

STATE OF WISCONSIN : CIRCUIT COURT : MILWAUKEE COUNTY
BRANCH 8

STROH DIE CASTING COMPANY,

Plaintiff,

VOLUME XX (p.m.)

v.

Case No. 639-887

MONSANTO COMPANY,

Defendant.

May 13, 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	Cross (Mr. Carlson)	3399

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

THE COURT: We are ready to resume the
cross-examination of Mr. Papageorge.

CROSS EXAMINATION (con't)

BY MR. CARLSON:

Q Good afternoon, sir.

A Good afternoon.

Q Welcome back. Just to your right they'll be a stack
of exhibits for you and I to go through. This may
aid in saving some time. In most instances I won't
have to walk back and forth. I believe on the top
of the stack there should be Exhibit 218?

A I found it.

Q And have you seen a copy of this particular exhibit
at some point in the past?

A Yes, I have.

Q Is this the kind of information that Monsanto was
monitoring with regards to PCBs in the 1968 time
frame?

A This is an example, yes.

Q And as a matter of fact, Risebrough was one of the
authors of this particular article?

A That is correct.

Q It's entitled Polychlorinated Biphenyls in the
Global Ecosystem?

1 A That is the title, yes.

2 Q And Monsanto was in touch with Risebrough with
3 regards to his findings?

4 A Yes.

5 MR. CARLSON: Your Honor, I would offer
6 Exhibit 218. It's learned treatise 52 on our list.

7 MR. RUNNING: No objection.

8 THE COURT: So received.

9 (Exhibit No. 218, previously marked for
10 identification, was received into evidence.)

11 MR. CARLSON:

12 Q The next document in the stack hopefully is
13 Exhibit 28?

14 A I found it.

15 MR. CARLSON: And, Your Honor, my records
16 would indicate that this exhibit has previously
17 been admitted.

18 Q Mr. Papageorge, I don't want to belabor the points
19 of this document. However, just if I could review
20 a couple of things. First of all, the author of
21 the document set forth in the second and third
22 pages the procedure that would have to be followed
23 if one were to change from a PCB fluid to a non-PCB
24 fluid?

25 A May I take a look --

1 Q Sure.

2 A -- while I read it.

3 Q If you don't feel comfortable with the question,
4 tell me, you know; and take as much time as you
5 need.

6 A I have glanced at that particular paragraph.

7 Q And am I correct in saying that that's one of the
8 things that the author of this particular memorandum
9 was doing was looking at what it would take in order
10 to switch over from a PCB hydraulic fluid to a
11 non-PCB hydraulic fluid?

12 A That's the intent of that paragraph, but the
13 reference is to competitive phosphate esters.

14 Q You folks had a water glycol fluid that could be
15 used in hydraulic systems at that time?

16 A There was such a mixture for some systems, yes.

17 Q You had a phosphate ester also available for some
18 systems?

19 A I'm trying to determine the date of this document.
20 I'm not aware that early on Monsanto had a
21 phosphate ester hydraulic fluid. I don't remember
22 that.

23 Q You do recall the water glycol, correct?

24 A I do, yes.

25 Q The particular subjects of this particular -- of the

1 work on switching fluids included the Pydraul 312
2 and the Pydraul F-9. I think you'll see that on the
3 second page of the document.

4 A There are references to those two Pydrauls, yes.

5 Q And then on the third page of the document if you
6 look down to just below the center of the page
7 there is an estimate of the minimum number of
8 gallons of Pydraul fluids that were in systems
9 domestically?

10 A There is.

11 Q And it was thought at that time that there was
12 approximately 2 million gallons of Pydraul fluids
13 of that type in the system?

14 A Yes.

15 Q Then there's a reference to the average customer
16 purchase price of \$3.25 a gallon for that fluid. Do
17 you see that reference?

18 A I do.

19 Q With a calculation then of \$6.5 million of fluid in
20 systems at that time?

21 A Yes.

22 Q The author then goes through and references what the
23 outcome would be if Monsanto were to tell the
24 customer that the fluid should be drained?

25 A It does.

1 Q And one of the concerns of the author was that if
2 fluids were drained folks might want their money
3 back?

4 A Well, that is a question that is raised, yes.

5 Q And the amount of money they would want back if all
6 of the fluid was drained was the maximum calculation
7 of \$6.5 million that were in the systems at that
8 time?

9 A Well, that would be the cost of the fluid as
10 originally purchased.

11 Q And the author then was questioning what would your
12 responsibilities be to compensate the customer for
13 his downtime for example?

14 A That question is raised for consideration.

15 Q And also the cost for who pays for the disposal?

16 A That is also being considered.

17 Q And who pays for the drums?

18 A Yes.

19 Q And who pays for the freight?

20 A That is also considered.

21 Q One of the ways to avoid having to make those
22 payments would be to hold off taking fluid -- strike
23 that -- to hold off telling your customers of the
24 problems with PCB until a new fluid is developed
25 that you can put on top of the old fluid, isn't that

1 true?

2 A Well, that's a way to do it; but there's more to
3 consider than just compatibility and cost of
4 replacement.

5 Q But in this particular case you went to the
6 terphenyl as a stopgap measure because a terphenyl
7 was compatible with the PCBs, you could put it on
8 top of the PCB?

9 A That was one of the reasons.

10 Q And that gave your folks enough time to develop the
11 phosphate ester that you could then put on top of
12 the terphenyl on top of the PCB, right?

13 A That's what happened, yes.

14 Q And during all of that period of time, you didn't
15 tell your 312 customers that they had the 5
16 chlorinated PCB in their systems which was the kind
17 that was causing damage to the environment? That's
18 also true, isn't it?

19 A Not quite.

20 Q You didn't tell them that you -- you didn't tell the
21 312 customer they have the 5 chlorinated PCB, did
22 you?

23 A The Monsanto field salesmen were capable of
24 transferring that kind of information. And when
25 discussion on the subject was brought up, the

1 customer was told, yes.

2 Q I'm sorry, but I haven't seen any documents of you
3 folks indicating that your salesmen were told to
4 tell the customer that 312 fluid had 5 chlorine PCB
5 in it.

6 A There is no such document.

7 Q Were you here when Mr. Damiani testified?

8 A Yes, I was.

9 Q I didn't hear if he said so. If I missed it, I
10 should be corrected. But I didn't hear him testify
11 that he had told the Stroh folks that they had the
12 5 chlorinated PCB in their fluids.

13 A I don't recall Mr. Damiani being asked that
14 question.

15 Q I'd like to if we could turn to Exhibit 29, which
16 hopefully is the next one on your --

17 A It is.

18 Q Exhibit 29 is a handwritten document looking at the
19 subject of the cost to change to phosphate esters or
20 water glycols from PCBs?

21 A May I review it quickly?

22 Q Surely.

23 A There are some costs that are written on this
24 document relating to that change.

25 MR. CARLSON: Your Honor, we would offer

1 Exhibit 29 into evidence as one of the documents
2 produced by Monsanto in this case.

3 MR. RUNNING: No, objection, Your Honor.

4 THE COURT: So received.

5 (Exhibit No. 29, previously marked for
6 identification, was received into evidence.)

7 MR. CARLSON:

8 Q In looking at the document, it is apparent that the
9 author was investigating or at least writing on the
10 subject of some additional costs the company may see
11 if there's a change over from PCB fluid to a non-PCB
12 fluid.

13 A Yes.

14 Q Is that correct?

15 A Yes.

16 Q And if you take a look at the second page of the --
17 the third page of the document the author is Norm
18 Johnson?

19 A His initials are there, yes, sir.

20 Q And who is that to?

21 A To Mr. Howard Bergen.

22 Q And Howard Bergen at that time held what
23 position?

24 A He was the director of the functional fluids
25 business group.

1 Q Now, if we just go back to our -- to the previous
2 discussion on the other exhibit. By not having to
3 refund to your customers the cost of the fluids that
4 were in place, your company saves \$6.5 million,
5 correct?

6 A Well, that's one to look at it, yes, sir.

7 Q And now a calculation was made to see how much
8 additional money could be saved if you -- if you did
9 not have to pay for the cost of changing from the
10 PCB fluid to the non-PCB fluid that in terms of
11 labor that would be required, correct?

12 A Yes. Those are additional cost items that would be
13 considered in such a program.

14 Q And it was expected, was it not, that if your
15 customer were told at the time this document was
16 drafted that the 312 fluid should be drained from
17 the machines your company would, in fact, be
18 responsible for the cost of draining those
19 machines?

20 A I don't know that, sir. That -- That would have to
21 be established, whose responsibility this program
22 would be.

23 Q And if you would take a look on the third sheet,
24 there was a calculation shown of the total cost to
25 the company if you had to cover the expenses of

1 your customers for the labor to drain and clean all
2 of these machines right underneath Norm Johnson's
3 initials.

4 A I see the calculation under Mr. Johnson's initials.
5 I'm having difficulty finding out the meaning of
6 that \$9.00.

7 Q It looks as though he multiplied the \$9.00 times the
8 2 million gallons that were in service?

9 A That's what it looks like, yes.

10 Q And I think if you look in the beginning parts of
11 the document what he's doing is calculating a cost
12 per gallon for draining and cleaning?

13 A I'm still having problems finding that cost per
14 gallon number.

15 Q If we look down below the 18 million, we'll also see
16 that not included in that number, however, was lost
17 production of the customers?

18 A That's listed in the parenthesis on the circled
19 area, yes.

20 Q Or the lost profit of the customers?

21 A That is also listed.

22 Q And the loss of customer goodwill and contracts?

23 A That is listed, yes.

24 Q If for the sake of discussion, the \$18 million cost
25 of draining and cleaning the machines -- then that's

1 another \$18 million you folks would be able to save
2 by not telling the 312 customers to drain and clean
3 at that time, isn't that true?

4 A That assumes that Monsanto would pay for that
5 \$18 million.

6 Q Right. Certainly there was a perception by your
7 company that there was that potential legal
8 situation that could develop though, wasn't
9 there?

10 A That is a consideration that's taken when making
11 these business decisions, and it represents perhaps
12 the worst case scenario.

13 Q And that's one of the reasons the legal department
14 is brought into this fairly early?

15 A Oh, the legal department is brought into every
16 decision, PCBs just being one of them.

17 Q Would you be kind enough to look at Exhibit 30,
18 which I believe is the next one in order?

19 A Yes, I have it.

20 Q And Exhibit 30 is a compilation of documents
21 starting with the February 16, 1970, memorandum
22 regarding the pollution letter?

23 A That is an attachment to a letter or a memorandum.

24 Q And then a copy of the February 9, 1970, letter is
25 attached to that?

1 A Yes.

2 Q And then the February 18 letter?

3 A Yes.

4 Q And then the question and answers that were --
5 strike that -- the questions that were expected to
6 be asked of your sales folks and answers they could
7 give?

8 A Yes.

9 Q I'd like to discuss --

10 MR. CARLSON: First of all, I would offer
11 Exhibit No. 30, Your Honor, as documents furnished
12 by Monsanto in this case.

13 MR. RUNNING: It's already in evidence,
14 Your Honor, on direct examination.

15 THE COURT: Okay. It's received if it
16 hasn't been received before.

17 (Exhibit No. 30, previously marked for
18 identification, was received into evidence.)

19 MR. CARLSON:

20 Q Would you be kind enough to look at page one of the
21 February 9 letter.

22 A I have it.

23 Q And the letter itself starts out with, "Recently
24 several newspaper and magazine articles." Maybe
25 we'll show that. Correct?

1 A Yes, it does.

2 THE COURT: What's the date of this
3 letter?

4 MR. CARLSON: This is February 9,
5 1970.

6 Q Now, Mr. Papageorge, what I'd like to do if I
7 could, sir, is to take the language of that first
8 sentence, "Recently several newspaper and magazine
9 articles have been published indicating that
10 polychlorinated biphenyls, PCBs, have been
11 discovered at some points in some marine, aquatic,
12 and wildlife environments."

13 And what I'd like to ask you to do, sir,
14 is listen to what I'm going to read to you and ask
15 if the February 9, 1970 -- this statement is
16 accurate, "Monsanto has concluded polychlorinated
17 biphenyls, PCBs, caused damage to certain species of
18 wildlife and aquatic life and are a worldwide
19 ecological contaminant."

20 That statement as of February 9, 1970,
21 was an adequate statement as to Monsanto, was it
22 not?

23 A Yes.

24 Q And if we take a look at that statement against what
25 you folks have written -- One of the things that

1 drafters of letters from your company seek to do is
2 to persuade people to take action? That's one of
3 the purposes the drafting, correct?

4 A That is a purpose.

5 Q And another possible purpose of drafting is to draft
6 things in such a way so that people do not do
7 things, correct?

8 A That depends on the context of the message.
9 Yes.

10 Q It's your perception that most lay people in looking
11 at the sentence, "Recently several newspaper and
12 magazine articles have been published indicating
13 that polychlorinated biphenyls have been
14 discovered at some points...", et cetera is less
15 persuasive as a motivating force than telling your
16 customers directly what you had concluded, isn't
17 that true?

18 A Admittedly those are two sets of words. But I can
19 see the same message in both statements.

20 Q So you think that the second message in your -- in
21 that comparison is equally as strong as the first as
22 advising your customer of what your company had
23 found?

24 A I believe so, yes.

25 Q Let's take a look at -- Or let me ask you another

1 question. As of February 9 of 1970, would you tell
2 me if Monsanto had concluded this statement to be
3 correct, "Damage to wildlife and aquatic life may
4 occur in concentrations as low as in the parts per
5 million. The PCBs are present in the environment in
6 the parts per million and parts per billion
7 categories."

8 As of February 9, 1970, that statement
9 that Monsanto was concerned was true, was it
10 not?

11 A That is right.

12 Q And let's take a look at that against what your
13 letter said. Your letter did not reference damage
14 to the wildlife, did it?

15 A No. The only reference is to environmental
16 contamination.

17 Q Now, in looking at these two statements, if the
18 purpose of the message is to convey accurate
19 information to your customer with regards to the
20 potential hazards of PCBs, would you not agree that
21 the top message is much clearer and stronger than
22 the bottom?

23 A I -- When you say much stronger and clearer, with
24 respect to which statement? Levels found? Is that
25 what you're talking about?

1 Q With regards to the actual facts that Monsanto knew
2 them to be with regards to PCBs -- The actual facts
3 that Monsanto knew them to be with regards to PCBs
4 as of February 9, 1970.

5 A Well, the top statement would certainly describe
6 those few reports that existed in early 1970
7 regarding a select few species and wildlife.

8 Q You don't recall that in the '69 time frame you and
9 your company had gone -- Monsanto had confirmed that
10 work? There was no argument about that work at that
11 time, was there?

12 A We confirmed the ability to analyze for PCBs. We
13 did not, of course, have any programs within
14 Monsanto to confirm the fact that PCBs harm juvenile
15 shrimp or the fact that the Paragrין falcon was
16 being harmed. We had to take the word of the
17 investigators on that score.

18 Q And the investigations -- Strike that. Let me
19 switch to another subject. I'd like to have you
20 listen to this statement and see if it is accurate
21 as of February 9, 1970, "Pydraul contains PCBs which
22 Monsanto markets under the trade name Aroclor.
23 PCBs may have between two and ten atoms of
24 chlorine.

25 "Monsanto is -- Of that most of the PCBs

1 found in the environment are of the 5 chlorine
2 category. Pydraul 312 contains approximately
3 9 percent and Pydraul F-9 contains approximately
4 40 percent of the 5 chlorine PCBs."

5 Is there anything in what I just stated to
6 you that was inaccurate?

7 A Would you read the reference to 40 percent?

8 Q "The Pydraul 312 contains approximately 9 percent
9 and the Pydraul F-9 contains approximately
10 40 percent of the five chlorine PCBs."

11 A That percent number -- I don't believe that's
12 correct.

13 Q What number would you put there?

14 A I -- I don't remember it. But I'm certain it's not
15 that high.

16 Q You don't recall that it was over the
17 mid-thirties?

18 A No, I don't.

19 Q Mr. Papageorge, I'd like to have you just look at
20 the homolog chart and see if that refreshes your
21 recollection with regards to the 5 chlorine PCB --
22 First of all, in the three -- I'm sorry in the
23 Aroclor 1242.

24 A In Aroclor 1242?

25 Q Right.

1 A Yes, it does.

2 Q Amounts there is what?

3 A This particular chart shows 8 percent.

4 Q You have seen other Monsanto documents showing it to
5 be 9 percent?

6 A And -- Yes. As well as 7. There's a range.

7 Q With regards to the Pydraul F-9 which contains the
8 Aroclor 1248 or the Aroclor 1248 what percent of the
9 5 chlorine is referenced?

10 A In the Aroclor 1248?

11 Q Yes.

12 A That's 36 percent. But that's not in the F-9. I
13 don't recall how much Aroclor 1248 is in the F-9
14 formula.

15 Q I understand that. But the F-9 formula has the 1248
16 PCB, correct?

17 A That's one of the ingredients, yes, sir.

18 Q And the 5 chlorine PCB in 1248 is approximately
19 36 percent?

20 A That is correct.

21 Q I'm getting some help here. You have seen other
22 charts at Monsanto for the 1248 showing it goes
23 higher than 36?

24 A As well as lower, yes, sir.

25 Q With regards to the subject or the statement that I

1 previously read to you, with these -- that change
2 was my statement accurate?

3 A As I recall, your statement referred to Pydraul F-9
4 as having 40 percent of the 5 chlorine and higher.
5 This data doesn't fit that statement.

6 Q So what we would have to do then is to make a number
7 of changes but if we say the Pydraul -- strike
8 that. The Pydraul F-9 contains Aroclor 1248 which
9 contains approximately 36 percent of the 5 chlorine
10 PCBs -- then that statement would be accurate?

11 A That's an accurate statement.

12 Q The point of this being that Monsanto could have
13 conveyed information to your customers telling them
14 that the products they were using had PCBs which
15 were by Monsanto's opinion creating problems in the
16 environment?

17 You certainly had that capacity at that
18 time, did you not?

19 A Well, that's hindsight thinking really. But the
20 industry when referring to the Aroclor 1254 and 1260
21 was thinking of a specific industrial mixture that
22 was used by many, many companies. And that's the
23 terminology that made sense when you attempted to
24 communicate.

25 Q Except that you had a whole group of customers

1 relying on your company for information about the
2 properties of products they were buying from you and
3 you didn't tell them that the five chlorine PCB was
4 in their product, did you?

5 A Well, as I said earlier, it's a matter of
6 communicating in terms that were common in the
7 day; and this was considered to be adequate at the
8 time.

9 Q It was considered by Monsanto to be adequate at the
10 time?

11 A Well, certainly.

12 Q Now, there is certainly a reason not to tell a 312
13 customer that they have some of the bad -- I don't
14 want to -- bad perhaps is a wrong
15 characterization -- had some of the 5 chlorine
16 PCBs because if you told them that there was
17 the perception that you could lose sales,
18 correct?

19 A No. I cannot say that's correct. That was not in
20 the thinking because this is all coupled with --
21 Irrespective of whether the 5 chlorine is present or
22 not, the material you're buying from us has a
23 mixture of PCBs, don't let it get in the
24 environment. Once that message is followed, no harm
25 is done to the environment.

1 Q Your customers were being called on by Houghton and
2 some other companies who at that time were telling
3 them as you understood that it -- that PCBs were
4 bad?

5 A Well, competitors were calling all PCBs equally bad,
6 yes.

7 Q And one of the things that you did in the February 9
8 letter of 1970 was not even to tell your customers
9 they had PCBs, the 312 and the F-9 users?

10 A Well, it told them they were not formulated with
11 Aroclor 1254 and 1260.

12 Q And it didn't tell them what it was formulated with
13 it, did it?

14 A True.

15 Q Let's take a look at the next one hopefully which is
16 Exhibit 31.

17 A I have it.

18 Q And this is one I believe that you discussed with
19 Mr. Running. It's the same as Defendants Exhibit
20 1250 -- I'm sorry, 1252.

21 MR. CARLSON: Which has been received in
22 evidence, Your Honor.

23 Q This is a document in which Dr. Kelly was raising
24 the issue in the last paragraph that customers
25 should be told about the PCBs whether there's any

1 possibility they might get or might contact food,
2 feed, or water?

3 A That's true.

4 Q And with regards to the Aroclor 1242, that also was
5 in contact with or coming in contact with potential
6 food, wasn't it, in the waterways?

7 A I'm confused by your question. The addition of in
8 the water. You mean drinking water?

9 Q Well, in the drinking water or fish swimming in the
10 water where the 1242 was present.

11 A That's a route of entry into the food chain, yes.

12 Q One of the things that I believe your company wanted
13 to express at some point was the importance of not
14 mixing PCBs with water so they don't come in contact
15 with each other in the first place in the plant
16 setting. Do you recall that?

17 A Yes, sir.

18 Q And the reason you didn't want them to come in
19 contact with each other in the plant setting was the
20 company's -- Monsanto's understanding that if that
21 occurred there was a potential for the PCBs then to
22 leave the plant with the water in the normal
23 discharge of the water?

24 A Of course, it depends on where that water is going
25 to go. And if it's going into a sewer, the

1 potential for getting in the environment is there.

2 The main purpose for cautioning against mixing with
3 water is the difficulty in controlling the PCBs once
4 mobilized by water systems.

5 Q One of the things I was interested in looking at --
6 First of all, on your label you didn't reference
7 that subject at all, that subject at all on the 312
8 label?

9 A It's covered by the statement -- The environmental
10 statement where it cautions against entering into
11 the environment.

12 Q You're talking about the sticker, now?

13 A Yeah, the environmental paragraph.

14 Q But specifically your company had a series of
15 memorandums looking at or addressing that the
16 question -- the customer should be told not to allow
17 the PCBs to come in contact with water, not to allow
18 them to mix.

19 Do you recall any information given to
20 your customers along that subject or on that
21 subject?

22 A I recall reading references to Pydrauls and water
23 systems in the product bulletins.

24 Q And that was the -- I don't want to interrupt you.

25 A I don't recall the dates of those bulletins and the

1 specific reference.

2 Q If I could perhaps refresh your recollection this
3 way. You're discussing with me in the Selector
4 Guides the fact that if a company chose to remove
5 Pydraul from water there was a way that that could
6 be done? Do you recall that there's a series of
7 tanks that are used?

8 A Yes. That was to correct a situation once it had
9 occurred. But the -- I do recall some reference to,
10 "Don't get it mixed in water in the first place; but
11 if it does, here is what you can do," yes.

12 Q If you can think of a specific document that
13 makes -- that gives a customer that information if
14 you happen to think about it during the course of
15 the trial or just while you're on the witness stand
16 just feel free to let me know, okay?

17 A I'll be happy to, yes, sir.

18 Q If you want to let me know when you're not on the
19 witness stand, that's okay too. I'm not too sure
20 Mr. Running would like that though. Would you be
21 kind enough to take a look at Exhibit 35?

22 A I have it.

23 Q Exhibit 35, the top page is a August 31st, 1970,
24 memorandum from yourself to a number of people?

25 A Yes, it is.

1 Q And then the following three pages is a program or
2 information that you had developed called
3 Polychlorinated Biphenyl Waste Control and
4 Disposal?

5 A That's the title of the document, yes.

6 MR. CARLSON: I would offer Exhibit 35
7 into evidence, Your Honor.

8 MR. RUNNING: No objection, Your Honor.

9 THE COURT: So received.

10 (Exhibit No. 35, previously marked for
11 identification, was received into evidence.)

12 MR. CARLSON:

13 Q If you would be kind enough to turn to the first
14 page of the draft.

15 MR. CARLSON: Is this in the way of some
16 people?

17 A JUROR: Yes.

18 MR. CARLSON: Can I move this down below?

19 THE COURT: Sure.

20 MR. CARLSON:

21 Q One of the things that you personally were
22 interested in doing is looking at the question of
23 how can liquids be handled to aid in preventing them
24 from escaping into the environment?

25 A That is one of the objectives of this document,

1 yes.

2 Q And with regards to liquids, the first point that's
3 referenced here, "Every effort must be made to
4 prevent the mixing of PCB with water thereby
5 measurably reducing the opportunity for PCBs to
6 enter a water system; that is, sewer, river, or
7 lake." This particular statement was never
8 incorporated in one of your product brochures, was
9 it?

10 A It seems to me it was, but I'm having difficulty
11 remembering just which product brochure. I -- I
12 just don't recall that.

13 Q The second point you make is, "All liquid handling
14 systems must be designed and maintained to assure
15 leaks and spills are a rarity. If they do occur,
16 corrective measures should be taken immediately."

17 With regards to die casting companies, did
18 that include diking or building concrete dikes
19 around machines?

20 A Well, that's covered under item two as well as three
21 which follows.

22 Q If a company has a trench system as opposed to
23 dikes, one of the things that occurs is that in the
24 normal course of business when washing down
25 equipment, you get water into trenches as well as

1 any fluid that may have leaked there?

2 A That is possible unless there's separate systems,
3 yes.

4 Q And Monsanto did not in any documents regarding the
5 312 product tell customers that they should build
6 separate dikes around the die cast machines so that
7 the water and the fluid would not mix, did you?

8 A No. Monsanto didn't specifically call for that
9 engineering specification, no.

10 Q And then there's reference to a drainage system or,
11 "Drainage systems should contain interceptor basins
12 to trap the heavy PCB for subsequent recovery."

13 A It does state that, yes.

14 Q And then if we go on -- And I think the only thing I
15 would like to discuss with you is one other point
16 not because I wouldn't be willing to read
17 everything. We do have some time constraints.

18 Item number six where there's reference to
19 the waste liquid PCBs. Do you see where I'm making
20 referencing to?

21 A Item six, yes, sir.

22 Q Would you read that for us.

23 A "Waste liquid PCBs can be destroyed by incineration
24 at temperatures above 800 degrees 'C' temperatures."

25 Q Can I interrupt you right there. Who established

the 800 degrees centigrade temperature?

A That was predicted by the research laboratory studies and confirmed by the test done at Johns Zinc Company before the design of Monsanto's incinerator.

(Whereupon, there was a change of reporters.)

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1 Q With temperatures below 800 degrees Centigrade it was
2 found, was there not, a potential for the development of
3 dibenzofurans?

4 A No.

5 Q You did conclude that temperatures below that amount
6 could result in vaporization to the atmosphere of the
7 PCBs?

8 A Yes, sir.

9 Q And there were other severly toxic oxygen-containing
10 materials that could be developed?

11 A That is what the statement says, yes.

12 Q Would you be kind enough to go down to the "Vapor"
13 section on Page 2?

14 A I have it.

15 Q And it references "vapor generation should be reduced by
16 limiting the heating of PCBs to the lowest temperature
17 required for the process," correct?

18 A I see that, yes.

19 Q With regards to the die cast operations, there was the
20 potential for the fluids to come in contact with hot
21 surfaces and vaporize, wasn't there?

22 A Yes, under "Unplanned Conditions," yes.

23 Q And then for Item Number 2 where it references, "The
24 vapor handling facilities should be designed and
25 maintained to assure no vapors escape to the

1 atmosphere."

2 In a die cast facility that wasn't a
3 recommendation, was it?

4 A I don't recall that. I do not.

5 Q If we turn to the last page there is some reference to
6 solids. In this context, can you tell me what the word
7 "solids" means?

8 A Well, I don't mean to be facetious, but --

9 Q Is anything other than the liquid itself --

10 A Right.

11 Q -- or the gases, the vapors from that liquid?

12 A This includes rags, dirty cloths, sawdust, kitty litter,
13 whatever was used to absorb PCBs.

14 Q Okay. And your recommendations at that time were, for
15 these kinds of solids, would be that if they're
16 contaminated with PCBs they must be segregated from
17 other plant solid waste, correct?

18 A Yes.

19 Q Now, I don't recall that information appearing on any of
20 your 312 literature. It didn't, did it?

21 A Not as such, no.

22 Q Nor did it appear on your F-9 literature?

23 A That is correct.

24 Q And then with regards to Item Number 2, "Disposal may be
25 made in a properly operated landfill which is not

1 located near any water system," correct?

2 A That is correct.

3 Q You did not make any recommendations to your customers
4 as to where landfills should or should not be if you're
5 disposing of PCBs, correct?

6 A Well, the reference was indirect. It had to be approved
7 by the local authorities for the disposal of industrial
8 chemicals.

9 Q Well, except in 1970 there weren't very many chemical
10 landfills. They were all just generally landfills,
11 weren't they?

12 A Well, I don't know that. No, there were chemical
13 landfills.

14 Q And was it important that PCBs only be put in chemical
15 landfills?

16 A Certainly.

17 Q You never put that on any of your product brochures, did
18 you?

19 A Oh, I recall a reference, yes.

20 Q And what year?

21 A Oh, I don't recall a specific year, but it seems to me
22 that that was so common a thought that it might have
23 existed for several years.

24 Q All right. You make reference here that, "Ordinary
25 burning of these materials must be avoided. Steel or

1 copper wastes may be reclaimed in high-temperature
2 furnaces," correct?

3 A Correct.

4 Q Now, with regard to the information that was being
5 provided to your customers during the time you sold 312
6 fluid, you did not tell them of this information, did
7 you?

8 A Would you help me with the time frame again here?

9 Q Sure. Up until -- when did you go to the terphenyl,
10 1971?

11 A '71.

12 Q Right. So any time that you were selling the 312 PCB
13 fluid this was not information that was told to your
14 customers, was it?

15 A It was information that would have been passed on to the
16 customer during discussions about disposal with the
17 Monsanto representative starting in early 1970.

18 Q If those discussions, in fact, came about?

19 A And they generally did, yes.

20 Q Now, with regards to wastes. In the die cast business
21 you understand that there is scrap material that is
22 available for reuse in the company, zinc or aluminum?

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

24 Q And the zinc and aluminum can come in contact with
25 hydraulic fluids that may have leaked in the area?

1 A That's my understanding.

2 Q And it is not appropriate to put that material into the
3 furnace for meltdown of the material so that it can be
4 reused, is it, with PCBs on it?

5 A Well, I don't know enough about the details of the
6 process. I don't know the temperatures achieved during
7 the remelting. I do not know if any degreasing of this
8 material takes place before its reprocessed, so I can't
9 answer your question.

10 Q Okay. Then you reference on Item Number 4, "Steel drums
11 which contained PCB should not be reused for any other
12 material."

13 Can you tell me at the time that you sold either
14 the PCB 312 or the PC -- polychlor -- PCT -- 312-A, you
15 never told your customers that, did you?

16 A Not directly, no.

17 Q Did you have hooding on your barreling operation of
18 PCBs?

19 A What is that? I missed that.

20 Q Hooding. Hooding over the barrels when you're handling
21 PCBs to take away vapor.

22 A Oh, oh, yes, when we filled them or used the drum we had
23 a fuel-collecting hood, yes.

24 Q You did not tell your 312 customers about the importance
25 of hooding, did you?

1 A No, because that's up to them how to decide how to
2 control vapors, worker exposure and entry into the air.

3 Q Those kinds of standards can be found in published
4 references about how to handle PCBs by the -- and I
5 think -- help me out -- the American Hygienist
6 Association?

7 A There is an exposure level for workers based on the
8 eight-hour working day published by the American
9 Congress of Governmental Industrial Hygienists.

10 Q And was Monsanto's expectation that your customers would
11 follow those guidelines for vaporization in the plant?

12 A That's right, follow those guidelines for worker
13 exposure.

14 Q Right. So that if we have people working with the PCB
15 fluids in our plant, you would expect us to follow those
16 guidelines for exposure?

17 A Certainly.

18 Q With regards to that subject, during the period of time
19 you sold us 312 fluid, you never told us there were PCBs
20 in the first place, did you?

21 A I don't -- no, I don't believe that's necessarily
22 correct. Some time during the discussion with the
23 marketing people when the fluid was initially introduced
24 into the system, and following that, it's reasonable to
25 believe that a thorough discussion was held about the

1 safety of this material and the levels of exposure that
2 would have to be maintained. No customer would buy a
3 fluid like this blindly.

4 Q Mr. Papageorge, you have not seen one Monsanto document
5 addressed to your customers telling them that the 312
6 fluid contained PCBs during the period of time that your
7 company sold the 312 fluids, isn't that true?

8 MR. RUNNING: Your Honor, I object to the
9 premise of the question. Plainly false. And we've gone
10 through those exhibits. Mr. Carlson is representing as
11 a fact something, if he just showed a label, he'd know
12 is untrue.

13 THE COURT: I don't recall -- you mentioned
14 312 --

15 MR. CARLSON: That's right.

16 THE COURT: -- or F-9?

17 MR. CARLSON: 312.

18 THE COURT: Well, I think you better rephrase
19 the question.

20 MR. CARLSON: Okay.

21 THE COURT: Assumption rather than a fact.

22 MR. CARLSON: There is. Let me do this in a
23 different direction.

24 Q During the time your company sold 312 product in the
25 market, was there any label, not your environmental

1 sticker right now, but any label that was used during
2 that time which told the customer that the product
3 contained PCBs?

4 A The labels in use refer to chlorinated hydrocarbons,
5 which is the broad family that includes PCBs.

6 Q And if one wanted to -- Strike that. There's a whole
7 range of standards applicable to vapors of the different
8 kinds of chlorinated hydrocarbons, aren't there?

9 A True.

10 Q Do you have Exhibit 38 before you, sir?

11 A I have it.

12 Q And on Exhibit 38, first of all, it's a two-page
13 document, the first page, a January 25, 1971 memorandum?

14 A Yes.

15 Q And attached to that is a January 25th -- Strike that.

16 The memorandum itself, one is a list of who's going to
17 get the information, and the second is the information
18 itself?

19 A Yes.

20 MR. CARLSON: I'd off Exhibit 38, Your Honor,
21 as information that's been provided by Monsanto in this
22 case.

23 MR. RUNNING: Your Honor, this is already in
24 evidence. We used it in direct examination.

25 THE COURT: All right. If not previously

1 received, it's received now.

2 MR. CARLSON:

3 Q The subject of this is the "Pydraul Reformulation Leter
4 to Customers?"

5 A It is.

6 Q And if we look in the middle of the second paragraph
7 there is reference to the fact that the company wanted
8 the old formulations to be sold first.

9 A There is.

10 Q And Mr. Running had asked you some questions, I believe,
11 about whether or not customers, if they wanted to
12 purchase new formulas instead of the old, you would have
13 sold it to them, correct?

14 A That is correct.

15 Q There was never any recommendation made to customers to
16 purchase the new formula and not buy the old, was there?

17 A No.

18 Q And with regards to the last paragraph of the
19 memorandum, it also references the fact that the company
20 wanted to ship the new formulations to the customer only
21 after the old formulations had been sold out of
22 inventory?

23 A Well, those aren't the words shown here.

24 Q That's --

25 A There is a preference stated, and then mentioning that

1 exceptions will be made, or words to that effect.

2 Q And during this period of time there was an
3 understanding by the company that at least some of the
4 PCBs in the old formula would get into the environment,
5 isn't that true?

6 A If it's mishandled, certainly.

7 Q Even if it's not mishandled. In a die cast facility, if
8 some got onto some molten metal, you'd have
9 vaporization?

10 A There's some vaporization, and it's hoped that that
11 vaporization would be contained.

12 Q But in the real world you knew that in die cast
13 companies they weren't putting all their die cast
14 machines for vapor, didn't you?

15 A That I didn't know. I don't know what type of
16 ventilation was applied to the building, whether the
17 material was captured or any of the details.

18 Q And you knew that there was at least a potential for
19 water and the PCBs to mix in some circumstances?

20 A In some, yes, sir.

21 Q And you knew there was a potential for some PCBs that
22 were disposed of, even in landfills, to end up in the
23 environment, didn't you?

24 A We would hope not, not if the proper landfill was used.

25 Q But you do acknowledge that there was that potential for

1 the environment to receive some of the PCBs you
2 continued to sell, isn't that true?

3 A If proper control measures weren't taken the potential
4 is certainly there, yes.

5 Q Do you have Exhibit Number 42 before you?

6 A I do.

7 MR. CARLSON: And Exhibit 42 are records, Your
8 Honor, which shows it has been received in evidence.

9 Q I would like to have you, if you would, and I don't want
10 to belabor this point. We've gone through this
11 information before. But I do want to discuss with you
12 the finding of 1242 outside a number of locations. Do
13 you see the particular chart that I'm making reference
14 to?

15 A Well, I have two charts here.

16 Q Okay. Would you be kind enough to look at the STR
17 document 004452?

18 A I have it.

19 Q And with regards to this document we find, for example,
20 the Delaware River plant. Whose plant was that?

21 A That's Monsanto's plant in Bridgeport, New Jersey.

22 Q Let's go down, and look at -- we have Anniston.
23 National Cash Register in Portage, Wisconsin. Do you
24 see that?

25 A I see it.

1 Q And 1242 was found in the water?

2 A Yes.

3 Q And then there's a whole series of companies underneath
4 that, including Appleton Coated Paper, General Motors,
5 General Motors in another plant, Ford, Johnson Motors
6 and Wisconsin Steel. Do you see all of that?

7 A I do.

8 Q Does this mean that all of these companies were not
9 handling your PCBs appropriately? They were all
10 handling them wrong?

11 A Not necessarily. The presence of that 1242 type PCB in
12 the water near that plant could well reflect an accident
13 that happened rather than a deliberate dumping or a
14 wrongful act.

15 Q Do you think each one of these companies had an
16 accident?

17 A Well, I could speak for Monsanto. Accidents did happen.
18 I cannot speak for the others listed there, but it's
19 very likely that accidents in the past did happen.

20 Q As a matter of fact, also in the past not everyone's
21 employees always do exactly what you want them to do all
22 the time either, do they?

23 A That's probably very true.

24 Q Okay. With regards to the 1242 fluid -- Strike that.
25 1242 PCBs we also find it's occurring in Stevensville --

1 or I'm sorry, Steubenville, Ohio and Bedford, Ohio and
2 Chicago, Canton Ohio, Christy Park, I guess that is,
3 U.S. Steel, General Electric. General Electric didn't
4 have any 1242.

5 The point being that you can have PCBs being
6 released in the environment as a result of their normal
7 use without a company mishandling them, correct?

8 A This is possible, yes.

9 Q And it's that kind of escape to the environment that can
10 occur for the PCBs that you folks continued to sell even
11 though you had decided, and had new formulation
12 available, isn't that also true?

13 A I'm confused by the question. This implies that the
14 PCBs found were dumped the day before the sample was
15 taken.

16 Q No, no, no. What I'm saying is, what my point is, that
17 you can't control all end uses of the product perfectly,
18 can you?

19 A If you use the word "perfectly" I have to answer no.
20 The intent is to keep the amount to a level that will
21 not harm the environment.

22 Q But knowing that you can't, and you don't live in a
23 perfect world, if you wanted to keep PCBs from getting
24 into the environment, the way to do that, after you have
25 the new formulation, is just to take back the old stuff

1 that you have in your warehouse, eat the loss, and sell
2 the new product, right?

3 A I don't buy that.

4 Q Okay.

5 A There are engineering ways to control.

6 Q Do you have Exhibit 823 before you?

7 A I have found it.

8 Q And Exhibit 823 is what, sir?

9 A 823 is a Monsanto memorandum dated December 8, 1972
10 authored by P.W.. Gann addressed to C. Paton. The
11 subject, Therminol FR Conversion Project.

12 MR. CARLSON: Your Honor, I would offer
13 Exhibit 823 into evidence. part of the Monsanto documents
14 they produced.

15 MR. RUNNING: Your Honor, if I could just have
16 a second. No objection, Your Honor. We would like
17 to check just to make sure it belongs together, but it
18 doesn't look like there's a problem.

19 (Change in reporters.)
20
21
22
23
24
25

1 MR. CARLSON:

2 Q With regards to Exhibit 823 --

3 THE COURT: Excuse me. Did you want to
4 check that before --

5 MR. RUNNING: No, no. I am just saying,
6 if we could go back later and see if there is a
7 problem -- I don't think there will. There are
8 several memos at the back that are not obvious
9 that -- There are several memos in the back of the
10 document that it's not obvious belong with the
11 document, but they may very well.

12 THE COURT: All right. Under those
13 conditions, received without objection.

14 MR. CARLSON:

15 Q This particular report -- First of all, the
16 memorandum is dated December 8, 1972?

17 A It is.

18 Q And it's regarding the closing -- the closing report
19 on the Therminol FR conversion project? Or, that's
20 the document that's attached to the memorandum?

21 A Yes.

22 Q And Therminol was a PCB fluid?

23 A Yes.

24 Q And FR stands for fire-resistant?

25 A Yes.

1 Q And conversion project had to do with getting
2 Therminol out of companies' -- or, out of your
3 customers' machines, correct?

4 A Yes.

5 Q And if we look at the third -- Let's see. Take a
6 look at the -- Well, let's look at the third page,
7 the table of contents, to start with. We have
8 "Objectives And Results," is one category?

9 A We're talking about the table --

10 Q Yeah, the table of contents, the third page.

11 A I think I found it, yes.

12 Q Okay. And there is only three things referenced,
13 "Objectives And Results, Scope Of Conversion Team
14 Activities," and then an "Addendum Index"?

15 A Oh. I see it now, yes.

16 Q Okay. Would you then be kind enough to turn to the
17 next page, which is the report which states
18 "Objectives" and "Results"?

19 A I found that.

20 Q And with regards to the first objective, would you be
21 kind enough to read that for us?

22 A I would like to. I haven't seen this since it was
23 published, so --

24 Q Okay. Familiarize yourself with it then.

25 A I have read the first objective, yes.

1 Q Would you be kind enough to read it out loud for us
2 then.

3 A "Search out and contact Therminol FR" -- And it's the
4 footnote reference. The footnote says, "In this
5 report, the term FR refers to the Therminol FR series
6 of heat transfer fluids based upon the
7 polychlorinated biphenyl fluids," parentheses,
8 "PCBs," close parentheses. -- "users to assure
9 awareness of the PCB food and environmental issues
10 and to encourage the voluntary termination or further
11 use of the FR fluids, and assure acceptable disposal
12 of the FR fluids."

13 Q And then on the right-hand side -- Well, let me just
14 ask you a couple of questions about that. First of
15 all, when reference is made to "encourage the
16 voluntary termination or further use of the fluids,"
17 that means getting the fluids out of the systems;
18 doesn't it?

19 A Yes, on the part of the user.

20 Q Right.

21 A Um-hum.

22 Q And it was your company's goal to get the fluids out
23 of those machines; wasn't it?

24 A Yes, especially in food-related uses.

25 Q And then on the right-hand side, for the "Results,"

1 would you be kind enough to read the first sentence
2 to us?

3 A "All U.S. customers known to have FR fluids received
4 a minimum of one phone call and confirmation letter
5 in addition to the formal Monsanto policy and
6 announcement letters."

7 Q Now, who was making these phone calls to the
8 customers?

9 A It would be the field salesman, and if he didn't do
10 it, Mr. Gann, the author of this report, would do it
11 for him.

12 Q In the case of a Pydraul fluid, if the same program
13 had been used for Pydrauls, it would have been Mr.
14 Damiani who would have made the phone call, assuming
15 he was the salesman at the time?

16 A Certainly.

17 Q And then if we go further down on this particular
18 section, do you see the sentence that begins,
19 "Additional information"?

20 A I see it.

21 Q Would you be kind enough to read that for us?

22 A "Additional information relative to conversion status
23 and return of FR fluid to Monsanto is contained in
24 the Project Log and Return Notice Register."

25 Q Now, when it references the "conversion status" and

1 "return of FR fluid to Monsanto," was Monsanto asking
2 the customer to send back the PCB fluids at that
3 time?

4 A No, they were offering the available service to
5 incinerate. The customer could send it elsewhere if
6 he had a proper place to go with it.

7 Q I see. And was this part of the motivation -- Strike
8 that.

9 Was that one of the reasons for the phone
10 call, that was to see to it that your customers took
11 this step?

12 A The phone call was to make certain that the customer
13 understood the environmental issue and the need to
14 keep these PCBs out of food -- food and animal feed,
15 and so on. That is the primary purpose of the phone
16 call. The availability of a disposal service by
17 incineration was communicated as something that we
18 thought was a big help to many customers who didn't
19 know where to go with their waste material.

20 Q I see. This particular report was drafted December 1
21 of 1972?

22 A That's the date of it, yes.

23 Q Now, by this time in 1972, with regards to Pydraul
24 users, you had not told them that they should
25 incinerate their Pydraul, had you?

1 A By '72?

2 Q Right.

3 A No, they were -- they were aware of the availability
4 of the Monsanto incinerator by '71 at the latest.

5 Yes. Um-hum.

6 Q Pydraul 312 users?

7 A Yes, sir. Incineration service was available.

8 Q Well, we will get to that. With regards to this

9 program -- And by the way, that raises another

10 interesting point. And that is, with this program

11 the customers were told that they should drain their

12 machines; weren't they? The Therminol program?

13 A The Therminol?

14 Q Yes.

15 A They were encouraged to drain their machines. They

16 were not told to drain them.

17 Q And then, if we take the next sentence, which

18 references -- it's, "As far is known, all Monsanto

19 plants and warehouses have returned all

20 PCB-containing fluid to Sauget"; did I correctly read

21 that?

22 A Yes.

23 Q So for these fluids that were in the warehouses of

24 Monsanto, you did not continue to sell them to your

25 customers, you took them back into your own facility?

1 A For this product line, yes.

2 Q If we go on to the next page, we see the second
3 objective?

4 A May I read it?

5 Q Surely.

6 A I have read that page.

7 Q Okay. The Objective No. 2 is stated to be, "Avoid
8 the creation of unsatisfactory customer relations
9 which may lead to future damage suits or claims
10 against Monsanto as a result of Monsanto's FR sales
11 termination policy," correct?

12 A It does say that, yes.

13 Q And then on the "Results" side, it was found, was it
14 not, that the customer aggravation remained
15 relative -- relatively low during that project?

16 A That's what it states, yes.

17 Q And then in the second paragraph under the "Results,"
18 about halfway down, you see the sentence beginning,
19 "Some of the older heat transfer systems"?

20 A I see it.

21 Q Would you be kind enough to read that for us?

22 A "Some of the older heat transfer systems were still
23 using Aroclor fluids. The Monsanto 'policy' mailings
24 did not alert customers that the Therminol FR,"
25 parentheses, "PCB," close paren, "issue also applied

1 to Aroclor. Another point of possible confusion in
2 their mind is that some customers used the Aroclor
3 and Therminol FR fluids in hydraulic applications and
4 never mentally connected alerts on heat transfer
5 subjects to these applications."

6 Q And then the memorandum goes on further and states,
7 "It is known that many mailings of the December 15,
8 1971, letter which were addressed to corporate or
9 purchasing officers never penetrated to the plant
10 operating personnel, engineering or maintenance,
11 where real application understanding existed,"
12 correct?

13 A It does say that, yes.

14 Q The objectives go on, and would you turn, I think,
15 two pages further and look at the Objective No. 4?

16 And would you be kind enough to read that for us?

17 A Objective 4. "Develop a documentary file on each
18 customer, including telephone notes and
19 correspondence."

20 Q Now, again, Therminol fluids are PCB fluids, correct?

21 A Some of them.

22 Q Right. This project pertained to the PCB Therminol
23 fluids?

24 A Yes.

25 Q But this project did not pertain to the Pydraul

1 hydraulic fluids or PCBs, did it?

2 A It did not.

3 Q These customers were handled differently than the
4 Pydraul customers?

5 A Yes. It's a different application.

6 Q Would you be kind enough to go further into the
7 document.

8 THE COURT: We're going to have to take a
9 break.

10 MR. CARLSON: Okay.

11 (Recess had.)

12 THE COURT: Sorry. We got delayed. I
13 had a long distance telephone call. We will resume
14 the cross-examination of Mr. Papageorge.

15 MR. CARLSON: Thank you, Your Honor.

16 MR. CARLSON:

17 Q Mr. Papageorge, bear with me. I know we have a lot
18 of material, but we will see if we can't get through
19 it.

20 THE COURT: You know, by July.

21 MR. CARLSON:

22 Q By the end of this evening. Before you on the right
23 you have an Exhibit 933?

24 A I have it.

25 Q And you'll recognize that as a Therminol conversion

1 bulletin?

2 A That's the title, yes.

3 Q Do you recall that document as being a bulletin that
4 was created telling the folks making the conversion
5 how to go about making a conversion of Therminol?

6 A It does.

7 MR. CARLSON: All right. I would offer
8 Exhibit 933 into evidence, Your Honor.

9 MR. CARLSON:

10 Q At the time --

11 THE COURT: Oops.

12 MR. CARLSON: I am sorry.

13 MR. RUNNING: Just a second, Your Honor.
14 I object on the basis of relevance, Your Honor, not
15 on the authenticity of the document. But I would at
16 this point -- We have had a lot of questions about
17 Therminol, and if Mr. Carlson has a point, I think it
18 should be made more quickly than this, so I object.

19 THE COURT: It's received over objection.
20 I think it's pretty obvious the reason why he's
21 bringing these out.

22 MR. CARLSON:

23 Q And, Mr. Papageorge, your company did not send
24 comparable technical information to owners of die
25 cast machines on how to properly drain the die cast

1 machines, did they?

2 A At what point in time?

3 Q At any time?

4 A At any time?

5 Q Yes.

6 A That is correct.

7 Q If you look right underneath there there is Exhibit
8 808. Would you be kind enough to identify Exhibit
9 808 for us?

10 A This is a Monsanto memorandum dated September 22,
11 1971, written by J.J. Roder to L. Durnstorff, titled
12 "Therminol FR Returns."

13 MR. CARLSON: And I would offer Exhibit
14 808 as one of the Monsanto documents, Your Honor.

15 MR. CARLSON:
16 Q Would you be kind enough to read the STR number.

17 THE COURT: You want me to rule?

18 MR. McDEVITT: He's going to read the
19 number.

20 THE WITNESS: STR 012111.

21 MR. RUNNING: No objection.

22 THE COURT: So received.

23 MR. CARLSON:
24 Q Do you recall, sir, that your company, for the
25 Therminol users, that is, the PCB Therminol users,

1 your company was waiving incineration costs for them?

2 A As shown by this memorandum, yes, sir.

3 Q The memorandum provides that disposal charges and
4 return freight are to be waived for these FR returns,
5 correct?

6 A That is correct.

7 Q Let's go on. Do you have Exhibit 1080 before you?

8 THE COURT: 1080 what?

9 MR. CARLSON: 1080. One-zero-eight-zero.

10 THE WITNESS: I have it.

11 MR. CARLSON: Just one -- This is a
12 defendant's exhibit that was received, Your Honor.

13 MR. CARLSON:

14 Q And I think I'll just summarize it quickly. This is
15 an October 14th, 1969, letter to an individual at the
16 Wisconsin Bureau of Fish Management?

17 A That is correct.

18 Q And then the next letter is October 13th of 1969 to
19 Fred Lee at the University of Wisconsin?

20 A That is correct.

21 Q And in the second page of that letter your company
22 makes reference to the interim report on some studies
23 that were underway regarding Aroclors? The second
24 paragraph?

25 A Yes. The second paragraph?

1 Q Yes, sir.

2 A Yes. Yes.

3 Q "The studies underway include our Aroclor 1242, 1254
4 and 1260 which are being fed at levels of 1, 10 and
5 100 parts per million in the diet." And then, "In a
6 three generation rat reproduction study with Fo
7 parental animals mating for first or second litters,
8 there has been no effect on live birth and 24 hour
9 survival indices of Fla litters," correct?

10 A That is correct.

11 (Switch in reporters.)

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1 Q Did you tell the folks in Wisconsin that you had adverse
2 results in the bird studies when you got them?

3 MR. RUNNING: At a later time?

4 MR. CARLSON: Yes.

5 THE WITNESS: At a later time, certainly.

6 MR. CARLSON:

7 Q In correspondence to them?

8 A I don't remember any specific document, but I do know
9 that representatives of the State of Wisconsin
10 universities and regulatory agencies were made aware of
11 this. In fact, they attended the meeting in Duluth,
12 Minnesota where it was described to the audience.

13 Q That, in fact, the PCB 1242 -- Strike that -- the
14 Aroclor 1242 was found to have a damaging effect on the
15 ability of the chicken to reproduce?

16 A Yes.

17 Q Would you be kind enough now to look at the exhibit,
18 hopefully, on the top of the stack of 465?

19 A I have it.

20 Q Okay. The document itself is a "PCB Presentation to the
21 Corporate Development Committee."

22 A That's the title.

23 MR. CARLSON: And my records do not indicate
24 that it's been received, Your Honor, so I'm going to
25 offer it into evidence as one of the Monsanto documents.

1 THE COURT: What was the number?

2 MR. CARLSON: 465.

3 MR. RUNNING: I don't object to the document.

4 I'm not sure if we used it or not, Your Honor.

5 THE COURT: So received.

6 MR. CARLSON:

7 Q The date of the document handwritten in the upper
8 right-hand corner is November 17th of 1969?

9 A That's what's written in the upper right-hand corner,
10 yes, sir.

11 Q And as of that particular date, November 17, 1969, and
12 it was as of November of 1969 from the standpoint of
13 reproduction, that PCBs were regarded as being highly
14 toxic to birds, were they not?

15 A Yes, that's the third paragraph, yes.

16 Q Right. And in the year 1969 you did not tell your 312
17 users that information, did you?

18 A Not in any general mailing, no.

19 Q If we go further down in the document there's reference
20 to this being a serious matter. Do you see where I'm
21 making reference to?

22 A I do.

23 Q And would you be kind enough to read that for us?

24 A "This is a serious matter, not only from the pollution
25 viewpoint, but also because of the \$22 million worldwide

1 customer business involved, with resultant gross profits
2 of \$10 million and a net investment of approximately \$9
3 million. In addition, there could be possible adverse
4 legal and public relations problems leveled against
5 Monsanto."

6 Q "Legal and public relations problems leveled against
7 Monsanto" would be a kind of pressure to discontinue
8 manufacturing PCBs, would it not?

9 A It would. Again, I don't know what you mean by
10 pressure. It's not the gun-at-the-head approach, if
11 that's what you mean, but it is a consideration that's
12 taken in all the businesses in terms of what image are
13 your actions reflecting.

14 Q The second page of this has an agenda?

15 A It does.

16 Q And as before we find that one of the departments
17 involved is the Law Department of Monsanto?

18 A Certainly.

19 Q In these presentations from the Legal Department -- let
20 me back off and do it a different way.

21 It is true, is it not, that you as a corporate
22 executive have been counseled that in drafting documents
23 they should be drafted in a way -- Strike that. They
24 should be drafted keeping in mind that they may be
25 discovered during the course of litigation?

1 A I've never been instructed with that kind of wordage,
2 no, sir.

3 Q Have you been advised that, in fact, documents that are
4 drafted may be discoverable in litigation?

5 A Again, I think the advice I get is to be truthful in
6 what you put on paper.

7 Q I understand that. What I want to find out is when is
8 the first time that you ever became aware of the fact
9 that someone making a claim against your company would
10 have the right to see your internal corporate documents
11 that are relevant to the issue?

12 A I personally? When I was first involved with the first
13 lawsuit involving PCBs.

14 Q Which was going back to what, the early seventies?

15 A 1974.

16 Q Okay.

17 A Something like that.

18 Q Okay. If we turn to the third page. I think I'm on the
19 third page. In the wrong direction. Sorry.

20 We find, first of all, that the Medical Department
21 had been actively engaged for the last eighteen months
22 regarding information that they were developing on PCBs.

23 A You have paraphrased it, but that's the essence, yes.

24 Q And then there's a reference towards the bottom third of
25 that particular paragraph that "some toxicological and

1 analytical test programs in excess of \$100,000 are going
2 to be spent." Do you recall that?

3 A It does say that, yes.

4 Q Now, the next page gives us some information regarding
5 the Monsanto worldwide Aroclor business as of that time,
6 doesn't it?

7 A It does.

8 Q This is, again, back in November of 1969, correct?

9 A Correct.

10 Q And you were making 104 million pounds of PCBs a year?

11 A That's worldwide, yes.

12 Q And the gross sales per year is \$22 million?

13 A Yes, sir, at that time.

14 Q And the gross profits at that time were \$10 million?

15 A Yes, sir.

16 Q How many years had Monsanto been making these kinds of
17 profits on PCBs?

18 A Oh, I don't know. I don't know through the years, sir.

19 Q Okay.

20 A I have no idea.

21 Q You started making PCBs back in the thirties?

22 A Yes, sir.

23 Q You continued to make PCBs through what year?

24 A 1977.

25 Q Now, if I can move ahead a little bit. You'll find in

1 about three or four pages there's a reference to a slide
2 or slide presentation that was made. I think it's on
3 Page 8 of the document. Do you see where I'm making
4 reference to?

5 A Yes.

6 Q Now, in looking at this, the alternatives are the same
7 alternatives that you and I had discussed before when we
8 looked at a graph, do you recall that, or series of
9 grafts?

10 A We looked at a document that discussed three
11 alternatives.

12 Q Right.

13 A I think the wording is a little bit different,
14 Alternative 3.

15 Q Okay. Alternative 1 was the do nothing?

16 A That is correct.

17 Q And it's still the do nothing?

18 A I'm sorry?

19 Q And, I mean, the do nothing in the other document we
20 discussed, and it's also -- Number 1 is the do nothing?

21 A If I remember correctly, you are correct.

22 Q And under that particular alternative it's noted that,
23 "This is also the quickest route to being forced out of
24 the business," correct?

25 A That is the author's opinion.

1 Q Okay. So that by doing something it was perceived that
2 you'd be able to stay in the PCB business for awhile?

3 A Doing the right thing, yes, sir.

4 Q Alternative Number 2. If we take a look at about in the
5 middle of the section where it references "All Aroclor
6 products are not serious pollutants - many degrade;
7 there is too much customer/market need, and selfishly
8 too much Monsanto profit to go out." Do you see what I
9 make reference to?

10 A I do.

11 Q And with regards to the degrading phrase -- "degrading
12 study" doesn't sound quite right to me for some
13 reason -- the studies on biodegradation with regards to
14 those studies in November of 1969, they hadn't been done
15 yet or the work completed, had they?

16 A That is correct.

17 Q So that when you talk about "All Aroclor products are
18 not serious pollutants -- many degrade," what studies is
19 that author making reference to?

20 A No studies. He was basing that statement on a strong
21 opinion that the research scientist had expressed.

22 Q That the lower chlorinated were going to degrade?

23 A Were probably very likely to degrade, yes.

24 Q Leaving the fives and sixes and higher?

25 A That is the scientist's opinion, yes.

1 Q So that at that time the scientist's opinion was
2 sufficient enough that you, that is the company, felt
3 the studies would bear out those opinions?

4 A Yes.

5 Q So that at that particular time for the Aroclor 1242,
6 you could have told your customer that the 5-chlorine
7 PCB would still remain even though the lower chlorinated
8 PCBs may degrade?

9 A In hindsight one could say that, yes.

10 Q Well --

11 A We didn't know enough about the biodegradation phenomena
12 to describe everything that would take place, and we
13 didn't want to go communicating opinions that had not
14 been supported by good data.

15 Q The good data you had was that the 5-chlorinated PCB was
16 the one that was showing up as peaks on these various
17 environmental studies?

18 A That is the solid data, yes, sir.

19 Q Correct. And it was also solid data that your 1242 PCB
20 had 5-chlorine PCBs in it?

21 A True, but we didn't know how those five chlorines, along
22 with the 1, 2 and 3's would withstand the environment.
23 We didn't know that. It is possible during degradation.

24 There's another theory that scientists had. It is
25 possible that with degradation of the lower, the

1 bacteria get acclimated and could also consume the fives
2 that are associated with all those lower chlorine PCBs.
3 That wasn't established yet.

4 Q There was no study that -- Strike that.

5 Can you point to me one document that shows that
6 even as a hypothesis?

7 A I don't know that anybody made a treatise out of it or a
8 document, no.

9 Q The third alternative is the -- Strike that.

10 The third alternative was to go out of the 1254 and
11 1260 business.

12 A That is what was considered.

13 Q If we go on to the next page. What I'd like to do is
14 reference the alternative courses of action.

15 Number 4 you folks indicated that you wanted to
16 "develop specific action plans tailored to each business
17 group and each customer/market situation to 'clean up'
18 the mess," correct?

19 A That is what it says, "clean up" in quotes.

20 Q Okay. With regards to the die cast industry for the
21 smaller customers, who had the responsibility of
22 developing that course of action?

23 A The responsibility falls on the director of the business
24 group, the ultimate responsibility.

25 Q And was the director of the business group that had that

1 responsibility provided with studies showing the ways
2 that PCBs could enter the water in die cast operations?

3 Q Certainly. I'm certain he was, yes, sir.

4 Q I haven't seen any such studies, have you?

5 A Well, it's not a formal document, no.

6 Q I'm sorry?

7 A This is information that's communicated from the field
8 people to their supervisor in St. Louis, in turn to the
9 director of marketing, and from there to the director of
10 the business group.

11 Q I see. And was the director of the business group made
12 aware of the fact that the 42 Aroclor was being found
13 outside a lot of die cast operations that you and I
14 discussed in that previous document?

15 A I would describe that as some die cast, not a lot.
16 Compared to the thousands in use, that's not really a
17 lot.

18 Q But every one that was looked at had it?

19 A No, there was some samples taken that had zero
20 detectible, near --

21 Q Of die cast --

22 A -- near factories, industrial sites.

23 Q I'm talking about die cast operations.

24 A Some die cast operations were included, yes, sir. I
25 don't remember exactly which ones now.

1 Q The fact of the matter was that most die cast operations
2 had 1242 in the waterways that were near their plants,
3 the ones that were studied?

4 A I have no data to tell me that.

5 Q We'll get back to that. Let me go on and discuss with
6 you Page 12. If you'd be kind enough to turn to that.

7 A I have it.

8 Q Okay. On this particular page what information is being
9 provided?

10 A Well, it lists the particular PCB by Aroclor
11 description, 1242 through 1260. It refers to the U.S.,
12 the domestic market, which is the United States, and has
13 broken it down into three categories, "Industrial, Heat
14 Transfer and Electrical."

15 Q And what do the numbers in each column signify?

16 A They signify pounds. I have no way of knowing what year
17 they are referring to here.

18 Q All we have is that this particular composition of
19 information was included in your November 17, 1969
20 report?

21 A That is true. This could be '68 data or it could be '69
22 extrapolated to complete the year. I don't know.

23 Q Okay. With regards to the Aroclor 1254 for the total,
24 how many pounds of that were manufactured for that year?

25 A Now, this is the manufacturing. This is sold to those

1 three applications.

2 Q Okay. And how many were sold total?

3 A Nine-tenths of -- nine-tenths million pounds -- 900,000
4 pounds.

5 Q Okay. And the 1260, how much of that?

6 A 4.1 million pounds.

7 Q And then for the 1242, how many million pounds of that
8 was manufactured and sold in that year?

9 THE COURT: That's two questions.

10 MR. CARLSON: I'm sorry.

11 Q How many pounds of the 1242 was sold that year?

12 A Were sold to these three uses?

13 A Yes.

14 Q Because there's a plasticizer use that almost equals
15 these. It's greater than --

16 Q Okay.

17 A -- 41.2 million for these three fluids that are listed.

18 Q And for these particular fluids, the 1242 was by far the
19 fluid sold -- or Strike that. The 1242 fluid was
20 substantially higher than any of the other fluids,
21 correct?

22 A Because of the electrical use, yes, sir.

23 Q And the 1242 fluid became a very important business to
24 protect, did it not?

25 A Well, important because of its value to the electrical

1 industry, yes, sir.

2 Q And also important to Monsanto from the standpoint of
3 its profits?

4 A Yes, to a degree.

5 Q Would you be kind enough to turn to Page 13, which is
6 the following page. And here we see the "Sources of
7 Fluids Pollution."

8 A That is the title of that page.

9 Q And there was, as the greatest intensity of pollution by
10 Monsanto, it was thought to be the industrial fluids?

11 A Of the uses listed, yes.

12 Q Yes. Dielectrics were indirect --

13 A Yes.

14 Q Listed as indirect in contained systems, correct?

15 A I'm sorry.

16 Q Dielectrics were indirect and they were in contained
17 systems?

18 A Yes.

19 Q And likewise for heat transfer?

20 A Yes.

21 Q Heat transfer fluids were the Therminol fluid that we
22 previously talked about?

23 A Some of them were called Therminols, yes, sir.

24 Q Now, those are the fluids where you actually went out
25 and called the folks up and told them to drain their

1 machines?

2 A We didn't tell them to drain, we suggested they drain it
3 from food-related/packaging-related applications.

4 Q That you recommended that they drain their machines?

5 A Yes, sir.

6 Q Okay. And then we go down to producing plants. Those
7 are your own plants?

8 A Yes.

9 Q And that was the only other direct method of PCB
10 contamination for the products or for the kinds of
11 properties listed here?

12 A That is correct.

13 Q Would you be kind enough to turn to the next page? And
14 here we have "Fluids Customer Alternatives." Do you see
15 that?

16 A That is the title of the page.

17 Q And on the left side there's "Area of Application."

18 A Yes, sir.

19 Q "Product of choice."

20 A That is the middle column, yes, sir.

21 Q And "Customer Options."

22 A Yes.

23 Q The first listing is "Industrial Fluids."

24 A Yes.

25 Q And you reference Pydraul 312 and F-9 along with some

1 others?

2 A Yes.

3 Q And then the right side, would you be kind enough to
4 read that for us?

5 A Under "Customer Options?"

6 Q Yes.

7 A "Customer could get along without us, Pydraul 312
8 favored. H2-O glycol has some pollution problems.
9 Phosphate ester route ok at present."

10 Q Your competition did have phosphate esters available as
11 fire-resistant hydraulic fluids as of November of 1969,
12 did it not?

13 A They did.

14 Q And you had water glycols available?

15 A We did.

16 Q As did your competition, correct?

17 A That is correct.

18 Q And as of November of 1969 it was understood that for
19 these particular hydraulic fluids the customers would
20 get along without the 312, correct?

21 A That is true.

22 Q Would you be kind enough then to turn to the next page.
23 There's a section here on "Customer Choices &
24 Alternatives & Penalties."

25 A Yes, sir.

1 Q And would you be kind enough to read to us the last
2 sentence of that paragraph?

3 A "Only in the industrial field could the customer make an
4 immediate conversion."

5 Q That was true for the die cast companies. I mean, they
6 could have made an immediate conversion at that time,
7 couldn't they?

8 A Any time they wanted to, yes, sir.

9 Q All they needed was a reason to, right?

10 A Yes.

11 Q The reason could have been if they had been told that
12 they had 5-chlorinated PCB that was causing damage to
13 the environment. That's also true, isn't it?

14 A It depends on the person making the decision. That
15 could be a consideration. But any time he felt
16 uncomfortable controlling, he could change.

17 Q Would you be kind enough to turn to -- it looks like a
18 typed 16, but a penned-in 15 somebody's written in.
19 And, again, we look at the situation with regards to the
20 1242. We see that it was expected that the 1254/1260
21 situation was going to spread to the 1242 and 1248.

22 A Not expected. This was a situation that was considered,
23 if it spreads, these numbers would result.

24 Q And if you totalled up the numbers for the 1242 and 1248
25 fluids, you would find that there would be a loss of

1 gross profits at \$6 million. Just take 7.36 and
2 subtract out the 1.36 from higher numbers.

3 A That is the profit, yes, for the applications listed.

4 Q One of the non-industrial fluid uses was the carbonless
5 copy paper, wasn't it?

6 A Yes, sir.

7 Q And carbonless copy paper used the Aroclor 1242?

8 A Yes, sir.

9 Q The carbonless copy paper was one of the first uses of
10 PCBs that your company stopped, wasn't it, or told your
11 customer to stop?

12 A Well, I would say it was sort of in the middle of the
13 time period. Not the first and not the last, certainly.

14 Q The use of the 1242 and the carbonless copy paper was a
15 use that was discontinued early in the PCB -- I want to
16 call it scheme of terminations, but maybe that's not a
17 fair word.

18 A Can you help me in the definition of "early?"

19 Q Along about the same time that you were discontinuing
20 the 1254 and 1260 products you also discontinued 1242
21 and the carbonless copy paper.

22 A Yes, but some sophisticated research had to be done
23 first, so that took some time. As I recall, that change
24 occurred about the middle of 1971 worldwide, Europe and
25 America.

1 Q The reason the 1242 was discontinued in the carbonless
2 copy paper is because it was understood that burning of
3 the paper did not destroy the PCBs, that just vaporized
4 them?

5 A That's one of the ways it got into the atmosphere, yes.

6 Q And it was the 5-chlorine PCB in that carbonless copy
7 paper that was perceived to be a problem, wasn't it?

8 A Well, I'm having some problems with the word "problem."
9 There were samples taken near paper plants that recycled
10 paper, and PCBs were found in the paper plant effluents
11 that were attributed to the carbonless copy paper. So
12 if presence is a problem, that's one consideration. If
13 PCBs in falcons is a problem, that's a different kind.

14 Q Except that the raw, if they're all PCB, 5-chlorinated
15 PCBs, the studies, and the thinking, was that this was
16 the problem PCB, the five. Like having red marbles, and
17 blue marbles, and yellow and green, ten different
18 colors, there's a couple of colors that are causing that
19 problem, right?

20 A Well, it's a problem if you just consider mere presence.
21 It's a problem if you consider harm. There's two
22 different kinds of PCBs involved.

23 Q And you also understand that your company should tell
24 people if the PCB is going to cause harm or has caused
25 harm?

1 A When it's demonstrated so, and the occasion comes to
2 communicate it, this was done.

3 Q Well, for the 312 which had the 5-chlorine PCB, even
4 after you folks knew everything about it, 1988, 1989,
5 1990, you hadn't sent a letter out to those customers
6 telling them that the PCB, 5-chlorinated PCB was in that
7 product and caused harm, have you?

8 A The letter was not sent out, but they knew about it.

9 Q They did. I see. Would you be kind enough to turn to
10 the page typed 27, and then there's a penned-in 23.

11 A I have it.

12 Q I think Mr. Running asked you some questions about this,
13 that it was going to cost some money to do this
14 particular aspect of your work.

15 A Yes, I recall that.

16 Q And you agreed with Mr. Running that one \$1.1 million
17 and \$1.2 million is a significant amount of money.

18 A Certainly at that time it was.

19 Q For companies, however, money is a very relative thing,
20 isn't it? What may be a lot of money to one person or
21 one company may not be as much to another person or
22 another company?

23 A I suppose that's generally true. I'm no expert in that.

24 Q Well, see if we can't turn -- would you be kind enough
25 to turn to the Monsanto annual sales report, which is in

1 evidence. And would you begin reading for me on Page
2 39, the bottom right-hand corner where it begins "At an
3 accrued.

4 A "At the December 31, 1990, Monsanto's balance sheet
5 included an accrued liability of approximately \$120
6 million for the remediation of waste disposal sites."

7 (Change in reporters.)
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1 Q Would you continue?

2 A "Monsanto's liquidity, financial position and
3 profitability are not expected to be affected
4 materially by the cleanup costs for Super Fund and
5 other waste disposal sites."

6 Q So apparently 1.1 million takes a different -- Or,
7 strike that. I don't have anything to ask about
8 that. Except that the amount of money that one has
9 is relative, isn't it, whether or not it's a lot or a
10 little?

11 A Well, I have a problem addressing that because this
12 report talks about 1990 and future dollars.

13 Q Right.

14 A The initial report was back in 1970, and the dollars
15 certainly are not the same.

16 Q No.

17 A They are not comparable.

18 Q I understand. Would you be kind enough to see if you
19 have Exhibit 663 there, on top of the next group?

20 A I have it.

21 MR. CARLSON: And, Your Honor, this is
22 the same as Plaintiff's Exhibit 481. Our records
23 show it has been received in evidence. It's also
24 Defendant's Exhibit 1082.

25 THE COURT: Three identical exhibits with

1 three different numbers?

2 MR. CARLSON: Afraid so, Your Honor.

3 MR. CARLSON:

4 Q Do you have it available there?

5 A I have it.

6 Q Would you be kind enough to look at the second page
7 and the center section on "Legal Aspects"?

8 A I am looking at it.

9 Q And it references that, "Although the law" -- "law is
10 unsettled, the present general rule is that if a
11 manufacturer knows or should know that a product of
12 its manufacture may cause damage if not properly
13 used, he has a duty to give adequate warning to
14 customers and users." Do you see that?

15 A I do see it.

16 Q And that was information that was conveyed to people
17 looking at PCBs as of November 17th of 1969?

18 A Certainly, as well as every other chemical we made.

19 Q We have to go on to the letters again. You have
20 there Exhibit 1009.

21 A I have it.

22 MR. CARLSON: While we're looking at it,
23 Your Honor, this is a document that's been received.
24 It's the same as the Defendant's -- I am sorry, this
25 is Defendant's 1009, and it's the same as our Exhibit

1 63. This is the February 9th letter.

2 THE COURT: Of '70?

3 MR. CARLSON: Yes.

4 MR. CARLSON:

5 Q The only thing I would like to do is to have you take
6 a look at the label. Do you see the label there?

7 A The mailing label?

8 Q Yes.

9 A Yes, sir.

10 Q And that label was created for that particular
11 mailing?

12 A Yes, sir.

13 Q And just so that I understand how it was used, when
14 the mailing went out, they checked -- put a check on
15 that mailing label?

16 A On a copy of the -- the envelope labels they checked
17 off when the documents were put in the envelope, the
18 envelope sealed and then ready for mailing.

19 Q When this information was brought together to
20 present, did you go out there -- did you personally
21 get the mailing labels and the documents?

22 A Each and every one of them?

23 Q Yes.

24 A No, sir.

25 Q Okay. Do you know who did that work? Somebody on

1 the legal staff --

2 A Oh, no.

3 Q -- or somebody under your direction?

4 A No, this was under my direction, supervised by a
5 secretary, an experienced secretary with half a dozen
6 typists.

7 Q Okay. And then for the -- I am talking about when
8 these materials were gathered to present during the
9 course of this litigation, not back when they were
10 mailed out.

11 A Oh. I misunderstood your question.

12 Q I am sorry. And I was thinking about another
13 question, so I wasn't --

14 A I don't know how these documents were assembled for
15 submission.

16 Q I see. Would you -- Do you have Exhibit 1010 also
17 there?

18 A I found it.

19 Q Would you take a look at the mailing label on Exhibit
20 1010.

21 A I am looking at it.

22 Q You see any difference between the mailing label for
23 1010 and 1011 -- I am sorry, for 1010 and 1009?

24 A You mean in terms of the the wording and so on?

25 Q In terms of anything. The check mark, anything?

1 A They appear similar.

2 Q I may be missing something, but to me they appear
3 identical.

4 A Well, they were all typed up in the same -- same
5 order, and so on, so it -- it would fall in the same
6 place on the original sheet.

7 Q Check mark exactly the same place?

8 A I -- It's possible.

9 Q Same check mark?

10 A Why not? Same people doing it.

11 Q These were procedures that were followed, were the --
12 Strike that.

13 With regards to Exhibit 1010 -- just a
14 second -- this was the letter that was sent out for
15 the -- to give information about the F-9 product --

16 A Yes.

17 Q -- you remanufactured?

18 A Yes.

19 Q Now, the F-9 product was remanufactured why?

20 A I am sorry. Was it "why"?

21 Q The F-9 product was reformulated why?

22 A That's to remove the Aroclor 1248 that was at one
23 time an ingredient.

24 Q The reason for removing the 1248 was because of
25 the -- excuse me -- somewhere between 36 and 40

1 percent of the five-chlorine PCB?

2 A That's the reason, yes, sir.

3 Q And with regards to this particular mailing, do you
4 know how they selected the customers that this
5 particular letter would be mailed to?

6 A The records for at least three years that had been
7 gathered for the earlier February meeting -- February
8 letter were scanned to determine which of those
9 customers received Pydraul F-9.

10 Q Okay. And then they were sent to the F-9 users?

11 A That's right, um-hum.

12 Q Do you know when Monsanto -- when Stroh had last
13 purchased an F-9 product?

14 A I don't, no.

15 Q Take a look at that a little bit. In this particular
16 situation the -- the company wanted F-9 not to be
17 used anymore because of potential damage to the
18 environment?

19 A Possible potential damage.

20 Q And the best way to prevent potential damage to the
21 environment by the F-9 would be to have your
22 customers drain the machines of the F-9 product,
23 correct?

24 A No, I don't agree with that. The best way is to keep
25 it in the machine and don't let it get in the

1 environment.

2 Q Well, in the heat transfer fluids, those were
3 contained systems; were they not?

4 A They were contained in terms of possible exposure to
5 the environment. They were not perceived to be
6 foolproof in terms of contaminating the food. Now,
7 that's the other end of the system, where escape
8 could happen into the baking -- the product that's
9 being baked, or the potato chips that are being
10 fried, or the package that's being made to wrap the
11 food.

12 Q And --

13 A There is a different kind of escape there.

14 Q And based on the work that had been done earlier in
15 finding 1242 in the waterways, your company knew that
16 industrial fluids using the 1242 and comparable
17 Aroclors were also going to get into the waterways
18 and get into the food chain, right?

19 A I personally don't know of any study that associates
20 1242 with fish contamination.

21 Q But you do see studies that have 1242 in the water
22 and -- strike that -- 1242 in the water and the
23 five-chlorine PCB in the fish, right?

24 A Yes, but those fish are caught out in the main body
25 of water, where 1242 is not found.

1 Q Would you be kind enough to see if you have Exhibit
2 1012 before you?

3 A I have it.

4 THE COURT: What number was that?

5 MR. CARLSON:

6 Q By the way, with regards to where 1242 and --

7 THE COURT: Excuse me. What number was
8 that?

9 MR. CARLSON: I am sorry. 1012.

10 THE COURT: 1012, thank you.

11 MR. CARLSON:

12 Q With regards to where aquatic life goes, one of the
13 problems with juvenile shrimp is that although they
14 spawn out in the sea, they come in and grow in the
15 early stages in the bays, they come in the bays;
16 isn't that right?

17 A Could be. I thought it was the other way around. I
18 thought as they got a little older they went out and
19 matured and then came back.

20 Q We'll have a chance to get into that.

21 A All right.

22 Q With regards to Exhibit 1012, by April 15th of 1971
23 your company did have a replacement fluid for the
24 Pydraul 312?

25 A As well as other Pydrauls, um-hum.

1 Q When the 312A was used, the terphenyl, it was known,
2 was it not, that -- Strike that.

3 Was any reformulation of the terphenyl
4 itself necessary in order to make it compatible with
5 PCBs?

6 A No, the terphenyl is terphenyl. It's not formulated.
7 It's produced as the chlorinated terphenyl.

8 Q And then when you finally went to the phosphate ester
9 to replace the PCBs, it -- Let me back up. Your
10 company did not advise the 312 users that the 312 had
11 PCBs in it until you had a replacement product
12 available that could be put right on top of it; isn't
13 that true?

14 A I -- I don't believe that they waited that long. The
15 knowledge of PCBs in 312 was available, and I find
16 that hard to believe, that that knowledge wasn't
17 known to the industrial fluid users.

18 Q You do know that throughout the years earlier, if one
19 looked at all of the product literature for the 312
20 product, it would simply refer to it as a chlorinated
21 hydrocarbon, however?

22 A That was the industry standard for describing that
23 kind of chemical, yes.

24 Q Now, with regards to the terphenyl, did you have some
25 customers that returned terphenyl for incineration?

1 A I don't recall any customer returning terphenyl. I
2 don't -- I don't know.

3 Q Let me go on to something else for a moment. Bear
4 with me just a second. You have to bear with me just
5 a second. Do you have to your right a copy -- or, do
6 you have Exhibit 1016?

7 A I have it.

8 Q And this particular exhibit is the letter of January
9 31st of 1972?

10 A It is.

11 Q And, again, you have indicated that you are going to
12 stop using a product, and this time is when you have
13 stopped using what product?

14 A Polychlorinated terphenyls.

15 Q By 1972 you were aware that the terphenyls could
16 potentially be an environmental problem if you
17 continued to use them?

18 A By 19 -- By the date of this letter we were aware
19 that they were difficult to degrade, yes.

20 Q You had not done any premarket degrading --
21 biodegrading studies for the terphenyls, did you?

22 A No.

23 Q You used the terphenyl as a stopgap because of the
24 pressure that was being exerted on the company to
25 stop using PCBs, right?

1 MR. RUNNING: Your Honor, this line of
2 inquiry is repetitive.

3 THE COURT: Can't hear.

4 MR. RUNNING: Your Honor, this line of
5 inquiry is repetitive. We have gone through this
6 very subject last week.

7 THE COURT: It seems like it.

8 MR. CARLSON: I didn't think I asked that
9 particular question, but I can stand to be corrected
10 at this stage.

11 MR. CARLSON:

12 Q Let's go by these and turn to Exhibit 1018, which is,
13 I believe, up there.

14 A I have it.

15 Q Mr. Running asked you a series of questions regarding
16 this particular exhibit, which is a March 15, 1972,
17 letter?

18 A That's what this exhibit is, yes, sir.

19 Q And this letter has as a subject again reformulating
20 of your products to -- so that they won't have PCBs?

21 A That's right, um-hum.

22 Q There was no information provided in that letter to
23 motivate a customer to drain out their hydraulic
24 systems to eliminate their PCBs, however, was there?

25 A No, there again that decision rested with the owner.

1 Q You knew that the owners of this equipment were
2 looking to you for guidance, did you not, as to
3 whether or not it was appropriate to use the fluid or
4 not use the fluid?

5 A Well, they certainly discussed it with Monsanto
6 representatives, yes, sir.

7 Q And would you be kind enough to turn to the next
8 exhibit on the right-hand side, which is Exhibit --
9 Defendant's Exhibit 1020.

10 A I have it.

11 Q This particular document was one that referenced the
12 Food & Drug Administration and, you know, products
13 coming in contact with food?

14 A Well, that's one of the subjects. It also covers
15 incineration.

16 Q And with regards to incineration, at this point in
17 time, you still had told your customers that it was
18 proper to use the Pydraul fluids in their die cast
19 machines, though; did you not?

20 A In the machine, yes. Not in the environment.

21 Q I understand that. Now, from 1973 until 1978 were
22 there some laws passed regarding the use of PCBs as
23 they pertained to die cast companies?

24 A The Toxic Substances Control Act was passed in 1976.

25 Q And at some point in time you understand that it

1 would be inappropriate for a company to have PCBs in
2 their hydraulic systems of die cast machines at more
3 than 50 parts per million?

4 A It did come to that, but I personally don't recall
5 the date. I was not involved at the time, so I don't
6 know it.

7 Q Were there mailings to the customers of Monsanto
8 which had purchased the PCB hydraulic fluids advising
9 them that to comply with federal laws they would have
10 to drain their machines?

11 A By that time the government was doing the advising.
12 Monsanto did not so advise, no.

13 Q So at that point -- Up to that point Monsanto had
14 been providing some information to your customers
15 about PCBs, correct?

16 A Certainly.

17 Q And at some point in time the government stepped in
18 and took over that role, would that be a fair way of
19 categorizing it?

20 A Yes, it was after the passage of the act.

21 Q And your own incinerator became dismantled or you
22 dismantled it when?

23 A 19 -- Well, it stopped operating in 1977. It was
24 dismantled several months later.

25 Q And any company that had your company's PCBs still in

1 their systems as of 1978 would not have Monsanto
2 available to take those PCBs back?

3 A No, they had more modern units available, probably
4 closer to home.

5 Q And Monsanto did not build any of those modern units?

6 A No.

7 Q Monsanto did not advise its customers any further of
8 any desirability or necessity of burning the PCBs?

9 A Well, that's not true at all. They advised them that
10 incineration was available at these private
11 companies.

12 Q At no time after -- There has been no mailings to
13 Stroh after 1973, have there?

14 A I do not know.

15 Q After 1973 you're not personally aware of anything
16 that your company did for the small die cast
17 companies that still had PCBs on the premises; isn't
18 that true?

19 A I -- No, there was continual dialogue with the field
20 representatives and the machine operators after 1973.

21 Q There were no formal programs in place to help the
22 small die cast companies after 1973, was there?

23 A No, everything that was perceived to be appropriate
24 had already been passed on to them.

25 Q You know today that there were many, many die cast

1 companies after that time that still had PCBs that
2 they had to cope with?

3 A To abide by the regulations, yes.

4 Q Do you have Exhibit 307 on the stack to your right?

5 MR. RUNNING: Your Honor, we object to
6 this exhibit. Since it's 5:00 o'clock, I don't know
7 if we should break and discuss the objection or --

8 THE COURT: All right. It's 5:00
9 o'clock. Sounds like a decent time. 8:45 tomorrow.

10 (Whereupon, the following proceedings
11 were had outside the presence of the jury.)

12 THE COURT: I'll take a look at it. And
13 you are free to leave.

14 MR. McDEVITT: It's a 1988 document,
15 Judge.

16 THE COURT: Did you want to take up that
17 now?

18 MR. RUNNING: Your Honor, I was just
19 reading the Tapin versus Krueger case from the Court
20 of Appeals, getting ready for the instructions
21 conference, and this is exactly the same situation,
22 only more so.

23 In the Tapin case the plaintiff attempted
24 to introduce a warning required by the Consumer
25 Products Safety Act some six, eight years after the

1 product had been sold, and the Court disallowed it
2 and was sustained by the Court of Appeals.

3 This is a Material Safety Data Sheet
4 prepared in October of 1988, some 16 years after the
5 last sale of polychlorinated terphenyl product to
6 Stroh. Mr. Carlson has made all his points regarding
7 what was on and what was not on the labels, the
8 environmental sticker, the correspondence. There is
9 no probative value to going into a 1988 material
10 safety data sheet.

11 And the fact of the matter is that this
12 material was required by regulation and by statute.
13 The statute was enacted four years after we stopped
14 selling the product. The regulations were enacted
15 after that, and to get into a comparison of what was
16 required in 1988 versus what was on our product
17 labels in 1972 has no probative value, it's
18 prejudicial and under the Tapin case it's
19 inadmissible.

20 THE COURT: Mr. Carlson?

21 MR. CARLSON: Well, quite frankly, I
22 hadn't planned on using it specifically for that
23 reason, although I suppose if it was in evidence, I
24 could. I don't have a problem at this stage not
25 offering the exhibit as an exhibit.

1 I do intend to ask him some questions
2 about the subject matter without referencing it as a
3 particular exhibit of any sort. I can cross-examine
4 him on issue which I think may affect his
5 credibility. But I will not refer to it as an
6 exhibit as such.

7 MR. RUNNING: Your Honor -- I take it
8 then you have withdrawn the offer?

9 MR. CARLSON: I don't think I had offered
10 it at that point. Had I?

11 THE COURT: No. No. You just said "have
12 you got Exhibit No. 307."

13 MR. RUNNING: I knew it was coming. Your
14 Honor, there is one other subject, now that the jury
15 is out.

16 Mr. Carlson had Mr. Papageorge read from
17 the Monsanto annual report for 1990, and he chose to
18 read from a passage on Monsanto's accrual for
19 liability for toxic waste facilities, which I think
20 it took us by surprise because that page was not in
21 the exhibit that was admitted into evidence, the
22 version, Plaintiff's Exhibit 995, that had been given
23 to us. We had been led to believe that Mr. Carlson
24 would only be using the information on assets and
25 sales of Monsanto Company.

1 He read from a, you know, passage on the
2 accrual of liability, and I -- I think there was an
3 implication there that Monsanto was doing something
4 wrong because it's got over \$100 million in liability
5 for disposal. Of course, that is not a large number
6 for a company of this size, but the jury doesn't know
7 that, and it was not included in the exhibit that had
8 been given to us.

9 It has no probative value in this case.
10 It's not relevant to any issue, and I move that the
11 question and answer be stricken.

12 THE COURT: Well, I don't know what the
13 intent of Mr. Carlson was, but I didn't get the
14 impression you got as to why he introduced it.

15 MR. CARLSON: That wasn't the purpose of
16 it. If I did, it was -- it was not planned. It was
17 simply to give the jury an understanding of relative
18 values because of the reference to 1.1 million being
19 a lot of money during the direct examination of Mr.
20 Papageorge by Mr. Running. This would be a nice way
21 to demonstrate perhaps there are other values
22 operating here.

23 How the Court -- If the Court perceives
24 that the jury thought that Monsanto had done
25 something wrong, and that's why it was being 3474

1 referenced, I have no problem with a limiting
2 instruction being given now or at some other point.

3 Change in reporters.)

4 MR. RUNNING: Your Honor, there's another
5 problem with that, and that is as The Court, I'm sure,
6 is aware, accounting standards for reporting under GAAP
7 provide that a threshold of materiality for a company
8 based on its sales and net worth and for, to say that
9 something will not have a terrible impact on the
10 corporation is a term of art under accounting standards.
11 And it follows from that if you're talking about
12 projected liability of \$100 million for a company like
13 Monsanto, perhaps that is not, under the accountant's
14 definition, a material impact on the financial
15 statement, particularly given the amount that had been
16 accrued, because what the accountants look to do is they
17 compare the accrual of liability against the, you know,
18 the possibility, the contingency involved in the
19 accrual.

20 So I would also -- I didn't know where Mr. Carlson
21 was going with this, because it was included in the
22 exhibit, but that was an improper comparison, because it
23 is not a reflection that Monsanto doesn't think \$100
24 million is a lot of money, or that Monsanto considers
25 that to be pocket change, as was the implication in the

1 question.

2 He has already gotten into evidence what Monsanto's
3 assets are, what Monsanto's sales are, and he can make
4 argument from that point, but to introduce accounting
5 terms, references to accruals and to materiality creates
6 a false impression for that reason as well. And whether
7 or not The Court derived that inference, I don't know.
8 If you want to warn the members of the jury.

9 And I'm troubled by referring to over \$100 million
10 in waste disposal liability, because I just don't know
11 that the members of the jury are as sophisticated as The
12 Court is. I'm sure they're not.

13 THE COURT: The odds are they are not.

14 MR. RUNNING: I'm sure of that.

15 THE COURT: I haven't looked at the exhibit,
16 but I assume this was in a footnote.

17 MR. CARLSON: No, it's in the body.

18 THE COURT: I see it had to do with your cash
19 flow situation.

20 MR. CARLSON: That's right.

21 THE COURT: The impression I've gotten was the
22 same one Mr. Carlson mentioned, that is, relative dollar
23 values. Maybe the jury got a different one, and I'd be
24 happy to explain that any reference in a statement, in a
25 financial document that's given to shareholders relating

1 to accrued liabilities, for whatever reason, is not
2 indicative that there is, in fact, legal liability for
3 any problems, something of that nature.

4 MR. CARLSON: I have no problem with that.

5 MR. RUNNING: Okay.

6 THE COURT: I didn't have the number.

7 MR. McDEVITT: 995, I think. I'll mark this
8 page.

9 MR. CARLSON: That's fine.

10 (Whereupon, the Court stood recessed until May
11 14, 1991 at 8:45 A.M.
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