

Wm. Papageorge - Glenn Brown Trial Testimony 10/28/91 P.M.

(Ms. Olliges replaced Ms. Carter.)

THE COURT: Ladies and gentlemen, thank you for waiting. Sorry for the delay. Mr. Kotoske, you may continue.

MR. KOTOSKE: Plaintiffs call as their next witness William Papageorge.

(Mr. Papageorge was sworn by the clerk.)

THE COURT: Proceed.

WILLIAM PAPAGEORGE,
of lawful age, having been first duly sworn, testified
as follows:

DIRECT EXAMINATION

QUESTIONS BY MR. KOTOSKE:

Q. Mr. Papageorge, do you still work at Monsanto?

A. I do not.

Q. When did you quit or retire or terminate?

A. My last working day was December 31st, 1986.

Q. And how is it that you are the corporate representative in this trial?

A. I don't know that I know, sir. You'll have to ask the attorneys. I can only guess.

Q. (Inaudible.) Are you being paid for your time?

1 A. I do not get paid for testimony as a fact
2 witness.

3 Q. Aside from all that, is Monsanto paying you
4 for being p in this trial?

5 A. Monsanto is not. I have an agreement with
6 the law firm that works with Monsanto.

7 Q. To be paid?

8 A. To be -- Yeah. The agreement does provide
9 for paying me for helping out on PCB cases.

10 Q. Would you mind telling us what your hourly
11 rate is?

12 A. It's \$150 an hour.

13 Q. And has that been true since you left the
14 company in '86?

15 p A. I'm trying to remember. No. The first year
16 I did not have any arrangement, and following that, as
17 best I recall, it was \$125 an hour.

18 Q. And it's gone up?

19 A. It's gone up this past year.

20 Q. About how much time have you spent consulting
21 with Monsanto (inaudible) on PCB cases?

22 MR. CARNEY: Your Honor, could we approach
23 the bench?

24 (A bench conferp ence was held.)

25 THE COURT: You may proceed, sir.

1 Q. How much money has Monsanto paid you in this
2 case? How much money -- Can you hear me?

3 A. Yes, I can. Yes.

4 UNKNOWN JUROR: You need to speak up a
5 little.

6 Q. How much money has Monsanto paid you in this
7 case?

8 A. I don't have an accurate count in mind. As
9 best I can rep call, it's about 20 hours so far.

10 Q. Not including the trial?

11 A. That is correct.

12 Q. And you've been here for the last two weeks
13 and will be throughout the trial?

14 A. I expect to be, yes, sir.

15 Q. Do you have a pension from Monsanto?

16 A. I do.

17 Q. Medical benefits and dental benefits?

18 A. Just a medical -- Medicare supplement.

19 p Q. And you have an interest in seeing Monsanto
20 win this case; do you not?

21 A. Certainly.

22 Q. All right. Now, let's talk about your
23 educational background. Would you tell us where you went
24 to college? That's what I'm interested in. Did you
25 attend college?

1 A. I did. I received my Bachelor of Science
2 degree in chemical engineering from Washington University
3 in 1943. I received from that same university a Master of
4 Science degree in chemical engineering in 1947. And I
5 also earned about 12 credits toward a Doctorate of Science
6 degree at Oklahoma A & M, now known as Oklahoma State
7 University.

8 Q. Now, you're not a medical doctor?

9 A. That is correct.

10 Q. You don't offer any opinions here in this
11 trial about medical toxicology?

12 A. I don't propose to, no.

13 Q. You don't propose to be an expert in
14 toxicology?

15 A. That is correct.

16 Q. I'd like to start with your work history and
17 the job you had just before you joined Monsanto in 1951.
18 Tell me about that job.

19 A. Just before 1951, I was with the Phillips
20 Petroleum Company in Bartlesville, Oklahoma, working on
21 two different types of assignments. The first two years
22 of a four-year period I was working on research to find
23 better ways to drill for oil wells and also better ways to
24 get oil out of wells that were pretty well spent. In
25 other words, to extract the last bit of oil still in the

1 ground. The last two years I was in the design
2 department, designing equipment for making gasolines or
3 gasoline fractions that are blended later to make the
4 product.

5 Q. b Did part of your duties with that company
6 include the designing of equipment?

7 A. Yes. The last two years.

8 Q. Then in 1951 -- I'm going to interrupt
9 myself. I've never taken your deposition in this case;
10 have I?

11 A. That is correct.

12 Q. In fact, you've never seen me before this
13 trial?

14 A. That is correct. We've never met.

15 Q. Then in 1951 you joinp ed Monsanto?

16 A. I did.

17 Q. Tell us what your first job was at Monsanto.

18 A. My first job was designing equipment to be
19 used in the manufacture of a chemical product at a plant
20 located here in St. Louis on Second Street.

21 Q. And what were they making at that -- What was
22 the chemical that was being manufactured?

23 A. Of the unit I was designing or --

24 Q. Yes.

25 b A. It was a chemical called phthalic, that's

1 p-h-t-h-a-l-i-c, anhydride, which is a chemical that is
2 used in making plastics or plastic softeners or used in
3 paint.

4 Q. And in 1953 you got a promotion; isn't that
5 correct?

6 A. In 1953 I would suggest it was more of a
7 lateral move from design engineering over to production
8 supervising. I was assigned a part of Monsanto's plant
9 that made a chemical.

10 Q. And you had a supervisory capacity at that
11 time?

12 A. Yes.

13 Q. The (inaudible) at that time was making
14 chemicals?

15 A. That is correct.

16 Q. Not PCBs?

17 A. That is correct.

18 Q. At some point in time you became assigned to
19 the Queeny Plant. Can you -- Could you spell that for the
20 reporter?

21 p A. Q-u-e-e-n-y.

22 Q. Where is that plant located?

23 A. 1700 South Second Street, St. Louis.

24 Q. And were there PCBs in that plant?

25 A. Yes.

1 Q. And I want to know (inaudible) in the plants.
2 Were you making them, or what were you doing?

3 A. They were certainly in the electrical
4 equipment, the transformers and capacitors used in the
5 plantp to distribute electricity. They were also present
6 in fluids used in some of the machinery. For example, in
7 compressors as an hydraulic fluid. They were present in
8 some systems used for heating chemicals, as heat transfer
9 fluids. They were also present as an ingredient. One of
10 the departments at the plant was given the assignment of
11 taking PCBs and other ingredients and blending them to
12 produce an industrial hydraulic fluid which wp as shipped
13 from that plant.

14 Q. This hydraulic fluid was used in machinery
15 throughout the United States; was it not?

16 A. Yes, sir.

17 Q. And one piece of machinery comes to mind is a
18 forklift. Would that be the type of hydraulic fluid that
19 you're talking about?

20 A. No. The --

21 Q. What I need is some examples, if you will, of
22 the type of equipment that the PCB mixp ture was used in.

23 A. This hydraulic -- This particular mixture?

24 Q. Yes.

25 A. I'll try to think. It was used in some

1 conveying systems. It was used in compressors that I
2 mentioned earlier. That's all that comes to mind at the
3 moment. Oh, used in some --

4 Q. That's fine.

5 A. That's all that I can really think of.

6 Q. Just so we know. Withp respect to that
7 (inaudible), when you sold it did it have a warning on it
8 that would warn people of the dangerous consequences of
9 exposure to PCBs?

10 A. It has cautionary words.

11 Q. What wording?

12 A. I don't propose to recall every word, but to
13 the effect that fumes should not be breathed for long
14 periods of time or repeatedly, that the material should
15 not be allowed on the skin for too lonp g a period of time,
16 that if clothes are dirty with the material they should be
17 laundered before re-use. That kind of statement.

18 Q. Do those warning labels still exist?

19 A. I suppose they do. I haven't seen them in
20 many years, though.

21 Q. Would the best source of those warning
22 labels, if there were warning labels, be in the hands of
23 Monsanto?

24 A. I would -- Yes. I would suggest p that would
25 be a good starting point.

1 Q. It would be the best place to find them;
2 isn't it?

3 A. I would think so, yes.

4 Q. Now, (inaudible) that hydraulic fluid prior
5 to 1953?

6 A. I didn't hear the first part.

7 Q. How long did you sell that hydraulic fluid
8 with PCB?

9 A. Prior to 1953?

10 Q. Yes.

11 A. p I -- As best I recall, that's about the time
12 that that fluid was invented and introduced into the
13 marketplace.

14 Q. About 1953?

15 A. In the middle '50's, yes, sir.

16 Q. All right. Now, still at the Queeny plant,
17 did there happen from time to time when one of the
18 capacitors would break or a transformer break that had
19 PCBs in them?

20 A. I personally do not remember any incident
21 p where a transformer or a capacitor, to use your word,
22 broke.

23 Q. Maybe that's -- Did you ever have leakage of
24 a PCB oil (inaudible)?

25 A. I am not aware of any incident like that.

1 Q. Did any employee ever complain of any health
2 problems at the Queeny plant from exposure to PCB?

3 A. PCBs?

4 Q. Yes.

5 A. Not to my knowledge, never.

6 b Q. Of course, that plant didn't manufacture
7 PCBs; did it?

8 A. That is correct.

9 Q. In 1953, you said there was a warning. What
10 were you aware of, you yourself, in 1953 of the dangerous
11 consequences, health consequences, from exposure to PCB?

12 MR. CARNEY: Your Honor, could we approach
13 the bench?

14 THE COURT: All right.

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1 THE COURT: Restate it or you can have it
2 read back.

3 MR. KOTOSKE: I'll repeat it.

4 THE COURT: Repeat it, please.

5 Q. (By Mr. Kotoske) In 1953 what did you know
6 about the dangerous consequences from exposure to PCB in
7 the work place, outside of the work place, anyplace?

8 A. In 1953, nothing. I was never aware of any
9 such product. I hadn't been invp olved with it yet.

10 Q. And do you know if anybody in Monsanto -- Did
11 you discuss anything with anybody in Monsanto what the
12 dangerous consequences were?

13 A. At what time, sir?

14 Q. In 1953.

15 A. 1953, no.

16 Q. And as you sit here, you didn't know
17 anything?

18 A. That's correct.

19 Q. As the supervisor of that plant did you ever
20 consult with Dp r. Kelly, Emmet -- Do you know Emmet Kelly?

21 A. I do, yes.

22 Q. And you know (inaudible)?

23 A. Yes.

24 Q. Did you ever ask him, "Dr. Kelly, are there
25 any consequences from exposure to PCBs?"

1 A. No, sir. My job didn't involve that kind of
2 question.

3 Q. All right. You didn't talk to him?

4 A. That's right.

5 Q. Did you p talk to Elmer Wheeler, who is also an
6 assistant of Dr. Kelly, in 1953?

7 A. No.

8 Q. And nobody told you anything?

9 A. That is correct.

10 Q. How do you (inaudible) when you call
11 (inaudible)? Do you call Dr. Kelly in the medical
12 department?

13 A. He was the medical director of the medical
14 department.

15 Q. How about Mr. Wheeler?

16 A. Mr. Wheelp er, he was at one time the assistant
17 director and later had the title manager-industrial
18 health.

19 Q. You want to refer to those fellows as the
20 medical section? Did Monsanto have a medical department?

21 A. Certainly.

22 Q. Did they have them all the way to 1953?

23 A. 1973, you say?

24 Q. 1953.

25 A. '53? '53, yes, sir.

1 Q. I'm going to call that the medical
2 department.

3 A. That's all right with me.

4 Q. Now, how long did -- Let's come forward. I
5 want to come forward in time to 1957. You had a job
6 change in 1957. Tell us what it was and the nature of
7 your duties in 1957.

8 A. In 1957 I was assigned as a superintendent in
9 the maintenance department of the Queeny plant.

10 Q. And what did you supervise at that plant?

11 A. I supervised the activities of about 400
12 mechanics, along with 30 or so foremen and a dozen or so
13 supervisors in their activities to either do construction
14 work in the plant or to maintain the equipment in the
15 plant.

16 Q. And did part of their jobs include repairing
17 malfunctioning equipment that contained PCBs?

18 A. Part of the job did include that, yes.

19 Q. That's the part of the job I want to talk
20 about. How many people at the plant did you have that
21 were working with PCBs, that is, flushing or refilling
22 equipment that contained PCBs? Just roughly. It's a long
23 time ago.

24 A. I'll try to think of the numbers. There were
25 about 30 electricians that could at one time or another be

1 involved with the electrical equipment that contained
2 PCBs. There were about as many maintenance men we had at
3 the plant called machinists who were involved with the
4 maintenance of pumps. Some of these pumps were involved
5 with pumping PCB type materials. And on occasion these
6 machinists would be involved working with those pumps.
7 There were about 60 pipefitters. These are individuals
8 who worked the pipelines and tubing. At sometime or other
9 these individuals would be working on pipelines or piping
10 systems that contained PCBs. That, I believe, covers most
11 of the maintenance people that could at one time or other
12 be exposed to systems that had PCBs in them.

13 Q. Now, these were PCBs that were manufactured
14 by Monsanto?

15 A. Yes.

16 Q. At this point in time, now we're at 1957,
17 just about the time the Bloomington Westinghouse Electric
18 plant starts construction, for your information.

19 A. As I understand.

20 Q. What did you warn -- Pardon me. What did you
21 know about the dangerous consequences from exposure to
22 PCBs in 1957?

23 A. '57. I knew that repeated exposure to the
24 skin would cause a reddening of the skin. And in order to
25 help me describe it, I associate it with the reddening

1 that I had seen on chapped hands. In some cases the
2 cracked skin with maybe a little oozing of blood for the
3 severer cases. I also knew that if an employee breathed
4 too much of the fumes, one of the early warning symptoms,
5 and this is what I called it in my own thinking, would be
6 a chest irritation, pretty much like a severe cold. Those
7 two things served as my guideline for watching out for
8 situations where PCBs were not used properly.

9 Q. What else did you know in 1957?

10 A. I knew that if the conditions continued, in
11 other words, no correction was made for the red skin and
12 the chest, sore chest problems, if it continued, that you
13 could expect to see a condition referred to earlier as
14 chloracne, a skin condition.

15 Q. You were told that that was just a skin
16 condition?

17 A. That was a change in the skin brought about
18 by too much PCBs in the body. And I also was told that if
19 you continued to expose a worker to these conditions, you
20 could end up affecting the liver of the person.

21 Q. Damage the liver; is that right?

22 A. That is correct.

23 Q. You knew all that in 1957?

24 A. Yes, sir.

25 Q. What else did you know in 1957?

1 A. Continuing along those lines, I also knew
2 that if the conditions were corrected and the employee was
3 removed from whap tever was causing his skin condition and
4 chest raling, that the symptoms would disappear, and
5 they'd be back to normal.

6 Q. That's what you thought? That was your --

7 A. That was my understanding, yes, sir.

8 Q. Back in 1957?

9 A. Correct.

10 Q. In 1957 did you ever see a warning published
11 by Monsanto that warned of liver damage?

12 A. I recall reading some document.

p 13 Q. Okay. I thought you were going to refer to
14 an article. Go ahead.

15 A. No. There is some document in Monsanto that
16 I recall reading, and I -- Gosh, this has been almost 30
17 years ago.

18 Q. I understand.

19 A. I just don't recall what the specific
20 document was. I do recall seeing it. And it seems to me
21 I got it from the plant physician. That would be the
22 place to get itp .

23 Q. The question was -- the question was can you
24 recall -- and if you can't, say so -- a warning, a warning
25 of liver damage to people who come in contact with PCBs?

1 If you could answer that yes or no, I would appreciate it.

2 A. In writing or --

3 Q. Yes.

4 A. I've seen it in writing.

5 Q. Warning to that effect?

6 A. Yes, sir.

7 b Q. Now, who would be the best person to have
8 that warning? The company?

9 A. Well, certainly a representative of the
10 company. In this case, the more I think about it, the
11 more it was the plant physician.

12 Q. In his files or records we would be able
13 to -- would that be the best place to look for this
14 document?

15 A. Well, that's where I would start, but I don't
16 know where they are, if they exist at all.

17 Q. You don't think at this point in time there
18 would still be some drums, 55-gallon drums or a tanker car
19 with that warning on it, do you?

20 A. Well, that kind of warning never appeared on
21 any container or tanker car.

22 Q. It didn't?

23 A. No.

24 Q. Where did they appear?

25 A. In the written document that I would -- I

1 wouldp call it a brochure that described the PCBs and their
2 uses and their characteristics and proper methods of
3 handling.

4 Q. I better ask the question more artfully
5 because I'm having a problem. I'm talking about warnings
6 to employees, workers who handled PCBs. Did you ever see
7 a warning back in 1957 with respect to liver damage that
8 the user of PCBs would receive?

9 A. When you say did I see, no, but I do know
10 that at safety meetings held with the workers --

11 Q. Please, Mr. Papageorge, you have a lawyer who
12 can cross-examine you. I just want answers to my
13 questions so we have an orderly presentation. I know
14 there's a lot of things you want to say, but there's a lot
15 I have to cover.

16 THE COURT: Let's move on.

17 MR. CARNEY: He was answering. He was asking
18 him about warnings. He was givinp g them to him. He cut
19 him off in the middle of a sentence.

20 THE COURT: (Inaudible)

21 Q. (By Mr. Kotoske) Did you ever see warnings
22 to employees in 1957, and I'm talking about the users of
23 these products, for example, (inaudible) manufacturing,
24 and you've heard these people from Westinghouse testify.
25 I'm talking about those folks. Did you ever see a warning

1 back in 1957 that used the word "chloracne"?

2 A. In order for me to answer the way I think you
3 want me, help me with your definition of "warning." Are
4 you talking about a label?

5 Q. Yes.

6 A. No, I did not see such a label with that word
7 on it, "chloracne."

8 Q. Did you see such a label with "liver damage"?

9 A. I did not.

10 Q. But you knew at that point in time that
11 repeated exposure as you've described would cause both
12 liver damage and chloracne?

13 A. Yes.

14 Q. In '57?

15 A. Yes.

16 Q. Now, I want to go forward in time to 1961.

17 You got a new job in 1961, did you not?

18 A. Yes, I believe I know which job --

19 Q. (inaudible) a little bit.

20 A. That would help.

21 Q. You became superintendent of technical
22 services department in 1961.

23 A. Yes. I recall.

24 Q. What were your -- Just tell us what your job
25 was. We know you were a superintendent, but we don't know

1 of what and what your duties were.

2 A. That particular job, I was back in the plant
3 engineering department, and I had assigned to me anywhere
4 from six to a dozen engineers, depending on how much work
5 we had to do. We were expected to study some of the
6 production processes in the plant and try to improve them.
7 They could either make the product better or lower cost or
8 safer, whatever it took in an engineering way to improve
9 the production units that we were assigned to.

10 Q. Now, in this job did you have any dealings
11 with PCBs?

12 A. No.

13 Q. That job continued till 1964. And you were
14 assigned to another plant?

15 A. I'm sorry. There is another assignment in
16 there.

17 Q. I missed one?

18 A. Yes. This '61 -- The position I just
19 described, I believe, now that I think about it, occurred
20 sometime between '59 and '60-'61. In about 1961 I was
21 assigned still at the Queeny plant as a general
22 superintendent of shipping, utilities, warehousing. It
23 was a sort of a miscellaneous type of services that my
24 department would provide the production people to help
25 them produce their products.

1 Q. When did you get assigned to the plant in
2 Sauget, Illinois?

3 A. In 1964.

4 Q. The date is 1964. What was the name of the
5 plant?

6 A. It's the William Krummyrich plant,
7 K-r-u-m-m-r-i-c-h.

8 Q. And that plant is located where?

9 A. Sauget, Illinois.

10 p Q. That's not too far from here?

11 A. It's across the river.

12 Q. What did that plant make?

13 A. Oh, they made over a hundred different
14 chemical products.

15 Q. Let me cut right to the point. Did that
16 plant manufacture PCBs?

17 A. Yes.

18 Q. Now, aside from that plant that manufactured
19 PCBs across the river, what other plants did Monsanto have
20 that map nufactured PCBs in the United States?

21 A. We had one additional plant, Anniston,
22 Alabama.

23 Q. I want to return to the Sauget, Illinois,
24 plant. Am I saying that correctly?

25 A. Yes. It's okay by me, yes. That's all

1 right.

2 Q. I don't think I am, but I'll take your word
3 for it. This plant made PCBs. What kinds of PCBs did it
4 make?

5 A. I can describe that, I guess, by using
6 Monsanto's trade names and numbers.

7 Q. Sure.

8 A. Would that help? They made Aroclor 1221,
9 Aroclor 1232, Aroclor 1242, Aroclor 1254, Aroclor 1260,
10 Aroclor 1016, and another one that was later referred to
11 as Capacitor 21.

12 Q. All those are PCBs?

13 A. They are mixtures of PCBs, yes.

14 Q. I want (inaudible) footnote in this
15 conversation. Were all PCBs that you made at that time
16 manufactured roughly the same way?

17 A. Roughly, yes.

18 Q. They were similar products, is what I'm
19 trying to establish. I know they have different
20 chlorinations, but roughly they are all made the same way?

21 A. The same way. The temperatures and pressures
22 and process would change, but the procedure was the same.

23 Q. Is it fair to say they are similar products?
24 I don't want to (inaudible). They were PCB products?

25 A. Yes. That's all right.

1 Q. And do you (inaudible) similar?

2 A. Well, it depends on what you're talking about
3 in trying to make them similar.

4 Q. Well, the general manufacturing process, you
5 didn't have a specific plant for 1216 and a specific plant
6 for 1242, did you?

7 A. No, sir.

8 Q. They were all made in the same plant?

9 A. Yes, sir.

10 Q. At about the same time?

11 A. They would be scheduled throughout the year.

12 So many pounds would be produced and put in storage, and
13 then another type would be manufactured and so on.

14 Q. Now, in 1964 the Krummrich plant was making
15 PCBs. How many workers do you have in that plant that
16 were making PCBs?

17 A. Oh, since I wasn't involved with that unit, I
18 really don't know

19 Q. Roughly. Can you give us some (inaudible)?

20 A. It would be a big, big guess on my part.

21 Q. Give us an estimate. Is it more than 10?

22 A. Yes. I would suggest it's about 40 people in
23 the operating unit and supported by about a dozen
24 maintenance people.

25 Q. And the workers that were making PCBs, did

1 they make all the different types of PCBs that you
2 mentioned or did you have special workers that made a
3 special type?

4 A. No. They all participated in making the
5 different PCBs.

6 Q. All right. In 1964 what did you know the
7 dangerous consequences from exposure to PCBs to be?

8 A. In 1964 I had the same knowledge that I
9 learned back in 1957.

10 Q. Hadn'tp learned anything different?

11 A. That is correct.

12 Q. Now, in 1964 did you ever see a warning label
13 on a Monsanto drum of PCBs that warned workers like these
14 capacitor plaintiffs in this case that exposure to PCBs
15 could cause liver damage?

16 A. I did not.

17 Q. Did you ever see in 1964 a warning label to
18 the plaintiffs in this case, for example, that were
19 exposed to PCBs in the capacitor manufacturing process
20 that exposure to that chemical could cause chloracne?

21 A. I did not.

22 Q. How long did you remain there at that job as
23 superintendent of the plant that made PCBs?

24 A. Oh, I was never superintendent of the --

25 Q. I must be mistaken. What was your job?

1 A. I was one of six, general superintendent of
2 manufacturing.

3 Q. p Did the general manufacturing that you
4 supervised include the manufacturing of PCBs that you just
5 described?

6 A. It did not.

7 Q. Did that job belong to somebody else?

8 A. Yes.

9 Q. Who?

10 A. Paul Heisler.

11 Q. How do you spell his name?

12 A. H-e-i-s-l-e-r.

13 Q. Now, in 1965 -- And I'm coming forward in
14 time. In 1965 did you have ap job change?

15 A. I did.

16 Q. In 1965 what was your job?

17 A. I was assigned as plant manager of the
18 Anniston, Alabama, Monsanto plant.

19 Q. That plant made PCBs also?

20 A. It did.

21 Q. It was the only plant at that time in the
22 United States that made PCBs?

23 A. That is correct.

24 Q. Now, you run the second plant. Let's talk
25 about thp at. How many -- First we need to know what your

1 title was.

2 A. Plant manager.

3 Q. For the whole plant this time, right?

4 A. That is correct.

5 Q. Promotion?

6 A. Yes.

7 Q. How many employees did that plant have?

8 A. At what point in time?

9 Q. Well, just when you come aboard.

10 A. About 150.

11 Q. Were they all making PCBs?

12 A. No.

13 Q. Now, let's just talk about that group of
14 employees that were making PCBs. How many of them did
15 that?

16 A. About 35. And that's about that number.
17 It's not exact.

18 Q. That's fair enough. Just to give us an idea.
19 What type of PCBs did they make at that plant?

20 A. They made the same types that I described
21 earlier for the Sauget, Illinois, plant.

22 Q. And the Sauget plant made the same as they
23 made in Anniston, Alabama?

24 A. That's right.

25 Q. Why did you have two plants that did that?

1 A. Primarily to make certain that we had a
2 second source of supply in the event some accident. Let's
3 say a fire occurred. That we could continue supplying our
4 customers.

5 Q. Did the sample employees make all of the PCBs
6 that you described?

7 A. Yes, at the time.

8 Q. Were they all made (inaudible)? I don't mean
9 the same process, but a similar manufacturing process?

10 A. Yes.

11 Q. And were they all basically similar products,
12 PCB products?

13 A. They fit in that family, yes.

14 Q. All right. Now, this plant had protective
15 clothing that the people wore who were working with PCBs,
16 did it not?

17 A. Yes.

18 Q. Now, let's just spend a minute on the idea of
19 protective clothing that Monsanto workers used in
20 manufacturing PCBs. Did they use a rubber apron?

21 A. Not an apron, no, sir.

22 Q. What was it?

23 A. On occasion they had access to a rubber sort
24 of an over-pants and a rubber -- like a short raincoat
25 that they had.

1 Q. Rubber gear?

2 A. Rubber gear. They had access to that, yes.

3 Q. How about gloves?

4 A. They had access to gloves, yes.

5 Q. Now, this is kind of a (inaudible). These
6 are not cloth working gloves, are they?

7 A. Well, they had access to those also.

8 Q. Describe -- All right. (Inaudible).
9 Describe the various types of gloves to which they had access
10 to.

11 A. They had the -- what I'm going to call the
12 cloth, canvas type glove. They had a glove which had a
13 plastic coating on it. They also had leather gloves. And
14 they also had a specialized rubber type of glove.

15 Q. Being (inaudible) to below the elbow?

16 A. There were two kind. There was a short cuff
17 and the higher cuff.

18 Q. Footwear. I want to talk about the footwear.
19 What kind of footwear did they use in making PCBs?

20 A. They were issued a work shoe, steel-toe
21 leather with an oil resistant sole. And when that was
22 damaged because of the exposure to oils and PCBs and what
23 have you, they would be replaced. In addition to that,
24 they had what we called at the plant a bootie, which is a
25 rubber -- looks like a winter over-shoe, which was made of

1 a rubberp that was a little bit more resistant to PCBs than
2 the ordinary rubbers would be.

3 Q. Before we go on, I (inaudible) put a thought
4 in here. Did the workers at your plant experience this
5 situation where their shoes would deteriorate fairly
6 rapidly if they did not use protective footwear?

7 A. If they didn't use a protective footwear,
8 yes. Their shoes were not designed to withstand the PCBs.
9 So they would havep to throw them away and get new ones.

10 Q. I want to move up the body. We have the
11 rubber gear, the booties and the gloves. What did they
12 wear on their face?

13 A. When appropriate, they would have available
14 to them what we call a respirator. It's a mask that
15 filters out chemicals.

16 Q. PCBs?

17 A. PCBs being one of them, yes, sir.

18 Q. And the fumes from PCBs?

19 p A. Yes.

20 Q. Did they have headgear?

21 A. Yes, we did. They had the cloth cap like a
22 baseball cap, and later this was replaced with the hard
23 hat.

24 Q. Okay. How long did you work at the Anniston
25 plant?

1 A. About five years.

2 Q. That would bring us up to 1970?

3 A. Correct.

4 Q. Now, between 1965 and 1970 what were you
5p aware of as to the dangerous consequences from exposure to
6 PCBs? If it hasn't changed, say so. And if it has, if
7 you've learned more, tell us.

8 A. It hadn't really changed any. I just made
9 certain that I reviewed everything and reassured myself
10 that my understanding was correct, and it turned out it
11 was.

12 Q. We'll get to that in a minute. Up to 1965
13 when you go to Anniston -- Are you with me in thep time?

14 A. I didn't hear that last word.

15 Q. Anniston, Alabama.

16 A. Yes.

17 Q. The other plant.

18 A. Yes.

19 Q. Up to that point in time did you ever see a
20 warning label on any drum, any tanker car, on anything
21 directed at the users like the plaintiffs in this case
22 that exposure to PCBs can cause liver damage?

23 A. No, I did not.

24 Q. p Did you ever see a warning label that warned
25 people that were using PCBs that they could get chloracne?

1 MR. CARNEY: Your Honor, I take it we are
2 still talking about labels on drums and tanker cars?

3 THE COURT: Yes.

4 MR. CARNEY: Okay.

5 A. I did not.

6 Q. (By Mr. Kotoske) Now, in 1969 you ended your
7 tenure at the Anniston plant in Alabama. What happened --
8 Was it '69?

9 A. Through the end of '69, yes, sir.

10 Q. What was your next job?

11 A. I was appointed as manager-environmental
12 control, reporting back to St. Louis in the home offices
13 of Monsanto.

14 Q. Did you return to St. Louis or stay in
15 Alabama?

16 A. I returned to St. Louis.

17 Q. At the world headquarters?

18 A. Yes, sir.

19 b Q. And the medical department was in the
20 headquarters (inaudible)?

21 A. Yes.

22 THE COURT: What was your title again? I'm
23 sorry.

24 THE WITNESS: Manager-environmental control.

25 THE COURT: Thank you.

1 Q. (By Mr. Kotoske) That job actually started
2 in January of '70, didn't it?

3 A. Yes, sir.

4 Q. Now, what qualifications did you have with
5 the position that you were appointed to?

6 A. I don't quite know how to answer that, other
7 than I did have experience with the manufacture of PCBs
8 and the handling of PCBs and the disposal wastes from
9 PCBs, and I suppose my technical change has formed part of
10 my qualifications.

11 Q. Now, I want to return to the title of the
12 job. Tell me the title again.

13 A. Manager-environmental control.

14 Q. Was that a new job?

15 A. Yes, sir.

16 Q. Just created?

17 A. Yes, sir.

18 Q. About 1970?

19 A. Yes, sir.

20 Q. What caused Monsanto to create that job?

21 A. There were reports that PCBs were being found
22 in the environment. And as a result of those reports and
23 Monsanto's studies that confirmed that these reports were
24 valid, true, management saw a need to appoint somebody to
25 look into this situation. And that somebody turned out to

1 be me.

2 Q. The job (inaudible)?

3 A. Yes, sir.

4 Q. Now, did those reports that you were
5 receiving about the environment also include animals,
6 birds, fish, rivers, streams?

7 A. The early reports, I don't recall them
8 including animals. They did include the others that you
9 mentioned.

10 Q. And what did those reports, later confirmed
11 by Monsanto, illustrate?

12 A. They illustrated that PCBs that contained
13 5 chlorines per PCB group or more were being found by the
14 analytical chemists in samples taken from rivers, streams,
15 fish, birds. That's it. We were able to confirm that
16 what they were seeing was in truth a PCB.

17 Q. Manufactured by Monsanto?

18 A. Not necessarily. There were several
19 worldwide producers.

20 Q. And where were the scientists finding these
21 PCBs? Globally?

22 A. Yes.

23 Q. Throughout the planet?

24 A. Well, there were some areas of the planet
25 that were not analyzed, but it certainly started up in

1 Sweden and down through Europe and in North America.

2 p Q. And you were finding, were you not, about
3 this time, not you, but the scientists, that animals,
4 birds, fish were dying from the toxicity of PCBs?

5 A. I don't remember any report that associated
6 the death of animals with exposure to PCBs.

7 Q. What PCB levels were you finding in the fish,
8 birds and animals in the early '70s?

9 A. I would have to review the literature. I
10 don't remember the numberp s.

11 Q. In about the 1970's did you also find that
12 the people had background levels now of the PCBs?

13 A. In 1970?

14 Q. Yes.

15 A. No. I don't recall any study that
16 demonstrated a background level.

17 Q. You know now, do you not, that every one of
18 us has a background level of PCBs?

19 A. Oh, I don't know about every one of us. Many
20 of us, but I don't know aboutp every one of us.

21 Q. In order to carry out your job in connection
22 with the environmental concerns -- (Inaudible) interrupt
23 myself. Were you concerned at the same time about toxic
24 effects in humans from PCBs?

25 A. Well, certainly that question was raised, and

1 Monsanto tried to address it, yes.

2 Q. It was part of the environmental concern as
3 well, was it not? You're finding thesp e levels in the fish
4 and streams, and people are eating the fish and so forth,
5 you were worried also about the human background levels of
6 PCBs?

7 A. Exactly, yes.

8 Q. The two were inextricably intertwined?

9 A. Which two, sir?

10 Q. The environmental concerns, if you pull them
11 apart, and the human concern?

12 A. Well, I associate the environmental route to
13 the human exp posure is very important.

14 Q. Fine. Had you heard of the Yusho accident in
15 1970?

16 A. That's when I first heard of it, yes.

17 Q. What did you hear about it?

18 A. I heard that an incident had occurred in a
19 prefecture of Japan called Yusho in which an oil that was
20 intended for human consumption, human use, had been
21 contaminated with PCBs, and many cases of illnesses were
22 reported.

23 p Q. Now, did those illnesses include heart
24 damage?

25 A. I don't remember heart damage.

1 Q. Lung damage?

2 A. No. Again, I don't remember lung damage. I
3 remember pigmentation, watery eyes, nausea, lack of
4 appetite, weakness, inability to sleep. Those are the
5 illnesses I recall being described.

6 Q. Dizziness. Do you recall that one?

7 A. p I don't recall that, but --

8 Q. Joint pain and muscle pain?

9 A. I don't recall that either, but that's 30
10 years ago.

11 Q. Now, you knew that in the reports of the
12 Yusho incident. My question to you is did Monsanto ever
13 have a warning on its tankers or its drums to say
14 (inaudible) the people that were working with the PCBs,
15 for example, the plaintiffs in this, that exposure to PCBs
16 could cause liver damage, chloracne, dizziness, vomiting
17 and the other symptoms that you just described? Did you
18 ever see a warning label in 1970 describing those
19 conditions as we have just discussed them?

20 A. I have not.

21 MR. KOTOSKE: Judge, can we go to the side
22 bar for just a minute?

23 THE COURT: Sure.

24 (A bench discussion was held.)

25 Q. (By Mr. Kotoske) I need to p change the

1 subject a little bit, but I want to stay in the same time
2 frame. We are in 1970. In this connection I would like
3 you to tell us what efforts did you undertake in this new
4 position -- I'm just going to call it environment
5 toxicology. Whatever you want to call it.

6 A. Environment is a better word, yes.

7 Q. Let's just call it that. What efforts
8 efforts did you undertake to be come acquainted with the
9 adverse health effects attendant to exposure to PCBs?

10 A. For which creatures?

11 Q. Anybody.

12 A. Any person or bird or --

13 Q. (Inaudible)

14 A. Human?

15 Q. From the top of the chain to the bottom of
16 the chain. I just want to know what you did to try to
17 educate yourself on this score since Monsanto selected you
18 as the man to run this program, right?

19 A. That is correct. My initial efforts were
20 concentrated on, I'm going to call it a tutorial, where
21 Mr. Wheeler taught me the basic ideas concerning medical
22 and toxicology terms. He showed me the medical library.
23 He had copies of appropriate articles accumulated in a
24 book as thick as the St. Louis telephone directory. That
25 was my homework assignment. And I spent I don't know how

1 p many hours with him one-on-one where he coached me. In
2 addition to that, when the opportunity presented itself,
3 he would take me along when he visited individuals in that
4 field. For example --

5 Q. What field?

6 A. In the field of PCBs and health effects. For
7 example, he was able to take me along to visit individuals
8 that were involved with the Food and Drug Administration
9 where they discussed the ongoing studies that Monsanto had
10 on PCBs and test animals. He was able to take me to visit
11 with government laboratories that were involved in testing
12 of fish and shrimp and the like. That in a general way
13 describes the overall program of my attempts to become
14 familiar with that part of the environmental problem.

15 Q. Now, you knew -- Strike that. Did you ever
16 learn from anyone that Monsanto itself as early as the
17 early p '30s and late '30s, 1930's, four years before you
18 took this job, had conducted toxicity studies on animals
19 exposed to PCBs?

20 A. Certainly.

21 (Ms. Pape replaced Ms. Carter.)
22
23
24
25

1 Q. Did you read 'em?

2 A. Yes.

3 Q. And you were aware of the information that was
4 in the Drinker Study--I think you called 'em something else,
5 but studiesp ?

6 A. I understand. I was made aware in '70, yes.

7 MR. KOTOSKE: I'm gonna (inaudible).

8 THE COURT: Want to take a break?

9 MR. KOTOSKE: Yeah.

10 THE COURT: All right. We'll take a ten-minute
11 break. Let's try to keep it to ten minutes if we can. Do
12 not discuss the case among yourselves or with others.

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

15 THE COURT: Proceed, please.

16 BY MR. KOTOSKE:

17 Q. In the 1970s when you assumed the new
18 job--this environmental job--to whom did you report?

19 A. It varied through the--are you talking about
20 the whole ten years--'70s--or 1970?

21 Q. '70s.

22 A. '70s?

23 Q. '70--I'm gonna go back--

24 THE REPORTER: Are you saying seven Ts?

25 THE WITNESS: '70s.

1 THE REPORTER: Seven Ds?

2 THE COURT: '70.

3 Q. I'm gonna go back and fill in the year, but
4 this job for you stopped in about 1976, did it not?

5 A. I did, yes, sir.

6 Q. So we have a time frame. 1970 to 1976.

7 A. All right.

8 Q. But during that period of time, going across
9 the board from the '70s to 1976, to whom did you report?

10 A. Initially I reported to Mr. Howard
11 Bergen--B-e-r-g-e-n.

12 Q. Now, you have to tell us the titles of these
13 gents in the company.

14 A. I'll try to remember them all. He was the
15 business director of the Functional Products Business Group.

16 Q. Was he on the executive committee?

17 A. No, sir.

1p 8 Q. All right.

19 A. Following that, I was reporting to Mr. Wendell
20 Corey--C-o-r-e-y. And I believe he was director of
21 administration for Monsanto Industrial Chemicals Company, an
22 operating unit of Monsanto.

23 Q. Was he at the executive level of the company?

24 A. No, sir.

25 Q. All right.

1 A. As best I recall, I was then reporting to p
2 Robert Potter--P-o-t-t-e-r. I believe at that time he was
3 director of Specialty Chemicals. I'm not positive of that,
4 but that describes it fairly well. And that's it, as best I
5 recall.

6 Q. Did the president of the company know what you
7 you were doing?

8 A. Certainly.

9 Q. Did the vice-president 'stratosphere' of the
10 company know what you were doing?

11 A. Welp l, they knew what I was doing, but not
12 every detail, of course.

13 Q. I understand. I understand that. They
14 understood the thrust of what you were doing?

15 A. That is correct.

16 Q. At the very highest level of Monsanto?

17 A. Yes, sir.

18 Q. It's true, is it not, that in 19--that in 1970
19 there was discussions in the company to quit making PCBs
20 altogether?

21 p A. Yes.

22 Q. Why?

23 A. The discussions regarding termination of
24 production and sales were centered around the environmental
25 presence. And it was decided among many of the thinkers in

1 Monsanto associated with this group of products that if
2 alternative materials could serve the same purpose, perhaps
3 the wisest thing to do is not produce these materials since
4 they are b being found in the environment and that's not the
5 intended place for 'em.

6 Q. They were never there before you produced 'em;
7 is that right?

8 A. I can only guess to that. I have no other
9 reason to--to believe differently.

10 Q. PCBs are persistent, are they not?

11 THE REPORTER: They're what?

12 MR. KOTOSKE: Persistent.

13 A. Some of the members of the PCB faþ mily are
14 persistent.

15 Q. That means they stay in the environment and
16 they stay in your body?

17 A. Well, I--I feel more comfortable with the
18 statement with the understanding that they stay in the
19 environment, because that's been demonstrated. I, not being
20 a medical person, I don't know how to describe the reference
21 to staying in the body. I'll have to go to a medical person
22 and ask that.

23 Q. What's the half-life of the PCB that Monsanto
24 manufactured?

25 A. I have never heard a scientifically-developed

1 answer to your question. It's rather difficult to arrive at
2 because the conditions throughout the world are not the
3 constant, but there have been speculation of something like a
4 generation, or some people say decades. Lacking a scientific
5 number, the rest is all guesswork.

6 Q. And you've never been told by anybody at
7 Monsanto what the precise half-life of PCBs are?

8 A. That is correct.

9 Q. As far as you know, Monsanto doesn't even
10 know?

11 A. That is correct.

12 Q. Well, you didn't stop production in 1970, did
13 you?

14 A. No, sir.

15 Q. You kept on producing PCBs; is that right?

16 p A. For specific purposes, yes.

17 Q. Did you change your warning labels on the
18 drums and on the tanks?

19 A. Yes, we did.

20 Q. What did you say now?

21 A. We had a reference to the fact that these
22 materials--PCBs--were being found in the environment, that
23 they could be causing some harm to--these are not the exact
24 words.

25 Q. I understand.

1 A. They could be causing some damage out there in
2 the environment. That every care should be taken in its
3 proper handling, shipment, use, disposal, and don't let it
4 get into the environment, or words to that effect.

5 Q. I understand. That was about 1971 or '72 you
6 did that?

7 A. No, this was in May of 1970 when that was
8 added to the containers.

9 Q. Now, at the time yop u changed the labels with
10 respect to the warning as to the environment, did you change
11 the warning with respect to the human health consequences
12 from exposure to PCBs?

13 A. No, there were no reference to health
14 consequences--

15 Q. Thank you.

16 A. --on the label.

17 Q. The other day Dr. Kelly testified in this case
18 concerning his letter of March 30th, 1970, when he said the p
19 company had a duty to warn our people that there was gonna be
20 (inaudible) and legal overtones. Do you remember my reading
21 that?

22 A. Yes, I do.

23 Q. And then I said, what did you do about it,
24 Dr. Kelly. And he said he called you and you told him,
25 Dr. Kelly, you're behind the times--or words to that effect.

1 What had you done?

2 A. Up to the time that Dr. Kelly prepared that
3 note--

4 Q. It was a letter.

5 A. That was a Monsanto memorandum as
6 distinguished from a letter sent to outside. Up to that
7 point, consideration had already been given and action
8 started on removing the use of PCBs in the paints that
9 Dr. Kelly was referring to. This was part of the overall
10 program that was later broadened for removal of PCBs from all
11 uses that are, by Monsanto's definition, considered to be
12 open uses.

13 Q. Let's (inaudible) into that section of the
14 testimony. What are some of the open uses that Monsanto made
15 PCBs for?

16 A. I'll try to think of some of them.

17 Q. Just give us a half a dozen or so.

18 A. I'll try. It was used as an ingredient in
19 sealants and caulking, such as the type that's used in the
20 glass windows in the skyscrapers. It's used as an ingredient
21 in special varnishes and paints. It's used as an ingredient
22 in the carbonless copy paper where the pencil breaks the
23 bubble and releases the ink and makes the copy. It was used
24 as a--we call that plasticide. This is a material added to
25 plastics to make them flexible. I'm sure there are other

1 uses; they just don't come to mind at the moment.

2 Q. Those were the examples of open uses--quote, open
3 uses?

4 A. That's what we called them. They were the
5 uses that when--when applied to a surface or to an article,
6 it was beyond the control of the user as well as supplier.

7 Q. (Inaudible). What about closed systems? What
8 did Monsanto understand by the phrase closed system?

9 A. We used that expression to describe those
10 systems where the liquid--the PCBs--along with other
11 ingredients, were in containers that were sealed, or in
12 piping systems that when properly maintained would not permit
13 PCBs to leak out and get out of control. This included,
14 under our initial thinking, the uses in the electrical
15 equipment, the hydraulic fluid systems and the heat transfer
16 systems. That was our initial understanding or definition.

17 Q. 63 percent of all PCBs that Monsanto produced
18 in a year were used by the electrical industry; is that true?

19 A. That sounds like a good percentage, yes, sir.

20 Q. How much of the PCBs in a year that Monsanto
21 produced were used in the open applications?

22 A. I'm gonna estimate on this and I'm gonna say
23 about 15 percent.

24 Q. And of that 15 percent of PCBs, once it was
25 first put into its applications (inaudible) out of control?

1 A. Most--in those applications, yes.

2 Q. But you kept on making the PCBs for closed
3 systems, and it was not until 1972--two years later--that you
4 stopped selling PCBs altogether for open applications?

5 A. That's not correct.

6 Q. Which statement is not correct?

7 A. The 1972 date as you referred to the open
8 systems.

9 Q. Yes.

10 b A. Unless we have a different definition of open
11 systems. The open systems that I described earlier were
12 terminated--the majority of them--in August of 1970. The
13 carbonless copy paper, because it's technologically very
14 difficult to find a replacement, took a little longer. And
15 as best I recall, we completed that by the end of the first
16 quarter of 1971--about March or April of '71.

17 Q. Yes. What aboutp the other applications of
18 open--other open applications? When did you stop those?

19 A. I think that describes all of what I--what we
20 call open. Now, we had, as I mentioned, the hydraulic
21 systems and the heat transfer systems--

22 Q. When did you stop--

23 A. --that were, in our minds, closed systems.

24 But we found out they were difficult-to-control closed
25 systems, so we made another decisionp to get out of those

1 closed systems that were difficult to control.

2 Q. When did you make that decision?

3 A. Oh, that was made starting in 19--late 1970 we
4 started reformulating the hydraulic fluids and got into a
5 program of changing out heat transfer systems with alternate
6 fluids.

7 Q. Did you start talking to the United States
8 government along about 1971 about the problem with the PCBs?

9 A. When you say you, it's me personally or
10 Monsanto?

11 Q. Monsanto.

12 A. Monsanto? Oh, Monsanto talked to the
13 government representatives--that was before I was assigned
14 this job--in the late '60s.

15 Q. When did you start talking to the federal
16 agencies?

17 A. Right after I was assigned the manager of
18 Environmental Control job. This would have been January,
19 February, 1970.

20 Q. Now, the IBT studies--do you know what I'm
21 talking about--the IBT Arochlor studies?

22 A. I believe I do, yes, sir.

23 Q. A man testified this morning about it.

24 A. Yes, sir.

25 Q. Mr. Smith?

1 A. Yes, sir.

2 Q. Did you use those studies in your presentation
3 to the Federal Government about the toxicity of PCBs?

4 A. I used--when I was alone--traveling alone and
5 discussing PCBs with the representatives of the Government, I
6 used summaries prepared for me by Mr. Wheeler of Monsanto's
7 medical department. When Mr. Wheeler could join me, he, of
8 course, spoke for the medical department. I did not--I
9 didn't play that role.

10 Q. Did he have the studies with him?

11 p A. At what point in time?

12 Q. At any point in time. I want to be sure. The
13 studies that I'm talking about during this part of your cross
14 examination are the studies that were identified this morning
15 by Mr. Smith. And you heard his testimony?

16 A. I did.

17 Q. And they are comprised of three studies that
18 make up Exhibit No. 12. Maybe I should get Exhibit 12 for
19 you. Maybe I should do that. Here they are. If you need to
20 look at 'em at all, Mr. Papageorge, I want you to take your
21 time, because I'm very interested in what you did with those
22 studies after you received 'em.

23 A. I'm familiar with the studies that are
24 described by this exhibit, yes, sir.

25 MR. KOTOSKE: For the record, that's

1 12--Plaintiff's 12. Did you rely on those studies when you
2 were talking to , for example, any federal agents about
3 controlling PCBs or the toxicity of PCBs?

4 A. Certainly. I hesitate because there were
5 increment studies or reports--one- or two-page summaries that
6 I was using during the period '70, '71, when this final
7 report was issued. I was not the one to share that with the
8 proper people in the Government. Mr. Wheeler did that.

9 Q. Now, let's (inaudible). Were you ever present
10 when Mr. Wheeler shared the results of those studies in
11 Exhibit 12 with the Federal Government?

12 A. I was in some instances, yes.

13 Q. How many instances? I don't want (inaudible).
14 It's not the point. I want to know how frequently Monsanto
15 relied on these studies. When I say those studies, for the
16 record, I mean Exhibit 12 during this part of the
17 examination.

18 A. I don't know what I could describe it in terms
19 of frequency, but this is the only long-term 'feeding' study
20 data Monsanto had for many years. Therefore, it had to rely
21 on these reports and their conclusions.

22 Q. All right. How many different federal
23 agencies did you meet with when those studies were presented
24 as to the toxicity of PCBs? We know one was EPA; is that
25 right?

1 A. Yes, sir.p

2 Q. The next one was the FDA?

3 A. That is correct.

4 Q. And the FDA was trying to regulate PCBs in
5 milk, fish and some other animals?

6 A. I don't know about animals. Other food items.

7 Q. They were trying to regulate the amount of
8 PCBs that we were eating; is that true?

9 A. That's true.

10 Q. And they were trying to regulate in the milk
1p 1 that we were drinking?

12 A. That's true.

13 Q. Who else did you meet with?

14 A. I recall the Department of Agriculture
15 representatives.

16 Q. Why did you meet with them? What were they
17 trying to regulate in PCBs?

18 A. Well, the Department of Agriculture is
19 involved with the quality of poultry and meat that the public
20 consumes.

21 Q. All right. And they were trying to regulate
22 the amount of PCBs in cattle--food that we were eating?

23 A. I don't know that they had reached a point of
24 regulating, but they were interested in the information to
25 determine whether they should regulate.

1 Q. And this regulation was (inaudible) designed
2 to prevent the amount of PCBs that humans got in their
3 system; isn't that true?

4 p A. When regulation was finally promulgated, if it
5 were, that was the intent, yes.

6 Q. Thank you. Did you actually use those
7 studies--may I have that stricken. When you were present
8 when Dr. Wheeler presented these studies, what did you hear
9 him say about the validity of the studies?

10 A. I don't know that the word validity ever was
11 used in the conversation. The report was represented as
12 something Monsanto received from the laboratory, and it
13 concluded--it included the data and the conclusions. And we
14 offered it to them for their experts to review.

15 Q. Each of these federal agencies have copies of
16 those reports--

17 A. Yes, sir.

18 Q. --in Exhibit 12?

19 A. Each of those that we discussed.

20 Q. I understand.

21 A. Plus others that I personally was not present
22 when these documents were given to them.

23 Q. Let's move ahead in time to the year 1972. By
24 this time in 1972, the Federal Government had formed a full
25 Federal Injury Agency Task Force on PCBs; isn't that true?

1 A. In 1972--let me--as I understood it, this
2 group had been formed in 1971.

3 Q. Now, I want the jury to know--can you describe
4 the function of p this PCB task force?

5 A. I'll try. This group consisted of
6 representatives from many U.S. federal departments, agencies,
7 administrations that--for example, the Food and Drug
8 Administration person was there, the person from the
9 President's office of Science and Technology, the Council of
10 Environmental Quality, the Department of Agriculture, the
11 Department of Defense, the Department of Interiors, the
12 Departmenp t of Commerce. That's not the complete--I'm giving
13 you an example of the types of the representatives that were
14 there. And they were all addressing PCBs and the
15 environment, trying to determine how each of their
16 departments and agencies might be involved or should be
17 involved and in what way.

18 Q. And they asked Monsanto to provide them--the
19 agency--with some toxic--toxicolog--information on the
20 toxicity of p PCBs--how dangerous was it?

21 A. Yes, they did.

22 Q. And what did you give them in response?

23 A. By that time--let me see. In 1971, right
24 after the reports we just discussed were available to
25 Monsanto, most of the representatives of that group, or at

1 least their agencies, had received copies of these reports.

2 Q. Exhibit 12?

3 A. Exhibit 12.

4 p Q. In addition to that, Elmer Wheeler was invited
5 to attend one of their meetings. And I was along with him
6 and others, and Mr. Wheeler was given an opportunity to
7 discuss with this group what Monsanto knew about PCBs and the
8 health effects and animal testing.

9 Q. Now, with respect to health effects, you told
10 'em about chloracne?

11 A. Yes.

12 Q. Did you tell 'em about liver damage?

13 A. Yes.

14 Q. Did you tell 'em about the results of the
15 Yusho study as you knew 'em?

16 A. Well, we discussed Yusho, but there were
17 people in that room that knew more about Yusho than we did.

18 Q. Now, with respect to the toxicological
19 information or toxicity of Aroclors, you gave the reports
20 from Exhibit 12?

21 A. Yes, plus others.

22 Q. Did you give 'em the Drinker Studies that
23 Monsanto contracted for in the 1930s?

24 A. Yes, sir.

25 Q. But you still hadn't changed the warning label

1 on tanker cars and the drums as to the human element or
2 effects with respect to humans?

3 A. That's true.

4 Q. Now, I want to move ahead in time to 1974. By
5 this time, there was a full-blown battle going on. On one
p 6 side there was Monsanto and the electrical industry, and on
7 the other side, there was a government seeking to regulate
8 PCBs. Is that a fair statement? And if it's not--if it's an
9 exaggeration or out of proportion at all, I want you to
10 correct me.

11 A. I--I personally didn't see it the way you
12 described it. In 19--

13 Q. Let me get the board and I'll (inaudible).

14 MR. KOTOSKE: Your p Honor, can I pick a good place
15 to stop when we finish the government positions?

16 THE COURT: You mean for another break or for the
17 day?

18 MR. KOTOSKE: For the day.

19 THE COURT: But let me ask you, do you expect to be
20 done on direct today?

21 MR. KOTOSKE: No, not at this point.

22 THE COURT: I would like to go to (inaudible).

23 BY MR. KOTOSKE:

24 Q. I would like to ask you some questions,
25 Mr. Papageorge. What is NEMA?

1 A. NEMA is the term used to describe the National
2 Electrical Manufacturers Association.

3 Q. Now, Monsanto is not a member?

4 A. That is correct.

5 MR. CARNEY: Mr. Kotoske, I don't think some of the
6 jurors are gonna be able to see it.

7 Q. Is Westinghouse a member?

8 A. p Yes.

9 Q. Is GE?

10 A. Yes.

11 Q. These two alone represent the biggest users of
12 PCBs and electrical capacitors, transformers, in the
13 United States, do they not?

14 A. That is correct.

15 Q. You, however, became chairman of the ANSI 107
16 committee (inaudible) at one time?

17 A. Yes, I was.

18 Q. Now, that committee had as its function what?p
19 And you were the chairman of this committee?

20 A. Yes.

21 Q. What was its function?

22 A. The committee was to put together a standard
23 on the proper use and handling of PCBs in electrical
24 transformers and capacitors.

25 Q. Did you ever accomplish that task?

1 A. Yes, we did.

2 Q. When?

3 A. The standard was finally published in January
4 of 1974.

5 Q. We had the EPA at this time in the '70s--about
6 '74--who was seeking to ban PCBs altogether; isn't that true?

7 A. There were individuals in EPA that were
8 striving for such a ban but, officially, EPA, to my
9 knowledge, did not have that posture or that position. They
10 wanted to control it.

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

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1 Q. The FDA was seeking to set limits; was it
2 not?

3 A. Yes.

4 Q. On PCBs in our food?

5 A. Yes.

6 Q. There was a federal agency who was seeking to
7 control PCBs in the water?

8 A. That's EPA, yes.

9 Q. You are quite (inaudible). I was wrong.
10 They control the water. There were officials that were
11 b trying to control EPA -- PCBs in the workplace?

12 A. Yes. OSHA.

13 Q. Thank you. But NEMA and the committee that
14 you chaired wanted to keep using PCBs --

15 MR. CARNEY: Object.

16 Q. -- in closed application?

17 MR. CARNEY: It's a compound question. NEMA
18 is one group and --

19 THE COURT: Sustained. Rephrase it, please.

20 Q. The committee that you chaired was seeking to
21 continue to use PCBs; were they not?

22 A. Yes, sir.

23 Q. On the other hand, certain agencies of the
24 government wanted to ban them altogether?

25 A. That's not correct.

1 Q. What is your position on that score?

2 A. The federal agencies were trying to control
3 the presence of PCBs in the environment or in food or in
4 the workplace.

5p Q. And did you object to those controls?

6 A. No. All we wanted was reasonable achievable
7 controls.

8 Q. You never sat in a meeting conducted by Paul
9 Wright of Monsanto where he designed a scheme to prevent
10 the control or prevent the regulation of PCBs both in the
11 environment, in the water and in the effluent? You sat in
12 that meeting; did you not?

13 A. I may well have, but I don't remp ember the
14 thrust of the meeting being anything like that.

15 Q. The purpose of the whole meeting attended by
16 Westinghouse, GE, and other members of NEMA held in your
17 offices at Monsanto was deliberately designed to prevent
18 the regulation of PCBs as the federal agencies were
19 attempting to do?

20 A. I'd have to refresh my memory on the exact --

21 Q. Do you deny it, sir?

22 A. Since I don't p remember, I'm forced to deny
23 it. I just don't recall the thrust of the discussion
24 being the way you described it.

25 Q. In any event, even through 1974, even through

1 all this brouhaha, you kept on making PCBs?

2 A. For the electrical use, yes.

3 Q. In 1974, did you change your warning as to
4 users like the Plaintiffs in this case making capacitors
5 with PCBs to warn them of chloracne ?

6 A. We did not.

7 Q. Liver damage?

8 A. We did not.

9 Q. Of any of the health consequences that you
10 now knew appeared in the Yusho literature?

11 A. We did not.

12 Q. By 1975, there was a major conference on PCBs
13 held in Chicago on November (inaudible). Do you recall
14 the event?

15 A. Yes, I attended.

16 Q. Did you participate in that p conference --

17 A. I was a member of a panel that ended up the
18 day's activities.

19 Q. At that conference, did you have those
20 reports with you that are part of Exhibit 12?

21 A. I personally did not have them.

22 Q. Mr. Calandra from IBT was with you; was he
23 not?

24 A. Yes, he was there.

25 Q. Who else from IBT was with you?

1 A. Dr. Kp eplinger and Dr. Gordon. There may have
2 been others, but I don't recall.

3 Q. Was Paul Wright with you?

4 A. No.

5 Q. And this conference sponsored by the United
6 States Government, specifically the EPA, were trying to
7 the best they could to regulate PCBs in the environment,
8 its use and its application even in the electrical
9 industry; isn't that true?

10 A. That is true.

11 p Q. And I suppose that the information that you
12 wanted to give to the United States Government at this
13 conference would be true and accurate information?

14 A. Certainly.

15 Q. At that conference, Mr. Calandra gave the
16 people running the conference on behalf of the government
17 Exhibit 12, did he not, the reports therein?

18 A. I know that Dr. Calandra spoke on the
19 subject. I have no way of knowing whetp her he gave full
20 copies of these reports to all the representatives of EPA
21 there or not. EPA had already received copies of this
22 prior to the meeting.

23 Q. Exhibit 12?

24 A. Yes, sir.

25 Q. In any event, he used Exhibit 12 to advance

1 the position that PCBs did not appear to be toxic in the
2 animal studies that IBT had conducted?

3 A. I don't know that I would say thp ey are not
4 toxic. He mentioned that at certain levels under the
5 conditions of the test conditions were noted which show
6 some harm is possible of these materials on the test
7 animals.

8 Q. Now, during this conference, I would like to
9 add -- You're at the conference with Mr. Calandro,
10 Keplinger and another official from IBT. Did you ever ask
11 those people from IBT how they prepared these studies,
12 whether these p studies were true, whether they were valid?
13 Did you ever inquire how these studies were carried out?

14 A. I had discussions regarding these studies for
15 many months before that particular meeting, so that
16 subject did not come up at that meeting, no.

17 Q. What discussions did you have months before
18 (inaudible) regarding these studies?

19 A. I had discussions with the IBT people who
20 would come to St. Louis, p to Monsanto, and I had at least
21 on three occasions visited their laboratory.

22 Q. Did you ever look at the raw data?

23 A. Oh, no. I'm not qualified to look at that
24 data and understand it, no.

25 Q. Let me ask you something. Did you ever ask

1 anybody from Monsanto, "Hey, let's go down and check the
2 raw data at IBT since they are doing toxic tests for us
3 and we haven't had any done p since 1938"?

4 A. Did I ask that?

5 Q. Yeah.

6 A. No. That's a responsibility of the medical
7 department.

8 Q. I don't care whose responsibility you think
9 it is. You're in charge of the environment program, and
10 I'm just trying to find out, didn't you think that it
11 would be prudent and reasonable to look at the raw data
12 (inaudible)?

13 A. Certainly, and that was being p done.

14 Q. By whom?

15 A. Monsanto toxicologists.

16 Q. Who?

17 A. Well, Dr. Hunt initially, and then when he
18 died he was replaced with a Dr. Levinskis and Elmer
19 Wheeler throughout all of this period was on top of it. I
20 had to rely on those three people.

21 Q. Now, this is very important. Those three
22 people, Monsanto (inaudible) actually went to IBT and
23 looked at the raw data?

24 A. Since I wasn't there, all I know is they went
25 there and looked at many things.

1 Q. Well, now, you just told me that these three
2 Monsanto people looked at this raw data,

3 A. No. I said they're responsible for following
4 the tests to assure that they were properly done, of high
5 quality, and the kind of tests that we expected from the
6 laboratory.

7 Q. b All right. Based on the information that you
8 had from these gentlemen, these Monsanto employees, did
9 they come back and tell you, "Bill, we looked at your raw
10 data, the bench books. These tests are according to
11 protocol"?

12 A. They told me the last part of your statement,
13 these tests are on schedule and they're according to
14 protocol.

15 Q. And did they tell -- Did they tell you how
16 they knew the testp s were according to protocol?

17 A. No.

18 Q. You never asked?

19 A. I didn't know enough about the business to
20 use the right words to form the question.

21 Q. And you relied on what these other Monsanto
22 people told you to believe that the tests were not
23 falsified?

24 A. Certainly.

25 Q. Where is Dr. Hunt today? I understand he's

1 deceased?

2p A. He died.

3 Q. What about Elmer Wheeler?

4 A. He died also.

5 Q. Who's left?

6 A. Dr. Levinskas.

7 Q. He's alive?

8 A. Yes, sir.

9 Q. He's available to testify in this trial?

10 A. Oh, I don't know that. I haven't seen Dr.
11 Levinskas for five years or more.

12 Q. Let's just focus on Dr. Levinskas. Did he
13 tellp you that he went to IBT and looked at the raw data?

14 A. No, sir.

15 Q. Did he tell you that the tests being carried
16 out at IBT were being carried out according to protocol?

17 A. Yes, he did.

18 Q. Did he tell you how he knew that fact?

19 A. No, he did not.

20 Q. I want to turn the examination to Paul
21 Wright. Paul Wright worked at IBT; is that true?

22 A. That's wþ hat I found out, yes.

23 Q. Before he went to IBT, Paul Wright worked at
24 Monsanto?

25 A. That's what I understand. Yes, sir.

1 Q. What did he do there?

2 A. Where?

3 Q. That's very (inaudible). When Paul Wright
4 worked at Monsanto before he went to IBT, what did he do
5 there?

6 A. All I know is that he worked for Monsanto's
7 agricultural chemicals company in some position in their
8 laboratories as a technician. That's all I know.

9 Q. You did not know him at Monsanto?

10 A. No, I didn't.

11 Q. Even when you became a director of
12 environment and he was the head of toxicology, you didn't
13 know him?

14 A. He was never the head of toxicology when I
15 was there.

16 Q. (Inaudible) he was the manager of toxicology?

17 p A. No. He was just a toxicologist in Monsanto's
18 medical department reporting to Dr. Levinskas.

19 Q. You never met him?

20 A. Oh, sure, I met him, but I had no business
21 discussions with him. They were limited to Elmer Wheeler
22 and George Levinskas.

23 Q. Now, did you hear the testimony this morning
24 about Paul Wright's connection with the studies that are
25 in Exhibit 12?

1 b A. I heard it, yes.

2 Q. If that -- If those facts are true, would you
3 find them to be outrageous?

4 A. If they are -- Under the condition if they
5 are true, I would find it very disturbing.

6 Q. In fact --

7 A. That just doesn't fit the man I saw briefly.
8 I don't know how else to answer that.

9 Q. Would you find that conduct simply reckless?

10 A. I don't know about reckless. It would
11 certainly be unprofessional.

12 Q. It would be damn near criminal?

13 A. That -- Not being a lawyer, I don't know what
14 you mean by criminal.

15 Q. It's outrageous under any conditions; is it
16 not?

17 A. It's just unacceptable.

18 Q. Even to Monsanto?

19 A. True.

20 Q. Now, you knew that -- When Paul Wright came
21 back to work in the toxicological department of the
22 Monsanto Company, your employer, did you ever talk to him
23 about those reports and the (inaudible)?

24 A. No.

25 Q. Did you ever think since you were giving

1 these reports out to federal agency after federal agency,
2 did you ever say to Paul, "Is there anything wrong with
3 those reports?"

4 A. I don't know what would lead a person to
5 suspect they are wrong, sir. It comes from a reputable
6 laboratory.

7 Q. Let me suggest a reason. Those reports were
8 given to about six or seven federal agencies as an index
9 to the toxicity of PCBs. They were given to other
10 agencies. They were given to the federal strike force on
11 PCBs. I would think if you want a suggestion that it
12 might be reasonable to ask Paul Wright, "Hey, Paul is that
13 good stuff or is that (inaudible)?"

14 MR. CARNEY: Your Honor, I'm going to object.
15 He's suggested no reason why Monsanto would be suspicious
16 at all about that.

17 THE COURT: What's your objection?

18 MR. CARNEY: I object. It's argumentative.

19 THE COURT: I don't think it's a question.
20 But I'm going to ask you to rephrase it as a question.
21 Sustained.

22 Q. Since you had given these reports to all
23 these federal agencies (inaudible) -- I'll ask it this
24 way. Did the thought ever occur to you, "Maybe I should
25 check with Paul Wright about the data underlying his

1 conclusions in this report to be sure it's true"? Did
2 that thought ever occur to you?

3 A. A thought like that would never occur to me
4 because I'm talking to his superiors who know more than
5 Paul does about toxicity studies and p protocols and
6 interpretation of raw data. Why should I go to a person
7 who is less experienced than they are to get some feel for
8 the value and the validity of this work?

9 Q. Because, Mr. Papageorge, it was Paul Wright
10 who wrote the report and concluded the raw data.

11 MR. CARNEY: I'm going to object. That
12 misstates what the report says.

13 THE COURT: It's not a question. I'll
14 sustain p n. Proceed.

15 Q. Now, again, in 1974 Monsanto was thinking
16 about quitting production of PCBs. Is that true?

17 A. That thought was always under consideration,
18 yes.

19 Q. Why didn't you quit?

20 A. Because it was our sincere belief that the
21 use in electrical equipment under the right conditions of
22 handling would provide a safety benefit to society that
23 could not be provided by any other p known material, and
24 without -- by arbitrarily stopping the production of PCBs
25 we would have put the power industry in this country in a

1 position where all kinds of difficulties would have
2 occurred, blackouts, brown-outs, factory shutdowns,
3 subways wouldn't work and on and on. It was a very
4 difficult decision to make.

5 Q. Yeah. In October 17th, 1976, Congress passed
6 the Toxic Substance Control Act; didn't they?

7 A. Yes, sir.

8 Q. The one chemical, the very one chemical and
9 the only chemical that is banned by name in that statute
10 is what?

11 A. PCBs.

12 Q. (Inaudible.) Have we experienced great
13 brown-outs? Have factories shut down? Have elevators
14 stopped? Has the whole world come to an end?

15 A. No, sir, because alternatives were found to
16 prevent those drastic conditions with some sacrifice in
17 efficiency and safety.

18 Q. And those alternatives have been known for at
19 least 15 years?

20 A. That I don't know.

21 Q. You don't know?

22 A. No.

23 Q. As a chemist?

24 A. As a chemist.

25 Q. As a man who deals with --

1 A. But not as a capacitor or transformer
2 designer.

3 p Q. It would have also meant if they were banned
4 altogether a great loss of income to Monsanto?

5 A. I would not describe it as great.

6 Q. You wouldn't?

7 A. No, sir. Not at that time.

8 MR. KOTOSKE: Now, I'm trying to cut it down,
9 Your Honor, because I know we're running over.

10 Q. I want to -- I'm going to talk specifically
11 now -- As a chemist, you might know the answer. First
12 I'll offer a general proposition to see if we can have
13 some agreement. By the way, did Monsanto keep making PCBs
14 after 1976?

15 A. Yes, they did.

16 Q. Did they make them in '77?

17 A. Yes, sir.

18 Q. '78?

19 A. No.

20 Q. Do they still make PCBs today?

21 A. No.

22 Q. Are you sure?

23 A. Positive.

24 p Q. Has Monsanto ever gone to the EPA and asked
25 for exemptions from the regulations to keep producing

1 PCBs?

2 A. That doesn't fit with the official position I
3 know from Monsanto.

4 Q. I want to ask you about a byproduct
5 (inaudible). I want to see what information you have.
6 When you heat PCBs in the presence of oxygen at a certain
7 temperature, it produces furans. True or not true?

8 b A. The potential is there, yes, sir.

9 Q. Now, Monsanto has known for at least 50
10 years, at least all the time you've been there, furans are
11 a very toxic substance?

12 A. I don't know that at all. I didn't find that
13 out personally until 19 -- I want to say 1970, '71. What
14 the medical people knew about it before that, I don't
15 know.

16 Q. Furans are about, according to Dr. Kelly,
17 b 2,000 more times toxic than PCBs. Do you know anything
18 about that?

19 A. I've heard that description, yes.

20 Q. And you have heard toxicity levels much
21 higher than that, haven't you, In the range of five to
22 10,000 times as toxic as PCBs?

23 A. Yes. I've heard some very high
24 concentrations, yes.

25 Q. Now, I want you to think back during the

1 '50's, during the '60's, during the '70's. Did Monsanto
2 ever put on its labels, on its drums, on its tankers, on
3 anything, to warn people like the Plaintiffs in this case
4 who actually used this stuff in the manufacture of
5 electrical capacitors, that heated PCBs could cause the
6 formation of extremely toxic furans?

7 A. No. That information was not known and not
8 discussed in that time period you discussed, '50's, '60's.

9 Q. Was it known in the '70's?

10 A. In the '70's, yes, there was discussion
11 amongst the scientists at the leading edge of this type of
12 study that this was a good probability, yes.

13 Q. Did you ever change? Did you ever change the
14 warning on the labels of these drums and these tankers to
15 alert people like the Plaintiffs in this case who use that
16 stuff to manufacture capacitors that heated PCBs could
17 cause the formation of extremely toxic furans?

18 A. On the label, no.

19 MR. KOTOSKE: (Inaudible) take a break, Your
20 Honor.

21 THE COURT: Well, let me ask the jury. Let
22 me have counsel come over.

23 (A bench conference was held.)

24 THE COURT: We'll go ten more minutes, and
25 then we'll stop. Does that meet with you all's approval?

1 MR. KOTOSKE: They can't take me for ten more
2 minutes.

3 THE COURT: Let's take ten more minutes. The
4 more we do now, the less we have to do later. You may
5 proceed, sir.

6 MR. CARNEY: I'm willing to stop, just so I'm
7 on the side of the jury. It's your decision to
8 (inaudible).

9 THE COURT: Go ahead.

10 Q. Mr. Papageorge, did Monsanto hire lobbyists
11 back in Washington, D.C.?

12 p MR. CARNEY: In connection with PCBs, I
13 assume?

14 Q. Yes. In connection with PCBs.

15 A. PCBs, not to my knowledge.

16 MR. KOTOSKE: Now I am at a convenient --

17 THE COURT: You win. You want to step down?

18 We'll take a break. Ladies and gentlemen, we will break
19 for the day. We will continue with the witness tomorrow
20 at 9:30. Again, do not discuss this case among yourselves
21 or with others. We'll see all of you back here at 9:30
22 and proceed at that time. Thank you.

23 (Court was recessed for day.)

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