

STATE OF WISCONSIN : CIRCUIT COURT : MILWAUKEE COUNTY
BRANCH 8

STROH DIE CASTING COMPANY,

Plaintiff,

VOLUME XVI (a.m.)

v.

Case No. 639-887

MONSANTO COMPANY,

Defendant.

May 7, 1991

Honorable Michael J. Barron
Circuit Judge Presiding

A-P-P-E-A-R-A-N-C-E-S

RIORDAN, DRIVELLO, CARLSON, MENTKOWSKI, STEEVES by
DONALD CARLSON AND JOHN PENDERGAST, appeared on behalf of the
Plaintiff.

BORGELT, POWELL, PETERSON, FRAUEN by JOSEPH McDEVITT
and KIRKLAND AND ELLIS by ANDREW RUNNING appeared on behalf
of the Defendant.

* * *

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I N D E X

<u>WITNESS</u>	<u>EXAMINATION</u>	<u>PAGE</u>
William Papageorge	Direct (Mr. Running)	2663

P-R-O-C-E-E-D-I-N-G-S

MR. RUNNING: Good morning. Monsanto recalls Mr. William Papageorge.

DIRECT EXAMINATION (con't)

BY MR. RUNNING:

Q Mr. Papageorge, you should have in front of you Defendant's Exhibit 1075.

A I have it.

Q Mr. Papageorge, can you identify this document, please.

A It's a multi-page document entitled PCB Environmental Pollution Abatement Plan. I don't see any date on it.

Q Okay. Is this one of the documents you reviewed in familiarizing yourself in your job responsibilities as manager of environmental control with Monsanto?

A Yes, it is.

Q And from reading the document, can you give an estimate of the time at which it was prepared?

A Oh, it was done in the latter part of October, 1969. Perhaps even the early part of November, 1969.

Q Do you know it was before a certain date?

A It was before a meeting held that Monsanto -- On November --

1 Q November 17th?

2 A That's the date, 1969.

3 Q Mr. Papageorge, showing you the blowup of

4 Defendant's Trial Exhibit 1082, which is the

5 12-point program you testified to at the start of

6 your testimony on Thursday.

7 A I remember it.

8 Q This came from what meeting?

9 A That's the November 17th, 1969, meeting we talked

10 about.

11 Q Okay. And the document you have in front of you

12 came shortly before the November 17th meeting that

13 resulted in the 12-point plan?

14 A Yes, it did.

15 MR. RUNNING: I move for the admission of

16 this document, Your Honor.

17 THE COURT: Which one?

18 MR. CARLSON: Exhibit?

19 MR. RUNNING: 1075. I believe you marked

20 an earlier draft.

21 MR. CARLSON: I have no objection.

22 THE COURT: So received.

23 (Exhibit No. 1075, previously marked for

24 identification, was received into evidence.)

25 MR. RUNNING:

1 Q Is this the first page of the document you've
2 identified, Mr. Papageorge?

3 A Yes, it is.

4 Q If you turn to page four -- page No. 416.

5 A I have it.

6 THE COURT: You want the lights or
7 not?

8 MR. RUNNING: I think we have to go
9 through so many documents -- No, Your Honor. I
10 think it is better if we keep the lights on.

11 THE COURT: Let's try two off.

12 MR. RUNNING: Fair enough.

13 Q Mr. Papageorge, can you still read it?

14 A Yes, I can see.

15 THE COURT: Wait a minute. I got the
16 wrong two.

17 MR. RUNNING: Okay. That should work
18 well.

19 Q Mr. Papageorge, let me direct your attention to the
20 first paragraph. "Analysis indicates the
21 environmental presence of the 5 and higher
22 chlorinated biphenyls which take the appearance of
23 Aroclor 1254 and Aroclor 1260. We have strong
24 indications that Aroclor 1242 or at least part of it
25 degrades biologically.

1 "Since the Aroclor 1242 contains -- it's
2 hard to read there. Something 7 percent of the 5
3 chlorine biphenyl -- contains around 7 percent or
4 higher we cannot rule out the possibility that the
5 observations may be a concentration affect of the
6 higher chlorinated biphenyls of Aroclor 1242."

7 Do you see that paragraph, Mr.
8 Papageorge?

9 A I do.

10 Q What was your understanding on this matter when
11 you assumed the position of manager of
12 environmental control in January 1970 a month and a
13 half later?

14 A I understood that even with the limited information
15 that Monsanto had at the time -- and most of it was
16 starting to come out of the Monsanto laboratory in
17 England -- in Wales specifically -- that it seemed
18 very likely that some of these PCBs were degrading
19 and disappearing. But the higher the chlorine
20 content, the more resistant they were. They were
21 not disappearing.

22 So at that time we thought that perhaps
23 some of the materials that was being identified as
24 Aroclor 1254 and Aroclor 1260 could have come from
25 something like a 1242. But we weren't sure, but we

1 thought we better consider that.

2 Q Was that considered subsequently?

3 A Yes, yes. It was, yes.

4 Q We'll get to that in a moment. The reference,

5 "Since the Aroclor 1242 contains around 7 percent of

6 the 5 chlorine biphenyl or higher, we cannot rule

7 out the possibility..." and so on. What is

8 7 percent a reference to?

9 A That's the amount by weight of the 5 chlorine

10 biphenyls and higher that's present in the original

11 Aroclor 1242 mixture.

12 Q What was the significance of the 5 chlorine biphenyl

13 molecule, why was that singled out as being the

14 dividing line?

15 A Because that is the type of PCB that was determined

16 thus far up to that point as being the kind that

17 didn't disappear. It would stay in the

18 environment. It was persistent.

19 Q Using the 5 chlorine biphenyl as a dividing line

20 then, how much of the 5 chlorine biphenyl or

21 higher molecules were there in Pydraul 312 at the

22 time?

23 A Oh, Pydraul 312 contained Aroclor 1242 at about

24 close to 50 percent, 47, 48. Somewhere in there.

25 Close to 50. So what this says is that the

Pydraul 312, the final mixture assuming it's 50 percent Aroclor 1242 and of that 1242, 7 percent is 5 chlorine or more.

That tells me that about three-and-a-half percent of the total Pydraul 312 is equivalent to 5 chlorine and higher biphenyl.

Q And what significance does that have?

A Well, that certainly says that almost 97 percent of that fluid is not the persistent PCB.

Q And the next line, "To date we have no confirmed reports of finding Aroclor 1242 present in the environment except in the effluent of our plants or in the plants -- I'm sorry -- or in streams and mud below our plants at Anniston and Sauget."

What was the significance of that finding?

A That tells us that if a sample of material is taken close to the point where PCBs are introduced and nature hasn't had time to degrade it, the analyst will be able to determine that it's Aroclor 1242. It hasn't had time to degrade into something else.

Q Does that mean it's not biodegradable?

A No. That means it hasn't had enough time to biodegrade yet.

1 Q Paragraph three. "Man. There's no harmful effect
2 known to man or other mammals after 40 years of
3 production. Investigations are underway by various
4 sources." What was your understanding when you
5 assumed the position of manager as environmental
6 control for Monsanto in January of 1970 on this
7 subject?

8 A Well, I was personally familiar with the fact that
9 Monsanto workers that made the PCBs had displayed
10 no harmful effects. And it was true that the
11 material had been made for 40 years and used.

12 In terms of investigations underway, that
13 covers many including Monsanto's animal and bird
14 studies and fish studies that were being made as
15 well as fish studies made by government
16 laboratories.

17 Q Was Monsanto monitoring the health of its
18 workers?

19 A It does, yes.

20 Q The next paragraph, "Political and Public Emotion.
21 PCBs are falsely linked with DDT because PCBs show
22 up in the analysis for DDT." Mr. Papageorge, could
23 you explain what's being referenced here?

24 A Well, this tries to explain the confusion that
25 existed for a period of time, late 1966 to fairly

1 late 1969, in which many, many laboratories looking
2 for DDT kept seeing other evidence that some chose
3 to identify as PCBs. And some chose to identify
4 them as other chlorinated chemicals.

5 So that it tries to describe that there
6 were instances where PCBs were identified as PCBs
7 when there was no real evidence. Later it was shown
8 that it was a false identification.

9 Q Turn to two other parts of this document that were
10 referenced to yesterday. This is from page five of
11 the same document, Mr. Papageorge. Will you turn to
12 page five?

13 A I have it.

14 Q Do you see something Mr. Damiani was read yesterday
15 by Mr. Carlson under Legal Liability, "All customers
16 using the products have not been officially notified
17 about known effects nor do our labels carry this
18 information."

19 Mr. Papageorge, what was done on this
20 subject after you became manager of environmental
21 control?

22 A Well, that was my top priority item that I addressed
23 immediately in January when I arrived at my new
24 assignment.

25 Q And how did you address it?

1 A I called together the group of Monsanto people who
2 were to make up my PCB -- I want to call them
3 committee or task force. They were representatives
4 of the parts of Monsanto that were interested in
5 PCBs. They included research people, manufacturing
6 people, marketing people, medical department
7 personnel, engineering people, anyone that could
8 contribute to a discussion.

9 And I conducted a session at which we
10 composed a rough draft of a letter that might go to
11 the customers. That was taken by one of the members
12 to a -- I don't know how much detail you need. But
13 anyway, it was finally typed up.

14 And the marketing representatives after
15 hearing the comments from the other professionals,
16 the engineering, the analytic chemists, the medical
17 personnel and all, they went back and made some
18 comments on the rough draft. I collected all of
19 these comments and eventually ended up with a
20 proposed letter to be used by all the business
21 groups.

22 Each business group then added
23 appropriate statements that fit their products. For
24 example, the Pydraul marketing group had a statement
25 that addressed Pydraul. The electrical people had a

1 statement that addressed the electrical application,
2 and so on. And that's the way we put together this
3 letter, and it was mailed as I recall in the
4 following month, February 1970.

5 Q We'll get to that letter in a moment, Mr.
6 Papageorge. Were there other letters involved?

7 A That was the first of several letters.

8 Q What about labels? There's been a reference to
9 labels. What was being done on that score?

10 A Yes. The labels were the second item we tackled.
11 We looked upon it really as another way to
12 communicate what Monsanto knew in terms of
13 environmental impact, and it was to do two things.

14 One is to supplement the letter that the
15 customer already should have received, and it served
16 as a constant reminder to those who were using it
17 and also attempted to cover the possibility that a
18 new customer might receive a container of this
19 material and certainly he should be tuned in as to
20 what could happen in the environment.

21 Q Another page from the same document. This is
22 page -- I believe it's seven, STR 29419.

23 A I have it.

24 Q Do you have it, Mr. Papageorge?

25 A I have it, yes.

1 Q Mr. Carlson also read this do to Mr. Damiani
2 yesterday. "Industrial. These fluids have
3 generally been strayed into drains, washed down
4 sewers and generally regarded as very harmless."
5 Did you address this subject when you were the plant
6 manager at Anniston, Mr. Papageorge?

7 A Yes, certainly. Certainly.

8 Q Did you address it as the manager of environmental
9 control?

10 A Yes, I did.

11 Q What was your understanding on this subject?

12 A I have difficulty accepting the statement,
13 "Generally sprayed into drains." I just have no
14 information that says it was generally done so. As
15 to washing down sewers, I'm aware of the washing of
16 oil stains on work floors, that kind of washing
17 down.

18 But I'm not aware -- I've never had any
19 information given to me that said large amounts of
20 liquid were deliberately flushed into the sewer to
21 get them out of the plant. I've never heard that.

22 And then, "Generally regarded as very
23 harmless." In a general way if properly used, one
24 could say that they are not too harmful.

25 Q Did Monsanto take steps to curtail the release of

1 PCBs into the municipal sewers at its plants?

2 A Yes, it did.

3 Q Were those steps successful?

4 A Well, as time went on they became more and more
5 successful, yes.

6 Q When you were the plant manager at Anniston for four
7 years, did you ever discover anybody dumping PCB
8 fluid into the sewers?

9 A No. No.

10 Q Did you ever discover anybody dumping PCB fluids
11 outside the plant?

12 A No.

13 Q Mr. Papageorge, we discussed this document --

14 MR. RUNNING: This is Defendant's Trial
15 Exhibit 1082, Your Honor.

16 Q -- at the start of your testimony on last Thursday
17 afternoon. I just want to -- You don't have to pull
18 it out. I'm going to direct your attention to a
19 couple paragraphs. This is the November 17, 1969,
20 meeting that resulted in the 12-point plan --

21 A It is.

22 Q -- that you explained on Thursday afternoon?

23 A Yes.

24 Q This is the 12-point plan again?

25 A Yes, it is.

1 Q I want to direct your attention now to the last
2 three paragraphs on page STR 1542. Mr. Papageorge,
3 the first paragraph reads, "Cost of this program is
4 estimated at approximately \$400,000 SARE and
5 \$700,000 capital to change equipment." What is SARE
6 mean?

7 A That is an acronym for Sales Administration Research
8 Engineering.

9 Q And the 700,000 capital, was does that refer to?

10 A That is the amount of money needed to buy new
11 equipment to add to the existing equipment to
12 control the process.

13 Q Should I add those two figures together to arrive at
14 the total costs? How should I do that?

15 A Well, you could do that. That will be the total
16 cost -- The SARE cost is for a calendar year. The
17 \$700,000 for capital could have required more than
18 one year to spend.

19 Q Is the SARE cost in accounting terms the operating
20 cost and the 700,000 capital cost a capital cost?

21 A Yes, it is.

22 Q They have different accounting significance, don't
23 they?

24 A Yes, they do.

25 Q Total \$1.1 million as of that time?

1 A For the activity that was known at that time, yes.

2 Q Was the program expanded subsequently?

3 A Yes, yes. Each year something new would be
4 added.

5 Q Was \$1.1 million a significant amount of money in
6 1969?

7 A At that time, yes, it was.

8 Q Was pressure -- Was Monsanto under pressure at the
9 time to take the steps outlined in this plan?

10 A You mean from outside of Monsanto?

11 Q Yes.

12 A Absolutely --

13 MR. CARLSON: Objection. Repetition. I
14 think we went through all of this, Your Honor.

15 THE COURT: About three times.

16 MR. RUNNING: I don't think in regard to
17 this particular step, Your Honor. But if it's sunk
18 in that well, I won't ask it.

19 Q "Conclusions: In light of the recent and developing
20 evidence of a possible threat to certain species of
21 bird and aquatic life, we should plan to discontinue
22 to manufacture Aroclors 1254 and 1260.

23 "The division is instructed to develop a
24 program to discontinue these products and report
25 this to the committee." Was that construction still

1 in place when you became manager of environmental
2 control?

3 A It was, yes.

4 Q Explain something about the procedure. Why is this
5 group instructing the division on anything?

6 A What --

7 Q Explain the procedure.

8 A This group is the -- contains the top officials in
9 Monsanto, and they certainly have every right to
10 tell others in Monsanto what's expected of them.

11 And the group was convinced that the discontinuation
12 of manufacturing of Aroclor 1254 and 60 was

13 appropriate, and they told the division to proceed
14 to do what is necessary to stop the manufacture.

15 Q Did the committee always in your experience accept
16 whatever representations were entered into by the
17 business people?

18 A Oh, no.

19 Q Would it make its own investigations from time to
20 time?

21 A From time to time it would make its own. But in
22 most instances, they would ask the representatives
23 of the units involved to go back and do some more
24 work and come up with new ideas if they could.

25 Q Try to give us a little more flavor to these

1 meetings. I mean was it -- What were they like?

2 Were these corporate developmental committee or
3 corporate committee meetings?

4 A I don't know quite where to start.

5 Q Well, for example, was it -- was it like -- was it
6 like an after dinner cocktail meeting or was it more
7 like Kingsfield interrogating his students?
8 Somewhere on the continuum? Can you explain what
9 the atmosphere was like?

10 A Well, normally a prepared presentation is presented
11 by a person who is qualified to speak. If it's a
12 medical problem, it would be a medical person. If
13 it's a manufacturing, it would be a manufacturing
14 person. If it's a marketing, it would be a
15 marketing person.

16 The officials who make up this committee
17 are generally given some outlines or some brief
18 summaries that they can look at and review and
19 comment on. As the presentation takes place, the
20 individuals are free to ask questions and stop the
21 discussion and pursue some point that they are
22 interested in.

23 Many times it's just like here. We have a
24 projector and slides on the screen and the free
25 discussion takes place. After the formal prepared

1 part is finished, then there's an open discussion
2 back and forth between these -- the president and
3 his vice presidents and the presenters of the
4 information.

5 At this point then the -- generally the
6 president of the company will make a summary of what
7 he understood and then give instructions to change
8 or he may give his approval. He says, "I like what
9 I hear, proceed." And in every case that I'm
10 familiar with, they say, "Come back in so many
11 months and tell us how you're doing."

12 That's roughly what takes place.

13 Q Are tough questions asked?

14 A Oh, yes. These people are -- They represent a lot
15 of experience and skills. So they know how to ask
16 some pretty tough questions.

17 Q What I'm getting at, Mr. Papageorge, if we're
18 looking back 20 years later and trying to understand
19 what the company was deciding on certain questions,
20 where should we first look?

21 Should we look to the decisions of the
22 corporate development or corporate management
23 committee? Should we look at the presentations made
24 by lower level management to the committee? Should
25 we look somewhere else? What would be the first

1 place to look?

2 A I would personally look at the decisions made by
3 this top level corporate management committee
4 consisting of the president and his vice presidents.
5 They are the key people.

6 Q And what -- Can you generalize based on your -- You
7 attended these meetings, didn't you, after January
8 1970 from time to time?

9 A I attended and made a presentation at only one.

10 Q And your superior attended the meetings?

11 A Correct. Everyone, yes, that involved the PCBs.
12 Mr. Burgen and his boss, Mr. Minkler, and his boss
13 Mr. Smith. All of the top level bosses were
14 involved.

15 Q Can you generalize as to the attitude of the
16 committee towards the PCB environmental problem?
17 Was it one of -- On a continuum from, "Let's do
18 nothing," to, "Let's do everything possible," where
19 did they stand one to ten?

20 A I think it boils down to from my personal
21 observation and understanding of the instructions
22 they do what is responsible. "Cut no corners. Let
23 us know what you need and we'll support you."

24 Q What did the committee do with proposed deadlines
25 for reformulation of PCB product into non-PCB

1 products? What was their general attitude towards
2 proposed deadlines for reformulation?

3 A Their general attitude was it wasn't fast enough.

4 In fact, the one presentation I made where some
5 deadlines were proposed the corporate committee
6 said, "This program sounds good to us, but it's not
7 fast enough. We want you to go back and see us
8 within a month with some deadlines that are quick
9 and not as extended as the original proposal."

10 Q Now, the last paragraph, "The status of
11 Aroclor 1242 should continue to be tested to
12 determine whether it contributes to this problem.
13 Other products which might be involved should also
14 be examined."

15 Do you recall the testimony you just gave
16 about the 5 chlorine and higher molecules and the
17 percentage that was in Aroclor 1242, Mr.
18 Papageorge?

19 A I do.

20 Q Do you recall also the testimony you gave that
21 there was some consideration being given to the
22 possibility that there might be a concentration
23 affect and that some of the 5 chlorine and higher
24 molecules that were in Aroclor 1242, the 7 percent
25 might be -- might be being found in environmental

1 samples and being identified as Aroclor 1254 and
2 1260?

3 A I remember that, yes.

4 Q What was the reaction of the corporate development
5 committee to this report?

6 A Well, their reaction was, let's conduct the
7 appropriate studies to establish that idea or to
8 show that it doesn't happen that way. Whatever it
9 takes, let's find out what is really going on.

10 Q And they authorized these studies even though to
11 date no environment samples had identified
12 Aroclor 1242?

13 A Yes, they did.

14 Q Mr. Papageorge, I'm going to show you Defendant's
15 Trial Exhibit 1009. You've testified a moment ago,
16 Mr. Papageorge, about a letter that was sent to
17 Monsanto customers in February of 1970.

18 I'd like you to review this document just
19 to familiarize yourself with it. I know you've
20 seen it before. Then I'm going to ask you some
21 questions really about the first page of the
22 document first.

23 A I have reviewed it.

24 Q Let's -- I'd like to first of all know your personal
25 involvement in the mailing program. You

1 testified you were involved in writing the first
2 letter?

3 A I was involved in the preparation of the drafts
4 and the final approval of the appropriate letters
5 to each of the applications for PCBs.

6 Q What decision was made regarding who would receive
7 the letters?

8 A They were to be sent to all customers on record in
9 Monsanto's files which covered a period of at least
10 three years and in many cases went back as far as
11 five years.

12 Q So if Andy Running Die Casting Company bought
13 Pydraul 312 in 1968, I would be on the list of
14 customers to receive the letter?

15 A Yes, you would.

16 Q And if I had bought it in 1964 and you still had the
17 records of my purchase, would I get it or would I
18 not?

19 A It depends if your -- if Monsanto's records had
20 other references to your company associating it with
21 Pydrauls. It might be a bill of lading in someone's
22 file or an invoice, a bill, the accounts receivable
23 department may have had a record of some sort that
24 someone kept.

25 All the files were perused looking for

1 that kind of information to go back as far as we
2 could. Because in some cases the material was
3 purchased many years ago, and that's the last we
4 heard. We had no idea where it was used, how it was
5 used, did it still exist. So we wanted to cover as
6 many of those as we could.

7 Q Was a letter finally agreed on to be sent to Pydraul
8 customers?

9 A Yes.

10 Q And were you involved in the mailing of the
11 letter?

12 A I was -- I certainly -- I didn't do any of the
13 typing or envelope stuffing, but I was present when
14 the activity started. There were extra secretaries
15 hired to help. The -- The secretaries did the
16 typing on the letter itself, and then they prepared
17 the labels to be attached to the envelopes.

18 The procedure called for maintaining the
19 proper records by each of the business groups to
20 show if necessary that the letters did go to the
21 customers on record.

22 I remember vividly spending weekends
23 watching this activity because there were thousands
24 of letters going out and we wanted to get them out
25 as fast as we could. We couldn't do that during a

1 normal workday. So we spent Saturdays and
2 Sundays -- I forget couple, three weekends to get
3 it all done.

4 Q Did you observe the process of the mailing work
5 underway on the weekends?

6 A Yes.

7 Q Now, this mailing list -- I take it there was
8 considerable amount of work involved in putting it
9 together?

10 A Oh, yes. That took -- That took several weeks on
11 the part of many people.

12 Q Did you want to save the mailing list for future
13 mailings?

14 A We did, yes.

15 Q Is that one reason you kept the names and addresses
16 of those who had received the first letter?

17 A Yes.

18 Q The first page of this document that you have in
19 front of you, it's got title Office of the President
20 and then it has an address of a company. There's a
21 check mark next to it. You see that?

22 A I see it.

23 Q What's the significance of the check mark?

24 A That shows that the envelope was stuffed and placed
25 in the out basket, and this is a way to keep score

1 as to how far along in the procedure had this
2 particular letter gotten.

3 Q Is it just a coincidence that we happen to be
4 able to catch the check mark in this case, if you
5 know?

6 A Well, I don't know so much of a coincidence. There
7 were many copies made of a whole page of addressees.
8 Some of those copies were used by the secretaries to
9 check off the fact that they did complete the letter
10 and it was ready to go. Some copies didn't have
11 a check mark. It's just a clean copy for the
12 record.

13 Q That's what I wanted to get at. We happened to make
14 a copy of one of the check mark in this case?

15 A Yes.

16 Q Now, were there other mailing labels on this page
17 originally?

18 A Yes, yes. Oh, yes.

19 Q And in copying for this -- In other words, every
20 mailing label on the page -- what was done with it?
21 How was it transferred from the sheet to the
22 envelope?

23 A Well, these are -- These labels are to -- are those
24 that had the adhesive with them. The full pages
25 insert in the typewriter and the addressee is typed

1 on it. And when the page is completed, it is
2 copied. Then the original labels are peeled off and
3 affixed to the envelopes and mailed.

4 Q And proper postage was put on the envelopes?

5 A Oh, yes. They go through the meter machines and
6 they are mailed out.

7 Q And were the letters mailed?

8 A Yes.

9 Q Is the mailing label that appears as STR 1326 --
10 does it go with the attached letter?

11 A I'm sorry. I didn't hear the last part.

12 Q Was the mailing label addressed on the first page of
13 this exhibit is the attached letter that was mailed
14 in the envelope?

15 A This mailing label was put on the envelope and the
16 envelope was stuffed.

17 Q But what I want to get at is did the secretary put
18 this letter in the envelope?

19 A Yes.

20 MR. CARLSON: I object to the lack of
21 foundation for that particular --

22 MR. RUNNING:

23 Q Was that a standard practice, Mr. Papageorge?

24 MR. CARLSON: I don't have a problem with
25 the second question. The first one I do.

1 THE COURT: I would agree. Is that -- In
2 other words, you can answer the question, was that a
3 standard practice?

4 MR. RUNNING:

5 Q Was it standard practice to put this letter in the
6 envelope with this mailing label?

7 A That was the practice.

8 MR. RUNNING: I move for admission of this
9 exhibit.

10 MR. CARLSON: I have no objection.

11 THE COURT: 1009?

12 MR. RUNNING: 1009, Your Honor.

13 THE COURT: So received.

14 (Exhibit No. 1009, previously marked for
15 identification, was received into evidence.)

16 MR. RUNNING:

17 Q And is this the first page of the exhibit, Mr.
18 Papageorge?

19 A Yes, it is.

20 Q There's the check mark and the mailing
21 label. There's been previously testimony that
22 that's a correct address for Stroh Die Casting
23 Company, Mr. Papageorge.

24 Is that -- Is the fact that Stroh Die
25 Casting Company appears as a -- as one -- Does

1 the mailing label indicate whether or not they were
2 a customer of record as of 1970 in Monsanto's
3 files?

4 A Yes, it does. That's the only place it could have
5 come from for this purpose.

6 Q Is this the letter that was sent? Is this the first
7 page of the letter?

8 A That is the copy of the first page, yes.

9 Q First paragraph Mr. Papageorge, "Recently several
10 newspaper and magazine articles have been published
11 indicating that polychlorinated biphenyls, PCBs,
12 have been discovered at some points in some marine,
13 aquatic and wildlife environments.

14 "The quantities detected are said to be in
15 the parts per million and parts per billion
16 categories." Let's stop on the second line. With
17 reference to polychlorinated biphenyls, when you
18 were at Anniston, Mr. Papageorge, was that the name
19 you used for Aroclors?

20 A We -- Monsanto never used the acronym PCBs. We
21 referred to our products by the trademark Aroclors,
22 which covered the whole family of products.

23 Q What about -- You were familiar with PCBs before
24 1965, weren't you?

25 A Yes, I was.

1 Q You were involved in their manufacture?

2 A Not in their manufacture. In their --

3 Q In the blending?

4 A Blending and the use in the making of products and
5 also in the use and equipment.

6 Q Okay.

7 (Whereupon, there was a change of
8 reporters.)

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1 Q Were what we now call polychlorinated biphenyls,
2 were they called polychlorinated biphenyls in 1965
3 or before, generally?

4 A Not generally, no.

5 Q What were these chemicals called?

6 A It depends which group is discussing it. The
7 chemist when talking to other chemists would refer
8 to them as chlorinated diphenyls, d-i, or biphenyls,
9 as time went on. The chemist in talking to the
10 manufacturing people in Monsanto would use the word
11 Aroclors. That same chemist in talking to a
12 customer would use expressions such as Pydraul and
13 Therminol and Pyranol, all of the trademarks that
14 were in common use at the time, but the acronym,
15 PCBs, was the expression first proposed by Dr.
16 Widmark and Mr. Jensen. That was in late 1966 that
17 that started to appear in the literature.

18 Q And that was in Sweden?

19 A Yes.

20 Q How long did it take for the phrase, PCBs or
21 polychlorinated biphenyls to catch on in this
22 country?

23 A I can't recall any specific date, if you will. It
24 sort of evolved. I would suggest that by late 1967
25 it started to become a fairly common term amongst

1 those who were studying it.

2 Q What about the population, generally? What about
3 industrial customers of Monsanto?

4 A Industrial customers? No. This is probably the
5 first time most of them saw that expression, unless
6 they happened to read the articles that were
7 published up to that point, which were not many, but
8 there were a few.

9 Q Now, referring to the first paragraph, generally,
10 why did you decide to include this information in
11 the letter?

12 A Well, it was something that Monsanto perceived as
13 being a new piece of important information.
14 Monsanto by late '69 had its own laboratories
15 confirm that the analytical procedures were
16 believable, and we had established enough
17 information to feel that this was a fact.

18 We didn't quite know how extended it was. We
19 were lacking a lot of the final information we would
20 like to have had, but we felt that we knew enough
21 that we should share that with our customers.

22 Q Were there subsequent letters after this?

23 A Oh, yes.

24 Q The next paragraph says "it is claimed that the PCBs
25 found." What does that refer to, "that the PCBs

1 found"?

2 A That refers to the report, for example, from Dr.
3 Jensen, in Sweden.

4 Q Are those the reports that we had up on the screen
5 on Thursday afternoon? Do you recall?

6 A Those, let me think. Yes, yes. That is an example
7 of the kind of report, yes.

8 Q Okay. And other reports like that?

9 A Yes.

10 Q What about Dr. Risebrough's work?

11 A Yes, the University of California, Berkeley,
12 published a paper in one of the technical journals.
13 The San Francisco Chronicle picked up on that and
14 had an article. It was designed for the lay person,
15 not necessarily the scientist, describing what Dr.
16 Risebrough and others had found.

17 Q Okay. This statement, "It is claimed that the PCBs
18 found strongly resemble chlorinated biphenyls
19 containing 54 percent and 60 percent chlorine by
20 weight." Was that an accurate description of the
21 articles?

22 A Yes.

23 Q And the bottom of the page reads, "PCBs with a
24 chlorine content of less than 54 percent have not
25 been found in the environment and appear to present

1 no potential problem to the environment." What was
2 the basis of that statement?

3 A That is based on the results coming out of the
4 laboratories that were looking at PCBs at that time,
5 early 1970.

6 Q Did the scientific data subsequently change on that?

7 A As time went on, it did change, yes.

8 Q And did Monsanto's view on the subject change?

9 A Yes, it did, as the information became available,
10 there was a continual review of what Monsanto was
11 doing with these products. It did influence their
12 programs.

13 Q Was the last paragraph an accurate statement at the
14 time?

15 A Yes, it was.

16 Q Let's turn to the next page of the letter, Mr.
17 Papageorge. Was this letter just sent to customers
18 who bought Aroclor 1264 and 1260 products, products
19 containing those Aroclors?

20 A No.

21 Q What was the purpose for sending it to customers who
22 were not buying products that contained 54 percent
23 or 60 percent chlorinated PCB mixtures?

24 A Well, we certainly knew that the products they were
25 buying contained a group of chemicals that came

1 under the acronyms, PCBs, and we did know that some
2 of those, as we discussed earlier, did include the
3 five chlorine types of PCBs.

4 Q Is that the 7 percent figure you referred to before?

5 A Yes, exactly. Yes, so we felt it only responsible,
6 really, to tell the people that the products do
7 contain PCBs and what type, where we could, and the
8 fact that some were being found in the environment
9 and some had not been found yet. That was the
10 intent.

11 Q Now the letter doesn't expressly say that Pydraul
12 312 contains PCBs, does it, just so we are clear on
13 that?

14 A No, it doesn't. It's implied. It does say are not
15 formulated. That's true.

16 Q Was that a conscious design on your part to be
17 sneaky?

18 A No. In hindsight, it should have been clarified.
19 The intent there was to show the fact that these all
20 had PCBs in them, but not the kind of PCBs that were
21 being found in the environment. The Therminols, the
22 terphenyls, the Pydrauls, they all followed that
23 category.

24 Q If a customer wasn't buying a Pydraul that was
25 formulated with Aroclor 1254 or Aroclor 1260,

1 received this letter, read it, and wondered why they
2 got the letter and called you, what would you have
3 said?

4 A Well, you are on our list of customers who bought
5 this product. Let's say Pydraul 312, and Pydraul
6 312 does contain some PCBs, not the kind that are
7 being found in the environment, but they're related,
8 sort of in that family of chemicals, and we believe
9 you ought to know that. That kind of response, I
10 would expect.

11 Q Was the oversight you've just referred to
12 subsequently corrected, in terms of expressly saying
13 point blank that Pydraul 312 contained PCBs?

14 A I didn't hear the first part.

15 Q You referred to an oversight, not saying point blank
16 directly in the letter, Pydraul 312 contains PCBs.
17 Was that oversight corrected later on?

18 A Oh, yes, yes.

19 Q Let's go to the last paragraph of this letter. "We
20 feel that all possible care should be taken in the
21 application, processing, and effluent disposal of
22 these products to prevent them becoming
23 environmental contaminants. Of interest to you may
24 be an article in Chemical Week, October 29, '69,
25 regarding water pollution standards set by each

1 state in the union. It is attached."

2 This letter reflects that good manufacturing
3 practice in the future may require that no products
4 used by any company should find their way into
5 waterways.

6 Why was that paragraph written in the way it
7 was?

8 A It's an attempt to underline the need for conducting
9 their manufacturing procedures in such a way that
10 the industrial chemical doesn't find its way into
11 waterways. Just a sort of an emphasis.

12 Q Was that last paragraph limited to products
13 containing Aroclor 1254 and 1260?

14 A On, no. That is all industrial chemicals.

15 Q Reference to no products, meant no products?

16 A I'm sorry.

17 Q Did the reference to no products, really mean no
18 products? No products should find their way into
19 waterways?

20 A Exactly, yes.

21 Q Is this a copy of the article that was enclosed in
22 the letter?

23 A It is.

24 Q Without going through the details in the article on
25 all of the 50 states, the second paragraph reads,

1 "All 50 states have had their water quality
2 standards improved entirely or in part by the
3 federal water pollution control administration.

4 Recently a state by state summary of these standards
5 was put together for the first time."

6 Let me ask a few basic questions, since we are
7 talking about something that happened 21 years ago.
8 Was the Environmental Protection Agency in existence
9 at this time?

10 A The date of this particular article is October, '69.
11 The Environmental Protection Agency was approved by
12 congress. It was in the midst of pulling together
13 its personnel and staff and getting organized.
14 There were a few people that knew that they were
15 part of the EPA, but as yet, the EPA was not
16 functioning the way it was planned and the way it
17 was able to later.

18 Q So the Federal Water Pollution Control
19 Administration was the predecessor to EPA?

20 A For water purposes, yes.

21 Q Have you ever heard of the Clean Water Act of '72?

22 A Yes, I have.

23 Q Can you describe in very general terms. We don't
24 want to get into a digression of the statute itself,
25 but what was the general scope of the clean water

1 act in 1972?

2 A The general scope was to protect our waterways from
3 being contaminated with all kinds of materials,
4 including industrial chemicals.

5 Q Is that a federal or state law?

6 A It's a federal law administered by the EPA.

7 Q Was it an important law?

8 A Very much so.

9 Q Did it have anything to do with the first Earth Day?

10 A I suspect that Earth Day helped put some emphasis on
11 the need for such an act, yes. I don't know that
12 there is a direct connection by Earth Day organizers
13 and the law, itself.

14 Q The first Earth Day was what, in April of '70?

15 MR. CARLSON: Objection. That is leading.

16 THE COURT: Sustained.

17 MR. RUNNING: This isn't really in
18 dispute.

19 MR. CARLSON: I don't know if you're
20 trying to get the witness to talk about things for
21 foundation or --

22 MR. RUNNING:

23 Q Mr. Papageorge, do you remember the first Earth Day?

24 A I do.

25 Q Do you recall when it was?

1 A April, 1970.

2 Q If you call it the 20th anniversary, I can figure
3 out the day. Mr. Papageorge, did this letter go out
4 before or after the first Earth Day?

5 A Before.

6 Q Obviously it went out before the Clean Water Act?

7 A Certainly.

8 Q Mr. Papageorge, when you were sending out this
9 letter, this first letter, did you look for other
10 models that you could use, other chemical companies
11 that had sent out similar letters about
12 environmental problems associated with their
13 products?

14 A We looked for models and found none and discovered
15 that we found ourselves doing things that had never
16 been done before in this field of industrial
17 chemicals in the environment.

18 Q Is it fair to say this is a first?

19 A The first in the world, yes.

20 Q And were the water quality standards as they existed
21 in Wisconsin in 1969, summarized in the letter that
22 was sent to Stroh?

23 A They were summarized in the article attached to the
24 letter.

25 Q And under toxic substances, the law in Wisconsin, in

1 1969, was none in concentrations or combinations
2 toxic to humans or of public health significance, is
3 that right?

4 A That is correct.

5 Q And also no materials producing color, taste, or
6 odor in amounts that would create a nuisance, is
7 that correct?

8 A That is correct.

9 Q And there is various solids, temperatures, I believe
10 also biological oxygen?

11 A Yes.

12 Q The reference to dissolved oxygen, explain what that
13 refers to, what dissolved oxygen means, in this
14 context?

15 A That is the amount of oxygen that the chemist can
16 detect in a sample of water taken from a natural
17 stream, lake, river.

18 Q If I put an industrial pollutant into a sample of
19 water, will that generally raise or lower the
20 dissolved oxygen content?

21 A Generally it will lower it.

22 Q Why is the dissolved oxygen content important?

23 A Well, it takes a given amount of oxygen to support
24 life in that waterway, aquatic life, plant life.

25 Otherwise it becomes a stagnant pool and nothing can

1 live in it.

2 Q Did the standards get more or less strict when the
3 Clean Water Act was passed two years later, just
4 generally?

5 A Well, generally it picked up the more restrictive of
6 the states, so some states had to tighten up,
7 whereas others didn't have to do anything different.

8 Q Mr. Papageorge, I'm going to show you Defendant's
9 Trial Exhibit 1251. Take whatever time you need to
10 review this. I'm just going to ask you about the
11 first couple of pages and then one other page I'll
12 direct your attention to.

13 (Switch in Reporters.)
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1 A I have read it or reviewed it.

2 Q Can you identify this as a Monsanto business record?

3 A Yes.

4 MR. RUNNING: Move for admission.

5 MR. CARLSON: No objection.

6 THE COURT: So received.

7 MR. RUNNING:

8 Q Mr. Papageorge, who is Mr. N.T. Johnson?

9 A Mr. Johnson at that time, early 1970, was the

10 marketing manager for Monsanto located in St. Louis

11 who was responsible for fluids -- fluid products sold

12 by Monsanto for use in industrial applications.

13 Q Okay. And the subject of this memo is "Pollution
14 Letters"?

15 A That is the title, yes.

16 Q One of the letters being the letter that we have just
17 looked at that was sent to Stroh?

18 A Yes.

19 Q And the first paragraph reads, "Attached is a list of
20 questions and answers which may be asked of you by
21 customers receiving our Aroclor-PCB letter. You can
22 give verbal answers; no answers should be given in
23 writing. If the customer asks a question you can't
24 answer or if he wants an answer in writing, then send
25 his questions to me and we will answer from here."

1 What was the reason for that decision,
2 not to have the field sales representatives writing
3 up written reports or letters to the customers about
4 technical questions?

5 A The recipients of this letter, both the direct
6 recipients and those receiving carbon copies,
7 represented different years of experience. Some of
8 them were quite experienced and could very likely put
9 the answers in writing and do it correctly. We were
10 concerned that some of the newer individuals might
11 not quite understand exactly what should be in
12 writing, and we were concerned of giving out the
13 wrong kinds of information. And this is one way to
14 make certain that the information that was being sent
15 out was proper, and Mr. Johnson decided that his
16 office ought to be the source, the focal point.

17 Q Now, there is a reference in the next paragraph, it
18 says, "We want to avoid any situation where a
19 customer wants to return fluid. The new reformulated
20 products will be available within a month. We would
21 prefer that the customer use up his current inventory
22 and purchase Pydraul 625A, Pydraul ACA, Pydraul ACA
23 Winter Grade and Pydraul 540A when available. He
24 will then top off with the new fluid and eventually
25 all Aroclor 1254 and Aroclor 1260 will be out of his

1 system. We don't want to take fluid back. Sell him
2 the replacement." What was the reason for that
3 statement?

4 A Well, that statement refers to fresh material,
5 unused, still in the container, as shipped from
6 Monsanto. Some of our customers keep an inventory of
7 that kind. The intent here is to demonstrate or to
8 enforce the use of those -- of that inventory because
9 under the right conditions it's still an excellent
10 product, it does what it's supposed to do, and when
11 controlled, it doesn't create any problems.

12 And by "control," I'm talking now control
13 in terms of exposing the worker in the shop, in the
14 factory, and also control to prevent the material
15 from getting into the environment and perhaps
16 creating some problems there.

17 Q It goes on. "We must be very positive in our
18 approach with each customer relative to our decision
19 to eliminate the use of Aroclor 1254 and Aroclor 1260
20 in our Pydraul products." Stop there. Does this
21 memo relate to Pydraul 312 at all?

22 A No. No.

23 Q Let's go on. "We, your customer and Monsanto, are
24 not interested in using a product which may present a
25 problem to our environment. We certainly have a

1 reason" -- "We certainly have no reason to be
2 defensive or apologetic about making this change."
3 What's the change?

4 A It's the removal of the Aroclor 1254 and Aroclor 1260
5 from those Pydraul products that contained it
6 initially.

7 Q "The decision to change makes good sense and our
8 customers should commend us, not criticize our
9 actions. No one has forced us to make this change."

10 Stop there. Was Mr. Johnson accurate on that score?

11 A He certainly was.

12 Q "We have done it to keep our customers out of
13 possible trouble. They should appreciate our effort,
14 and stay with us as a customer on the reformulated
15 Pydrauls. To make this change has cost us research
16 monies and time." It goes on to say the salesmen
17 ought to be positive. Mr. Papageorge, was this
18 evidence of some cover-up?

19 A Absolutely not. I don't know what he would be
20 covering up.

21 Q It goes on, "Don't let a customer or competitor
22 intimidate you. I doubt if our competitors know
23 whether their product could present a problem to our
24 environment. You might ask your customer if he has
25 ever asked Houghton or Stauffer, Carbine, et cetera,

1 about the effects of their products." Was there any
2 concern that Monsanto's competitors were intimidating
3 its customers?

4 A Well, it was a concern because there was evidence
5 that they were intimidating the customer.

6 Q How were they doing that?

7 MR. CARLSON: Objection, hearsay.

8 THE COURT: Sustained.

9 MR. RUNNING:

10 Q Did you receive reports that Monsanto's competitors
11 were capitalizing on the alleged problems with PCBs
12 to sell their products as opposed to Monsanto's
13 products?

14 MR. CARLSON: Objection, leading and
15 hearsay.

16 THE COURT: Sustained.

17 MR. RUNNING:

18 Q It goes on, "We should also recognize, point this out
19 to your customer, we must clean up. The Chemical
20 Week article gives him an idea of laws in effect in
21 his state. Read this yourself. Be familiar with the
22 data on each state in which your customers are
23 located. Use this in your discussions." Was that
24 done, Mr. Papageorge?

25 A Yes, it was.

1 Q It goes on, "We can't afford to lose one dollar of
2 business. Our attitude in discussing this subject
3 with our customer will be the deciding factor in our
4 success or failure in retaining all our present
5 business. Good luck." Was that Monsanto's
6 overriding policy, not to lose a dollar of business?

7 A I wouldn't call it overriding. It has to be done
8 with responsible action. So the dollar isn't
9 necessarily -- the two go together. If you can do it
10 responsibly, that's very desirable. That's the
11 purpose for being in existence in the first place.

12 Q Have you ever seen salesmen use this kind of language
13 before?

14 A Oh, yeah. This is typical marketing information.

15 Q Did Monsanto try to motivate its salesmen?

16 A Certainly.

17 Q Did it try to do so at the expense of the
18 environment?

19 A Never.

20 Q I show you Defendant's Trial Exhibit 1252. Can you
21 identify this as a March 30, 1970, memorandum from
22 Dr. Kelly to yourself?

23 A Yes.

24 Q Is this a Monsanto business record?

25 A Yes.

1 MR. RUNNING: Move for admission, Your
2 Honor.

3 MR. CARLSON: Just hold on one second.
4 No objection.

5 THE COURT: So received.

6 MR. RUNNING:

7 Q I am sorry. Let me go back to one more question on
8 Mr. Johnson. I'm sorry, Mr. Papageorge, let me just
9 go back. This Defendant's Trial Exhibit 1251, do you
10 have that in front of you?

11 A I have.

12 Q It has a series of questions and answers that Mr.
13 Johnson prepared, does it not, for the salesmen to
14 get an idea of what the information was on PCBs at
15 the time?

16 A Yes.

17 Q Will you turn to Page STR 2323, which I have up on
18 the screen.

19 A I have it.

20 Q Now, I have highlighted Question 1 -- I am sorry,
21 Question 3. Let me just read the question and answer
22 in case the others can't read it.

23 "Why should PCB be an environmental
24 contaminant if chlorinated terphenyl is not?"
25 Answer, "I don't think there is any positive answer

1 on this, and I can't give you any theories. However,
2 I would emphasize that not all PCBs appear to be
3 contaminants. Those such as Aroclor 1221, 1232 and
4 1242 haven't been identified in marine, aquatic and
5 wildlife environments. Chlorinated terphenyls, at
6 least those made by Monsanto, have not been
7 identified in the environment either."

8 Mr. Papageorge, were chlorinated
9 terphenyls, or PCTs, used as substitutes for a period
10 of time for PCBs in some of Monsanto's products?

11 A Yes, they were.

12 Q And were they being used to substitute, at least in
13 the plans, early 1970, when this was prepared?

14 A In early 1970, not yet.

15 Q So even though this is attached, "Possible Customer
16 Questions On PCBs," do you think that this
17 questionnaire goes with the -- with the letter?

18 A Yes.

19 Q It does go with the letter?

20 A I am sorry. No. No. This goes to the sales people.

21 Q Okay. So I am just trying to get a reference in
22 time. Had the decision been made yet to convert some
23 of the products to polychlorinated terphenyls? There
24 is a reference to a conversion.

25 A There is a reference to a conversion program. There

1 were studies on their way to see if the material
2 containing the chlorinated terphenyls was acceptable.
3 The program was well underway. But as yet it hadn't
4 gone through all the testing and approvals
5 necessary --

6 Q Okay.

7 A -- for final marketing.

8 Q So terphenyls were a proposed substitute, but the
9 decision hadn't been made yet?

10 A That is correct.

11 Q And Mr. Johnson has written what he's written in the
12 proposed answer to this question about the difference
13 between terphenyls and biphenyls?

14 A Yes.

15 Q He says that he didn't have any theories as to why
16 one would be a contaminant and the other wouldn't.
17 Do you see that?

18 A That's what he says, yes.

19 Q Did Mr. Johnson know everything on this subject?

20 A I don't think anybody knew everything on this
21 subject.

22 Q What were the reasons, as you understood them, that
23 terphenyls might not be an environmental contaminant?

24 A Well, there -- at that point in time we saw some of
25 the terphenyls as containing lower amounts of

1 chlorine, giving a lot more carbon and hydrogen
2 associated with that chlorine, which was looked upon
3 as favorable for degradation. Also, in the
4 applications being considered at the time, it was
5 becoming more and more evident that it took less in
6 terms of pounds per gallon of material to achieve the
7 same kind of fire-resistance that the older PCB-type
8 products had. So these were both looked upon as a
9 step in the right direction.

10 Q I will set this up. Mr. Papageorge, I just want to
11 walk through the reasons to make sure we all
12 understand them. And by covering the subject now we
13 won't have to refer back to it every time it comes up
14 in these documents. I am going to write "Differences
15 Between PCBs And PCTs"; is that all right?

16 A All right.

17 MR. CARLSON: I am sorry. Have you given
18 that an exhibit number?

19 MR. RUNNING: I will.

20 MR. CARLSON: I thought you just did.

21 MR. RUNNING: I am just writing it.

22 We'll save it, don't worry.

23 MR. RUNNING:

24 Q Okay. And the first reason was what for the
25 chlorine?

1 A The chlorinated terphenyls contained less chlorine
2 than the PCBs for which they were to substitute.

3 Q Let's use a specific example, and I know this wasn't
4 made until later in time.

5 A Um-hum.

6 Q But Pydraul 312 was converted to Pydraul 312A; is
7 that right?

8 A That is correct.

9 Q I'll just write here, "Less Chlorine," first of all.

10 Now, what was the ingredient in Pydraul 312 that
11 provided the fire-resistance?

12 A PCBs.

13 Q And what kind of PCBs?

14 A The Aroclor 1242. The 42 percent chlorine.

15 Q So I'll put one column "PCT" and one column "PCB,"

16 and for Aroclor 12 -- I am sorry, for Pydraul 312A it
17 was Arochlor 1242?

18 A Not 312A.

19 Q 312 was 1242?

20 A Correct.

21 Q And Aroclor 1242 means 42 percent by weight?

22 A Yes.

23 Q So we put 42 percent chlorine. What was the
24 ingredient in Pydraul 312A, the PCT product?

25 A It was Aroclor 5432. 32 percent chlorine.

1 Q So the PCT had 32 percent chlorine?

2 A Yes.

3 Q What was the significance of that?

4 A It's significant in that at that time we related, by
5 the information we all had, that the less the
6 chlorine, the more the opportunity for degradation
7 existed. It's more apt to degrade. It would not
8 persist.

9 Q Can we say the less chlorine, the greater the
10 biodegradation?

11 A Yes.

12 Q I am going to write, "The lower the chlorine
13 percentage, the greater the biodegradation"; is that
14 fair?

15 A That is correct.

16 Q Okay. What was the next difference?

17 A The next important difference is the fact that when
18 the PCTs were used in place of the PCBs, it didn't
19 take as much of the material to -- to reach the
20 fire-resistance that we were looking for.

21 Q What was the consequence of that?

22 A That means that less of the chlorinated material was
23 present, and if it did get into the environment,
24 certainly there would be less of it out there.

25 Q Okay. So let's again -- I'll just put here for the

1 first reason Pydraul 312A -- "312 versus 312A"?

2 A Um-hum.

3 Q We'll do the same thing -- Shall we -- What -- Is

4 what you just said the same thing as you said for

5 reason one? Are we just repeating the same point?

6 A No. No. Let me try to explain.

7 Q Okay.

8 A When making Pydraul 312, close to 50 percent of the

9 mixture was that PCB which was 42 percent chlorine.

10 When we made Pydraul 312A, I don't remember the exact

11 number, it was in the 30 percent, about a third of it

12 was the chlorinated terphenyl, which was 32 percent

13 chlorine. So you had less material with lower

14 chlorine.

15 Q Okay.

16 A So there were two steps in what we felt was in the

17 right direction again.

18 Q If I wrote, "Less Chlorinated Material," is that a

19 fair summary of number two?

20 A Yes.

21 Q And for one column I'll put, "Pydraul 312A," and the

22 other, "Pydraul 312." And your testimony is that in

23 Pydraul 312 how much of the mixture was PCBs?

24 A Close to 50 percent. 47, 48, somewhere in there.

25 Q So say less than 50 percent?

1 A Yes.

2 Q And for Pydraul 312A, how much was terphenyl?

3 A About 30, 31, 32 percent.

4 Q Okay. So it was about 32 percent?

5 A Um-hum.

6 Q So a reduction basically from a half to a third?

7 A Yes.

8 Q What was the significance of that?

9 A Well, as I said earlier, there was less chlorinated
10 material present in each pound of Pydraul, and if any
11 of it did get in the environment by some accident,
12 the amount of chlorinated material would certainly be
13 less.

14 Q Okay. And what -- Was there a third reason?

15 A Oh, of course the -- another -- a reason, the two are
16 compatible, which is very important to machines that
17 are actively producing product.

18 Q Mr. Papageorge, were there differences in the
19 molecular weights of the two compounds?

20 A Oh, certainly.

21 Q And did that difference have any significance --
22 potential significance to the environment, that one
23 was heavier than the other?

24 A Well, it was heavier certainly. The terphenyl, being
25 the bigger molecule, was heavier. On the other hand,

1 the fact it didn't have all those chlorines attached
2 to it made it easy for, let's say, bacteria to get
3 get to the hydrogen and the carbon and start eating
4 it and destroying it.

5 Q Yes. Which of the two compounds were more mobile in
6 the environment, PCBs or the PCTs?

7 A Oh, I see. The PCBs are more mobile because they are
8 more soluble in water, for example.

9 Q Okay. So why don't we just -- For Reason 3 can we
10 say, "Less Mobile, More Soluble"?

11 A Certainly.

12 Q Have we fairly summarized the reasons why the PCTs
13 were different than PCBs?

14 A I believe so, yes. Um-hum.

15 THE COURT: Now that you have finished
16 with that, we are going to take our break now.

17 THE CLERK: All rise.

18 (Recess had.)

19 (Switch in reporters.)
20
21
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24
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1 THE COURT: We'll resume the Direct
2 Examination of Mr. Papageorge.

3 MR. RUNNING: Your Honor, we've marked the
4 chart Mr. Papageorge was referring to as Defendant's
5 Exhibit 1256. I'd move for the admission of that
6 exhibit as a summary of his testimony.

7 MR. CARLSON: No objection.

8 THE COURT: So received.

9 MR. RUNNING:

10 Q Now, Mr. Papageorge, on to the next document. This
11 has already been received into evidence, Your Honor.
12 It's 1252. Mr. Papageorge, you've identified Dr.
13 Kelly as Monsanto's company doctor, is that correct?

14 A I have, yes.

15 Q And did you receive this memorandum from him on
16 March 30th of 1970?

17 A I did.

18 Q What did you do after you received this memo?

19 A First I called Dr. Kelly and informed him that we
20 already were considering his suggestion. It was
21 part of an overall plan for the marketing of PCBs,
22 so his letter arrived at my desk at a very opportune
23 time. It showed me that he would be supportive of
24 this particular part of the plan.

25 Q And what does this memorandum refer to, what

1 specific problem?

2 A This refers to the use of PCBs in coatings, paint,
3 really, in silos, and the coating after awhile chips
4 off, dissolves, gets into the silage, the silage is
5 eaten by the cattle, by the cows, and it shows up in
6 their milk.

7 Q The PCBs in the silage coating, were those
8 functional fluids, within the -- I understand there
9 are various divisions in Monsanto. One is the
10 plasticizer group, one is the functional fluids
11 group, there is a dielectric group, is that correct?

12 A The dielectric is part of functional fluids.

13 Q Part of functional fluids, okay. What group were
14 these silo coatings in?

15 A This came under the Monsanto plasticizers group.

16 Q So would Pydraul 312, for example, be used as a silo
17 coater?

18 A No, certainly not.

19 Q So hydraulic fluids and silo coatings were not the
20 same product?

21 A That is correct.

22 Q What decision did Monsanto make at or about this
23 time concerning the use of PCBs in silos?

24 A The decision was not to sell PCBs for coatings used
25 not only in silos, but anywhere.

- 1 Q Did you agree with that decision?
- 2 A Certainly.
- 3 Q Is that what Dr. Kelly was recommending?
- 4 A Dr. Kelly's recommendation was specific to the use
- 5 of coatings that related to food, feed, and water
- 6 for drinking purposes.
- 7 Q Did Monsanto's decision go beyond those areas?
- 8 A They did. They covered all uses of PCBs in any kind
- 9 of coatings.
- 10 Q Now, how was this decision, how were the people
- 11 informed of this decision by Monsanto? Let's take
- 12 the distributors, for example?
- 13 A I'm sorry, take what?
- 14 Q How were the distributors of these silo coatings,
- 15 how were they informed of the decision to stop the
- 16 sales?
- 17 A The marketing individuals in Monsanto who had the
- 18 distributor as part of his territory that he
- 19 covered, informed him that beginning, as I recall,
- 20 in the summer of 1970, he would no longer be sold
- 21 any PCBs from Monsanto.
- 22 Q And were letters also sent out?
- 23 A Yes.
- 24 Q What was the content of the letters?
- 25 A In essence, as of that date that I can't remember at

1 the moment, PCBs for use in coatings would no longer
2 be available.

3 MR. RUNNING: Your Honor, this document is
4 already in evidence as Plaintiff's Exhibit 33. If
5 we could also admit it as Defendant's Trial Exhibit
6 1088, just for convenience. It's the outline of the
7 CMC presentation, entitled "PCB Environmental
8 Problem." Do you have any objection?

9 MR. CARLSON: If the Court thinks that's
10 all right, I don't have a problem with it. We are
11 going to have two exhibit numbers on --

12 THE COURT: As long as the record
13 discloses that 33 and 1088 are the same.

14 MR. CARLSON: That's no problem.

15 MR. RUNNING:

16 Q Thank you, Your Honor. Mr. Papageorge, can you
17 identify this document?

18 A This document is a copy of an outline presented to
19 the top management committee in Monsanto, referred
20 to as the CMC, and the title of the outline is "PCB
21 Environmental Problem," and attached to it is the
22 text of a talk that I made before that group, and
23 included in that were copies of transparencies that
24 were shown on the screen during the discussion.

25 Q In other words, you made a presentation to

1 Monsanto's management using transparencies, much as
2 we are doing this morning?

3 A Yes.

4 Q Referring to Item 3 under actions, the first action
5 is "Control effluent from our plant?"

6 A I see it.

7 Q Can you describe what is involved there?

8 A That consisted of a program of many parts, really.
9 One was the insistence that the maintenance
10 mechanics repair leaks quickly.

11 No. 2 is have the operators be very careful
12 when they conducted their operations so that they
13 didn't create spills unnecessarily, or even, for
14 example, when they'd take a sample, be careful as
15 you take the sample.

16 We also helped them, speaking of samples, by
17 providing them with a device that under the sample
18 spigot, there was a funnel to catch any drippage,
19 and that drippage would be collected at a central
20 point.

21 We introduced concrete curbs. We made really
22 giant bathtubs so the material could not get off the
23 concrete floor into the surrounding area or into the
24 sewers. We then provided that there would be a
25 catch basin underneath this, so that the material

1 would collect, and then we'd be very careful how we
2 transferred the material in this basin into the
3 proper containers for disposal, proper disposal or
4 recycling, if it was still clean enough to recycle.

5 Those are just some examples of how we tried to
6 control effluent from our own producing plant.

7 Q Just a couple of items on this page I'd like to
8 refer to. Under major developments, 2B, "Meetings
9 with Dr. Risebrough and Olcutt, at Berkeley,
10 California."

11 A Yes.

12 Q What was involved there?

13 MR. CARLSON: I object. It's hearsay at
14 this point.

15 THE COURT: It sounds like it.

16 MR. RUNNING:

17 Q Were you involved in meeting Dr. Risebrough?

18 A Yes, I met with Dr. Risebrough and Dr. Olcutt.

19 Q What was the purpose of the meeting?

20 A Well, we knew they were conducting studies in
21 California. We had of course seen his scientific
22 paper and had seen the reference in the newspaper to
23 him, so we made an appointment in, I believe it was
24 March of '70 to visit with them and find out what
25 their program was, what their findings were.

1 This is where we discussed the program they had
2 ongoing for the Brown Pelican off Southern
3 California, and the fact that the Brown Pelican was
4 having troubles reproducing. They were laying eggs
5 with no shells or very thin shells, so that the
6 mother bird couldn't sit on them without breaking
7 them.

8 That is the kinds of discussion we had, and we
9 reviewed their needs for any more sample material,
10 whatever, wherever we could help with their program.

11 Q Did you discuss whether the problems were due to DDT
12 or PCBs?

13 A Oh, yes. Their program --

14 MR. CARLSON: Wait. That can be answered
15 yes or no, Your Honor.

16 THE COURT: I agree. It sounds like it's
17 going to be hearsay.

18 MR. RUNNING:

19 Q What did Dr. Risebrough say to you?

20 MR. CARLSON: That is objected to as
21 hearsay.

22 THE COURT: Sustained.

23 MR. RUNNING: Your Honor, I would submit
24 that the information that Mr. Papageorge had at the
25 time is certainly relevant to the claim by the

1 plaintiff that the conduct was outrageous. The
2 state of mind is relevant.

3 THE COURT: There is nothing wrong with
4 this gentleman testifying as to what he did as a
5 result of his conferences, but this question asks
6 what Dr. Risebrough told him.

7 MR. RUNNING:

8 Q Mr. Papageorge, did the information you obtained
9 from Dr. Risebrough enter into the decisions you
10 made subsequently about the appropriate uses for
11 Monsanto's PCB products?

12 A That was certainly considered, yes.

13 Q Now, Item C is participation with regulatory
14 agencies in a meeting at Duluth, Minnesota. Were
15 you involved at that meeting?

16 A I was.

17 Q Could you describe the meeting?

18 A This meeting was called by the director of the water
19 -- the Federal Water Laboratory located in Duluth.
20 His purpose for calling the meeting was to
21 familiarize himself and his staff with PCBs, their
22 manufacture, their uses, and also to offer an
23 opportunity for other laboratories that were
24 interested to share their findings up to that point
25 in time. This occurred in March, middle of March,

1 1970.

2 Q What was Monsanto's policy at the time regarding
3 cooperation with outside laboratories and agencies?

4 A Total openness. We were invited to attend, and we
5 were delighted to do so, frankly.

6 Q Item F is "Coordination with co-producers in
7 Europe." What did that involve, Mr. Papageorge?

8 A Prior to April, 1970, there was an ongoing
9 discussion with Monsanto representatives in Europe,
10 with other producers of PCBs in Europe, but these
11 were on a one-to-one type of discussion. In April
12 of 1970, three of us from Monsanto, St. Louis joined
13 three or four from Monsanto, Europe and met as a
14 group, representatives from the German, French,
15 Spanish, and Italian PCB manufacturers, and we
16 shared with them what we had learned and done
17 regarding PCBs and the environment, and we were
18 hoping to get them to join us, cooperate with us and
19 concur that what we were doing was the right way to
20 go.

21 Q Were the producers in Europe doing more to restrict
22 the release of PCBs in the environment or less than
23 Monsanto?

24 MR. CARLSON: Object, hearsay, Your Honor.
25 Personal knowledge.

1 THE COURT: It's awful difficult to make a
2 ruling on that type of question. It's impossible
3 without knowing what he's going to say, as to
4 whether or not it is from personal knowledge or from
5 what somebody told him over there.

6 MR. CARLSON: I guess I'd object to the
7 lack of foundation at this time, until we have that.

8 THE COURT: Well, he's been there.

9 MR. CARLSON: I understand, but I don't
10 know if he's gone through the plant and looked at
11 materials or talked to somebody.

12 MR. RUNNING:

13 Q Mr. Papageorge, did you learn what steps if any the
14 European producers had taken to restrict or
15 reformulate PCB uses?

16 A I did.

17 Q How did you learn that information?

18 A Well, we had this review session with all of them in
19 the room, where each one, just as I did, described
20 their programs, and they had no programs.

21 Q Turn to page number 1432.

22 THE COURT: 1432?

23 MR. RUNNING:

24 Q 1432, Your Honor, entitled "PCB content, plant
25 effluent," same document.

1 Mr. Papageorge, was this one of the
2 transparencies you showed to the president of
3 Monsanto in this meeting?

4 A It is.

5 Q Can you describe what is shown here?

6 A This shows the amount of PCBs calculated as being in
7 the plant wastewater, leaving the plant at the three
8 Monsanto plants, the two in the United States, and
9 the bottom one there is in the United Kingdom.

10 It shows the amounts associated with the dates,
11 in the left-hand column, the actual amounts, and it
12 also shows for the future dates, the targets that we
13 were going after in terms of losses per day.

14 Q Okay. Now Mr. Carlson has referred to these
15 numbers. I want to be clear on which ones. Do you
16 see the numbers I'm circling in blue?

17 A I do.

18 Q Let's talk about the Sauget facility, first of all.
19 Is that a big plant?

20 A Yes, it is.

21 Q Can you describe the size for those of us who
22 haven't walked around it?

23 A You're talking about the PCB unit or the whole
24 plant?

25 Q The whole plant.

1 A The whole plant is roughly 75 to a hundred acres.
2 The PCB unit, itself, occupies five to ten acres.
3 It had, at that time, close to 2,000 employees.

4 THE COURT: Excuse me, the whole plant or
5 the PCBs?

6 THE WITNESS: The whole plant. The PCB
7 unit had about 40 operators, and it had about 10 or
8 15 mechanics supporting it. Those are not exact
9 numbers, but they're close.

10 MR. RUNNING:

11 Q Did the Sauget plant have a wastewater treatment
12 facility?

13 A At that time, no.

14 Q Did it feed into municipal wastewater?

15 A Yes.

16 Q So these releases were not directly into the
17 Mississippi River?

18 A That is correct.

19 Q Now the reference to 3,500 parts per billion, how
20 does that translate into parts per million?

21 A You divide that by a thousand, so that will give you
22 3.5 parts per million.

23 Q Why hadn't Monsanto detected the presence of 3.5
24 parts per million PCBs in the Sauget plant effluent,
25 prior to April, 1969?

1 A The analytical methods available to Monsanto to
2 detect PCBs at that low a level were not available
3 until late '68, early '69.

4 (Switch in reporters.)

5 Q How many pounds of PCBs approximately were produced
6 at the Sauget plant in a year? Just generally?

7 A About 40 million pounds.

8 Q What was the volume of wastewater from the plant at
9 the municipal treatment facility just generally, if
10 you know?

11 A I just don't know. This involved water from all of
12 the producing units. I just don't have that number.

13 Q Based on your experience at Monsanto's plants, do
14 chemical manufacturing facilities generate a lot of
15 wastewater?

16 A Yes, they do.

17 Q How did the PCBs get into the municipal sewer at the
18 Sauget plant or the Anniston plant?

19 A Well, it goes back to the things I described earlier
20 regarding our program to reduce losses, the drippage
21 from the sample procedure, the leakage, say, from a
22 pump that's leaking at the pump seal, and the
23 mechanic doesn't take care of it right away, and
24 there was no pan under it to stop it, the -- the
25 cleanup of the floor, the stains on the floor, every

1 so often the supervisor would say, "I need a clean
2 department," and they put some detergent down and
3 then hose it into the sewer.

4 These are the -- I am not talking now
5 about rivers of fluid, of PCBs flowing, these are
6 small amounts here and there, but they did add up, as
7 you can see, to a little over -- well, a drum and a
8 half a day from that big unit.

9 Q Once the technology was available to detect PCBs at
10 this level in the wastewater, what did Monsanto do
11 about it?

12 A Well, it gave us a way to measure our success in
13 lowering the losses, and then we went into our
14 program for keeping it out of the wastewater that I
15 described earlier.

16 Q And was the program successful?

17 A Yes, it was. You can see the numbers reflect that.

18 Q Now, this presentation was in mid-April of 1970; is
19 that right?

20 A Yes.

21 Q So you had three sets of data for Sauget; is that
22 right?

23 A Yes.

24 Q And the rest of these that I put in the hatch box,
25 what were those?

1 A Those were the targets that we told the plant they
2 must shoot for.

3 Q And did they?

4 A Yes, they did. Um-hum.

5 Q And was the program ultimately successful?

6 A Yes.

7 Q Was it easy to reach this level of reduction in the
8 wastewater effluent in the span of eleven months?

9 A I don't know how to describe ease. It didn't take
10 space age technology, so it was easy regarding the
11 technology involved. It did take some concerted
12 effort on the part of the bosses and the workers, and
13 so from that viewpoint they felt that this was an
14 added burden we placed on them, so it wasn't easy
15 from their perspective, but it was achievable, and it
16 just took a concerted effort, everybody do your job
17 well and use these techniques, and it got done.

18 Q So the detection technology was space age but the
19 control technology wasn't?

20 A That is correct.

21 Q Let's go to -- The next page is STR 1433. Is this
22 still from your presentation to the president of
23 Monsanto, the vice presidents? I am at STR 1433.

24 A I found it. Yes.

25 Q Are we still on your presentation to the president

1 and vice presidents of Monsanto?

2 A We are.

3 Q Direct your attention to the first paragraph. It
4 reads, "We have worked closely with our customers and
5 have offered our technical assistance on their
6 disposal and effluent problems. Arrangements have
7 been made for the return and recovery of some of
8 these fluids. Successful control is possible for
9 those uses which utilize Aroclor in closed, sealed
10 systems." Let's stop there. What's being described
11 here, Mr. Papageorge?

12 A That attempts to describe the uses of -- Are you
13 talking about the closed, sealed systems now?

14 Q Yes.

15 A That --

16 Q I am sorry. I'm just talking about working closely
17 with customers and offering technical assistance.

18 A Well, through our field representatives, in
19 emphasizing the need for control and to keep PCBs
20 from entering the environment, we had offered this
21 technical assistance insofar as we were capable to do
22 it, at the same time recognizing that we couldn't put
23 on the hat of a consulting engineering company, not
24 having the -- that kind of activity as part of
25 Monsanto, but we did recognize that we had some

1 experiences with PCBs that might be helpful with
2 customers and their engineering staffs or their
3 engineering consultants that they might have to help
4 them, so we -- we tried as best we could to let it be
5 known that we were ready and willing to help as far
6 as possible.

7 Q Okay. Let's go on. "Successful control is possible
8 for those uses which utilize Aroclors in closed,
9 sealed systems. In those instances where control is
10 virtually impossible, e.g.," for example, "coatings,
11 adhesives, pesticide uses, cutting oils, we must
12 discontinue sales or offer, preferably, an acceptable
13 substitute product." Stop there. Are hydraulic
14 fluids included in the list of instances where
15 control is virtually impossible?

16 A No.

17 Q Why not? Why weren't they?

18 A Because control is possible so that it wouldn't make
19 sense to consider them otherwise. They, again, lend
20 themselves to some simple corrective action. Simple
21 in terms of the kinds of technology it would take.
22 All it requires is the kinds of things that Monsanto
23 used in its plants, curbing, trenches, collection
24 tanks, maintenance, good maintenance. So control is
25 possible in that kind of system.

1 Q Were there reasons why it might have been harder for
2 Monsanto to control spills at its plants than Stroh
3 would have -- the trouble Stroh would have had at its
4 plant? Let's talk about the Anniston plant. Was
5 that an open plant?

6 A I am sorry.

7 Q Was the Anniston plant an open plant?

8 A Yes, these are open structures. They have no walls
9 around the steel structure.

10 Q Why is that? Why don't chemical plants of this size
11 have walls?

12 A Well, there is no attempt to keep the elements out;
13 the rain and snow doesn't hurt them.

14 Q Is it something like a refinery?

15 A Like a refinery that we see pictures of occasionally
16 in the newspapers and all. Yes, that kind of thing.
17 The only building in the whole unit is the building
18 that houses the instruments that the operators use to
19 control the process.

20 Q Does the absence of walls around the operating area
21 of the facility make it easier or more difficult to
22 control spills?

23 A I don't think that the presence or absence of walls
24 is a factor. You can still build the concrete curb
25 to keep the spills from going where they shouldn't

1 go, you can still build the sump tank under it to
2 catch it, you can still build these devices, like the
3 pans underneath the pumps, so that when a pump starts
4 to leak, you catch the material. So walls really are
5 not a factor here.

6 Q I understand they are not a factor for your use of
7 proper spill containment procedures you have just
8 outlined.

9 A Right.

10 Q But let's talk about in the early '60s.

11 A Well --

12 Q Does it help to have walls around a facility? Does
13 that help make it easier to prevent spills from
14 leaking out?

15 A To a degree it does. If the spill, say, occurs on
16 the floor, and is permitted to flow off of that floor
17 into the surrounding area, which is generally either
18 dirt or crushed rock, the PCBs of course find their
19 way into that area, then you have, let's say, heavy
20 rainfalls that not only sweep across that open area
21 but also can drive through some portions of that
22 upper floor in the structure, if there are any PCBs
23 around, that rain is going to pick them up and move
24 them. So a wall would help there. But once you put
25 these curbs and all in, the wall's effect is not as

1 great.

2 Q I take it there are a lot of pipes in a chemical
3 facility?

4 A Oh, yes.

5 Q A lot of connections?

6 A A lot of connections, a lot of flanges.

7 Q A lot of rubber hoses?

8 A Hoses.

9 Q A lot of pumps?

10 A Couplings, many, many pumps some with mechanical
11 seals, some with stuffing boxes with packing.

12 Q Did you have experience with spill containment as a
13 result of your work for Monsanto?

14 A I certainly have, oh, yes.

15 Q What are those items that are identified as being
16 instances where control is virtually impossible?
17 What do they have in common? How can you describe
18 those uses? They're hard to read even from here.
19 Coatings, adhesives, pesticide uses, cutting oils.

20 What do they have in common?

21 A In common. They -- The PCBs of course are present,
22 and the application is such that -- Pesticide uses,
23 as one can imagine, is one where the pesticide is
24 spread, the PCBs go with it. You can't control it
25 once you have spread it. The adhesives, they are

1 found on many, many cartons and tapes that end up in
2 packages, as an example, that find their way in all
3 kinds of landfills, for example. Coatings, covers
4 the whole area of the -- primarily paints and
5 varnishes.

6 I recall vividly the example where they
7 were used -- PCBs were used quite extensively in
8 making long-lasting traffic paints, the white and
9 yellow lines that you see on highways. That kind of
10 application, it's easy to see how it gets in the
11 environment. After a while it wears, and it
12 disappears, the PCBs are still with them, they're
13 getting into the environment. You can't control it.

14 Q What was done about those applications?

15 A What was done? We discontinued sales to those
16 applications in August of 1970.

17 Q You mentioned pesticide uses. Was Aroclor ever used
18 as a pesticide itself?

19 A No.

20 Q And then this is titled, "Schedule For Discontinuing
21 Aroclor Applications." I see a reference to
22 "Pesticide Extender." Is that how PCBs were
23 sometimes used?

24 A Yes.

25 Q How common was that usage?

1 A It was not a big use.

2 Q I see the reference to \$10,000 worth of sales a year.

3 A That's all it was. It was a very small use. It was
4 used with some pesticides, in pesticide mixtures that
5 were intended to be sprayed on surfaces for crawling
6 insects, and the intent there was that the PCBs would
7 persist along with the pesticide so that the insect,
8 when it walks across, would be exposed and would die
9 from that exposure.

10 Q Now, had the decision been made to reformulate
11 hydraulic fluids, some of the hydraulic fluids, as of
12 this date, April of 1970, or at least was this your
13 proposal?

14 A The decision was to reformulate those hydraulic
15 fluids that had the Aroclor 1254 and the Aroclor 1260
16 and even Aroclor 1248. In other words, those with
17 the five and more chlorines in them.

18 Q Aroclor 1248 is between 42 and 54?

19 A Yes, it was in between.

20 Q So it would have more than 7 percent of the higher
21 chlorinated molecules?

22 A Yes.

23 Q Why wasn't Pydraul 312 included on this list?

24 A Well, at that time Aroclor 1242, which was an
25 ingredient in Pydraul 312, was not being identified

1 in the environment and was not considered to be an
2 environmental -- an environmental problem.

3 Q The first paragraph, I didn't highlight it, but let's
4 just briefly refer to it. You've discussed the
5 toxicity testing that Mr. Wheeler started up. I
6 think we addressed that last Thursday afternoon. Was
7 that still underway as of April of 1970?

8 A The long-term studies were underway, yes.

9 Q Okay. And you wrote, "Data to date indicate that
10 Aroclors are mildly toxic to mammals, however, it is
11 highly unlikely that this will be a significant
12 factor in any decision regarding the banning or
13 restricting of the use of Aroclors." Why was that?

14 A Well, from what we had learned and sensed at the
15 time, just the mere presence of an industrial
16 chemical, manmade, in the environment was considered
17 to be undesirable, and we felt that the restriction
18 of the use of this kind of chemical would be based on
19 its presence alone rather than on health effects,
20 unless those health effects were very, very dramatic,
21 so obvious that one can't ignore them.

22 Q In other words, you had decided that the presence of
23 the chemical in the environment on a persistent basis
24 was enough to reformulate it?

25 A That's right.

1 Q The next paragraphs -- I will read the next
2 paragraph. "A major development has been achieved by
3 our research department in refining our analytical
4 procedures to the level that we now possess
5 capabilities far exceeding many laboratories and
6 unsurpassed by any. We are actively communicating
7 our methodology to other laboratories to improve the
8 type of information being generated. Our objective
9 is to be considered experts with reliable results."

10 Is that a fair summary of the work to date?

11 A It certainly is.

12 Q The next paragraph. "Biodegradation studies have,
13 thus far, confirmed our initial beliefs that the
14 lower chlorinated biphenyls would degrade easily."
15 Let's stop there. What studies were you referring
16 to?

17 A This is primarily the work conducted in the United
18 Kingdom at the Ruabon, Wales, laboratory. Monsanto's
19 laboratory.

20 Q Let's go on. "We were disappointed in the resistance
21 to degradation of some of the isomers in Aroclor
22 1242. This would tend to confirm the belief that
23 some of the five and six chlorinated biphenyls being
24 found in the environment could be residue from
25 degraded Aroclor 1242." Let's stop there. What --

1 What were you reporting here?

2 A We were reporting the fact that the five and six
3 chlorinated biphenyls which were present at about 7
4 percent in Aroclor 1242 were not degrading along with
5 the one, two, three, four chlorines.

6 Q Does that mean they would never degrade?

7 A Well, never is a long time. They wouldn't degrade in
8 a reasonable period of time.

9 Q Was this a matter of concern?

10 A Yes. Yes. Because it supports the fact that the
11 five and six-chlorine biphenyls were found in the
12 environment. It fits in with that.

13 Q Why wasn't Monsanto satisfied that 93 percent of
14 Aroclor 1242 is biodegradable? Why isn't that good
15 enough?

16 A Well, it's just that the other 7 percent was still
17 perceived to be a potential problem. Not a proven
18 problem, but Monsanto just didn't feel it was
19 necessarily worth the risk any longer.

20 Q What alternatives were you pursuing at this time in
21 regard to addressing that 7 percent of Aroclor 1242
22 that wasn't readily biodegradable?

23 A The one alternative is to remove that 7 percent from
24 the material that was sold so that it never had a
25 chance to get into any product and we didn't have to

1 worry about the release to the environment.

2 Q I think that's addressed in the next sentence. It
3 says, "We are actively pursuing the possible use of
4 distilled Aroclor 1242 with degradable components as
5 a possible substitute with minimum loss of other
6 favorable characteristics, for example,
7 fire-resistance." What does this reference to
8 distilled Aroclor 1242 refer to?

9 A "Distilled" refers to a step in a process for --
10 which removes the five, six, seven and higher
11 chlorinated biphenyls from the material that
12 originally started out as an Aroclor 1242.

13 Q Was this program ultimately successful?

14 A It was.

15 Q What was that product called ultimately?

16 A It was called Aroclor 1016.

17 Q Okay. And what was unique about Aroclor 1016?

18 A The five-chlorine and higher biphenyls were reduced,
19 as I recall, to less than 1 percent, but it still had
20 predominantly the three-chlorine biphenyl.

21 Q Mr. Papageorge, are all PCBs the same?

22 A They are not.

23 Q And did you believe at the time that it was possible
24 to make a biodegradable Aroclor?

25 A Yes.

1 Q Mr. Papageorge, I am going to hand you Defendant's
2 Trial Exhibit 1089. Can you identify this as an
3 April 7, 1970, PCB management plan that you prepared?

4 THE COURT: April 7 of '70?

5 MR. RUNNING: 1970.

6 THE WITNESS: Yes, it is.

7 MR. RUNNING:

8 Q And was this distributed to your boss, Mr. Bergen,
9 and to others in the company?

10 A Yes.

11 MR. RUNNING: I move for the admission of
12 this document, Your Honor.

13 MR. CARLSON: No objection.

14 THE COURT: So received.

15 MR. RUNNING:

16 Q Mr. Papageorge, I am not going to go through all of
17 this plan. Was this a more detailed version of your
18 presentation to the corporate management committee?

19 A It is.

20 Q And on this cover memo you call it "a plan for
21 managing the PCB problem"?

22 A Yes.

23 Q And did you summarize that plan to the president of
24 Monsanto and to the vice presidents?

25 A Yes, the previous document is a reflection of that

1 summary.

2 Q Okay. I do want to cover one point that's been
3 referred to by Mr. Carlson. You see the heading
4 "Basic Strategy," Mr. Papageorge?

5 A I do.

6 Q Let me read to the end of the highlighted section.

7 It says, "With the growing evidence of the presence
8 of PCB and the apparent damage it can do to the world
9 environment, Monsanto must respond as a responsible
10 member of the business world genuinely concerned with
11 the welfare of our environment, yet not take
12 premature action which would compromise its
13 responsibilities to its customers, shareholders or
14 employees." Did you write that part of the plan, Mr.
15 Papageorge?

16 A Yes, I did.

17 Q Was Monsanto genuinely concerned about the apparent
18 damage PCBs could do to the world's environment at
19 the time?

20 A Certainly.

21 Q Why was Monsanto also concerned about compromising
22 its responsibilities to its customers?

23 A Well, as a responsible industry or company, we
24 just -- we just have that responsibility built into
25 the way we operated.

1 Q What did the customers want at the time?

2 A The customer want a product that is capable of doing
3 what he buys it for. He wants it not to create
4 problems beyond his control. He wants to know all he
5 can about that material. Of course, he wants it
6 available to fit his needs, and he wants it -- he
7 wants so many pounds of the product at a certain
8 price. These are the kinds of things he expects from
9 a responsible supplier, and we were trying to fulfill
10 all that.

11 Q Were any of Monsanto's customers at the time
12 requesting that the product be reformulated to remove
13 PCBs?

14 A No, it was the opposite really. They didn't want to
15 change anything.

16 Q What about shareholders? Why were you concerned at
17 the time about Monsanto's responsibilities to its
18 shareholders?

19 A Well, Monsanto is a company in the business of
20 attempting to make a reasonable profit, and that's
21 why it has these shareholders interested in it, and
22 any decision that's made that affects the income for
23 any shareholders, it has to be done responsibly. You
24 can't do it without good, sound reason.

25 Q What about concern about compromising

1 responsibilities to employees, what was that about?

2 A That directly affects really the jobs associated with
3 any product line, from manufacture, to sales, to the
4 whole team.

5 Q Let's turn to the next page. Let's focus on
6 "Objectives." I think we have read the comment that
7 I have highlighted above in the presentation to the
8 management committee. Let me read the overall
9 objectives. The first paragraph, "The overall
10 objective of this plan is to manage the PCB pollution
11 problem to prevent it from adversely affecting the
12 established return-on-investment objectives of the
13 Functional Fluids and Plasticizers Groups, while
14 maintaining the corporate image of Monsanto as a
15 responsible and respected member of industry
16 worldwide. We must assume worldwide leadership and
17 work closely with the appropriate regulatory agencies
18 in arriving at logical rational decisions." Let's
19 stop there. Does this mean that Monsanto is going to
20 be putting profits ahead of the environment?

21 A Definitely no.

22 Q Why not? It does -- It refers to a return on
23 investment, Mr. Papageorge.

24 A Well, it certainly does, but it doesn't say do it any
25 way you can and don't be responsible. That's not the

1 point. The point is achieve the return on investment
2 responsibly, which could well mean discontinue PCBs
3 and find something else to replace it.

4 Q Well, how could it -- how could it result in a
5 favorable return on investment to discontinue PCBs?
6 In the short run you're going to lose money; aren't
7 you?

8 A Well, initially the loss of sales of PCBs will
9 reflect a loss of money, but if a good alternative
10 material is found, initially you have the cost of
11 building a new plant to make that new material, but
12 once you get an acceptable substitute, eventually it
13 will not only pay for the new plant but make up for
14 the losses that you had when you stopped the PCB
15 sales. So that's just another way to still have your
16 return on investment and do it responsibly.

17 Q Mr. Carlson has referred several times to this
18 concept, the corporate image. What did that mean to
19 you, Mr. Papageorge?

20 A It means that Monsanto is looked upon by just about
21 everybody, whether it be the employees, the
22 customers, the neighbors, the -- its competitors, as
23 a -- as a respected company, a company that's
24 expected to do the right thing. They're very
25 sensitive about that, that perception, and they work

1 hard to get it.

2 (Switch in reporters.)

3 Q Mr. Papageorge, we've all seen these corporate ad
4 campaigns. Mobile has ad campaigns, Dow has an ad
5 campaign called "Dow let's you do great things?"

6 MR. CARLSON: Your Honor, I object. That
7 is -- first of all, it's leading, it's testimony by
8 --

9 MR. RUNNING: I haven't even finished the
10 question, Your Honor.

11 THE COURT: Well, lawyers don't testify.

12 MR. CARLSON: He's trying to.

13 MR. RUNNING: I'd like to have the
14 privilege of being allowed to complete my question
15 before Mr. Carlson interrupts.

16 MR. CARLSON: You may. I'm not going to
17 argue with you. I object to the form of the
18 question at this point, even though he's not done
19 with it.

20 MR. RUNNING:

21 Q Mr. Papageorge, are you familiar with corporate ad
22 campaigns such as Dow's ad campaign?

23 A Yes.

24 Q Is that what you were talking about, an ad campaign?

25 A No, no. The image or the perception I'm talking

1 about is something that is done over many, many
2 years of time and by performing in a way that is
3 looked upon by outsiders as responsible, favorably.

4 I'm not talking about advertising campaigns or that
5 type of thing, although that is done.

6 Q Did Monsanto run a TV ad campaign on Aroclors?

7 A No.

8 Q Nothing like Aroclors let you do great things or
9 anything like that?

10 A No, sir.

11 Q In the long-term, did you think that Monsanto could
12 trade damage to the environment for profits? Did
13 you think that was a viable option?

14 A Trade damage for profit?

15 Q Did you think there was a trade off?

16 A At no time -- if the environment was damaged, forget
17 the profit, get out.

18 Q Why forget the profit? What would that do to the
19 company if it was determined that the company had
20 knowingly compromised the environment for short-term
21 profits? What would that do to the long-term
22 profitability of the company?

23 A It would affect the long-term profitability badly,
24 negatively.

25 Q Why?

1 A Because all of the entities that we would be working
2 with, whether they be customers, shipping companies,
3 regulatory agencies, the general public, the
4 shareholders or potential shareholders, they would
5 have an image of Monsanto that just would not be
6 favorable, and they would have nothing to do with
7 this, and in the long run, that hurts more than the
8 few dollars you might have earned up front by acting
9 irresponsibly.

10 Q Is the company's reputation an asset?

11 A Oh, it's a very precious asset. That is something
12 they always work hard to keep and maintain.

13 Q Let's look at the eight objectives. I'll read them.
14 My question at the end, Mr. Papageorge, will be, I
15 would like you to identify any one of these
16 objectives that entail putting short-term profits
17 over the environment.

18 The first objective is, "Reduce and effectively
19 control the PCB content of all effluent from
20 Monsanto plants."

21 Did that entail putting short-term profits over
22 the environment, Mr. Papageorge?

23 A It does not.

24 Q Second objective. "Inform customers of the PCB
25 problem and the importance of preventing

1 environmental pollution both at their plants or by
2 their products, and encourage them to take
3 responsible action by offering assistance on
4 reclamation, substitute products and proper
5 disposal."

6 Did that entail putting short-term profits over
7 the environment?

8 A No.

9 Q Third objective. "Develop products to replace
10 Aroclors for those uses in which Aroclors have been
11 demonstrated to be harmful to the environment and
12 cannot be prevented from escaping into the
13 environment."

14 Did that include putting short-term profits
15 over the environment?

16 A It does not.

17 Q The fourth objective. "Develop reliable analytical
18 procedures for determining PCB content of liquids,
19 gases, or solids."

20 Did that entail putting short-term profits over
21 the environment?

22 A No.

23 Q Fifth objective. "Develop methods for effective
24 disposal of wastes containing PCB without
25 contaminating the environment."

1 Did that entail putting short-term profits over
2 the environment?

3 A No.

4 Q Sixth objective. "Develop methods for reclaiming
5 and reusing off-grade fluids containing PCB."

6 Did that entail putting profits over the
7 environment?

8 A No.

9 Q Seven. "Determine effects of PCBs on birds, aquatic
10 life, animals, and humans." Did that entail putting
11 profits over the environment?

12 A It does not.

13 Q Eighth objective. "Establish and maintain favorable
14 relationships with our customers, the press,
15 governmental agencies, other worldwide producers,
16 the public, and the universities."

17 Did that entail putting profits over the
18 environment, Mr. Papageorge?

19 A It does not.

20 Q I show you Defendant's Trial Exhibit 1090. Will you
21 identify this as an April 17, '70 memorandum from
22 Dr. Keller to yourself?

23 A Yes.

24 Q Is this a Monsanto business record?

25 A Yes.

MR. RUNNING: I move for its admission.

MR. CARLSON: It's previously been admitted as another number. We'll have to correlate it. I have no objection.

THE COURT: So received.

MR. RUNNING:

Q Mr. Papageorge, is this Dr. Keller's first report to you on environmental sampling, or at least specific results of environmental sampling?

A Yes.

Q And we heard a lot of names. Who was Dr. Keller, again?

A Dr. Keller is the director of the analytical research chemistry group. This is the group that looks into new analytical procedures, and this is also the group that developed the PCB testing methods.

Q He reports as of April, '70, a total of 167 environmental samples had been analyzed?

A He does.

Q Mr. Carlson has referred to the results of that sampling work. I'd like to take you through it, Mr. Papageorge. It's not a great copy. We'll do the best we can with this. I take it the results are reported on three pages that are attached to the

1 memorandum?

2 A That is true, yes.

3 Q And the sampling results are divided by categories,
4 aren't they, Mr. Papageorge?

5 A They are.

6 Q What is the significance of this title right here,
7 non-industrial? What type of environmental samples
8 were those?

9 A Well, as listed, you can see there is fish samples,
10 there is a human fat sample, milk, water, silo
11 scrapings.

12 Q Are these samples taken away from the immediate
13 vicinity of an industrial facility?

14 A Not this first page, no.

15 Q I'm sorry. I think I slipped a not in there. I
16 don't think you heard me. These sites, location of
17 sample sites, Manitowoc River, Kewaunee River, Burns
18 Ditch, Manistee River, source unknown, dairy farms,
19 dairy farms. Are those in the immediate vicinity of
20 industrial facilities using PCBs?

21 A Not to my knowledge.

22 Q Okay. There we go, and does this column here, I'll
23 try to get to a more legible part of the screen.
24 It's not very legible. Does this column here that
25 I've circled, does that report what kind of Aroclor

1 had been identified in the environmental sample?

2 A It does.

3 Q And most people can't read this. Let me just --

4 this column here, is Aroclor 1242 the one on the far
5 left?

6 A Yes.

7 Q And the next column over is Aroclor 1248?

8 A Yes.

9 Q And this column is what?

10 A 1254.

11 Q What is the significance of the star, the stars all
12 the way down that column?

13 A That designates that in the samples listed, the PCB
14 identified by the chemist appears to be Aroclor
15 1254.

16 Q Was that consistent with Jensen and Widmark's
17 reported findings?

18 A Very much so, yes.

19 Q And with the other researchers at the time?

20 A Yes.

21 Q Now, is there another category of samples that were
22 taken?

23 A Yes.

24 Q And do those start at the second page of the
25 memorandum, second page of the attachment, STR 6711?

1 A Yes, but I sense that the second page and the third
2 page have been transposed.

3 Q I think you're right.

4 A The second page is a continuation of the third page.

5 Q You're right. This is the end of the second
6 category?

7 A Right. This is the industrial category.

8 Q Okay. Just for the record, I'm referring to STR

9 6714 -- or 12. 6714. No, 6712. Industrial

10 facilities. What is the significance of that
11 category?

12 A This sheet describes samples taken from a waterway

13 that is near a factory site in which we know PCBs
14 were either manufactured or used.

15 Q These facilities here were factories that you knew
16 used PCBs?

17 A Correct.

18 Q Now, the column, PCBs found, is it fair to say that

19 the Aroclors, many, many types of Aroclors were

20 found in those industrial samples, is that accurate?

21 Some Aroclor 1242, some Aroclor 1248?

22 A For some of them. There were some that had just the
23 one.

24 Q Okay, but unlike the chart for environmental

25 samples, in which they were all 1254, this one has

1 several different Aroclors identified?

2 A That is correct.

3 Q Does the fact that Aroclor 1248 -- I'm sorry,
4 Aroclor 1242, as being identified in some of these
5 industrial samples, did that indicate to you at the
6 time that Aroclor 1242 didn't biodegrade?

7 A It indicated that near the source, a sample would
8 show the product as is and nature had not had a
9 chance to degrade.

10 Q So can you say whether or not this data contradicted
11 Jensen's finding that Aroclor 1254 was the
12 predominant Aroclor --

13 MR. CARLSON: Wait a minute. That
14 particular piece of testimony -- strike that. That
15 statement is not in the record, Your Honor. That
16 is, with regard to what Jensen found in terms of the
17 kind of Aroclor or kind of PCB, there is no
18 testimony about that in this record. There is no
19 study of that in this record.

20 MR. RUNNING: There is.

21 MR. CARLSON: There is not.

22 MR. RUNNING: I can refer to it.

23 MR. CARLSON: If you want to go in
24 chambers, I'd be happy to do it. There is no
25 testimony about that in this record.

1 MR. RUNNING: If you think we need to go
2 into chambers, fine.

3 (In Chambers.)

4 THE COURT: Let the record show the Court
5 is in chambers with counsel for both sides relative
6 to the objection made by Mr. Carlson.

7 MR. RUNNING: I can respond. Mr. Carlson
8 has asserted that there is no basis on the record to
9 say that Jensen and Widmark reported that Aroclor
10 1254 was the type of PCB being found in the
11 environment.

12 On Thursday afternoon, I took Mr. Papageorge
13 through Defendant's Trial Exhibit 1080, which
14 included a series of unpublished papers by Jensen
15 and Widmark.

16 As an example, STR 1254 reads that "Among these
17 210 theoretically possible biphenyls, the most
18 interesting for us are those that are the most
19 likely products of a degree of chlorination
20 corresponding to a mean of five chlorine atoms per
21 molecule, the most usual in industrial products.
22 Molecules fewer than four and more than eight
23 chlorines have not been documented by analysis."

24 It goes on to give tables indicating the peaks
25 of the chromatographs that had been identified for

1 environmental samples. Mr. Papageorge explained in
2 his testimony that the type of Aroclor with a mean
3 of five chlorine atoms per molecule was Aroclor
4 1254.

5 That is the predicate for the question. I'm
6 not planning on extended digression on it. It was
7 the one question to refer the witness back to these
8 papers and to show that what Jensen and Widmark were
9 finding is the same thing that Monsanto was finding
10 in its environmental sampling, and that the
11 industrial sample results that Mr. Carlson has used
12 with Dr. Peterson and in his opening arguments are
13 not environmental sample results, and you wouldn't
14 expect to get the same results. That is the point
15 of the question.

16 MR. CARLSON: The question that I objected
17 to was the representation that Jensen had reported
18 that the Aroclor -- the higher chlorinated Aroclors
19 were the ones that were found. That is not in his
20 report. That is in the evidence that you just
21 referenced. I don't have a problem with that. It's
22 the question of what was reported in the literature.

23 MR. RUNNING: I didn't say published
24 reports. I just said reports.

25 MR. CARLSON: There is a difference. If

1 you want to reference the work that Monsanto
2 obtained, which you've put as a part of your case, I
3 don't have a problem with that, but that is not in
4 the reported literature.

5 MR. PENDERGAST: Actually, if I can just
6 make an additional point, it's misleading to say
7 that this is a discovery of Aroclor 1254. That is
8 confusing to the jury.

9 What are found are specific isomers that aren't
10 present across the board that are most prevalent,
11 perhaps in 1245, but this does not report that it
12 was 1254 that was found, so that part of your
13 question is misleading. You were saying, Jensen
14 found 1254, and that is not the fact. He found the
15 remnants of various Aroclors, no doubt.

16 THE COURT: Well, I agree with Mr.
17 Carlson. Can we define the question to what the
18 Swedish people actually found, rather than
19 transposing it to Aroclor 1254? Then we don't have
20 a problem.

21 MR. CARLSON: I don't have a problem with
22 that.

23 MR. RUNNING: Okay.

24 THE COURT: As I understand it, these are
25 mixtures.

1 MR. RUNNING: Yes.

2 THE COURT: Of different kinds of PCBs,
3 and I haven't heard, I don't recall the definition
4 yet that 1254 has only five chlorines or better. We
5 do have evidence in there that 1242 has some with
6 five chlorines or better, but I don't recall that
7 1254 is confined to those with five chlorines or
8 better, so why don't you just confine it to the five
9 chlorine situation, and then we won't have a
10 problem.

11 MR. RUNNING: Just so we don't have a
12 problem when I go. The reference is to a mean of
13 five chlorines, not just five. That's what I'm
14 trying to refer to.

15 (Whereupon, a recess was taken.)

16 MR. RUNNING:

17 Q Mr. Papageorge, let me refer you back to an exhibit
18 that you testified about on Thursday afternoon,
19 Defendant's Exhibit 1080. There is a reference on
20 STR 25154 to Jensen and Widmark finding that the
21 PCBs that they were analyzing in the environmental
22 samples corresponded to a mean of five chlorine
23 atoms per molecule. Do you see that reference?

24 A I do. I remember it.

25 Q Which of Monsanto's products, if any, correspond to

1 a mean of five chlorine atoms per molecule?

2 A Aroclor 1254.

3 Q Was the discovery of PCBs corresponding to Aroclor

4 1242 in these industrial samples in 1970, was that

5 contradictory of a report of Jensen and Widmark that

6 I've just referred to?

7 A It's contradictory in that this is a different

8 mixture of PCBs, yes.

9 Q Different mixture. Is it also a different type of

10 sample?

11 A Yes.

12 Q Industrial versus environmental?

13 A Yes.

14 Q Was it surprising to find Aroclor 1242 in an

15 industrial sample?

16 A No.

17 Q Did that change your views at the time about the

18 potential for Aroclor 1242 to degrade in the

19 environment?

20 A No.

21 Q Is this the end of the -- in other words, the third

22 page, second page of the industrial sample, the

23 third page of the total samples?

24 A It is.

25 MR. RUNNING: Your Honor, I think this

1 will be a quick exhibit.

2 THE COURT: Okay. Finish that one.

3 MR. RUNNING:

4 Q Can you identify Defendant's Trial Exhibit No. 1093,
5 Mr. Papageorge? Can you identify this as an April
6 22nd, 1970 letter from yourself to Mr. John Daubert,
7 Supervisory Chemist, Pesticide Residue Section,
8 Wisconsin State Department of Agriculture?

9 A It is.

10 MR. RUNNING: I move for the admission of
11 this exhibit.

12 MR. CARLSON: No objection.

13 THE COURT: So received.

14 MR. RUNNING:

15 Q Had Dr. Daubert requested assistance from Monsanto,
16 Mr. Papageorge?

17 A Yes.

18 Q What kind of assistance had he requested?

19 A He requested samples of Monsanto's products that
20 went under the trademark, Aroclors.

21 Q Did he also request other information?

22 A Not at that time.

23 Q Do you see the third paragraph? "You also requested
24 information concerning these compounds. Please find
25 enclosed a copy of Monsanto Technical Bulletin."

1 A That's true.

2 Q And then the last paragraph is, "If I can be of
3 further assistance, please feel free to write," and
4 it is signed by you.

5 Had Monsanto's policy changed concerning
6 cooperation with state, federal, local officials?

7 A Changed from when?

8 Q From when you've described it as of April of 1970?

9 A No, no. That is still the practice, cooperate
10 fully.

11 Q In other words, the corporate management committee
12 on April 15th, when you informed them of the
13 cooperation at Duluth and other areas, did they tell
14 you to clamp down on the dissemination of
15 information?

16 A No. Just the opposite. They want us to encourage
17 more cooperation.

18 MR. RUNNING: This is probably a good
19 place to break, Your Honor.

20 THE COURT: Okay. All right. It's noon.
21 I have three evictions and a scheduling conference
22 starting at one o'clock, so why don't we come back
23 at 1:45.

24 (Noon Recess.)

25