibit?

15 A. They had some numbness, some tingling, some
16 tremors, not all. May I finish?

17 Q. Yes.

18 A. Not in comparison to the amount ingested.
19 There were some studies that showed that people that had
20 ingested more PCBs didn't show the tremors or the symptoms
21 of pain or stiffness in the joint while others who had
22 less exposure did.

23 Q. Did they also exhibit -- You mentioned the
24 tremors. Did you mention dystonias? You know what
25 dystonia is, don't you?

BROWN VS. MONSANTO

1 A. I know what some people call dystonia.

2 Dystonia is a problem with muscle use.

3 Q. Was that exhibited in the Yusho studies?

4 A. I can't recall whether it was or not.

5 Q. All right. And the neuropathies. We're
6 talking about neuropathy. Was that exhibited in the Yusho
7 study?

8 A. Forty-three percent of one group showed some
9 changes in their EMG, which is an electrical test of
10 nerves.

11 Q. And you believe an EMG is proof positive of a
12 neuropathy?

13 A. Yes. It doesn't show the cause -- what other
14 causes there may be. There may be alcoholic neuritis or a
15 (inaudible). There may be a number of causes.

16 Q. What are the effects of massive exposure to
17 PCB on the heart?

18 A. Again --

19 MR. CARNEY: I object to the question again,
20 Judge. He's talking about massive exposure. And he is
21 not relating it to the amount. And he's referred to some
22 of these plaintiffs getting massive exposure and that's
23 (inaudible).

24 MR. KOTOSKE: Your Honor, we don't need this
25 kind of prompting of the witness.

BROWN VS. MONSANTO

1 THE COURT: I understand your objection, sir.
2 I'm going to make the same ruling. Overruled. If the
3 doctor wants to qualify anything, he can.

4 A. Now, what massive exposure, (inaudible)
5 unconscious?

6 Q. (By Mr. Kotoske) In some cases there have
7 been cases where people have passed out in this case,
8 having to be carried out of the plant.

9 MR. CARNEY: Objection. Your Honor, there is
10 no evidence that anybody passed out because of exposure to
11 PCBs in this case.

12 THE COURT: I'm going to sustain the
13 objection. I want you to define it if you can so we can
14 move this along, what you mean by massive exposure.

15 Q. (By Mr. Kotoske) I'm going to use this
16 situation, and tell me whether or not you think that is
17 massive exposure. Listen to these facts.

18 A. These facts or assumptions?

19 Q. Facts.

20 A. These are facts.

21 Q. Assume these facts are true. A man works as
22 a heater man. He floods an oven on a daily basis with
23 PCB. This oven is 40 feet long, 6 feet wide, 6 feet tall,
24 and he is making capacitors with PCB-1242. Do you
25 understand what PCB-1242 is?

BROWN VS. MONSANTO

1 A. Yes, I do.

2 Q. For a period of six years during this job he
3 is drenched, drenched. His clothes are drenched every day
4 in PCBs. When he opens this oven, the PCBs are heated,
5 and he breathes the fumes of heated PCBs and sees the
6 smoke and haze. He gets nauseous. He vomits. He gets
7 dizzy from this exposure on a daily basis for six years.
8 Do you call that massive?

9 MR. CARNEY: Let me object, Your Honor. I
10 think he's mischaracterized the testimony I heard. I
11 think he's talking about Mr. Fritch, who was the only
12 heater man. And he didn't say drenched every day. And I
13 think there were some other things that were an
14 over-statement.

15 MR. KOTOSKE: Your Honor, we don't need his
16 testimony.

17 THE COURT: Well, the jury will recall what
18 the evidence was. (inaudible)

19 Q. (By Mr. Kotoske) Would you call that a
20 massive exposure?

21 A. If the facts are as you state, and I have no
22 reason to believe that they are as you state because I
23 have never heard of any company with that type of
24 exposure.

25 Q. You would find that outrageous, wouldn't you?

BROWN VS. MONSANTO

1 A. I would find that unbelievable, yes.

2 Q. Good. Now --

3 A. All right. Assuming this man had this
4 massive exposure for six years, assuming that, I have to
5 ask you one question, did he have chloracne?

6 Q. Yes. He exhibited rashes.

7 MR. CARNEY: Your Honor, I object.

8 A. That's a different rash, not chloracne.

9 Q. Dr. --

10 MR. CARNEY: There is no evidence in this
11 case that Mr. Fritch had chloracne.

12 MR. KOTOSKE: Mr. Carney, your objection is
13 noted. I told him to rephrase it (inaudible)

14 Q. (By Mr. Kotoske) He exhibits rashes on his
15 body, in his groin, on his stomach, on his neck and his
16 hands and arms repeatedly. We don't know if it's
17 chloracne because we can't biopsy it 30 years later to
18 find out if it is or not, but he has these rashes. All
19 right. Now, would you call that a massive exposure?

20 A. First, we've got to define this rash. PCBs
21 act as a pigment remover. You can get a redness on your
22 body, on your groin from PCBs the same as you can get them
23 from turpentine. However, the systemic marker for PCB
24 intoxication or the benchmark for PCB over-exposure is
25 chloracne, and that's a different type of rash completely

BROWN VS. MONSANTO

1 from a turpentine rash or a PCB skin rash.

2 Q. Are you saying to this jury that you can't
3 have a PCB exposure unless and but for chloracne?

4 A. Of course you can get the exposure. Yes, you
5 can get exposure, but you won't get systemic illness.

6 Q. Tell the jury what chloracne is.

7 A. Chloracne is like teenage acne, only worse.
8 It is accompanied by pigmentation. That's darkness of the
9 skin. It's when it becomes infected you get infected
10 cysts and scarring. It's a result of not the PCBs getting
11 on your skin, but PCBs being absorbed into your system and
12 changing the fat metabolism of your sweat glands,
13 sebaceous glands.

14 Q. Let me just ask you point blank, are you
15 telling the jury that chloracne is like teenage acne?

16 A. Of course not. I didn't tell them that. I
17 said it's like teenage acne, only much worse. You didn't
18 hear all my answer, Mr. Klawans.

19 Q. Well, I'm not Klawans. I'm Kotoske.

20 A. Kotoske.

21 Q. Are you saying you cannot have a medical
22 condition -- adverse medical condition from exposure to
23 PCBs unless you first have chloracne?

24 A. That is my statement, and that is also the
25 statement of Renate Kimbrough.

BROWN VS. MONSANTO

1 Q. Well, I know. I know. By the way, Renate
2 Kimbrough is now a private consultant, is she not?

3 A. I don't know.

4 Q. She consults with General Electric, does she
5 not?

6 A. I don't know. The last time I saw her she
7 was (inaudible) with the government.

8 Q. The government was one of the biggest users
9 of PCBs.

10 A. Yes, they were. (inaudible) It was their
11 patent.

12 Q. Now, assuming there's a massive exposure,
13 what conditions have they documented with respect to the
14 heart? Does PCB cause any heart (inaudible)?

15 MR. CARNEY: Your Honor, let me object again.
16 He's using this word "massive" without any definition.

17 MR. KOTOSKE: There is a definition in the
18 record.

19 THE COURT: Well, I want you to define it a
20 little bit, so we can move this along. What do you mean
21 by "massive" in your question?

22 MR. KOTOSKE: No. When I use massive -- I've
23 defined it for you. And whenever I use massive, that's
24 the definition I am using.

25 THE COURT: State it again for my benefit.

BROWN VS. MONSANTO

1 What do you mean by that?

2 Q. (By Mr. Kotoske) A man is a heater man. He
3 works at a Westinghouse capacitor plant. He uses 1242,
4 among other things.

5 THE COURT: The facts that you stated
6 earlier?

7 MR. KOTOSKE: Right.

8 THE COURT: Proceed.

9 Q. (By Mr. Kotoske) Do you know of any
10 scientific literature that documents heart disease from
11 exposure to PCB? Just a simple yes or no will do. And if
12 there is, tell me the (inaudible).

13 A. Yes. There have been epidemiological
14 studies. The one that I know of that I've stated that
15 there has been an excess of non-arteriosclerotic, that's
16 the high blood pressure type of heart disease, due to
17 PCBs. However, when you analyze those particular cases,
18 you find you're talking about rheumatic fever, for one.
19 You're talking about diabetic gangrene. So that
20 particular epidemiological study, I don't know if you
21 consider that a scientific study, but I do not believe
22 it's accepted by scientific authorities that PCBs cause
23 heart disease.

24 Q. And you explain it away by what? These
25 people had other conditions?

BROWN VS. MONSANTO

1 A. Well, no, but they didn't -- if you think
2 that rheumatic fever, rheumatic heart disease is due to a
3 chemical, that certainly flies in the face of all
4 scientific information for the past 50 years.

5 Q. What scientific literature is there that
6 documents liver damage from exposure to PCB? That's a
7 well known consequence from exposure to PCB, isn't it?

8 A. It's well known in acute episodes, yes.

9 Q. And that's been known for what, 50 years?

10 A. Well, first of all -- No. The PCB exposure
11 that I know about with liver disease occurred in two
12 non-electrical applications. These are the two that have
13 been reported to me, two that I've seen in the literature,
14 that was an acute episode which you heated the material
15 up, breathe it in a confined space. There was a heat
16 exchange situation where it leaked, and the people were
17 exposed to that for three days, and it leaked, and they
18 developed hepatitis, which is jaundice, and they got over
19 it in a relatively short time.

20 Q. What other liver damage was done besides
21 hepatitis?

22 A. In humans?

23 Q. Yes.

24 A. I don't know of any.

25 Q. How about in rats?

BROWN VS. MONSANTO

1 MR. CARNEY: Your Honor --

2 Q. (By Mr. Kotoske) Animal studies?

3 MR. CARNEY: I think we need to approach the
4 bench on this. He's getting into an area.

5 THE COURT: All right.

6 (There was a conference at the bench.)

7 THE COURT: He's going to ask you another
8 question.

9 Q. (By Mr. Kotoske) Staying with the liver and
10 PCB exposure, has it been documented -- Do you know of
11 scientific literature that documents enzyme imbalance in
12 the liver due to exposure to PCB?

13 A. Yes.

14 Q. Do you know of situations where porphyrins
15 have been out of balance because of exposure to PCB,
16 either high or low?

17 MR. CARNEY: I'm going to object to the
18 relevance. There is no foundation.

19 MR. KOTOSKE: Can't hear.

20 MR. CARNEY: We have (inaudible.)

21 THE COURT: I'm going to overrule the
22 objection, as long as it will be stricken.

23 THE COURT: You may answer, doctor.

24 A. Would you repeat the question?

25 MR. KOTOSKE: Can we read this one back? I

BROWN VS. MONSANTO

1 want to be relatively sure, and I won't do this very
2 often.

3 (The reporter read back as requested.)

4 A. Yes, but --

5 Q. (By Mr. Kotoske) Thank you. That's the only
6 question. You have a lawyer here who can cross-examine
7 you.

8 THE COURT: I'm going to let him answer. You
9 may finish, sir.

10 A. There have been studies when they are high.
11 There have been studies when they are low. So I don't
12 think there's been a great deal of scientific validity put
13 on the porphyrin changes and exposures that these
14 individuals had.

15 Q. By the way, let me ask you something. Have
16 you ever published any articles on the adverse
17 consequences from exposure to PCB?

18 A. No, sir.

19 Q. Thank you. Now, I want to change the subject
20 a little bit. Tell the jury what furan is.

21 A. Can I go over to the --

22 Q. You want to write on the blackboard?

23 A. Yes, please. (Inaudible) chemistry, but --
24 We're talking about -- Let's start with polychlorinated
25 biphenyl, PCB. This is -- You've heard, I'm sure, benzene

BROWN VS. MONSANTO

1 (inaudible) and talk about that. Here's one. Here's
2 another. And these are various places where they have
3 been chlorinated. Well, we knock this one out here, and
4 we put the oxygen in here. And this goes over here. So
5 that's the furan, dibenzofuran. It has oxygen, and it's
6 chlorinated, of course, for various amounts. So it's a
7 completely different horse after (inaudible) and where the
8 benzene (inaudible) directly together. So this one is --
9 That's a different one, but I'll put this down here to
10 show you -- These are all carbon atoms here and a carbon
11 here, but over here you do not have that carbon to carbon.
12 You have an oxygen. And without elaborating the
13 chemistry, it only takes a small dip of change in the
14 molecular structure or the physical structure of a
15 compound. Diamond's carbon, and (inaudible) coal is
16 carbon. So they are a lot different. You can take
17 Haldol, which a lot of people used to take, and you change
18 the chlorine on it, and you get bichloro (inaudible)
19 chlorine, and you get another toxic compound. Haldol
20 works very close to (inaudible), one less chlorine. So
21 you cannot go by structure.

22 A. Yes, sir.

23 Q. Were you finished?

24 A. Yeah.

25 Q. What causes PCBs to produce furans? What do

BROWN VS. MONSANTO

1 you have to add?

2 A. You have to keep the PCBs in the presence of
3 oxygen to a temperature of 600 to 800 degrees centigrade
4 or Celsius.

5 Q. And what's that based on?

6 A. Beg pardon?

7 Q. What's that temperature based on?

8 A. I'm sorry. I can't hear you.

9 Q. What is that temperature based on? Where did
10 you get those numbers?

11 A. I got it from scientists, and I've read it in
12 the literature.

13 Q. What literature did you read that in?

14 A. Well, I don't remember it, but it's common
15 knowledge to scientists.

16 Q. Common knowledge that you have to heat it to
17 what?

18 A. 600 to 800.

19 Q. 600 to 800 Fahrenheit?

20 A. Centigrade.

21 Q. That's Fahrenheit.

22 MR. CARNEY: Objection. Centigrade. That's
23 what the --

24 A. Either one is pretty hot.

25 Q. (By Mr. Kotoske) You've got to add heat to

BROWN VS. MONSANTO

1 PCB, heat to produce furan?

2 A. No. You also have to have oxygen.

3 Q. Well, I understand that. But the pyro
4 (inaudible) can't exist to heat the fire -- The heat can't
5 exist without oxygen?

6 A. But you have PCB in a container, a closed
7 pipe, you don't have oxygen.

8 Q. All right. You have to have oxygen and heat
9 for this chemical to change into a furan?

10 A. But if you get too much heat, then it's
11 destroyed. After 800 degrees degrees the PCBs are
12 destroyed.

13 Q. How toxic are furans?

14 A. Quite toxic. Much more toxic than PCBs.

15 Q. A small amount could be very, very toxic,
16 could it not?

17 A. If you (inaudible) it, yes.

18 Q. As a matter of fact, over 100 days period of
19 time, just 100 days, .6 milligrams can kill you; isn't
20 that true?

21 A. I'm sorry. But you're talking about
22 something I didn't hear the first part of it.

23 Q. Why don't you assume an exposure to PCBs that
24 are heated, and let's use your numbers down here.
25 .6 milligrams of this furan will kill you, true?

BROWN VS. MONSANTO

1 A. Well, it certainly hasn't shown -- It's
2 possible if the human species responds like the mink does,
3 if it responds like the guinea pig, we don't know, but
4 it's a very toxic compound, probably 2,000 times more
5 toxic than PCBs.

6 Q. I want the jury to get the (inaudible) of
7 what we're talking about. If you take a regular aspirin,
8 just an aspirin size, how many milligrams does a normal
9 aspirin have in it?

10 A. Well, it's 5 grains, and that's 60
11 milligrams, it's about 300 milligrams.

12 Q. A normal aspirin, just a normal one has 350
13 milligrams. Less than half of 1 milligram of furans,
14 exposure to furans over 100 days can kill you, couldn't
15 it?

16 A. It's possible.

17 Q. It could cause very serious toxic effects?

18 A. Well, it hasn't been shown in humans because,
19 obviously, we can't test humans.

20 Q. It's been shown in animal studies, hasn't it?

21 A. I'm sorry. I couldn't hear.

22 Q. It's been shown in animal studies?

23 A. Yes, it has.

24 MR. CARNEY: Just a minute, Your Honor. He
25 was in the middle of a question -- or an answer.

BROWN VS. MONSANTO

1 THE COURT: Let him finish his sentence.

2 A. You're talking about furans. You haven't
3 mentioned amount. It's in parts per million in the
4 Japanese PCBs.

5 Q. I'm not talking about the Japanese PCBs
6 (inaudible).

7 A. I wanted to clarify.

8 Q. Thank you. I appreciate it. Let's stay on
9 the subject.

10 A. I thought I was staying on the subject.

11 Q. It was reported in animal studies the
12 toxicities of these furans that we are talking about.
13 They can cause heart disease in animals. It's been known.
14 Animal studies have shown they cause heart disease. Have
15 you read those studies?

16 A. No, I have not.

17 Q. Liver disease?

18 MR. CARNEY: Your Honor, I'll object to this
19 line of questioning. I don't think there is any evidence
20 that furans were in the PCBs at Monsanto in the
21 Bloomington plant.

22 MR. KOTOSKE: We understand that.

23 THE COURT: Did you make this up?

24 MR. KOTOSKE: PCBs cause furans which are
25 highly toxic, just like he said.

BROWN VS. MONSANTO

1 THE COURT: (inaudible) Subject to being
2 connected up.

3 MR. CARNEY: Well, (inaudible).

4 Q. (By Mr. Kotoske) Now, just stay with me now.
5 We are not talking about Japan, and we are not talking
6 about Japanese PCBs. I'm just talking about furans.
7 Furans are produced from heating PCB at a certain
8 temperature in the presence of oxygen. I want to ask you
9 whether you know of animal studies that show the toxicity,
10 adverse health consequences to animals with respect to
11 these diseases, heart conditions?

12 A. I do not know. They may exist. I do not
13 know.

14 Q. Liver conditions?

15 A. I'm sure there's been some work on that, yes,
16 sir.

17 Q. Nervous system?

18 A. In animals?

19 Q. Yes.

20 A. I don't know of any. They may. I don't know
21 of any.

22 Q. Now, I want to change the subject a little
23 bit, and I'm going to go to some exhibits, some documents.
24 And I want you to have before you Exhibit No. 11, and I'll
25 tell you that I'm going to refer to pages in that exhibit,

BROWN VS. MONSANTO

1 and I'm going to ask you some questions about that. Now,
2 you have before you Exhibit No. 11, and can you see that
3 they are paginated in the lower right-hand corner pages 1
4 through so forth, and I'll show you, help you. You see
5 that? This is the number, like 3, 5?

6 A. Uh-huh.

7 Q. That's the number I'm going to be referring
8 to. I am not going to be referring to this Bates number.
9 Now, look at page 1.

10 A. Yes, sir.

11 Q. Do you have that?

12 A. Yes, I do.

13 Q. Okay. You know what that is?

14 A. It's a material safety data sheet from the
15 U.S. Department of Labor.

16 Q. Was that prepared by Monsanto?

17 A. Very probably it was.

18 Q. I'm interested in that, doctor. Can you
19 explain to us because you're (inaudible) for a long time,
20 why are there no material safety data sheets prior to the
21 date of this one which was July 30, 1972?

22 A. Well, I do not believe that was -- The
23 material safety data sheets were mandated by the
24 Department of Labor, either that or by the Department of
25 Transportation. So all companies started them up about

BROWN VS. MONSANTO

1 that time.

2 Q. Oh, so that's the explanation?

3 A. Yes.

4 Q. Did you, nevertheless, have an internal
5 material safety data sheet?

6 A. Yes. We had some, yes.

7 Q. What's the purpose of these material safety
8 data sheets?

9 A. To educate the people in transportation and
10 to educate the workers in various plants that use the
11 material.

12 Q. All right. Did you give these to
13 Westinghouse; do you know?

14 A. I don't know whether we did or not. I would
15 imagine we did because --

16 Q. You don't remember one way or the other?

17 A. No, I know we gave them -- we received
18 inquiries from all our companies asking for material data
19 safety sheets. I don't know whether we gave them to
20 Westinghouse.

21 Q. I want you to turn to page 16, which is
22 (inaudible) 1242 which we know for sure was out at
23 Westinghouse.

24 MR. CARNEY: Which page?

25 A. We know for sure what?

BROWN VS. MONSANTO

1 Q. (By Mr. Kotoske) Page 16. Are you on page
2 16?

3 A. Yes, I am.

4 Q. Now, these aren't the best copies, but it's
5 the best we can do. Do you see toward the bottom of the
6 page where it says "Special manufacturing of -- Pardon.
7 Pardon. "Special fire fighting procedures."

8 A. Yes, sir.

9 Q. And it suggests equipment somebody should
10 have when this stuff is on fire, and it says "Respiratory
11 protection when fighting fires or exposure to vapors or
12 gases is possible." Is that what it says?

13 A. Yes, sir.

14 Q. Okay. And then it says underneath that, and
15 it's hard to read, "Explosion Hazards." Do you see that
16 one?

17 A. Yes, I do.

18 Q. And it says with respect to explosions, "High
19 toxic gases, fluorides and chlorane can be involved in
20 fires of this product." Have I read that correctly?

21 A. Yes, you have.

22 Q. Turn to page 17 a minute where it talks about
23 "Effects of over-exposure." Do you see that, the second
24 line down from the top?

25 A. Yes, sir.

BROWN VS. MONSANTO

1 Q. And it says, "Skin irritation in the form of
2 acne, chloracne, systemic intoxication leads to nausea,
3 vomiting, loss of weight, edema and abdominal pain." Did
4 I read that correctly?

5 A. Yes, you did.

6 Q. And in order to correct this problem and
7 there has been this exposure, you are warned to remove the
8 person from exposure, remove contaminated clothing, wash
9 contents in area with amounts of water and soap and refer
10 the person to a physician?

11 A. Yes, sir.

12 Q. And that's what you do when you have this
13 kind of exposure?

14 A. Yes, sir.

15 Q. I want you to turn to page 22, if you will,
16 please. By the way, I forgot to ask you something. On
17 this material safety data sheet that I just went through,
18 that's Monsanto's own prepared document, is it not?

19 A. Yes. I mean we prepared it, yes.

20 Q. Did you prepare it?

21 A. No, I didn't prepare it. I prepared -- I
22 gave the information on the section on -- I'm trying to
23 read it. It says, "Signs of" -- Well, I gave them the
24 safe handling data, and I can't read where it said what
25 happens.

BROWN VS. MONSANTO

1 Q. (Inaudible) cut this short. What I'm trying
2 to establish, is this information well known to Monsanto
3 at least by the date of the document? What's the date?

4 A. 1970 -- '72.

5 Q. But you already knew all this information way
6 back in the '50s and '60s, didn't you?

7 A. Which all? We knew that skin irritation
8 could occur. We knew that chloracne could occur. We knew
9 if you caught on fire, you would have hydrochloric acid
10 and chlorine released. Yes, we knew that.

11 Q. And you knew exposure would cause nausea and
12 vomiting?

13 MR. CARNEY: I'm going to object. He has to
14 define what exposure is, whether it's long-term or acute.

15 THE COURT: Rephrase.

16 Q. (By Mr. Kotoske) You, yourself, have had a
17 hand in preparing this document. What did you mean by
18 "exposure" when you use that word?

19 A. It could be anything. It could be a truck
20 falling over, a truck catching on fire. It could be
21 exposure in the workplace, yes. It could be any -- You
22 have a certain amount of space on the safety data sheet.
23 You have a certain amount of information to put on. Now,
24 systemic intoxication leading to nausea and vomiting has
25 only been on acute episodes like the ones I said on the

BROWN VS. MONSANTO

1 heat transfer agency where they leaked, but I can't go
2 into all that on three lines. So we put everything in.

3 Q. What did you mean by exposure when you used
4 the term when you helped draft it? Just tell us what you
5 meant by that.

6 A. Exposure that could occur in a transportation
7 vehicle, that of a tank car or truck where you would
8 rupture the tank car, and you would get exposure there. I
9 couldn't quantify the amount of exposure, or a couple of
10 55-gallon drums would fall out of a truck and break open.
11 I include that type of exposure. And I have to put
12 exposure in a workplace, but, remember, this is not the
13 only thing that the worker got. This was started off by
14 the transportation people. So the worker had other
15 information sent to his company by Monsanto that detailed
16 what should be done.

17 Q. Let me me give you a couple of examples of
18 exposure and tell me if they would be included in examples
19 that shows (inaudible). A guy is unloading a tanker truck
20 and the hose brakes or something goes wrong and he just
21 gets drenched. Would you include that as an exposure?

22 A. Certainly would.

23 Q. How about a situation where fellows are
24 taking hot (inaudible) full of 1242 and soldering on
25 (inaudible) and fill them up with fill holes, and it gets

BROWN VS. MONSANTO

1 all over them. Would you include that in exposure?

2 Q. First how hot is it? How hot is the
3 temperature?

4 Q. I'm just talking about exposure to PCBs, not
5 furans.

6 A. I know that, but you're not giving me enough
7 facts to go on. You're saying exposure.

8 THE COURT: You mean vapor exposure or
9 physical?

10 Q. (By Mr. Kotoske) No. I'm talking about
11 something inside the fill holes in a capacitor after they
12 are flooded with PCBs, dripping with PCB oil, and then
13 they work on them and get the stuff all over their
14 clothes. Would you call that exposure?

15 A. If they get the stuff all over their clothes,
16 yes, that is exposure.

17 Q. How about a situation where -- Let's see.
18 How about a situation where a fella is lugging damaged
19 capacitors full of PCB to the dump. He has to put them on
20 a (inaudible) truck, and they fall over and get all over
21 his pants and shoes. Would you call that exposure?

22 A. That's exposure. And we advise against it.
23 We say (inaudible) if the clothes are contaminated,
24 destroy them.

25 MR. KOTOSKE: Can I strike that? Move to

BROWN VS. MONSANTO

1 strike all that.

2 THE COURT: Just try to answer the question.

3 MR. KOTOSKE: Is it stricken, Your Honor?

4 THE COURT: It's stricken.

5 Q. (By Mr. Kotoske) How about a situation where
6 a woman --

7 MR. CARNEY: Your Honor, can we approach the
8 bench?

9 (There was a conference at the bench.)

10 THE COURT: Proceed.

11 Q. (By Mr. Kotoske) I will. I want you to
12 turn, Dr. Kelly, with that to page 21, and I'm going to
13 ask you a series of questions about animal studies. I can
14 help if you need --

15 A. I've got it here.

16 Q. Okay. The document that we're looking at is
17 dated September 15, 1938, and it's a report to Monsanto
18 Chemical Company by a Cecil K. Drinker, M.D.

19 A. I thought he is a Ph.D., but that's all
20 right.

21 Q. (inaudible) Now, if you'll page through all
22 the way back. You know, I don't want to read through all
23 this. I just want to ask you some questions generally
24 about studies that were done in the late '30s for
25 Monsanto. Have you ever had occasion to read these animal

BROWN VS. MONSANTO

1 studies?

2 A. Yes, quite often.

3 Q. The questions I want to ask you are these.

4 In part these animal studies relate to a form of PCB.

5 They also relate to other chemicals that were manufactured
6 by Monsanto.

7 A. Yes, sir.

8 Q. These are actually animal studies, are they
9 not?

10 A. Yes, they are.

11 Q. And they were hired to be done by Monsanto by
12 Dr. Drinker who was then dean and professor of physiology
13 at the Harvard School of Public Health, if you'll look at
14 page 22.

15 A. Yes. But this is going to take a little
16 explanation, Mr. Kotoske.

17 THE COURT: I'll let him explain at some
18 appropriate time.

19 A. Because you have stated there they are hired
20 by Monsanto to do some studies. This is the aftermath of
21 studies that were carried out by Professor Drinker in 1936
22 at the behest of the Halowax Corporation, and this is
23 going to take a little while. Bear with me.

24 Q. (By Mr. Kotoske) You know what, Mr. Kelly,
25 I'm going to try to (inaudible) a little bit. My

BROWN VS. MONSANTO

1 questions don't go so much to the substance of the report.
2 I'm trying to find out whether they were in Monsanto's
3 files and they were available to you back in the 1930's.
4 That's all I'm (inaudible)?

5 A. They were in Monsanto's files that were
6 available to me, yes.

7 Q. All right. And the other question is did you
8 have a chance to read them?

9 A. Yes.

10 Q. Okay. This is the type of research
11 information you were trying to collect on toxicity or
12 somebody was trying to collect on toxicity of Monsanto's
13 chemicals?

14 A. Yes.

15 Q. And frequently used animal studies?

16 A. Yes.

17 Q. That's all I want to ask you.

18 A. Fine.

19 Q. Will you turn to page 46?

20 A. Yes, sir.

21 Q. Do you know what page 46 entitled "Process
22 for the production of aroclors, pyranols," et cetera --
23 This is actually a Monsanto document, is it not?

24 A. Yes, it is.

25 Q. What was the purpose? What was its function?

BROWN VS. MONSANTO

1 What did Monsanto use it for?

2 A. I don't know. I mean, first of all, just
3 you're confusing me a little bit by jumping to this one
4 from the Drinker studies. Forget about Dr. Drinker?

5 Q. Right. If your lawyer wants to ask you about
6 Drinker, he will ask you. Moving right ahead now. I'm
7 trying to save time is all I'm trying to do.

8 A. I have to be clear to know what you're asking
9 so I can answer you correctly.

10 Q. Yes, sir.

11 (Ms. Carter was replaced by Ms. Pape)

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BROWN VS. MONSANTO

1 A. It appears that the English plant was going to
2 manufacture PCBs they called Arochlors and Pyranols. That's
3 a heat transfer unit. (Inaudible) Anniston plant in the
4 United States. Our (inaudible) plant, which was in
5 East St. Louis, really, but it's referring to it in this.
6 We'll keep talking about East St. Louis, if you don't mind.
7 I think everybody knows that more than they do Sauget. So it
8 came back and (inaudible) said, this is what they do at these
9 plants. And I think your basis of your question was what was
10 the purpose of 'em. I guess it was to tell people back in
11 England what they did--what he thought they did at Anniston
12 and (inaudible).

13 Q. By the way, in what towns did Monsanto
14 manufacture PCBs--East St. Louis, and where did you say the
15 other plant was?

16 A. Anniston, Alabama.

17 Q. Now, this document contains an entry that I
18 want to ask you about and it's on page 49. Did you have
19 occasion, Dr. Kelly--I guess I should ask you a foundation
20 question--ever to read this document?

21 A. Did I what?

22 Q. Did you ever read this document that we're
23 discussing here?

24 A. Yes, uh-huh.

25 Q. Okay. I'd like to read from page 49. I want

BROWN VS. MONSANTO

1 you to tell me if I'm reading correctly. This document is
2 entitled hazards, and the specific section I'm going to read
3 from this document is toxicity. And it says, there are many
4 literature references to harmful effects of the type of
5 chloracne resulting from exposure to chlorinated diphenyls,
6 especially in cases where people working with small
7 electrical components have been exposed to fumes of
8 hydrochlorinated Aroclors. Chloracne is sometimes
9 accompanied by gastric troubles and there are, in the
10 literature, the records, liver troubles. There are some
11 trouble of this kind among the production workers at Anniston
12 in the early days of the development of Aroclors. At that
13 time, hydrochlorinated Aroclors were being made from diphenyl
14 which had come from low grade benzene. (Inaudible) continue
15 reading. Now, I need to ask you a couple questions about
16 that. When a chemist uses diphenyl, it's the same as
17 biphenyl?

18 A. That's correct.

19 Q. So when it's hydrochlorinated diphenyl, we're
20 still talking about PCBs?

21 A. That's correct.

22 Q. Will you turn to page 51, please, in this
23 document.

24 MR. CARNEY: Your Honor, I think it's very
25 misleading to the jury to stop where he stopped, because the

BROWN VS. MONSANTO

1 next sentence makes--

2 MR. KOTOSKE: You know, cross examination

3 (inaudible).

4 THE COURT: I'm gonna overrule your objection.

5 MR. CARNEY: (Inaudible.) I think that makes

6 sense.

7 MR. KOTOSKE: You can (inaudible).

8 THE COURT: Overruled.

9 MR. KOTOSKE: I don't object to (inaudible).

10 THE COURT: I understand. Let's move it. Let's

11 move it.

12 BY MR. KOTOSKE:

13 Q. I want you to--pages 51. Would you please

14 read that second paragraph to yourself?

15 A. To myself?

16 MR. CARNEY: Your Honor--

17 Q. Yes, quietly.

18 A. I beg your pardon?

19 MR. CARNEY: Never mind.

20 A. I still don't know what--

21 Q. Read the second paragraph.

22 A. Out loud?

23 Q. To yourself.

24 A. Okay.

25 Q. By the way, in the sentence right before that,

BROWN VS. MONSANTO

1 it states this document called the Toxicity of Arochlors, and
2 it's by a Robert M. Brown. Did you know him?

3 A. Yes, I did.

4 Q. Was he Chief of Industrial Hygiene Division of
5 Health, Department of Public Welfare, City of St. Louis,
6 Missouri? Was he--did you know him professionally?

7 A. Yes, he was the chief of a one-man division.

8 Q. Here in St. Louis?

9 A. Yes, he was--he was it. He was the industrial
10 hygiene section.

11 Q. And he was--is he the one that has commented
12 on what is about to follow here in this report? That's how I
13 read it. Maybe you read it different.

14 A. Will you repeat that? You lost me on the
15 reading.

16 Q. Is he the fellow that is reporting in the
17 paragraphs right below his name? At least that's how I read
18 it.

19 A. Oh, yes. Yes, he wrote this.

20 Q. Okay. Now, here's what he says about PCBs as
21 stated in that article: Arochlors are a group of chlorinated
22 diphenyls produced by the Monsanto Chemical Company. There
23 is need, therefore, to give warning, for the toxicity of
24 these compounds has been repeatedly demonstrated both from
25 the standpoints of their absorption from the 'higher air' as

BROWN VS. MONSANTO

1 well as from their effects in producing a serious and
2 disfiguring dermatitis when allowed to remain in contact with
3 the skin. Since these effects have been repeatedly observed,
4 industrial hygienists have taken care to see that the proper
5 controls have been established whenever these products are
6 used. Have I read that correctly?

7 A. You read it correctly.

8 Q. Now, just keep your finger there and I want
9 you to turn back to page 46. Now, keep your finger there.
10 What's the date of this document? I see April, '55.

11 A. Which one?

12 Q. The cover page for this report that we're
13 reading.

14 THE COURT: On page 46?

15 Q. Oh, page 46. The date is April, '55?

16 THE COURT: Is that what you're asking?

17 MR. KOTOSKE: Yeah.

18 A. Okay. April, '55. Now, you want me on 46 or
19 47?

20 Q. That's all I want to know, Doctor. I just
21 wanted to know when this literature was (inaudible), when it
22 was out. Can you turn to page 52.

23 A. Yes.

24 Q. I think you may have answered this and so I
25 don't want to spend a lot of time. But do you see, sir, down

BROWN VS. MONSANTO

1 in the middle of the page--are you on 52?

2 A. Yes, I am.

3 Q. There is a reference and I'll read it. The
4 St. Louis plant B Arochlors building was rated a toxic
5 department. Is that the East St. Louis PCB plant?

6 A. That's correct.

7 Q. And it was rated toxic?

8 A. Well, you have to--to understand what rating
9 toxic means. If you--I mean I can't--I think--

10 THE COURT: We'll let him explain.

11 A. I think the jury would like to know what we
12 mean when we say this. At the East St. Louis plant at that
13 time they had probably 20 different compounds being
14 manufactured, that they allowed people to have--take a shower
15 on company time and be furnished clean clothes every day.
16 That was in the union contract. So if they were off fifteen
17 minutes early or they didn't have a 'police' there to see
18 that they took showers, but it was a well--they (inaudible).
19 So I have never--I had been in the plant--I never saw them
20 wear hats, coat, trousers, rubber shoes. They used their own
21 shoes. They did--they got a change of clothes, but most of
22 the people in the whole plant--now, the plant employed 1,000
23 people, 1,200 people, and there were 15 in the PCB
24 department. So these people got the same underwear, showers,
25 as half the plant did--probably all the plant. Later on--I

BROWN VS. MONSANTO

1 don't know what time--but all of the people in the plant got
2 company clothing.

3 Q. And it says down here further down in the last
4 sentence, employees in the toxic department are given an
5 annual medical examination and a lung x-ray every three
6 years; is that true?

7 A. That's what it says, but here is our policy.
8 I might--I started it, so let's--I don't know whether--where
9 he got his information, but we gave people examinations on a
10 voluntary basis to all wage (inaudible) employees. We did it
11 by ages. If a man didn't--personally (inaudible) but if an
12 employee was under, I think it was 35 years, he was examined
13 every three years. If he was 45, every two years; and over
14 55 or 50, every year. X-rays depended on whether they were
15 exposed to any dust, but it was a minimum of every three
16 years to find out cancer, find out lung troubles from
17 smoking, bronchitis from smoking, find out any number of
18 conditions. Perhaps that we didn't (inaudible) chemicals
19 unless it were with a dusty situation.

20 MR. KOTOSKE: Your Honor, this would be a
21 convenient place for us to stop the examination.

22 THE COURT: That's fine. Doctor, we're gonna take
23 a lunch break. You can step down momentarily.

24 THE WITNESS: Your Honor, when do you want me to
25 come back?

BROWN VS. MONSANTO

1 THE COURT: Let's say about 1:20.

2 THE WITNESS: I'll be here.

3 THE COURT: Thank you. Ladies and gentlemen, we
4 will take our--you can step down, sir. Thank you. We will
5 take our lunch break at this time. 1:20 we'll reconvene, and
6 see you at that time. Do not discuss the case among
7 yourselves or with others.

8 (Ms. Pape was replaced by Ms. Olliges.)

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BROWN VS. MONSANTO

1 THE COURT: You may continue, Mr. Kotoske.

2 MR. KOTOSKE: Thank you.

3 Q. This morning, Dr. Kelly, there was a dispute
4 in the testimony as to what degree of heat was needed.
5 Heat is the same as pyrolysis; isn't it? Do you know what
6 pyrolysis means?

7 A. Well, I think. Whether it's heat with oxygen
8 or not, I'm not sure. The answer is no. (Inaudible.)

9 Q. Which (heat) requires oxygen?

10 A. (Inaudible.)

11 Q. You don't dispute that; do you?

12 A. No.

13 Q. But the real dispute was right here, what
14 temperature is required.

15 MR. KOTOSKE: And, Your Honor, I'd like to
16 now read from an article that's been read from, Dr.
17 Kimbrough's article. It's been used by the defense. This
18 witness has recognized Dr. Kimbrough, and I'm going to
19 read from page, in the article, 88. Quote.

20 MR. CARNEY: Which exhibit?

21 THE COURT: Which exhibit number is it,
22 please?

23 MR. KOTOSKE: I don't know what defendant's
24 exhibit number it is. They have used it in this trial.

25 THE COURT: Can we agree, whatever it is,

BROWN VS. MONSANTO

1 you'll proceed --

2 MR. CARNEY: Well, I don't know what article
3 it is.

4 THE COURT: Which one is it?

5 MR. KOTOSKE: 1987. It's been read from
6 twice, but I don't know the exhibit number. If you could
7 please tell me. Here's what it looks like.

8 MS. RUTTER: I'll find it.

9 MR. KOTOSKE: What number is it?

10 MS. RUTTER: D-291.

11 THE COURT: I'm sorry. What is it?

12 MS. RUTTER: D-291.

13 THE COURT: Thank you.

14 MR. KOTOSKE: Thank you.

15 MS. RUTTER: You're welcome.

16 Q. (By Mr. Kotoske) Now, on page 88 of that
17 article, Dr. Kimbrough states, and I'll ask you if you
18 agree or disagree with this statement, "Although PCBs are
19 no longer used commercially in the United States, because
20 of their persistence they are still free in our
21 environment. A number of transformers and capacitors
22 which contain PCBs, however, are still in use. Results of
23 laboratory experiments show -- showed that pyrolysis of
24 PCBs at temperatures of 200 to 600 centigrade could result
25 in the formation of significant amounts of the more toxic

BROWN VS. MONSANTO

1 polychlorinated dibenzofurans." That's what we've been
2 talking about, these here; right?

3 A. This is --

4 Q. End quote.

5 A. Is this a question?

6 Q. Do you agree with the statement she made?

7 A. I'd have to see the statement. May I see it,
8 see her reference?

9 Q. I'm sorry. I read that paragraph right
10 there. I'm sorry.

11 A. I'm looking at the reference, Mr. Kotoske.
12 Well, this is a reference -- She refers to something in
13 1978. I have not seen that reference. And this
14 publication of hers is what? 1987?

15 Q. Correct.

16 A. Huh?

17 Q. Yes. Correct.

18 A. Both of which occurred considerably after I
19 left Monsanto, so I don't believe I'm in a position to
20 confirm her statement. I had other information that I had
21 received while I was at Monsanto that would be -- that it
22 would take 600 to 800 C. Maybe she's right; maybe she
23 isn't. I don't know. I think you'll have to ask someone
24 else that.

25 Q. Thank you. I want to change the subject to a

BROWN VS. MONSANTO

1 definition. I'm going to -- PCBs are broken down into
2 higher chlorinated PCBs and lower chlorinated PCBs; is
3 that correct?

4 A. Well, there's a range of PCBs from lower
5 chlorinated all the way up to almost fully chlorinated,
6 yes, sir.

7 Q. The statement is correct then?

8 A. Yes, but there's a big division between low
9 chlorinated and high chlorinated.

10 Q. I appreciate that.

11 A. I was just making myself clear.

12 Q. I appreciate that. I'm just asking you, are
13 PCBs broken down roughly into higher chlorinated and lower
14 chlorinated?

15 A. Yes.

16 Q. (Inaudible.) Where would you put 1242?

17 A. Well, I would put them in the lower
18 chlorinated group, but 1242 means that you've got a PCB
19 with three chlorine atoms on the ten parts that are
20 available. That's the average. Some of them are higher
21 chlorinated in there, some lower chlorine in them. Some
22 might be two chlorine atoms. But it's an average of three
23 chlorine atoms. So it is in the lower chlorinated group.

24 Q. It's a lower chlorinated biphenyl?

25 A. Yes.

BROWN VS. MONSANTO

1 Q. Thank you. And I think we should discuss
2 chlorination of PCBs. When you have an Aroclor -- Aroclor
3 is Monsanto's name for PCBs; right?

4 A. It's Monsanto's name not only for PCBs, but
5 for other chlorinated compounds which were not PCBs.

6 Q. Let's take 1260. That's the name of a PCB;
7 isn't it?

8 A. I can't hear you, sir.

9 Q. Is 1260 the name of a PCB?

10 A. Yes.

11 Q. And it is 60 percent chlorinated; right?

12 A. That's correct.

13 Q. And just let me put another one up here.
14 1254, for example. It would be 54 --

15 A. Correct.

16 Q. All right. Just so we know what (inaudible)
17 means. Now I want to go on to something else. I'll ask
18 you whether -- I'm going to read a statement to you and
19 I'm going to ask you if you agree with it or disagree with
20 it. Listen to the statement.

21 A. Whose statement, by the way?

22 Q. I'm not going to tell you.

23 A. Okay.

24 MR. CARNEY: Your Honor, I'm going to object.

25 THE COURT: You've got to say.

BROWN VS. MONSANTO

1 MR. KOTOSKE: It's his testimony.

2 THE COURT: It's his testimony?

3 MR. KOTOSKE: Yeah. In Pierce versus
4 Monsanto (inaudible).

5 Q. I'll read this statement and see if you agree
6 with it. Quote, "Obviously, if there's an acute
7 overwhelming exposure, you can die from liver trouble
8 without the occurrence of chloracne. That is if you have
9 an acute (inaudible) exposure." Do you agree with this
10 testimony?

11 A. I still agree with it. It was true then;
12 it's true now.

13 Q. I want to ask you a little bit about Paul
14 Wright. Was he an honest toxicologist?

15 A. I believed it all my life, all my contacts
16 with him. There was nothing in my contacts with him from
17 1972 until I left, I retired in '74, that gave me any
18 reason to doubt his honesty as a scientist or a
19 toxicologist.

20 Q. Do you think he'd be the type of toxicologist
21 that would phony data?

22 A. No, I do not believe that. I do not think he
23 would.

24 Q. Do you think he would be the kind of a fellow
25 that would (inaudible) studies on PCBs and produce forged

BROWN VS. MONSANTO

1 and false statistics concerning those toxicological
2 studies?

3 A. I do not think he would do that at all.

4 Q. As far as you knew, he was a perfectly honest
5 guy?

6 A. Yes. And I saw him every day for those
7 four -- two to three years.

8 Q. I want to change the subject, and I'm going
9 to go back to Exhibit 11. Exhibit 11.

10 A. Is that in here?

11 Q. I believe it is. I'll check it. Now, I want
12 you to turn to page 57 and 58, and you will find there a
13 letter that you wrote. If you would like to take a minute
14 to read it, go ahead. I want to ask you some questions
15 about that.

16 A. Yes, sir. I read it.

17 Q. Are you familiar with that letter?

18 A. Yes, I'm familiar with it.

19 Q. Did you author it?

20 A. Did I what?

21 Q. Did you author it?

22 A. Yes, I did.

23 Q. Tell the jury when it's dated.

24 A. September 20th, 1955.

25 Q. And the reference is Aroclor toxicity; is it

BROWN VS. MONSANTO

1 not?

2 A. That is correct.

3 Q. And you write -- And I'm going to read parts
4 of it, and I need to ask you another question. When you
5 use the word, the abbreviation MCC, that stood for
6 Monsanto Chemical Company?

7 A. That is correct.

8 Q. But when you use MAC, what's that stand for?

9 A. Maximum allowable concentration.

10 Q. Now that we have that, I want to read
11 something that you wrote in 1955. "Monsanto's position
12 can be summarized in this fashion: We know Aroclors are
13 toxic, but the actual limit has not been precisely
14 defined. It does not make too much difference it seems to
15 me because our main worry is what will happen if an
16 individual develops any type of liver disease and gives a
17 history of Aroclor exposure. I'm sure the juries would
18 not pay a great deal of attention to MAC." Did I read
19 that correctly?

20 A. You read that correctly.

21 Q. I want to just focus. This letter was
22 written in 1955; was it not?

23 A. Yes, it is.

24 Q. And you were talking about the toxicity of
25 PCBs; were you not?

BROWN VS. MONSANTO

1 A. Yes, I was.

2 Q. And who were you writing to?

3 A. I didn't hear that, sir.

4 Q. I'm sorry. Who were you writing to?

5 A. Mr. J. W. -- Dr. J. W. Eyerman (phonetic),
6 who was in the research and development office in either
7 England or Brussels. I think he was in England at that
8 time.

9 Q. Was he a Monsanto employee?

10 A. Yes, he was.

11 Q. Now, you're talking about the toxicity of
12 PCBs, and you say Monsanto's position is "We know they are
13 toxic." Is that correct?

14 A. Yes, sir.

15 Q. But you don't know precisely how toxic they
16 are. It has not been defined for you yet?

17 A. Mr. --

18 Q. Is that true?

19 A. It is true, Mr. Kotoske, but you are only
20 reading half of the correspondence. I remember this
21 correspondence very well. We had done testing at the
22 Kettering Laboratory and proven what levels people can
23 work an eight-hour day for the rest of their life and not
24 be injured. Barrett wrote me and said, "Well, why don't
25 you find out how much it takes to harm somebody?"

BROWN VS. MONSANTO

1 Q. To kill somebody?

2 A. Yes.

3 Q. Is that the test Monsanto used, how much does
4 it take to kill somebody?

5 A. No.

6 Q. The outside limit?

7 A. No, I didn't. I said, "Look, we know what a
8 safe limit is. That's what we're looking for. We're not
9 interested in what it takes to kill animals."

10 Q. Mr. Kelly --

11 A. We are using only half the correspondence and
12 putting a wrong spin on it.

13 Q. In 1955, if Monsanto were to put this out in
14 the public domain, the toxic PCBs, without knowing the
15 precise limits of how toxic it is, would you agree with me
16 that that is reckless?

17 A. Would you say that last phrase over?

18 Q. I sure will.

19 A. What did you say?

20 Q. Would you agree with the proposition that if
21 a chemical company puts out, sells for use by workers, a
22 poison that they don't know the precise limits of its
23 toxicity --

24 A. (Inaudible.)

25 Q. Let me finish, please.

BROWN VS. MONSANTO

1 A. All right.

2 Q. Would you agree with me that that is
3 reckless?

4 A. No, I would not agree with it, and I do not
5 agree the way you have characterized what we did.

6 Q. Would you agree --

7 MR. CARNEY: Let him finish.

8 A. Let me finish.

9 THE COURT: You can finish. Slow down.

10 A. We investigated and found and published what
11 were safe limits for a worker for eight hours a day. This
12 information was developed at a prominent university
13 laboratory. It was accepted by the American Conference of
14 Government Industrial Hygienists, in which there are no
15 industrial hygienists, they are all government people.
16 They accepted the information we developed, accepted it as
17 valid, and that is a very responsible action on the
18 company's part, and if people would follow what we
19 recommended, follow the safe limit, we found nobody would
20 be hurt, and I think that's proven.

21 Q. Are you finished?

22 A. Yes.

23 Q. "We know," you write -- Here's what you write
24 in 1955. "We know Aroclors are toxic, but the actual
25 limit" -- And you're talking about toxicity; are you not?

BROWN VS. MONSANTO

1 A. No. I'm talking about what Barrett wrote me
2 before, said, "What is the total dose you have to do to
3 kill the animals?" We're not interested in what it takes
4 to kill animals. We're interested in knowing what the
5 animals can be exposed to for prolonged periods of time.
6 That's what we found out.

7 Q. Are you finished?

8 A. Yes.

9 Q. "We know Aroclors are toxic, but the actual
10 limit has not been precisely defined." Would you agree
11 with me as a general proposition that if a chemical
12 company puts a poison on the market and don't know how
13 poisonous it really is that that is conscious disregard
14 for the safety of the workers and people who are exposed
15 to it?

16 A. I wouldn't agree with you in the least
17 because we gave -- we found out what the safe limit for a
18 worker is. As I said before, that safe limit was accepted
19 by the government authorities, the government industrial
20 hygienists, and that I think is 100 percent responsible.

21 Q. Monsanto came up with the safe limits?

22 A. No. The government industrial hygienists
23 came up with the safe limit. We recommended one -- Treon
24 recommended one, but the government has to approve it.
25 The government agency, the government industrial

BROWN VS. MONSANTO

1 hygienists, has to approve it. And that's the only
2 information they had was the information that Treon
3 supplied them.

4 Q. Now, would you turn to page 90 (inaudible)?
5 And I'll explain to you what 90 is. Are you on page 90?

6 A. Yes, I am.

7 Q. Now, that's a -- Turn to the next page, 91.
8 As you can see, that's a very poor copy, so we retyped so
9 everybody can read the retyped version. (Inaudible.)
10 Except we have to make a correction in yours. Counsel,
11 would you come here?

12 THE COURT: This is 25?

13 MR. CARNEY: Yeah. I think there was a typo
14 in there. Otherwise, we agree it's the same.

15 Q. Now, I'd like you to take a minute --

16 A. I'm sorry?

17 Q. I'd like you to take a minute and read that
18 letter because I'm going to ask you some questions about
19 it.

20 A. Yes, sir. I've read it before.

21 Q. Now, you wrote the letter?

22 A. What, (dear)? What?

23 Q. You wrote it?

24 A. I wrote it, yes.

25 MR. CARNEY: Your Honor, before we get into

BROWN VS. MONSANTO

1 the letter, this is a letter about --

2 MR. KOTOSKE: Let's go to the sidebar.

3 (A bench conference was held.)

4 Q. We were discussing the PCB in this letter
5 that happened to be 1254?

6 A. I can't hear you. You're talking to the
7 blackboard. I can't hear.

8 Q. Now, you were discussing a PCB in this letter
9 that happened to be 1254?

10 A. Yes, sir.

11 Q. I'm going to read something from this letter.
12 "All in all, this could be quite a serious problem having
13 legal and publicity overtones. This brings us to a very
14 serious point. When are we going to tell our customers
15 not to use any Aroclor in any paint formulation that
16 contacts food, feed, water for animals or humans? I think
17 it is very important that this be done. It may be that
18 some of the customers will assure themselves on the basis
19 of (nonextractability) that a particular formulation might
20 be safe, but I think we should make a blanket
21 recommendation against these uses." End of quote. Signed
22 R. Emmet Kelly, M.D. Date March 30, 1970, page 90 in
23 Exhibit 11. The questions I have are these. Prior to
24 March 1970 when you wrote this letter, Monsanto's PCBs had
25 been used in what is called open applications; had they

BROWN VS. MONSANTO

1. not?

2. A. I would believe so. I'm not sure when they
3 discontinued some of them.

4. Q. They were in paint, carbon paper and a
5 variety of other products; right?

6. A. They were used as a plasticizer, yes, sir.

7. Q. And you had not warned any of those people
8 that would use those products about the serious
9 consequences of their health from exposure to those PCBs;
10 had you?

11. A. You mean the final product?

12. Q. Right.

13. A. The final, we did not manufacture. We told
14 the manufacturer what the problem was, and there had been
15 previously and subsequently no harm to anybody's health
16 from use of those products.

17. Q. That you have reported?

18. A. That anyone had reported.

19. Q. We'll see.

20. A. Beg your pardon?

21. Q. We'll see.

22. A. I'm sorry. I cannot hear you.

23. Q. We'll see.

24. A. Okay. Fine.

25. Q. Now, how would a customer, a purchaser, for

BROWN VS. MONSANTO

1 example, of paint or carbon paper -- What else did you use
2 it in, PCB --

3 A. Transformers, capacitors.

4 Q. Well, I can understand that, but what open
5 applications did you use them in?

6 A. Plasticizers for some final (inaudible).

7 Q. What is a plasticizer?

8 A. Beg your pardon?

9 Q. What is a plasticizer?

10 A. Plasticizer is a compound that makes a
11 compound plastic -- (Inaudible) it would be almost as hard
12 as cardboard.

13 Q. Suppose I went down to the hardware store and
14 I bought some paint back before March of 1970 that had a
15 plasticizer containing PCB 1254. Would there be a warning
16 on there that says you can get heart conditions, lung
17 conditions, skin conditions, liver conditions?

18 A. In what?

19 Q. Would there --

20 A. No, because -- For a lot of reasons, one of
21 which is this was not used in paint that you would find in
22 a hardware store. This was used in one special
23 application that probably went into an isolated group at
24 one or two isolated manufacturers in Ohio, in Michigan.
25 It was not to the best of my knowledge ever used in

BROWN VS. MONSANTO

1 over-the-counter paint. Number two, there has been no
2 evidence before or after that anyone could get heart
3 disease and that host of illnesses you mentioned from
4 using the paint, even if the paints were available.

5 Q. Let me ask you something right here. You've
6 testified for Monsanto as a witness in a variety of cases;
7 is that right?

8 A. Well, not a -- Yes, but --

9 Q. Did you ever --

10 MR. CARNEY: Your Honor, I think he's getting
11 into the area you precluded.

12 MR. KOTOSKE: (Inaudible.)

13 THE COURT: Stay away from the subject.

14 Q. Have you ever in any case found that any
15 exposure to PCB caused any medical problem in anyone?

16 MR. CARNEY: Your Honor, I think this again
17 gets into that area that you've --

18 A. I don't know.

19 THE COURT: (Inaudible.) I'm going to allow
20 it only on a separate issue. If you want more, I'll
21 explain it to you.

22 MR. KOTOSKE: I understand.

23 THE COURT: You may answer the question.

24 Q. Let me repeat it so she doesn't have to read
25 it back. Have you ever, all the testimony you've ever

BROWN VS. MONSANTO

1 given, have you ever found one person that was exposed to
2 PCB with medical problems that you said were caused by PCB
3 exposure?

4 MR. CARNEY: Your Honor, I'm going to object.
5 I don't think he's ever testified as an expert in making
6 that decision, so --

7 THE COURT: Let him answer. He can say that.
8 Go ahead, sir.

9 A. I never examined any client, any plaintiff
10 who was in a case in which I testified either by
11 deposition or legal testimony. I did not examine the
12 people.

13 Q. Have you ever testified as an expert in any
14 case on behalf of Monsanto?

15 A. Sure.

16 MR. CARNEY: I'm going to object.

17 A. Well, sure.

18 THE COURT: I think I ruled that out. He's
19 answered the question yes. So, I mean, I'll sustain any
20 further questions in that area unless you want to move to
21 a different --

22 MR. KOTOSKE: I want to do a different twist
23 on it.

24 Q. Have you ever found that PCBs have caused any
25 medical condition in anybody?

BROWN VS. MONSANTO

1 A. Have I ever found -- You mean did I discover
2 it or have I read about it? What are you talking about?

3 Q. Have you ever determined, have you ever
4 concluded that PCB exposure caused damage to anyone?

5 A. Yes.

6 Q. Who?

7 A. Four people in Brazil, Indiana who were
8 exposed to leakage of PCB from a jury-rigged heat transfer
9 unit.

10 Q. What (inaudible) did they have?

11 A. They had acute hepatitis, acute jaundice from
12 exposure to PCBs at elevated temperatures.

13 Q. Liver damage?

14 A. Yes.

15 Q. What else?

16 A. That's it.

17 Q. No. I mean what other people?

18 A. I found an individual, one or two
19 individuals, in a thermometer factory in upper New York
20 who were inserting their hands into PCB 1242. They were
21 filling bulb transformers. That's a transformer -- I mean
22 a thermometer, not transformers. Thermometers. That was
23 used for ovens. I went up there because this was news to
24 me, and I wanted to see it. So I went up there, and these
25 ladies were dipping their hands and filling it. I said,

BROWN VS. MONSANTO

1 "Why don't you get some sort" -- They had chloracne. And
2 I said, "Why don't you get forceps or some sort of a gimic
3 that you don't have to put your hands in?" And they did
4 that, and then that was it. They got rid of it.

5 I was called by Crown Chemical Company in New York.
6 A man said we've had people exposed, very similar to the
7 Brazil, Indiana case, to a heat exchanger that leaked. I
8 said, "What (span) had this acute exposure?" They did
9 have nausea. These men -- There were three of them had
10 exposure, and they had (inaudible), and he said what
11 should they do. And I said treat them as if they have
12 liver problems. They may have chemical hepatitis,
13 jaundice. He called me back two weeks later and said,
14 "That's right. They did have jaundice. I'll keep in
15 touch." They got well.

16 So, yes. If you have sufficient exposure and you
17 have a disease that is compatible with what we know about
18 PCBs, I'm not going to deny it.

19 Q. Thank you. I would like you to look next at
20 a certain -- And I don't -- Excuse me. I've lost my
21 place. Would you please turn to page 100 way back in this
22 (inaudible)?

23 A. Yes.

24 Q. You know, I misspoke. This is a speech
25 you're looking at that you did not give. It was given by

BROWN VS. MONSANTO

1 Papageorge, Mr. Papageorge, on September 4, 1971. And I
2 just have a few questions. Did he consult with you before
3 he gave this speech?

4 A. To the best of my knowledge he did not.

5 Q. Then there's a -- And I don't know if you
6 know the answer to this, but I'd like to ask you anyway.
7 There's an organization in this country called the
8 National Electric Manufacturers Association, the brief
9 name of which is NEMA. Do you know anything about that
10 group?

11 A. Slightly.

12 Q. Okay. Is GE a member of NEMA?

13 A. I don't know, but I wouldn't be at all
14 surprised if they weren't. They're pretty big in
15 electrical.

16 Q. How about Westinghouse?

17 A. I don't know. I wouldn't be surprised.

18 Q. Monsanto can't be a member because it doesn't
19 manufacture electrical equipment, but does it interface
20 with NEMA?

21 A. I don't know if they were ever asked or ever
22 wanted to be there. I don't know anything about what
23 Monsanto's relationship to NEMA is.

24 Q. That's all I wanted to know. I would like to
25 have you look way down in the bottom of page 175, and you

BROWN VS. MONSANTO

1 are going to be seeing a very long affidavit under oath by
2 William Papageorge, and it bears a date of March 14th,
3 1974. Were you still at Monsanto in March of '74?

4 A. Yes, I was there until December the 1st,
5 1974.

6 Q. All right. I just -- This is a question.
7 Did Mr. Papageorge before he signed that affidavit under
8 oath consult with you as to its content?

9 A. No, sir. To the best of my recollection, I
10 never saw this affidavit until it was pointed out to me in
11 one of these trials.

12 Q. That's all I have on that then. Next I want
13 to change the subject matter. Please excuse me for trying
14 to rush this.

15 A. That's all right.

16 Q. But I want to get done today, and I think
17 I'll make it. While you were in your last years at
18 Monsanto, especially from '70 to '74, there were hearings
19 going on seeking to ban PCBs and the manufacture of PCBs.
20 Do you recall those events?

21 A. I do not recall there were plural hearings.
22 I just recall from hearsay talking about at lunch that
23 there was some -- there was a congressional hearing by
24 some congressman. But I had nothing to do with it, and I
25 don't know anything about it.

BROWN VS. MONSANTO

1 Q. And you did not participate?

2 A. I did not participate in any hearing with any
3 government agency.

4 Q. Do you know what position Monsanto maintained
5 nevertheless? Did Monsanto object to the banning of the
6 manufacture of PCBs before Congress?

7 MR. CARNEY: Your Honor, I'm not sure of the
8 time frame, but I think we may have been talking about
9 time frame after this witness retired.

10 THE COURT: Well, let's let him answer or
11 rephrase the question. Can you answer it in that way,
12 Doctor?

13 DR. KELLY: No, I wasn't privy to any of
14 these discussions.

15 Q. Then you don't know anything about them?

16 A. What I heard at lunch, but I certainly didn't
17 have anything to do with it. Never heard any of the top
18 brass talking about --

19 Q. That's what I was interested in, when you
20 were working at the company.

21 A. No. I don't know anything about it.

22 Q. I just wondered, Dr. Kelly, do you know why
23 your company didn't consult with you during the hearings
24 before Congress to get your input?

25 MR. CARNEY: Can we have a time frame, what

BROWN VS. MONSANTO

1 time you're talking about?

2 Q. '70 to '74.

3 A. I don't know.

4 Q. One final question. Was it Papageorge that
5 the company selected to be this representative in that
6 dispute with Congress, in that "disputation" with Congress
7 (inaudible)?

8 A. I can't answer that yes or no.

9 Q. You are, however, familiar, are you not, with
10 some rat studies that were done by IBT about this time;
11 are you not?

12 A. Again, I'll have to face you when you're
13 asking the questions.

14 Q. My fault. In '70 and '71, Monsanto had hired
15 IBT to conduct some rat studies, animal studies on
16 Aroclors 1260.

17 A. It was before '71. It started I think in '69
18 or '70.

19 Q. They actually started in '69?

20 A. Remember, if you were doing a test, you first
21 have to get the rats. Then you have to find out a dose
22 that the rats could take and live over a period of two
23 years. There's -- Also, you've got to go up and set up a
24 protocol. When we started with the protocol, that's the
25 pattern of the examinations we were going to do. Then

BROWN VS. MONSANTO

1 we'd have to go up and talk to the Food and Drug people
2 and say, "Look, this is what we're starting. Have you got
3 any other suggestions?" And they might have a couple
4 others. So it takes a long time. So I think we started
5 thinking right after we found out that there were
6 environmental problems associated with birds and shrimp.

7 Q. Okay. I understand. I want to ask you to
8 the best you can tell us, when you do one of these studies
9 you have a test group of animals; do you not?

10 A. Yes.

11 Q. And you also have a control group?

12 A. Yes.

13 Q. What happens to the animals that are in the
14 test group?

15 A. Well, first of all, that test group is broken
16 down into three groups. One, you want to find out
17 something -- You hope you get a positive result
18 (inaudible). Two, you will have a level that you hope
19 will show nothing. Then, three, you try to pick one in
20 between to try to find out, "Well, let's hope we can get a
21 high enough level it doesn't show anything also." So you
22 have three test groups of one control.

23 Q. What happens to the control group? Why are
24 they necessary?

25 A. Because in any animal experimentation things

BROWN VS. MONSANTO

1 can happen by chance. In other words, if you took a group
2 of people and fed them anything, if you didn't have a
3 control group, how do you know it wasn't by chance?

4 Q. Well, the jury has to know this.

5 A. What?

6 Q. The reason I'm asking the question is so the
7 jury --

8 A. I'd be happy to explain.

9 THE COURT: Just a minute. Did you explain
10 it totally, what a control group is?

11 A. A control group, if you take a chemical, give
12 it to a bunch of rats, and you follow them for two years,
13 over that two years in a rat is the lifetime of a human,
14 so they're going to have all the illnesses that a human
15 has during his lifetime. They (inaudible) of gout, heart
16 disease, tumors in the liver, God knows what else. So you
17 have your control group. And you compare what happens to
18 these people who are exposed to the chemical -- I mean,
19 the animals, to the people (inaudible). That's the only
20 way you can tell.

21 Q. And does the test group get fed or exposed to
22 the PCBs?

23 A. Does what?

24 Q. Does the test group of animals, those in the
25 test group, do they get exposed to the PCBs?

BROWN VS. MONSANTO

1 A. Yes, they get exposed at three different
2 levels.

3 Q. Do you expose the control group to PCBs?

4 A. No.

5 Q. That's all I wanted to know. Now, it is very
6 important to properly record the data as you go along in
7 the years; is it not?

8 A. Of course.

9 Q. And if you skew the data or falsify the data,
10 the test is of no consequence?

11 A. It all depends to the degree you're talking
12 about. When you say "falsify the data," would you explain
13 what you mean by that?

14 Q. Well, yes. Let's suppose there are animals
15 in the test group that are so decomposed that the biopsies
16 are meaningless. Let's suppose that there are false
17 biopsies conducted such that the test itself is
18 fraudulent. (Inaudible)?

19 A. Then, again, you have about a hundred animals
20 in each group. So if you've got one or two that are
21 decomposed, that really won't make an awful lot of
22 difference. It's not the thing to do. That's not the way
23 an experiment should be carried out. But it doesn't
24 falsify the results. As you said, it doesn't negate the
25 results.

BROWN VS. MONSANTO

1 Q. Let's say half the animals are dead and
2 decomposed beyond use. Would you still say that's a valid
3 test?

4 A. Probably not. But I'd have to know more
5 about it.

6 Q. Now, I want to change the subject, and I'm
7 going to end the examination. Are you being paid by
8 Monsanto for your services in this case?

9 A. Yes, I am.

10 Q. How much have you been paid?

11 A. Nothing.

12 Q. Are you charging them by the hour?

13 A. \$150 an hour.

14 Q. When do you expect to be paid?

15 A. They've been paying all along. I mean, three
16 months, two months.

17 Q. They're just not up to date?

18 A. Well, I don't know. It takes a little time.
19 There's a bureaucracy. It takes time for the check to be
20 issued.

21 Q. So you can't tell us exactly how long?

22 A. No, but I'm not worried.

23 MR. KOTOSKE: I have nothing further, Your
24 Honor.

25 THE COURT: Why don't we -- It's a little

BROWN VS. MONSANTO

1 humid in here. Why don't we take a break right now? Tell
2 me how long will you be, Mr. Carney? If it's short, we'll
3 continue, but if it will be a little bit longer --

4 MR. CARNEY: I would anticipate, and I hate
5 to give an estimate --

6 THE COURT: I know.

7 MR. CARNEY: But I would say maybe 45 minutes

8 THE COURT: That's fine. Why don't we take a
9 break now? We'll turn the air-conditioner on. Do not
10 discuss this among yourselves or with others.

11 (Ms. Olliges was replaced by Ms. Pape.)

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BROWN VS. MONSANTO

1 THE COURT: Ladies and gentlemen, this will be our
2 last witness for the afternoon. I know it's kind of humid
3 and I'm sorry about that, but I can't control the weather.
4 Mr. Carney, you may proceed with questioning.

5 MR. CARNEY: Judge, I am going to do my best to
6 finish by--

7 THE COURT: No, I didn't say that for you to hurry
8 up.

9 MR. CARNEY: No, I recognize that somebody has an
10 appointment, so--. Here are the--here's the Court's copy of
11 the exhibits so you can follow along, Judge.

12 CROSS EXAMINATION

13 QUESTIONS BY MR. CARNEY:

14 Q. Dr. Kelly, your--the plaintiffs were all asked
15 about how long their deposition took in this case. Some of
16 'em went a day and some went over a day. How long were
17 you--were you deposed by the plaintiff's lawyer in this case?

18 A. If Mr. McCrea is the plaintiff's lawyer, I
19 was.

20 Q. Mr. McCrea back there?

21 A. Yes.

22 Q. How long were you deposed in this case?

23 A. Six days.

24 MR. KOTOSKE: Excuse me?

25 A. Six--

BROWN VS. MONSANTO

1 MR. KOTOSKE: Can we approach the Bench? And
2 Mr. McCrea can come up here, please.

3 (A discussion was had at the Bench.)

4 MR. KOTOSKE: The deposition was noticed by
5 Mr. Carney who took the deposition.

6 THE COURT: It's noted.

7 Q. I asked you some questions at that deposition,
8 didn't I?

9 A. Yes, you did.

10 Q. And did that take less than a day--my
11 questions?

12 A. Yes, it did.

13 Q. And this was back in the spring of 1990?

14 A. Yes, sir.

15 Q. And then on the days of May 31, June 1,
16 June 12, June 13, June 15 and June 16, 1990, you were deposed
17 by Mr. McCrea?

18 A. Well--

19 MR. KOTOSKE: So the record is straight, the cross
20 examination lasted 27 hours.

21 MR. CARNEY: That's what Mr. McCrea said. It took
22 a lot longer than 27 hours. I was there.

23 THE COURT: Continue.

24 A. I can't be sure of those dates, but I do have
25 the depositions--five and a half of these--this big

BROWN VS. MONSANTO

1 (indicating). And the dates are there, but I don't know the
2 exact dates. But I know it was--the whole business was five
3 and a half days or five--almost six days.

4 Q. Now, Dr. Kelly, I'm not gonna go through all
5 those questions because we've agreed to certain portions of
6 that video can be read. Both parties have agreed to have the
7 video played for the jury, so I'm not gonna ask you all those
8 questions again.

9 A. I'm happy about that. Thank you.

10 Q. Now, you mentioned that Mr. Wheeler--you hired
11 Mr. Wheeler as an industrial hygienist at Monsanto?

12 A. Yes, in 1947.

13 Q. And was he still working for you in December
14 of '74 when you retired?

15 A. Yes.

16 Q. So he worked for you for 27 years?

17 A. Yes, sir.

18 Q. And how closely did you and Mr. Wheeler work
19 in that medical department for those 27 years?

20 A. Oh, very close. At first there was just he
21 and I and a secretary. And then as we grew up--grew larger,
22 we still had adjoining offices. We shared a secretary for a
23 few years and we had lunch every day. And we saw each other
24 on problems almost daily.

25 Q. And now I'd like to go through some of these

BROWN VS. MONSANTO

1 documents. Some of 'em are (inaudible) and we can go through
2 'em pretty quickly. Some of 'em are letters. First I'd like
3 to have you look at Exhibit 5. For the record, it's
4 Defendant's Exhibit 5. Can you identify that for the record?

5 A. This is a letter from Elmer Wheeler to a
6 Mr. H. W. Speicher, who is the--S-p-e-i-c-h-e-r--who is the
7 Administrator of Industrial Hygiene--Industrial--at
8 Westinghouse Electric in (inaudible) dated July 25th, 1956.

9 Q. So this was a Monsanto letter from Mr. Wheeler
10 who worked with you, correct?

11 A. Correct.

12 MR. KOTOSKE: Objection. Lack of foundation.

13 THE COURT: Overruled.

14 Q. And it was directed to Mr. Speicher, the
15 Industrial Hygiene Department at Westinghouse Electric?

16 A. That is correct.

17 Q. And it was dated July, 1956?

18 A. Yes.

19 MR. CARNEY: Your Honor, I would like to offer this
20 exhibit.

21 MR. KOTOSKE: Objection. Lack of foundation.

22 THE COURT: I'm not sure if he testified
23 (inaudible) about the letter. I might have missed it.

24 MR. CARNEY: Oh, maybe I didn't (inaudible).

25 Q. Are you familiar with that letter?

BROWN VS. MONSANTO

1 A. Yes, I saw it at the time it was written and
2 I've seen it many times since then.

3 MR. CARNEY: Okay. Your Honor, I move for its
4 admission.

5 MR. KOTOSKE: Go to side bar, because it's gonna
6 come up and I want to settle it.

7 (A discussion was had at the Bench.)

8 THE COURT: Give me 30 seconds. Go ahead.

9 BY MR. CARNEY:

10 Q. Doctor, with regard to this Exhibit D-5, it
11 was prepared and signed by Mr. Wheeler?

12 A. Yes.

13 Q. And was Mr. Wheeler employed at Monsanto on
14 July 25, 1956?

15 A. Yes, he was.

16 Q. Who was his boss at Monsanto on July 25, 1956?

17 A. I was.

18 Q. He reported to you?

19 A. Yes, he did.

20 Q. His office was right next to yours?

21 A. Yes, it was.

22 Q. What was Mr. Wheeler's title at Monsanto on
23 July 25, 1956?

24 A. Assistant director of the medical department.

25 Q. And is that what's below his signature?

BROWN VS. MONSANTO

1 A. Yes, it is.

2 Q. And is this Exhibit D-5 a Monsanto document?

3 A. It's a letter sent out from Monsanto. I guess
4 that's a document.

5 Q. And Mr. Wheeler reported to you--did he
6 prepare this letter in the regular course of Monsanto's
7 business as a part of his duties as the assistant director of
8 Monsanto medical department?

9 A. Yes, he did.

10 Q. And how did Mr. Wheeler prepare this letter?

11 A. He called in a secretary who was listed
12 here--Sally Bradstetter (sp.)--S.M.B.--was the secretary, and
13 he took the letter to her, signed it, and she brought it back
14 and she mailed it.

15 Q. Did Mr. Wheeler prepare this correspondence on
16 July 25? He did prepare it, didn't he?

17 A. Yes.

18 Q. Was the correspondence prepared on or about
19 the date July 25, 1956?

20 A. Yes.

21 Q. And did you see it somewhere in about that
22 time?

23 A. I saw a carbon, yes. We're a small department
24 at that time. We floated the carbons around on a
25 (inaudible).

BROWN VS. MONSANTO

1 MR. CARNEY: Your Honor, I move for the admission
2 of Exhibit D-5 pursuant to Section 490.680 (inaudible) of the
3 statute.

4 MR. KOTOSKE: Objection.

5 THE COURT: (Inaudible).

6 (A discussion was had at the Bench.)

7 THE COURT: Ladies and gentlemen, we're gonna have
8 to take one more short break to resolve an issue. So give us
9 about fifteen minutes or so. We're trying to move along.
10 Please bear with us. Again, do not discuss the case among
11 yourselves.

12 (A recess was taken, after which the
13 following proceedings were had.)

14 THE COURT: For the record, Defendant's Exhibit 5
15 is admitted into evidence. You may continue, Mr. Carney.

16 MR. KOTOSKE: Judge, I don't have to stand and say
17 objection or anything?

18 THE COURT: No, it's noted. Proceed.

19 BY MR. CARNEY:

20 Q. Yes, Dr. Kelly. In this letter that Monsanto
21 sent to Westinghouse on July 25, 1956, I'd like you to follow
22 along. I'm gonna read a paragraph in the letter. I am--this
23 is a quote. "I am sending under separate cover two detailed
24 reports published by personnel at the Kettering Laboratories
25 in Taiwan, 'The Toxicity of the Vapors of Aroclors 1242 and

BROWN VS. MONSANTO

1 1254.'" Did I read that correctly?

2 A. Yes, you did.

3 Q. "The data contained herein were condensed and
4 presented by Dr. Treon at the A.I.H.A. meeting in
5 Philadelphia this year. It was published in the form
6 presented in June, 1956, issue of the 'A.I.H.A. Quarter,' a
7 copy of which I am sure you must have." This is the letter
8 from Monsanto to Westinghouse, correct?

9 A. Correct.

10 Q. This Monsanto letter to Westinghouse goes on:
11 "I am asking Dr. Treon by a copy of this letter to send you a
12 reprint of his publication if such is available at the
13 present time." Did I accurately read the letter from
14 Monsanto to Westinghouse?

15 A. You read the second paragraph correctly, yes,
16 sir.

17 Q. Now, did Monsanto on its own also send these
18 Treon reports to Westinghouse?

19 A. Yes.

20 Q. Who was Dr. Treon?

21 A. Dr. Treon was a Ph.D. who worked at the
22 Kettering Laboratory, which is a branch of the University of
23 Cincinnati Medical School. It was one of the first or second
24 industrial hygiene--industrial medical laboratories operating
25 in the United States. This was before (inaudible).

BROWN VS. MONSANTO

1 MR. KOTOSKE: Judge, you know, lack of foundation.

2 He has no (inaudible).

3 THE COURT: Proceed. Overruled.

4 Q. The--and this was the laboratory where
5 Monsanto commissioned certain toxicity testing on PCBs?

6 A. Yes, sir.

7 Q. Was the University of Cincinnati laboratory a
8 reputable laboratory?

9 A. Oh, no question.

10 Q. Now, I'd like to continue on with this letter
11 from Monsanto to Westinghouse dated July, 1956. Was there
12 also some information with regard to safe handling of PCBs in
13 that letter?

14 A. Yes, there was.

15 Q. Okay. You want to--well, let me read
16 the--from the second page of the letter. "We recommend that
17 repeated and prolonged skin contact with any of the Aroclors
18 be avoided." Do you see that?

19 A. Yes.

20 Q. Did I read that sentence?

21 A. Yes, I do.

22 Q. Then there's--"In addition, reported cases of
23 skin irritation have been surprisingly few in view of the
24 heavy quantities of Aroclor manufactured and handled in the
25 last 20 years."

BROWN VS. MONSANTO

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

2 Q. "We believe, however, that care in handling
3 and good personal hygiene is necessary to avoid irritation"?

4 A. Yes, sir.

5 Q. Is that what--

6 A. That's what it says.

7 Q. --Monsanto wrote to Westinghouse in 1956?

8 A. Yes.

9 Q. And then the last or the second to the last
10 paragraph says that, "As with many chlorinated hydrocarbons,
11 exposure to sufficient quantities over a long enough period
12 of time could conceivably result in chloracne."

13 A. Yes.

14 Q. Do you see that?

15 A. That's correct, yes, sir.

16 Q. Then it goes on with--in that same paragraph,
17 "To our knowledge, there had never been any cases of
18 chloracne in the electrical industry's use of these
19 products."

20 A. That's correct.

21 Q. And then read just the last sentence of that
22 letter from Monsanto to Westinghouse.

23 A. If the--"If I can be of any further assistance,
24 please let me know."

25 Q. Let's go to--

BROWN VS. MONSANTO

1 MR. CARNEY: Your Honor, just to move this along, I
2 have handed Mr. Kotoske all of the exhibits I plan on using,
3 so he has them in front of him.

4 Q. Let's go to Exhibit D--or 10--Defendant's
5 Exhibit 10-B.

6 A. B like in Benny?

7 Q. Yeah.

8 A. Yes, sir.

9 Q. Is this another letter from Monsanto--your
10 Mr. Wheeler at Monsanto to Mr. Speicher at Westinghouse, the
11 Industrial Hygiene Department?

12 A. Yes, it is.

13 MR. KOTOSKE: Excuse me, counsel. (Inaudible.)

14 MR. CARNEY: (Inaudible.) See, your copy is the
15 Westinghouse copy.

16 MR. KOTOSKE: Thank you. (Inaudible).

17 MR. CARNEY: 10-B.

18 MR. KOTOSKE: Okay.

19 MR. CARNEY: And, again, do I need to go through
20 all these questions again, Your Honor? I will.

21 THE COURT: Why don't you do it very briefly.

22 BY MR. CARNEY:

23 Q. Mr. Wheeler was employed by you on April 30,
24 1962?

25 A. Yes, he was.

BROWN VS. MONSANTO

1 MR. KOTOSKE: Well, if this is gonna be the same
2 question, I'll have a running objection to all of 'em.

3 THE COURT: That's fine.

4 MR. CARNEY: Your Honor, I would offer Exhibit 10-B
5 into evidence.

6 THE COURT: Pursuant to the objection, you may so
7 do it.

8 Q. Take a look at Exhibit 9.

9 A. Yes, sir.

10 Q. Is that a letter from Mr. Speicher, the
11 industrial hygienist at Westinghouse, to Monsanto, dated
12 April 25, 1962?

13 A. Yes, it is.

14 Q. And was this a letter that was found in
15 the--was this received on or about April 25, 1962, by
16 Monsanto?

17 A. Yes, it was.

18 Q. And it--

19 MR. KOTOSKE: Exhibit--okay. I understand.

20 MR. CARNEY: I move for the admission of Exhibit
21 D-9.

22 THE COURT: Subject to the objection, so admitted.

23 Q. Look at these two exhibits, D-9 or 9 and 10-B.

24 Is there a--

25 A. Wait till I find 'em.

BROWN VS. MONSANTO

1 Q. Okay.

2 A. Okay. I have 'em.

3 Q. Is there any relationship between the two
4 letters?

5 A. Well, they're both talking about safe handling
6 procedures for Aroclors.

7 Q. Is the letter--let me just ask this to maybe
8 shorten it a bit. Is the letter 10-B--Wheeler's letter dated
9 April 30, 1962--is that responding to Speicher's--
10 Westinghouse's letter dated April 25, 1962?

11 A. Yes, it is.

12 Q. Part of 9--Exhibit 9--just briefly, what was
13 Mr. Speicher inquiring about in that letter?

14 MR. KOTOSKE: The letter speaks for itself. That
15 is an objection.

16 THE COURT: Well, he can read it.

17 MR. KOTOSKE: That's correct. I don't object--and
18 I still object to these, but--

19 MR. CARNEY: Well, let me read it. Maybe the best
20 way is just to read the letter. It's a short letter.

21 THE COURT: Okay.

22 BY MR. CARNEY:

23 Q. The letter from Mr. Speicher at Westinghouse
24 dated April 25, 1962, to Monsanto. "The question has again
25 arisen with respect to the maximum temperature at which our

BROWN VS. MONSANTO

1 capacitor of Inerteen and transformer of Inerteen can be
2 heated before local exhaust ventilation should be provided.
3 About fifteen or more years ago Ed Barnes and I felt that
4 when a capacitor of Inerteen was heated to more than 50
5 degrees centigrade, that local exhaust ventilation should be
6 provided." Who is Ed Barnes?

7 A. Ed Barnes was an old-timer who came to
8 Westinghouse before Speicher. I believe he was Speicher's
9 boss. He was quite a power in industrial hygiene, one of
10 the--

11 Q. Well-recognized industrial hygienist?

12 A. One of the authorities. And I think he was
13 president of the American Industrial Hygienist Association.

14 Q. And he worked for Westinghouse?

15 A. Oh, yes.

16 Q. And, by the way, when you--50 degrees
17 centigrade--it has out in the margin what 50 degrees
18 centigrade is in Fahrenheit?

19 A. Yes, it does.

20 Q. And what does that say?

21 A. 112.

22 Q. The letter from Westinghouse goes on to say,
23 "In your letter of October 23, 1959, you indicated that local
24 exhaust ventilation should be provided for Aroclors and
25 heated above 150 degrees Fahrenheit."

BROWN VS. MONSANTO

1 A. Yes.

2 Q. "This question has recently arisen with
3 respect to one of our repair shops in the Midwest. I notice
4 in your bulletin OP115 for Aroclors, a temperature of 200 to
5 300 degrees centigrade may be reached before open exhaust
6 ventilation need be provided." Then it goes on to say,
7 without going into the whole thing, they
8 thought--Westinghouse thought that you ought to provide
9 ventilation at even a lower temperature; is that correct?

10 A. That's correct.

11 Q. Then he goes on to say in the second
12 paragraph--this is Westinghouse's letter to
13 Monsanto--"Normally, we"--Westinghouse--"have asked our
14 people to prevent prolonged skin contact with Aroclors and to
15 use a good grade of neoprene-coated gloves when necessary.
16 Recently the question with respect to a fairly desirable hand
17 cream was raised. I would like to know your recommendation
18 for one of the hand creams supplied by (inaudible) Safety
19 Appliances Company." And then we have the response of
20 Monsanto--this letter; is that correct?

21 A. That's correct.

22 Q. And Monsanto's response, again, is Exhibit
23 10-B dated April 30, 1962--Monsanto's letter to Mr. Speicher?

24 A. Yes, sir.

25 Q. And Monsanto says that we agree that we should

BROWN VS. MONSANTO

1 reconsider our statement with regard to the temperatures and
2 when local ventilation should be provided?

3 A. Yes.

4 Q. So, basically, Westinghouse was recommending a
5 lower temperature and Monsanto agreed with Westinghouse?

6 A. Yes. As I said, I guess we were conservative
7 about it.

8 Q. Then the letter goes on in the fourth
9 paragraph, "The experience of your company in handling the
10 specific Aroclors that you used should dictate where and at
11 what temperatures local exhaust ventilation should be
12 provided. I can think of no better experts than you and Ed
13 Barnes as to what control measures are necessary in your own
14 plants." That's Westinghouse's plants?

15 A. That's correct.

16 Q. So you were saying--Monsanto was saying that
17 Westinghouse would be the best expert, because they were
18 knowledgeable about PCBs, on what ventilation and control
19 measures for the handling of PCBs?

20 A. Well, they knew they were--we knew they were
21 knowledgeable about the toxicity and also--

22 MR. KOTOSKE: Now, now, now, I'll object.

23 THE COURT: Sustained as to (inaudible). You may
24 rephrase it if you wish.

25 MR. KOTOSKE: I don't have any objection to what's

BROWN VS. MONSANTO

1 in the letter. You know, I have a running objection,
2 though--

3 THE COURT: I understand. I understand. Let's
4 continue.

5 Q. But Monsanto was saying to Westinghouse in
6 this letter, "I can think of no better experts than you and
7 Mr. Barnes"--that's Mr. Speicher at Westinghouse and
8 Mr. Ed Barnes at Westinghouse--"as to what control measures
9 are necessary in your own Westinghouse plants"?

10 A. Certainly here we have two experts--

11 MR. KOTOSKE: Please, same objection.

12 THE COURT: Overruled. He can comment on the
13 meaning of this. Overruled.

14 A. The letter says, "I can think of no better
15 experts than you and Ed Barnes." These people were respected
16 as experts and they certainly knew their own plants. They
17 lived with their plants. So this conclusion was what control
18 measures are necessary. You got experts. You got the people
19 that know their plants, so they're the people to do it.

20 MR. KOTOSKE: I'll make a delayed motion to strike
21 that last part. I have no objection if he just answers the
22 questions. (Inaudible.)

23 THE COURT: He answered the question. Overruled.

24 Q. And then the letter goes on to talk about hand
25 creams in the last paragraph?

BROWN VS. MONSANTO

1 A. Yes, sir.

2 Q. And Monsanto's response with regard to hand
3 creams was, "In our operations"--Monsanto's operations,
4 correct?

5 A. Yes.

6 Q. "In our operations, we try to stress
7 prevention of skin contact rather than the use of the creams.
8 In order to answer your specific question, however, it would
9 appear to me that 'FEM-F' would offer more protection than
10 'FEM-I' or 'FEM-S'?"

11 A. Yes, sir.

12 Q. Is that correct? You were saying in this
13 letter to Westinghouse that rather than use creams, it would
14 be better to try to avoid skin contact?

15 A. We were--the medical department was, if that's
16 what you mean by I.

17 Q. Yes, by Monsanto?

18 A. Yes.

19 Q. Okay. Let's go to Exhibit--

20 MR. CARNEY: I'm not gonna use Exhibit 23, to move
21 this along. Let's go to Exhibit 50--50-B as in boy.

22 A. Yes, I have it.

23 Q. This is a letter from Mr. Wheeler at Monsanto
24 to Mr. Terrill at Westinghouse dated May 7, 1971.

25 A. Yes.

BROWN VS. MONSANTO

1 Q. And was this a letter that was sent by
2 Monsanto to Westinghouse on or about May 7, 1971?

3 A. Yes, it was.

4 MR. CARNEY: Your Honor, I would offer Exhibit
5 D-50--Defendant's Exhibit 50-B.

6 THE COURT: So admitted, subject to the objection.
7 Proceed.

8 MR. CARNEY: Let me just--is that readable in the
9 back row?

10 UNKNOWN JUROR: (Inaudible.)

11 MR. CARNEY: What I have here, Your Honor, is the
12 entire letter which I know nobody can read, but then certain
13 selections are in yellow. We just made those a little larger
14 so, hopefully, you can read that.

15 BY MR. CARNEY:

16 Q. What I'd like you to do--I don't think you
17 need to read the entire letter, but would you read--look at
18 your--why don't you read it out of your book. This is
19 Exhibit 50-B. That's the letter to Mr. Terrill of
20 Westinghouse?

21 A. Yes, sir.

22 Q. Okay.

23 MR. KOTOSKE: You know, Judge, I'm gonna have to
24 object because (inaudible) depending on the ruling later
25 about doing this.

BROWN VS. MONSANTO

1 THE COURT: Make it brief--make your objection.

2 You mean the way it's excised?

3 MR. KOTOSKE: Well, no, whether it was entered or
4 not. I have a running objection to all this whole thing.

5 THE COURT: It's admitted pursuant to the
6 objection.

7 MR. KOTOSKE: Okay.

8 THE COURT: Proceed, Mr. Carney.

9 Q. Would you read the first question to the jury
10 and they can read along with you--the first paragraph you
11 read.

12 A. "Mr. Waid answered questions from our regional
13 vice-president, Mr. 'Sam LeCort', of Washington. They sent
14 you copies of the reports and publications on polychlorinated
15 biphenyls such as we have recently provided 'Dr. Buchholz'."

16 (Ms. Pape was replaced by Ms. Carter.)
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BROWN VS. MONSANTO

1 Q. And then read the next paragraph.

2 A. "We have sent you via first-class mail a
3 package of material. I hope that this (inaudible) weight,
4 approximately 8 pounds, that you will receive this mailing
5 promptly."

6 Q. And then the last sentence of the letter?

7 A. "I have received" --

8 Q. No. The "If we can be."

9 A. Oh, the next page. "If we can be of any
10 assistance in discussing any of the reports or data with
11 you, please let me know."

12 Q. What was Monsanto's policy about providing
13 Westinghouse with information about toxicology and safe
14 handling of PCBs?

15 A. We provided them with everything we had and
16 everything they wanted to know. We also recognized the
17 fact that they knew as much about it as we did.

18 MR. KOTOSKE: Strike the last part. He can't
19 know what Westinghouse knew.

20 MR. CARNEY: Your Honor, he knew the
21 gentlemen Mr. Speicher and Mr. Lawrence.

22 THE COURT: I'm going to overrule. Just
23 based on what personal knowledge he had. Let's proceed.

24 Q. (By Mr. Carney) And the part of keeping
25 Westinghouse apprised with what you had, was this 8 pounds

BROWN VS. MONSANTO

1 of material you sent in that letter?

2 A. Yes, sir.

3 Q. And I noticed in a couple of these letters it
4 ends with, "If we can be of any assistance in discussing
5 any of the reports or data, will you please let me know."
6 Did from time to time Mr. Speicher and others at
7 Westinghouse call the medical department at Monsanto with
8 questions about PCBs?

9 A. Yes, they did.

10 Q. And was there a policy with regard to
11 answering those questions?

12 A. Oh, certainly. Tell them everything we know,
13 everything they wanted.

14 Q. Let's go to the Exhibit 8-A. Is 8-A a letter
15 from Westinghouse dated November 2, 1959, to the U.S.
16 Navy?

17 A. Yes.

18 MR. KOTOSKE: This is a different objection.

19 THE COURT: All right.

20 MR. KOTOSKE: Monsanto is telling the Navy
21 something different than they are telling Westinghouse.

22 THE COURT: Do you want to come over to
23 hopefully enlighten me on this exhibit?

24 MR. KOTOSKE: I don't know what the Navy's
25 got to do (inaudible)

BROWN VS. MONSANTO

1 THE COURT: Let's let him lay a foundation.

2 MR. CARNEY: Judge, if there is any objection
3 to this document going in evidence, we do have an
4 affidavit from the custodian of Westinghouse that makes
5 this document admissable.

6 THE COURT: All right.

7 MR. KOTOSKE: That's not it. The Navy -- the
8 United States Navy I don't think is part of this lawsuit.

9 THE COURT: I'm trying to move this along.
10 We can go over here, but we might take sometime.

11 MR. CARNEY: I think I can clear up. What
12 we're talking about is knowledge that Westinghouse had
13 that they were telling the Navy about.

14 THE COURT: I think I'm going to admit it.
15 Do you want to come over, go over, Mr. Kotoske, on that
16 issue (inaudible) -- I'm going to allow it on that issue.

17 MR. KOTOSKE: Let me just --

18 THE COURT: Very briefly.

19 MR. KOTOSKE: Whatever Westinghouse and the
20 Navy discussed, we don't know where that information
21 came from. The United States is not part of this case.
22 That is basically its irrelevancy (inaudible) objection.

23 THE COURT: Admissable on the (inaudible) of
24 knowledge only. You may proceed.

25 Q. (By Mr. Carney) And the writer of this

BROWN VS. MONSANTO

1 letter was Mr. Speicher. That's the same Mr. Speicher at
2 Westinghouse that was writing Mr. Wheeler back and forth?

3 A. Yes. That's correct.

4 Q. And the date of this letter is November 2,
5 19 --

6 A. 1959.

7 Q. Will you read the -- The letter starts out,
8 "Your letter concerning properties and safe usage
9 precautions for Inerteen has been referred to me for
10 reply," correct?

11 A. Yes, sir.

12 Q. And then why don't you read the third
13 paragraph.

14 A. "Prolonged or repeated skin contact with any
15 of the chlorinated diphenyls should be avoided since they
16 have some ability to dissolve oils and fats. This is
17 particularly true for the less chlorinated compounds.
18 Chloracne can also develop where prolonged skin contact is
19 permitted repeatedly if the skin is not cleansed daily for
20 the removal of these contaminants. However, (inaudible)
21 occurs the chloracne has not been reported frequently."

22 Q. Now, these chlorinated diphenyls, are those
23 PCBs?

24 A. Yes.

25 Q. Then will you read the next paragraph?

BROWN VS. MONSANTO

1 A. It is well to provide neoprene coated gloves
2 and aprons to prevent skin contact and clothing
3 contamination where necessary."

4 Q. And then would you read the next paragraph of
5 Westinghouse's letter to the Navy. That's Mr. Speicher's
6 letter dated 1959.

7 A. "Prolonged or excessive vapors of excessively
8 heated Inerteen should not be breathed. The maximum
9 allowable concentration for trichlorodiphenyl" --

10 Q. Is that a PCB?

11 A. Yes. That's PCB 1242.

12 Q. That's the kind that went to the Bloomington
13 plant?

14 A. Correct. -- "appears to be 1 milligram per
15 cubic meter of air and .5 milligrams per cubic meter
16 (inaudible) for transformer Inerteen. For
17 trichlorobenzene itself a vapor concentration should not
18 exceed about a hundred parts per million." We have
19 said -- that was in transformer Inerteen rather than
20 capacitor.

21 MR. KOTOSKE: Pardon me?

22 MR. KOTOSKE: Can I have that read again?

23 That was for transformer Inerteen, not capacitor?

24 THE WITNESS: That's right.

25 MR. KOTOSKE: Thank you.

BROWN VS. MONSANTO

1 Q. (By Mr. Carney) But the 1242, the
2 trichlorodiphenyl is the 1242?

3 A. Yes. In fact, I'll repeat paragraph 2,
4 "Capacitor Inerteen is trichlorobiphenyl and transformer
5 Inerteen consists of 40 percent trichlorobenzene and
6 60 percent hexachlorodiphenyl. So it's 60 percent PCB and
7 40 percent trichlorobenzene. And the transformer, there
8 is no trichlorobenzene in the capacitor.

9 Q. Okay. And then it goes on to say, "High
10 concentrations may produce irritation of the respiratory
11 tract, eyes and throat. It is believed significant vapors
12 should not be released from the chlorinated diphenyls at
13 temperatures below 150 degrees Fahrenheit where good
14 general ventilation is provided."

15 A. Yes. But, Mr. Carney, where he is talking
16 about "High concentrations may produce irritation to
17 respiratory tract, eyes," et cetera, he's referring to
18 trichlorobenzene.

19 Q. Okay.

20 A. And then he goes back to talk about the PCBs.
21 And he said significant vapors should not be released from
22 the stuff, the PCB, where good, general ventilation was
23 provided.

24 Q. Okay. Thank you. Let's go to Exhibit D-71.
25 Can you identify that as memo from Mr. Speicher?

BROWN VS. MONSANTO

1 A. That is a letter from Mr. Speicher.

2 Q. And who did this memo go to?

3 A. It went to a Mr. McClain.

4 Q. Is that the Bloomington plant, Bloomington
5 Works?

6 MR. KOTOSKE: Judge, I have to object to
7 this. This is not a Monsanto document. This is an
8 inner -- This is from Westinghouse to Westinghouse. It
9 just happened to show up in Monsanto's files. This man
10 can't lay a foundation at all for that.

11 THE COURT: What about that?

12 MR. CARNEY: Yes, Your Honor.

13 MR. KOTOSKE: I mean, really.

14 MR. CARNEY: Well, we have a business record
15 affidavit from Westinghouse saying that it's a genuine
16 Westinghouse document.

17 MR. KOTOSKE: You know, I have an affidavit
18 from the man mentioned in this letter, Mr. McClain. Am I
19 going to be able to offer that affidavit?

20 THE COURT: With the same statutory affidavit
21 that's referred to.

22 MR. KOTOSKE: That talks about (inaudible).

23 THE COURT: That lays the foundation.

24 MR. KOTOSKE: He never talked about receiving
25 any of these things.

BROWN VS. MONSANTO

1 MR. CARNEY: (Inaudible)

2 THE COURT: It's noted. Have you moved for
3 the admission or not?

4 MR. CARNEY: Well, let me just -- This memo
5 was sent not only to Mr. McClain at Bloomington and
6 Westinghouse, who else was it sent to at Westinghouse?

7 A. It was (inaudible) sent to the safety
8 engineer at the Bloomington Works, the headquarters
9 engineering (inaudible) and the headquarters works
10 engineering, I don't know where building 1502 is, and also
11 the law department.

12 Q. Westinghouse law department?

13 A. Yes. I don't know if that's Bloomington or
14 Pittsburgh.

15 MR. KOTOSKE: Judge, excuse me. This is a
16 Monsanto employee trying to authenticate a letter that's
17 interior correspondence between Westinghouse offices.
18 Now, I really don't think --

19 THE COURT: The foundation is present. Now
20 whether it's relevant, et cetera, that's another question.
21 (Inaudible) overruled. Let's proceed.

22 Q. (By Mr. Carney) It also shows copies going
23 to Bloomington Works, industrial relations to Mr. Maxom?

24 A. Well, that's the safety -- I mentioned him
25 first. That's the safety --

BROWN VS. MONSANTO

1 Q. The safety supervisor?

2 A. That's correct.

3 Q. And the date is October 6, 1972?

4 A. That's correct.

5 Q. And Mr. Speicher is the administrator and is
6 headquartered in industrial hygiene for Westinghouse?

7 A. Yes.

8 MR. CARNEY: Your Honor, I move for the
9 admission of D-71.

10 MR. KOTOSKE: I have a whole different
11 reason. This man can't possibly lay a foundation for this
12 document, and there's a whole (inaudible).

13 THE COURT: Well, if the affidavit is in the
14 file it's there. Now, any other objections at this point?

15 MR. KOTOSKE: He has no knowledge of what
16 happens at Westinghouse with respect to this
17 correspondence. That's my only point.

18 THE COURT: It will be admissible. Now,
19 parts thereof you might want to make objections to. Let's
20 proceed. Again, this is on the issue of --

21 MR. CARNEY: Of knowledge to Westinghouse.

22 THE COURT: Proceed.

23 Q. (By Mr. Carney) The beginning of this memo
24 states, "This Westinghouse memo is one of the functions of
25 the headquarters industrial hygiene laboratory to

BROWN VS. MONSANTO

1 formulate precautionary statements issued by the
2 corporation on labels, nameplates, data sheets,
3 instruction manuals," et cetera; is that correct?

4 A. Yes, sir.

5 Q. And then in bold print it states what should
6 be included in that information, and it says that -- and
7 I'm going to quote this -- "This equipment contains
8 chlorinated hydrocarbons. Extreme care should be taken to
9 prevent any injury into the environment. Prolonged skin
10 contact and prolonged breathing of vapors should be
11 avoided. For further instruction (inaudible) book for
12 information about safe use, handling and disposal
13 procedures." Did I read that correctly?

14 A. Yes, you did.

15 Q. Now, there's been some mention in your
16 testimony about Industrial Bio-Test or IBT.

17 A. Yes, sir.

18 Q. Did you ever visit the IBT laboratories in
19 Chicago?

20 A. Oh, yes. I visited them frequently from the
21 time we started with them. I don't know if that was 1959
22 or earlier than '59, all the way up to 1974. I went up
23 there at least once a year and quite often twice a year.

24 Q. Have you visited other toxicology labs during
25 your decades of employment with Monsanto?

BROWN VS. MONSANTO

1 A. I visited about a half a dozen or more in the
2 United States and one or two in England.

3 Q. What did you see at the IBT labs on the
4 occasions when you visited them?

5 A. I saw a very well-run laboratory. I saw
6 dedicated scientists there. I saw animals that were taken
7 care of quite well.

8 Q. What was the state of cleanliness?

9 A. Excellent.

10 Q. Did you see animals mistreated or slopped on
11 the floor or anything like that?

12 A. No. They were all in cages. They looked as
13 happy as any animal in a cage looks.

14 Q. You were asked about Paul Wright. Did you
15 talk to Paul Wright when he became employed at Monsanto in
16 November of 1972 or sometime after that time?

17 A. Well, I welcomed him. I mean most of the
18 interviewing was done by --

19 Q. Did you have discussions with him?

20 A. Oh, yes.

21 Q. And did Paul Wright when he joined Monsanto,
22 did he tell you that the IBT tests that he did for
23 Monsanto when he was an IBT employee were false and
24 phonied up?

25 A. Absolutely not.

BROWN VS. MONSANTO

1 Q. Did he tell you that the IBT studies he did
2 for you while he was at IBT for Monsanto were bad studies
3 or not valid studies?

4 A. No, he did not.

5 Q. Mr. Kotoske read from a letter that you wrote
6 in March of 1970 where you said, "This brings us to a very
7 serious point. When are we going to tell our customers
8 not to use any aroclor in any (inaudible) formulation
9 which contacts food, feed or water."

10 MR. KOTOSKE: In humans I guess?

11 MR. CARNEY: For animals or humans.

12 Q. (By Mr. Carney) You said, "I think it's very
13 important that this be done." Did you have any
14 discussions with anyone at Monsanto after you wrote this?

15 A. Yes. Bill called me -- Bill, Mr. Papageorge
16 called me, and he said, "Emmet, you're a little behind the
17 times. We have been doing this. We have notified our
18 customers over the last couple months." And, in fact, a
19 month later when I was at the executive committee meeting,
20 a corporate development committee meeting, that was
21 emphasized in one of the programs that work was underway.
22 So it was just a question of they didn't clue me in on
23 what they were doing.

24 Q. You mentioned some acute problems with PCBs
25 like nausea, vomiting or hepatitis, which is the jaundice

BROWN VS. MONSANTO

1 thing. I'm not sure the jury heard an explanation of
2 acute. Maybe they know what it is. Can you tell the jury
3 what acute is as opposed to chronic?

4 A. Sure. Acute is -- I'll start with the human
5 aspect. Suppose you get an attack of influenza. Bingo,
6 you've got a temperature of 102 and the chills. That's
7 acute. If you've got diabetes, that's a chronic illness
8 because it takes a long time to start. It lasts a longer
9 time. Now, (inaudible) toxicology, if you get the
10 exposure, as I explained in this heat exchange apparatus
11 that I had the one or two (inaudible) of. These people
12 got an acute exposure over one or two days, developed
13 symptoms within one or two days after that. That's acute.
14 A chronic exposure is when you get a small percentage of
15 that dose, if it's 100 or 1,000 over a long period of
16 time, you can develop an illness from that. That's
17 chronic exposure.

18 Q. Chronic is long-term, acute very short-term?

19 A. And also chronic, the symptoms and illness
20 show up after a long period of exposure. And acute
21 happens the first couple days after exposure.

22 Q. So it leads to nausea and vomiting. If you
23 have an acute exposure, it would be very soon after the
24 exposure?

25 A. Oh, sure, after or during it.

BROWN VS. MONSANTO

1 Q. It wouldn't happen ten years later?

2 A. Oh, no.

3 Q. And in an acute exposure of PCBs if you
4 remove the PCBs, does the (inaudible) like vomiting or
5 hepatitis go away?

6 A. When you remove a man (inaudible) PCBs, and,
7 yes, you remove them. And as far as the treatment, I mean
8 if the treatment for liver illness of this type is the
9 high carbohydrate diet (inaudible) injection, you treat
10 them, and it goes away, yes.

11 Q. Goes away in a year or two years?

12 A. Oh, no. It goes away in weeks.

13 Q. Take a look at page 49. Mr. Kotoske
14 (inaudible) this Exhibit 11. Mr. Kotoske read -- He read
15 part of this, and he stopped and left out one sentence,
16 and I just want to read it. Page 49, this is the memo I
17 think from this English doctor.

18 A. Well, he wasn't a doctor. He was a chemist
19 over there.

20 Q. In England?

21 A. And he wasn't an industrial hygienist. He
22 wasn't a doctor. He was a research person. He may have
23 been a Ph.D., I don't know, but he was not an M.D.

24 Q. At any rate, the part that Mr. Kotoske read
25 was this. I'll read Mr. Kotoske's portion, and I will

BROWN VS. MONSANTO

1 read the next sentence after what Mr. Kotoske read.

2 "There was some trouble at this time among the production
3 workers at Anniston in the early days of the development
4 of aroclors. At that time highly chlorinated aroclors
5 were being made from diphenyl which had come from
6 low-grade benzene." And this is the part he left out.
7 "Since good benzene has been used, the same aroclors have
8 been made without trouble." Did I read that right?

9 A. Yes, you did.

10 Q. And then the next sentence that he didn't
11 read was, "In March 1955 it was reported that the Anniston
12 diphenyl and aroclor plants had run 12 years without lost
13 time accident;" is that correct?

14 A. Yes, it is.

15 Q. Now, this Anniston plant where they had the
16 problem with the bad benzene, was Monsanto -- did they own
17 the Anniston plant?

18 A. No, they did not.

19 Q. That was before 1935?

20 A. Yes, it was.

21 Q. Now, you mentioned in the Yusho incident
22 there was some peripheral neuropathy shown, and you said
23 that there was tremors. Have you looked at the articles
24 since then?

25 A. Yes, I have.

BROWN VS. MONSANTO

1 Q. Were there any tremors noticed in the Yusho
2 articles?

3 A. No. I was wrong in my recollection. There
4 were not.

5 Q. And Dr. Klawans, the plaintiff's expert, has
6 said he didn't see any tremors either?

7 A. (The witness nods in the affirmative.)

8 Q. When you first heard about this Yusho
9 incident in Japan, did you think PCBs was the cause of
10 these ailments?

11 A. I thought their PCBs, (inaudible) or the
12 Japanese PCBs, which is manufactured by a different
13 process, which had different contaminants or a higher
14 level of contaminants was the cause, yes.

15 Q. But at first the literature said that PCBs
16 were the cause; is that true?

17 A. That's correct.

18 Q. And the later literature from the same
19 writers they examined this, did they determine -- did they
20 still insist that PCBs were the cause?

21 A. No. They reversed their thinking and their
22 statements that said furans or chlorinated dibenzofurans
23 which I drew on the board were the reason.

24 Q. And do you know how many more furans were
25 found in these Japanese PCBs than were found -- than the

BROWN VS. MONSANTO

1 European PCBs made by European manufacturers?

2 A. At least a thousand times.

3 Q. More furans?

4 A. More furans, yes.

5 Q. And in the 1970's, the early 1970's, was
6 there a comparison made by some scientists of the United
7 States Monsanto PCBs to the European PCBs?

8 A. Yes. There was a Dr. Voss who is a
9 (inaudible).

10 Q. Is he affiliated with Monsanto?

11 A. No. He is affiliated with the University of
12 'Utrent' which is a prominent university over in the
13 Netherlands, and he ran Monsanto's PCB, a French PCB
14 called 'chlorophyl,' and I think a German or Italian PCB,
15 I forget the name of it, and he found that in the two
16 European PCBs he found benzofurans, chlorinated
17 dibenzofurans. He did not find any in the Monsanto at
18 that time.

19 Q. That was in the early '70s?

20 A. In the early '70s. It was reported in the
21 scientific literature, and he was a completely
22 disinterested person as far as Monsanto was concerned.

23 Q. So we had in the Yusho incident Japanese PCBs
24 that had a thousand times more furans than the European
25 PCBs; is that correct?

BROWN VS. MONSANTO

1 A. That's correct.

2 Q. And then we had the European PCBs where there
3 were some furans found in the early '70s, and they found
4 none in the Monsanto PCBs?

5 A. At that time they found none.

6 Q. And up to the time you left Monsanto in
7 December of 1970 had anybody ever found any furans in
8 Monsanto PCBs?

9 A. Not to my knowledge, no. The scientists at
10 Monsanto haven't found any. They were looking.

11 Q. Have the workers in electrical plants ever
12 had the types of symptoms that were found in the Yusho and
13 Taiwan people that ate the rice oil with heavy furans?

14 MR. KOTOSKE: Pardon me. Pardon me.
15 Objection. Lack of foundation. He is not offered as an
16 expert witness by either side, and he cannot make that
17 determination.

18 Q. (By Mr. Carney) But did you study the
19 literature at the time of the incident?

20 THE COURT: We are not talking about the
21 literature.

22 MR. KOTOSKE: This man's not an expert in
23 this trial.

24 THE COURT: He can talk about what was in the
25 literature. Is that what your question calls for?

BROWN VS. MONSANTO

1 MR. KOTOSKE: I want to know what literature
2 he's talking about.

3 THE COURT: (inaudible) the literature. Talk
4 about what literature you're talking about.

5 Q. (By Mr. Carney) When you were at Monsanto
6 was it your job to keep track of the literature with
7 regard to PCBs?

8 A. Yes, it was.

9 Q. And you followed this story about Yusho at
10 the time (inaudible)?

11 A. Yes.

12 Q. And did you see in the literature at that
13 time, was any of the same kinds of symptoms in the
14 electrical workers who were working with capacitor or
15 transformer plants that were shown in Yusho with the
16 discolored nails and the brown skin?

17 A. No, sir, I did not.

18 MR. CARNEY: I have no further questions.

19 THE COURT: Redirect, Mr. Kotoske?

20 MR. KOTOSKE: Yeah, I do. But I'm going to
21 keep it short.

22 REDIRECT EXAMINATION

23 QUESTIONS BY MR. KOTOSKE:

24 Q. What other plants did you visit?

25 A. I visited a transformer plant. I've visited

BROWN VS. MONSANTO

1 (inaudible) Electric Company in St. Louis.

2 Q. Did you ever visit the Westinghouse plant in
3 Bloomington?

4 A. No, I did not.

5 Q. Did you ever step inside there?

6 A. No, I didn't visit. I didn't step inside
7 there. I don't even know if I drove past it.

8 Q. Did you ever converse with anybody from the
9 Bloomington plant?

10 A. Not that I know of.

11 Q. Or anybody in the Bloomington plant?

12 A. No, I did not.

13 Q. Did you ever know anybody in the Bloomington
14 plant?

15 A. Not that I recollect.

16 Q. Did you ever send anything to the Bloomington
17 plant?

18 A. No, I did not.

19 Q. You know that I'm talking about the
20 Westinghouse plant in Bloomington?

21 A. Yes, I know that.

22 Q. Did you ever send any letters to the
23 Bloomington plant?

24 A. No. I received no letters from the
25 Bloomington plant either.

BROWN VS. MONSANTO

1 Q. Do you know if Mr. Wheeler ever sent any
2 letters to the Bloomington plant?

3 A. I do not recall seeing any.

4 Q. Do you know if Mr. Wheeler sent any other
5 information to the Bloomington plant?

6 A. I think something was directed to a
7 Mr. Speicher.

8 Q. Who is in Pittsburgh, Pennsylvania?

9 A. Who is also in charge of the industrial
10 hygiene at the Bloomington plant, just as Mr. Wheeler in
11 St. Louis was in charge of --

12 Q. Please, I don't want to argue.

13 MR. CARNEY: Let him finish.

14 Q. (By Mr. Kotoske) It's the end of the day. I
15 just want you to answer my question.

16 THE COURT: I think (inaudible).

17 A. I'm finished.

18 Q. (By Mr. Kotoske) The headquarters of
19 Westinghouse is in Pittsburgh?

20 A. Yes.

21 Q. That's where Mr. Speicher worked?

22 A. Yes.

23 Q. And that's who you communicated with?

24 A. Yes.

25 Q. You had no communication with this plant in

BROWN VS. MONSANTO

1 Bloomington, did you?

2 A. Not that I recollect. I don't think so.

3 (Ms. Carter was replaced by Ms. Olliges.)

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BROWN VS. MONSANTO

1 Q. One other thing I want to say here is you
2 were shown your letter of March 30, '70 again, and you
3 said Papageorge was the head of this, he had done some
4 (inaudible)?

5 A. I can't hear your latter two sentences. I'm
6 sorry to disturb your train of thought, but I couldn't
7 hear.

8 Q. You were shown your March 30, 1970 letter.
9 Do you remember that letter?

10 A. Well, let's get it back.

11 Q. Okay.

12 A. Where is it?

13 Q. Okay. I believe it's on page 90 and 91.

14 A. Beg your pardon. Nine?

15 Q. 90.

16 A. 90.

17 Q. Excuse me.

18 THE COURT: (Inaudible.)

19 Q. 90.

20 A. Oh, yes, sir, I've got it.

21 Q. Do you have it?

22 A. Yes, I do.

23 Q. Now, you told us when Mr. Carney was asking
24 you about this letter that you had communicated with
25 Papageorge, Mr. Papageorge, and that he had already sent

BROWN VS. MONSANTO

1 out a notification?

2 A. I didn't say he sent out a notification. I
3 said he had already communicated with the customers. I do
4 not know how he communicated with them.

5 Q. Do you know what he said to the customers?

6 A. I do not know what he said to the customer,
7 but he told me that my concern was already taken care of.

8 Q. That might be nice, but I want to know did he
9 tell you what he told the customers?

10 A. I don't recall what exactly he told me. He
11 said the problem has been taken care of. I do not know
12 exactly what he told the customer.

13 Q. The fact of the matter is you don't have a
14 lick of information about what he told the customers; do
15 you?

16 A. I don't know the details, no.

17 Q. Thank you. Now, I want to ask you about some
18 of these letters, but before I do that, I want to be very
19 clear on just one area, and I'm going to get these letters
20 and I'm going to show you one that you may not have seen.
21 I want to talk about IBT. Did you tell us that you
22 visited IBT?

23 A. Oh, yes. I told you I visited it repeatedly
24 from the years -- when we first started with them, were
25 one of the earliest clients. I don't know if it was

BROWN VS. MONSANTO

1 1953 -- sometime during the '50's, and I visited them all
2 the time up until 1974.

3 Q. Did you actually -- And you visited while
4 Paul Wright worked there?

5 A. Yes. Before he was there and after he was
6 there.

7 Q. And all during the time he was there?

8 A. Yes.

9 Q. And tell me roughly how many times did you
10 visit when Paul Wright worked there (inaudible)? Give me
11 briefly an idea.

12 A. Probably two. At least two.

13 Q. Did you walk around the laboratory and look
14 at what he was doing?

15 A. Not what what he was doing, what everybody
16 was doing. They had about 30 toxicologists. They had
17 about ten of our products up there.

18 Q. They were doing lab work on ten of Monsanto's
19 products?

20 A. Not at the same time. Maybe they had five.

21 Q. That's not important.

22 A. But they also had 50 of other people's
23 products.

24 Q. I just want to know about Monsanto. I don't
25 want to know about (inaudible).

BROWN VS. MONSANTO

1 A. But you're asking did I walk around. So I
2 did see obviously rats that were being tested for other
3 companies.

4 Q. By the way, did you ask him to show you the
5 animal testing that he was doing in connection with
6 Monsanto products?

7 A. I don't know what you mean by show me the
8 animal testing. You mean show me the rats?

9 Q. Yes.

10 A. Say "These cages are getting 100 parts per
11 million of 1260"?

12 Q. Precisely.

13 A. Yes. He said these are some of our rats.

14 Q. He showed you?

15 A. Yes.

16 Q. And you had no objection to what he was
17 doing?

18 A. No.

19 Q. Found the lab in good shape?

20 A. I found it in good shape?

21 Q. (Inaudible)?

22 A. Beg your pardon?

23 Q. Best in the country?

24 A. I didn't say it was the best in the country.
25 I said it was an excellent laboratory, and I considered it

BROWN VS. MONSANTO

1 to be the Cadillac of industrial laboratories.

2 Q. Okay. Going to these letters, I'm not going
3 to read the whole line, but I want you to pick up the
4 letter that's got 71 as the exhibit number. I think you
5 might (inaudible) have put the book down.

6 A. Yes, sir.

7 Q. Do you have that?

8 A. Yes, I do.

9 Q. I'm going to read something from here. This
10 letter is dated October 6th, 1972. You can see that?

11 A. Beg your pardon?

12 Q. October 6th, 1972.

13 A. Yes, I see it.

14 Q. This is actually Westinghouse at the
15 Bloomington Works?

16 A. Well, the letter is directed to them. The
17 letter comes from East Pittsburgh, Pennsylvania.

18 Q. And it's directed to the Bloomington plant?

19 A. Yes.

20 Q. In 1972 this letter is written?

21 A. Yes, sir.

22 Q. Let me read something.

23 MR. CARNEY: I'm going to object. It's
24 addressed to several people. I think it's
25 mischaracterizing the letter.

BROWN VS. MONSANTO

1 THE COURT: Well, that's fine. Let's
2 proceed.

3 Q. They're talking about warnings and labels; is
4 that right?

5 A. Yes.

6 Q. And here's what they said. Quote "It has
7 come to our attention that the nameplate for Inerteen
8 capacitors has been recently reviewed" --

9 THE COURT: Revised.

10 A. Revised.

11 Q. "... revised, and we have obtained copies of
12 the artwork for the proposed nameplates. It's our opinion
13 the precautionary statement does not fully meet the
14 requirements of the Federal Occupational Safety and Health
15 Act and the corporation's policies; and, consequently, we
16 are recommending that the wording be changed." Isn't that
17 right?

18 A. Yes.

19 Q. And then what Mr. Carney read to you was the
20 proposed change; wasn't it?

21 A. Yes.

22 Q. Something else I want to read to you in this
23 letter. You had sent some instruction books out, did you
24 not, on how to handle Aroclors to Westinghouse?

25 A. I'm sure they were included in the eight

BROWN VS. MONSANTO

1 pounds of material we sent out. I think we did not send
2 out instruction books. There was information about safe
3 handling data and warnings in all our publications. There
4 were sections written by the medical department. There
5 have been instruction booklets sent out to a specific --
6 for a specific purpose that may not have had safe warnings
7 in them -- safe handling.

8 Q. Now, I'll read from the letter again. Quote
9 "We have been unsuccessful in locating the copy of the
10 instruction book to which reference is made on the
11 nameplate that was proposed in May of '72. Apparently it
12 is the feeling of our Bloomington people that this
13 instruction book was never actually written." Going on,
14 "Nor do we know" -- "Nor do they know who, if anyone, has
15 been assigned to this project." Can you explain that?

16 A. No. First of all, I will interpret it. I
17 can't explain it, but here Westinghouse is looking for a
18 bulletin of their own, an instruction bulletin of their
19 own, and they can't find one, and they don't know who was
20 supposed to write it. I can't explain what happened at
21 Westinghouse because it's nothing to do with Monsanto.

22 Q. That's your opinion. We don't need your
23 opinion.

24 THE COURT: You asked a question and asked
25 him to explain it.

BROWN VS. MONSANTO

1 MR. KOTOSKE: And he did.
2 THE COURT: Did you finish your --
3 DR. KELLY: No, I haven't, Your Honor.
4 THE COURT: You may finish it, and then we'll
5 move on.
6 A. It says nothing in here that this is a
7 Monsanto instruction bulletin, and you followed that
8 this -- your previous --
9 Q. (Inaudible) it is because the nameplate was
10 written.
11 A. The nameplate comes from Westinghouse. We
12 don't put nameplates on their capacitors.
13 Q. Thank you. Can you turn to Exhibit 50-B?
14 A. 50-B?
15 Q. Yeah. This is one of the exhibits that you
16 identified?
17 A. Yes.
18 Q. And when you have it, I'll ask you something.
19 A. Yes, sir.
20 Q. Do you see in the third paragraph down in
21 that letter where it talks about IBT Laboratory in
22 Chicago?
23 A. Yes, sir.
24 Q. What you are sending Westinghouse in the 18
25 pounds of stuff that you're sending, or whatever, is the

BROWN VS. MONSANTO

1 lab studies, the animal testing studies from IBT?

2 A. Yes.

3 Q. Thank you. I want to read something. No.
4 And, finally, I want to ask you about a letter which you
5 identified as Exhibit 5.

6 A. Yes, sir.

7 Q. Do you have that?

8 A. Yes, I do.

9 Q. Okay. This letter is discussing Pydraul. Do
10 you see that in the last paragraph?

11 A. On the first page you mean?

12 Q. Yeah. Why don't you take a minute and read
13 this letter because I'm going to ask you some questions
14 about it, and I want to be sure we're on the same
15 (inaudible). (Inaudible) than I thought.

16 MR. CARNEY: Your Honor, while he's taking a
17 minute to read, may I approach the bench real quickly?

18 THE COURT: Off the record or on?

19 MR. CARNEY: I don't think it (inaudible).

20 (A bench conference was held.)

21 MR. CARNEY: If I could just note for the
22 record my relevancy argument that Pydraul doesn't have
23 anything to do with capacitors.

24 THE COURT: Noted. Proceed, sir.

25 Q. (By Mr. Kotoske) This letter, did you have a

BROWN VS. MONSANTO

1 chance to read it?

2 A. Yes, sir, I did.

3 Q. Does this letter concern itself with
4 Pydraul?

5 A. Well, it concerns itself with the makers of
6 1242 and 1254. It also concerns itself with the
7 decomposition of Pydraul.

8 Q. Right. Is Pydraul a PCB that was sold in
9 Bloomington?

10 A. I don't know.

11 Q. In fact, Pydraul contains -- According to my
12 notes, you were discussing trichlorobenzenes in connection
13 with this letter?

14 A. Oh, I don't believe so. I wasn't -- I didn't
15 say that. We were talking about Inerteen that had
16 trichlorobenzene. We weren't talking about Pydraul.

17 Q. All right. Let's just get our facts
18 straight. What's this letter all about?

19 A. The letter is an answer by Mr. Wheeler to
20 several questions from Mr. Speicher. He requested
21 toxicity information on several of the Aroclors,
22 atmospheric sampling (inaudible). So he sent him the
23 detailed reports concerning the toxicity of vapors of
24 Aroclor 1242 and 1254, which are PCBs, and then he sent --
25 talked to him about how they established the -- what

BROWN VS. MONSANTO

1 apparatus they use to find out how much in the air, an
2 industrial hygienist takes the material and a sample of
3 the air and analyzes the contents.

4 Q. The (inaudible), we're talking about
5 ventilation; aren't we?

6 A. Well, among other things, yes. But what he's
7 asking about specifically is what is the toxicity
8 information concerning Aroclor 1242, 1254 at the levels
9 that workers breathe. That's what he's asking about and
10 how to do it. So that's what he's saying.

11 Q. And the letter concludes quote, "As with many
12 chlorinated hydrocarbons, exposure in sufficient
13 quantities over a long period of time could conceivably,"
14 conceivably, "result in chloracne. In this respect,
15 however, the Aroclors are not a potent (inaudible)" --
16 What do you mean by that?

17 A. Something that produces chloracne.

18 Q. "...such as chlorinated naphthalenes. To our
19 knowledge there has never been any case of chloracne in
20 the electrical industry (inaudible) products," is that
21 what it says.

22 A. That's what it says, and that is --

23 Q. Now, I'd like to show you a final letter
24 dated February 13, 1975, and I'd like it marked as
25 Plaintiffs' 1 for identification.

BROWN VS. MONSANTO

1 MR. CARNEY: Is this a new -- Is this
2 something on your exhibit list?

3 MR. KOTOSKE: No. It's not an exhibit --

4 THE COURT: Can you see it?

5 MR. CARNEY: Your Honor --

6 MR. KOTOSKE: It's already been (inaudible).

7 MR. CARNEY: What number on Exhibit 11?

8 MR. KOTOSKE: It's pages 191 to 192, and the
9 response from Monsanto starts at 94. Actually we could
10 probably use Exhibit 11. I was thinking that might be
11 less confusing.

12 MR. KOTOSKE: It will. Thank you.

13 THE COURT: For purposes of Exhibit 1, you
14 want to just call it 11 then? Is that what you're saying?

15 MR. KOTOSKE: We don't need to separate them
16 out.

17 MR. CARNEY: It starts at page 191 of Exhibit
18 11.

19 Q. (By Mr. Kotoske) Would you please turn to
20 that page in Exhibit 11?

21 A. 191?

22 Q. Yes.

23 A. Yes, sir.

24 Q. This is a Westinghouse letter to Monsanto?

25 MR. CARNEY: Your Honor --

BROWN VS. MONSANTO

1 A. Which arrived three months after I left
2 Monsanto. It was February the 3rd, 1975.

3 Q. Well --

4 A. I retired December the 1st, 1974. Just for
5 the record.

6 Q. Thank you. Would it surprise you to learn
7 that Westinghouse as late as February 3rd, 1975 is asking
8 Monsanto what the true toxicity aspects of Aroclors were?

9 A. It wouldn't surprise me at all that some
10 individuals might. This is a letter, as I said, I haven't
11 seen, but it's staff supervisor, personnel relations.
12 Here's a man, personnel relations, isn't even close to the
13 medical department or the industrial hygiene department.
14 Why Westinghouse didn't ask the people in their own plants
15 that knew, I don't know.

16 Q. (Inaudible) ask a question, if you just
17 answer very simply.

18 A. Sure.

19 Q. The medical department had received
20 complaints from capacitor workers they were getting skin
21 irritations, nauseousness and vomiting, and they were
22 asking Monsanto in this letter, "How toxic is this stuff?"
23 But this letter arrived after you had already retired?

24 A. Yes.

25 Q. Is this the first time you've ever seen it?

BROWN VS. MONSANTO

1 A. No.

2 Q. Where did you see it for the first time?

3 A. Sometime in the past five years.

4 Q. So you're familiar with its content?

5 A. Yes.

6 MR. CARNEY: Your Honor, he's obviously
7 familiar with it because of this lawsuit, but he wasn't
8 there at the time to receive it or know anything about it,
9 so I don't think there's any foundation.

10 MR. KOTOSKE: This man has authenticated
11 documents from Westinghouse --

12 THE COURT: You anticipate it's going to come
13 in with Mr. Papageorge or not?

14 MR. CARNEY: I think it will, Judge.
15 Papageorge was there, and he'll be able to talk about it.

16 THE COURT: I'm going to let him talk about
17 it as much as he can.

18 MR. KOTOSKE: We'll ask Mr. Papageorge, and
19 I'm not going to have any more questions for this witness

20 THE COURT: Anything else for Mr. Carney?

21 MR. CARNEY: Yeah. Just quickly, Judge,
22 because we had a little delay here (inaudible).

23 RECROSS-EXAMINATION

24 QUESTIONS BY MR. CARNEY:

25 Q. This letter that you just looked at, that

BROWN VS. MONSANTO

1 doesn't come from Bloomington; does it?

2 A. South Boston, Virginia.

3 Q. It's a plant of Westinghouse's in South
4 Boston, Virginia?

5 A. Well, it's a transformer -- It says South
6 Boston Distribution, Transformer Division. Looks like
7 it's a warehouse of the transformer plant.

8 MR. CARNEY: Just let me quickly look. I
9 don't have anything other questions.

10 THE COURT: Anything else?

11 MR. KOTOSKE: No (nodded).

12 THE COURT: He's done?

13 MR. CARNEY: Can he be excused except for his
14 appearance as an (inaudible)?

15 THE COURT: Sure. Any objection to him being
16 excused?

17 MR. KOTOSKE: He's (inaudible) in his case,
18 so I guess I have to object (inaudible).

19 THE COURT: So he's coming back?

20 MR. CARNEY: He's not coming back alive.

21 THE COURT: I'll rephrase that.

22 MR. KOTOSKE: If he's not coming back alive,
23 I'm going to (inaudible.)

24 THE COURT: Could I rephrase that? Coming
25 back in a different form?

BROWN VS. MONSANTO

1 DR. KELLY: (Inaudible.)

2 THE COURT: Thank you. He is excused
3 physically and will be back by deposition.

4 MR. CARNEY: Yes.

5 THE COURT: Ladies and gentlemen, it's been a
6 long day and a long week, and I appreciate your attention,
7 your work on the case so far. We will break for the
8 weekend. Again, over the weekend, do not discuss the case
9 among yourselves or with others. Don't look at or view
10 anything about the trial from any source. We'll take it
11 up again Monday at 9:30. Any questions or problems at
12 this time?

13 UNKNOWN JUROR: Could we be excused now?

14 THE COURT: Yes. Be excused.

15 (Court recessed for day.)
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BROWN VS. MONSANTO