

WATER PCB-SD0000018171

1 Oral Deposition of
2 William B. Papageorge, taken pursuant to Notice, held
3 at the Radisson Hotel, 7750 Carondelet Plaza, St.
4 Louis, Missouri 63105, on Tuesday, April 28, 1998, at
5 10:05 a.m., before John W. Begley, a Registered
6 Professional Reporter - Notary Public there being
7 present.

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1 THE COURT REPORTER: Usual
2 stipulations?

3 MR. MC CLAIN: That's fine.

4 MR. JUETTNER: That's fine.

5 MR. ROUX: That's fine.

6 MR. MANNINO: That's fine.

7 MR. GOUTMAN: That's fine, but I
8 would like the witness to read and sign the
9 transcript.

10 - - -

11 (It is hereby stipulated by and among
12 counsel for the respective parties that the
13 sealing, filing and certification are waived,
14 and that all objections, except as to the form
15 of the questions, be reserved until the time of
16 trial.)

17 - - -

18 William B. Papageorge, after having
19 first been duly sworn, was examined and
20 testified as follows:

21 - - -

22 EXAMINATION

23 - - -

24 BY MR. MC CLAIN:

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1 Q. Mr. Papageorge, my name is Ken McClain and I
2 represent the Commonwealth of Pennsylvania.

3 Can you describe all of the jobs that
4 you had by name with Monsanto and in what years.

5 A. May I consult the list, sir, to refresh my
6 memory better?

7 Q. You sure can. And you have been courteous
8 enough to provide me with a copy of your curriculum
9 vitae. We will mark that as the first exhibit. We
10 will make reference to that. We will mark that as
11 Exhibit 1.

12 (The above-referred-to document was
13 marked as Papageorge Exhibit 1 for
14 identification)

15 BY MR. MC CLAIN:

16 Q. Go ahead, sir.

17 A. I started with Monsanto in November of 1951.
18 The initial assignment was, carried the title of
19 Assistant Project Engineer at the Monsanto plant,
20 which was referred to as the J.F. Queeny plant
21 located in the St. Louis area. And that assignment
22 lasted until 1954. At that point I was promoted to
23 the title Senior Chemical Engineer at the same plant,
24 and that assignment lasted until 1955. I was then

1 appointed a Production Supervisor at the same plant
2 from 1955 to 1956. I then became a Maintenance
3 Supervisor at the same plant from 1956, 1957. I was
4 then appointed as Maintenance Superintendent at the
5 plant 1957 through 1959. I was then appointed as
6 Assistant Engineering Superintendent, again at the
7 same plant, 1959 to 1961. In 1961 I became a General
8 Superintendent of Warehouse, Inventories, and
9 Utilities, and that assignment lasted until 1964.
10 All of the assignments I just described were at the
11 same plant.

12 Q. The Queeny plant.

13 A. The Queeny plant. In 1964 I was transferred
14 to another Monsanto plant located across the river
15 from St. Louis in the Village of Sauget, S A U G E T,
16 Illinois, as General Superintendent of Manufacturing.
17 In 1965 I was appointed as plant manager at the
18 Anniston, Alabama plant of Monsanto, and that
19 appointment terminated in the end of 1969. In early
20 1970 I was appointed as Manager and Environmental
21 Control for the organic division of Monsanto Company
22 located in St. Louis. In 1973 my title was changed
23 to Manager of Product Acceptability for the Monsanto
24 Industrial Chemical Company. In 1977 --

1 Q. Which is a different company than you had been
2 working for?

3 A. There was a reorganization within Monsanto and
4 instead of using the terminology divisions, like
5 organic and the like, textiles, they changed the
6 subgroups to include the word Monsanto and then they
7 described the types of chemicals that each group was
8 involved with.

9 Q. I'm sorry. Go ahead. Finish your answer.

10 A. I was going to say that the group in 1973 that
11 I was appointed to was referred to as the industrial
12 chemical company.

13 Q. My question, though, was it a separate company
14 or was it simply another way to refer to the
15 division?

16 A. It was another way to refer to the division
17 within the corporate structure, yes.

18 Q. Go ahead.

19 A. In 1977, with another Monsanto reorganization,
20 I was appointed as Manager of Product Acceptability
21 for Monsanto Chemical Intermediates Company. Still
22 located in St. Louis. Shortly after that appointment
23 I was appointed a Director, Environmental Operations
24 for the Chemical Intermediate Unit, and that

1 assignment lasted until 1982. In 1983 I was
2 appointed Director, Environmental Operations of
3 Industrial Chemicals Company, which reflects still
4 another reorganization, and that lasted until 1985.
5 During 1986 I was appointed following another
6 reorganization at which the Monsanto Company was then
7 referred to as Monsanto Chemical Company. I was
8 appointed as Manager, Occupational Health.

9 I retired at the end of 1986.

10 Q. During your time as an employee of Monsanto,
11 and I'm using that term generically to include all of
12 the different name changes that you have described
13 for us, were you involved in the production and/or
14 distribution of the general family of products known
15 as Aroclors?

16 A. Yes.

17 Q. Describe, would you, for us, your role in, and
18 you don't have to go job by job, but generically,
19 perhaps by plant that you were involved in, to the
20 extent that they involved the product, your
21 assignments involving the product Aroclors.

22 MR. GOUTMAN: Objection. Overly broad.

23 If you can answer it, please try to do

24 so.

1 THE WITNESS: I'll try. My involvement
2 with products that included the Aroclors,
3 either as Aroclors or as ingredients, started
4 with the maintenance function in which my
5 maintenance teams were handling the Aroclor
6 containing products in systems such as heat
7 transfer systems, power distribution systems,
8 air compressors. That was my indirect
9 involvement through my team of workers.

10 BY MR. MC CLAIN:

11 Q. And that was at the Queeny plant.

12 A. At the Queeny plant, yes.

13 Q. And just to back up for a second, would you
14 describe for the jury, please, what Aroclors are.

15 A. Aroclors is a Monsanto trademark which was
16 used with a series of chlorinated biphenyls and
17 chlorinated terphenyls and blends of these chemicals,
18 and marketed under the trade name Aroclors.

19 Q. And at the Queeny plant, as an example, what
20 were these products sold? What were they
21 manufactured to be used in?

22 A. Well, the Queeny plant was not a manufacturing
23 site for Aroclors.

24 Q. So when you said that they were used at the

1 Queeny plant when you were maintenance supervisor,
2 they were found in equipment contained in the Queeny
3 plant?

4 MR. GOUTMAN: Objection to the form of
5 the question.

6 You may answer.

7 THE WITNESS: That is one location, yes.
8 They were also shipped to the plant for use.

9 BY MR. MC CLAIN:

10 Q. In what applications?

11 A. In heat transfer systems, electrical systems,
12 various hydraulic fluid systems.

13 Q. And what were they used for in those systems?
14 Can you describe that for us? What was their purpose
15 in those systems?

16 A. Well, it varied from application to
17 application. In the electrical systems they were
18 used as fluids to dissipate heat within electrical
19 circuitry inside of transformers, capacitors, or
20 starting switches. In the hydraulic fluid
21 application they were used as a means to transfer
22 power from, say, an electric motor to a need at the
23 other end of the system in which the fluid, very much
24 like your car brakes, the hydraulic fluid operates a

1 gadget at the other end. In the heat transfer
2 systems they were used as a means to convey heat from
3 a flame source over to a point of use in which you
4 tried to increase the temperature of some process
5 without introducing the risk of fire.

6 Q. And in general were Aroclors known in the
7 industry as PCBs?

8 MR. GOUTMAN: Objection to the form of
9 the question. At what time frame are you
10 talking about?

11 BY MR. MC CLAIN:

12 Q. Are they known as PCBs today?

13 A. Today they are known as PCBs.

14 Q. Generically.

15 A. Yes. Except for the terphenyls. The Aroclor
16 also applied to the terphenyl line.

17 Q. Aroclor applied to the terphenyl line, but
18 they are not PCBs.

19 A. That's correct.

20 Q. Those are the poly biphenyls.

21 MR. GOUTMAN: What are the poly
22 biphenyls?

23 MR. MC CLAIN: PCBs.

24 THE WITNESS: The polychlorinated

1 biphenyls.

2 BY MR. MC CLAIN:

3 Q. Not the tri.

4 A. Correct.

5 Q. Poly meaning two?

6 A. More than one.

7 Q. But not as many as three. I mean, what was
8 the difference between the trichloryl and the poly
9 biphenyls?

10 A. The poly applies to the chlorine.

11 Q. Right.

12 A. Polychlorinated. When you use the expression
13 three, we use the T E R terminology to describe the
14 phenyls. Terphenyl and biphenyl, so there's two
15 phenyls or three phenyls.

16 Q. Right.

17 A. The poly did not apply to the phenyl groups.

18 Q. I understand. What was your next involvement
19 with the Aroclor products?

20 A. When I was at this Queeny plant, the General
21 Superintendent of Warehousing, Inventories, and
22 Utilities I was involved in not only the utilities,
23 which means the electrical distribution systems and
24 compressed air and the like, but I was also involved

1 with a facility which was part of the inventory
2 system in which fluids containing PCBs, Aroclors,
3 were blended and shipped out either in tank car or
4 tank truck lots or in pails or barrels, so that was
5 my next involvement.

6 Q. Now, when you say they were blended, they were
7 blended for what purpose?

8 A. Well, examples include the hydraulic fluids in
9 which there are a half dozen or so ingredients blended to
10 reach certain properties.

11 Q. I see.

12 A. Or sometimes they were blended with other
13 ingredients to make the transformer electrical
14 fluids, so we would blend them in those blending
15 facilities.

16 Q. What different products -- did the products
17 that were blended at the Queeny plant receive number
18 designations following the blending or were they
19 numbered before the blending began, such as 1260s,
20 1254s, etc.?

21 A. The 1200 series referred to the
22 polychlorinated biphenyl product line. The one two
23 is the biphenyl.

24 Q. I understand.

1 A. And the last two digits refer to the percent
2 of chlorine in that mixture, which was not a blended
3 mixture; it was created in the tank in which chlorine
4 bubbled through the biphenyl, and under conditions of
5 temperature and time you reached that 60 or 54 or 42
6 level. It was not a blend of the virgin individuals
7 blending to reach the 60.

8 Q. I understand. So what was blended were
9 different chemicals to give that 1260 or 1242
10 different properties.

11 A. And marketed under different names, different
12 trademarks.

13 Q. All right. So you were involved in blending
14 at the Queeny plant. What else happened at the
15 Queeny plant that involved the Aroclor product line?

16 A. Nothing else other than, of course, the
17 shipping. The warehousing, the loading of the trucks
18 and tank cars and so on.

19 Q. What then -- did anything that you did at the
20 Anniston plant involve Aroclors?

21 A. Well, the Anniston plant was one of the
22 Monsanto plants in which PCBs were manufactured, and
23 as plant manager the buck stopped at my desk. That
24 was part of the system.

1 Q. What products were manufactured at Anniston?

2 A. Aroclors.

3 Q. Aroclors?

4 A. You want me to enumerate all of the Aroclor
5 PCB types?

6 Q. Yes.

7 A. I'll try to remember them. Aroclor 1221, and
8 rather than repeat the word "Aroclor" I'll just
9 mention the four digits.

10 Q. That's fine.

11 A. 1232, 1242, 1248, 1254, 1260, 1268.

12 Q. At what plant would the 1232 product have been
13 manufactured? If you know.

14 A. Anniston did make that, but that was very
15 rarely done. Yes, Anniston made 1232.

16 Q. All right. And as plant manager of Anniston
17 you say the buck stopped with you. How many
18 different people would have been involved in the
19 manufacture of Aroclor there?

20 MR. GOUTMAN: How many employees were at
21 the Anniston plant?

22 BY MR. MC CLAIN:

23 Q. Yes. At any one time. And if it
24 fluctuated --

1 A. You mean at the whole plant or just with the
2 PCBs?

3 Q. With the PCBs.

4 A. Just the PCBs. Of course I don't wish to
5 imply that I remember the specific numbers. I
6 remember the --

7 MR. GOUTMAN: Don't guess, sir.

8 BY MR. MC CLAIN:

9 Q. Just approximately. Just to give me some
10 sense of the size of the operation.

11 A. The reason I'm hesitating, I have to include
12 not only the people that operated the equipment who
13 made the equipment, but I have to include the
14 mechanics who repaired the product, I have to include
15 the people who shipped it, so I would say when I
16 first went there, of the 150 employees at the plant,
17 half of them were involved with PCBs to some degree.
18 Varying.

19 Q. I'm sorry. I was looking down at the date
20 when you said you first went there.

21 A. '65.

22 Q. So in '65 how many were there?

23 A. About 150 total.

24 Q. 150 total and half of those were PCB related?

1 A. To some degree or other.

2 Q. So 75, approximately.

3 A. Yes.

4 Q. And then how many of those would have been
5 involved in the actual manufacturing on a day to day
6 basis?

7 MR. GOUTMAN: Objection to the form of
8 the question.

9 THE WITNESS: Again, I have to estimate
10 it, sir. It has been decades. 25 or 30.

11 BY MR. MC CLAIN:

12 Q. Okay. All right. And then when you were
13 brought back to St. Louis as Manager, Environmental
14 Control of the Organic Division, what was your
15 involvement, if any, with Aroclor?

16 A. I was appointed to monitor the PCB
17 environmental issue that was evolving at the time.

18 Q. And at that time, 1970 through '73, when you
19 served as Manager of Environmental Control, was the
20 issue of PCBs of an urgent nature for the company?

21 MR. GOUTMAN: Objection to the form of
22 the question.

23 You can answer it if you understand it.

24 THE WITNESS: I don't know how to

1 describe urgency, sir. That's subjective. It
2 varies person to person.

3 BY MR. MC CLAIN:

4 Q. For you.

5 A. For me that was my assignment. That was my
6 job.

7 Q. So it was of some urgency to you.

8 MR. GOUTMAN: Same objection.

9 THE WITNESS: Yes.

10 BY MR. MC CLAIN:

11 Q. It was the principal assignment that you had
12 in St. Louis, is that correct, during those years '70
13 through '73?

14 MR. GOUTMAN: Objection to the form of
15 the question.

16 THE WITNESS: Yes, as long as we both
17 understand by "assignment" I was to monitor and
18 communicate. I don't want to imply that I was
19 still involved with manufacturing the material
20 or selling it or any of that.

21 BY MR. MC CLAIN:

22 Q. No. I understand.

23 A. I was monitoring the presence in the
24 environment, which was totally new to everybody at

1 that time.

2 Q. We are going to look at some documents on that
3 subject in just a moment from that time period.

4 A. Okay.

5 Q. But my question was during the '70 to '73 time
6 period that was your only concern, monitoring PCBs in
7 the environment?

8 MR. GOUTMAN: Objection to the form of
9 the question.

10 You can answer it.

11 THE WITNESS: I hesitate because it
12 seems to me near the end of that period, the
13 1973 period, I was assigned other Monsanto
14 products to monitor.

15 BY MR. MC CLAIN:

16 Q. So then from '70 through mid 1973 that was
17 your principal, if not only, focus.

18 MR. GOUTMAN: Objection to the form of
19 the question.

20 You may answer.

21 THE WITNESS: When you use the word
22 "principal", yes. That doesn't mean that other
23 questions weren't asked of me of other product
24 lines and so on.

1 BY MR. MC CLAIN:

2 Q. And as you mentioned, at or around that time
3 there were reports in the popular press and in the
4 scientific literature which concerned the question of
5 whether or not there was PCB contamination of the
6 environment; am I correct?

7 MR. GOUTMAN: Objection to the form of
8 the question.

9 You may answer.

10 THE WITNESS: That was one of the
11 questions that was raised, yes.

12 BY MR. MC CLAIN:

13 Q. And another question that was being raised was
14 was that contamination harmful to animals and/or
15 humans; correct?

16 MR. GOUTMAN: Objection to the form of
17 the question.

18 THE WITNESS: That was another question,
19 yes.

20 BY MR. MC CLAIN:

21 Q. And you concerned yourself with that during
22 the years 1970 through 1973; correct?

23 MR. GOUTMAN: Objection to the form of
24 the question.

1 THE WITNESS: Along with other concerns.

2 BY MR. MC CLAIN:

3 Q. Yes, but that was your principal concern.

4 MR. GOUTMAN: Objection to the form of
5 the question. What is "that"? Could you
6 please tell me what "that" refers to?

7 MR. MC CLAIN: The concern for whether
8 or not PCBs had contaminated the environment
9 and if they had contaminated the environment
10 whether that was a health threat to animals or
11 humans.

12 THE WITNESS: That's true, sir. Also
13 what types of PCBs. That was a question that
14 hadn't been answered yet.

15 BY MR. MC CLAIN:

16 Q. And you were addressing all of those issues
17 and trying to find answers for them.

18 A. As best I could, yes.

19 Q. Now, after you left the job of Manager,
20 Environmental Control you told us that you went on to
21 become the Manager, Product Acceptability from '73
22 through '77. Did you have anything in that job
23 responsibility that involved Aroclors?

24 A. Yes, Aroclors continued to be one of the

1 groups of products that I was assigned under that new
2 title.

3 Q. And what did you do in regard to Aroclors in
4 that job responsibility?

5 A. Oh, I continued keeping informed of new
6 information, serving as a source of information
7 regarding Monsanto's involvement, both within
8 Monsanto, the left hand knowing what the right is
9 doing kind of approach, as well as the other world
10 producers of PCBs and the regulatory authorities,
11 both in the states and in Europe and in Japan and
12 universities that were conducting studies,
13 independent laboratories that were getting into the
14 analytical business, looking for PCBs. Wherever a
15 question would arise that the person posing the
16 question felt I could answer I would hear from them
17 and I would try to respond as best I could.

18 Q. Just to divert for a moment, after about 1970
19 Monsanto stopped selling Aroclors for use in so
20 called open systems, did it not?

21 MR. GOUTMAN: Objection to the form of
22 the question.

23 THE WITNESS: Yes, as long as we
24 understand what was meant by so-called open

1 systems. I hope your definition is the same as
2 mine.

3 BY MR. MC CLAIN:

4 Q. You tell me what you understand that term to
5 mean.

6 A. We use that expression to describe the uses in
7 which there was no provision for containing the PCBs
8 and avoiding escape into the environment. The
9 obvious example would be the presence in paint used
10 to put the yellow stripe down the highway. That is
11 in the environment almost immediately, whereas a
12 system designed to contain a heat transfer fluid
13 under high pressure and high temperature, that is
14 designed to be a closed system, and if properly
15 maintained it remains, so that's the distinction in
16 our thinking.

17 Q. And so for those so-called open systems, such
18 as paints, plasticizers, mastics, adhesives, Monsanto
19 stopped selling Aroclors for those uses?

20 A. Yes.

21 Q. In about what year was that?

22 A. That was in August of 1970.

23 Q. And was that because Monsanto concluded that
24 the reports regarding environmental contamination of

1 PCBs were correct?

2 MR. GOUTMAN: Objection. What reports?

3 All reports? Some reports?

4 BY MR. MC CLAIN:

5 Q. In general at this point in time.

6 MR. GOUTMAN: Objection to the form of
7 the question.

8 BY MR. MC CLAIN:

9 Q. By 1970 there had been reports of
10 environmental contamination; am I correct?

11 A. There had been reports of PCBs found in
12 samples taken from the environment which indicated a
13 presence of the higher chlorinated types of PCBs, and
14 with that information Monsanto decided that the open
15 uses were very likely a contributor to that presence,
16 and they decided to terminate sales.

17 Q. All right. And am I correct that products
18 like paints, plasticizers and mastics were
19 specifically, and let's add caulks to that, were
20 specifically identified by Monsanto by 1970 as being
21 open system products that were contributing to the
22 detected PCB contamination in the environment?

23 MR. GOUTMAN: Objection to the form of
24 the question.

1 THE WITNESS: I don't know about
2 Monsanto being positive or certain that they
3 were contributing, but they had the potential
4 for contributing, dependent on the specific
5 application and the care and attention given,
6 so with that potential existing Monsanto
7 believed that it should not be contributing to
8 the environmental problem by selling to those
9 types of uses.

10 BY MR. MC CLAIN:

11 Q. Were substitute products available, then, in
12 1970 for such uses in the markets?

13 MR. GOUTMAN: Can you read that
14 question back.

15 (The last question was read back by the
16 Court Reporter)

17 MR. GOUTMAN: 1974? What products are
18 we talking about? All products?

19 MR. MC CLAIN: No, paints,
20 plasticizers, mastics, caulks.

21 MR. GOUTMAN: If you know, sir.

22 THE WITNESS: Did I hear 1974?

23 BY MR. MC CLAIN:

24 Q. '70 for; not 1974.

1 MR. GOUTMAN: I'm sorry. Are we talking
2 about the year 1974?

3 BY MR. MC CLAIN:

4 Q. We are talking about 1970, the year 1970, when
5 you stopped selling Aroclors for use in open systems
6 were there other products to replace the Aroclors for
7 such uses?

8 A. There were products that were available to
9 substitute; however, in many cases the substitution
10 did not result in identical properties or
11 characteristics. In many cases they had to sacrifice
12 some feature, such as durability or fire resistance
13 and so on. But there were substitutes. Some of them
14 not as favorable to our customers as they wanted.

15 Q. But after 1970 there were still paints and
16 plasticizers and mastics and caulks available on the
17 market; am I right?

18 A. Yes, with diminished properties.

19 Q. In all cases?

20 MR. GOUTMAN: If you know, sir.

21 THE WITNESS: I can't speak for all
22 cases, no.

23 BY MR. MC CLAIN:

24 Q. Now, in 1976 was there a law passed which

1 influenced the production of all Aroclors known as
2 TSCA?

3 A. Yes.

4 Q. What was the impact of that law, if you have
5 an understanding?

6 A. Will you help me with impact on who and where?

7 Q. On Monsanto.

8 A. On Monsanto. Well, Monsanto anticipated some
9 regulatory activity of this type, so the impact
10 really is difficult to measure because Monsanto was
11 ready to terminate all activity regarding PCBs, and
12 in fact they terminated sales before the TSCA Act
13 required it.

14 Q. When did Monsanto terminate sales of all
15 Aroclors, whether they be for a closed system or any
16 other use?

17 A. As I remember, it was July '77.

18 Q. And that was approximately when your job
19 changed to Director of Environmental Operations.

20 MR. GOUTMAN: Objection to the form of
21 the question.

22 THE WITNESS: Yes. The timing, yes.

23 BY MR. MC CLAIN:

24 Q. And did you have any responsibilities after

1 '77 in regard to Aroclors in your job as Director of
2 Environmental Operations?

3 A. Yes, the responsibility that I had under that
4 assignment involved the use or continued use of PCB
5 type products in plants assigned to that part of
6 Monsanto in terms specifically of electrical
7 equipment, so my responsibility was to make sure that
8 if they worked on a transformer and had to drain it
9 or repair it and so on, that the proper safeguards
10 were taken and the material handled appropriately.

11 Q. Now, I have an understanding, Mr. Papageorge,
12 that during approximately this time period Monsanto
13 instituted a program of recycling or disposing of PCB
14 by-products or fluids for customers that had them
15 still in transformers or other uses. Am I accurate
16 about that?

17 MR. GOUTMAN: Objection to the form of
18 the question.

19 THE WITNESS: When you say 1977, sir,
20 I -- I think you are referring, and correct me
21 if I'm wrong, I think you are referring to an
22 incineration service that Monsanto offered for
23 the destruction or disposal of liquids,
24 pumpable material, that contained PCBs. As

1 best I remember, by 1977, which is the year we
2 are talking about, that unit was either down or
3 close to be being shut down. I don't remember
4 it being in service in 1977.

5 BY MR. MC CLAIN:

6 Q. How long did it operate? When did it operate?

7 A. As best I remember, it started operating in
8 late 1971.

9 Q. I see.

10 A. Until about 1977.

11 Q. And why was it operated during those years,
12 1971 through 1977?

13 A. To provide a means of properly destroying
14 PCBs.

15 Q. So that they didn't get into the environment.

16 A. Well, that was the ultimate objective, yes.

17 Q. Why after '77 was that service discontinued?

18 A. Primarily -- well, it is two reasons. One is
19 there were commercial incinerators available prior to
20 that 1977 date, but in 1977, as I recall, the unit
21 that Monsanto had had reached a point where it just
22 could not be maintained properly. It had served its
23 purpose and was damaged to the point where it had to
24 be dismantled.

1 Q. In your next job as environmental, as Director
2 of Environmental Operations for Monsanto Industrial
3 Chemical Company, '83 through '85, did you continue
4 to have any responsibilities or involvement for
5 Aroclors?

6 A. Again, it was a case of for those systems that
7 still contained Aroclors at the plants assigned to
8 me, I had to make certain that proper procedures were
9 followed in handling those PCBs.

10 Q. That were still in use in those plants and
11 equipment or other uses.

12 A. Yes.

13 Q. And then finally you were the Manager for
14 Occupational Health for one year before your
15 retirement. Did you have any responsibility for
16 Aroclors during that time period?

17 A. Well, I had to make certain that all of
18 Monsanto's plants, which were close to 30, followed
19 the proper industrial hygiene practices as it related
20 to the handling of PCB materials.

21 Q. And what were those practices as of 1986 that
22 were in use in Monsanto plants in handling PCB
23 containing materials?

24 A. In 1986 it really referred to the use as a

1 dielectric fluid in electrical equipment.

2 Q. And what were the industrial hygiene controls
3 that were in use around dielectric fluids?

4 MR. GOUTMAN: In 1986?

5 MR. MC CLAIN: 1986.

6 THE WITNESS: 1986. There, of course,
7 was the need to keep any concentrations of the
8 vapors below the then available OSHA
9 requirements. As I remember, they were a half
10 milligram per cubic meter of air for Aroclor
11 1242 and one milligram per cubic meter of air
12 for Aroclor 1254. And in addition to that,
13 they were, the industrial hygienists at the
14 plants, had a responsibility for making certain
15 that the employees that might handle this
16 dielectric fluid, either from a leaking
17 transformer or topping off a transformer or
18 changing out a unit, followed the long
19 established practices of wearing the right kind
20 of gloves, don't get it on their skin, washing,
21 of course not ingesting. In other words, when
22 they stopped for lunch wash your hands before
23 you eat your food. These kinds of things were
24 part of the responsibility of the occupational

1 health system.

2 BY MR. MC CLAIN:

3 Q. And the industrial hygienists in the plants
4 reported to you?

5 A. No, the plant personnel reported within the
6 plant organization, and depending on the size of the
7 plant he may be a full-time industrial hygienist or
8 he may wear several hats. He may be the safety man,
9 he may operate the fire truck, or he may also be the
10 industrial hygienist, but in every plant that I
11 recall that individual reported in to what today is
12 called the human resources part of the plant.

13 Q. And did that human resources person have a
14 reporting responsibility to you?

15 A. No, they reported to the plant manager?

16 Q. And did anyone report to you about plant
17 activities in regard to PCBs?

18 MR. GOUTMAN: Objection to the form of
19 the question as to plant activities.

20 MR. MC CLAIN: What was going on at the
21 plant. Going on at the plant.

22 MR. GOUTMAN: What was that?

23 MR. MC CLAIN: What was going on at the
24 plant is what I mean by "plant activities".

1 MR. GOUTMAN: I think that's overly
2 broad.

3 THE WITNESS: I have a problem with your
4 use of the word "reporting". To me reporting
5 means I am the supervisor and he is responsible
6 to me and if he doesn't perform I replace him.
7 Is that the kind of reporting you are thinking
8 of?

9 BY MR. MC CLAIN:

10 Q. No, I was referring to it in the casual sense
11 of someone reporting to you about the activities of
12 the plant.

13 A. The communication function.

14 Q. That is what I mean.

15 A. Oh, yes, they would report?

16 Q. In that sense.

17 A. They would share their experiences at their
18 plants with me. I tried to stay tuned in and I
19 fulfilled a role where if an individual needed some
20 resources, whether he needed test equipment or
21 another person on his staff, I would go to bat for
22 them and go to the plant manager and arrange for
23 these things for them?

24 Q. So you were more, in regard to those persons,

1 a resource person to someone to try to make sure that
2 their needs were being meant so that they could
3 handle the industrial hygiene function at the plant
4 level?

5 A. From their viewpoint?

6 Q. Yes.

7 A. Yes.

8 Q. During your time, any of your time, at
9 Monsanto, in any of your positions, were you involved
10 in any efforts to clean up spills of Aroclors at
11 plants?

12 Let me back up. Were there instances
13 where there were spills at plants that were viewed as
14 a potential threat to human health?

15 MR. GOUTMAN: Objection to the form of
16 the question.

17 You may answer if you can.

18 THE WITNESS: I don't recall any
19 perception of a spill that was interpreted as a
20 threat to human health. It was just one big
21 mess kind of situation.

22 BY MR. MC CLAIN:

23 Q. Were special procedures employed to clean up
24 the mess?

1 MR. GOUTMAN: Objection to the use of
2 the phrase "special procedures".

3 You may answer.

4 THE WITNESS: You will have to help me
5 with "special" because it is time related.

6 BY MR. MC CLAIN:

7 Q. Tell me what, from the very earliest days,
8 there were concerns, were there not, and that is from
9 the very time that you came to work in 1951, with the
10 toxicity of PCBs?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: Well, I find the word
14 "concerns" a little misleading in that the
15 concerns for PCBs were no different than the
16 concerns for all industrial chemicals. The
17 message to the workers is respect that
18 chemical. Don't wallow in it, don't drink it.
19 This kind of message. So when we have, to get
20 back to the PCB spill, naturally he's not --
21 he's told don't wallow, don't walk through it.
22 Contain it. Shut off the valve or whatever it
23 is to stop the continued spillage. I don't
24 know how else to explain that.

1 BY MR. MC CLAIN:

2 Q. In 1951 it is true, isn't it, that you knew,
3 when you first came to work at Queeny, that PCBs
4 could cause chloracne.

5 A. I didn't know that in 1951, no.

6 Q. You knew also, didn't you, that PCBs could
7 cause liver damage in 1951?

8 THE WITNESS: I was eventually aware of
9 that, but you mentioned '51. That's why I
10 hesitated.

11 BY MR. MC CLAIN:

12 Q. How shortly after you came to work did you
13 know that PCBs could cause chloracne?

14 A. The best I can recall, I was involved with the
15 maintenance function, which was the 1956 period.

16 Q. During that time period, 1956, did you also
17 become aware that PCB exposure could cause liver
18 damage?

19 A. Yes, it could at excessive exposures. Yes.

20 Q. And is it true that in 1956 men working around
21 PCBs were required to wear protective clothing?

22 A. Yes, just like all other chemicals. It was
23 not unique. You had to use the right gloves, the
24 right kind of coveralls, change clothes, shower. All

1 of these features were pretty universal.

2 Q. And what specifically was utilized at the
3 Queeny plant for men working around PCBs?

4 And it was men in those days, wasn't
5 it?

6 A. Yes.

7 Q. What were the men required to wear when
8 working around PCBs at the Queeny plant?

9 A. Of course it depended on the job and the
10 circumstances. If there were fumes, for example,
11 coming out of a tank, they were expected to put on a
12 respirator if they were going to stay exposed. If
13 there's a situation that involves handling a piece of
14 equipment, they were supposed to put on the proper
15 kind of glove that would keep the PCBs off of his
16 skin and at the same time the glove should be the
17 type that can withstand that exposure. It wouldn't
18 swell up or create a leak so that the PCB could get
19 to this person's hands.

20 Q. Because they were -- strike that.

21 Would the PCBs corrode or dissolve
22 normal gloves?

23 MR. GOUTMAN: Objection. I don't know
24 what you mean by "normal gloves".

1 BY MR. MC CLAIN:

2 Q. When you say they had to be special gloves
3 that would withstand PCBs, what did you mean?

4 A. The material of choice then was neoprene type.
5 It is a synthetic rubber. They were discouraged --
6 not discouraged; they were not allowed to use, say,
7 canvas lined gloves or cotton woven, cotton gloves,
8 or any other material that would absorb the liquid.

9 Q. Why?

10 A. To keep the PCB off of their skin.

11 Q. Could PCBs be absorbed through the skin?

12 A. Yes.

13 Q. Could they affect the skin surface as well?

14 A. Yes.

15 Q. And so the neoprene gloves were designed to
16 keep the PCBs off the skin.

17 MR. GOUTMAN: That's what he just said.

18 THE WITNESS: Well, I don't want to make
19 it sound like the neoprene gloves were
20 specifically designed just for PCBs.

21 BY MR. MC CLAIN:

22 Q. I understand.

23 A. They happened to be appropriate because of the
24 characteristic of neoprene for involvement with PCBs.

1 Q. And in regard to the respirators, what type of
2 respirators were utilized when working around PCBs?

3 A. I don't remember --

4 MR. GOUTMAN: Objection to the form of
5 the question. Excuse me.

6 THE WITNESS: I don't remember the
7 catalog number. It is a respirator designed to
8 absorb organic chemical fumes.

9 BY MR. MC CLAIN:

10 Q. And they weren't just paper masks, as an
11 example.

12 A. No, they had an absorbant material, primarily
13 carbon.

14 Q. Cartridges?

15 A. Cartridges that were replaceable. As long as
16 they sense that some of the odor is getting through
17 they would get a new cartridge.

18 Q. And what about covering for the shoes of the
19 men working with it? Were they required to wear
20 covers over their shoes made of neoprene?

21 A. Covers were available. Also what we call at
22 the plants booties, which are -- you don't need a
23 pair of shoes inside the booty; it is a shoe in and
24 of itself made of a resistant material.

1 Q. And those were utilized when working around
2 PCBs; is that correct?

3 A. They were available and it was a judgment call
4 on the part of the employee to decide whether he's
5 going to have to walk through it or he doesn't have
6 to put anything special on his feet.

7 Q. Why was that of concern, that someone would
8 walk through it, in normal shoes?

9 A. Well, by normal shoes, let's agree that we are
10 talking about the typical leather top shoe with,
11 perhaps, a synthetic rubber sole, maybe even a
12 leather sole. Now, the leather, itself, is an
13 absorbent. The liquid will soak through fairly
14 quickly and get to the person's socks and his skin.
15 And the whole idea is to avoid that kind of exposure.
16 This is why the booties were recommended. It goes
17 above the ankle so that it gives you a little more
18 protection.

19 Q. All right. And so there was a concern that
20 absorbing this material, even into the shoes, could
21 be absorbed into the systems of the workers?

22 A. Yes.

23 MR. GOUTMAN: Objection to the form of
24 the question.

1 BY MR. MC CLAIN:

2 Q. Through the soles of their feet?

3 MR. GOUTMAN: Objection to the form of
4 the question.

5 You may answer if you can.

6 THE WITNESS: My answer is yes.

7 BY MR. MC CLAIN:

8 Q. Were the workers provided with coveralls or
9 other clothing at the plant that they were required
10 to leave at the plant when working around PCB
11 materials?

12 A. Yes.

13 Q. Why?

14 A. That wasn't unique to PCBs. The whole plant
15 had a change of clothing as part of the practice in
16 the plant.

17 Q. Why?

18 A. Because in a chemical plant everyone is
19 exposed to so many different kinds of chemicals. It
20 was decided prudent that the clothing used
21 throughout the day, whether it had dust on it or oil
22 stain or what have you, be thrown into the dirty
23 clothes bin and laundered by a commercial laundry so
24 that the employee did not take any of that into the

1 family laundry room and expose his family, not
2 knowing what is on that garment.

3 Q. So did Monsanto have concerns that even the
4 residue of these chemicals contained on clothing
5 might be a health risk to persons that were related
6 to workers?

7 MR. GOUTMAN: Objection to the form of
8 the question.

9 MR. MC CLAIN: Related or lived in the
10 home, I guess, would be a better description.

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: Well, there is that
14 thought. I don't know. Concern implies almost
15 panic.

16 BY MR. MC CLAIN:

17 Q. No, I didn't say anything about panic.

18 A. I don't know about that.

19 Q. But you were, as the maintenance supervisor at
20 Queeny, at least aware of the potential that if the
21 men wore their coveralls home after working around
22 the Aroclors that that material could be absorbed in
23 the skin of their wives or persons laundering the
24 coveralls they took home; am I right?

1 MR. GOUTMAN: Objection to the form of
2 the question.

3 THE WITNESS: It is just the presence of
4 PCBs or any industrial chemical in the home
5 that is perceived to be inappropriate. It has
6 no place in the home, so don't take it home is
7 the thought behind this laundry service that
8 was provided.

9 BY MR. MC CLAIN:

10 Q. And that was in place in 1961, when you were
11 maintenance supervisor at Queeny, as an example, just
12 to put a date on it.

13 I'm sorry. I picked the wrong date. I
14 don't know why I said '61. The date on your CV is
15 1956 through 1957.

16 A. Yes.

17 Q. Now, to get back to my question, we started
18 down this road because I asked the question were
19 there times at plants, at the Queeny plant as an
20 example, where there were specific cleanups employed
21 because there was a generalized concern that if it
22 didn't get cleaned up it would be a health threat to
23 workers?

24 MR. GOUTMAN: Objection. That's been

1 asked and answered.

2 MR. MC CLAIN: I want to be clear about
3 it because we had some definitional problems
4 which is why we started down this road.

5 MR. GOUTMAN: I don't think there were
6 any definitional problems. He already answered
7 the question ---

8 MR. MC CLAIN: Okay. I don't need to
9 fight with you; all I want to ask the witness
10 whether or not he can answer the question.

11 MR. GOUTMAN: If I can just finish a
12 sentence without you interrupting me, Ken. The
13 witness has answered that question, there are
14 no definitional problems, I object to the
15 question, but if the witness would like to try
16 to answer it again that's fine.

17 Read back the question, please.

18 (The last question was read back by the
19 Court Reporter).

20 THE WITNESS: There were in place
21 procedures for coping with different spills,
22 depending on the size of the spill, the
23 location, the temperature of the spill. If it
24 is a cold fluid it is an awful lot like oil

1 from your car in the garage floor kind of thing
2 or if it is a leak from a very hot source where
3 it is fuming while it is on the ground, that's
4 a little different scenario or scene. The
5 whole idea was to prevent employees from
6 unnecessarily coming near it. Each case can
7 result in a different approach. If a spill is
8 minor, in the fifties, as we are talking about,
9 such things as sawdust, clay, or sand would be
10 used to absorb the spilled liquid. Later on in
11 the '70's there was an attempt to contain the
12 spills inside of drip pans and buckets that
13 would contain the fluids so that it could
14 easily be transferred into an appropriate
15 place. I don't know what else to add because
16 in time the procedures did change, depending on
17 what was known and what was available.

18 BY MR. MC CLAIN:

19 Q. You mentioned the problem of --

20 MR. GOUTMAN: Excuse me before you pose
21 the next question.

22 BY MR. MC CLAIN:

23 Q. You mentioned --

24 MR. GOUTMAN: I think the record should

1 be clear that this witness was addressing
2 industrial chemicals generally and not
3 specifically Aroclors in that last answer.

4 MR. MC CLAIN: I don't need your
5 clarification at all.

6 MR. GOUTMAN: I don't really care if you
7 need it, Ken.

8 MR. MC CLAIN: Unless you want to raise
9 your hand and be sworn, because I will be happy
10 to take your deposition if you would like me
11 to, but I don't know if you have the ability to
12 testify one way or the other. Any time you
13 want to ask the witness any questions I'll be
14 happy to stop and go take a break. You can ask
15 him whatever questions you would like. That's
16 certainly your right. I would prefer that you
17 do it after I'm done, but I'll give you the
18 courtesy if you want to ask a question, but I
19 don't think it is proper for you to testify.

20 MR. GOUTMAN: Well, I thought that you
21 would want to know or keep the record straight
22 --

23 MR. MC CLAIN: Thank you for your
24 courtesy.

1 MR. GOUTMAN: Excuse me, Ken. Just
2 don't interrupt me anymore today.

3 MR. MC CLAIN: I'll do whatever, Tom, I
4 feel I need to at the appropriate time. I'll
5 try to contain myself, though.

6 MR. GOUTMAN: Ken, this deposition won't
7 continue if you continue to interrupt me.

8 MR. MC CLAIN: Then we will have to come
9 back.

10 MR. GOUTMAN: I don't think Judge
11 Mirarchi countenances counsel interrupting
12 other counsel. Now, I will be courteous to you
13 --

14 MR. MC CLAIN: I don't think Judge
15 Mirarchi --

16 MR. GOUTMAN: You just did it again.

17 MR. MC CLAIN: I don't think Judge
18 Mirarchi would countenance you leaning over,
19 whispering to the witness, and then testifying
20 on the record. I don't appreciate that.

21 MR. GOUTMAN: Sir, I don't think that
22 Judge Mirarchi likes counsel interrupting other
23 counsel. Now, if you can't conduct yourself in
24 a gentlemanly fashion and a professional

1 fashion and let me finish a sentence, this
2 deposition will end.

3 MR. MC CLAIN: Tom, I think you are
4 being overly sensitive about this, and I think
5 I could get three witnesses to that effect.
6 I have been very low key here, I haven't been
7 discourteous in the least, but if you feel like
8 I have been, you know, end the deposition at
9 your peril.

10 MR. GOUTMAN: No, I'm asking you not to
11 interrupt me, sir. Can you do that?

12 MR. MC CLAIN: I don't know. We will
13 see.

14 MR. GOUTMAN: I was interested in
15 clarifying the record and that's why I
16 interjected that comment. If you are not
17 interested in clarifying the record, that's
18 fine.

19 MR. MC CLAIN: I appreciate your
20 clarifying the record by asking questions at an
21 appropriate time.

22 BY MR. MC CLAIN:

23 Q. Mr. Papageorge, you said something that
24 sparked a question that I wanted to raise with you,

1 which is the question of what happens to PCBs when
2 they are heated. At some temperature do they become
3 furans?

4 A. Become what, sir?

5 Q. Furans.

6 A. Furans?

7 Q. Furans.

8 A. Furans?

9 Q. Yes.

10 A. I'm sorry.

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: My chemistry training
14 tells me, sir, that there is very likely a
15 temperature that must be present for furans to
16 be created, along with several other conditions
17 with the formation of furans. It's not just a
18 temperature function.

19 BY MR. MC CLAIN:

20 Q. What are those conditions that --

21 A. You would have to have carbon, oxygen,
22 hydrogen, chlorine in the proper configuration so you
23 end up with a chemical which is called a furan, yes?

24 Q. Did you ever deal with the issue of the

1 transformation of PCBs into furans in a fire
2 situation while you were with Monsanto?

3 MR. GOUTMAN: Objection to the form of
4 the question.

5 THE WITNESS: No.

6 BY MR. MC CLAIN:

7 Q. That never was an issue that you addressed.

8 A. No.

9 Q. Were you involved in any situations involving
10 PCBs in fires in buildings during your time at
11 Monsanto?

12 MR. GOUTMAN: Objection to the form of
13 the question.

14 THE WITNESS: Yes.

15 BY MR. MC CLAIN:

16 Q. What situations were you involved with?

17 A. These were litigation matters. I recall the
18 Binghamton, New York situation. I remember the One
19 Market Plaza situation. That's all I recall.

20 Q. And what was your involvement in Binghamton,
21 New York?

22 A. I certainly was aware of the situation there
23 and I got my information from attorneys.

24 MR. GOUTMAN: Well, in that case don't

1 go any further. I caution you not to disclose
2 anything, any communications, between yourself
3 and counsel for Monsanto.

4 BY MR. MC CLAIN:

5 Q. Did you testify as a witness in that matter?

6 MR. GOUTMAN: In what matter;
7 Binghamton?

8 MR. MC CLAIN: Yes.

9 THE WITNESS: No.

10 BY MR. MC CLAIN:

11 Q. Did you provide any advice or direction to the
12 building owner in that circumstance?

13 A. No.

14 Q. Did Monsanto?

15 A. I don't know.

16 Q. So other than information that you received
17 from attorneys, did you know anything about the
18 Binghamton, New York matter?

19 A. What I read in the local newspapers.

20 Q. And what was that that you can recall?

21 A. That a fire occurred, the allegations that the
22 building was unfit for human occupancy. That kind of
23 thought remains with me. It has been several years
24 now.

1 Q. Yes. In regard to your responsibilities, did
2 you have any responsibilities to investigate whether
3 or not it was fit for habitation or what effect the
4 fire would have in a building that contained PCBs?

5 A. No.

6 MR. GOUTMAN: Objection.

7 Sir, you are going to have to wait until
8 I have a chance to object before you answer.

9 Objection to the form of the question.

10 BY MR. MC CLAIN:

11 Q. What about One Market Plaza? What was your
12 understanding of what happened there?

13 MR. GOUTMAN: Again, sir, I caution you
14 not to disclose any information that you
15 obtained by virtue of communications between
16 yourself and counsel for Monsanto.

17 THE WITNESS: The only information I
18 recall I read in the public press.

19 BY MR. MC CLAIN:

20 Q. What did you understand the situation was
21 there from your reading in the public press?

22 A. That a transformer failed with a resulting
23 fire, and that's about it that I can remember.

24 Q. Were you asked by Monsanto to investigate this

1 matter?

2 A. No.

3 Q. Did you make any determination in regard to
4 this matter about whether or not the presence of PCBs
5 made that building uninhabitable?

6 A. No.

7 Q. Was there a predecessor company to Monsanto in
8 the manufacture of PCBs?

9 MR. GOUTMAN: Objection. Calls for a
10 legal conclusion.

11 THE WITNESS: Yes.

12 BY MR. MC CLAIN:

13 Q. As you understand it, was there a predecessor
14 company?

15 MR. GOUTMAN: Same objection.

16 THE WITNESS: Yes.

17 BY MR. MC CLAIN:

18 Q. What was that company?

19 A. Swann Chemical Company.

20 Q. Let me show you a document and see if you have
21 seen it before today.

22 Let's mark this as Exhibit Papageorge
23 2. (Indicating).

24 (The above-referred-to document was

1 marked as Papageorge Exhibit 2 for
2 identification)

3 BY MR. MC CLAIN:

4 Q. Okay?

5 A. I have read the exhibit.

6 Q. Were you aware that as early as 1934 Swann
7 Chemical had performed studies concerning dermatitis
8 and exposure to Aroclors?

9 MR. GOUTMAN: At what point?

10 MR. MC CLAIN: Was he aware at any point
11 in his career.

12 THE WITNESS: I was informed in the
13 early 1970's of Swann's experience with skin
14 problems with employees. This particular
15 Exhibit is not familiar to me. I don't recall
16 ever seeing it.

17 MR. MC CLAIN: But you had heard in 1970
18 that Swann had done some research into exposure
19 to Aroclor?

20 MR. GOUTMAN: Objection. Misstates
21 prior testimony.

22 THE WITNESS: No, I had heard that
23 Swann, as a producer of PCBs, had an incident
24 where employees had a skin condition. I do not

1 relate that to any formal tests as described in
2 this document. (Indicating)

3 BY MR. MC CLAIN:

4 Q. Do you have any understanding about whether or
5 not that testing was pursued that is described in the
6 document in front of you?

7 A. I do not.

8 Q. Did you know Dr. Emmet Kelly?

9 A. Yes.

10 Q. Who was he?

11 A. He at one time was Monsanto Company's
12 corporate medical director.

13 Q. And when did you come to know him?

14 A. I don't recall when I first met the man, but
15 he and I got to know each other better starting when
16 I was plant manager at Anniston, Alabama, and he
17 would make his visits to the plant.

18 MR. MC CLAIN: Let me hand you what we
19 will mark as Papageorge Exhibit 3.

20 (Indicating).

21 (The above-referred-to document was
22 marked as Papageorge Exhibit 3 for
23 identification)

24 BY MR. MC CLAIN:

1 Q. Did --

2 MR. GOUTMAN: Do you want him to read it
3 first?

4 MR. MC CLAIN: First I want to ask a
5 question because I may want to give you another
6 document to look at with that document.

7 BY MR. MC CLAIN:

8 Q. Did Monsanto have a plant in Brazil, Indiana?

9 A. Not that I know of.

10 Q. Did you know a Mr. Frank Capnea?

11 A. No.

12 Q. Go ahead and review this document.

13 A. I have read the exhibit.

14 Q. Did you know that in 1950 Dr. Kelly suspected
15 the possibility that Aroclor fumes might cause liver
16 damage?

17 MR. GOUTMAN: Objection. Objection to
18 the form of the question.

19 THE WITNESS: Yes.

20 BY MR. MC CLAIN:

21 Q. And that he based that on work that had been
22 done by Dr. Drinker in 1938?

23 MR. GOUTMAN: Objection to the form of
24 the question.

1 THE WITNESS: Oh, I don't know that Dr.
2 Kelly based his opinion on only that work, so I
3 can't speak for Dr. Kelly.

4 BY MR. MC CLAIN:

5 Q. Are you familiar that Dr. Drinker did work in
6 1938 regarding Aroclors?

7 A. Yes.

8 Q. And were you aware that Dr. Kelly was aware of
9 that work?

10 A. Yes.

11 MR. MC CLAIN: Why don't we take a
12 break. We have been going for about an
13 hour-and-a-half.

14 MR. GOUTMAN: Sure.

15 (Off the record discussion)

16 BY MR. MC CLAIN:

17 Q. Did you know an E. Mather?

18 A. Matter or Mather?

19 Q. M A T H E R.

20 A. Oh, Mather. Yes.

21 Q. Who is he?

22 A. He's a Monsanto employee working in the
23 Monsanto research department.

24 Q. By the way, I had a question about the last

1 Exhibit. Who is Mr. Paul Benignus?

2 A. Benignus?

3 Q. Benignus.

4 A. He's a Monsanto employee with various
5 assignments throughout Monsanto.

6 MR. GOUTMAN: You are taking his
7 deposition next week.

8 MR. MC CLAIN: Okay. Thank you.

9 MR. GOUTMAN: He'll be able to tell you
10 who he is.

11 BY MR. MC CLAIN:

12 Q. What was his responsibility?

13 A. At what point in time, sir?

14 Q. In 1951, 1950.

15 A. He was the individual in Monsanto's business
16 group that associated with fluid, functional fluids,
17 industrial fluids, and he was responsible for the
18 electrical applications?

19 Q. During what period of time did he remain in
20 that position? Do you know?

21 A. He retired in 1974, so it is before 1950 and
22 ending in 1974?

23 Q. Who was Mr. P.J.C. Haywood?

24 A. Would you repeat that last name again?

1 Q. Haywood, H A Y W O O D.

2 A. The name rings a faint bell, but I at the
3 moment can't place him.

4 MR. MC CLAIN: This will be Papageorge
5 Exhibit 4. (Indicating).

6 (The above-referred-to document was
7 marked as Papageorge Exhibit 4 for
8 identification)

9 BY MR. MC CLAIN:

10 Q. When you came to work --

11 MR. GOUTMAN: Excuse me. He's still
12 reading, Ken.

13 MR. MC CLAIN: Sorry.

14 THE WITNESS: I have read the exhibit.

15 BY MR. MC CLAIN:

16 Q. Do you see on page two of this document, in
17 reference to Aroclors in 1948 it is suggested by
18 Robert M. Brown, the Chief of the Industrial Hygiene
19 section, Division of Health, Department of Public
20 Welfare, City of St. Louis, Missouri, that there is a
21 need to give warnings when working around and with
22 Aroclors?

23 MR. GOUTMAN: Objection to the form of
24 the question.

1 THE WITNESS: Yes, it is there.

2 BY MR. MC CLAIN:

3 Q. Was there a warning given in 1951 when you
4 came to work on tanks or drums of Aroclors that went
5 out from the plant?

6 A. I think you are referring to the label affixed
7 to the container?

8 Q. Yes.

9 A. Yes, there were warnings. Yes.

10 Q. There were warnings?

11 A. Yes.

12 Q. And what did that warning say?

13 A. I don't propose to give you the exact wording,
14 but it referred to avoidance of skin contact,
15 breathing fumes, injesting. Words to that effect.

16 Q. Was there any mention made of the possibility
17 of liver damage on that label that you recall?

18 A. No, effects are never on labels, sir.

19 Q. My question was did it say anything about
20 liver damage.

21 A. The answer is no. Typical of all industrial
22 chemicals.

23 Q. And was there any mention made of dermatitis
24 on the label?

1 A. No, it refers to avoid skin contact.

2 Q. Or chloracne?

3 A. That's correct. There is no mention of
4 chloracne specifically.

5 Q. Let me show you what we will mark as
6 Papageorge Exhibit 5. (Indicating).

7 (The above-referred-to document was
8 marked as Papageorge Exhibit 5 for
9 identification)

10 BY MR. MC CLAIN:

11 Q. Sir.

12 A. I have read the exhibit.

13 Q. Can you identify any of the individuals
14 referenced in the top in handwriting? J.W. Meigs?
15 J.J. Albon? I can't read. B.L. Whomever. Maybe you
16 can. It refers to the -- I thought it was, at
17 first glance, a reference to who it went to.

18 A. I don't recognize any of those names.

19 Q. I think that's the authors of an article as I
20 look at it more closely.

21 This is apparently a report of an
22 article or summary of an article that appeared in The
23 Journal of the American Medical Association in 1954.
24 You were aware, at about this time, about the problem

1 of chloracne and contact dermatitis in '54.

2 MR. GOUTMAN: Objection to the form of
3 the question.

4 THE WITNESS: I was aware of the
5 possibility of chloracne symptoms due to
6 excessive exposures to PCBs.

7 BY MR. MC CLAIN:

8 Q. And what are chloracne symptoms?

9 A. I'm no medical person, but I have seen --

10 Q. What is it?

11 A. It looks like, to me, it looked like teenage
12 acne concentrated on the cheekbone area and the
13 hairline behind the ears. (Indicating).

14 Q. Was it painful to the workers as it was
15 reported to you?

16 A. No pain; it was a disfiguration. The
17 treatment was painful.

18 Q. What was the treatment?

19 A. In those days they used ultra violet light.
20 This is not for a PCB exposure; this is a different
21 chemical.

22 Q. And what was that chemical?

23 A. It was a wood treating chemical, sodium
24 pentachlorophenate.

1 Q. That's when you saw it?

2 A. That's the group that was in my work group
3 that made this wood treating chemical and were
4 exposed during the process.

5 Q. Did you observe it in connection, "it" being
6 chloracne, in association with workers working in the
7 Queeny plant around Aroclors?

8 A. No.

9 Q. Why?

10 A. Never.

11 Q. Was it because of the precautions that were
12 taken in the plant to prevent workers from being
13 exposed?

14 MR. GOUTMAN: Objection. Calls for a
15 medical conclusion.

16 BY MR. MC CLAIN:

17 Q. If you can draw that conclusion.

18 A. Well, sir --

19 MR. GOUTMAN: I also object because it
20 calls for speculation.

21 THE WITNESS: I don't know how to answer
22 that except that the precautions that we took
23 were intended to avoid situations like that and
24 we would like to think that they were

1 successful. That's what that tells us.

2 MR. MC CLAIN: I will show you what we
3 are going to mark as Papageorge Exhibit 6.
4 (Indicating).

5 (The above-referred-to document was
6 marked as Papageorge Exhibit 6 for
7 identification).

8 MR. GOUTMAN: My objection to the use of
9 this document, it was produced in the Scott
10 litigation when documents in the Scott
11 litigation were subject to a confidentiality
12 order entered by the judge in that litigation.

13 MR. MC CLAIN: So you didn't produce it
14 in this case?

15 MR. GOUTMAN: I don't know if this
16 particular document was produced in this case
17 or not, but it certainly wasn't Bates stamped
18 SCM 048757. I just --

19 MR. MC CLAIN: If it wasn't --

20 MR. GOUTMAN: You are interrupting me
21 again and therefore I object.

22 MR. MC CLAIN: If it wasn't produced in
23 this litigation I want to know why not. I want
24 to know on what basis it was withheld because

1 this is the only copy of it that I have got. I
2 see no reason why it should have been withheld
3 for any other reason.

4 MR. GOUTMAN: I don't know if it was
5 withheld or not.

6 MR. MC CLAIN: I don't know either, but
7 since you raised the issue --

8 MR. GOUTMAN: There you go interrupting
9 me again. Try to control yourself and don't
10 interrupt me. I would like to finish my
11 statement.

12 MR. MC CLAIN: Don't tell me don't
13 interrupt you. I'm not going to take your
14 direction on anything; all I want to know is
15 why this document wasn't produced in this case.

16 MR. GOUTMAN: I would suggest, sir, that
17 you take a break and get control of yourself.

18 MR. MC CLAIN: I am not out of control.
19 You have interjected a specious objection and
20 it raised a real question in my mind about the
21 production of documents in this case.

22 MR. GOUTMAN: It raises a question in
23 mind because I would like to know how you got
24 ahold of documents that are subject to a

1 confidentiality agreement. Why don't you tell
2 us that for the record.

3 MR. MC CLAIN: I want -- I'll answer
4 your question if you tell me why this wasn't
5 produced in this case.

6 MR. GOUTMAN: I don't know if it was
7 produced or not.

8 MR. MC CLAIN: And if you made the
9 decision to withhold it.

10 MR. GOUTMAN: I don't know if it was
11 produced or not. Are you telling us as an
12 officer of the court that this document was not
13 produced?

14 MR. MC CLAIN: I'm telling you this is
15 the copy that I have got in my file and it does
16 not bear a Bates stamp number, as you point
17 out, from your production in this case and this
18 is the copy that I have in front of me. I
19 believe it was produced to us from another
20 source which I don't believe was you, so it
21 leads me to the conclusion that it wasn't
22 produced in this case.

23 MR. GOUTMAN: Sir, are you saying as an
24 officer of the court that this document was not

1 produced by us in this litigation?

2 MR. MC CLAIN: I believe it was not.

3 MR. GOUTMAN: Fine. We will put that to
4 the test.

5 MR. MC CLAIN: Okay. Let's do that.

6 MR. GOUTMAN: Do you have a question
7 about this document?

8 Are you done reading it?

9 THE WITNESS: No yet.

10 I have read the exhibit.

11 BY MR. MC CLAIN:

12 Q. Were you aware in 1955 that concerns were
13 being raised about surface coating use of Aroclors?

14 MR. GOUTMAN: Objection to the form of
15 the question.

16 THE WITNESS: In 1955 I was not.

17 BY MR. MC CLAIN:

18 Q. Were you aware that there were concerns being
19 raised by Dr. Kelly about uses of Aroclors in
20 household uses?

21 MR. GOUTMAN: Objection to the form of
22 the question.

23 THE WITNESS: In 1955, sir?

24 BY MR. MC CLAIN:

1 Q. Yes.

2 A. I was not.

3 Q. Do you see where he says, at page two of the
4 second document contained in the group dated
5 September 20, 1955 --

6 A. Do I see the paragraph? I do.

7 Q. Where he says, "If it is in an industrial
8 application where we can get air concentrations and
9 have some reasonable expectation that the air
10 concentrations will stay the same, we are much more
11 liberal in the use of Aroclor. If, however, it is
12 distributed to householders where it can be used in
13 almost any shape and form and we are never able to
14 know how much of the concentration they are exposed
15 to, we are much more strict."

16 Do you see that?

17 A. I see that.

18 Q. Did you know anything about this in 1955?

19 A. No.

20 Q. Did you know that this was a subject of
21 concern for Dr. Kelly?

22 MR. GOUTMAN: Objection to the form of
23 the question.

24 THE WITNESS: At that time?

1 BY MR. MC CLAIN:

2 Q. Yes.

3 A. No.

4 Q. Who was Dr. D.V.N. Hardy?

5 A. He was a medical doctor located in the British
6 Isles. I don't know if he was located in Wales or in
7 London, but he was associated with Monsanto in
8 England.

9 Q. Did you know that there was work on the
10 toxicology of Aroclors going on in Germany?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: At what point in time?

14 BY MR. MC CLAIN:

15 Q. Did you come to know it at any point in time?

16 A. Yes.

17 Q. What was the work that was done in regard to
18 toxicology of Aroclors that was performed in Germany?

19 A. I can only recall I was informed of the
20 studies in Germany, but at this moment I can't recall
21 any details.

22 Q. You can't recall the results?

23 A. I don't recall any of the specifics. How it
24 was performed, who it was performed for, or what the

1 results were.

2 Q. Who was J.W. Barrett?

3 A. Barrett was a Monsanto employee in England in
4 their research function in the London office.

5 Q. Who was Howard Nason?

6 A. Mr. Nason was the head of the research
7 department of Monsanto located in St. Louis.

8 Q. Do you know why Mr. Barrett would say, would
9 write, that they wouldn't do any toxicological
10 studies without full discussion with Mr. Nason?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: Can you tell me where that
14 is, sir?

15 BY MR. MC CLAIN:

16 Q. It is on the second page of the first
17 document.

18 A. No, I don't know what Mr. Barrett had in mind.

19 Q. Do you see here in the September 20, 1955
20 letter to J.W. Barrett from Dr. Kelly where he says
21 MCC's position, and that MCC means Monsanto Chemical
22 Company, doesn't it?

23 A. Yes.

24 Q. "Monsanto Chemical Company's position can be

1 summarized in this fashion. We know Aroclors are
2 toxic but the actual limit has not been precisely
3 defined."

4 As of 1955, did you have an
5 understanding that it was Dr. Kelly's view that the
6 precise level of toxicity had not been defined
7 precisely of Aroclors?

8 MR. GOUTMAN: Objection as to what Dr.
9 Kelly's thinking was. This witness is not Dr.
10 Kelly.

11 You can answer the question if you can.

12 THE WITNESS: I am not aware of the
13 situation as it existed in 1955.

14 BY MR. MC CLAIN:

15 Q. He goes on to say, "It does not make too much
16 difference, it seems to me, because our main worry is
17 what will happen if an individual develops any type
18 of liver disease and gives a history of Aroclor
19 exposure. I am sure the juries would not pay a great
20 deal of attention to the MACs", which I think are
21 Maximum Allowable Concentrations. MAC

22 A. MAC is that, yes. I have no --

23 MR. GOUTMAN: There's no question.

24 Do you have a question about that?

1 BY MR. MC CLAIN:

2 Q. Yes, the question is did you ever discuss this
3 with Dr. Kelly or know that he was discussing this
4 with others at that time?

5 MR. GOUTMAN: Objection to the form of
6 the question.

7 THE WITNESS: I did not know and do not
8 know.

9 BY MR. MC CLAIN:

10 Q. Do you see on the last page of this document,
11 the series of correspondence between Kelly and
12 Barrett where he says, "You commented in your letter
13 about the difference in toxicity between" --

14 MR. GOUTMAN: Sir, where are you?

15 MR. MC CLAIN: The last page.

16 BY MR. MC CLAIN;

17 Q. "This paragraph should read", do you see where
18 he makes that correction on the document? Is your
19 document the same as mine?

20 A. It doesn't look the same, sir.

21 MR. GOUTMAN: No, we don't have that
22 page.

23 BY MR. MC CLAIN:

24 Q. Is it stapled in a different order perhaps?

1 When they put together the copies.

2 MR. GOUTMAN: It doesn't contain that
3 page.

4 MR. MC CLAIN: Do you have a different
5 page?

6 MR. GOUTMAN: No.

7 MR. MC CLAIN: That page is missing.
8 I'm sorry. Except for the highlighted copy I
9 have got -- can I walk around with this and we
10 will substitute this as the exhibit? Although
11 it has got my handwriting on it.

12 MR. GOUTMAN: Just tear off the last
13 page.

14 MR. MC CLAIN: What we will do is then
15 add it to your document.

16 BY MR. MC CLAIN:

17 Q. This last document, go ahead and review it.

18 A. I have read it.

19 Q. Does it appear to you to be part of the
20 sequence of correspondence that is contained in
21 Exhibit 6?

22 MR. GOUTMAN: Objection. No foundation.
23 This witness has testified that he knows
24 nothing about this document.

1 In any event, you may answer if you can.

2 THE WITNESS: Your guess is as good as
3 mine. I don't know.

4 BY MR. MC CLAIN:

5 Q. Do you see that it is between the same
6 individuals?

7 MR. GOUTMAN: Can I see it again?

8 MR. MC CLAIN: Yes.

9 MR. GOUTMAN: Objection. The document
10 speaks for itself.

11 THE WITNESS: The same individuals are
12 noted on each of the two exhibits.

13 BY MR. MC CLAIN:

14 Q. And the date sequence is in close proximity of
15 each other.

16 MR. GOUTMAN: One is September 20 and
17 one is September 22. We will stipulate to
18 that.

19 BY MR. MC CLAIN:

20 Q. Do you see where it says, "You commented in
21 your letter about the difference in toxicity between
22 Aroclor 1254 and 1242. These differences are not
23 surprising because in the earlier work it was found
24 that toxicity increased with degree of chlorination."

1 Did you see that?

2 A. Yes.

3 Q. Did you know that was Dr. Kelly's opinion in
4 1955?

5 MR. GOUTMAN: Objection to the form of
6 the question.

7 THE WITNESS: Did I know in 1955 that
8 that was Dr. Kelly's opinion?

9 BY MR. MC CLAIN:

10 Q. Yes.

11 A. I did not.

12 Q. Did you have that opinion in 1955?

13 A. No.

14 Q. Was there a different warning placed on
15 Aroclors depending upon their degree of chlorination?

16 MR. GOUTMAN: Objection. When?

17 MR. MC CLAIN: In 1955.

18 THE WITNESS: No.

19 BY MR. MC CLAIN:

20 Q. Did you see where it says, "Of course, the
21 volatility is important in the case of inhalation
22 toxicity, and absorption into the intestinal tract is
23 important from the point of oral toxicity"?

24 MR. GOUTMAN: You are going to have to

1 show it to us.

2 MR. MC CLAIN: I apologize.

3 THE WITNESS: I see that, yes.

4 BY MR. MC CLAIN:

5 Q. Did you have any understanding of that subject
6 in 1955, the difference in toxicity depending upon
7 the volatility?

8 A. I did not.

9 Q. Was there any mention of that made on any of
10 the labels that you saw, that any one of Aroclors was
11 more toxic than the other?

12 A. No, we treated all of them as though they
13 could cause problems if excessive amounts were
14 absorbed or eaten or inhaled.

15 Q. Was there any reference given on any of them
16 that in an industrial use certain uses were
17 appropriate whereas uses in households were not
18 appropriate?

19 MR. GOUTMAN: Objection to the form of
20 the question.

21 You can answer.

22 THE WITNESS: I am not aware of any such
23 distinction.

24 MR. GOUTMAN: Do you want this affixed?

1 (Indicating).

2 MR. MC CLAIN: Yes.

3 BY MR. MC CLAIN:

4 Q. What is your preference, Mr. Papageorge, in
5 regard to lunch? Do you take lunch? We are going to
6 be a while. If I --

7 MR. GOUTMAN: The -- I'm interrupting
8 you.

9 MR. MC CLAIN: You can interrupt me at
10 any time you want.

11 MR. GOUTMAN: How long do you think you
12 will be?

13 MR. MC CLAIN: I think I'm clearly going
14 to be another three hours. I think that's
15 about my best estimate of what it will take.
16 So I think we probably -- four o'clock or so.

17 MR. GOUTMAN: Sorry. The question is
18 with a break or without a break?

19 MR. MC CLAIN: I think it is unfair to
20 the witness if I push on for three hours
21 without a break, don't you?

22 MR. GOUTMAN: Let me talk to the
23 witness.

24 MR. MC CLAIN: I can do that if you want

1 to.

2 MR. GOUTMAN: Let me talk to him off the
3 record.

4 Off the record
5 (Off the record discussion).

6 MR. GOUTMAN: We are going to break for
7 lunch at an appropriate time.

8 MR. MC CLAIN: There's two more
9 documents in the fifties.

10 MR. GOUTMAN: Will we get to some
11 documents that he authored or received?

12 MR. MC CLAIN: Received? No, there's not
13 going to be any of those.

14 This will be Papageorge Exhibit 7.
15 (Indicating).

16 (The above-referred-to document was
17 marked as Papageorge Exhibit 7 for
18 identification)

19 MR. GOUTMAN: Same objection as to the
20 use of the document that has been subject of a
21 confidentiality order.

22 THE WITNESS: I have read the exhibit.

23 BY MR. MC CLAIN:

24 Q. First of all, did you, at the time, 1955, know

1 that there was so much discussion about the toxicity
2 of Aroclors based upon their chlorination?

3 MR. GOUTMAN: Objection to the form of
4 the question.

5 THE WITNESS: No.

6 BY MR. MC CLAIN:

7 Q. Do you see here where it says that it was
8 being considered in 1955 to pass on to the American
9 Conference of Governmental Industrial Hygienists a
10 recommendation that different standards be adopted
11 for different Aroclors?

12 MR. GOUTMAN: Objection to the form of
13 the question.

14 You may answer.

15 THE WITNESS: I do see that, yes.

16 BY MR. MC CLAIN:

17 Q. You never saw a label that suggested such a
18 different standard, did you?

19 MR. GOUTMAN: Objection to the form of
20 the question.

21 BY MR. MC CLAIN:

22 Q. From Monsanto.

23 A. Sir, the industrial hygienists do not have
24 their recommendations on any label for industrial

1 chemicals.

2 Q. Did you ever know that there was a different
3 standard suggested for different chlorination levels
4 of Aroclor?

5 A. Did I ever know it? Yes.

6 Q. And was that by the ACGIH?

7 A. Yes.

8 Q. And when did they adopt that?

9 A. As best I recall, the late 1950's.

10 Q. Do you see here that it says that the
11 information being given out as of 1955 was that the
12 higher, this is on page two of the first document I'm
13 referring to in that first paragraph, do you see
14 where it says that the information that was given out
15 as of 1955 was that the higher chlorinated Aroclors
16 were less toxic than the lower level chlorinated
17 Aroclors?

18 MR. GOUTMAN: Are you referring to a
19 specific sentence?

20 MR. MC CLAIN: Yes. I'm referring to
21 that paragraph that begins, "However, if the
22 MCC", that is Monsanto Chemical Company's,
23 "recommendations are accepted there will be an
24 implication that Aroclor toxicity increases

1 with chlorine content, a reversal of all of the
2 position suggested in MCC technical
3 literature", and then it goes on to quote it.

4 MR. GOUTMAN: All right. What is the
5 question? I'm sorry. I didn't hear a question.

6 BY MR. MC CLAIN:

7 Q. Did you know that as of 1955 Monsanto Chemical
8 Company had circulated literature that said the
9 higher the chlorination the less toxic it was?

10 MR. GOUTMAN: Objection to the form of
11 the question.

12 THE WITNESS: Did I know it in 1955?

13 BY MR. MC CLAIN:

14 Q. Yes.

15 A. I did not.

16 Q. Do you see here in paragraph three where there
17 was concern being raised about using Aroclors in
18 paints?

19 MR. GOUTMAN: Objection to the form of
20 the question.

21 THE WITNESS: There was concern in the
22 use of latex paints. I see that.

23 BY MR. MC CLAIN:

24 Q. And did you have any understanding in 1955

1 that that was a concern of Dr. Kelly?

2 MR. GOUTMAN: Objection to the form of
3 the question.

4 THE WITNESS: In 1955?

5 BY MR. MC CLAIN:

6 Q. Yes.

7 A. No.

8 Q. Look on page three, where it says, "As far as
9 the paints in question are concerned it is impossible
10 to know how any particular can may be eventually
11 used, so every can would need to show the warnings
12 and precautions for all foreseeable eventualities.
13 The presence of these warnings would tend to deter
14 people from using the paints even in cases where no
15 special precautions were needed."

16 Do you see that?

17 A. I do.

18 Q. Do you know that there were discussions about
19 warnings with Aroclors in them in 1955?

20 MR. GOUTMAN: Objection.

21 THE WITNESS: I did not.

22 BY MR. MC CLAIN:

23 Q. Look at the last document. It is a 1954
24 document attached between Barrett and Kelly again

1 where it talks about -- the letter indicates that
2 Kelly was going through the files of Ruabon and
3 Newport. Who are Ruabon and Newport? Do you know?

4 A. Let me interrupt. My copy is the next to the
5 last page.

6 Q. Yes.

7 A. Ruabon is a city in Wales and Newport is
8 another city in Wales. They are two separate
9 Monsanto locations.

10 MR. GOUTMAN: Excuse me. If I can just
11 correct the record, the document that you are
12 referring to is not from Kelly, but it is from
13 Hamer, as you can see at the bottom of the page
14 that you have in your hand.

15 MR. MC CLAIN: I'm sorry. You are
16 right. I was looking at the next document as
17 being from Kelly. It is from Hamer. From
18 Hamer to Barrett, copies to Hardy, Morgan, and
19 Newman.

20 BY MR. MC CLAIN:

21 Q. Do you see there where it discusses that in
22 the 1938 report, "Liver damage is of course the
23 outstanding effect and of the various hydrocarbons
24 tested, diphenyl gave evidence as being the most

1 toxic"?

2 Do you see that?

3 A. Yes, I see that. Yes.

4 Q. And then finally on the last page do you see
5 at the top of the page it says, "We do not know what the
6 maximum allowable concentration of Aroclor is." This
7 is the correspondence dated February 12, 1954,
8 between Kelly and Newman. From Kelly to Newman.

9 A. I see that.

10 Q. And it says, "We have run animals for about 60
11 days at seven times this" -- I'm sorry. Starting
12 with the sentence beginning, "One milligram per cubic
13 meter has been set up. We have run animals for about
14 60 days at seven times this and found some liver
15 damage. We are now running this at a lower level."

16 Do you see that?

17 A. I do.

18 Q. Did you ever discuss with Dr. Kelly his
19 concerns about liver damage during this time period?

20 A. No.

21 Q. Did he share with you, during this time
22 period, any concerns about the workers under your
23 direction and control being at risk for liver damage?

24 A. No.

1 MR. MC CLAIN: Why don't we take our
2 lunch.

3 (Deposition recessed)

4 BY MR. MC CLAIN:

5 Q. Back on the record.

6 Were you familiar with the compound
7 known as Prydraul, P Y D R A U L?

8 A. I'm familiar with the trademark that applies
9 to many mixtures, sir, yes.

10 Q. And was that a product of Monsanto?

11 A. Yes.

12 Q. And was it a PCB?

13 A. It contains PCB as one of many ingredients.

14 MR. MC CLAIN: Let's mark this as
15 Papageorge Exhibit 8. (Indicating).

16 (The above-referred-to document was
17 marked as Papageorge Exhibit 8 for
18 identification)

19 BY MR. MC CLAIN:

20 Q. Do you know Dr. Lehman and Dr. Zwickey?

21 MR. GOUTMAN: Are you going to let him
22 read the document?

23 BY MR. MC CLAIN:

24 Q. First I want to ask that question.

1 A. I do not recognize those names.

2 Q. Now you can read it.

3 A. I have read the document.

4 Q. Cellulube, was that a Monsanto product?

5 A. No.

6 Q. That's all the questions I have on that
7 document.

8 This will be Papageorge Exhibit 9.

9 (Indicating)

10 (The above-referred-to document was
11 marked as Papageorge Exhibit 9 for
12 identification)

13 BY MR. MC CLAIN:

14 Q. I'm showing you what we have marked as
15 Papageorge Exhibit 9.

16 A. I have read the exhibit.

17 Q. Was Allied Chemical a company that you were
18 familiar with?

19 A. Yes.

20 Q. They were a customer of Monsanto.

21 A. Yes.

22 Q. Did you ever have contact with any persons at
23 Allied Chemical?

24 MR. GOUTMAN: Objection. Overly broad.

1 You can answer.

2 THE WITNESS: Eventually, yes.

3 BY MR. MC CLAIN:

4 Q. Do you know the circumstances which led Dr.
5 Kelly to instruct Mr. Benavoglia that he would give
6 Allied Chemical the following information regarding
7 Aroclor 1254?

8 A. I do not.

9 Q. Why do they use Aroclor 1254 at Allied
10 Chemical?

11 A. I don't know.

12 Q. Were you aware in 1960 that it was Dr. Kelly's
13 view that Aroclor 1264 is capable of causing --

14 MR. GOUTMAN: 1254?

15 BY MR. MC CLAIN:

16 Q. Let me start again. Did you know that it was
17 Dr. Kelly's view that Aroclor 1254 was, "Capable of
18 causing systemic injury by the inhalation of fumes,
19 especially at elevated temperatures or by absorption
20 through the skin following repeated or continuous
21 contact"?

22 A. Yes.

23 Q. You knew that that was a concern about
24 exposure to Aroclor 1254.

1 A. Yes.

2 Q. It goes on to say, "There is no question but
3 that if the material is heated the vapors must be
4 exhausted without allowing the employee to breathe
5 them."

6 You understood that in 1960?

7 A. Yes.

8 Q. "The symptoms after exposure consist of
9 headache, nausea and, after more severe exposure,
10 signs of liver damage occur. This is evidenced by
11 enlarged liver and jaundice."

12 Did you understand that by 1960?

13 A. Yes.

14 Q. Did you ever witness, in your own employees,
15 headache, nausea, and signs of liver damage from
16 exposure to PCBs?

17 A. Never.

18 Q. Did it occur to you in 1960 that whatever the
19 information contained on the label was not sufficient
20 to inform persons using your PCBs in plant settings,
21 that it was not sufficient to protect the workers at
22 those plants?

23 A. I don't agree, sir. It was sufficient. If
24 you didn't get it on your skin, didn't breathe it,

1 didn't eat it, that's sufficient.

2 Q. Allied Chemical was a long-time customer of
3 Monsanto, were they not?

4 MR. GOUTMAN: Objection to the form of
5 the question.

6 THE WITNESS: For what products?

7 BY MR. MC CLAIN:

8 Q. For 1254, Aroclor 1254.

9 A. They certainly were customers of 1254. I
10 don't know about the long-time description.

11 Q. Well, they would have been seeing these labels
12 that you have told me about come on their deliveries
13 of 1254; am I right?

14 MR. GOUTMAN: Objection as to this
15 witness testifying as to what Allied Chemical
16 may or may not have seen.

17 Subject to that objection, if you have
18 any personal knowledge, please tell us.

19 BY MR. MC CLAIN:

20 Q. Is it possible that they didn't see the
21 labels?

22 MR. GOUTMAN: Objection. Again, calls
23 for speculation.

24 THE WITNESS: It is possible.

1 MR. GOUTMAN: Objection. Calls for
2 speculation.

3 You can answer.

4 BY MR. MC CLAIN:

5 Q. Answer it if you can.

6 A. I don't know enough about the arrangements
7 made with Allied, whether they had already received
8 products with labels on it or were contemplating
9 ordering and using, so I can't answer. I don't know.

10 Q. Do you know why Dr. Kelly felt it was
11 necessary to add this additional information if the
12 instructions on the label were sufficient to protect
13 workers?

14 MR. GOUTMAN: Objection.

15 THE WITNESS: I don't know.

16 BY MR. MC CLAIN:

17 Q. You don't disagree with any of this
18 information, do you?

19 A. No, I don't.

20 Q. And that would be good information for a
21 person utilizing Aroclor 1254 to have; am I right?

22 MR. GOUTMAN: Objection to the form of
23 the question as to the person utilizing Aroclor
24 1254.

1 THE WITNESS: I have problems, sir,
2 visualizing a person with an 8th grade
3 education understanding this as distinguished
4 from a medical doctor getting this information
5 and passing it onto his company's personnel.

6 BY MR. MC CLAIN:

7 Q. Was Jack Benavoglia a medical doctor?

8 A. No, he's a Monsanto sales representative.

9 Q. Is there any reference in this document to
10 Mr. Benavoglia giving it to the Medical Director of
11 Allied Chemical?

12 A. The last sentence tells me a lot. It says, it
13 asks, Mr. Benavoglia to ask Allied Chemical's
14 medicine medical personnel to contact Monsanto's
15 medical personnel, so doctor is talking to doctor or
16 industrial hygienist is talking to industrial
17 hygienist. That's the best communication regarding
18 this type of information.

19 Q. Did it appear on any labels to have the
20 industrial hygiene personnel at any plant contact Dr.
21 Kelly regarding use of Aroclor? Do you remember that
22 ever being on labels?

23 A. That kind of information, sir, is like saying
24 continue breathing. That is understood by industry.

1 Q. My question was was it on the label?

2 A. No.

3 MR. MC CLAIN: This document we will
4 mark as Papageorge Exhibit 10. (Indicating).

5 (The above-referred-to document was
6 marked as Papageorge Exhibit 10 for
7 identification)

8 THE WITNESS: I have read the exhibit.

9 BY MR. MC CLAIN:

10 Q. Did you know Hexagon Laboratories?

11 A. Yes.

12 Q. What was their business?

13 A. I associate them with manufacturers and
14 sellers of water treating chemicals.

15 Q. Did you become aware that in 1961 they had an
16 incident involving exposure of their employees to hot
17 Aroclor 1248?

18 A. In 1961, no.

19 Q. Did you know about this afterwards?

20 A. Yes.

21 Q. In what circumstance did you become aware of
22 it?

23 A. In early 1970, when I assumed the job of
24 monitoring the PCB environmental issue, this is one

1 of the pieces of information that I was brought up to
2 date on by medical department personnel.

3 Q. Was the information contained in Exhibit 9 in
4 that same category? Were you made aware of it in
5 1970? The sale --

6 A. I don't remember this one. (Indicating)

7 Q. When you say "this one", you are talking about
8 Exhibit 9.

9 A. Yes.

10 Q. You do remember Exhibit 10. What is it that
11 you remember about it?

12 A. I don't recall the subject matter that raised
13 this point, but it was shown to me, as best I recall,
14 as an example of even a non-medical person can be a
15 good communications effort between the supplier,
16 Monsanto, and the customer. That's the context in
17 which it was brought up.

18 Q. Were there other reports, other than this
19 hepatitis report by Hexagon Laboratories, of
20 employees or persons exposed to Aroclors developing
21 hepatitis or other liver-related problems?

22 A. I don't recall any.

23 Q. Certainly we have seen documents from Dr.
24 Kelly where he has laid out that as a possibility.

1 MR. GOUTMAN: Objection. Objection to
2 the form of the question. The document says
3 develops symptoms of hepatitis. Are you
4 referring to something else?

5 BY MR. MC CLAIN:

6 Q. In the previous documents we have seen several
7 of them where Dr. Kelly has raised the issue of
8 hepatitis, liver damage or jaundice, have we not?

9 MR. GOUTMAN: Objection to the form of
10 the question.

11 THE WITNESS: Yes, but it is emphasized,
12 those documents also emphasize, continuous and
13 high levels of exposure.

14 BY MR. MC CLAIN:

15 Q. The documents will speak for themselves; all
16 I'm saying is that we have seen documents with the
17 words hepatitis, liver damage and jaundice, have we
18 not?

19 A. Yes.

20 Q. Do you know of any other documents or have you
21 seen any other documents where it was reported that
22 persons were exposed to hot Aroclor vapors and
23 developed hepatitis?

24 MR. GOUTMAN: Objection. Objection to

1 your use of the word "other". It merely says
2 that they developed symptoms of hepatitis. It
3 is misleading.

4 You can answer it if you can.

5 THE WITNESS: I have not seen any other
6 documents that refer to these kinds of
7 symptoms, no. (Indicating)

8 BY MR. MC CLAIN:

9 Q. Do you see where it says, "Since we are
10 dealing with a highly toxic material at high
11 temperatures and since these failures cannot be
12 prevented, it is felt that a more thorough and
13 clearly written description of the hazards be
14 described under Safety of Handling. Also the
15 antidote and the first aid treatment if any be
16 included. I certainly would be interested in this
17 information if available."

18 Were you made aware that customers were
19 desirous of more information than was currently being
20 put on the label in the '61 time period?

21 MR. GOUTMAN: Objection. Your use of
22 the word "customers", are you referring to
23 somebody else other than the Hexagon
24 Laboratories?

1 MR. MC CLAIN: Yes, I am. I am
2 referring to the fact that in the previous
3 exhibit, Exhibit Number 9, also asks to provide
4 more information to Allied Chemical and Dye
5 Corporation than was provided on the label.

6 MR. GOUTMAN: That wasn't your question.
7 You are saying the customers, your question
8 said that customers were contacting Monsanto
9 regarding additional information, and thus far
10 we have seen Hexagon Laboratories. I just
11 object to the use of the plural customers. If
12 the question is whether he's aware that Hexagon
13 Laboratories contacted Monsanto, I think we can
14 stipulate that they did contact Monsanto.

15 MR. MC CLAIN: Can you read back my
16 question?

17 (The last question was read back by the
18 Court Reporter)

19 MR. GOUTMAN: You may answer subject to
20 my objection.

21 THE WITNESS: The question implies that
22 that request as exemplified by this Hexagon
23 letter, Exhibit 10, that that information is
24 expected on the label. This letter is talking

1 about Safety of Handling, which is a page or a
2 paragraph, depending on how much material is
3 covered, in the sales brochures, handouts,
4 other methods of communicating other than the
5 label.

6 BY MR. MC CLAIN:

7 Q. That's a good clarification. Let me clarify
8 it then. Were there reports that you became aware of
9 in your time with Monsanto where either the labels or
10 the handouts that were given to customers were not
11 adequate to inform them about the risks inherent in
12 the use of Aroclors?

13 A. I believe they were adequate.

14 Q. No, that wasn't my question. Were there
15 reports to you that customers did not feel they were
16 adequate?

17 A. This is the only example that I remember.
18 (Indicating)

19 Q. Do you remember the Bent Glass Company here in
20 St. Louis?

21 A. Will you say that again? Bent?

22 Q. B E N T.

23 A. No, I don't.

24 MR. MC CLAIN: This will be Papageorge

1 Exhibit 11. (Indicating).

2 (The above-referred-to document was
3 marked as Papageorge Exhibit 11 for
4 identification)

5 THE WITNESS: I have read the
6 exhibit.

7 BY MR. MC CLAIN:

8 Q. Do you see where there was an epidemic of
9 chloracne at the International Bent Glass Company?

10 A. That's what it states here.

11 Q. And that they were using a paint manufactured
12 by Drakenfeld of New York City?

13 A. I see that, yes.

14 Q. And do you see where Kelly writes, "We may
15 have to warn users similar to Drakenfeld about the
16 hazards"? Do you see that?

17 A. I do.

18 Q. Was it ever discussed with you that Kelly
19 thought that additional warnings were required to
20 users of paint?

21 A. Not for this Aroclor 4465, no.

22 Q. Well, in regard to what products were you made
23 aware of it?

24 MR. GOUTMAN: Objection to the form of

1 the question.

2 THE WITNESS: I understood your question
3 to be addressing a problem with Aroclor 4465.
4 This is not a PCB, so I don't know how --

5 BY MR. MC CLAIN:

6 Q. What is it?

7 A. It is a terphenyl.

8 Q. It is a terphenyl?

9 A. Yes.

10 Q. Is the chloracne caused by terphenyls
11 different than the chloracne caused by PCBs?

12 MR. GOUTMAN: Objection. Calls for a
13 medical conclusion.

14 THE WITNESS: I have seen no reference
15 whatever with chloracne associated with
16 chlorinated terphenyls, so I don't know.

17 BY MR. MC CLAIN:

18 Q. This is the first time you have seen one?

19 MR. GOUTMAN: Objection to the form of
20 the question.

21 BY MR. MC CLAIN:

22 Q. Is this not a chlorinated terphenyl?

23 A. Yes, but I can't help but notice the use of
24 the word "presumably" caused. That is not definite

1 proof.

2 Q. So you discount this letter.

3 MR. GOUTMAN: Objection to the form of
4 the question.

5 THE WITNESS: I don't know. When you
6 say "discount", you mean I threw it in the
7 waste basket? No. It did raise some
8 questions, but the answers were never
9 available.

10 BY MR. MC CLAIN:

11 Q. When did you see this letter first?

12 A. Early 1970?

13 Q. And for what purpose were you looking at it?

14 A. That was part of my session with the medical
15 department personnel to bring me up to date on these
16 kinds of situations that might be related to the
17 Aroclor product line.

18 Q. And how long of a session was this that you
19 had?

20 A. It was concentrated for the six weeks in
21 January and February, and then it was -- it would
22 bring up sessions on through to about June or July of
23 1970.

24 Q. Who participated in those meetings?

1 A. Elmer Wheeler was the lead tutor. Dr. Kelly
2 participated. And the industrial hygienist?

3 Q. What was his name?

4 A. Jack Barrett. That's all that comes to mind
5 now.

6 Q. Were you ever introduced to Garrett Schepers?

7 A. I'm sorry. Garrett who?

8 Q. Schepers. Dr. Garrett Schepers.

9 A. I don't recognize that name at all.

10 MR. MC CLAIN: Who are you? I have not
11 been introduced.

12 MR. DAVIDSON: I'm from Monsanto. I
13 haven't been introduced to you either. I'm
14 Gerard Davidson, I'm an attorney, and I
15 represent Monsanto.

16 MR. MC CLAIN: I would appreciate it if
17 you don't laugh in the middle of my questions.

18 MR. DAVIDSON: That's a name out of the
19 past that I'm not surprised you dredged up.

20 MR. MC CLAIN: I would appreciate if you
21 would keep your amusement to yourself.

22 MR. DAVIDSON: I'm sure it didn't make
23 it on the record.

24 MR. MC CLAIN: It made it into my

1 hearing.

2 BY MR. MC CLAIN:

3 Q. Now, at this meeting, at this series of
4 meetings that you say was kind of a tutorial for you?

5 A. Yes.

6 Q. Do you know why it was felt that you needed a
7 tutorial on the subject?

8 MR. GOUTMAN: Objection to the form of
9 the question.

10 THE WITNESS: You will have to ask the
11 people that invited me to attend.

12 BY MR. MC CLAIN:

13 Q. Who did invite you to attend?

14 A. Dr. Kelly and Elmer Wheeler, and they are both
15 deceased. I don't know why they --

16 Q. Then how would I ask them?

17 A. Well --

18 MR. GOUTMAN: Don't answer that
19 question.

20 BY MR. MC CLAIN:

21 Q. Did anyone explain to you why you were invited
22 to attend?

23 A. Not in so many words, sir. It was a matter of
24 I was new on the job and they were close to the

1 subject, and I started with that group, rather than
2 with the research group or the marketing group or --
3 it just fell in place without any particular plan.

4 Q. Were there any written materials given to you?

5 A. There were copies of written materials, yes.

6 Q. Were they some of the documents that you have
7 identified here today?

8 MR. GOUTMAN: Objection. Vague.

9 THE WITNESS: I don't recall if these
10 specific documents were part of the looseleaf
11 notebook that was prepared for me, or whether
12 they came up during the discussion where
13 someone would go to the library or the files
14 and get me a copy.

15 BY MR. MC CLAIN:

16 Q. So they made up a looseleaf notebook for you
17 of documents to look at.

18 A. Yes.

19 Q. Did you retain that in your possession?

20 A. I did.

21 Q. And was it left with the company when you
22 retired?

23 A. Yes.

24 Q. 1986.

- 1 A. Yes.
- 2 Q. And how would it be identified?
- 3 A. Oh --
- 4 Q. How was it identified?
- 5 A. When you said when I left with the company. I
- 6 transferred my files to my successor in 1976. I
- 7 don't know where they ended up.
- 8 Q. And who was your successor in 1976?
- 9 A. Cole Weber. J.C. Weber.
- 10 Q. And have you ever seen that notebook since you
- 11 gave it to Mr. Weber in 1976?
- 12 A. No.
- 13 Q. What else was in it?
- 14 A. Sir --
- 15 Q. I know it was a long time ago.
- 16 A. I just don't remember. I just don't remember
- 17 the details.
- 18 Q. If we see any other documents that were in
- 19 that book, would you let me know?
- 20 A. Yes. If I remember them.
- 21 Q. You have done it so far, and I appreciate it,
- 22 when you say you saw this in '70 or '71.
- 23 A. Yes, but that doesn't mean that I remember it
- 24 as being part of the book.

1 Q. Let's go back. Any of these documents that
2 have been marked as exhibits, were they part of the
3 book?

4 A. Not that I recall.

5 Q. Were you made aware in 1970 that there had
6 been a report in the mid sixties of environmental
7 contamination by PCBs?

8 MR. GOUTMAN: Objection to the form of
9 the question.

10 THE WITNESS: You say in the mid
11 sixties?

12 BY MR. MC CLAIN:

13 Q. Yes.

14 A. I feel we are playing a bit of a guessing game
15 here. I don't know which one you are referring to.
16 Are you referring to the Swedish study?

17 Q. Yes.

18 A. That was 1966 or thereabouts. Late '66.

19 Q. November 28, 1966.

20 A. Yes.

21 MR. MC CLAIN: We will mark that as
22 Papageorge Exhibit 12. (Indicating).

23 (The above-referred-to document was
24 marked as Papageorge Exhibit 12 for

1 identification)

2 BY MR. MC CLAIN:

3 Q. Go ahead.

4 A. I have seen this document before and read it.

5 Q. When was the first time that you read it?

6 A. Early 1970. During my tutorial sessions.

7 Q. And was this November 1966 letter addressed to
8 Monsanto Europe?

9 A. Yes.

10 Q. Who are Rising & Strand?

11 A. As I understood it, they were sales
12 representatives of Monsanto in Sweden.

13 Q. Do you see here where it says "these," referring
14 to some studies at the University of Stockholm, "these"
15 have revealed that a group of products called
16 Polychlorinated Bi-Phenols - PCB for short -
17 accumulated in certain organs in animals"?

18 A. Can you help me find that? Is it on the first
19 page?

20 Q. Yes, it is in that first paragraph.

21 A. Oh. All right.

22 Q. Right next to the handwriting.

23 A. I see it, yes.

24 Q. And that they are said to be related to DDT

1 and equally poisonous.

2 A. That's what it states.

3 Q. And the last page, if you will look back
4 there, it says, "I suppose there is no doubt that
5 what has been termed Polychlorinated Bi-Phenols is
6 equal to Aroclor."

7 A. I see that.

8 Q. "There is also no doubt that the published
9 facts will cause considerable unrest in several
10 quarters. We probably will have to have Aroclor
11 registered with the Swedish Board of Poisonous
12 Substances and the industry will have to be
13 particularly careful in handling the material."

14 Do you see that?

15 A. Yes.

16 Q. And that, "The problem in some cases of course
17 may be the disposal of used material."

18 A. I see that.

19 Q. On the first page, one last thing, and then
20 I'm going to ask you about your meetings in '70, "PCB
21 is broken down considerably slower than DDT and gives
22 rise to danger of liver and skin".

23 MR. GOUTMAN: You are at the bottom of
24 the first page?

1 MR. MC CLAIN: Yes. The first sentence
2 of the last paragraph.

3 THE WITNESS: I see that, yes.

4 BY MR. MC CLAIN:

5 Q. In 1970 what type of meetings did you have
6 regarding this report or what were the discussions
7 about this report?

8 MR. GOUTMAN: About this document?

9 MR. MC CLAIN: Yes.

10 THE WITNESS: This document was shown to
11 me as the first notice that Monsanto
12 representatives received regarding the
13 possibility that polychlorinated biphenyls were
14 being found by a laboratory, and the fact that
15 in this memo the spelling was Bi-Phenols
16 created some confusion regarding the true
17 identity of the material being described. That
18 was what this particular letter did. It was
19 the first notice Monsanto had regarding the
20 environmental issue with PCBs.

21 BY MR. MC CLAIN:

22 Q. What were you told -- strike that.

23 Based on your meetings in 1970, were
24 you able to determine that Monsanto did anything in

1 1967, as an example, to determine whether or not
2 these reports applied to Aroclor?

3 A. They did many things. The addressee of this
4 particular Exhibit, Mr. David Wood --

5 Q. Yes. Who was he?

6 A. He was a Monsanto marketing representative in
7 Europe. He, personally, went to Stockholm and met
8 with the investigators at the University of
9 Stockholm. While there he got some information
10 regarding the analytical procedures used by that
11 laboratory. He shared that information with the
12 Monsanto researchers in St. Louis. The analytical
13 chemists in St. Louis then launched a program of
14 procuring the latest instruments for determining PCBs
15 in samples. They took the procedure sent to them
16 from Sweden and applied it to the US samples and
17 became familiar with the whole process of how complex
18 it could be, how difficult it was to get a reliable
19 answer, so they went -- they launched really a
20 learning program regarding the analytical procedure
21 and its -- the validity of its answers.

22 Q. Were there any steps taken in 1967 to prevent
23 any further environmental release of PCBs?

24 A. In 1967?

1 Q. Yes.

2 A. No, because there wasn't any evidence to
3 indicate that in truth these were PCBs in 1967.

4 Q. So the answer is no, there were no steps taken
5 in 1967.

6 A. There was --

7 MR. GOUTMAN: Objection. The answer is
8 what he gave you.

9 BY MR. MC CLAIN:

10 Q. Were there any steps taken?

11 MR. GOUTMAN: Objection. Asked and
12 answered.

13 You can answer again, sir.

14 THE WITNESS: No steps were taken
15 because of the lack of evidence to take the
16 proper steps. What do you do without
17 information?

18 BY MR. MC CLAIN:

19 Q. I move that his answer be stricken after the
20 word "no."

21 Do you know whose handwriting this is
22 in the margin, by any chance? That first page. Is it
23 recognizable to you?

24 A. No.

1 Q. Why don't we just mark this so we have a good
2 copy in the record. It is the same document, I
3 believe. (Indicating).

4 (The above-referred-to document was
5 marked as Papageorge Exhibit 13 for
6 identification)

7 BY MR. MC CLAIN:

8 Q. Is this the same document?

9 A. It appears to be.

10 Q. But for the handwritten notations in the
11 margin.

12 A. That's one difference, and of course the type
13 appears to be different. It could well be the
14 reproduction process, but I also note that these
15 reference numbers at the bottom of the page are not
16 identical to the --

17 Q. No, I think they came from different
18 productions, but I'm just trying to determine which
19 copies I have and which ones I don't. Are these the
20 same? Is the text of the document the same?

21 A. It appears to be, yes.

22 Q. But the document that we have marked as
23 Exhibit 12 appears to be a different copy of the same
24 document.

1 A. I don't know how to define "a different copy."
2 The reproduction process distorted some of the
3 printing.

4 Q. And there is handwriting in the margin from
5 some source.

6 A. Yes.

7 Q. And underlying in the document that we have
8 marked as Exhibit 12; is that right?

9 A. Yes.

10 Q. And that's not on Exhibit 13.

11 MR. GOUTMAN: These documents speak for
12 themselves, Ken.

13 MR. MC CLAIN: I'm just asking the
14 witness if he can determine that.

15 MR. GOUTMAN: He's not an expert in that
16 field.

17 BY MR. MC CLAIN:

18 Q. Were you aware that before this report was
19 released in Sweden that there had been a presentation
20 of the report in the New Scientist magazine?

21 A. I was aware, as best I remember, of a single
22 column article summarizing this study. It was not a
23 formal, scientific report from a laboratory.

24 Q. Was anyone from Monsanto at the Jensen lecture

1 at the Wenner-Gren Centre meeting in Stockholm in
2 November of 1966?

3 MR. GOUTMAN: Objection to the form of
4 the question.

5 THE WITNESS: I don't know.

6 MR. MC CLAIN: Let's mark this next
7 document as Papageorge Exhibit 14.
8 (Indicating)

9 (The above-referred-to document was
10 marked as Papageorge Exhibit 14 for
11 identification)

12 MR. GOUTMAN: I would just note for the
13 record that this document is incomplete.

14 MR. MC CLAIN: This is the way it was
15 produced to us, so if you have a complete
16 version I would like to have it.

17 MR. GOUTMAN: I don't know how it was
18 produced to you --

19 MR. MC CLAIN: I'm telling you this is
20 how it was produced to us.

21 MR. GOUTMAN: There you go again
22 interrupting me. I'm just telling you that you
23 are showing this witness an incomplete
24 document. It ends with a colon.

1 MR. MC CLAIN: I'm showing you the
2 document that was produced to us. If you have
3 a completed copy I would prefer to use it
4 myself.

5 MR. GOUTMAN: You didn't tell me or call
6 me in advance to tell me that you needed a
7 complete copy. I probably could have done
8 something about it back in Philadelphia.

9 MR. MC CLAIN: I assumed that you didn't
10 have a complete copy or you would have produced
11 it to me.

12 MR. GOUTMAN: I don't know that I didn't
13 produce it to you, sir.

14 MR. MC CLAIN: This is what I have got.

15 MR. GOUTMAN: I understand. I'm just
16 noting for the record that it's not a complete
17 document.

18 THE WITNESS: I have read the exhibit.

19 BY MR. MC CLAIN:

20 Q. Are you familiar with this document --

21 A. I am not.

22 Q. -- or the lecture that it purports to report?

23 A. I have not seen this before. (Indicating)

24 Q. Were you aware, on page two of the document it

1 talks about studies that had been done on PCBs,
2 Greenburg and Mayer, '39, about the death of three
3 workers from liver diseases? Do you see that report?
4 Second page. Top. Greenburg, Mayer.

5 A. I see the reference to it. I don't recall the
6 authors that are mentioned there. I do remember a
7 report involving polychlorinated naphthylamines.

8 Q. What about Wedol, Haller and Benton in their
9 '42 report regarding animals exposed to PCB? Were you
10 familiar with that report?

11 A. I don't recognize those authors.

12 Q. Do you see the Paribok reference in that same
13 paragraph from '55?

14 A. I do.

15 Q. Reporting fatty degeneration of the liver from
16 exposure to PCBs.

17 A. I see it.

18 Q. Miller injected 69 milligrams of PCB
19 subcutaneously in guinea pigs.

20 A. I see that.

21 Q. And that death occurred among those animals in
22 11 to 29 days.

23 A. That's what it reports.

24 Q. Were you familiar with that study?

1 A. I don't recognize any of those.

2 Q. And then they talk about tests done by
3 McLaughlin in 1964 on eggs and exposure to PCBs had
4 the highest order of toxicity. Do you see that?

5 A. I do.

6 Q. And how it had a no hatch level among the
7 chickens when exposed to PCBs?

8 A. I see that.

9 MR. MC CLAIN: Let's mark this next
10 document as Papageorge Exhibit 15.
11 (Indicating).

12 (The above-referred-to document was
13 marked as Papageorge Exhibit 15 for
14 identification)

15 BY MR. MC CLAIN:

16 Q. This is a letter from Dr. Kelly to Mr. Wood,
17 is it?

18 A. Yes.

19 MR. GOUTMAN: Have you had a chance to
20 read it?

21 THE WITNESS: Not yet.

22 I have read the exhibit.

23 BY MR. MC CLAIN:

24 Q. Do you see in the fourth paragraph of the

1 first page, "We have been receiving quite a few
2 communications from our customers, but the most
3 critical one is NCR, who are very much involved with
4 their carbonless carbon paper."

5 A. I see that.

6 Q. That had PCBs in it, did it not?

7 A. What had?

8 Q. Carbonless carbon paper.

9 A. Oh, yes.

10 Q. And in the last paragraph do you see that it
11 says, "The consensus in St. Louis is that while
12 Monsanto would like to keep in the background in this
13 problem, we don't see how we will be able to in the
14 United States. We feel our customers, especially
15 NCR, may ask us for some sort of data concerning the
16 safety of these residues in humans."

17 A. I see that.

18 Q. Do you know whether NCR, in fact, asked for
19 that data?

20 MR. GOUTMAN: Objection to the form of
21 the question.

22 THE WITNESS: No.

23 BY MR. MC CLAIN:

24 Q. Do you remember there being some concern

1 raised about PCBs in the British wildlife?

2 MR. GOUTMAN: Objection. What time
3 frame?

4 MR. MC CLAIN: '67.

5 THE WITNESS: I was not aware of it at
6 the time, no.

7 BY MR. MC CLAIN:

8 Q. Are you aware that Monsanto was aware of it in
9 1967?

10 A. Not at that time.

11 Q. When did you become aware of it?

12 A. Early 1970.

13 Q. Same time during your sessions with Dr. Kelly
14 and others?

15 A. Yes, plus a trip to the British Isles and
16 visited these places.

17 MR. MC CLAIN: Let's mark this next
18 document as Papageorge Exhibit 16.

19 (The above-referred-to document was
20 marked as Papageorge Exhibit 16 for
21 identification)

22 MR. GOUTMAN: Do you want him to read
23 this entire article?

24 MR. MC CLAIN: No. If he wants to. It

1 is up to him.

2 BY MR. MC CLAIN:

3 Q. You are familiar with this article?

4 A. Yes, I am.

5 Q. You became familiar with it in 1970?

6 A. Yes.

7 Q. If you look on the last page it gives thanks
8 to Monsanto for supplying samples of
9 polychlorobiphenyl resins.

10 A. I do see that, yes.

11 Q. And let me show you Exhibit 17, what we will
12 mark as Papageorge Exhibit 17. (Indicating).

13 (The above-referred-to document was
14 marked as Papageorge Exhibit 17 for
15 identification)

16 BY MR. MC CLAIN:

17 Q. Who is Gene Wilde?

18 A. Mr. Wilde was a marketing representative with
19 Monsanto in the United States.

20 Q. It says, Dr. Kelly writes, "Frankly, if I knew
21 what to do or where to attack the problem of
22 polychlorobiphenyl compounds in British wildlife, I
23 would do it. As it is, however, I think the
24 initiative is out of our hands. We have to wait to

1 see how big a problem will be created for us by the
2 conservationists in England."

3 Do you see that?

4 A. I do.

5 Q. Do you remember talking to Dr. Kelly that he
6 thought this was a problem being created by
7 conservationists in England?

8 A. I never talked to Dr. Kelly about that.

9 Q. Do you know why Dr. Kelly felt that this was a
10 problem being created by British conservationists?

11 A. No, I don't.

12 Q. British conservationists weren't spreading
13 PCBs through the woods of England, were they?

14 MR. GOUTMAN: Objection.

15 Don't answer the question.

16 Argumentative.

17 MR. MC CLAIN: As far as you know.

18 MR. GOUTMAN: Objection.

19 Don't answer the question.

20 MR. MC CLAIN: Were conservationists in
21 England spreading PCBs through the woods of
22 England?

23 MR. GOUTMAN: Objection.

24 Don't answer that question.

1 MR. MC CLAIN: I am asking him a
2 question.

3 MR. GOUTMAN: I know you are asking him
4 a question.

5 MR. MC CLAIN: And you are instructing
6 him not to answer that question?

7 MR. GOUTMAN: Yes.

8 MR. MC CLAIN: On what basis?

9 MR. GOUTMAN: It is a facetious question
10 and he is not going to answer it. If you want
11 to get a court order go ahead.

12 BY MR. MC CLAIN:

13 Q. I will.

14 In what sense would British
15 conservationists be causing Monsanto problems with
16 the PCB issue in England? If you know.

17 MR. GOUTMAN: Objection. This is a
18 document of someone else and you are asking him
19 to speculate as to what might have been going
20 through another individual, indeed a deceased
21 individual's head, and it is an improper
22 question.

23 You may answer if you can.

24 THE WITNESS: I don't know.

1 BY MR. MC CLAIN:

2 Q. You went to England in 1970.

3 A. Yes.

4 Q. Were the conservationists in England
5 troublesome?

6 MR. GOUTMAN: Objection.

7 You may answer.

8 THE WITNESS: I didn't talk to any
9 conservationists.

10 BY MR. MC CLAIN:

11 Q. As far as you could tell, have they spread
12 PCBs through the woods of England?

13 MR. GOUTMAN: Objection.

14 Don't answer the question.

15 BY MR. MC CLAIN:

16 Q. Now, are you following your counsel's
17 advice --

18 MR. GOUTMAN: Don't answer that
19 question.

20 I have instructed him not to answer. He
21 is not answering. You don't have to go any
22 further than that.

23 MR. MC CLAIN: Well, I think I have got
24 to ask him whether he is following your advice.

1 MR. GOUTMAN: He is following my advice.

2 MR. MC CLAIN: Okay.

3 BY MR. MC CLAIN:

4 Q. The Risebrough --

5 A. I call it Risebrough.

6 Q. The Risebrough, R I S E B R O U G H. Are we
7 talking about the same one?

8 A. I believe that's the way it is spelled.
9 Robert Risebrough.

10 Q. Did you ever come to know that individual?

11 A. Yes.

12 Q. And how?

13 A. Well, I went to the University of California
14 at Berkeley campus and met with him. That was my
15 initial introduction.

16 Q. Why did you meet with him?

17 A. To be brought up to date on his studies with
18 PCBs and the pelicans off the shore of California,
19 southern California.

20 Q. What had he found?

21 A. He had found that the pelicans could not
22 reproduce because their eggs were either without
23 shells or had soft shells, and he attributed
24 initially to PCBs and DDT and later decided it was

1 DDT that was the cause.

2 Q. Initially he published that it was PCBs that
3 were the cause?

4 MR. GOUTMAN: That's not what he said.
5 Objection.

6 THE WITNESS: His initial report
7 mentioned both the presence of DDT and PCBs in
8 the analyses, and he went further to, in a way,
9 speculate as to what the presence of these two
10 types of chemicals were doing to the
11 hatchability of the eggs.

12 BY MR. MC CLAIN:

13 Q. And did his reports cause concern for Monsanto
14 about the environmental impact and its sale of PCBs
15 were having on the ecosystem?

16 A. Well, it certainly was brought to Monsanto's
17 attention and stimulated Monsanto to institute some
18 studies using chickens as the test bird.

19 Q. Did Monsanto receive pre-publication copies of
20 the studies before they appeared in the scientific
21 press?

22 MR. GOUTMAN: What studies? I'm sorry.

23 MR. MC CLAIN: Of the PCB studies by
24 Risebrough.

1 THE WITNESS: No.

2 MR. MC CLAIN: Let's mark this as
3 Papageorge Exhibit 18. (Indicating)

4 (The above-referred-to document was
5 marked as Papageorge Exhibit 18 for
6 identification)

7 MR. MC CLAIN: Actually, are you
8 familiar with this article?

9 MR. GOUTMAN: Take your time and review
10 it.

11 THE WITNESS: Okay.

12 MR. GOUTMAN: Is the question is he
13 familiar with this?

14 MR. MC CLAIN: Yes.

15 THE WITNESS: I recall seeing an
16 article, it is either this copy or something
17 quite similar. It has been so long ago that I
18 don't recall all of the details. I don't
19 recall this handwritten note on the last page,
20 but in summary it looks like something that I
21 have seen before.

22 BY MR. MC CLAIN:

23 Q. Did you know Scott Tucker?

24 A. Yes.

1 Q. How did you know him?

2 A. He was the research chemist who led the
3 analytical effort regarding the PCB studies for
4 Monsanto.

5 Q. Was he a competent scientist?

6 A. Yes.

7 Q. And did he come up with the analytical methods
8 which Monsanto relied upon to determine compounds of
9 PCBs in environmental samples?

10 MR. GOUTMAN: Objection to the form of
11 the question.

12 THE WITNESS: Will you help me with the
13 words did he come up with?

14 BY MR. MC CLAIN:

15 Q. Did he develop them?

16 A. He took the procedures used by the University
17 of Stockholm and in a way, I'm going to use the
18 expression fine tuned them, so he did play a big role
19 in this, but don't underestimate the contribution of
20 his team members. He had others working with him.
21 And they all contributed to this knowledge that was
22 accumulating as they wrestled with this problem.

23 Q. But Tucker was the point man?

24 A. He was the principal chemist assigned the task

1 on the bench, so to speak. His supervisor, because
2 of Monsanto's organization, would be considered the
3 point man.

4 Q. But when you thought about who was in charge
5 of the project it was Tucker?

6 MR. GOUTMAN: Objection to the form of
7 the question.

8 THE WITNESS: No, I thought Dr. Keller
9 as the guy who spoke for that group, and he
10 would assign Dr. Tucker to execute whatever
11 activities or programs were required to support
12 their activities.

13 BY MR. MC CLAIN:

14 Q. Let's go back to those.

15 Confidential, not to be released until
16 published. Do you know how this document came into
17 Monsanto's hands before it was published?

18 MR. GOUTMAN: Objection to the form of
19 the question.

20 THE WITNESS: I do not.

21 BY MR. MC CLAIN:

22 Q. Were there contacts with Risebrough regarding
23 his study before it was published that you know of?

24 A. I know that Dr. Risebrough was sent samples of

1 PCBs to use in his laboratory as standards for his
2 analytical methods.

3 Q. Were there not contacts made with Dr.
4 Risebrough to attempt to persuade him not to
5 implicate PCBs as the cause of the damage that he was
6 finding?

7 A. I don't know that at all.

8 Q. You are unaware of any such contacts?

9 A. No.

10 MR. MC CLAIN: Let's mark this as
11 Papageorge Exhibit 19. (Indicating)

12 (The above-referred-to document was
13 marked as Papageorge Exhibit 19 for
14 identification)

15 BY MR. MC CLAIN:

16 Q. Sir?

17 A. I have scanned the exhibit.

18 Q. Are you familiar with this document?

19 A. It seems familiar.

20 Q. It says, "During the last 15 years" --

21 MR. GOUTMAN: Where are you?

22 MR. MC CLAIN: First sentence.

23 MR. GOUTMAN: Mine says, "For the last
24 15 years".

1 MR. MC CLAIN: What did I say?

2 MR. GOUTMAN: During.

3 BY MR. MC CLAIN:

4 Q. "For the last 15 years there has been growing
5 world-wide concern regarding the persistence of
6 chlorinated pesticides (particularly DDT) and their
7 universal presence in man, food, animals, fish,
8 birds, air, water, and soil."

9 Were you aware or were the people at
10 Monsanto aware during that 15 year time period about
11 the world-wide growing concern discussed there?

12 A. Generally, yes.

13 Q. Did Monsanto make DDT?

14 A. No.

15 Q. Who did?

16 A. The principal manufacturer was a company in
17 California whose name started with an "M", which used
18 to be confused with Monsanto. Now the name escapes
19 me.

20 Q. If you think about it, please let me know.

21 It goes on to discuss in this document,
22 I think it can be dated by a paragraph on the last
23 page, it says as of this date, October 1969 on the
24 last page that I have here, page seven.

1 A. I see that.

2 Q. So it is approximately October of 1969, I
3 guess, it discusses PCB studies that had been done,
4 some of which we have looked at already.

5 In 1970, when you began your work as
6 Manager of Environmental Control, did you take it
7 upon yourself to review the studies that are
8 discussed here on page two or were they discussed
9 with you at your seminar that you told us about?

10 MR. GOUTMAN: On page two?

11 MR. MC CLAIN: I'm sorry. Pages one and
12 going on to page two.

13 MR. GOUTMAN: Where it says, "In the
14 last six months"? Is that what you are
15 referring to?

16 MR. MC CLAIN: Yes.

17 MR. GOUTMAN: Up through h? Is that what
18 you mean?

19 MR. MC CLAIN: Yes.

20 MR. GOUTMAN: I'm sorry, just so I'm
21 clear, as of 1970 did he familiarize himself
22 with those instances enumerated in a through h?

23 MR. MC CLAIN: Yes.

24 THE WITNESS: Yes.

1 BY MR. MC CLAIN:

2 Q. And other than the seminar how did you do
3 that?

4 A. Held weekly meetings with the group of
5 individuals within Monsanto that were involved with
6 PCBs, either in research, medical, engineering,
7 marketing, whatever. Just sort of a standing
8 committee on PCBs. And I, because of my new
9 assignment, ended up being the titular chairman, so
10 to speak, and we would all compare notes as to what
11 we heard, what we needed to know, what projects would
12 be appropriate to sponsor, and so on, so that took
13 place initially virtually every week, and then it
14 spread out to every two or three weeks. It depended
15 really on the level of activity and the availability
16 of any news to be shared by the group.

17 Q. Let me divert for a minute. Did you ever have
18 any contact with a company called Gustin Bacon?

19 MR. GOUTMAN: Did you meaning this
20 witness?

21 MR. MC CLAIN: Yes.

22 BY MR. MC CLAIN:

23 Q. A company called Gustin Bacon or CertainTeed?

24 A. Did I have any personal contact? No.

1 Q. Did you have any contact as a company that you
2 know about with Gustin Bacon?

3 A. Not Gustin Bacon.

4 Q. CertainTeed?

5 A. CertainTeed, I have seen their name in print
6 in a listing, but I don't recall the specifics.

7 Q. What about a company called Sonneborn?

8 A. Sonneborn? That rings a faint bell again, but
9 I had no personal contacts.

10 Q. They made a caulk compound.

11 A. That I don't remember.

12 Q. How about a company called ChemRex?

13 A. No, I don't know them.

14 Q. Did you ever have any contact with U.S.
15 Mineral Company?

16 A. U.S. Mineral.

17 MR. ROUX: If there is such a company
18 by that name.

19 BY MR. MC CLAIN:

20 Q. United States Mineral Products Company?

21 A. That does not ring a bell, no.

22 Q. Back to this document, it says here on page
23 two, "After investigation - not complete in all cases
24 - the committee has concluded:

1 "That the identification of PCBs as
2 contaminates of the environment is certain."

3 Was that your conclusion in 1970?

4 A. Yes, that was my conclusion. This document is
5 dated before that, though.

6 Q. I know that.

7 A. Okay.

8 Q. It says here, "Data available at present
9 indicate that PCBs may be 'moderately toxic' to man."

10 MR. GOUTMAN: Where are you?

11 MR. MC CLAIN: Third page.

12 MR. GOUTMAN: If you can just tell us
13 where you are, it would help.

14 We will agree with you that that's what
15 it says.

16 BY MR. MC CLAIN:

17 Q. Was that your view as of 1970?

18 A. I had no reason to believe otherwise, yes.

19 Q. It says, "There have been a limited number of
20 cases of occupational disease where workmen have been
21 exposed to excessive vapor inhalation or repeated and
22 prolonged skin contact with subsequent development of
23 skin manifestations '(chloracne)' or more serious
24 involvement of the liver and kidneys."

1 Did I read that correctly?

2 A. Yes, you did.

3 Q. Was that your understanding as of 1970?

4 A. Yes.

5 Q. Was there any effort made to alert users or
6 persons that had been sold PCB containing products
7 that PCBs were moderately toxic to man?

8 MR. GOUTMAN: Objection. That's a
9 compound question. Could you please break it down?

10 MR. MC CLAIN: How would you suggest?

11 MR. GOUTMAN: Well, you say, as I
12 understand it, you asked about our customers and our
13 customers' customers.

14 MR. MC CLAIN: No, not necessarily.

15 MR. GOUTMAN: Maybe I misunderstood your
16 question.

17 MR. MC CLAIN: I understand your
18 objection.

19 BY MR. MC CLAIN:

20 Q. What effort was made to alert people that were
21 using products containing Aroclors to the fact that
22 PCBs may be moderately toxic to man?

23 A. This was done through the decades that PCBs
24 were sold. This is not a new conclusion. It was

1 relayed in many ways: Through product literature,
2 through the field spokesmen, representatives that
3 called on the customer, with handouts, with telephone
4 and letter communications between Monsanto's
5 professionals in our medical department and their
6 counterparts in the customer's offices. It was an
7 ongoing bit of communication. I don't know what else
8 to add.

9 Q. Do you recall in these, in any of these
10 handouts, in the 1969 or '70 time period, was there
11 any indication about the environmental contamination
12 problem that was being discussed was put into your
13 safety handouts?

14 A. I'm confused.

15 MR. GOUTMAN: Objection to the term
16 "safety handouts".

17 BY MR. MC CLAIN:

18 Q. Let me see if I can rephrase. In 1970, when
19 you came on board --

20 A. Yes.

21 Q. -- and you reviewed the handouts that were
22 being given with Aroclors. Am I right?

23 A. Yes.

24 Q. Was there any mention made in those handouts

1 in 1969 about environmental contamination?

2 A. We went even further. We sent a specific
3 letter addressed to the president and purchasing
4 agent of the customers.

5 Q. In 1969 you did?

6 A. There was a letter in '69, March of '69, and
7 then there was another letter in February of '70?

8 Q. To whom?

9 A. Customers of Monsanto on record for at least
10 three years and more.

11 Q. So that letter would have gone to, assuming
12 that CertainTeed/Gustin Bacon was a customer,
13 Sonneborn was a customer, as an example, those would
14 have received letters from you?

15 A. Yes. Definitely.

16 Q. And what would those letters have said?

17 A. They would have mentioned the fact that the
18 studies in Sweden were reporting the presence of PCBs
19 and what type of PCBs they were, and there was some
20 mention of the products that contain these PCBs, and
21 the words of caution about handle properly. Don't
22 let it get into the environment.

23 Q. Now, how was that possible? How would it be
24 possible for a manufacturer of, let's say, an open

1 system product not to get it into the environment?

2 A. He's got a decision to make about whether he
3 continues putting that product out. He's got to use
4 his best judgment based on the information he had.
5 If he felt uncomfortable with what he had, he could
6 pick up the telephone or write and ask for more.

7 Q. In your view, was the information sufficient
8 that you were providing to the manufacturers of these
9 products that they should have known not to place
10 them in open systems products?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 You may answer.

14 THE WITNESS: I don't know enough about
15 the final application to say that I had a view
16 regarding each and every application. It is up
17 to the customer to evaluate the uses which you
18 put the PCBs and make a judgment call.

19 BY MR. MC CLAIN:

20 Q. As of 1969 which applications do you believe,
21 based on the information that you were sending out,
22 should a manufacturer have known were inappropriate
23 uses of Aroclors?

24 MR. GOUTMAN: A couple of objections.

1 Maybe points of clarification. That he
2 thought as of 1969? Is that the question?

3 MR. MC CLAIN: Well, as of 1970, when
4 you assumed the job of Manager, Environmental
5 Control --

6 THE WITNESS: Okay.

7 BY MR. MC CLAIN:

8 Q. Upon reviewing the situation and the
9 information that had been sent out to your
10 customers --

11 A. Yes.

12 Q. -- which products do you believe a
13 manufacturer should have recognized were
14 inappropriate to place Aroclors in as of 1970 when
15 you assumed the job?

16 MR. GOUTMAN: Objection to the form of
17 the question.

18 THE WITNESS: I don't know that I'm in
19 the position to play God in this thing. I
20 don't know exactly where each of the PCB
21 containing products ended up, what type of
22 control was maintained. It is an awful lot
23 like expecting the manager of the supermarket
24 to know where the person who bought a can of

1 tomatoes, where that can is going to end up.
2 There's no way of knowing. Once it leaves his
3 door he's lost contact of that can of tomatoes.
4 I think it is a poor excuse. I think it is a
5 poor example. Sorry.

6 BY MR. MC CLAIN:

7 Q. I don't think it is a poor example. Let's
8 play that out a little bit. Let's say the
9 supermarket manager places, sells, the can of
10 tomatoes and it has a warning that says persons that
11 are allergic to tomatoes should not eat these. The
12 person then buys it knowing that, knowing that he is
13 allergic to tomatoes, and eats them. That would be
14 an inappropriate use in my view. Okay? Just so we
15 are on the same page.

16 A. Yes, but the manager --

17 MR. GOUTMAN: There's no pending
18 question.

19 MR. MC CLAIN: Just clarification. I'm
20 using the witness's example.

21 MR. GOUTMAN: I think you changed the
22 example, but, in any event --

23 BY MR. MC CLAIN:

24 Q. The question is, all right, knowing what

1 information was published in your bulletins about
2 environmental contamination from Aroclors, what
3 products do you believe would have been inappropriate
4 for a manufacturer to continue to utilize Aroclors
5 in?

6 MR. GOUTMAN: With all due respect,
7 counselor, that's the same question he was just asked
8 and he just answered. If the witness has any more to
9 add, please do so.

10 THE WITNESS: I don't feel I have enough
11 information to answer your question in specific
12 terms, even generally, because I have no idea
13 whatever what happens in the customer's plant
14 and what happens when he ships his product, and
15 what happens when the shipper has got it on his
16 truck, and what happens at the destination when
17 it is finally put to use. It is just too
18 complex.

19 BY MR. MC CLAIN:

20 Q. Let's step back for a minute. You stated
21 earlier that by 1970 Monsanto had made the decision
22 that open system products, that Aroclors would not be
23 sold for use in open system products; am I right?

24 A. Yes.

1 Q. So obviously by 1970 Monsanto had made the
2 decision that it was not appropriate to utilize
3 Aroclors where they could be released through the
4 environment; am I right?

5 MR. GOUTMAN: Objection to the form of
6 the question as to the use of the word "appropriate."

7 THE WITNESS: Monsanto decided, from its
8 limited knowledge of these open uses, that the
9 chances of the PCBs in these uses that
10 Monsanto, right or wrong, judged to be open,
11 would lead to easy entry into the environment,
12 and it was based really on the limited
13 information, but pretty common knowledge about
14 many of the uses, so they arbitrarily decided
15 not to sell, rather than go to each customer
16 and sit down and determine specifically where
17 the product went that the customer made and how
18 they handled, that would have been so time
19 consuming you would have never gotten to the
20 end of that process, so they arbitrarily said
21 no more. I don't know how else to describe
22 that intent. The intent was to cut down on,
23 what appeared to be obvious free discharge to
24 the environment.

1 BY MR. MC CLAIN:

2 Q. And that was based upon the reports that we
3 see on page one of Exhibit 19, the Widmark and Jensen
4 report of November '66, the Great Britain report in
5 '67, the Rhine River and Netherlands reports of '69,
6 and Risebrough's report of August of '68; is that
7 right?

8 A. Well, plus the a through h examples.

9 Q. In the last six months, which would have taken
10 us into 1968; right?

11 A. What was the date of this? (Indicating)

12 MR. GOUTMAN: 1969.

13 BY MR. MC CLAIN:

14 Q. October of 1969, so it could have been early
15 1969; correct?

16 MR. GOUTMAN: I'm sorry. I was
17 speaking to the witness.

18 BY MR. MC CLAIN:

19 Q. That was the basis upon which Monsanto made
20 its decision?

21 A. That was the information that it had at hand
22 then, and, yes, that's the basis for the decision.

23 MR. MC CLAIN: Let's take a break.

24 (Off the record discussion).

1 MR. MC CLAIN: This will be marked as
2 Papageorge Exhibit 20.

3 (The above-referred-to document was
4 marked as Papageorge Exhibit 20 for
5 identification)

6 BY MR. MC CLAIN:

7 Q. Are you familiar with this document?

8 A. Yes, I am.

9 Q. Mr. Kelly says, "When are we going", this is
10 about PCB in milk samples; is that right?

11 A. Correct.

12 Q. And apparently in this instance paint had been
13 applied to concrete silos containing grain that fed
14 or feed that fed cattle; am I right?

15 A. That is right.

16 Q. And what was being found was that the cattle
17 milk had PCBs in it. He said, "When are we going to
18 tell our customers not to use any Aroclor in any
19 paint formulation that contacts food, feed, or water
20 for animals or humans. I think it is very important
21 that this be done."

22 Now, when was that suggestion first
23 made? Do you know?

24 A. Which suggestion, sir?

1 Q. That customers not utilize Aroclors in paints
2 that would contact food within the confines of
3 Monsanto.

4 A. The discussion about eliminating uses which
5 led to entry into the environment took place over a
6 many month period, shortly after the analytical
7 methods demonstrated that in truth what is being seen
8 are PCBs; therefore, we should take some action, so
9 when Dr. Kelly, in this memorandum to me, asked when
10 are we going to tell them, the decision had already
11 been made but he was not aware of it, so I ran --

12 MR. GOUTMAN: How --

13 Finish your answer.

14 THE WITNESS: So I ran over to his
15 office. I told him, Doctor, I got your memo.
16 We decided to bow out of the open uses and we
17 are going to tell our customers within the next
18 month, at best.

19 BY MR. MC CLAIN:

20 Q. And what was the date that decision had been
21 made. By which date?

22 A. I don't recall. It was about the middle to
23 the end of March. Near the time of this memo.

24 Q. What was the ANSI committee?

1 MR. GOUTMAN: Objection. Vague.

2 You can answer it if you can.

3 THE WITNESS: This is a group of
4 representatives of the electrical equipment
5 industry, the power distribution industries,
6 government agencies that was assembled to
7 address the proper handling and use of PCBs to
8 avoid further contamination of the environment,
9 and the acronym ANSI stands for the American
10 National Standards Institute.

11 BY MR. MC CLAIN:

12 Q. What was the C-107 committee?

13 A. That was the designation of the group that I
14 just mentioned.

15 Q. And what was their responsibility?

16 A. To prepare, in essence, guidelines on the
17 proper continued use of PCBs in the electrical
18 industry because of the safety features that it
19 provided.

20 MR. MC CLAIN: This next document will
21 be Papageorge Exhibit 21. (Indicating).

22 (The above-referred-to document was
23 marked as Papageorge Exhibit 21 for
24 identification)

1 BY MR. MC CLAIN:

2 Q. Are you familiar with this document?

3 A. It appears to be a document that I prepared.

4 Q. This was a speech that you gave?

5 A. Yes.

6 Q. Does this fairly and accurately represent
7 Monsanto's PCB program as you knew it on September
8 14, 1971?

9 A. Oh, I don't know about the use of the words
10 "fairly and accurately". This is the way the
11 situation appeared to me.

12 Q. You didn't try to fudge anything here.

13 A. I don't need to; I just called it the way I
14 saw it.

15 Q. You were trying to tell the truth when you met
16 with this committee.

17 A. Yes.

18 Q. It says here that, and we have already seen
19 this, that in 1967 you received copies of a talk
20 given in Sweden by Professors Widmark and Jensen in
21 Stockholm; is that right?

22 MR. GOUTMAN: We will agree that that's
23 what it says. We'll agree and stipulate to
24 that.

1 BY MR. MC CLAIN:

2 Q. That's what it says; right?

3 A. Yes, that's what it says.

4 Q. And the date really was 1966, though, wasn't
5 it? We saw that document earlier.

6 A. We had a report in late 1966. It was a few
7 months later that we got what the investigators in
8 Sweden actually presented.

9 Q. So you heard about it in 1966 and then you got
10 a copy of the paper subsequently is how you would
11 phrase it.

12 A. Yes.

13 Q. And then it talks about the accumulating
14 evidence during 1968 and 1969; is that right?

15 MR. GOUTMAN: Where are you referring
16 to?

17 THE WITNESS: Is that the third
18 paragraph in the middle?

19 MR. MC CLAIN: Yes.

20 MR. GOUTMAN: Don't accept the
21 characterization of this document if you don't
22 agree with it.

23 What's the question, counsel?

24 BY MR. MC CLAIN:

1 Q. The question is in the second paragraph
2 there's reference to during 1968 and 1969 the
3 evidence continued to indicate that the higher
4 chlorinated biphenyls were being identified in the
5 tissues of fish and birds; correct?

6 MR. GOUTMAN: I object, because that
7 leaves out the beginning.

8 BY MR. MC CLAIN:

9 Q. I'll read the whole thing. "During 1968 and
10 1969 as methodology improved the evidence continued
11 to indicate that the higher chlorinated biphenyls
12 were being identified in the tissue of fish and
13 birds"; correct?

14 A. Correct. That's the third paragraph?

15 Q. Right.

16 A. Yes.

17 Q. And that was true, as far as you knew it.

18 A. Yes.

19 Q. In this document it talks about fish being
20 concentrators of PCBs. Did you have that
21 understanding, that fish were concentrators of PCBs?

22 MR. GOUTMAN: Could you direct us to
23 where you are referring to; what page?

24 THE WITNESS: What page is that on?

1 MR. MC CLAIN: In the third paragraph.

2 MR. GOUTMAN: Of what page?

3 MR. MC CLAIN: Third page. I'm sorry.

4 MR. GOUTMAN: Second paragraph?

5 MR. MC CLAIN: Yes.

6 BY MR. MC CLAIN:

7 Q. It says, "We have been in touch with
8 laboratories such as the Water Quality Laboratory of
9 Duluth, Minnesota. They have conducted studies which
10 indicate there is some effect on some species. There
11 has been some work done in the Columbia, Missouri
12 Bureau of Interior Fish and Pesticides Laboratory
13 which indicates, for example, magnification about
14 50,000 times. By that I mean that the amount of PCB
15 detected in this fish tissues was 50,000 times that
16 present in the water environment in which this fish
17 was exposed."

18 A. That's what I stated, yes.

19 Q. And in other documents I have seen reports
20 that at least some investigators thought that the
21 fish concentrated the PCBs from their aqueous
22 environment. Are you familiar with such reports?

23 MR. GOUTMAN: Objection to the form of
24 the question.

1 You may answer.

2 THE WITNESS: Yes, that's -- that is
3 part of what is known as biomagnification.

4 BY MR. MC CLAIN:

5 Q. What does that mean?

6 A. It means that the material being studied
7 occurs at extremely low levels at the bottom of the
8 feeding chain, and as each of the members of the
9 feeding chain, you go up the chain, so to speak, are
10 accumulating higher concentrations, so the creature
11 at the top of this food ladder is eating much more
12 concentrated material than the creature at the very
13 bottom.

14 Q. I understand. At page four you state, "There
15 is a growing thought among many of the responsible
16 scientists that this environmental problem is the
17 most complex" --

18 MR. GOUTMAN: Is most complex.

19 BY MR. MC CLAIN:

20 Q. "Is most complex and it is not really any one
21 insult, that is the demise of any particular species,
22 but it could be the cumulative effect of all insults
23 a creature is exposed to and usually the last insult
24 is the one that gets blamed."

1 A. I did state that.

2 Q. And so was it your view that this
3 environmental contamination that was being detected
4 from PCBs was viewed by some scientists as being an
5 overall contributor, perhaps, to disease levels in
6 humans?

7 MR. GOUTMAN: Objection to the form of
8 the question.

9 THE WITNESS: No, that was not the
10 thought at the time. This was just an example
11 of the questioning that was still occurring at
12 the time regarding the effects of the presence
13 of these materials in the environment, and the
14 intent was to -- the intent was to make sure
15 that all of the evidence available was
16 accumulated before you jump into conclusions,
17 and this was brought about by such things as
18 Risebrough's work where he said PCBs and then
19 he retracted, and then there's this, at that
20 time it was still a fresh thought, the shrimp
21 that were studied in the laboratory at
22 Gulf Breeze, Florida were studied in indoor
23 troughs with low concentrations of PCBs and the
24 newly hatched juvenile shrimp did not survive.

1 This does not mean that that's what happened
2 out there in the gulf, itself, because the
3 gulf, as best I recall, nobody was able to
4 detect the PCB level in the gulf water. It was
5 much lower than the test trough water.

6 BY MR. MC CLAIN:

7 Q. But when it was introduced in the trough water
8 it was toxic to the shrimp.

9 A. At the level that they mentioned, five parts
10 per billion, which was achievable with the
11 instrumentation available.

12 Q. Which was a low level at the time.

13 MR. GOUTMAN: Which was what? I'm
14 sorry.

15 BY MR. MC CLAIN:

16 Q. A low level at the time.

17 MR. GOUTMAN: Objection to the form of
18 the question.

19 You may answer.

20 BY MR. MC CLAIN:

21 Q. In fact, it says so in the document. "Very,
22 very low concentrations - five parts per billion in
23 the water, due destroy juvenile shrimp."

24 A. Yes.

1 Q. That's what you said at the time.

2 A. Yes.

3 Q. And you reported here -- you state at page
4 eight, "We decided that we've got to get out of those
5 applications" -- I'm sorry.

6 "We decided that we've got to get out
7 of those applications when we thought there was no
8 earthly chance - or it was beyond our ability - to
9 control the introduction into the environment, so we
10 got out of all of the so-called plasticizer
11 applications. August 30, 1970 was the targeted
12 effective date."

13 And you told us about that already.

14 A. Yes.

15 Q. Now, you go on and talk about Mr. William Fitz
16 Ryan, Congressman Fitz Ryan's bill, and how he first
17 submitted a bill that talked about using controls,
18 and subsequently brought back a bill that said all
19 PCBs should be banned. Do you see that?

20 A. I see on page nine the last full paragraph on
21 the page. Is that the paragraph that you had
22 reference to?

23 Q. Yes.

24 A. Where he was going to ban them, but he did

1 propose at the time that the Secretary of HEW could
2 give exceptions.

3 Q. And so then what happened with the second
4 bill?

5 A. Oh, the next page.

6 Yes. The second bill he wanted a total
7 ban without any exceptions.

8 Q. And ultimately was that the way that the
9 legislation went?

10 A. Seven years later.

11 Q. Did you favor or oppose it?

12 MR. GOUTMAN: Do you mean him,
13 personally?

14 MR. MC CLAIN: The company.

15 MR. GOUTMAN: If you feel comfortable
16 speaking for the company, sir, please answer
17 the question.

18 THE WITNESS: In 1976, January or
19 thereabouts, the vice president of Monsanto and
20 I went to Washington at a meeting called by the
21 EPA to which the representatives of the
22 electrical equipment manufacturers were
23 present, and Monsanto's vice president informed
24 the audience that Monsanto was ready to stop

1 production of PCBs when our electrical
2 customers had found a suitable, safe
3 alternative. So by that announcement, I would
4 suggest that, yes, we were supportive of that
5 approach.

6 BY MR. MC CLAIN:

7 Q. And what was the date of that?

8 A. January of 1976.

9 Q. And before that time you had not been in favor
10 of a ban of PCBs?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: Well, we found that --

14 BY MR. MC CLAIN:

15 Q. Let me ask you a different question. If you
16 want to answer that, go ahead, but I think this will
17 be a better question. By 1970 you decided not to
18 sell it for so-called open system uses.

19 A. Yes. Correct.

20 Q. You made that decision voluntarily.

21 A. Yes.

22 Q. But you continued to believe between 1970 and
23 1976 that it could be used in closed system
24 applications.

1 MR. GOUTMAN: Objection to the form of
2 the question.

3 You can answer.

4 THE WITNESS: Not quite. Between August
5 of 1970, when we stopped selling to the open
6 uses, and about 1972 we phased out of the
7 hydraulic fluids and the heat transfer fluids
8 voluntarily because we found that even though
9 these symptoms were designed to be closed
10 systems they still tended to malfunction, leak
11 and what have you. And we were able to come up
12 with alternative materials and alternative
13 designs to overcome the shortcomings of the
14 alternative materials. For example, if a
15 material was no longer fire resistant we were
16 able to propose certain fire prevention
17 systems. Deluge symptoms and the like. So the
18 only thing remaining in, say, 1973 and
19 thereabouts, and these dates are
20 approximations, I forgot the exact timing, the
21 only use remaining was in the electrical
22 business. Electrical equipment.

23 And in 1976 we informed Russell Train of
24 EPA and his audience we were ready to bow out.

1 That's it.

2 BY MR. MC CLAIN:

3 Q. By September of 1969 Dr. Kelly had concluded
4 that it was not going to be possible to protect or to
5 prevent the full discontinuance of PCBs; isn't that
6 true?

7 MR. GOUTMAN: Objection to what Dr.
8 Kelly thought.

9 THE WITNESS: I don't recall that
10 particular statement, but if he made it, he's
11 entitled to his opinion.

12 MR. GOUTMAN: Don't speculate.

13 BY MR. MC CLAIN:

14 Q. Before 1976 were there people in the company
15 that expressed the view that you ought to discontinue
16 their use because they were being, the PCBs were
17 still being lost to the environment, even in closed
18 system applications?

19 A. Well, in many ways it would have been
20 irresponsible because of the fear of blackouts,
21 fires, catastrophes throughout the power distribution
22 system, and if you remember the blackout in New York
23 City that was paramount in our thinking at the time.

24 Q. Was that caused by PCBs or the lack thereof?

1 A. No, but it was an example of what happens with
2 this interconnected electrical distribution system
3 and the failure of any segment and the domino effect
4 it has, so we were in a position of perceiving this
5 as a very serious type of decision. And to suddenly
6 stop the availability of a fireproof liquid for that
7 purpose just didn't seem responsible, in spite of the
8 environmental presence.

9 Q. Did anyone consider, during this time period,
10 what impact the use of PCBs in building products
11 would have for building environments?

12 MR. GOUTMAN: During what time period
13 are we talking about?

14 MR. MC CLAIN: Any of this time period
15 between 1970 and 1976.

16 MR. GOUTMAN: Are you talking about
17 anyone in Monsanto or anyone in the world?

18 MR. MC CLAIN: Well, let's take it one
19 step at a time.

20 BY MR. MC CLAIN:

21 Q. First of all, anyone at Monsanto.

22 A. I don't know that we used the expression
23 "building products". It was part of the open system
24 use. And --

1 Q. Tell me what the concerns were in regard to
2 open systems use in like building environments.

3 MR. GOUTMAN: Objection. Vague.

4 THE WITNESS: Well, by all of the common
5 definitions of what is a closed system, the
6 uses we perceive, such as coatings, the varnish
7 on this woodwork, the ceiling tiles, if you
8 will, the adhesives, to us those were open
9 uses. They are out there, and just because
10 they are in a fixed spot doesn't mean that
11 eventually they will find their way into the
12 garbage pit or the landfill or what have you.
13 So we, in our collective thinking, kind of
14 grouped building use as an open use.

15 (Indicating)

16 BY MR. MC CLAIN:

17 Q. Did you consider the, at any point, the
18 problem of off gassing from adhesives and coatings on
19 surfaces in buildings?

20 A. Off gassing?

21 MR. GOUTMAN: Of PCBs you are talking
22 about?

23 MR. MC CLAIN: Yes.

24 THE WITNESS: We certainly considered

1 it, but knowing how PCBs behave, they are not
2 volatile. They don't just give off fumes
3 continuously.

4 BY MR. MC CLAIN:

5 Q. What about when they are heated?

6 A. When they are heated you have to reach a
7 pretty high temperature. It isn't just a matter of a
8 little bit of heat, like a light bulb. It takes a
9 high temperature to drive off that, make a vapor out
10 of the liquid.

11 Q. What about in a building heating system?

12 MR. GOUTMAN: Objection. Hypothetical.
13 You can answer the question.

14 THE WITNESS: I just don't imagine a
15 building heating system, unless it is right at
16 the, let's call it the furnace unit, the heat
17 source, exceeding the 300 degrees Centigrade or
18 what have you to volatilize PCBs.

19 MR. GOUTMAN: The T&S Building got very
20 hot.

21 MR. MC CLAIN: You would be very
22 surprised.

23 MR. GOUTMAN: I would be surprised if it
24 got to 300.

1 MR. MC CLAIN: I would be surprised if
2 that is a temperature --

3 THE WITNESS: That's a temperature,
4 sir --

5 BY MR. MC CLAIN:

6 Q. What is your basis for saying that 300 degrees
7 for the vaporization of PCBs?

8 MR. ROUX: 300 degrees Celsius. I
9 think he said Celsius.

10 MR. MC CLAIN: Yes.

11 THE WITNESS: That is the order of
12 magnitude of temperature that we use to
13 vaporize the PCBs to purify them. We cool
14 them, condense them, and collect them, and
15 that's the product that is sold.

16 BY MR. MC CLAIN:

17 Q. So at that temperature they are fully
18 vaporized.

19 A. There is always a pot of liquid at the bottom
20 of the pot. It is boiling off the top. That's the
21 temperature it takes to drive it off and separate the
22 vapor from the liquid.

23 Q. Now, in some of the documents there were
24 expressions of concern about workers exposed to even

1 granular PCBs or flaked PCBs. Do you recall seeing
2 documents like that?

3 MR. GOUTMAN: Objection. No foundation
4 as to what documents you are talking about, but you
5 can answer if you can.

6 THE WITNESS: What I believe you are
7 referring to is the series of PCBs that are
8 solids at room temperature.

9 BY MR. MC CLAIN:

10 Q. Yes.

11 A. The 1268, as an example. 1270 and so on.
12 When they reach room temperature they are no longer
13 liquids; they are solids. They look like limestone
14 chips, some of them, and they have to be ground and
15 crushed before they are packaged and sold to the
16 customer. In that physical form it is easy to create
17 dusts and some of those dusts, unless they are
18 collected properly, with filters and air screens, can
19 get out into the environment and settle on people's
20 skin, up their nostrils and in their ears, and this
21 is the kind of thing that you watch for as you work
22 with that type of PCB. Now, those were not very
23 common. They were produced in smaller volumes.

24 Q. What about 1262s? What kind of physical form

1 did they have?

2 A. 62? I would suggest that you might compare
3 that to a heavy molasses. Very thick.

4 Q. And do you know what uses it was used for?

5 A. Not specifically. It brought properties,
6 primarily of fire resistance, to be used in plastic
7 materials. An example would be, for example, the
8 plastic shower walls that are now made, the units.
9 (Indicating)

10 Q. Yes.

11 A. Some of the customers added those PCBs to that
12 to make it a fire resistant shower wall.

13 Q. Do you know why it would have been utilized in
14 duct material?

15 A. I know nothing about duct construction.

16 Q. Or mastics. Why would it be used in a mastic?

17 A. I would be guessing.

18 MR. GOUTMAN: Don't guess.

19 BY MR. MC CLAIN:

20 Q. Give me your best, recognizing that it is not

21 --

22 MR. GOUTMAN: He already said he is
23 guessing. That's it.

24 BY MR. MC CLAIN:

1 Q. Do you have an educated guess, called a
2 hypothesis?

3 MR. GOUTMAN: I don't think the rules
4 say that educated guesses are different than
5 the guesses.

6 MR. MC CLAIN: If he has got some basis
7 based on his experience I would like to have an
8 answer.

9 THE WITNESS: I don't have experience
10 with mastics.

11 BY MR. MC CLAIN:

12 Q. Or adhesives.

13 A. Your guess is as good as mine as to why they
14 use a certain viscosity in one and a thinner in the
15 other and a solid in a third.

16 Q. Did Monsanto consider the problem of what
17 could happen to PCB containing materials if a fire
18 should occur in a building where PCB products had
19 been installed?

20 MR. GOUTMAN: At what point are we
21 talking about?

22 MR. MC CLAIN: At any point.

23 MR. GOUTMAN: Objection. Overly broad.

24 THE WITNESS: You asked me did Monsanto

1 consider. Well, Monsanto's knowledge of PCBs
2 and their characteristics unavoidably forced
3 them to classify them as fire resistant. And
4 by that their tests showed that materials with
5 sufficient PCBs in them would not sustain a
6 fire as long as a blow torch was on it it might
7 smolder and spit and burn, but the minute you
8 pull the flame away it would snuff out.
9 There's no way that Monsanto would ever know
10 that enough PCBs were present to give that
11 characteristic. It might add to too little and
12 you think you got a fire resistant system and
13 it really isn't. So I don't know that Monsanto
14 was in any position to know exactly what would
15 happen with duct work in a building that caught
16 on fire. They just didn't have any
17 information.

18 BY MR. MC CLAIN:

19 Q. Did you consider what could occur if releases
20 of PCBs into a building were caused by a fire?

21 MR. GOUTMAN: Objection. Are you
22 talking about Mr. Papageorge? Did he consider, this
23 witness?

24 MR. MC CLAIN: Yes.

1 MR. GOUTMAN: I object to the question
2 as overly broad.

3 You can answer if you can.

4 THE WITNESS: I never felt I had enough
5 information to arrive at a responsible
6 conclusion. I had to rely, really, on the
7 manufacturer of that product and what he was
8 introducing into the marketplace.

9 BY MR. MC CLAIN:

10 Q. So it would have been your view that the
11 manufacturer of that product should have foreseen
12 that, based on the information that you gave them,
13 that it contained PCBs and take whatever precautions
14 were necessary if their product were involved in a
15 fire to be certain that those PCBs didn't get out
16 into the environment?

17 MR. GOUTMAN: Well, I object to that
18 question. I think that's asking him to draw a legal
19 conclusion, and I might add one that the law of
20 Pennsylvania has never recognized.

21 If you understand the question, you can answer
22 it.

23 THE WITNESS: I think I understand it,
24 but that doesn't mean that I really do.

1 MR. GOUTMAN: If you think you
2 understand it, we would ask that you try to
3 rephrase the question since the witness is not
4 sure of the question.

5 MR. MC CLAIN: He thinks he understands
6 it. Let him answer it.

7 MR. GOUTMAN: Go ahead. If you
8 understand the question, answer it; if you
9 don't, then don't.

10 MR. MC CLAIN: Quit coaching the
11 witness. You made your objection.

12 MR. GOUTMAN: I'm not coaching the
13 witness.

14 THE WITNESS: The reason I hesitate -- I
15 think I better hear it again.

16 MR. MC CLAIN: That's fair.

17 Please read it back.

18 (The last question was read back by the
19 Court Reporter).

20 MR. GOUTMAN: Again, I object to the
21 form.

22 THE WITNESS: I would expect the
23 customer who used PCBs in his product would
24 consider the information we gave him, evaluate

1 whether he needs more and ask for it, in terms
2 of what the PCB would contribute to his
3 product. Monsanto was never in the business of
4 designing his product or proposing how he
5 should make it and so on. And I would expect
6 him to do whatever it takes to assure himself
7 that the product he introduces to the market
8 place is socially responsible, including what
9 PCB information he has and all of the other
10 information he needs to have before he
11 introduces it to the marketplace.

12 BY MR. MC CLAIN:

13 Q. Let me just ask you, Mr. Papageorge, you would
14 not want residues of PCBs on surfaces where persons
15 worked in an unprotected environment, would you,
16 based on your knowledge?

17 MR. GOUTMAN: Objection. What do you
18 mean by "residues"? What concentrations are you
19 talking about?

20 MR. MC CLAIN: Would you want any
21 concentrations of PCBs on surfaces in a building
22 where people were working continually in an
23 unprotected fashion?

24 MR. GOUTMAN: Objection. It calls for

1 a medical testimony that this witness is not
2 qualified to give.

3 You can express an opinion if you have one.

4 THE WITNESS: I can express my personal
5 experience. I have worked in environments like
6 that for years, and I have seen people retire
7 from Monsanto at a healthy 65 that worked with
8 PCBs on surfaces and on their hands and
9 everything for 40 years, so I cannot really say
10 that I would be concerned with that kind of
11 exposure. If you can't smell it I don't think
12 it can hurt you. It has a distinctive odor,
13 which varies from person to person, but you
14 know it when it is there.

15 BY MR. MC CLAIN:

16 Q. What does it smell like?

17 A. I can only describe what it smells like to me.

18 Q. Fine.

19 A. It reminds me of a disinfectant type that they
20 used to use in the old time dispensaries and so on.
21 To me. Others smell it differently, but if you can't
22 smell it, the levels have not reached what is
23 considered generally to be harmful. And there's no
24 evidence that harm has been done under those

1 conditions.

2 Q. And that's your personal opinion.

3 A. Yes.

4 Q. So is it fair to say that it would be your
5 feeling that if you couldn't smell it you would not
6 take any precautions when working around it?

7 A. Yes.

8 Q. Is that right?

9 A. Yes.

10 Q. That would be your view?

11 A. That's one criteria, yes.

12 Q. Do you know what view other governmental
13 agencies take in regard to that subject? Do they
14 use a smell test?

15 A. No, I don't know.

16 Q. Do you know any government agency that uses
17 the Papageorge smell test?

18 A. That's true.

19 Q. None do?

20 A. Well, I have never discussed it with anybody
21 so I don't know.

22 Q. So it may be an innovation, but no one has
23 used it yet; right?

24 MR. GOUTMAN: Objection to the form of

1 the question. Are you looking for a different
2 answer?

3 MR. MC CLAIN: No, I'm saying no one
4 has used it, have they?

5 MR. GOUTMAN: No one has used what?
6 Objection to the form of the question.

7 If you understand the question, please answer.

8 THE WITNESS: No one has used my
9 guideline of presence of odor as an indicator
10 of potential problems that I'm aware of.

11 BY MR. MC CLAIN:

12 Q. And you are familiar, are you not, that NIOSH,
13 as an example, sets a very low standard of exposure
14 to PCBs on surfaces?

15 MR. GOUTMAN: Objection to the form of
16 the question.

17 You can answer.

18 THE WITNESS: I don't know what you mean
19 by "low."

20 BY MR. MC CLAIN:

21 Q. What do you understand NIOSH's recommendation
22 to be? Do you have an understanding?

23 A. I have not kept tuned in.

24 Q. Do you have in mind any levels at which

1 government agencies have viewed exposure to PCB on
2 surfaces to be safe?

3 A. No, I don't.

4 Q. There was one incident that I did want to talk
5 to you about, the so-called Yusho incident.

6 Y U S H O.

7 A. Correct. Yusho.

8 Q. Yusho. Tell us about that, to the extent that
9 you remember it.

10 MR. GOUTMAN: Objection. Overly broad.
11 You can you answer it.

12 THE WITNESS: As I recall, in 1968 an
13 incident occurred in Japan in which they used a
14 Japanese made PCB, a Kanechlor,
15 K A N E C H L O R, I don't recall the number,
16 there's a number that follows the Kanechlor
17 designation, the system used the Kanechlor as a
18 heat transfer fluid, which was heated over in
19 one corner of the operation. The hot fluid is
20 transferred to a unit in which they distilled
21 rice brand oil to be used as a food oil. The
22 system apparently developed an internal leak in
23 which the Kanechlor mixed with the rice brand
24 oil, and the rice brand oil contaminated with

1 this Kanechlor was sold to the public. And the
2 community came up with ailments, symptoms:
3 Nauseas, headaches, there's even a reference to
4 the birth of what they called brown infants. A
5 pigmentation in the infant that with time
6 cleared up, but when they were first born they
7 were darker complected. As I recall, at the
8 meeting of EPA in November of 1975 in Chicago
9 the report was made that the material that was
10 responsible for the ailments was dioxins; not
11 the PCBs. That's all I really know about this.

12 BY MR. MC CLAIN:

13 Q. Are dioxins a by-product of burning PCBs?

14 A. No.

15 Q. Are they ever found as a contaminate of PCBs?

16 A. No.

17 Q. Have you heard reports that dioxins are found
18 when PCBs are burned?

19 A. PCBs burning? Never.

20 Q. In what situations have you heard of dioxins
21 being associated with PCBs?

22 MR. GOUTMAN: Objection to the form of
23 the question.

24 THE WITNESS: When PCBs are blended with

1 other chlorinated chemicals to make, as an
2 example, transformer fluids, and the one I have
3 in mind at the moment is tetra and trichloryl
4 benzene as a diluent. It is the tetra and
5 trichloryl benzene, when burned, can create
6 dioxins. The chemical possibility is there.
7 With PCBs -- you can't get from PCBs to dioxin.
8 The configuration just doesn't allow it.

9 BY MR. MC CLAIN:

10 Q. What about a fluid used in light ballasts?
11 Does that chemical mix allow dioxins to be created?

12 A. I'm not aware of any chemical mix in the PCB
13 ballast units.

14 Q. It was 100 percent PCB.

15 A. Correct.

16 Q. What was the grade? What was the --

17 A. The most common one was Aroclor 1242 in this
18 country.

19 Q. Were you ever involved in a meeting of the so
20 called ad hoc committee in regard to PCBs?

21 A. I think we are talking about the same.
22 Monsanto ad hoc committee?

23 Q. Yes.

24 A. No, it existed before I had arrived on the

1 scene in 1970.

2 Q. Were you given any reports of the ad hoc
3 committee when you came as part of your packet to
4 review as part of your job as Manager, Environmental
5 Operations, or Manager, Environmental Control?

6 A. I have seen reports from that committee. As
7 best I recall, I think I saw a report during my
8 tutorial period, but I can't recall just which one it
9 was.

10 Q. What was the purpose of that committee? If
11 you know.

12 A. The committee was attempting to communicate to
13 upper management in Monsanto the status of the PCB
14 environmental issue as they perceived it, and their
15 intent was to make recommendations to upper
16 management in Monsanto regarding what actions
17 Monsanto as a corporation should take.

18 MR. MC CLAIN: Let's mark this as
19 Papageorge Exhibit 22. (Indicating).

20 (The above-referred-to document was
21 marked as Papageorge Exhibit 22 for
22 identification)

23 BY MR. MC CLAIN:

24 Q. Sir?

1 A. I have scanned the document.

2 Q. Does this look familiar to you?

3 A. Yes, it does.

4 Q. Do you see here the objectives of the group
5 on the front page, on the page marked "Objectives"?

6 A. Yes.

7 Q. "Protect continued sales and profits of
8 Aroclors,

9 "Permit continued development of new
10 uses and sales, and

11 "Protect the image of the Organic
12 Division and the Corporation as members of the
13 business community recognizing their responsibilities
14 to prevent and/or control contamination of the global
15 ecosystem"?

16 A. I see that, yes.

17 Q. Did you understand that those were the three
18 goals of the committee?

19 MR. GOUTMAN: That isn't what this says.
20 Objection.

21 THE WITNESS: I don't know that this was
22 reflective of the goals of the committee. The
23 way it reads to me is that this committee saw
24 these three points as areas of recommendation

1 to the two top managers, Mr. Bergen and
2 Mr. Springate.

3 BY MR. MC CLAIN:

4 Q. And their first priority, at least by number
5 if not by emphasis, was to protect continued sales
6 and profits of Aroclors?

7 MR. GOUTMAN: Objection to the form of
8 the question.

9 THE WITNESS: That's what it says, yes.

10 BY MR. MC CLAIN:

11 Q. And to permit the continued development of new
12 uses and sales of Aroclors.

13 A. Yes.

14 MR. GOUTMAN: You have already read
15 these, Ken.

16 BY MR. MC CLAIN:

17 Q. And to protect the image of the Organic
18 Division and the corporation.

19 A. That's one of the three, yes.

20 MR. GOUTMAN: "As members of the
21 business community recognizing their
22 responsibilities to control contamination of
23 the global ecosystem."

24 MR. MC CLAIN: That's what it says.

1 BY MR. MC CLAIN:

2 Q. So did you understand that the goal was to
3 protect the image of the Organic Division or to
4 actually be involved in preventing and/or controlling
5 contamination of the global ecosystem?

6 MR. GOUTMAN: Objection to the form of
7 the question.

8 THE WITNESS: You can't have one without
9 the other, sir.

10 BY MR. MC CLAIN:

11 Q. Do you know why it was phrased this way, to
12 protect the image of the corporation, of the Organic
13 Division?

14 A. No, I don't.

15 Q. Now, in 1970, April 17, for the first time
16 there was something called earth day. Do you
17 remember that?

18 A. Yes.

19 Q. You tried to get ready for earth day; isn't
20 that right?

21 MR. GOUTMAN: Objection to the form of
22 the question.

23 BY MR. MC CLAIN:

24 Q. You prepared a handout so that people would

1 have a way to respond if they were given questions on
2 earth day?

3 A. I remember some activity at that time, yes.

4 Q. Why did you feel that it was necessary to
5 prepare information on earth day?

6 MR. GOUTMAN: Objection to the form of
7 the question.

8 THE WITNESS: Well, as you know, earth
9 day was observed to emphasize the need for a
10 cleaner environment. The PCB environmental
11 issue was new and getting some attention in the
12 press, and putting the two together, Monsanto
13 decided that the likelihood that we would be
14 asked questions was very high.

15 BY MR. MC CLAIN:

16 Q. Was it part of the effort to present the image
17 of Monsanto being a responsible company?

18 MR. GOUTMAN: Objection to the form of
19 the question.

20 THE WITNESS: It is part of not only
21 projecting the image, but maintaining the image
22 is more accurate.

23 MR. MC CLAIN: Let's mark this as
24 Papageorge Exhibit 23. (Indicating).

1 (The above-referred-to document was
2 marked as Papageorge Exhibit 23 for
3 identification).

4 MR. GOUTMAN: Again, note my objection
5 to use of documents produced in the Scott
6 litigation.

7 BY MR. MC CLAIN:

8 Q. First of all, are you familiar with this
9 document?

10 A. Yes, I am.

11 Q. You prepared it?

12 A. I circulated it.

13 Q. On page five you say, "Is the public in any
14 immediate danger? "

15 A I see that.

16 Q. "It is our opinion that the public is not
17 faced with any immediate danger to its health from
18 PCBs. Contrary to the sensational headlines of
19 recent days, PCB is not commonly found around the
20 household.

21 "The major market for PCB-containing
22 products is in electrical equipment. It is also used
23 in closed system heat-transfer applications. The
24 'plasticizer' uses are very limited and are

1 restricted to specialty products."

2 Did I read that accurately?

3 A. Yes.

4 Q. Is it fair to say that the general public was
5 concerned about the use of plasticizers where they
6 could be in contact with PCB on a regular basis?

7 MR. GOUTMAN: Objection. Objection to
8 the form of the question. I don't know what
9 you mean by "the general public", and the
10 foundation for which this witness would have
11 responsive information in regard to that
12 question.

13 You may answer the question.

14 THE WITNESS: You have asked me if the
15 general public had concerns about plasticizer
16 use. I don't know that the general public
17 would even know the word "plasticizer", let
18 alone ask about it.

19 BY MR. MC CLAIN:

20 Q. Why did you put it in your question and answer
21 for people to be able to talk about it?

22 A. That's in the event that somebody from the
23 audience or on the phone or a newspaper journalist
24 picked up on the idea of plasticizers and asked the

1 question.

2 Q. You must have thought that it was a
3 possibility or you wouldn't have put it in this memo;
4 am I right?

5 MR. GOUTMAN: A possibility of what,
6 Ken?

7 MR. MC CLAIN: That someone would raise
8 the issue.

9 MR. GOUTMAN: He just said that.

10 THE WITNESS: That's one of the key uses
11 of PCB at the time. The plasticizer, note that
12 it is in quotes --

13 BY MR. MC CLAIN:

14 Q. Yes.

15 A. -- as distinguished in the fluid use in
16 electrical equipment and so on, so since it was a key
17 use it was perceived that it is possible somebody may
18 ask.

19 Q. And that if such products were used in
20 households someone would be concerned about being
21 exposed to PCBs in their house; right?

22 A. Or even if they thought they were in the
23 house, let alone whether or not they were.

24 Q. So you wanted to assure the general public

1 that on a daily basis they wouldn't be exposed to
2 PCBs in plasticizers; am I right?

3 MR. GOUTMAN: Objection to the form of
4 the question.

5 THE WITNESS: Yes.

6 BY MR. MC CLAIN:

7 Q. That's the purpose of this paragraph, isn't
8 it, Mr. Papageorge?

9 MR. GOUTMAN: Objection to the form of
10 the question.

11 THE WITNESS: That's true, but in
12 households the use of PCBs around a home and so
13 on is -- was so remote.

14 MR. MC CLAIN: And you wanted to assure
15 them that even in plasticizers --

16 MR. GOUTMAN: I don't know who
17 interrupted whom.

18 Were you done with your answer?

19 THE WITNESS: Yes.

20 BY MR. MC CLAIN:

21 Q. That even in plasticizers they would not --
22 strike that.

23 They would not be exposed in their
24 homes even to plasticizers because they weren't

1 commonly used for household applications; am I right?

2 MR. GOUTMAN: Objection to the form of
3 the question.

4 THE WITNESS: If the question was asked
5 along those lines, yes.

6 BY MR. MC CLAIN:

7 Q. Because you at least contemplated that people
8 would be concerned about being exposed to
9 plasticizers in their environments that contained
10 PCBs; am I correct?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: It was conceivable that
14 the uninformed individual might assume that his
15 shower curtains had PCBs in them, and if you
16 raise the question then we wanted to assure
17 them that it is not in your shower curtain.
18 That kind of discussion would take place. This
19 is what was meant by restricted to specialty
20 products; not the day in and day out ordinary
21 items in a household.

22 BY MR. MC CLAIN:

23 Q. And it was at least within your contemplation
24 that if the general public were exposed to

1 plasticizers in their daily environment they would be
2 concerned about that?

3 MR. GOUTMAN: Objection for the same
4 reasons I stated before.

5 MR. MC CLAIN: That's true, isn't it?

6 MR. GOUTMAN: Same objection.

7 MR. MC CLAIN: That's why you wrote the
8 paragraph.

9 MR. GOUTMAN: Same objection.

10 THE WITNESS: Well, it all depends on
11 how the person asking the question perceived
12 the problem. The fact that they might ask that
13 question would indicate that they had a
14 concern; otherwise, they wouldn't have asked
15 it. And we were trying to coach, if you will,
16 people -- not coach, but to inform anybody in
17 this list what the appropriate answer would be.

18 MR. MC CLAIN: This next Exhibit we will
19 mark as Papageorge Exhibit 24. (Indicating)

20 (The above-referred-to document was
21 marked as Papageorge Exhibit 24 for
22 identification)

23 BY MR. MC CLAIN:

24 Q. This is your document?

1 MR. GOUTMAN: Take your time. Don't
2 rush.

3 I am going to interpose an objection to the
4 use of a document used in the Scott litigation.

5 BY MR. MC CLAIN:

6 Q. This is one of your documents, Mr. Papageorge?

7 A. Yes, it appears to be a copy of a document
8 that I prepared.

9 Q. Do you see one of your objectives? This
10 document is entitled, "Management Plan,
11 Polychlorinated Biphenyl Environmental Problem"
12 dated April 7, 1970.

13 A. Was that a question?

14 Q. Yes.

15 A. I'm sorry. Yes, that is the correct title.

16 Q. On page two, under III "Objectives" it says,
17 "The overall objective of this plan is to manage the
18 PCB pollution problem to prevent it from adversely
19 affecting the established Return-on-Investment
20 objectives of the Functional Fluids and Plasticizers
21 Groups while maintaining the corporate image of
22 Monsanto as a responsible and respected member of
23 industry world wide."

24 Do you see that?

1 A. It does.

2 Q. And under the "Objectives", supporting the
3 overall objective below it says, number two, was to,
4 "Inform customers of the PCB problem and the
5 importance of preventing environmental pollution both
6 at their plants or by their products, and encourage
7 them to take responsible action by offering
8 assistance on reclamation substitute products and
9 proper disposal."

10 Do you remember what efforts, if any,
11 you took in regard to the Gustin Bacon company?

12 MR. GOUTMAN: Specifically with regard
13 to Gustin Bacon?

14 MR. MC CLAIN: Yes.

15 THE WITNESS: I know nothing about that
16 company.

17 BY MR. MC CLAIN:

18 Q. What about other companies using plasticizers?
19 What efforts did you make? Can you recall any?

20 A. We offered substitute plasticizers, for
21 example, and we offered incineration service to
22 destroy any unused PCB liquids.

23 Q. Did you give any advice to plasticizer
24 customers about concerns that they should have about

1 persons being exposed to those products in indoor
2 environments?

3 MR. GOUTMAN: Objection.

4 Could you read back that last question,
5 please.

6 (The last question was read back by the
7 Court Reporter).

8 MR. GOUTMAN: I object to the question
9 because I don't know what you mean by advice on
10 concerns they should have. It doesn't make
11 syntax sense to me.

12 If the witness understands that
13 question, then the witness can answer.

14 BY MR. MC CLAIN:

15 Q. Do you understand the question?

16 A. I understand the question and it implies that
17 sharing with the customers information we had
18 regarding the effect of PCBs on human beings.

19 Q. Yes.

20 A. And we have always done that. That is an
21 ongoing activity in addition to this new activity.
22 It's two separate prongs. The human health effect
23 issue is not new. It is there all the time. With
24 each new customer, each new application, each

1 brochure that is printed and all of these
2 communications that we talked about earlier regarding
3 the medical profession. One doctor to another,
4 industrial hygienist to another. That was always
5 ongoing. This is an environmental program on top of
6 the human health program.

7 Q. And so the answer to the question is you did
8 instruct them that they ought to be concerned about
9 exposures to plasticizers in sold products or not;
10 correct?

11 MR. GOUTMAN: Objection to the form of
12 the question.

13 THE WITNESS: I'm confused. Who am I
14 instructing?

15 BY MR. MC CLAIN:

16 Q. Did you ever instruct or give advice to a
17 plasticizer customer that they ought to limit
18 exposure to PCBs in finished products?

19 MR. GOUTMAN: By the users of those
20 finished products?

21 MR. MC CLAIN: That's right.

22 THE WITNESS: Not in those words. We
23 told them what PCBs can do, at what
24 concentrations, and not knowing the

1 concentrations that would exist in that final
2 product, which ends up in a user's hands,
3 Monsanto was in no position to say here's what
4 you must say. We had to leave it to the
5 judgment of the manufacturer of that item and
6 how he communicated with his customer.

7 BY MR. MC CLAIN:

8 Q. And that was his responsibility, in your view.

9 A. Yes.

10 MR. MC CLAIN: I don't have any further
11 questions.

12 - - -

13 BY MR. MANNINO:

14 Q. I have a few questions.

15 Mr. Papageorge, my name is Tony
16 Mannino. I represent Philips Electronics and Advance
17 Transformer.

18 A little bit earlier counsel asked you
19 some questions about light ballasts. I believe you
20 had responded to the effect that Aroclor 1242 is the
21 most common use of Aroclors in light ballasts in the
22 United States. Is that fair to say?

23 A. That's correct.

24 Q. How do you know that information? On what do

1 you base that?

2 A. My discussions with members of the electrical
3 equipment industry.

4 Q. Are you aware of the use of Aroclor 1242 or
5 application of it in products other than light
6 ballasts at any time in closed systems?

7 A. In electrical equipment?

8 Q. In any other type of product.

9 A. Oh, yes, there are thousands of uses. I don't
10 know where to start.

11 Q. Can you give me an example of what types of
12 products you are aware of.

13 A. It is an ingredient in hydraulic fluids, it is
14 used in some heat transfer fluids, it is a -- it was
15 an ingredient in some adhesives, some coatings,
16 lacquers and varnishes, some inks, and of course we
17 talked about the electrical, the capacitors and some
18 switch gears, electrical switch gears. I'm sure I
19 haven't covered all. Sealants, caulking around the
20 skyscraper towers, the fixed windows, so to speak.
21 That's all that comes to mind at the moment.

22 Q. If that's all you can think of off the top of
23 your head.

24 A. Yes.

1 Q. Do you have any knowledge how ballasts are
2 constructed or what their component parts are?

3 A. No, I really can't say I have. I have
4 observed the assembly line.

5 Q. Do you have -- were you finished?

6 A. Yes.

7 Q. Do you have any idea as to what part of a
8 ballast, if it had contained PCBs, would have
9 contained PCBs?

10 A. As I understand it, there's a condenser in
11 there. And unless I'm totally wrong, the condenser
12 is a foil and craft paper winding that is immersed in
13 the PCB. There's another component to that ballast
14 unit that I'm not familiar with. The whole idea, as
15 I understand it, is to give that initial current to
16 flash on the fluorescent tube.

17 Q. Based on, we have been talking all day about
18 open systems versus closed systems, what type of
19 application would ballasts consist of in your
20 understanding?

21 A. We consider that a part of a closed system.

22 Q. And a little bit earlier we also discussed,
23 there was some hesitancy around 1970 on Monsanto's
24 part, with respect to discontinuing closed systems,

1 because of a possible effect on the power system in
2 general as related to electrical ballasts.

3 A. Yes.

4 Q. Can you explain what the concern was of the
5 power system. I know you had made reference to the
6 '65 blackout and whatnot.

7 A. The concern had to do with the previous
8 experience of decades ago with mineral oil as a fluid
9 in transformers and the explosions and fires that
10 occurred. And I think it strikes home when you are
11 staying at, say, the Holiday Inn and there's a green
12 box outside your door that contains a transformer.
13 When it had PCBs in it the chance of it exploding and
14 creating a fire are reduced considerably as compared
15 to the mineral oil unit that might be perched out
16 there. So it is that kind of sensation that we felt,
17 and we were reinforced constantly by the makers of
18 those transformers, not only the Holiday Inn type,
19 but the big units, the power distribution stations.

20 Q. So is it fair to say that circa 1970, about
21 the time that Monsanto discontinued use of the open
22 system, that the discontinued manufacture of PCBs for
23 open systems, that there was hesitancy at that point
24 in time to discontinue it for closed systems due to

1 the lack of a safe alternative at that point in time?

2 A. That is true, and that -- it wasn't only
3 Monsanto's idea; the government, the federal
4 government, supported this use in the interagency
5 task force report, which was published in May of
6 1972. There were many pages in there devoted to the
7 continued use and why it is important to continue
8 using it.

9 MR. MANNINO: That's all I have.

10 - - -

11 BY MR. JUETTNER:

12 Q. Good afternoon. Nice to meet you, Mr.
13 Papageorge. Is that how you pronounce your name?

14 A. Yes. Whatever makes you feel comfortable. I
15 respond coming and going.

16 Q. My name is John Juettner. My firm represents
17 ChemRex. I have a few follow-up questions.

18 You testified that in 1969-1970
19 Monsanto made a decision to discontinue the
20 manufacture of PCBs for open systems; is that
21 correct?

22 A. Yes.

23 Q. And some of the open systems you referred to
24 included plasticizers and caulking; is that correct?

1 A. Yes.

2 Q. How familiar are you with the use of
3 plasticizers?

4 A. I don't know how to describe that. It is a
5 limited knowledge in terms of the intended benefit of
6 adding in a material which is referred to generally
7 as a plasticizer, is to add it to a base material
8 that by itself would be brittle, like some rubbers,
9 like chlorinated rubber, or the old phonograph
10 records that when you dropped they cracked. This is
11 why later they were more flexible. They had a
12 material called a plasticizer that was added. So it
13 was an ingredient added to give this property of
14 flexibility.

15 Q. Plasticizers then, some of their applications
16 might include floor tiles, for example.

17 A. Yes. Definitely.

18 Q. Ceiling tiles?

19 A. I'm not familiar enough with the need for
20 flexibility in ceiling tiles to even have an
21 impression on that.

22 Q. Plasticizers could be used in, as a component
23 product, for example, for caulking?

24 A. Correct. Yes.

1 Well, in Monsanto the word "plasticizer,"
2 when it came to the PCBs, was used quite
3 broadly and in fact it almost became a synonym
4 for miscellaneous PCB uses. In other words, if it
5 wasn't a fluid used in a piece of machinery it was
6 turned over to the plasticizer group to market, and
7 it picked up the term plasticizer, so it is a
8 miscellaneous chemical additive, which brought
9 certain properties to the end products, whatever they
10 might be.

11 Q. Is a plasticizer as a chemical additive, is
12 that included as part of food wrapping?

13 A. Oh, yes.

14 Q. Why do you add PCBs to a plasticizer? Is that
15 to increase its elasticity?

16 MR. GOUTMAN: Objection. It is my
17 understanding that PCBs are used as
18 plasticizers, so I don't understand your
19 question.

20 In any event, you can explain.

21 BY MR. JUETTNER:

22 Q. Let me rephrase the question. PCBs are then
23 used as plasticizers which can, in one application,
24 become part of food wrapping; is that correct?

1 A. Oh, PCBs were not ever promoted for use in
2 food wrapping. There are other plasticizers that are
3 acceptable for contact with food. The PCBs as
4 plasticizers fall into that broad category of
5 plasticizer, but when you say with PCBs used, why
6 were they used as plasticizers, the principal feature
7 was one of inactive. They did not react with the
8 rest of it, the materials, to cause a future problem
9 of any kind. They also were so stable they didn't
10 deteriorate with time. So the caulking you use
11 around that window in the skyscraper would last for
12 decades. It wouldn't become brittle and break and
13 crack off.

14 Another feature in many applications
15 with PCBs as plasticizer, the user of that PCB was
16 seeking fire resistance to impart that property to
17 that piece of plastic, so if it was near a flame it
18 would not just burn like a candle.

19 Q. Do you know whether PCBs as a plasticizer were
20 ever used as food wrapping?

21 MR. GOUTMAN: Objection. What does
22 that have to do with this case? I mean, I
23 don't think anybody is claiming that as part
24 of Plaintiff's claim that food wrapping in the

1 Transportation -- ?

2 MR. JUETTNER: I'll try to connect up in a
3 minute.

4 MR. GOUTMAN: Is that part of your
5 claim?

6 MR. MC CLAIN: It might be. It could
7 be. I'll wait for him to connect up.

8 THE WITNESS: Is that question still out
9 there?

10 MR. GOUTMAN: Why don't you repeat the
11 question. I also think it might have also
12 already been asked and answered.

13 MR. JUETTNER: Can you read back the
14 last question.

15 (The last question was read back by the
16 Court Reporter).

17 THE WITNESS: I have no information that
18 informed me that PCBs per se were used in food
19 wrapping.

20 BY MR. JUETTNER:

21 Q. You don't know whether this issue of PCBs, if
22 it was, it was not in food wrapping -- strike that.

23 Was there any concern about PCBs as a
24 plasticizer, was there ever any concern raised at

1 Monsanto whether PCBs were being leached into the
2 food?

3 A. Yes, this comes about with the use in some
4 printing inks, that Monsanto would sell to an ink
5 place and the ink would, in turn, be sold to somebody
6 that is making a wrapper or a package. There was
7 also concern about some adhesives where you wanted to
8 seal the package with an adhesive. Those kinds of
9 things.

10 Q. And this was part of the problem that you saw
11 with regard to using PCBs in open systems; correct?

12 MR. GOUTMAN: Objection to the form of
13 the question.

14 THE WITNESS: Correct.

15 BY MR. JUETTNER:

16 Q. Exhibit 20, you looked at that a few minutes
17 ago. Actually about an hour ago, but I believe it
18 referred to a report to Monsanto regarding PCBs which
19 were contained in a paint or concrete coating
20 transferring or migrating to another product; is that
21 correct?

22 A. Yes.

23 Q. Was that another example of part of the
24 problems Monsanto perceived in using PCBs in an open

1 system?

2 MR. GOUTMAN: Objection to the form of
3 the question.

4 THE WITNESS: Yes.

5 BY MR. JUETTNER:

6 Q. Based on that kind of information, do you know
7 whether Monsanto made any effort to determine if PCB
8 containing products in an open system would transfer
9 or migrate to non PCB containing products?

10 MR. GOUTMAN: Objection. Overly broad.
11 Refers to what, any potential product in this
12 universe where there might be a leaching from
13 one product to another?

14 MR. JUETTNER: Do you understand the
15 question?

16 MR. GOUTMAN: I don't know that I do.

17 THE WITNESS: I'm not real sure. I
18 think you asked, correct me if I'm wrong, you
19 asked if Monsanto conducted any studies to
20 determine whether the use of PCBs in some
21 applications of plasticizer would essentially
22 end up in a food product.

23 BY MR. JUETTNER:

24 Q. Let me try to be more specific. You expressed

1 or Monsanto expressed some concerns about PCB
2 products in open systems being released in the
3 environment; is that correct?

4 A. Correct.

5 Q. Say, for example, a PCB containing caulk was
6 applied to a building and then another product, which
7 did not contain PCBs, was applied on top of that.
8 Would it be possible, based on the knowledge gained
9 by Monsanto, that the non PCB containing product
10 could receive the PCBs from the PCB containing
11 product?

12 MR. GOUTMAN: Let me object to the
13 question in that no foundation has been made as to
14 this witness's expert background necessary to answer
15 that question. Secondly, it would ask him to speak
16 for every employee of Monsanto, which I think is
17 unfair.

18 If you understand the question, sir, I
19 think you can answer it.

20 THE WITNESS: I think I understand the
21 question. I don't know that I have an
22 appropriate answer in terms of personal
23 knowledge because I would need more information
24 regarding the compatibility of these two and

WILLIAM B. PAPAGEORGE

1 whether or not PCBs would migrate into the new
2 material or whether the new material would
3 repel it. There's just -- there are too many
4 unanswered questions yet to put the whole
5 picture together.

6 BY MR. JUETTNER:

7 Q. So you don't feel today that you are capable
8 of answering whether PCBs can migrate from one
9 product to another?

10 MR. GOUTMAN: Objection to the form of
11 the question.

12 THE WITNESS: I, personally, can't.

13 BY MR. JUETTNER:

14 Q. Do you know the difference between a
15 polysulfide based caulk and urethane caulk?

16 A. No.

17 Q. Do you know whether PCBs sold by Monsanto were
18 used for either a polysulfide based caulk or urethane
19 based caulk?

20 A. I do not.

21 Q. Have you ever heard of PCBs being used in a
22 urethane based caulk?

23 A. No.

24 MR. JUETTNER: That's all I have.

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1 MR. GOUTMAN: I just have one follow-up,
2 sir.

3 - - -

4 BY MR. GOUTMAN:

5 Q. You discussed this morning certain precautions
6 that were in effect at Monsanto's plants regarding
7 the handling of PCBs and what to do when PCBs
8 spilled. Were those precautions in effect just for
9 PCBs?

10 A. Well, the same principles apply to all
11 industrial chemicals, ranging from cyanide to water.

12 MR. GOUTMAN: That's all I have.

13 MR. MC CLAIN: I have no further
14 questions.

15 MR. ROUX: No questions.

16 MR. MANNINO: No further questions.

17 (Witness excused.)

18 (Deposition concluded at 4:20 p.m.)

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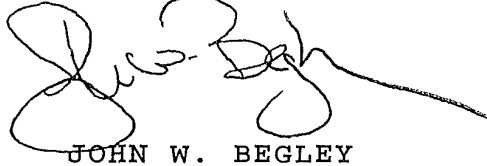
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C E R T I F I C A T E

- - - - -

I, JOHN W. BEGLEY, a Registered Professional Reporter and Notary of the State of Pennsylvania, do hereby certify that I reported the deposition of William B. Papageorge in the foregoing matter; that the foregoing is a true and correct transcript of the stenographic notes of testimony taken by me.

I FURTHER CERTIFY that I am not an attorney or counsel of any of the parties; nor a relative or employee to any attorney or counsel connected with the action, nor am I in any way interested in the result of said case.



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SIGNATURE:

William B Papageorge

WITNESSED BY:

Karen Collins

DATE:

September 17 1998

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ERRATA SHEET

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PAGE	LINE #	CHANGE	REASON THEREFOR
12	20	--- Manager, Environmental	Correct, 122 Title
22	13	made the product, ---	Incorrect word
22	14	--- repaired the equipment, ---	Incorrect word
73	9	Not yet,	Incorrect word
107	4	Jack Garrett	Incorrect name
121	7	--- polychlorinated naphthalenes,	Incorrect chemical
203	7	was one of inactivity, ---	See ---

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