

Transcript of the Testimony of **WILLIAM PAPAGEORGE**

Date: May 17, 2007

Volume: III

Case: PAULSON v. MONSANTO

Gore Perry Reporting & Video Company

Phone:(314) 241-6750

Fax:(314) 241-6750

Email:schedule@goreperry.com

Internet: www.goreperry.com

Montana Tenth Judicial District Court	1	APPEARANCES OF COUNSEL:	
Fergus County	2		
Marty Paulson, et al.,	3	For the Plaintiffs:	
	4		
Plaintiffs,	5	Mr. Torger S. Oaas	
	6	P.O. Box 76	
vs. Case No. DV-04-55	7	Lewistown, Montana 59457	
	8		
Monsanto Chemical Company,	9	For Defendant Columbia Paint and Coatings	
n/k/a Pharmacia, et al.	10	Company (via telephone):	
	11		
Defendants.	12	Mr. Stephen R. Brown	
	13	Ms. Katie Mahe	
Video Taped Deposition of William Papageorge	14	Garlington, Lohn & Robinson, PLLP	
Vol. III	15	P.O. Box 7909	
Taken on Behalf of Defendant Pharmacia	16	Missoula, Montana 59807-7909	
May 17, 2007	17		
	18	For Defendant Monsanto Department of Fish,	
	19	Wildlife and Parks (via telephone):	
	20		
	21	Mr. Maxon Davis	
GORE & PERRY REPORTING CO.	22	Davis, Hatley, Haffeman & Tighe, P.C.	
515 Olive, Suite 700	23	P.O. Box 2103	
St. Louis, Missouri 63101	24	Great Falls, Montana 59403-2103	
	25		
	Page 342		Page 344
1 Montana Tenth Judicial District Court	1	For Defendant Pharmacia Corporation and	
2 Fergus County	2	Monsanto Chemical Company:	
3	3		
4 Marty Paulson, et al.,	4	Ms. Carol A. Rutter	
5	5	Mr. Adam E. Miller (pages 183	
6 Plaintiffs,	6	through 192)	
7	7	Husch & Eppenberger, LLC	
8 Case No. DV-04-55	8	190 Carondelet Plaza	
9	9	Clayton, Missouri 63105	
10 Monsanto Chemical Company,	10		
11 n/k/a Pharmacia, et al.,	11	Ms. Catherine A. Laughner	
12	12	Browning, Kaleczyc, Berry &	
13 Defendants.	13	Hoven, P.C.	
14	14	139 North Last Chance Gulch	
15	15	Helena, Montana 59601	
16 Video Taped Deposition of William	16		
17 Papageorge, Vol. III, taken on behalf of the Defendant	17	Also present:	
18 Pharmacia, at the offices of Husch & Eppenberger, 190	18		
19 Carondelet Plaza, Clayton, Missouri, on May 17, 2007,	19	Ms. Amanda Russo	
20 before Faith A. Olliges, Missouri C.C.R. No. 807,	20	Husch & Eppenberger	
21 Illinois C.C.R. No. 084-003344, RDR, CRR, and Notary	21		
22 Public.	22	Videographer:	
23	23		
24	24	Mr. Curt Shaw	
25	25	Gore & Perry Reporting Company	
	Page 343		Page 345

1 (Pages 342 to 345)

1	INDEX	1	Columbia Paint. I also have with me Katie Mahe, who's
2	PAGE	2	an attorney with us.
3	Examination by Ms. Rutter 348	3	MR. SHAW: Very good. Would the court
4	Examination by Mr. Oaas 467	4	reporter please administer the oath to the witness?
5	Examination by Ms. Rutter 551	5	(Reporter swore in witness.)
6	Examination by Mr. Oaas 559	6	-----
7	Examination by Ms. Rutter 561	7	William Papageorge,
8		8	of lawful age, having been first duly sworn to testify
9	DEFENDANT'S EXHIBIT INDEX	9	the truth, the whole truth, and nothing but the truth
10		10	in the case aforesaid, deposes and says in reply to
11	Exhibit A 362	11	oral interrogatories propounded as follows, to-wit:
12	Exhibit B 396	12	EXAMINATION
13	Exhibit C 453	13	QUESTIONS BY MS. RUTTER:
14	Exhibit D 405	14	Q. Good morning, Mr. Papageorge. How are you
15		15	today?
16	PLAINTIFF'S EXHIBIT INDEX	16	A. Good morning. Fine. Thank you.
17	Exhibit 70 467	17	Q. Now, in your prior deposition in this case,
18	Exhibit 71 467	18	the Plaintiffs' counsel spent some time discussing
19	Exhibit 72 467	19	with you your background and experience with PCBs, so
20	Exhibit 73 467	20	I'll just touch briefly on those areas here.
21	Exhibit 74 467	21	Were you born in 1922, sir?
22	Exhibit 75 467	22	A. Yes.
23		23	Q. So that makes you about 84 today?
24		24	A. Yes.
25		25	Q. And you grew up and went to school here in

Page 346

Page 348

1	MR. SHAW: We are on the record at 9:35	1	St. Louis?
2	a.m. Today's date is May 17th, 2007. We're at the	2	A. Yes.
3	offices of Husch & Eppenberger. The address is 190	3	Q. Did you serve in the military?
4	Carondelet Plaza, St. Louis, Missouri.	4	A. Yes.
5	I'm Curt Shaw, Legal Videographer, along	5	Q. Could you tell us briefly about that service?
6	with Faith Olliges, Certified Court Reporter, here	6	A. Well, the service, as best I remember,
7	today for the deposition of William Papageorge,	7	extended from late 1942 until the latter part of 1946.
8	actually to continue the deposition of William	8	Q. And what level did you enter at, and what
9	Papageorge, to be taken in the cause of Marty Paulson,	9	level did you depart at?
10	et al versus Monsanto Chemical Company, et al,	10	A. I entered as a -- officially as a corporal as
11	currently pending in the Montana Tenth Judicial	11	a result of enrollment in the ROTC, and I terminated
12	District Court, Fergus County, Cause No. DV-04-55. At	12	service as a captain.
13	this time, would counsel please identify themselves	13	Q. And was that an honorable discharge?
14	and whom they represent?	14	A. Yes.
15	MR. OAAS: This is Torger Oaas	15	Q. And, Mr. Papageorge, do you have a B.S. in
16	representing the plaintiffs.	16	chemical engineering from Washington University?
17	MS. LAUGHNER: Cathy Laughner representing	17	A. I do.
18	Pharmacia.	18	Q. And that was awarded in about 1943?
19	MS. RUTTER: Carol Rutter representing	19	A. Yes.
20	Pharmacia and Monsanto, and also my legal assistant,	20	Q. And you have a Master's of chemical
21	Amanda Russo, is in the room with us. Telephone	21	engineering also from Washington University here in
22	participants.	22	St. Louis?
23	MR. DAVIS: Max Davis for the Montana	23	A. Yes.
24	Department of Fish, Wildlife, and Parks.	24	Q. And that was awarded in about 1947?
25	MR. BROWN: This is Steve Brown for	25	A. Yes.

Page 347

Page 349

2 (Pages 346 to 349)

1 Q. And you were first employed by Monsanto in
2 approximately late 1951. Does that sound correct?
3 A. Yes.
4 Q. If you need to jog your memory on any of
5 those dates, I do have a copy of your CV.
6 Could you please briefly describe the
7 different Monsanto facilities that you worked at and
8 the approximate dates that you worked at them?
9 A. I worked at the Monsanto plant in St. Louis
10 referred to as the J. F. Queeny Plant, which was
11 located on Second Street in the St. Louis area. I
12 then served at the plant in Sauget, Illinois, referred
13 to as the William Krummrich Plant of Monsanto. I was
14 then assigned to the Monsanto plant in Anniston,
15 Alabama. I was then reassigned to Monsanto in the
16 St. Louis area, the general offices of Monsanto, from
17 which I retired eventually.
18 Q. And were you Plant Manager at Anniston from
19 approximately 1965 until the end of 1969?
20 A. Yes.
21 Q. And then you worked at Monsanto headquarters
22 in St. Louis from approximately January 1970 until
23 your retirement?
24 A. Yes.
25 Q. And you retired at the end of 1986?

Page 350

1 A. Yes.
2 Q. Do you recall, Mr. Papageorge, Plaintiffs'
3 counsel asking you questions about Monsanto acquiring
4 Swann Chemical Company in the 1930s?
5 A. Yes.
6 Q. What was the year that Monsanto acquired
7 Swann?
8 A. 1929. No. I...
9 MS. RUTTER: Could you -- Miss Russo,
10 would you please get for Mr. Oas the copy of the
11 notebook with the exhibits that have been premarked as
12 one through 41?
13 A. May I correct my answer?
14 Q. Yes.
15 A. I believe I correct it. 1929 was the year
16 the Swann Chemical Company was formed. Monsanto
17 acquired it in 1935.
18 Q. We'll save the exhibit binders for a moment.
19 Had Monsanto ever manufactured PCBs before it acquired
20 Swann in 1935?
21 A. No.
22 Q. What, if any, PCB manufacturing plants did
23 Monsanto acquire from Swann, and where were they
24 located?
25 A. The only plant acquired from Swann that

Page 351

1 manufactured PCBs was the plant located in Anniston,
2 Alabama.
3 Q. Now, was the Krummrich Plant that's located
4 in Sauget, Illinois, acquired from Swann?
5 A. No.
6 Q. At some time after the Swann acquisition, did
7 Monsanto start manufacturing PCBs at Krummrich?
8 A. Yes.
9 Q. Do you remember approximately when that
10 occurred?
11 A. No, I do not.
12 Q. We'll pull out an exhibit later on in the
13 deposition that will probably refresh your
14 recollection on that date.
15 Who were Monsanto's biggest customers for
16 PCBs after Monsanto acquired Swann in 1935?
17 A. The biggest customers, as best I recall,
18 involved the electric equipment manufacturing
19 companies.
20 Q. And who were the biggest of those companies?
21 A. At that time, it was General Electric and
22 Westinghouse.
23 Q. And what, if any, were the primary uses of
24 PCBs made by the electrical industry, such as General
25 Electric and Westinghouse, after Monsanto acquired

Page 352

1 Swann in 1935?
2 A. Primary uses were as insulating and cooling
3 fluids, excuse me, in transformers and capacitors.
4 Q. What is a dielectric fluid?
5 A. Primarily it's a -- a liquid that does not
6 conduct electricity.
7 Q. And so when you spoke of insulating and
8 cooling fluids, were PCBs used as a dielectric fluid
9 in transformers and capacitors?
10 A. Yes.
11 Q. Why were PCBs used as dielectric fluids in
12 transformers and capacitors?
13 A. Well, in addition to its ability not to
14 transfer electricity through the fluid, they were used
15 in those types of equipment because they were not
16 flammable or explosive, which provided for some safety
17 protection.
18 Q. Were there any rules or codes or regulations
19 concerning what type of dielectric fluids had to be
20 used in transformers (sic.) -- transformers located in
21 buildings such as high rises in cities or hospitals or
22 stadiums, places of that nature?
23 A. Yes. There were generally rules that
24 specified under what conditions transformers and
25 capacitors could be used and where they were located

Page 353

3 (Pages 350 to 353)

1 and how the effects of a fire could be minimized in
2 the event one should have happened.
3 Q. And what brand names did General Electric and
4 Westinghouse use in relation to PCB-containing
5 dielectric fluids?
6 A. Brand names?
7 Q. Yes. What did GE call the dielectric fluid
8 that it used in --
9 A. Oh!
10 Q. -- GE transformers, for example?
11 A. General Electric used the trademark Pyranol.
12 Westinghouse used the trademark Inerteen.
13 Q. And what is an askarel?
14 A. Askarel is the same as these two I just
15 described, but it's the word -- it's the generic kind
16 of expression that describes fluids in that type of
17 service, electrical service, that are fire-resistant,
18 explosion-resistant, and nonconducting.
19 Q. Were there manufacturers of PCBs other than
20 Monsanto anywhere in the world?
21 A. Yes.
22 Q. And could you name some of those to the
23 extent you can remember them as you sit here today?
24 Either the country or the name of the manufacturer,
25 whichever is easier.

Page 354

1 A. I can remember the countries pretty well.
2 Germany, for example, Italy, France, the Netherlands
3 were -- and Japan that manufactured these kinds of
4 fluids.
5 Q. So it sounds as if there were a number of PCB
6 manufacturers in Europe and then in Japan as well?
7 A. Yes.
8 Q. Now, was Monsanto the sole supplier of PCBs
9 to U.S. PCB customers?
10 A. To the best of our knowledge.
11 Q. Were there any imports of PCBs into the
12 United States?
13 A. I was made aware of PCBs manufactured in
14 Germany were used in mining equipment designed by a
15 German company, and when that equipment was delivered
16 to the United States, it contained the PCBs made in
17 Germany.
18 To my knowledge, that is the only source
19 of PCBs other than Monsanto's in the United States.
20 Q. In addition to use in transformers and
21 capacitors, what other uses for PCBs developed over
22 the years?
23 A. Well, they were used as plasticizers, and by
24 that term I mean as an ingredient applied to other
25 materials to make the material more flexible instead

Page 355

1 of being brittle.
2 They were also used as an ingredient in a
3 mixture that eventually ends up as a paint, and the
4 most popular one was the type of paint used to paint
5 traffic lines on highways, the yellow line, the white
6 lines.
7 They were also used as an ingredient in
8 mixtures of fluids that were used to operate
9 equipment, hydraulic fluids.
10 At the moment, I can't think of any other
11 general category.
12 Q. What was a Therminol?
13 A. Oh, Therminol is Monsanto's trade name for
14 heat transfer -- heat transferring fluids.
15 Q. And can you give an example of what type of
16 use historically there was for a PCB-containing
17 Therminol fluid?
18 A. These fluids were used in systems in which
19 the fluid itself was heated in a safe location,
20 transferred to another location where its heat would
21 be used to accomplish some benefit. For example, it
22 would be used to heat the cooking oil in which food
23 was prepared. That's typical kind of use. It's a
24 case of where the heating of the heat transfer fluid
25 can safely be done in one location and the heat

Page 356

1 transferred to another instead of the possibility of
2 fires and explosions.
3 Q. And the Therminol itself is inside some type
4 of closed system typically?
5 A. Yes.
6 Q. Or was, I should say --
7 A. Yes.
8 Q. -- historically. What is Turbinol,
9 Mr. Papageorge?
10 A. Turbinol is another fluid. It's used to
11 operate very much like hydraulic fluid, to operate
12 machinery, turbines, and so on.
13 Q. Such as turbines in gas compression stations
14 where there was a great danger of fire and explosion?
15 A. Yes.
16 Q. Mr. Papageorge, let's switch gears a bit.
17 Under what circumstances were you transferred in late
18 1969 from being Plant Manager in Anniston, Alabama, to
19 Monsanto's corporate headquarters as Director of
20 Environmental Operations?
21 A. In the late '60s, there were observations
22 made in which material that was analyzed was
23 determined to be the material Monsanto used in these
24 fluids we just talked about, and the expression
25 introduced at that time was PCBs, which was intended

Page 357

4 (Pages 354 to 357)

1 to describe the expression "polychlorinated 2 biphenyls". 3 By late '69, the methods used in 4 laboratories to analyze for these PCBs had evolved to 5 the point where the data that was generated by the 6 highly sophisticated equipment was becoming more 7 reliable and much more descriptive of what the type of 8 PCB was being discovered. 9 Q. What were your job duties in the 10 newly-created position of Manager of Environmental 11 Control beginning in January 1970? 12 A. My job description really involved my 13 awareness of, as much as I could be, about the uses of 14 PCBs, the presence of PCBs found in the environment, 15 the efforts made to reduce that entry into the 16 environment, and, in an essence, I was trying to let 17 the left hand know what the right hand was doing. I 18 don't know how else to describe it. 19 It's -- I was the eyes and ears of upper 20 management. If I saw something that was 21 objectionable, I would try to solve the situation at 22 the lowest level within the company where I could. If 23 the response to my comments were ignored, I would take 24 it up the company ladder, so to speak, to the top 25 management, if necessary.	1 including Monsanto's European operations. But when 2 they understood that it was a phenol, not a phenyl, 3 P-H-E-N-Y-L, they decided that it must be a different 4 set of chemicals. 5 Q. What type of analytical equipment were 6 Drs. Jensen and Widmark using when they first 7 identified in the environment a substance that is 8 described in some reports as polychlorinated 9 biphenols, O-L-S, and in others with a Y-L-S? 10 A. Well, I'm not an expert on this analytical 11 equipment, but it was my definite understanding that 12 what was used was a much more sophisticated piece of 13 equipment designed and produced in Germany that Jensen 14 and Widmark had access to. It's only after Monsanto 15 decided to make further studies of defining what that 16 material was that Monsanto placed an order from the 17 German producer of that equipment to deliver to the 18 United States Monsanto laboratories. 19 Q. Was this in your understanding a ready-made 20 item that you could just call up and order it one day 21 and have it shipped out the next? 22 A. No. My understanding was much more complex 23 than that. As best I understood it, the basic parts 24 of the equipment were delivered by the manufacturer in 25 Germany, but it took considerable effort on the part
Page 358	Page 360
1 But I didn't find too many of those areas 2 within Monsanto. I found some of those negative 3 responses to my suggestions amongst the general public 4 and the purchasers of PCBs from Monsanto, and I would 5 then, of course, approach the top leadership within 6 the purchaser's company in an attempt to get quick 7 action. 8 Q. Who were Drs. or Professors Jensen and 9 Widmark, Mr. Papageorge? 10 A. Dr. Widmark and Dr. Jensen were Swedish 11 chemists located in Stockholm. I think it was the 12 University of Utrecht, U-T-R-E-C-H-T. 13 Q. And how do they fit into the discovery of 14 what was reported to be biphenols or biphenyls in the 15 environment in Europe? 16 A. They had an active program in determining the 17 presence of DDT, DDE in the environment to establish 18 what effects their presence might have. In the 19 analysis to determine the presence of the DDTs, DDE, 20 they kept seeing information that did not fit what 21 they expected to see. 22 Eventually, Dr. Jensen determined, in his 23 opinion, that what he was seeing was a polychlorinated 24 phenol, spelled P-H-E-N-O-L. That information 25 eventually was made known to many chemical producers,	1 of the purchaser of that equipment to assemble it and 2 get the right pieces to fit in the right places so 3 that the assembled unit performed what it was intended 4 to perform, and that took more time than any of us 5 expected. 6 Q. Who is David Wood? 7 A. David Wood is a Monsanto employee. As best I 8 remember, he was a Monsanto Company in London 9 employee. 10 Q. After this initial report from Drs. Jensen 11 and Widmark in Stockholm, did anyone from Monsanto 12 visit with Dr. Jensen or Widmark? 13 A. Yes. I don't recall the original -- There 14 was a group out of Monsanto Chemical London that went 15 to Stockholm and visited. In 1970, I was present with 16 a group, including Monsanto representatives from the 17 United States, that joined individuals out of Monsanto 18 London to visit with Widmark and Jensen. 19 MS. RUTTER: Ms. Russo, could you please 20 get the prelabeled exhibit binder that's Exhibits 1 21 through 41? 22 Miss Olliges, could you please mark that 23 as Exhibit Notebook A, which, for the record, contains 24 premarked Exhibits M-1 through M-41, with the M in 25 front of them to distinguish them from plaintiff's
Page 359	Page 361

5 (Pages 358 to 361)

1 exhibits that were used in the previous days of this
2 deposition. And we need a copy for Mr. Oaas, please.
3 This is for Plaintiffs' counsel.
4 (Reporter marked Defendant's Exhibit
5 Notebook A for identification.)
6 Q. Mr. Papageorge, could you please take a
7 minute to look at that notebook?
8 To speed things up a bit here today, did
9 you at my request before this deposition review the
10 documents that were in the notebook that's been marked
11 as Exhibit A, Notebook Exhibit A to your deposition
12 and includes Exhibits M-1 through 41?
13 A. It appears very similar to the volume that I
14 looked through.
15 Q. And can you tell us generally whether all of
16 these documents in this notebook are documents that
17 you saw in early 1970 after you first started your job
18 as Manager of Environmental Control at Monsanto's
19 headquarters in St. Louis? We can go through a few of
20 the documents and I can reask the question at that
21 time if that would be simpler.
22 A. Well, yes. When you said is this all of the
23 documents I saw, I saw so many documents, I just can't
24 vividly recall each and every specific one. But these
25 are very typical of the kinds of documents that I saw

Page 362

1 at that time.
2 Q. Right. And I certainly wasn't meaning to
3 suggest that this was all of the documents that you
4 saw. These are just representative documents from the
5 time period 1966 through late 1969, and with that
6 preface, we'll start going through them a bit.
7 Could you please turn to the tab that's
8 labeled 8, M-8? And could you please identify this
9 memo for the record? Just who it's from, who it's to,
10 and the date of the document.
11 MR. OAAS: If I could just interrupt for a
12 minute. I'll just be brief. I just want to state for
13 the record, given the way that you're approaching
14 this, I'm going to reserve my objections to all of
15 these exhibits because, although I may have seen some
16 of these in prior discovery, I haven't seen them in
17 this order, and I'm not prepared to state my
18 objections until I would have the opportunity to go
19 through each exhibit, so... That's it.
20 BY MS. RUTTER:
21 Q. So the pending question, Mr. Papageorge, is
22 could you please just state who Exhibit M-8 is from,
23 who it's to, and the date of the memo?
24 A. The exhibit is a two-page document authored
25 and sent out by Gene Wilde, W-I-L-D-E, addressed to

Page 363

1 R. Emmet Kelly, M.D., dated February 13, 1967.
2 Q. And who was R. Emmet Kelly, M.D.?
3 A. He was Monsanto's corporate physician.
4 Q. Was he -- Did he at some early time in the
5 company's history become Medical Director for the
6 company?
7 A. Yes.
8 Q. And you personally knew Dr. Kelly quite well?
9 A. Yes.
10 Q. And who was Gene Wilde?
11 A. I don't recall his specific title. I don't
12 remember.
13 Q. When it refers to "general offices" there on
14 the memo, does that mean it's from St. Louis?
15 A. Yes.
16 Q. If you could please refer to the middle part
17 of the exhibit where it says "Dave Wood," could you
18 please read that paragraph into the record?
19 A. "Dave Wood of our Brussels office sent us the
20 LK" -- looks like a B, "press release of January 10,
21 1967, about the Swedish success in detecting the
22 polychlorinated biphenyl."
23 Q. And then could you read the next sentence,
24 please?
25 A. "A memo written by Dave Wood dated January

Page 364

1 26th summarizing his visit with Jensen."
2 Q. So what does this document tell you about the
3 timing of Monsanto's first visit to meet with
4 Dr. Jensen in Sweden?
5 MR. OAAS: I just want to object to the
6 form of that question and indicate for the record that
7 the memo referred to at least has not been identified
8 as an exhibit in particular in this notebook, nor
9 provided to Plaintiffs' counsel through prior
10 discovery requests.
11 MS. RUTTER: For the record, a huge
12 production was made to Plaintiffs' counsel at the
13 Smith Moore law firm in Greensboro, North Carolina, of
14 a huge variety of documents and other information.
15 This bears Bates labels MONS. I certainly agree with
16 counsel that we can't hash out here on the record
17 whether you have a contention that any particular
18 document was not included in that production or in the
19 numerous subsequent productions that Monsanto has
20 made, and so your -- I suggest we deal with that on a
21 case-by-case basis.
22 MR. OAAS: Well, if you have this memo
23 written by Dave Wood, I'd sure appreciate you
24 producing it.
25 MS. RUTTER: I'm sure it was produced at

Page 365

6 (Pages 362 to 365)

1 Smith Moore many, many months ago as part of the
2 master collection that you requested.
3 MR. OAAS: It's not in this notebook.
4 MS. RUTTER: Mr. Oaas, this is -- If we
5 had all of the documents in this room, it would fill
6 up many, many boxes, and we are on a limited time
7 period. You are free to select whatever documents you
8 choose from the master production we gave you with
9 which you choose to question this witness. I know
10 that a very large and thorough production was made.
11 MR. OAAS: I just wanted to know. Is it
12 in the notebook?
13 MS. RUTTER: It's not in the notebook.
14 MR. OAAS: Thank you.
15 BY MS. RUTTER:
16 Q. Mr. Papageorge, can you please tell us when
17 Dave Wood first visited Dr. Jensen in relation to
18 Dr. Jensen's reported findings of biphenols or
19 biphenyls in the Swedish environment?
20 A. It happened, as best I recall, in late 1966.
21 Q. And this memo, Exhibit M-8, dated February
22 13th, 1967, refers to a meeting between David Wood and
23 Dr. Jensen; is that correct?
24 A. Correct.
25 Q. Could you please look at the exhibit that's

Page 366

1 been marked M-4, Mr. Papageorge? And could you just
2 briefly, please, for the record identify who it's to,
3 who it's from, and the date of the document?
4 A. The memo was authored and sent by David Wood.
5 It's addressed to George Buchanan located in
6 St. Louis. Mr. Wood is -- at that time was in
7 Brussels, Belgium.
8 Q. And what's the date of the document, please?
9 A. The date is December 1st, 1966.
10 Q. Could you please read the first line of the
11 letter, excuse me, of Exhibit M-4?
12 A. "I attach a copy of a letter received from
13 Ola Palm in Stockholm."
14 Q. And if you would please turn the page,
15 Mr. Papageorge, to the next exhibit in the book. Can
16 you please identify the author of this document, the
17 to, the from, and the date?
18 A. This document is a letter with the heading
19 "Rising & Strand" authored and mailed by -- It's
20 initialed "Ola," and it's mailed to "Dear David".
21 Q. And it says for the attention of Mr. D.
22 Wood --
23 A. Oh, yes.
24 Q. -- right above that?
25 A. You are -- That is correct. It is addressed

Page 367

1 to Mr. David Wood.
2 Q. And the date is November 28th, 1966?
3 A. Correct.
4 Q. Right. Now, does the first paragraph of that
5 letter refer to polychlorinated biphenols with an
6 O-L-S?
7 A. It does.
8 Q. Does the second paragraph of that -- or does
9 the next-to-last paragraph of that letter also refer
10 to biphenols, O-L-S?
11 A. The next to last?
12 Q. Oh, I'm sorry. On the first page.
13 A. It does.
14 Q. And for the record, this Exhibit M-5 was also
15 marked as Plaintiff's Exhibit 51 during the prior
16 deposition.
17 Mr. Papageorge, if you would turn back,
18 please, to Mr. Wood's cover memo, Exhibit M-4, can you
19 please read into the record the postscript that
20 Mr. Wood has written on his communication to Monsanto
21 in the United States?
22 A. "Thinking of the total quantities of Aroclor
23 used in Sweden compared with the much larger volume of
24 Pentachlorophenol and Sodium Pentachlorophenate for
25 water treatment in the paper industry and sapstain

Page 368

1 control in the timber industry. Is it likely that the
2 chlorinated phenols show similar chromatographic
3 traces to the chlorinated bi-phenols?"
4 Q. Mr. Papageorge, did Monsanto ever manufacture
5 DT -- DDT?
6 A. Not to my knowledge.
7 Q. So Monsanto wasn't researching DDT?
8 A. That is correct.
9 Q. That's what Jensen and Widmark were
10 researching when they found these unknown peaks?
11 A. Yes.
12 Q. Could you please turn to Exhibit M-7 and
13 identify that document for the record by author and
14 date?
15 A. The author is Gunnar Widmark, the date
16 December 29, 1966.
17 Q. And who is it to?
18 A. It's addressed to a Mr. Ford at Monsanto in
19 St. Louis.
20 Q. And could you please turn to the attachment
21 to that letter, which, for the record, is dated
22 September 1966, Institute of Analytical Chemistry,
23 University of Stockholm. Mr. Papageorge, can you read
24 the handwritten note about the instrumentation that
25 they said they were using that appears on this

Page 369

7 (Pages 366 to 369)

1 otherwise typed document?
2 MR. OAAS: I'm going to object to the form
3 of the question. I don't know who "they" are.
4 A. The handwritten addition reads as follows.
5 "Mass spectral" -- I'm sorry. "Mass spectrometer
6 LKD-9000."
7 Q. Could you please turn to the next page?
8 MR. OAAS: What exhibit are we referring
9 to?
10 MS. RUTTER: We're referring to the
11 attachment to Exhibit M-7. You have it in front of
12 you.
13 MR. OAAS: I don't have any handwritten
14 notations.
15 MS. RUTTER: Here. Let me show you. Next
16 page. Right there.
17 MR. OAAS: Thank you.
18 MS. RUTTER: Sure.
19 BY MS. RUTTER:
20 Q. Mr. Papageorge, do you see the page that says
21 "Pesticide Analysis"?
22 A. Yes.
23 Q. And this is a document that bears the name
24 Soren Jensen and Gunnar Widmark?
25 A. Yes.

Page 370

1 Q. Could you please look in the first paragraph
2 and read the type of machine that they say
3 that they -- the type of analytical equipment they say
4 they were using?
5 A. "An analysis of samples from the Swedish
6 wild-life fauna by means of gas chromatography, using
7 both electron capture detector and micro coulometric
8 detector, a large number of unknown but chlorine
9 containing compounds have been detected together with
10 the ordinary pesticides. Massspectra of some of these
11 compounds obtained at a combined gas chromatograph
12 mass spectrometer (LKB-9000) indicate that most of the
13 unknown compounds are polychlorinated biphenyls,
14 potentiated somewhat in nature towards those of higher
15 degree of chlorination."
16 Q. And then could you read, please, just the
17 last sentence of the next paragraph, the one that
18 starts out "200 samples"?
19 A. "200 samples of soil and water did not
20 contain detectable amounts of chlorinated biphenyls
21 nor did 20 samples of terrestrial mammals."
22 Q. Do you know, Mr. Papageorge, was a combined
23 gas chromatograph with a mass spectrometer new
24 technology in 1966?
25 A. If I understand your -- Was that new

Page 371

1 technology?
2 Q. Yes.
3 A. That's my understanding, yes.
4 Q. Did Monsanto eventually obtain a copy of
5 Soren Jensen's paper in the English language
6 that he -- it wasn't published, but that he provided
7 concerning his findings?
8 A. Eventually, yes.
9 Q. Can you please turn to tab M-11, and can you
10 identify that cover memo, please? Just by author, who
11 from, who to, and the date.
12 A. Authored by D. Wood, addressed to
13 Dr. R. Emmet Kelly, dated February 22, 1967.
14 Q. And can you please read the next-to-last
15 paragraph of that memo, the one that starts "I am
16 sending"?
17 A. "I am sending the only copy of Mr. Jensen's
18 paper to you and, therefore, if any of the other
19 recipients of this letter needs to have access, they
20 can take a copy from yourself."
21 Q. And then if you turn back to the affiliated
22 document that's marked M-11.2, can you please tell us
23 whether this appears to be a copy of Mr. Jensen's
24 original remarks?
25 A. I'm sorry. Would you define that again?

Page 372

1 Q. Sure. It bears --
2 A. Oh!
3 Q. -- Exhibit M-11.2.
4 A. And what was your question regarding this?
5 Q. Does Exhibit M-11.2 appear to be a copy of
6 Mr. Jensen's original remarks? On the topic of the
7 unidentified --
8 A. Yes.
9 Q. -- peak?
10 A. Yes. It -- It appears it's a copy.
11 Q. Could you please turn to Exhibit M-32?
12 A. 32?
13 Q. Yes. And who is that memo from, and who is
14 it to, please?
15 A. The memo is from W. R. Richard addressed to
16 file, dated March 7, 1969.
17 Q. And who was W. R. Richard?
18 A. Dr. Richard was the head of the research
19 group associated with the Functional Products
20 Department of Monsanto Company.
21 Q. And there are a number of CCs on this memo;
22 are there not?
23 A. Yes.
24 Q. I won't go over them all due to time
25 constraints, but who is E. Tucker?

Page 373

8 (Pages 370 to 373)

1 A. Mr. Tucker was a member of Monsanto's U.S.
2 Research Department.
3 Q. Was he an analytical chemist?
4 A. He was an analytical -- in the Analytical
5 Chemistry Department.
6 Q. And did he go by Scott?
7 A. Yes.
8 Q. Who was R. Keller?
9 A. R. -- Dr. Keller is Mr. Tucker's immediate
10 supervisor, his boss.
11 Q. And is "R. Kelly" R. Emmet Kelly, Monsanto's
12 Medical Director?
13 A. Yes.
14 Q. And who is E. Wheeler?
15 A. E. Wheeler was a member of Dr. Kelly's staff.
16 Q. His first name was Elmer?
17 A. Elmer.
18 MR. SHAW: Five minutes of video tape
19 remain.
20 Q. All right. Mr. Papageorge, could you please
21 read the first -- very first sentence of the document
22 into the record?
23 A. "We have been cooperating with Aroclor
24 samples to the following investigators."
25 Q. And then could you please read all of the

Page 374

1 individuals and institutions with whom Monsanto was
2 cooperating according to this memo?
3 A. Your question --
4 Q. Right. If you'd --
5 A. Referred to individuals. This document shows
6 a department or a --
7 Q. Let's just use the left-hand column and the
8 date.
9 A. Oh, okay.
10 Q. Right.
11 A. Jensen and Widmark and Tatton are listed; the
12 Department of Interior, Fish and Wildlife Service;
13 Bureau of Sport Fisheries, Denver, Colorado; Wisconsin
14 Alumni Research Foundation of Madison, Wisconsin.
15 Q. Is that known as WARF, W-A-R-F --
16 A. Yes.
17 Q. -- for short?
18 A. The Natural Agricultural Chemicals
19 Association in Washington, D.C.; the State University
20 of New York College of Medicine, Syracuse, New York;
21 Cornell University, Division of Bioscience - Ecology;
22 FDA, Washington, D.C.; U.S.D.A., Agriculture Research
23 Service, Pesticides Regulation Division; Regional
24 Primate Research, Madison, Wisconsin; the U.S. Bureau
25 of Commercial Fisheries, Ann Arbor, Michigan; the Rome

Page 375

1 Pollution Laboratory in Rome, New York; Wildlife
2 Research, Department of Interior, Washington, D.C.;
3 Patuxent of U.S.D.I.; University of Wisconsin Lab --
4 Labs; Denver Labs, Fish and Wildlife Division;
5 University of California, Riverside; Industrial
6 Bio-Test Labs; Medical College of South Carolina.
7 MS. RUTTER: That's probably a good place
8 to stop and change our video tape.
9 MR. SHAW: This will end tape number one
10 of the continued deposition of William Papageorge. We
11 are off the record at eleven -- excuse me -- 10:34
12 a.m.
13 (Whereupon, there was a brief recess.)
14 MR. SHAW: We are back on the record at
15 10:40 a.m. This will begin tape number two in the
16 continued deposition of William Papageorge.
17 BY MS. RUTTER:
18 Q. Mr. Papageorge, could you please turn to
19 Exhibit M-16? And could you identify this document
20 for the record, please?
21 A. This is a copy defined as an Outbound
22 Shipping Report addressed to Cincinnati - FG -- I
23 think that's Setum.
24 Q. Sutton, perhaps.
25 A. Anniston. The date is March 27, 1967, and

Page 376

1 the material shipped went to Federal Water Pollution
2 Control Administration, Department of Interior, 1014
3 Broadway, Cincinnati, Ohio.
4 Q. And what were the materials shipped to the
5 Federal Water Pollution Control Administration in
6 Cincinnati by Monsanto's Anniston plant in March of
7 1967?
8 A. The samples are defined as Aroclor 5460 and
9 Aroclor 1260.
10 Q. Now, is Aroclor 1260 a PCB?
11 A. Yes.
12 Q. What does the word "Aroclor" mean? Or --
13 A. It's Monsanto's trademark that was used to
14 describe chemicals made from benzene or benzene
15 derivatives, and that's where the expression "aro"
16 comes from. It's aromatics. And the C-L-O-R is
17 derived from the presence of chlorine in these
18 particular chemicals.
19 Q. Were all Aroclors PCBs?
20 A. No.
21 Q. Do you recall as you sit here today what
22 Aroclor 5460 was?
23 A. That product is really a chlorinated
24 terphenyl.
25 Q. Which is different from a chlorinated

Page 377

9 (Pages 374 to 377)

1 biphenyl?
2 A. Correct.
3 Q. All right. Could you please turn to Exhibit
4 M-10? That's tab 10 in your notebook, Mr. Papageorge.
5 And could you please identify this memo for the record
6 by the author, who it's from, who it's to, and the
7 date?
8 A. It's from D.V.N. Hardy, H-A-R-D-Y. It's
9 addressed to Dr. R. Emmet Kelly in St. Louis, dated
10 21st February 1967.
11 Q. And who was D.V.N. Hardy?
12 A. I don't know his exact job title. He was
13 from the London office. So a Monsanto --
14 Q. So he was a Monsanto -- a Monsanto employee
15 in London?
16 A. Correct.
17 Q. All right. And in this memo, Mr. Hardy or
18 Dr. Hardy, whatever the case may be, appears to be
19 transmitting information requested by Dr. Kelly,
20 Monsanto's Medical Director?
21 A. Yes.
22 Q. And he includes a couple of articles by a
23 Mr. Tatton, apparently from the Laboratory of the
24 Government Chemist in London?
25 A. Yes.

Page 378

1 Q. And Dr. Tatton appears to be researching
2 pesticides such as DDT?
3 A. Yes.
4 Q. Could you please read into the record the
5 very last paragraph where it says "I have also been in
6 touch"?
7 A. "I have also been in touch with
8 Mr. Richardson of Shell to whom I supplied the samples
9 of pure Aroclor components, and he reports that the
10 characteristics of the unknown material in the
11 organochlorine residues are quite different from those
12 of any of the chlorinated biphenyls I submitted to
13 him. He also said he's carrying out metabolic
14 experiments on fowls, and that the chlorinated
15 biphenyls appears substantially unchanged in the egg.
16 I told him that Jensen had been asking for pure
17 samples of Aroclor constituents, and we came to the
18 conclusion that Jensen must therefore have jumped the
19 gun in blaming chlorinated biphenyls. Richardson is
20 going to see Jensen around March 2nd, and they will
21 discuss the position and Richardson's latest results.
22 The situation will be reported to me on Richardson's
23 return and I will pass it on directly to you."
24 Q. So it appears, Mr. Papageorge, that after the
25 Jensen report in late '66, early '67, Monsanto started

Page 379

1 communicating with DDT researchers other than
2 Mr. Jensen in Europe to cooperate and coordinate
3 findings?
4 A. Yes.
5 MR. OAAS: Object to the form of the
6 question as leading.
7 Q. Could you please turn to Exhibit M-7,
8 Mr. Papageorge. That's a document you've already
9 identified for the record, the Gunnar Widmark letter
10 to Monsanto dated December 29th, 1966. Could you
11 please read the next-to-last paragraph into the
12 record?
13 A. "At present we have no knowledge of the
14 biological significance of the presence of these
15 compounds in living organisms. We have started a
16 collaboration with the Department of Toxicology at the
17 Carolin Institute but we should very much appreciate
18 to work with your toxicologists over this problem."
19 Q. Could you now please turn to Exhibit M-21,
20 Mr. Papageorge?
21 A. I'm sorry. 10?
22 Q. 21.
23 A. Oh, 21.
24 Q. And could you please state the date of the
25 document and the title and the authors who appear on

Page 380

1 the second page? The date of the document.
2 A. The date, July '68.
3 Q. And it's called "Project"?
4 A. "Project: Electrical Fluids - Part VI - Air
5 and Water Pollution Control."
6 Q. And according to the next page of the
7 document at the bottom, who are the authors of this
8 document?
9 A. E. Wheeler/Scott Tucker, P. Benignus/R. H.
10 Munch.
11 Q. And Wheeler is with the medical department,
12 and Scott Tucker is an analytical chemist?
13 A. Correct.
14 Q. And who were Mr. Benignus and Mr. Munch?
15 A. Mr. Benignus was in the marketing department
16 in charge of materials containing the Aroclors.
17 R. H. Munch is a research individual who was involved
18 with evaluating different chemicals for use as
19 functional fluids.
20 Q. And going back to the first page of the
21 document, could you please read the four objectives
22 stated into the record? Objective one.
23 A. "Objective one." Following -- "Follow
24 developments in analytical chemistry leading to more
25 sensitive and specific methods for identifying

Page 381

10 (Pages 378 to 381)

1 Aroclors in our environment.
2 Number two. Keep in touch with
3 laboratories doing research on environmental
4 contamination by Aroclors including Universities, FDA,
5 U.S.D.A., Fish and Wildlife Service.
6 Number three. Study present methods for
7 disposal of Aroclors and if necessary develop safer
8 ones.
9 Number four. Assess possible toxic
10 effects on humans."
11 Q. Could you please turn to Exhibit M-20? It's
12 the exhibit just before 21 in the binder. And I'm
13 going to ask you to look at the last page of this
14 document first, Mr. Papageorge. Who are the document
15 authors?
16 A. M. W. Dietrich, E. M. Emery, L. Fowler, R. E.
17 Keller.
18 Q. And Dr. Keller you knew personally?
19 A. Yes.
20 Q. Did you know any of these other individuals?
21 A. I -- I think I recall Mr. Fowler, Dr. Fowler,
22 F-O-W-L-E-R.
23 Q. Was he in Dr. Keller's Analytical Chemistry
24 Department?
25 A. Yes.

Page 382

1 Q. The paragraph right above their names has a
2 date. What is that date, please? It refers to a
3 speech by a Mr. J. D. Hinchey.
4 A. The date is January 10, 1968.
5 Q. Could you now turn, please, to the page
6 that's numbered eight at the bottom of Exhibit M-20?
7 A. I have it.
8 Q. And do you see where it says "Technical
9 Competence"?
10 A. Yes.
11 Q. Can you please read the paragraph that starts
12 Atlas-MAT, M-A-T, into the record?
13 A. "Atlas-MAT (Varian) CH-4B Mass Spectrometer:
14 Testing of the new medium resolution Atlas CH-4B Mass
15 Spectrometer is continuing. Emphasis is being placed
16 on the gas chromatography rapid scan mass
17 spectrometry(GC/MS) capability of the instrument.
18 Packed columns are presently being used. A new
19 single-stage Biemann helium separator has been ordered
20 to extend our capabilities to capillary column GC."
21 Q. Does this document suggest to you,
22 Mr. Papageorge, that by approximately January 1968
23 Monsanto had acquired a combined mass spec gas
24 chromatography machine and was attempting to make it
25 work?

Page 383

1 MR. OAAS: Object to the form of the
2 question.
3 A. Yes.
4 Q. Could you please turn to Exhibit M-3,
5 Mr. Papageorge?
6 A. Three?
7 Q. Three. What's the title of that document?
8 A. The title? "What's new about the CH-4B?"
9 Q. And the manufacturer of this new CH-4B is who
10 according to this document?
11 A. Krupp, K-R-U-P-P.
12 Q. Has an address in Bremen, B-R-E-M-A-N --
13 M-E-N?
14 A. Yes.
15 Q. You understand that to be in Germany?
16 A. That's what I believe it is.
17 Q. And the date on the lower right-hand side of
18 this document is what?
19 A. 1958 and 1966.
20 Q. Suggesting that this document was created not
21 before 1966?
22 A. Correct.
23 Q. Could you please turn to the second page of
24 the document? And read into the record the result
25 under the "Result".

Page 384

1 A. Oh! "Result. The new Atlas Mass
2 Spectrometer, CH4B, capable of even greater
3 achievements deals with all analysis problems in
4 organic chemistry - the outcome of 15 years of
5 experience."
6 Q. And then over in the next column, under
7 "Sensitivity," it refers to "for analysis of gas
8 chromatographically separated fractions"?
9 A. Yes.
10 Q. So it's your understanding this is an
11 advertisement for some of the newly-available
12 technology combining what's known by analytical
13 chemists as a mass spec GC?
14 A. Yes.
15 Q. Please turn to the last exhibit in this
16 notebook, Mr. Papageorge, Exhibit M-41. And would you
17 please identify that document for the record?
18 A. This is a copy of minutes of meeting of the
19 Corporate Development Committee of November 17, 1969.
20 Q. Now, who was the Corporate Development
21 Committee comprised of? The names appear on the
22 document, but can you give us a feel for the level of
23 these individuals within Monsanto Company at the time?
24 A. These individuals are entitled as vice
25 presidents within the Monsanto corporate or

Page 385

11 (Pages 382 to 385)

1 leadership.
2 Q. What about Mr. Bock? It says chairman. Is
3 that chairman of the board of Monsanto?
4 A. No. He's chairman of this committee.
5 Q. He's chairman of this committee. But -- So
6 these -- this is high level management?
7 A. Yes.
8 Q. And have you seen these minutes before?
9 A. They appear familiar, yes.
10 Q. Could you please go to the second page where
11 it says "Plan of Action" and read into the record the
12 first paragraph?
13 A. "The availability of alternate products to
14 satisfy customer requirements was reviewed. Main
15 problems are that no replacement product is available
16 for capacitors and replacement products for other uses
17 pose a pollution problem.
18 In plasticizer use, evidence is not
19 available as to whether Aroclor escapes from end
20 products, either through leeching or by dispersal in
21 burning.
22 The recommended plan of action is to
23 establish a tailored program for each business group
24 and each customer market situation to assure that the
25 loss of PCBs in the environment, if any, is minimal."

Page 386

1 Q. And then could you please turn to the next
2 page? Is that a 12 point action plan that this
3 committee devised in November 1969?
4 MR. OAAS: Object to the form of the
5 question.
6 A. I have it.
7 Q. What is set out on the last page of
8 Exhibit 41 in this memo dated November 17th, 1969?
9 MR. OAAS: Object to the form of the
10 question.
11 A. It lists 12 activities to be pursued in
12 following the PCB situation.
13 Q. And what's the first activity?
14 A. "Appoint a project manager."
15 Q. And who was that?
16 A. That was me.
17 Q. And when did you start your job in that role?
18 A. January the 1st of 1970 as best I recall.
19 Q. What's action plan item number two?
20 A. "Notify all Aroclor customers of the PCB
21 problem."
22 Q. Can you please tell us generally what
23 Monsanto did in that regard?
24 A. Generally, we had the different business
25 groups involved with Aroclors assign individuals

Page 387

1 within their groups who would contact customers and do
2 it verbally and in writing informing them of the
3 growing PCB issue.
4 Q. What is action item number three?
5 A. "Reduce and effectively control PCB effluents
6 from Monsanto plants."
7 Q. Item four?
8 A. "Educate customers on need to reduce and
9 effectively control PCB effluents at their plants."
10 Q. Let me hand you Plaintiff's Exhibit 4 that
11 was marked at your prior deposition when Plaintiffs'
12 counsel was asking you questions. You've already
13 identified this memo in your earlier deposition, but
14 could you please tell us whether this ANSI Committee
15 was part of carrying out action item number four?
16 A. Yes. This covered that -- that specific set
17 of customers.
18 Q. The customers in the electrical industry?
19 A. Correct.
20 Q. But action was also taken in relation to
21 customers in other industries?
22 A. Yes.
23 Q. What is action item number five, please, in
24 Exhibit 41, the November 1969 12 point action plan?
25 A. "Develop and implement new packaging systems

Page 388

1 for Aroclor 1254/1260."
2 Q. And what was done in that regard?
3 A. A conveyor belt pumping system vapor recovery
4 facility was built so that the 1260 and 1254 that was
5 being placed in drums could be transferred into those
6 drums without any spillage on the surface in which the
7 equipment was mounted and without any fumes being
8 released.
9 Q. What is point six on the action plan?
10 A. "Introduce to market replacement products for
11 Aroclor 1254 and 1260."
12 Q. Was that possible in the capacitor industry?
13 A. At that time, no.
14 Q. Did it -- Was it able to be developed -- Was
15 a replacement product able to be developed later on?
16 A. Yes. Later on, there were replacement
17 products placed in use.
18 Q. The prior page, Mr. Papageorge, if you could
19 turn back a page, where it says, "Main problems are
20 that no replacement product..." Could you please read
21 that sentence?
22 A. "Main problems are that no replacement
23 product is available for capacitors and replacement
24 products for other use -- uses pose a pollution
25 problem."

Page 389

12 (Pages 386 to 389)

1 Q. So the concern was that the replacement might
2 be a -- might pose similar environmental issues?
3 A. Yes. That was --
4 MR. OAAS: Object to the form of the
5 question.
6 A. That was a consideration, yes.
7 Q. What is Aroclor 1016?
8 A. 1016 is a modified Aroclor 1242. The Aroclor
9 1242 was redistilled to remove the higher chlorinated
10 Aroclors that were PCBs that were present in the 1242
11 such that 1016 ended up being an effective dielectric
12 fluid for capacitors without the more persistent
13 higher chlorinated PCBs.
14 Q. Would you please read action item seven into
15 the record?
16 A. "Continue and expand biodegradation test
17 program with Aroclor series, particularly 1242, 1248,
18 and 1254."
19 Q. And do you know, was Dr. Scott Tucker of
20 Monsanto in charge of that program?
21 A. He was certainly very much involved. I don't
22 know --
23 Q. You don't know if "in charge" was the proper
24 word. Let me rephrase the question. Was Dr. Scott
25 Tucker of Monsanto heavily involved in the

Page 390

1 biodegradation studies that Monsanto undertook with
2 regard to PCBs?
3 A. Yes, he was.
4 Q. What is action item number eight, please?
5 A. "Continue toxicological test program."
6 Q. And what did Monsanto do in that regard?
7 A. Monsanto had established with a toxicity
8 testing laboratory in the Chicago area, as best I
9 remember, to test the various Aroclors with the
10 typical test animals.
11 Q. Such as?
12 A. Dogs.
13 Q. Rats?
14 A. And rats.
15 Q. Hamsters?
16 A. Hamsters. Some chickens.
17 MR. OAAS: I don't mean -- Was that
18 Bio-Test he's referring to?
19 MS. RUTTER: Yes.
20 Q. All right. Was that Industrial Bio-Test that
21 --
22 A. Yes.
23 Q. -- you're referring to?
24 MR. OAAS: Thank you. Appreciate it.
25 Q. Now, Monsanto had previously had toxicity

Page 391

1 testing performed at the Kettering Laboratory by a
2 Dr. Treon; is that correct? I believe Plaintiffs'
3 counsel asked you questions --
4 A. Yes.
5 Q. -- about Dr. Kettering (sic.). These were
6 additional toxicity tests?
7 A. Correct.
8 Q. What was your personal experience over your
9 years of working -- your many years of working with
10 PCBs, Mr. Papageorge, about the toxicity of PCBs to
11 Monsanto workers?
12 A. Ooh, my personal experience. There was many
13 an opportunity for exposure. That exposure would, of
14 course, vary depending on the activity that the worker
15 might find himself involved with. I found it very
16 interesting that many of the retirement programs that
17 I attended with these workers just how active and
18 healthy they appeared, and I'm not a doctor or a
19 medical person, but they struck me as being very
20 active and had an activity like farming, for example,
21 that they entered as soon as they retired from
22 Monsanto.
23 The only experience of a negative nature
24 that I witnessed was the situation in which one
25 employee at the Anniston plant had been seen by the

Page 392

1 plant doctor because his hands were damaged, I'm going
2 to call it, red skin and peeling skin, very heavily
3 damaged hands.
4 The doctor reported that to me, so I
5 deliberately made it a point to come out and see this
6 worker, who, because of his seniority, and for reasons
7 known only to him, he chose to work only the midnight
8 shift, and because of his seniority he could, instead
9 of having a rotating schedule like the rest of the
10 workers, he would make trade-offs with other
11 individuals. Nevertheless, it turns out that he was
12 careless in not wearing gloves and other protection
13 when he handled PCBs.
14 That's the only damage I personally
15 witnessed relating to PCBs.
16 Q. In your several decades of working with them?
17 A. That is true.
18 Q. And was this worker that you've described
19 with the red hands, was he violating Monsanto's safe
20 handling practices?
21 A. Definitely.
22 MR. OAAS: Object to the form of the
23 question.
24 Q. What safe handling did -- practices did
25 Monsanto recommend for its workers in relation to PCBs

Page 393

13 (Pages 390 to 393)

1 in the manufacturing facility?
 2 A. Well, the recommendations were varied. They
 3 addressed how to cope with vapors, how to avoid
 4 exposure to the -- to the liquids. They were taught
 5 how to use respirators, how to use their gloves, how
 6 to wear their protective shoes, how to change their
 7 work clothes when the clothes became contaminated, how
 8 to avoid spreading any spilled material by walking
 9 through it.
 10 Q. I take it that as with almost any industrial
 11 chemical, it wasn't recommended that you touch the
 12 chemical with your bare hands?
 13 A. Very true.
 14 MR. OAAS: Object to the form of the
 15 question.
 16 Q. In any event, this employee who had reddened
 17 hands had been having direct hand contact with the
 18 PCBs?
 19 A. Yes.
 20 Q. Did he recover and come back to work?
 21 A. Yes, he did.
 22 Q. So back to point eight in this 12 point
 23 action plan from November of 1969, where Monsanto is
 24 continuing a toxicological test program, was the
 25 effort in light of the Jensen/Widmark discovery to

Page 394

1 evaluate the potential effects, if any, of tiny
 2 amounts of PCBs in the environment?
 3 A. Yes.
 4 Q. Could you please read point nine of the 12
 5 point action plan?
 6 A. "Accelerate present analytical test program."
 7 Q. And by "analytical test program," that refers
 8 to Dr. Scott Tucker's and Dr. Keller's work with the
 9 new equipment, the combined mass spec GC?
 10 A. Yes.
 11 Q. What's point 10 of the 12 point action plan?
 12 A. "Determine feasibility and cost of
 13 eliminating the 5/6 chlorine in Aroclors 1242 and
 14 1248."
 15 Q. And was that done?
 16 A. Yes.
 17 Q. And is that the MCS 1016 that we were talking
 18 about earlier?
 19 A. Yes.
 20 Q. What's point 11 of the 12 point action plan?
 21 A. "Study incineration products."
 22 Q. Were you personally involved in that,
 23 Mr. Papageorge?
 24 A. Well, I was following it very closely. I did
 25 not take samples personally or... But I was well

Page 395

1 aware of the program and the analysis that resulted.
 2 Q. And what incineration program ultimately was
 3 Monsanto able to offer its customers?
 4 A. Well, once Monsanto had installed an
 5 incinerator capable of doing the PCB destruction
 6 disposal program, it offered to those individuals that
 7 had PCBs that they wanted destroyed an opportunity to
 8 send that material to Monsanto's plant and eventually
 9 that material would be destroyed properly.
 10 MS. RUTTER: Miss Russo, where is the
 11 original of this notebook? Miss Olliges, could you
 12 please mark that as Notebook B containing Exhibits
 13 M-42 through M-75?
 14 (Reporter marked Defendant's Exhibit
 15 Notebook B for identification.)
 16 Q. Mr. Papageorge, could you please turn to the
 17 first exhibit in Notebook B, Exhibit M-42, and could
 18 you please identify for the record what this letter
 19 is?
 20 A. This is a letter dated February 9, 1970,
 21 prepared and transmitted by Donald A. Olson, Director
 22 of Sales, Functional Fluids Group, to its listed
 23 customers.
 24 Q. And does this letter, this February 9th, 1970
 25 letter, M-42, relate to point two of the 12 point

Page 396

1 action plan, "notify the customers of the PCB issues"?
 2 A. Yes.
 3 Q. What's your best estimate of how many of
 4 these letters were mailed out?
 5 MR. OAAS: I just want to object to the
 6 form of the question. Are we just talking about
 7 plasticizer customers or all customers in general?
 8 MS. RUTTER: To all the customers on the
 9 distribution list on the documents that were produced
 10 to you and are sitting behind you in those boxes. I'm
 11 just asking him right now for his best estimate of
 12 the...
 13 A. As close as I can come --
 14 MR. OAAS: Well, I just want -- I just
 15 want to know are you talking about all customers?
 16 MS. RUTTER: I'll note --
 17 MR. OAAS: Or, rather, just the Functional
 18 Fluids Group or the Plasticizer Group or --
 19 MS. RUTTER: I'm talking to -- about all
 20 customers --
 21 MR. OAAS: Okay. Okay.
 22 MS. RUTTER: -- that are on the
 23 distribution list.
 24 MR. OAAS: You don't need to get the
 25 distribution list. I just want -- Are you talking

Page 397

14 (Pages 394 to 397)

1 about direct customers?
 2 MS. RUTTER: Right now I'm talking about
 3 all customers who are on the distribution list, get my
 4 microphone back, that are on the inch-thick
 5 distribution list that is attached to Exhibit M-87 or,
 6 excuse me, M-88 –
 7 MR. OAAS: Okay.
 8 MS. RUTTER: That has been produced
 9 previously to counsel and is behind him in the boxes.
 10 MR. OAAS: Okay. I'm familiar with that.
 11 MS. RUTTER: Okay.
 12 MR. OAAS: I just wanted to know what you
 13 were referring to.
 14 BY MS. RUTTER:
 15 Q. Okay. So, Mr. Papageorge, what's your best
 16 estimate of the number of customers that this
 17 February 9th, 1970 letter, which has been marked
 18 Exhibit M-42, were sent to?
 19 MR. OAAS: I just want to object to form
 20 of the question that Exhibit 88 will speak for itself
 21 in terms of numbers.
 22 Q. You may answer subject to that objection.
 23 A. I don't have a number in mind. It's just so
 24 many of them, and this particular letter was sent to
 25 only a small number of total PCB customers. This is

Page 398

1 just the Functional Fluids Group.
 2 Q. And if we turn to the next exhibit,
 3 Exhibit M-43, could you please identify this record,
 4 this exhibit for the record?
 5 A. This is a letter dated February 19, 1970,
 6 which was mailed to a Mr. McCall of Great Western
 7 Chemical Company, and the letter was signed by
 8 W. E. Schalk, S-C-H-A-L-K, Director of Sales for
 9 Plasticizers.
 10 Q. Was this letter – And who was Great Western
 11 Chemical Company? What was its relationship to
 12 Monsanto, if you know?
 13 A. They were a distributor.
 14 Q. Was this letter sent to other distributors as
 15 well?
 16 A. Yes.
 17 Q. Could you please turn to page two of this
 18 February 19th, 1970, letter?
 19 A. Page –
 20 Q. Right.
 21 A. – two. All right.
 22 Q. That page. And do you see the paragraph
 23 where it says "for your guidance"?
 24 A. I do.
 25 Q. Could you please read that into the record?

Page 399

1 A. "For your guidance, we intend to mail the
 2 attached letter to all our Aroclor customers around
 3 February 27. The letter will be addressed to the
 4 Office of the President at the Accounts Receivable
 5 address which we hold in our files. We will send you
 6 sufficient copies of the letter for your needs in
 7 notifying your customers.
 8 To help you further, we have drafted a
 9 cover letter which you may wish to use in notifying
 10 your customers. A copy is attached, but the decision
 11 whether to use it or draft your own cover letter is,
 12 of course, yours.
 13 We regret the work that this request may
 14 cause you. As a responsible supplier, however, we
 15 feel we have a duty to keep our customers fully
 16 informed in matters concerning the safe handling of
 17 our products. We are sure of your support in this
 18 matter and are confident of your assistance along the
 19 lines indicated."
 20 Q. Could you please turn to Exhibit M-44,
 21 Mr. Papageorge? It's here in the notebook.
 22 Did you attend the Duluth conference in
 23 March of 1970 that is referenced in Exhibit M-44?
 24 A. Yes.
 25 Q. This is certainly a document that you've seen

Page 400

1 before?
 2 A. Yes.
 3 Q. If you could please turn to the third page of
 4 the exhibit, it's called "Agenda For PCB Meeting,
 5 March 70 – March 17th, 1970"?
 6 A. I have it.
 7 Q. And could you please turn to the next page or
 8 pages? Are those pages entitled "List of Persons
 9 Attending PCB Meeting, March 17th, 1970, Hotel
 10 Duluth"?
 11 A. Yes.
 12 Q. Do you have an estimate of how many people
 13 attended that meeting?
 14 A. About 400 or -- It was an auditorium full.
 15 Q. A large number?
 16 A. Yes.
 17 Q. And if you'll look at the first list of
 18 attendees, can you just read into the record the first
 19 three attendees? I certainly don't intend to go
 20 through the whole list. The first gentleman listed,
 21 for example, was Richard A. –
 22 A. Schoettger.
 23 Q. Schoet –
 24 A. Schoettger (pronouncing Shett-ger),
 25 Schoettger (pronouncing Shote-ger).

Page 401

15 (Pages 398 to 401)

1 Q. And he was from where?
2 A. Fish Pesticide Research Lab in Columbia,
3 Missouri.
4 Q. What was the next agency listed in
5 attendance?
6 A. Victor Lambou, Fresh Water Protection --
7 FWPCA, I forget, in Washington, D.C.
8 Q. Some water -- some federal water protection
9 agency?
10 A. Yes.
11 Q. The next individual?
12 A. David Stalling, Fish Pesticide Research Lab
13 in Columbia, Missouri.
14 Q. And then if you skip down, where was
15 J. Cameron MacLeod from?
16 A. Fisheries Research Board of Canada,
17 Freshwater Institute, Winnipeg.
18 Q. Turning to the next page, did we have
19 attendees from the Department of Fisheries and
20 Forestry in Winnipeg? Mr. Crowley or Cowley?
21 A. Oh, yes. Yes. Len J. Cowley, Department of
22 Fisheries and Forestry.
23 Q. And below him, the WARF Institute from
24 Madison, Wisconsin?
25 A. Yes.

Page 402

1 Q. Now, did Monsanto financially support the
2 work of that group on identification of PCBs in fish
3 and water?
4 A. Yes.
5 Q. Could you please read the next-to-last name?
6 A. I'm sorry.
7 Q. I'm sorry. On the page we were on.
8 A. On that list. All right.
9 Q. Mr. Dustman.
10 A. Mr. Dustman, Patuxent Wildlife Research
11 Center, Bureau of Sports Fisheries and Wildlife at
12 Laurel, Maryland.
13 Q. And then it appears we have representatives
14 from various state agencies, including from Michigan,
15 Rhode Island, University of Wisconsin, and a number of
16 states?
17 A. Yes.
18 Q. Did Monsanto make a presentation at this
19 Duluth meeting, Mr. Papageorge?
20 A. I think I spoke there.
21 MR. SHAW: Five minutes of video tape
22 remain.
23 MS. RUTTER: Okay.
24 Q. Could you please turn to Exhibit No. 45,
25 Mr. Papageorge, and could you identify this generally

Page 403

1 for the record, please?
2 A. This is a Technical Bulletin published by
3 Monsanto relating to Aroclors used as plasticizers.
4 Q. And if you'll turn to the next-to-last page
5 of that document, what's the date on it?
6 A. March '70.
7 Q. Now, could you please turn to the page that's
8 Bates labeled 856 of this March 1970 -- March 1970
9 bulletin, M-45. It's 856 at the bottom.
10 A. There.
11 Q. And could you please read into the record the
12 "Environmental Hazards" paragraph that's in this March
13 1970 Aroclor Plasticizers Technical Bulletin?
14 A. It's entitled "Environmental Hazards".
15 "Aroclor 1232, Aroclor 1242, Aroclor 1248, Aroclor
16 1254, Aroclor 1260, Aroclor 1262, Aroclor 1268,
17 Aroclor 4465, and Montar 1 all contain polychlorinated
18 biphenyls (PCB) of various types and in varying
19 amounts. PCB residues in small amounts have been
20 found in the environment and some studies have
21 indicated that they may be harmful to certain forms of
22 animal life. Extreme care should therefore be taken
23 by all users of PCB-containing products to prevent any
24 entry into the environment through spills, leakage,
25 use, disposal, vaporization or otherwise. Further,

Page 404

1 the products in which PCB materials are used, or which
2 are formulated using PCB materials as a component,
3 should be given careful study to eliminate the
4 possibility that PCB might reach the environment as a
5 result of use in a given application.
6 Some specific applications where the use
7 of PCB should definitely be avoided are in paints and
8 sealants for swimming pools, paints and waterproofing
9 agents in silos and other buildings where food
10 products for humans or animals are stored, and as a
11 component of any container or wrapping used in the
12 packaging of food products."
13 Q. And to whom was this Aroclor Plasticizer
14 Technical Bulletin, dated March 1970, Exhibit M-45,
15 distributed by Monsanto?
16 A. The customers or users.
17 MS. RUTTER: This would probably be a good
18 time to stop.
19 MR. SHAW: This will end tape number two
20 in the continued deposition of William Papageorge. We
21 are off the record at 11:39 a.m.
22 (Reporter marked Defendant's Exhibit
23 Notebook D for identification.)
24 (Whereupon, there was a brief recess.)
25 MR. SHAW: We are back on the record at

Page 405

16 (Pages 402 to 405)

1 11:46 a.m. This will begin tape number three in the
2 continued deposition of William Papageorge.
3 Q. For the record, we have just had marked out
4 of sequence in response to one of Plaintiffs'
5 counsel's previous objections a notebook that we are
6 calling Notebook D, and it has in it tabs A through N
7 bearing various dates on the tabs.
8 And, Mr. Papageorge, could you please go
9 to the very first tab in Notebook D to the exhibit
10 that's marked M-88, and can you please identify this
11 document for the record?
12 A. This is a letter authored by Donald A. Olson,
13 Director of Sales, Functional Fluids Group, dated
14 February 9, 1970.
15 Q. And it appears to be the same letter as the
16 letter marked Exhibit M-42 in the notebook you just
17 looked at?
18 A. Yes.
19 Q. This letter has with it the distribution list
20 of the customers to which it was -- the letter was
21 mailed; is that correct?
22 MR. OAAS: I'm just going to object to the
23 form of the question because we're -- are we dealing
24 with -- Are we just dealing with -- Does the list just
25 refer to the functional fluid list?

Page 406

1 MS. RUTTER: The list attached to the
2 letter is the mailing list.
3 MR. OAAS: For the Functional Fluids Group
4 only.
5 MS. RUTTER: We'll look at the list.
6 MR. OAAS: All right.
7 BY MS. RUTTER:
8 Q. Mr. Papageorge, did Monsanto maintain copies
9 of the mailing lists to whom its customer warning
10 letters about PCBs were sent?
11 A. Yes.
12 Q. And is a copy of the mailing list for the
13 February 9th, 1970, Donald Olson letter attached to
14 Exhibit M-88?
15 A. Yes.
16 Q. Could you please turn to the page that's
17 Bates labeled 21 in that distribution list?
18 A. I have it.
19 MR. OAAS: That's MCL 000021?
20 MS. RUTTER: It is.
21 MR. OAAS: Okay.
22 Q. And in the third-to-last row in the middle,
23 can you please tell me to whom the distribution list
24 shows that this letter was sent, the February 9th,
25 1970, letter?

Page 407

1 A. It's Director of Purchases, Hercules,
2 Incorporated; Imperiar (sic.) Color Chemical and Paper
3 Department, Glens Falls, New York.
4 Q. Could you please turn to the page that's been
5 Bates labeled 23 in the notebook or on Exhibit M-88?
6 It's just a couple pages over. Do you have that page?
7 A. I do.
8 Q. And the fourth row from the bottom in the
9 middle, can you please read another customer to whom
10 the February 9th, 1970, warning letter was sent?
11 A. Director of Purchases, Koppers Company,
12 Incorporated, 750 Koppers Building, Pittsburgh,
13 Pennsylvania.
14 Q. Could you please turn now a number of pages
15 over on the mailing list to page 48, and in the very
16 top right-hand column read to me the first customer
17 listed on the distribution list as also having
18 received this February 9th, 1970, warning letter from
19 Monsanto?
20 A. Office of the President, Great Western Chem
21 Company, Incorporated, 860 Wharf Street, Richmond,
22 California.
23 Q. Thank you, Mr. Papageorge. Could you please
24 turn -- And there are a number of other customers on
25 this mailing list; is this correct?

Page 408

1 A. Oh, yes.
2 Q. Quite a few?
3 A. Many.
4 Q. We could count them up, but I didn't. Let's
5 turn to tab B since we are trying to wrap this up as
6 expeditiously as possible given all the documents we
7 have.
8 A. I have tab B.
9 Q. Okay. And you know tab B I think we already
10 covered in your prior notebook, so we'll skip to
11 tab C. And can you please identify the letter that's
12 under tab C?
13 A. Tab C?
14 Q. Yes. It should be dated April 29th, 1970.
15 A. It's a letter signed by W. E. Schalk,
16 Director of Sales, Plasticizers, and it's dated April
17 29, 1970, and mailed to Mr. W. C. McCall, President,
18 Great Western Chemical Company, 3720 North West Yeon
19 Avenue, Portland, Oregon, 97210.
20 Q. And for the record, that letter has been
21 labeled M-50; is that correct?
22 A. Correct.
23 Q. And was this April 29th, 1970, letter sent to
24 all of Monsanto's distributors?
25 A. Yes.

Page 409

17 (Pages 406 to 409)

1 Q. Let's go to tab D. Can you please identify
2 the two letters under tab D that have been labeled
3 respectively 52-A.1 and 52-A.2?
4 A. 52-A.1 is a letter dated May 11, 1970, signed
5 by W. E. Schalk, Director of Sales, Plasticizers, and
6 it's addressed to Mr. J. W. Sohrage, American Mineral
7 Spirits Company, 3100 South Meacham Road, Palatine,
8 Illinois, 60067.
9 Q. And to whom is the second letter, apparently
10 duplicate letter, other than the addressee that's been
11 marked 52-A.2 directed?
12 A. That letter is addressed to a Mr. Karl F.
13 Giloth, Vice President, Central Solvents and Chemicals
14 Company, 2540 West Fluornoy Street, Chicago, Illinois,
15 60612.
16 Q. And were American Mineral Spirits Company and
17 Central Solvents & Chemicals Company also plasticizer
18 distributors for Monsanto?
19 A. Yes.
20 Q. Mr. Papageorge, during the questioning by
21 Plaintiffs' counsel, he asked you a number of
22 questions about Plaintiff's Exhibit 56. Do you recall
23 generally this April 13th, 1970, memo and Plaintiffs'
24 counsel's questions about Exhibit 56?
25 A. Yes, I recall it.

Page 410

1 Q. Can you tell me looking at these letters to
2 some of Monsanto's plasticizer distributors dated May
3 1970, after this April 1970 memo that was Plaintiffs
4 56, whether these letters were sent to customers in
5 response to the information that Mr. Paton was
6 reporting to you in Exhibit 56?
7 A. Yes.
8 Q. And could you please read into the record not
9 the entire letter, but just the part that starts "By
10 now you will have been informed"?
11 A. "By now you will have informed your customers
12 of this possible environmental problem. Subsequent to
13 our earlier letter, other reports concerning PCBs have
14 been published. An examination of the PCB matter has
15 indicated that their use in certain applications may
16 be a source of the alleged environmental
17 contamination. For this reason, no sales or shipments
18 of the Aroclor 1200 series products for the following
19 applications will be made after June 1, 1970: shoe
20 polish, cleaning compounds, perfumes, catheters, dust
21 control agents, dental adhesives/molds, optical uses,
22 sprinkler systems, Christmas tree flame retardants."
23 Q. And then could you just read the next two
24 sentences?
25 A. "We are notifying direct customers using the

Page 411

1 above-mentioned products in these applications
2 immediately of this decision. As a distributor of
3 these products, it would seem appropriate that you
4 follow the same course of action. Our records show
5 the following products and applications being served
6 by you."
7 Q. And the exhibit itself will reflect what
8 those were. But the May 11th, 1970, letters, Exhibits
9 52.A.1 and 2 were Monsanto's response to the
10 information contained in Cumming Paton's memo dated
11 April 13th, 1970, that Plaintiffs' counsel asked you
12 about as Exhibit 56?
13 A. Yes.
14 MR. OAAS: Object to the form of the
15 question.
16 Q. Let's go to tab G, Mr. Papageorge.
17 A. Tab E?
18 Q. G as in --
19 A. Oh, G.
20 Q. -- Georgia. Who is the letter from and who
21 is the letter to and the date, please, Mr. Papageorge?
22 A. The letter is authored by A. W. Hempelmann,
23 Northwest Area Manager, Organic Division.
24 Q. Was he a Monsanto employee?
25 A. Yes. And it's addressed to Mr. Frank N.

Page 412

1 Youngman, Jr., Great Western Chemical Company, 3720
2 North West Yeon Avenue, Portland, Oregon, 97210, dated
3 July 31, 1970.
4 Q. And just looking at the first paragraph of
5 the letter, what is the general subject matter?
6 A. The general subject matter has to do with
7 polyester polyurethane coatings for exterior use.
8 Q. Could you just read that first paragraph into
9 the record, please?
10 A. I'm sorry?
11 Q. That first paragraph.
12 A. Oh, the first paragraph?
13 Q. Yes.
14 A. "Thanks for your letter of July 16, Frank,
15 requesting our recommendations for replacement of
16 Aroclor 1254 in cast or molded polyurethane parts and
17 in polyester coatings for exterior use."
18 Q. So it appears that Great Western Chemical
19 Company was contacting Monsanto in July 1970 to
20 discuss replacements for Aroclor 1254?
21 A. Yes.
22 MR. OAAS: Object to the form of that
23 question.
24 Q. Please turn to the next tab, tab H, and
25 identify that letter for the record, please.

Page 413

18 (Pages 410 to 413)

1 A. This is a Monsanto letter dated August 14,
2 1970, signed by Walter E. Schalk, Director of Sales,
3 Plasticizers.
4 Q. And, in general, does this letter discuss a
5 returned goods policy?
6 A. Yes.
7 Q. The gist of that policy was that if unopened
8 barrels of PCBs were returned within a certain time
9 period full credit would be given and Monsanto would
10 pay the freight?
11 A. Yes.
12 Q. Could you please turn to Exhibit M-60.1 and
13 tell me whether this August 14th, 1970, letter was
14 sent to Monsanto's distributors?
15 A. I'm sorry.
16 MR. OAAS: I'm going to object to the form
17 of the question on the basis of foundation.
18 A. Which reference did you refer to initially?
19 Oh, this?
20 Q. There.
21 A. Oh, there.
22 Q. Exhibit 60.1.
23 A. Okay. Yes. The answer is yes.
24 Q. Have you seen this May 9th, 1973, memo to
25 file about the mailing before?

Page 414

1 A. Yes.
2 Q. Now, please look at the next exhibit in this
3 grouping, which is called M-102. It's under the same
4 tab, but it has a different exhibit number on it.
5 A. I have it.
6 Q. What's the date of this letter, and who
7 signed it?
8 A. The date is August 14, 1970, and it's signed
9 by Walter E. Schalk.
10 Q. Could you please read the last paragraph of
11 that letter into the record?
12 A. Monsanto -- No. The last?
13 Q. Oh, I'm sorry. On the first page. The last
14 paragraph of the first page.
15 A. "It was recently brought to our attention
16 that the Food and Drug Administration has apparently
17 established guidelines setting forth suggested maximum
18 levels of PCBs allowable in certain foods. These
19 levels, as we understand them, are five parts per
20 million in fish and 0.2 parts per million in milk.
21 Monsanto, therefore, strongly recommends that PCBs not
22 be used in applications which could lead, either
23 directly or indirectly, to the contamination of food
24 and water supplies for humans or animals. Examples of
25 applications which would seem particularly hazardous

Page 415

1 would be coatings for water treatment facilities,
2 coatings for food handling equipment, and coatings for
3 such farm items as silos and feed hoppers."
4 Q. Can you please look at the page Bates labeled
5 MCL 416, Mr. Papageorge, and tell me whether this is
6 the mailing list for the August 14th letter, 1970,
7 letter, in 102?
8 MR. OAAS: I'm going to object as to
9 foundation.
10 A. Yes.
11 Q. Let's just read into the record some of the
12 names of the types of customers who received the
13 August 14th, 1970, letter Bates labelled M-102.
14 MR. OAAS: Well, I'm going to object to
15 the form of that question as to foundation, and I'm
16 going to object to counsel's phrasing the question in
17 that these customers actually received this letter
18 when the actual exhibit doesn't contain any indication
19 that it was mailed or received by anybody on that
20 list.
21 Q. Mr. Papageorge, subject to counsel's
22 objections, you've identified the exhibit marked 102.1
23 as the mailing list for the letter that's in Exhibit
24 102; is that correct?
25 A. Yes.

Page 416

1 Q. Could you please read name number three on
2 the list? `.
3 MR. OAAS: I have the same objection to
4 that question.
5 A. Adelphi Paint & Color Works, Incorporated.
6 Q. Number seven?
7 A. Allied Paint Manufacturing Company.
8 Q. Number nine?
9 A. Amchem Products, Incorporated, Benjamin
10 Foster Division.
11 Q. Let's turn to the next page, number 13.
12 A. American Lacquer & Solvent Company.
13 Q. Let's turn to page 420, number 59.
14 A. Columbia Paint & Varnish Company.
15 MR. OAAS: I just want to object to the
16 form of that question and any implication in that
17 question that customer number 59 is the same Columbia
18 Paint Company that's the defendant in this lawsuit.
19 Q. My next question, for the record, to make
20 sure that he had read completely what was in here, is
21 please read the address for that particular Columbia
22 Paint & Varnish Company.
23 A. 452 Communipaw Avenue, Jersey City, New
24 Jersey, 07304.
25 Q. Turning the page, number 70.

Page 417

19 (Pages 414 to 417)

1	A. Davis Paint Manufacturers Company.	1	Washington.
2	MR. OAAS: I didn't mean to interrupt you,	2	Q. Could you please just read the first
3	Mr. Papageorge. I just want the record to reflect	3	paragraph of this memo into the record?
4	that I have the same objections to any questions in	4	A. "Attached is Return Material Notice covering
5	reference to this exhibit.	5	10-600 pound drums Aroclor 1254, which was returned
6	MS. RUTTER: We just have a few more.	6	12-30-70 by subject firm to the Krummrich Plant as
7	MR. OAAS: Okay.	7	indicated by copy of B/L attached."
8	Q. Number 74, please, Mr. Papageorge.	8	Q. And then could you please read the second
9	A. De Soto, Incorporated, Chemical Coatings	9	paragraph?
10	Division.	10	A. "This is one of our discontinued Aroclors and
11	Q. Number 95, please.	11	in line with our policy, since it was returned prior
12	A. Ford Paint & Varnish Company.	12	to December 31, 1970, the customer is to be given full
13	Q. If you'll turn the page, number 117 and 118.	13	credit."
14	A. Glidden Durkee Division of SCM. Glidden	14	Q. Could you please turn to tab L in Notebook D?
15	Durkee.	15	And could you please identify this document for the
16	Q. Number 122.	16	record by author, addressee, and date?
17	A. Sherwin Williams Company.	17	A. The author is W. E. Schalk. The date's
18	Q. And then number 123, 124, and 125.	18	September 27, 1971, and it's addressed to Mr. Ernest
19	A. Great Western Chemical Company.	19	McCall, Great Western Chemical Company, 6900 Fox
20	Q. And in what city was that one sent?	20	Avenue, Seattle, Washington, 98108.
21	A. Richmond, California.	21	Q. And is the general subject matter of this
22	Q. 124?	22	letter again PCBs?
23	A. Great Western Chemical Company, Portland,	23	A. Yes.
24	Oregon.	24	Q. I inadvertently skipped one letter. Could
25	Q. 125.	25	you please go to tab E as in empty?
Page 418		Page 420	
1	A. Great Western Chemical Company, Seattle,	1	A. Did you say E?
2	Washington.	2	Q. E as in Evelyn.
3	Q. Let's turn to the next page. Number 142.	3	A. I have it.
4	A. Jordan Paint Company.	4	Q. Who is the author of the letter, who is the
5	Q. Number 149.	5	addressee, and what's the date on the letter, please?
6	A. Kohler McLister Paint Company.	6	A. The author is W. E. Schalk, Director of
7	Q. And then numbers 150 through 153.	7	Sales, Plasticizers. The addressee is Mr. W. C.
8	A. Koppers Company, Incorporated, Richmond,	8	McCall, President, Great Western Chemical Company,
9	California; Koppers Company, Incorporated, Newark, New	9	3720 North West Yeon Avenue, Portland, Oregon, 97210,
10	Jersey; Koppers Company, Westfield, New Jersey;	10	and it's dated May 25, 1970.
11	Koppers Company, Pittsburgh, Pennsylvania.	11	Q. Could you please turn to the second page of
12	Q. And we could go on and on, but for the sake	12	this letter and read the first paragraph into the
13	of shortening things up a bit, if you could turn to	13	record?
14	433, customer number 205.	14	A. "In review of the allegations which have been
15	A. Sherwin Williams Company.	15	made concerning PCBs, and being a concerned and
16	Q. And that's of Cleveland, Ohio?	16	responsible member of the world community, we have
17	A. Yes.	17	come to a decision to discontinue the sale of the
18	Q. Mr. Papageorge, can you please turn to tab J	18	above PCB-containing products for modifier and
19	in Notebook D? And could you please identify this	19	plasticizer applications effective August 30, 1970."
20	memo by author and date? Author, date, and subject.	20	Q. And is Exhibit M-53 that you just read from a
21	A. The author is Francis Stupfell.	21	letter that Monsanto sent to its plasticizer
22	Q. And by whom is he employed?	22	distributor customers, including Great Western, on or
23	A. Monsanto. Dated January 4, 1971.	23	about May 25th, 1970?
24	Q. And what is the subject matter?	24	A. Yes.
25	A. Great Western Chemical Company, Seattle,	25	Q. Mr. Papageorge, let me hand you what's been
Page 419		Page 421	

20 (Pages 418 to 421)

1 marked as Exhibit M-48.
 2 MS. RUTTER: Mr. Oaas, it's in your second
 3 notebook.
 4 Q. Can you please identify Exhibit M-48 for the
 5 record, Mr. Papageorge?
 6 A. These reflect minutes of meeting of the
 7 Corporate Management Committee, April 20, 1970.
 8 Q. And that's the Corporate Management Committee
 9 of Monsanto Company?
 10 A. Yes.
 11 Q. If you'll turn to the second page, can you
 12 tell us, please, Mr. Papageorge, were you among the
 13 attendees at that meeting?
 14 A. Yes.
 15 Q. And these are minutes that you saw after that
 16 meeting concluded?
 17 A. Yes.
 18 Q. Could you please read the last paragraph on
 19 the second page starting "division"?
 20 A. "Division has maintained an aggressive
 21 program of customer education, and cooperative efforts
 22 with research organizations, governmental agencies and
 23 wildfire groups to identify the scope of the problem,
 24 eliminate discharges, improve analytical methods, and
 25 conduct toxicity studies."

Page 422

1 Q. Could you please read just the next two
 2 essentially bullet points that are carry-over on the
 3 next page?
 4 A. "Concerned agencies and groups are
 5 appreciative of our efforts. FDA indicated it was
 6 contemplating a residue level of 0.5 ppm in milk and
 7 5.0 ppm in food."
 8 Q. And then could you skip down to conclusions,
 9 please, and read the first paragraph starting "the
 10 committee"?
 11 A. "The Committee felt that while the division
 12 had taken major steps to resolve this problem, more
 13 affirmative action must be taken. A replacement
 14 product should be developed on a crash basis for the
 15 NCR application."
 16 Q. And then if you could just read the first
 17 sentence in the next paragraph.
 18 A. "It was decided that the affirmative action
 19 being taken should be communicated to concerned
 20 governmental agencies together with the reasons for
 21 continuing sales to the limited uses which would
 22 involve major public hardships if immediately
 23 discontinued."
 24 Q. Let me hand you what's been marked as
 25 Exhibit M-52 and ask if you can identify that for the

Page 423

1 record.
 2 MS. RUTTER: And, again, Mr. Oaas, that's
 3 in your notebook.
 4 A. Minutes of Meeting of the Corporate
 5 Management Committee, May 11, 1970.
 6 Q. And, again, that's the Corporate Management
 7 Committee of Monsanto Company?
 8 A. Yes.
 9 Q. Did you see these minutes in May 1970 shortly
 10 after they were prepared?
 11 A. Yes.
 12 Q. Could you please summarize the mandates that
 13 were given by the committee as a result of this
 14 May 11th, 1970, Corporate Management Committee meeting
 15 of Monsanto? The first action item is to discontinue
 16 sale of Aroclor 1242 to NCR; is that correct?
 17 A. Yes.
 18 MR. OAAS: I'm going to object to the form
 19 of the question.
 20 MS. RUTTER: Okay.
 21 MR. OAAS: You didn't give him an
 22 answer -- a chance to answer that other question, or
 23 was that --
 24 MS. RUTTER: I'm --
 25 MR. OAAS: Okay.

Page 424

1 MS. RUTTER: I'm just -- I'm very
 2 cognizant of our time --
 3 MR. OAAS: All right.
 4 MS. RUTTER: -- limitations here.
 5 BY MS. RUTTER:
 6 Q. Mr. Papageorge, could you please describe in
 7 your own words or quoting from the document, as
 8 appropriate, the action plan set out in these
 9 May 11th, 1970, Corporate Management Committee
 10 minutes?
 11 A. Well, it was discontinue the sale of Aroclor
 12 1242 to -- to NCR.
 13 Q. And what was the NCR application?
 14 A. This was the use in ink in copying machines.
 15 The other, you referred to them as mandates, close the
 16 loop on heat transfer applications where fire
 17 resistance is vital and replace with alternates in
 18 other cases. Replace all nonbiodegradable chlorinated
 19 biphenyls in hydraulic applications.
 20 Q. So that's for Pydrauls?
 21 A. Yes.
 22 Q. And there is a time line set out in this
 23 memo?
 24 A. Yes.
 25 Q. And then what's the next point?

Page 425

21 (Pages 422 to 425)

1 A. "Close the loop on all nonbiodegradable
2 chlorinated biphenyls in transformer applications."
3 Q. And what's the completion date on that?
4 A. August 1970.
5 Q. And what did that mean?
6 A. That was interpreted as meaning if you
7 continue using it, make sure that none of the material
8 gets into the environment.
9 Q. And was that an action item for Monsanto to
10 carry out in customer education?
11 A. Yes.
12 Q. What's the next action item?
13 A. "Close the loop on capacitors as far as
14 possible and replace 1242 with 1242B."
15 Q. And is 1242B the same thing as Aroclor 1016?
16 A. Yes.
17 Q. And you've testified about that previously?
18 A. Yes.
19 Q. That was a more biodegradable form of 1242?
20 A. Correct.
21 Q. And then the last action item?
22 A. "Terminate sales of all nonbiodegradable
23 chlorinated biphenyls to various uncontrollable end
24 uses. Complete by August 30, 1970."
25 Q. Did you meet that August 30, 1970, deadline?

Page 426

1 A. Yes.
2 Q. And, in fact, in the notebook you have in
3 front of you, under tab E, could you please look at
4 Exhibit M-53 under tab E?
5 A. Uh-huh. I have it.
6 Q. Okay. Is that the letter that Monsanto sent
7 to its customers shortly after this May 11th, 1970,
8 Corporate Management Committee meeting telling them
9 that Aroclors would be discontinued for plasticizer
10 applications effective August 30, 1970?
11 A. Well, this particular letter is addressed to
12 a distributor.
13 Q. Right.
14 A. And I don't know how that connects with the
15 previous question about sending it to its customers.
16 Q. Right. So we --
17 A. This is -- Oh, this is --
18 Q. This was the distributor letter.
19 A. Correct.
20 Q. Did a similar letter go to Monsanto's direct
21 customers?
22 A. Yes.
23 Q. And, in fact, is a copy of that letter right
24 behind Exhibit M-53 marked as Exhibit M-96?
25 A. Yes.

Page 427

1 Q. Let me hand you Exhibit M-62, Mr. Papageorge,
2 and ask you to please identify that for the record.
3 A. Minutes of the meeting of the Corporate
4 Management Committee, September 14, 1970.
5 Q. And the title of the -- at the bottom of the
6 page, "Organic Division"?
7 A. "Organic Division - PCB Status Report".
8 Q. Did you see copies of these minutes shortly
9 after they were prepared in September 1970?
10 A. Yes.
11 Q. Could you please turn to the conclusion
12 section on the last page of the letter and read that
13 into the record?
14 A. "The President commended the Division for the
15 excellent progress made on its program. The three
16 month's extension requested for phasing out of
17 products in hydraulic fluids was approved with the
18 caution that the Division continue to exert pressure
19 to move this program as fast as possible. Further
20 progress on the program should be reviewed with the
21 Committee in the first quarter of 1971."
22 Q. Let me hand you M-63 and ask you to identify
23 that for the record, please.
24 A. Minutes of the meeting of the Corporate
25 Management Committee on March 8, 1971.

Page 428

1 Q. And, once again, are these minutes of the
2 Corporate Management Committee of Monsanto Company
3 that you saw shortly after they were prepared on
4 March 8th, 1971?
5 A. They are.
6 Q. And could you please read the final paragraph
7 on the final page?
8 A. "The President commended the Division for the
9 excellent results attained in this program, but
10 cautioned that continuing surveillance is required to
11 keep it working in an effective manner."
12 Q. Mr. Papageorge, after terminating plasticizer
13 applications effective August 30th, 1970, and other
14 open uses, what PCB applications were still in use as
15 of early 1971 when Exhibit M-63, the CDC minutes from
16 March '71, was created?
17 A. The use in electrical equipment.
18 Q. That's transformers and capacitors?
19 A. Yes.
20 Q. Could you please go back to your Notebook B?
21 I'll hand it to you. I'll take your present notebook.
22 A. You want --
23 Q. Yes.
24 MS. RUTTER: Miss Russo, could you please
25 get that notebook? I'm afraid I'll lose my microphone

Page 429

22 (Pages 426 to 429)

1 otherwise. The videographer is pleased.
 2 Q. Could you please turn to Exhibit M-72 in
 3 Notebook B, Mr. Papageorge?
 4 A. 72?
 5 Q. Yes. Thank you. Can you please identify
 6 this document for the record?
 7 A. This is a report entitled "Polychlorinated
 8 Biphenyls and the Environment" developed by the
 9 Interdepartmental Task Force on PCBs in Washington,
 10 D.C., and it's dated May 1972.
 11 Q. Have you seen this document before?
 12 A. Yes.
 13 Q. Is it a document that you saw on or about the
 14 date it was published apparently in May 1972?
 15 A. Yes.
 16 Q. Could you please turn to the -- Let me start
 17 over. Could you please turn to the page that's Bates
 18 labeled 1013 at the bottom. The last two numbers will
 19 be 13.
 20 First of all, under the topic 12 where it
 21 says "Sponsoring Organization Names and Addresses,"
 22 can you tell me, please, who participated or who were
 23 the government agencies that were among those
 24 participating in the International (sic.) Task Force
 25 report?

Page 430

1 A. Gee, I hesitate because -- For example,
 2 Department of Agriculture is a government agency.
 3 Isn't this a listing of --
 4 Q. I must have asked a bad question. Let me
 5 start over. Who were the government agents --
 6 agencies who participated in the International (sic.)
 7 Task Force report?
 8 A. Department of Agriculture and Department of
 9 Commerce, the EPA and FDA.
 10 Q. Department of the Interior?
 11 A. Yes. Oh, you mean -- You want me to read
 12 those. Is that --
 13 Q. Well, I think you covered most of them. And
 14 then it says "plus other participating agencies"?
 15 A. That's why I put the FDA in there.
 16 Q. Right. And then where it says "Abstracts"?
 17 A. Yes.
 18 Q. Could you please read the first three
 19 sentences into the record?
 20 A. "This report is the product of a six-month
 21 review of the chemicals known as PCBs --
 22 polychlorinated biphenyls -- by five federal agencies
 23 with participation by other agencies. The
 24 Interdepartmental Task Force on PCBs had as its goal
 25 the coordination of the scientific efforts of the

Page 431

1 Government aimed at understanding PCBs and the
 2 strengthening of the Government's ability to protect
 3 the public from actual or potential hazards associated
 4 with them. The task force made nine findings,
 5 conclusions, and recommendations, primarily pointing
 6 out that PCBs should be restricted to essential or
 7 nonreplaceable uses which could minimize the
 8 likelihood of human exposure or leakage to the
 9 environment."
 10 Q. Mr. Papageorge, could you please turn to the
 11 page that's Bates labeled 1021 at the bottom? In the
 12 third paragraph from the top, in about the middle,
 13 there's a reference to a Quail Roost Conference on
 14 PCBs. Do you see that reference?
 15 A. I do.
 16 Q. Is that another PCB conference that you
 17 attended?
 18 A. Yes.
 19 Q. What were the -- Who else attended?
 20 A. I just don't remember them in detail. It
 21 just..
 22 Q. I have a document here that has the
 23 attendees, I believe, and I'll come to it in a minute.
 24 I was just trying to short circuit.
 25 A. Okay.

Page 432

1 Q. Was it a large attendance? Do you recall?
 2 If you don't, I'll show you a document later on.
 3 A. Well, it was more than a dozen people.
 4 Q. Could you please turn to the page that's
 5 Bates labeled 1023 at the bottom?
 6 A. I have it.
 7 Q. And I'm certainly not going to take the time
 8 to have you read all nine conclusions of the task
 9 force into the record, but could you please read
 10 conclusion number one?
 11 A. "PCBs should be restricted to essential or
 12 non-replaceable uses which involve minimal direct
 13 human exposure since they can have adverse effects on
 14 human health. There currently are no toxicology --
 15 toxicological or ecological data available to indicate
 16 that the levels of PCBs currently known to be in the
 17 environment constitute a threat to human health, but
 18 additional experiments are underway to evaluate the
 19 impact of low level, long-term exposure to PCBs."
 20 Q. And, Mr. Papageorge, could you please turn to
 21 point six on the page that's been labeled 1024? It's
 22 the next page. Conclusion number six. And just read
 23 the first paragraph there.
 24 A. "Their continued use for transformers and
 25 capacitors -- Let me back off. Let me start again.

Page 433

23 (Pages 430 to 433)

1 "The use of PCBs should not be banned entirely. Their
2 continued use for transformers and capacitors in the
3 near future is considered necessary because of the
4 significantly increased risk of fire and explosions
5 and the disruption of electrical service which would
6 result from a ban on PCB use. Also, continued use of
7 PCBs in transformers and capacitors presents a minimal
8 risk of environmental contamination. The Monsanto
9 Company, the sole domestic producer, has reported
10 voluntarily eliminating its distribution of PCBs to
11 all except manufacturers of electrical transformers
12 and capacitors."

13 Q. When did Monsanto discontinue the use of --
14 the manufacture and sale of PCBs?

15 A. '77. 1977.

16 Q. And do you remember an exhibit that
17 Plaintiffs' counsel asked you questions about
18 involving a meeting between Russell Train of the EPA
19 and Monsanto and the electrical manufacturers?

20 A. I do.

21 Q. Do you remember approximately when that
22 meeting occurred? I could find the document in a
23 minute, so you don't need to speculate.

24 MR. OAAS: I'll stipulate it took place in
25 1975 if it would speed things up.

Page 434

1 A. '75. I was going to say 1975-ish.

2 Q. Okay. You personally participated in that
3 meeting?

4 A. I was there, yes.

5 Q. Who was there for General Electric?

6 A. About -- About three individuals. I remember
7 Mr. Welsh particularly.

8 Q. Is that Jack Welsh?

9 A. Jack Welsh.

10 Q. He wasn't then at the level of the company
11 that he later attained?

12 A. No. He -- That was I think his -- what I'm
13 going to call his entry job into GE.

14 Q. And who was Monsanto's vice president who
15 appeared at that meeting?

16 A. Fitzgerald.

17 Q. You knew him personally?

18 A. Yes.

19 Q. You were there with him?

20 A. Yes.

21 Q. And what was the substance of
22 Mr. Fitzgerald's remarks at that meeting?

23 MR. OAAS: Well, I'm going to object to
24 the form of that question. It calls for hearsay.

25 Q. What was the message that Mr. Fitzgerald

Page 435

1 delivered to the capacitor and transformer
2 manufacturers --

3 MR. OAAS: Same objection.

4 Q. -- at this meeting?

5 MR. OAAS: Same objection as a disguised
6 hearsay question. Same objection. Foundation,
7 hearsay.

8 A. In essence, it was one of we will fully
9 cooperate with the users of these electrical --
10 dielectric liquids, and it was up to them to decide
11 what replacements could be found for that use and when
12 it could be effective.

13 Q. And in light of Plaintiffs' counsel's
14 objection, could you please turn to the exhibit that's
15 been marked M-74 in that notebook?

16 A. 74?

17 Q. Yes.

18 MR. SHAW: Four minutes of tape remaining.

19 MR. OAAS: Excuse me. I misspoke. The
20 meeting was in '76.

21 MS. RUTTER: I'm going to find your
22 exhibit in a minute.

23 BY MS. RUTTER:

24 Q. Mr. Papageorge, let me -- Don't lose your
25 place because I'm going to come back to Exhibit 74.

Page 436

1 Let me hand you Plaintiff's Exhibit 50 that

2 Plaintiffs' counsel previously asked you questions
3 about. And can you please read the date of this
4 document?

5 A. The date of the document is December 22,
6 1975.

7 Q. And on the second page of the letter, who
8 sent the document to Monsanto?

9 A. Russell E. Train, Administrator, EPA.

10 Q. And did this letter lead to a meeting between
11 EPA, Monsanto, and the transformer and capacitor
12 manufacturers?

13 A. Yes.

14 Q. And was that meeting in early 1976?

15 A. Yes.

16 Q. And if you'll look at Exhibit M-74, can you
17 please identify that document for the record?

18 A. This is a letter signed by Mike Petrilli,
19 Industry Sales Specialist, Functional Products, dated
20 January 26th, 1976.

21 Q. And could you please read the first sentence?

22 A. "Enclosed is a copy of the remarks made by
23 Jack Fitzgerald, our Managing Director, to the EPA
24 meeting on January 14, 1976. This statement is
25 prepared as a press release and issued to the media on

Page 437

24 (Pages 434 to 437)

1 January 22, 1976. A copy of that press release is
2 attached."
3 Q. And then if you could turn to the next
4 document, M-74.1, is that the distribution list for
5 this January 26th, 1976, letter?
6 A. Yes.
7 Q. Could you please turn to Exhibit M-74.2, and
8 identify that for the record?
9 MR. OAAS: What was that exhibit number?
10 MS. RUTTER: M-74.2. It's under the M-74
11 tab. There you have it.
12 A. I have it.
13 Q. Can you identify that document for the
14 record, please?
15 A. Yes. It's a -- It's a news release developed
16 by Dan R. Bishop of Monsanto Industrial Chemicals
17 Company, dated January 26th, 1976.
18 Q. You know Mr. Bishop?
19 A. I knew him, yes. I know him.
20 Q. You knew him at the time?
21 A. Uh-huh.
22 Q. And you saw this press release --
23 A. Yes.
24 Q. -- at or near the time to its release?
25 A. Yes.

Page 438

1 Q. Could you please --
2 MR. SHAW: Counsel, I beg your pardon.
3 We're about ready to lose testimony.
4 MS. RUTTER: Okay.
5 MR. SHAW: This will end tape number three
6 in the continued deposition of William Papageorge. We
7 are off the record at 12:47 p.m.
8 (Whereupon, there was a lunch recess.)
9 MR. SHAW: We are back on the record at
10 1:27 p.m. This will begin tape number four in the
11 continued deposition of William Papageorge.
12 BY MS. RUTTER:
13 Q. Good afternoon, Mr. Papageorge.
14 A. Good afternoon.
15 Q. We're back from a short break. The tape --
16 The video tape ran out in the middle of our discussion
17 of the press release dated January 26th, 1976,
18 Exhibit M-74.2, that you had kindly identified for the
19 record. Could you please turn to the middle paragraph
20 and read the paragraph into the record? Or actually
21 let's read the first two paragraphs into the record.
22 A. The first two?
23 Q. The first two.
24 MR. OAAS: I'm going to object to the use
25 of this exhibit on relevancy.

Page 439

1 A. "Monsanto Company today announced that it has
2 informed its U.S. capacitor and transformer industry
3 customers and the U.S. Environment Protection Agency
4 that it intends to eventually phase out the production
5 of polychlorinated biphenyl (PCB) dielectric
6 insulating fluids. Dielectric fluids are
7 non-conductors of direct electrical current and are
8 necessary ingredients in most power generating
9 equipment.
10 In making the announcement, F. J.
11 Fitzgerald, a corporate vice president and managing
12 director of Monsanto Industrial Chemicals Company,
13 said it is too early to put an exact timetable on the
14 phase-out but that it would be in a planned and
15 orderly manner. Mr. Fitzgerald added, 'As soon as we
16 are satisfied that the electrical power supply
17 industry's needs for usable, acceptable alternative
18 dielectric fluids have been met, by whomever, Monsanto
19 will voluntarily shut down its own PCB manufacturing
20 unit.'
21 Q. Mr. Papageorge, when Monsanto ceased the
22 manufacture and sale of PCBs in 1977, were there any
23 laws that required them to do so at that time?
24 A. No.
25 Q. Could you please turn to the very first

Page 440

1 exhibit in the very first notebook and could you
2 identify that memo for the record, please?
3 A. This exhibit is dated May 1982 entitled "PCB
4 Production History Fact Sheet".
5 Q. And it's on Monsanto letterhead?
6 A. Yes.
7 Q. And if you'll turn to the last page of the
8 Exhibit M-1, who is the contact in relation to this
9 fact sheet?
10 A. Larry O'Neill, Environmental Communications
11 Manager, Monsanto Company.
12 Q. Could you please turn to page two of the memo
13 and look at the paragraph near the top that says "1970
14 to '72"?
15 A. I see it.
16 Q. Could you please read that into the record?
17 From 1970 to 1972.
18 MR. OAAS: Objection.
19 A. "Monsanto" --
20 MR. OAAS: Just object to the form of the
21 question as to foundation.
22 A. "Monsanto phased out sales of PCBs for 'open
23 applications' that could lead to environmental
24 releases. These uses, which reduced the company's PCB
25 sales by 64 percent, included heat-transfer fluids,

Page 441

25 (Pages 438 to 441)

1 hydraulic fluids, plasticizer applications, and
2 miscellaneous uses."
3 Q. Thank you, Mr. Papageorge. And in May 1982,
4 when this PCB Production History Fact Sheet was
5 created, you were an employee of Monsanto Company at
6 that time; were you not?
7 A. What date is that? May?
8 Q. May '82.
9 A. Yes.
10 Q. And in 1970 to 1972, the facts that you just
11 read into the record, you were intimately involved
12 with that phase-out; were you not?
13 A. Yes.
14 Q. While we're in this notebook, let's look
15 quickly at Exhibit M-30, please. It's towards the
16 back. Could you please identify for the record
17 Exhibit M-30 by the author, the date and the general
18 subject matter of the publication? Or of the letter,
19 excuse me.
20 A. The author is Elmer P. Wheeler, Manager,
21 Environmental Health, with Monsanto Company, and the
22 date is March 3rd, 1969.
23 Q. And what was the gist of what Mr. Wheeler was
24 communicating in this letter?
25 A. This is in response to an article that

Page 442

1 appeared in the "San Francisco Chronicle," which
2 described some research work done by Dr. Robert
3 Risebrough of the University of California.
4 Q. What category of customers was this letter
5 sent to?
6 A. It would have to be -- It had to be the uses
7 that lead to open exposure to the environment.
8 Q. I believe we have the -- we have the actual
9 customer distribution list in another notebook, but
10 regardless of the audience, it was -- was this a
11 letter dated March 3rd, 1969, to Monsanto customers
12 advising them of the developing PCB issue?
13 MR. OAAS: Objection.
14 A. Yes.
15 MR. OAAS: Objection as to foundation.
16 Q. And, Mr. Papageorge, when you started in your
17 job as Manager of Environmental Control on
18 January 2nd, 1970, at Monsanto headquarters, is this
19 letter, March 3rd, 1969, Exhibit M-30, a letter that
20 you saw shortly after you started your new job?
21 A. Yes.
22 Q. And you knew Mr. Elmer Wheeler, the author of
23 the letter, personally?
24 A. Yes.
25 Q. Do you know if Mr. Wheeler is living or dead?

Page 443

1 A. I think he's deceased.
2 Q. What about Dr. Robert Emmet Kelly?
3 A. Oh, he's deceased, yes.
4 Q. Let's look at Exhibit M-36 in the same
5 notebook, please. Could you please just read the top
6 portion of the memo into the record?
7 A. Are you referring to the handwritten notes
8 or --
9 Q. Yes.
10 A. -- the typed?
11 Q. The handwritten -- Both the handwritten notes
12 and the typed part that says "Rough Draft".
13 A. The notes say, "Notes from trip of European
14 trip, dictated by R. E. Keller". It's a rough draft
15 dated June 12, '69.
16 Q. And, again, Dr. Keller was an analytical
17 chemist with Monsanto?
18 A. Yes.
19 Q. Dr. Tucker, Dr. Scott Tucker, worked for
20 Dr. Keller?
21 A. Yes.
22 Q. And if you would please turn to page 34754.
23 It's the marking at the bottom, ends in 754.
24 A. I have it.
25 Q. Do you see the marking halfway down that says

Page 444

1 "May 5th"?
2 A. I do.
3 Q. And can you tell me, please, what the first
4 sentence of that entry indicates that Messrs. Keller,
5 Wheeler, and Digby of Monsanto and Richard of Monsanto
6 were doing on May 5th of 1970? I'm sorry. Of 1969.
7 A. They were meeting with Dr. Widmark, the
8 Swedish scientist.
9 Q. So this was another meeting between Monsanto
10 and the Swedish scientist who originally made the
11 announcement of biphenols or biphenyls in the
12 environment?
13 A. Yes.
14 Q. You yourself personally met with Mr. Widmark
15 and -- or Dr. Widmark in 1970, Mr. Papageorge?
16 A. Yes.
17 Q. Could you please turn to the page labeled
18 34757? It says "10" at the top.
19 A. I have it.
20 Q. And do you see the sentence that says "when
21 asked what he would do"?
22 A. I see it.
23 MR. OAAS: Wait. Can you identify where
24 you're at?
25 MS. RUTTER: Yes. I'm on page 10 in the

Page 445

26 (Pages 442 to 445)

1 document. I'm on Bates label MONS 34757.
2 MR. OAAS: I'm on the page, but what line
3 are you on?
4 MS. RUTTER: It's like the second line
5 from the top. "When asked what he would do..."
6 MR. OAAS: Okay.
7 Q. Could you please read that sentence and then
8 the three points after that sentence into the record,
9 Mr. Papageorge?
10 A. "When asked what he would do, if he were in a
11 manufacturer's position involving PCBs, Widmark
12 commented as follows: One, restrict PCBs to closed
13 systems. Two, find a substitute for PCB. Three, come
14 up with a positive analytical data so that
15 biologists/ecologists cannot misuse it."
16 Q. And with respect to points one and three, did
17 Monsanto, in fact, do both of those items?
18 A. Yes.
19 Q. And with respect to item two, where it was
20 possible to find a substitute for PCBs that didn't
21 create additional issues or problems, did Monsanto do
22 that?
23 A. Yes.
24 Q. But in some instances Monsanto was unable to
25 find a substitute?

Page 446

1 A. That's true.
2 Q. And it was the manufacturers of the
3 capacitors and the transformers who took the lead in
4 trying to develop the substitute products that met
5 their particular industry needs?
6 MR. OAAS: Object to the form of the
7 question.
8 A. Yes.
9 Q. Let's turn to Exhibit M-51 in the next
10 notebook, please. That's the bigger notebook,
11 Notebook B.
12 A. What number was that again?
13 Q. 51.
14 A. 51. I have it.
15 Q. Mr. Papageorge, at some point in time, did
16 Monsanto start applying environmental warning labels
17 to the containers of PCBs that it was selling?
18 A. Yes.
19 Q. And does this memo refresh your recollection
20 about the time period when the process of developing
21 that environmental warning label began?
22 A. Yes.
23 Q. And is this -- Could you please identify
24 Exhibit M-51 for the record, the author, the
25 recipients and the date?

Page 447

1 A. I am the author, and the recipients were
2 members of Monsanto's Research Department, they were
3 members of the -- Monsanto's Medical Department, and
4 Monsanto's Marketing Department.
5 Q. And the date of this memo that you prepared
6 is?
7 A. April 13, 1970.
8 Q. And that's your signature that appears on
9 this memo?
10 A. Yes.
11 Q. And were you in this memo proposing an
12 environmental stick-on label before the permanent
13 labels could be printed?
14 A. Yes.
15 Q. And could you please read into the record
16 what the environmental stick-on label that was being
17 developed in April of 1970 was going to say?
18 A. "This product contains polychlorinated
19 biphenyls, which some studies have shown to be an
20 environmental contaminant. Care should be taken to
21 prevent any loss into the environment through spills,
22 leakage, disposal, evaporation or otherwise."
23 Q. To speed things up here, we're not going to
24 go through every document under tab 51, but can you
25 please find the document that ends in 8633? And it's

Page 448

1 got a tab on it that's 51.4. And for the record, to
2 help you find it, it's an Aroclor 1232 label. I think
3 you're there. It's the document in front of that one.
4 Mr. Papageorge, can you tell us whether
5 Exhibit M-51.4 off to the left-hand side of that
6 label, does that show the environmental stick-on label
7 that was developed?
8 A. Yes.
9 Q. And that was intended to be used -- How was
10 that label intended to be used?
11 A. To be put on labels already affixed to a
12 container, and this was additional information that
13 was added.
14 Q. And so if you could turn -- Can you please
15 find the Aroclor 1254 label that bears Bates label
16 8635? Can you tell us, please, whether the "Caution -
17 Contains Chlorinated Hydrocarbons"? Do you see where
18 I am? All right. The "Caution - Contains Chlorinated
19 Hydrocarbons" portion of this label, for how many
20 years had Monsanto been printing labels that had that
21 particular warning or safe handling information on it?
22 A. Ooh, that I don't know. It's --
23 Q. That -- That was under the auspices of
24 Dr. Kelly in the Medical Department?
25 A. Yes. Back when it was originated, and it's

Page 449

27 (Pages 446 to 449)

1 been on for so long that it -- I don't know when it
2 started.
3 Q. That's what I was trying to elicit. It was a
4 long-standing --
5 A. Yes.
6 Q. -- caution that was on Monsanto's --
7 A. Oh, yes.
8 Q. -- Aroclor labels?
9 A. Uh-huh.
10 Q. And members of Monsanto's Medical Department
11 likely would have documents or testimony about when
12 that label was first established?
13 A. Correct.
14 Q. In fact, I think Plaintiffs' counsel himself
15 may have used an exhibit when he questioned you that
16 was back in the 1930s.
17 But, in any event, the environmental
18 warning label that is shown on the Aroclor 1254 label
19 that's Bates labeled ending 8635, that was being newly
20 developed and added in the April/May 1970 time period?
21 A. Yes.
22 Q. Could you please turn to Exhibit M-71,
23 Mr. Papageorge?
24 A. I see it.
25 Q. And what's the date of the memo, and what

Page 450

1 does it state on its face as the source of information
2 in the memo?
3 A. The date is October 13, 1976. It's a memo to
4 the file by Mr. G. F. Barton.
5 Q. And could you please read the section that
6 says "information obtained"?
7 A. "Information obtained from Bill Papageorge
8 and David Wood, October 5, 1976."
9 Q. Could you please read the next-to-last
10 sentence of the memo, the one that starts "PCBs were
11 produced"?
12 A. "PCBs were produced at the Anniston plant
13 from 1929 to April 1972."
14 Q. And did Monsanto stop producing PCBs at
15 Anniston in 1972 because it had ceased PCB sales to
16 open uses and no longer had the need of the facility?
17 A. Yes.
18 Q. Let's turn to M-69. You'll need to go back a
19 couple of spaces. This was the Quail Roost Conference
20 that we were discussing, Mr. Papageorge, where you
21 remembered attendees but not how many. Can you please
22 identify for the record Exhibit M-69, the date and
23 what it purports to be?
24 A. The dates are December 20-21, 1971. It's a
25 list of attendees to a PCB meeting at Quail Roost

Page 451

1 Conference Center.
2 Q. And you are one of the attendees?
3 A. I attended, but I'm looking for a listing.
4 Q. It's alphabetical. You're on page 8669.
5 A. I see it, yes. Uh-huh.
6 Q. And just by looking at the first entry on the
7 first page, "Los Angeles Times," the press attended
8 this meeting --
9 A. Yes.
10 Q. -- at Quail Roost? Now, the subject matter
11 of this meeting was what generally?
12 A. Generally, it's an overall review of the PCB
13 issue as it existed in 1971, the end of '71.
14 Q. And this attendance list shows, does it not,
15 a large number of governmental agencies and state and
16 federal research institutes in attendance?
17 A. Yes. Yes.
18 Q. I'm going to quickly label a Notebook C, but
19 everyone will be happy to learn that I'm not going to
20 use very many of the documents in it.
21 MS. RUTTER: Miss Russo, do you know where
22 our additional copies of this notebook are?
23 And, Miss Olliges, could you please mark
24 this as Papageorge Notebook C since, as I said before,
25 I marked one notebook out of sequence.

Page 452

1 MR. OAAS: We won't hold it against you.
2 MS. RUTTER: Thank you.
3 (Reporter marked Defendant's Exhibit
4 Notebook C for identification.)
5 Q. Mr. Papageorge, the first document in this
6 notebook that I want to call your attention to is
7 M-79, and it is under the tab that says "1970" on it.
8 Oh, sorry. We switched notebooks on you here. Don't
9 put that one away yet.
10 Mr. Papageorge, could you please identify
11 the document that's been labeled M-79.3 in this
12 Notebook C?
13 A. It's a -- It's a letter with a Montana State
14 University heading signed by Frederick A. Beland,
15 dated 27th of March, 1970, and addressed to Monsanto
16 Chemical Company, Research & Engineering Division, in
17 Dayton, Ohio.
18 Q. And could you please read just the first
19 sentence of that letter into the record?
20 A. "I plan" --
21 MR. OAAS: Object to the form of the
22 question.
23 A. -- "to begin electron capture gas
24 chromatographic studies on polychlorinated biphenyls
25 and would appreciate it if you would provide me with

Page 453

28 (Pages 450 to 453)

1 samples of Aroclor 1254 and 62."
2 Q. And then could you please turn to the next
3 document in sequence, which ends in Bates label 8712
4 and identify that for the record?
5 A. This is a letter dated April 27, 1970,
6 addressed to Professor Frederick A. Beland of Montana
7 State University, Department of Chemistry, Bozeman,
8 Montana, 59715.
9 Q. And --
10 A. Signed by Robert W. Keller.
11 Q. And I'm sorry. The date of the letter is?
12 A. April 27, 1970.
13 Q. And you personally knew Dr. Keller?
14 A. Yes.
15 Q. And you were employed by Monsanto at the time
16 this letter was prepared?
17 A. Yes.
18 Q. Could you please read into the record the
19 first sentence, the first two sentences of
20 Dr. Keller's response?
21 A. "Your March 27 letter requesting samples of
22 Aroclor 1254 and 1262 have been forwarded to my
23 attention. We are sending samples of Aroclor 1254,
24 1260, and 1262 representative of our current
25 production material" --

Page 454

1 Q. And if you could read --
2 A. May --
3 Q. -- just the next sentence.
4 A. I'm sorry. "...under separate cover to your
5 attention."
6 Q. Oh, and then the next sentence, please. And
7 I'm sorry. I cut you off.
8 A. "Also being sent under separate cover are 20
9 milligram amounts of the 4-, 2.2-, 2.3-, 2.4-, 2.5,
10 3.3- and 4.4 isomers."
11 Q. Sounds like analytical chemists talking to
12 each other?
13 A. Yes.
14 Q. And, now, could you please turn to
15 Exhibit M-81? It's under 1972 tab.
16 A. I have M-81.
17 Q. And could you please identify this letter for
18 the record, Mr. Papageorge?
19 A. It's a letter dated March 6th of 1972
20 addressed to a Dr. James J. Manion, Chairman of the
21 Science Division of Carroll College, Helena, Montana,
22 59601, and signed by me.
23 Q. And could you read the first para -- the
24 first two paragraphs of that letter into the record?
25 A. "I am forwarding under separate cover the

Page 455

1 sample of Aroclor 1254 you requested in your letter
2 dated March 3. There is no charge for this material.
3 If I can be of further service, please let me know."
4 Q. And is Exhibit M-81 a letter that you, in
5 fact, prepared and sent to Dr. James J. Manion at
6 Carroll College in Helena, Montana, on or about the
7 date it bears, March 6th, 1972?
8 A. Yes.
9 MS. RUTTER: Miss Russo, I'm to this
10 folder now if you have -- I'm not going to use all of
11 it, so I'll just pass them on one at a time.
12 Q. I'm handing you an exhibit that's been
13 premarked as M-149, and Miss Russo is providing a copy
14 to Plaintiffs' counsel. Mr. Papageorge, can you
15 please identify Exhibit 149?
16 A. Exhibit 149 is a page out of "Time Magazine" a
17 of October 11, 1971.
18 Q. And does it show you on the right-hand side
19 as an individual to whom a copy of this "Time
20 Magazine" article was distributed?
21 A. Yes.
22 Q. Do you recall seeing this "Time Magazine"
23 article?
24 A. Yes.
25 Q. In about October of 1971?

Page 456

1 A. Yes. Uh-huh.
2 Q. Could you please read the title of the
3 article?
4 MR. OAAS: I'm just going to object to the
5 form of any questions about this article.
6 A. "The Menace of PCB".
7 Q. And if you could look down to about -- I
8 won't count sentences. It's close to the heading. Do
9 you see where it says "until recently"?
10 A. I see it.
11 Q. Could you read that sentence into the record,
12 please?
13 A. "Until recently, PCBs were used in industry
14 in many ways, for instance, as softeners in plastics,
15 paints and rubber, as additives in printing inks and
16 papers."
17 Q. That's enough because we're trying to make
18 good time. I won't have you read the whole article.
19 Mr. Papageorge, I'm going to hand you what
20 I've had marked as Exhibit 148, and Miss Russo will
21 provide a copy to Plaintiffs' counsel, and I will also
22 hand you a copy of Plaintiff's Exhibit 60, which is a
23 document that Plaintiffs' counsel discussed with you
24 during your earlier deposition in this case.
25 First of all, Mr. Papageorge, could you

Page 457

29 (Pages 454 to 457)

1 please describe what this brochure appears to be?
2 MR. OAAS: What record are you referring
3 to?
4 MS. RUTTER: I'm sorry. Exhibit M-148.
5 Thank you.
6 A. This is a-- I'm going to call it a Technical
7 Bulletin describing the Aroclor compounds that
8 Monsanto made and marketed and describes
9 characteristics of these materials and their possible
10 applications.
11 Q. Could you please turn to the page that's
12 Bates labeled DSW 263711? It looks like this?
13 A. I have it.
14 Q. And what's the title on this page?
15 A. "Industrial Applications of the Aroclors".
16 Q. Now, could you please turn to the very end
17 page and tell me what date appears in the bottom
18 left-hand corner? I'm actually looking at this. It
19 looks like you've got something extra clipped on
20 there. The DSW label is 3748. There, you have it.
21 A. I have it.
22 Q. Do you see where it appears to say 53?
23 A. Oh, yes. Off to the left. Okay.
24 Q. That indicates that it's a 1953 bulletin?
25 A. Correct.

Page 458

1 Q. Now, could you please turn to the page that's
2 labeled DSW-263731? It's in the middle of the
3 bulletin or close to the end of it. And could you
4 please confirm that the page labeled "Aroclors in
5 Paint, Varnish and Lacquer Formulations" that's Bates
6 labeled DSW-263731 in the middle of M-148 is the same
7 page as the beginning page that Plaintiffs' counsel
8 showed you during your deposition in Plaintiff's
9 Exhibit 60?
10 A. Yes, it is.
11 Q. It even has the same Bates label on it; is
12 that correct?
13 A. Yes.
14 Q. But the document I've shown you is an entire
15 brochure, not just excerpts from it; is that correct?
16 A. That is correct.
17 MR. OAAS: We would have no objection to
18 the entire brochure being admitted into evidence at
19 trial.
20 MS. RUTTER: I now need M-155. We need a
21 clip or something. I just found a paper clip,
22 Miss Russo. That will -- Oh, good. That's even
23 better. Thank you so much.
24 BY MS. RUTTER:
25 Q. Mr. Papageorge, can you please identify

Page 459

1 Exhibit 155 for the record?
2 A. This is a document with Monsanto letterhead
3 signed by D. K. Mitchell, dated September 28, 1970,
4 and addressed to B. T. Dean.
5 Q. And can you please read that short
6 three-sentence paragraph that's in the middle of page
7 one?
8 A. I do.
9 Q. Could you please read it out loud?
10 A. "The following compilation lists all analyses
11 on PCB presently in our files. The data on page one
12 through six are listed in chronological order. The
13 remaining pages are analyses by the Bureau of
14 Commercial Fisheries and are so presented as
15 received."
16 Q. What is the Bureau of Commercial Fisheries,
17 or what was it at that time?
18 A. I forget the official name for them. It has
19 to do with --
20 Q. Was it a federal agency in your
21 understanding?
22 A. It was a federal agency with commercial
23 activity.
24 Q. I'd like to hand you Exhibit -- Plaintiff's
25 Exhibit 31, which is a portion of this Exhibit 155

Page 460

1 that Plaintiffs' counsel asked you questions about.
2 Can you please confirm that Plaintiff's Exhibit 31 has
3 the first six pages, but not the remaining pages that
4 are referred to in the cover memo?
5 MR. OAAS: Counsel for Plaintiffs would
6 also stipulate that the entire exhibit WBP M-155 can
7 be admitted at the trial of this case.
8 MS. RUTTER: Thank you.
9 Q. Mr. Papageorge, Plaintiffs' counsel has
10 stipulated that we can use the complete Exhibit M-155
11 at trial --
12 A. Oh!
13 Q. -- rather than the truncated exhibit,
14 Plaintiff's 31.
15 Looking at M-155, can you please tell us
16 whether the last few pages of that document -- who did
17 the testing that's reflected in those pages? Was it
18 Monsanto, or was it the Federal Bureau of Commercial
19 Fisheries?
20 A. It was the Federal Bureau of Commercial
21 Fisheries.
22 Q. And does the document reflect that on
23 occasion Monsanto and the federal bureaus were sharing
24 split samples?
25 A. Yes.

Page 461

30 (Pages 458 to 461)

1 Q. And, generally speaking, the Federal Bureau
2 of Commercial Fisheries was testing for PCBs in fish,
3 water, and sediment?
4 A. Yes.
5 Q. And Monsanto and the Federal Bureau of
6 Commercial Fisheries appeared to be sharing that data
7 in 1969 and 1970?
8 A. Yes.
9 Q. I hand you Plaintiff's Exhibit 61,
10 Mr. Papageorge. This is a Parlon brochure that
11 Plaintiffs' counsel asked you a number of questions
12 about. Do you recall at least generally those
13 questions?
14 A. I do.
15 Q. If you'd look at the first page, there's a
16 section in here about use of Parlon paint in food
17 processing. I'm on the page before here.
18 A. Oh!
19 Q. Do you see where it refers to that in the
20 table of contents?
21 A. Yes.
22 Q. And you recall Plaintiffs' counsel asking you
23 questions about use of Parlon in the food processing
24 industries?
25 A. I do.

Page 462

1 Q. Could you please turn to the very last page
2 of this document?
3 A. Of that section?
4 Q. No. Of the -- The very last page of the
5 document.
6 A. Of the document.
7 Q. The page where you usually find the dates.
8 And if you look right here, Mr. Papageorge, can you
9 please tell me the date of that document?
10 A. 1978.
11 Q. Right. Now, by 1978, Mr. Papageorge, was
12 Monsanto selling PCBs for use in any type of
13 plasticizer application?
14 A. No.
15 Q. In fact, in 1978, was Monsanto out of the PCB
16 business period?
17 A. Yes.
18 Q. So whatever Hercules was promoting with this
19 Parlon 1978 brochure, it couldn't have been PCBs?
20 MR. OAAS: I object to the form of the
21 question.
22 A. That is true.
23 Q. I'd now like to turn to Exhibit 61, which is
24 in Notebook B, and can you please identify that memo,
25 the author, the recipient and the date?

Page 463

1 A. Monsanto letterhead. Author is Tom C. Ford.
2 The date August 27, 1970, and it's addressed to
3 Mr. John Mason.
4 Q. It has a number of CCs; does it not?
5 A. I'm sorry?
6 Q. It has a number of CC's; does it not? Carbon
7 copies.
8 A. Oh! Oh, up here. I'm sorry. You're right.
9 There are carbon copies issued.
10 Q. And does your name appear as one of the
11 people copied?
12 A. Yes.
13 Q. Do you recall receiving this memo?
14 A. Yes, I do.
15 Q. And do you recall the attachment to this
16 memo, which is the next document in the notebook?
17 MR. OAAS: I'm going to object to the form
18 of that question.
19 A. The attachment?
20 Q. Your notebook is missing a copy, so -- Oh, my
21 notebook has two, so --
22 MR. OAAS: I don't have a copy, either.
23 MS. RUTTER: Mr. Papageorge and I will
24 share a copy.
25 Q. Mr. Papageorge, can you please identify the

Page 464

1 document that's currently in front of you for the
2 record?`
3 MR. OAAS: Object to the form of the
4 question.
5 A. Well, this is a -- the letterhead
6 Environmental Defense Fund. It's dated August 24,
7 1970. It's addressed to Mr. Pierre Wilkins of
8 Monsanto Company, and it's signed by Roderick Cameron,
9 Executive Director of the Environmental Defense Fund.
10 Q. And, Mr. Papageorge, is that memo that you're
11 holding Bates labeled ending 8641, did you receive
12 that Environmental Defense Fund letter from Mr. Tom C.
13 Ford on or about August 27th, 1970, in the ordinary
14 course of your duties for Monsanto at that time?
15 A. Yes.
16 Q. And did you read the letter from the
17 Environmental Defense Fund to Monsanto dated
18 August 24th, 1970, on or about that date?
19 A. I did.
20 Q. Could you please read the second paragraph of
21 the Environmental Defense Fund letter to Monsanto into
22 the record?
23 MR. OAAS: Object to the form of the
24 question.
25 A. "At ADF, we have been most impressed by

Page 465

31 (Pages 462 to 465)

1 Monsanto's willingness to be responsible where the
2 environment is concerned. We have closely watched the
3 development of information concerning the
4 environmental impact of Monsanto's product,
5 polychlorinated biphenyls (PCB). What impressed us
6 most was Monsanto's attitude and, finally, its action
7 to lessen the environmental degradation caused by its
8 product. We continue to watch our PCB cleanup program
9 to be sure that your action is as good as your word,
10 but in the meantime, we are impressed by your
11 sensitivity and responsibility. Indeed, in many
12 informal conversations, we have signaled (sic.) out
13 your company as being one capable of acting on its own
14 long-term interest and that of society rather than its
15 short-term economic interest. We have great respect
16 for you."
17 MS. RUTTER: Thank you, Mr. Papageorge.
18 Counsel, that concludes my questioning for
19 now except I want to do some document foundational
20 authentication matters with Mr. Papageorge. Those are
21 purely ministerial, and I would invite you to go ahead
22 and do any substantive questioning you ask of the
23 witness with the understanding that I'm reserving my
24 right to do some foundational authentication after
25 that's done.

Page 466

1 MR. OAAS: All right. I'll give you a
2 copy of these.
3 (Plaintiff's Exhibits 70 through 75 were
4 marked for identification.)
5 EXAMINATION
6 QUESTIONS BY MR. OAAS:
7 Q. Good afternoon, Mr. Papageorge.
8 A. Good afternoon.
9 Q. You recall me from about a year ago?
10 A. Yes, sir, I do.
11 Q. I have some questions for you.
12 A. All right.
13 Q. And I'm going to hand you a stack of
14 documents, the top one that I've marked as Plaintiff's
15 Exhibit 70, because I'm going to be directing your
16 attention to those as we go along, please.
17 By the way, Mr. Papageorge, it's my
18 understanding at least at the last deposition you were
19 appearing in your individual capacity and not as a
20 representative of Pharmacia; is that correct?
21 MS. RUTTER: That's correct. He's here as
22 William B. Papageorge.
23 Q. Okay. Are you being paid for your time spent
24 at this deposition, Mr. Papageorge?
25 A. I'm sorry.

Page 467

1 Q. I'm sorry.
2 MS. RUTTER: He was reading documents.
3 A. Yeah.
4 Q. Are you being paid for your time to attend
5 this deposition?
6 A. No. No. Not under oath, uh-uh.
7 Q. Were you paid to do anything for any type of
8 work associated with this deposition?
9 A. If I have -- If someone wants to consult with
10 me about some past recollections, some documents and
11 all, yeah.
12 Q. And did you do that kind of work in reference
13 to this case?
14 A. Some of it, yes.
15 Q. And specifically in reference to your
16 deposition?
17 A. I'm sorry.
18 Q. And specifically in reference to your
19 deposition, both last year and today?
20 A. Some of it, but not all of it.
21 Q. Okay. And you were paid for that work? You
22 were paid for that work?
23 A. Yeah.
24 Q. Okay. And who were you paid by?
25 A. I'm sorry.

Page 468

1 Q. And who were you paid by?
2 A. All I know is I got a note from Mrs. -- Miss
3 Rutter. I don't know who paid it.
4 Q. Okay. And were you paid by check?
5 A. Yes.
6 Q. Okay. And was it a check from this law firm,
7 Husch & Eppenberger?
8 A. Yes.
9 Q. And do you recall about how much you were
10 paid?
11 A. Yes. It was less than 4,000. About 3,000,
12 something in there.
13 Q. Okay. And that was for work you did in
14 preparation for your deposition last year and today or
15 just today?
16 A. No. Last year, what was behind me.
17 Q. Okay. All right. And was that based on an
18 hourly rate, or did they just write you out a check
19 for \$4,000, or how was that arrived at?
20 A. It's an hourly rate.
21 Q. Okay. And what's your hourly rate?
22 A. \$220.
23 Q. And they paid you about \$4,000; is that
24 right?
25 A. As I remember, yes.

Page 469

32 (Pages 466 to 469)

1 Q. Okay. And do you expect to be paid any more
2 for your preparation work for this deposition?
3 A. I expect some of it, yeah, but I don't know
4 which parts.
5 Q. Okay. Do you know how much time? Can you
6 give an estimate of how much time you spent in
7 consultation and preparation for this deposition?
8 A. Not yet, no. I haven't added it up.
9 Q. Okay. Can you give me an estimate?
10 A. It'd be a wild one. I -- I know it was a
11 short day. It's less than eight hours --
12 Q. Okay.
13 A. -- is all I really...
14 Q. All right. Now, do you hold yourself out as
15 a consultant on PCB matters today, Mr. Papageorge?
16 A. Yes.
17 Q. And have you testified at all in any
18 PCB-related matters since our last deposition?
19 A. No.
20 Q. Now, how familiar are you with what I'm going
21 to call the Anniston PCB cases? Do you know what I
22 mean by that reference?
23 A. I think I do. I can't -- I can't -- I'm not
24 in a position to know of all the Anniston PCB cases.
25 Q. How many of them are there to your knowledge?

Page 470

1 A. I don't know.
2 Q. How many were you involved in as a witness?
3 A. About three of them.
4 Q. Okay. Let's look at Exhibit 70 right on top
5 there, Mr. Papageorge. Do you see where I'm referring
6 to?
7 A. I have it.
8 Q. Would you take a minute and look --
9 MS. RUTTER: Excuse me. For some reason
10 that's not in my stack.
11 MR. OAAS: Yeah.
12 MS. RUTTER: It starts --
13 MR. OAAS: Right there.
14 MS. RUTTER: -- 17.
15 MR. OAAS: Number one, that's No. 70.
16 Okay. I know it doesn't have -- I didn't copy the
17 sticker.
18 MS. RUTTER: Oh, okay.
19 MR. OAAS: Exhibit 17 refers to a prior
20 deposition number. I've remarked it as Exhibit 70 for
21 this deposition. You see what he's got?
22 MS. RUTTER: All right. I see it.
23 MR. OAAS: Is that okay with you?
24 MS. RUTTER: Yes.
25 MR. OAAS: All right.

Page 471

1 MS. RUTTER: I was just confused because
2 my exhibit said something different than --
3 MR. OAAS: All right.
4 MS. RUTTER: -- the number you were
5 saying.
6 MR. OAAS: Okay. Are you satisfied we're
7 all looking at the same piece of paper?
8 MS. RUTTER: Could I see it for a minute,
9 Mr. Papageorge?
10 THE WITNESS: Sure.
11 MR. SHAW: Five minutes of tape remaining.
12 MS. RUTTER: Yes.
13 BY MR. OAAS:
14 Q. Do you know what that is, Mr. Papageorge?
15 A. I'm going to call this an order form.
16 Q. Okay. I imagine you saw quite a few of those
17 in your days as Plant Manager at Anniston?
18 A. Quite a few. I never kept score, but...
19 Q. You recognized --
20 A. They're familiar. That's a typical normal
21 form.
22 Q. Okay. Now, it appears to be, and correct me
23 if I'm wrong, that this is an order by a customer for
24 Aroclor 1254.
25 A. That's what it says, yes.

Page 472

1 Q. Okay. And the customer appears to be
2 identified as -- under the -- under the typed-on words
3 on the left-hand column, "ship to" category, Columbia
4 Paint Company, PO Box 1704, Helena, Montana?
5 MS. RUTTER: Objection to the form of the
6 question.
7 Q. Do you see where I'm referring to, sir?
8 A. I see it, but you used the word "customer".
9 Q. Okay. That's the wrong description; that's
10 the wrong term to use?
11 A. The way I see it, Great Western is the
12 customer, and Columbia is the shipping destination.
13 Q. Okay. All right. And this was an order for
14 looks like 60 pounds of Aroclor 1254?
15 A. It's a 50-pound can, a big bucketful.
16 Q. Okay. And they paid a little over \$30 for
17 that?
18 A. Yes.
19 Q. And the price per pound is listed at roughly
20 50 -- 50 cents a pound, 52 cents a pound. Would that
21 be right?
22 A. That's what it says.
23 Q. And to your knowledge, was that the average
24 price per pound for Aroclor 1254 in the year 1970?
25 A. When you use the word "average," I don't know

Page 473

33 (Pages 470 to 473)

1 it's an average.
2 Q. How about was that a representative price?
3 A. Representative for the five-gallon can. It
4 may not represent the tank carful or the barreelful.
5 Q. Okay. I understand. The large orders
6 might -- might have a lesser price?
7 A. Typically, yes.
8 Q. And would that same price structure -- And
9 what I'm referring to, if this five-pound bucketful
10 had been ordered in 1969, would the price be roughly
11 50 cents a pound?
12 A. All right. Roughly.
13 Q. You'd agree with that?
14 A. Uh-huh.
15 Q. Okay. Now, as I understand it, this form --
16 You see it has -- it has Monsanto on the top of the
17 form?
18 A. Yes.
19 Q. Okay. So this is a Monsanto order form?
20 A. Well, it's a form filled out by someone in
21 Monsanto who got a message over the telephone or by
22 mail --
23 Q. Okay.
24 A. -- to place this order.
25 Q. Okay.

Page 474

1 A. And this is the form used by Monsanto's
2 system to go to the particular location in Monsanto
3 that has that in stock and is ready to ship it.
4 Q. Okay. So it appears to me, and correct me if
5 I'm wrong, that apparently Columbia Paint Company
6 wanted to purchase one 60-pound drum of Aroclor 1254;
7 correct?
8 A. Correct.
9 MR. BROWN: I'm going to object to the
10 form of this question.
11 THE REPORTER: I'm sorry. Who's this?
12 MS. RUTTER: That's Mr. Brown.
13 Q. Anyway, they were the customer?
14 MS. RUTTER: Objection. Asked and
15 answered. Object to the form of the question.
16 A. I'm sorry. Who was the --
17 Q. They were the customer?
18 A. Who's "they"?
19 Q. Columbia Paint Company.
20 MR. BROWN: Same objection. This is
21 Steve.
22 A. I -- I don't --
23 Q. Why don't you just walk me through how
24 this -- how this order would have been processed at
25 Monsanto, Mr. Papageorge. That's all I'm trying to

Page 475

1 get to.
2 MR. SHAW: Excuse me, counsel. We need to
3 change the tape.
4 MR. OAAS: Okay. I'm sorry.
5 MR. SHAW: This will end tape number four
6 in the deposition of William Papageorge. We are off
7 the record at 2:26 p.m.
8 (Whereupon, an off-the-record discussion
9 was held.)
10 MR. SHAW: We are back on the record at
11 2:28 p.m. This will begin tape number five in the
12 continued deposition of William Papageorge.
13 MR. OAAS: Thank you.
14 BY MR. OAAS:
15 Q. Mr. Papageorge, just let me ask my question
16 again, and I'm just -- It's a real simple question.
17 If you could just walk me through how this order would
18 have been received and processed at Monsanto.
19 A. Well, someone in Monsanto got either a
20 telephone call or by mail a request for this
21 particular product in this particular amount to be
22 shipped to the Columbia Paint Company, shipped to.
23 The customer is the one that pays the price for it, so
24 it's Great Western Chemical. It's the one that's
25 marked "sold to".

Page 476

1 Q. I see that. Okay. I'm with you.
2 A. So it is shipped to Columbia Paint from
3 Monsanto's Sauget, Illinois, plant, that involved just
4 one shipping bill.
5 Q. Okay.
6 A. One big piece of transportation. It doesn't
7 ship it to Spokane, Washington, and from there to
8 Helena, Montana.
9 Q. All right.
10 A. Double shipment. It avoids that second
11 shipping charge.
12 Q. Would the -- So the PCB referenced in this --
13 on this exhibit would have been shipped directly from
14 the manufacturing plant at Sauget, Illinois, to
15 Helena, Montana?
16 A. Correct.
17 MR. BROWN: I object to the form of the
18 question. This is Steve Brown.
19 Q. And this document indicates that this is a
20 Monsanto record, so I'm assuming that somebody in
21 Monsanto knew that Columbia Paint Company had
22 purchased Aroclor 1254 on or about May 21st, 1970, as
23 indicated by this -- by this order form?
24 MS. RUTTER: Objection to the form of the
25 question.

Page 477

34 (Pages 474 to 477)

1 A. Well, when you say "purchased," they didn't
2 purchase it from Monsanto. They purchased it from
3 Great Western.
4 Q. Okay. What is Monsanto's name doing at the
5 top of this form?
6 A. Because this is the piece of paper that's
7 used internally to place the order at the -- at the
8 location that has the material.
9 Q. Okay.
10 A. They might have sent this at that time just
11 as well to another location.
12 Q. Okay. Does Monsanto get -- retain a copy of
13 this order form?
14 A. Yeah. That's where this came from.
15 Q. Okay. Where would it have been kept at, this
16 particular order form?
17 A. Monsanto's general filing system.
18 Q. Okay. So this document would impart notice
19 to Monsanto that on May 21st, 1970, Columbia Paint
20 Company had purchased one 50-pound drum of Aroclor
21 1254?
22 MS. RUTTER: Objection. Asked and
23 answered so --
24 A. Not purchased.
25 MS. RUTTER: -- many times that it's

Page 478

1 argumentative.
2 A. Not from Monsanto.
3 Q. Oh, they purchased from Great Western
4 Chemical Company?
5 A. Correct.
6 Q. Okay. But manufactured by Monsanto?
7 A. And shipped by Monsanto.
8 Q. Okay. Great. And I just want to establish,
9 this is a record kept by Monsanto in its ordinary
10 course of business?
11 A. Yeah.
12 Q. Yeah. Okay. Thank you.
13 Now, Mr. Papageorge, I'm going to hand you
14 what was marked at your previous deposition
15 Exhibit 65-A, just have you review that letter,
16 please.
17 MS. RUTTER: Do you have a copy of that
18 for me, counsel?
19 MR. OAAS: You know, I don't. If you want
20 to take a break and obtain a copy. I got that from
21 Cathy.
22 MS. RUTTER: I've got it.
23 MR. OAAS: All right. Thank you. Can we
24 go ahead?
25 MS. RUTTER: Yes.

Page 479

1 BY MR. OAAS:
2 Q. Mr. Papageorge, do you recall me asking you
3 some questions about Exhibit 65-A at your last
4 deposition?
5 A. Somewhat, yes.
6 Q. And I think I asked you whether or not that
7 letter, 65-A, it appears to indicate you got a copy of
8 that letter, correct?
9 A. Yes.
10 Q. It imparted some information that a Monsanto
11 customer was importing Japanese PCBs?
12 A. I recall the reference to that.
13 Q. Okay.
14 A. I'm not aware of any shipment from Japan, but
15 I have no way of knowing for sure.
16 Q. Doesn't that letter indicate to you that
17 Sonnenborn was purchasing Japanese -- purchasing and
18 importing Japanese PCBs?
19 MS. RUTTER: Objection to the form of the
20 question.
21 Q. By July of 1971.
22 A. I don't know that that tells me they are
23 importing. It's almost a rumor that that's going on.
24 Q. You recall whether or not you were -- Do you
25 recall whether or not you did any investigation on

Page 480

1 your own to determine whether or not Sonnenborn was,
2 in fact, importing Japanese PCBs?
3 A. Yeah, but we never confirmed any of that.
4 Q. All right. Okay. And then if you could go
5 to -- I'm going to hand you what your counsel handed
6 to you as a copy of Exhibit 4. Well, you have one in
7 front of you there.
8 A. I have one, yes.
9 Q. Okay. That's your report to the ANSI
10 Committee, correct?
11 A. Yes.
12 Q. If we could just reference page 108.
13 A. I have page 108.
14 Q. Okay. And doesn't that indicate,
15 Mr. Papageorge, that you told the ANSI Committee that
16 you, and when I say "you" in this reference, I'm
17 talking about Monsanto, that Monsanto had no
18 information that any imports had arrived in the United
19 States?
20 A. Well, there is no -- Is there -- Which
21 sentence are you referring to?
22 Q. I'm just reading from the second paragraph,
23 the first full paragraph, to pick up the point that --
24 that was raised earlier about foreign imports. "We
25 are to the best of our ability trying to monitor

Page 481

35 (Pages 478 to 481)

1 imports. To this day we have no information that any
2 have arrived in this country."
3 MS. RUTTER: I assume you're asking the
4 question as of the date of the memo, September 14th,
5 1971?
6 Q. Absolutely. Absolutely. In September 1971,
7 you had no information that any of your customers were
8 importing PCBs?
9 A. That is true.
10 Q. Okay. And that would include Sonnenbom?
11 A. Well, naturally, since we had no information
12 whatever.
13 Q. All right. Why don't you skip that document,
14 Mr. Papageorge, and go to what I've marked as
15 Exhibit 67.
16 MS. RUTTER: I don't see -- I've got it.
17 MR. Oaas: These documents -- I reserved
18 questions on Exhibit 67 and 68. The exhibits --
19 MS. RUTTER: I saw that in the transcript.
20 MR. OAAS: -- would have been given to you
21 at that time.
22 MS. RUTTER: They were.
23 BY MR. OAAS:
24 Q. Okay. Would you take a minute and look
25 through Exhibit 67, sir?

Page 482

1 A. I have scanned the article.
2 Q. Okay. I have a few questions about it.
3 A. All right.
4 Q. You can take as long -- as long as you want
5 to review any portion of this exhibit to answer any
6 question. All right?
7 A. All right.
8 Q. Now, and this refers to questions by Miss
9 Rutter concerning the letters that Monsanto sent out
10 in 1970 that -- You recall her asking you about those
11 letters --
12 A. Yes.
13 Q. -- earlier today?
14 A. Yes.
15 Q. Okay. If you turn to page three, there's a
16 handwritten "App. 8," page three at the bottom. Do
17 you see that sir?
18 A. I see it.
19 Q. I'm directing your attention to the middle of
20 page three. I want you to find a sentence, "It is not
21 our responsibility to alert our distributors'
22 customers." Do you see that?
23 A. Yes.
24 Q. Would you tell me what that refers to, sir,
25 please?

Page 483

1 MS. RUTTER: Objection, lack of
2 foundation.
3 A. It refers to Monsanto communicating with our
4 customers' customers, and it would indicate that in
5 the first place we don't have that information, and
6 our customers are reluctant to share their customer
7 list with the public, so it's very difficult to
8 communicate unless you do have a name and an address.
9 Q. So your testimony under oath is that your
10 recollection is that Monsanto did not know the
11 identity of its distributors' customers?
12 MS. RUTTER: Objection to the overbroad
13 and vague form of the question.
14 Q. In 1970.
15 A. In 1970, we may have known a handful of them,
16 but we just didn't have a complete list from any of
17 our initial customers of who their customers were.
18 Q. You recall ever seeking that information back
19 in 1970, for example, from Great Western Chemical
20 Company?
21 A. I do not.
22 Q. You recall you yourself ever requesting that
23 information from Great Western Chemical Company in
24 1970?
25 A. No. I was never involved in that. That was

Page 484

1 Marketing Department responsibility.
2 Q. Have you ever seen any document authored by
3 any director of -- like say in the Plasticizer
4 Division, like Mr. Schalk at the time. Have you ever
5 seen a letter from Mr. Schalk trying to obtain a
6 customer list from a distributor?
7 A. Not in writing, no.
8 Q. Do you have any memory or recollection at
9 this time whether back in 1970 a distributor like
10 Great Western Chemical Company would refuse to give
11 you that information?
12 A. Do I have any record?
13 Q. Do you have any recollection or memory --
14 A. Recollection.
15 Q. -- that they had ever refused to give you --
16 A. The marketing people would -- That's the
17 answer I would get when I asked that question.
18 Q. You don't have any specific recollection of
19 ever asking that question --
20 MS. RUTTER: Objection, mischaracterizes
21 testimony.
22 Q. -- to Great Western Chemical Company in 1970?
23 A. Specific to Western Chemical?
24 Q. Right.
25 A. No.

Page 485

36 (Pages 482 to 485)

1 Q. Okay. Now, I want to go a little further
2 down on page three there, Mr. Papageorge.
3 A. Uh-huh.
4 Q. It reads -- I'll just read it into the
5 record. "Let me summarize what Monsanto's letter
6 says." Do you see where I'm at, sir?
7 A. I do.
8 Q. Okay. " One. Its primary function is to
9 alert customers to a potential environmental pollution
10 problem. Confidentially, our Legal Department
11 believes this will minimize and hopefully eliminate
12 claims made against us for environmental pollution
13 damage." Did -- Did I read that correctly?
14 A. Yes, you did.
15 Q. Okay. Was that your understanding of the
16 function of the letters --
17 MS. RUTTER: Objection, lack of
18 foundation.
19 Q. -- that were sent in 1970?
20 MS. RUTTER: The first sentence or the
21 second sentence?
22 MR. OAAS: Both.
23 MS. RUTTER: Objection to the overbroad
24 and vague form of the question.
25 A. You're asking me a question about what the

Page 486

1 Legal Department's belief was.
2 Q. Let me just try it again, and maybe I can
3 ask --
4 A. Yeah.
5 Q. -- a better question. Its primary function
6 is to alert customers to a potential environmental
7 pollution problem.
8 A. That's -- That's it.
9 Q. You had that -- That was your understanding
10 of the letter?
11 A. That was for sure, yes.
12 Q. How about the second sentence? And alls I'm
13 asking is were you aware, and I think you were -- Were
14 you a Director of Environmental Operations at this
15 time?
16 A. Uh-huh.
17 MS. RUTTER: What is the date on this?
18 Does it have a date?
19 MR. OAAS: Well, I'm assuming 1970. If I
20 can't connect it up, then you can have your objection.
21 A. There's no date --
22 Q. No date.
23 A. -- fixed to it, but it's --
24 Q. But they're referring to the 1970 letters is
25 my understanding.

Page 487

1 A. We can only assume that --
2 Q. Okay.
3 A. -- because of the subject matter and timing.
4 Q. Okay. Let's assume that's true. What about
5 the second sentence in that paragraph I read? Did you
6 have that understanding as to the purpose of the
7 letters, or is this new information to you today?
8 MS. RUTTER: Objection. Lack of
9 foundation, calls for speculation.
10 A. The second --
11 Q. Yes. The second sentence, it says,
12 "Confidentially, our Legal Department believes this
13 will minimize and hopefully" --
14 A. That's not the second sentence. It says
15 "does not imply". I see the number two. You're still
16 in number one.
17 Q. The second sentence in paragraph number one.
18 A. Oh, the second sentence. All right.
19 Q. It says, "Confidentially, our Legal
20 Department believes this will minimize and hopefully
21 eliminate claims made against us for environmental
22 pollution damage." Is that new information to you
23 today?
24 A. I don't ever remember our Legal Department
25 specifically saying that -- making that statement.

Page 488

1 Q. Okay. Now, you recall whether or not
2 Monsanto gave advice to its regional managers as to
3 how to handle customer inquiries and questions that
4 were prompted by the letters that were sent in 1970 to
5 its direct customers and its distributors?
6 A. There was communications to all Monsanto
7 representatives.
8 Q. Okay.
9 A. And an attempt made so that everybody on the
10 team understood it.
11 Q. Okay.
12 MS. RUTTER: Counsel, do you have an
13 author for this document? I'm not finding an author
14 or a date.
15 MR. OAAS: I can't tell you that off the
16 top of my head.
17 MS. RUTTER: Object to the lack of
18 foundation for the document.
19 BY MR. OAAS:
20 Q. Let's go to -- I want you to direct your
21 attention to Bates No. DSW 318235.
22 A. 225.
23 Q. Page 16.
24 A. What page did you say?
25 Q. Page 16 in the handwritten numbers.

Page 489

37 (Pages 486 to 489)

1 A. I have it.
2 Q. Okay. And it appears to me that I'm looking
3 at a set of anticipated questions from Monsanto
4 customers and Monsanto's suggested responses to its
5 field personnel if they got asked a particular
6 question?
7 MS. RUTTER: Objection. Lack of
8 foundation on an undated, unsigned document.
9 Q. Is that what it looks like to you,
10 Mr. Papageorge?
11 A. Like what? I'm sorry.
12 Q. Can you tell me what I'm -- what I'm looking
13 at here? If you can't, that's fine, too, but if you
14 can, let me know.
15 A. This refers to effluent and analytical
16 equipment.
17 Q. Okay.
18 A. Is that what you're talking about?
19 Q. Yeah. Page 16.
20 MS. RUTTER: I believe he's on page 15,
21 counsel.
22 Q. Page 16.
23 A. 16.
24 Q. Excuse me.
25 MR. DAVIS: It's the one that has page six

Page 490

1 at the upper right?
2 MR. OAAS: Right, Max.
3 MR. DAVIS: Paying attention.
4 MR. OAAS: Good. Never doubted it for a
5 minute.
6 BY MR. OAAS:
7 Q. Mr. Papageorge, am I looking at a series
8 of -- at a document prepared by Monsanto that appears
9 to be a series of questions that Monsanto anticipated
10 its customers might be directing to its field
11 personnel after they had received the PCB notification
12 letters?
13 MS. RUTTER: Objection, lack of
14 foundation. No date, author, or letterhead on the
15 document in question. But you may answer.
16 A. You said it's Monsanto's. I would say it's
17 employees of Monsanto who had these thoughts and
18 expressed them, and they were typed on a piece of
19 paper to share with the whole team, so to speak.
20 Q. Okay. That's very good. I want to ask you
21 something about question five. Do you see question
22 five there?
23 A. Uh-huh.
24 Q. It says, "How does Monsanto think Aroclors
25 can get into the environment and cause so much

Page 491

1 pollution?"
2 A. Yeah.
3 Q. Do you see that?
4 A. Yeah.
5 Q. And the answer reads, "Disposal, leakage from
6 systems using it, spills, et cetera." Did I read that
7 correctly?
8 A. Yeah.
9 Q. If you were asked that question back in --
10 You as Director of Environmental Operations, if you
11 were asked that question back in 1970, would you have
12 given the same answer that's written there?
13 A. Yeah. It's -- Again, it's a case of Monsanto
14 thinking, but not Monsanto knowing definitely that
15 it's happening this way.
16 Q. Okay. Now, let's go to page 17. There's a
17 heading "Toxicity". Do you see what I'm referring to?
18 A. I do.
19 Q. And there's a question with a number one
20 after it do you see there?
21 A. Uh-huh. Yes.
22 Q. And the question reads, "If PCB is a danger
23 to fish and birds, how about humans?" And the answer
24 reads, "The amounts being found in the environment are
25 not considered a danger to humans or fish. The whole

Page 492

1 question on chlorinated pesticides relates to birds."
2 Did I read that correctly?
3 A. Yes.
4 Q. Would that be -- Again, I'm asking you in
5 your capacity as Director of Environmental Operations,
6 if you had been asked that question back in 1970,
7 would the answer typed here, would that be a true and
8 correct answer?
9 MS. RUTTER: Objection, overbroad and
10 vague, calls for speculation and conjecture.
11 A. My hesitation is due to the fact that the
12 question is related to chlorinated pesticides, but
13 there's no definition of what is meant by that
14 expression.
15 Q. Okay.
16 A. It's not necessarily PCBs.
17 Q. All right. If you were asked a question back
18 in 1970 as Director of Environmental Operations as to
19 whether or not PCBs were toxic to fish, how would you
20 have answered that?
21 MS. RUTTER: Objection, calls for
22 speculation and conjecture, lack of foundation. But
23 you may answer subject to the objection.
24 A. My answer would have been one, "Well, show me
25 the information you have and let me know where it came

Page 493

38 (Pages 490 to 493)

1 from and who conducted the studies and what damage was
2 done and under what conditions." It's a difficult
3 question to answer.
4 Q. Can't be answered yes or no in your --
5 A. Not at that time, no.
6 Q. Okay. Thank you. Let's go to page 21.
7 A. I have it.
8 Q. Do you see the heading "Applications"?
9 A. Yes.
10 Q. And then there's a question number one there
11 again? Do you see that?
12 A. I do.
13 Q. And it reads, "Could Aroclor 1254/1260 escape
14 from my sealant/adhesive/coating whatever into the
15 environment?" Do you see that question?
16 A. Yeah.
17 Q. Okay. If you were asked that question as the
18 Director of Environmental Operations back in 1970, how
19 would you have answered it then?
20 MS. RUTTER: Objection, overbroad and
21 vague.
22 A. Well, the answer given there touches on it,
23 but what it really implied I'd need more information.
24 I don't have enough.
25 Q. So you couldn't give an answer to that

Page 494

1 question?
2 A. No, not with what I was told.
3 Q. All right. Mr. Papageorge, I'm going to hand
4 you a document that I've marked as Plaintiff's 70-A
5 and ask you to take a minute and look at that, please.
6 MS. RUTTER: While I find it, and Mr. Oaas
7 did indeed give me a copy. It's just when they are
8 not in notebooks, I tend to lose them.
9 MR. OAAS: That's okay. Take your time.
10 No problem.
11 A. I've scanned it.
12 Q. Have you ever seen this article before,
13 Mr. Papageorge?
14 A. I don't remember seeing this.
15 Q. Okay. You certainly know who Jack T. Garrett
16 is?
17 A. Jack Garrett, yes. Yes.
18 Q. And who was Mr. Garrett?
19 A. He's a Monsanto employee working in
20 Monsanto's Medical Department, which was headed by
21 Dr. Kelly, and Mr. Garrett ended up as an industrial
22 hygienist following employee exposures and ways to
23 prevent exposure.
24 Q. And apparently back in the 1950s,
25 specifically 1957, he authored an article titled

Page 495

1 "Toxicity Considerations in Pollution Control"?
2 A. Yes.
3 Q. Okay. And he's identified in the article as
4 an industrial hygienist and advisor on stream
5 pollution control for the Monsanto Chemical Company,
6 St. Louis, Missouri?
7 A. Yes.
8 Q. Okay. And that's -- That's how you
9 understand his employment at Monsanto at that time?
10 A. In the '50s, yes.
11 Q. Now, if you direct your attention to the
12 first three or four paragraphs of this article,
13 Mr. Papageorge.
14 A. Uh-huh.
15 Q. I'm just going to read them and then ask you
16 a question about it. It starts out with, "When a new
17 product is to be manufactured, it behooves the
18 manufacturing plant to determine the effect, if any,
19 of the waste products on the receiving stream." Would
20 you agree with that statement as the Director of
21 Environmental Operations for Monsanto?
22 MS. RUTTER: As of 1970?
23 MR. OAAS: Yeah.
24 A. Yeah. Because they use the word "if any,"
25 "new," and "maybe".

Page 496

1 Q. "The determination should answer the
2 following questions. One. Will the effluent, as
3 discharged, adversely affect human life?" Would you
4 have agreed with that statement as the Director of
5 Environmental Operations for Monsanto in 1970?
6 A. Well, the question, as worded, implies an
7 effluent will be discharged. On any new product, if
8 it is discharged, that question should be asked. If
9 there is no discharge -- In other words, that question
10 is limited to effluent.
11 Q. How about in your capacity as the Plant --
12 Plant Manager at Anniston, Alabama? Did that plant at
13 Anniston during your tenure as Plant Manager discharge
14 PCB waste into any receiving stream?
15 A. Not deliberately.
16 Q. So they did, but it wasn't deliberately. Was
17 that your answer?
18 MS. RUTTER: Objection to the use of the
19 term of art "discharge," which implies all sorts of
20 legal things and can be used in a host of different
21 ways. You may answer subject to my objection.
22 MR. OAAS: I'm just asking his common
23 sense understanding.
24 A. In my thinking, when you say a deliberate
25 discharge, those who are discharged know it for a fact

Page 497

39 (Pages 494 to 497)

1 that this material is created and it goes from here to
2 there to there and it's being discharged, and when I
3 answered the question of a discharge into a stream, I
4 had in mind a deliberate discharge, not the kind that
5 is created by a downstorm of an awful lot of water
6 rinsing off the surface of the planet and on down to
7 reach some sewer line or stream or creek or
8 what-have-you.
9 Q. And then Mr. Garrett goes on to say in point
10 two there, "Will the effluent as discharged adversely
11 affect aquatic life?" Do you see that?
12 A. If you have an effluent, you should know what
13 it is.
14 Q. And what it may or may not be doing to
15 aquatic life?
16 A. If you have a discharge, yeah.
17 Q. Okay. Now, let's skip down to the heading
18 "Chronic Toxicity" -- "Chronic Toxicity Data". Do you
19 see where I'm referring to, sir?
20 A. I see it.
21 Q. Okay. Now, in 19 -- Were you aware as to
22 whether or not in the 1950s to whether or not Monsanto
23 had any chronic toxicity data on PCBs?
24 MS. RUTTER: Objection, lack of
25 foundation.

Page 498

1 A. In 1957 -- I don't recall any studies that
2 were defined as "data on chronic toxicity". They had
3 on LD-50, you know, the low dose at 50 percent of the
4 test animals are affected, they had those acute
5 toxicity studies, not the chronic.
6 Q. All right. How about in 1970?
7 A. In 1970, there were chronic studies underway.
8 Q. Now, if you'd turn to the second page of that
9 article, please, Mr. Papageorge. I'm going to read
10 from the first column on the left, starting with the
11 words "data are necessary on the effects". Do you see
12 that?
13 A. I see it, uh-huh.
14 Q. It says, "Data are necessary on the effects
15 of pollutants on aquatic life for several reasons, the
16 principal reason being that the appearance of dead
17 fish in the receiving stream has long been considered
18 the ultimate evidence of bad industrial practice." Do
19 you agree with that statement in general?
20 A. Yeah.
21 Q. Then it goes on to say, "In addition to this
22 situation, damage to aquatic life is a violation of
23 many state fish and game laws. A third reason is the
24 offense to the aesthetic senses. The smell of dead
25 fish is one that is seldom tolerated with any degree

Page 499

1 of appreciation by the public." Would you agree with
2 those statements by Mr. Garrett?
3 A. That's right. There's...
4 Q. And let's go --
5 MS. RUTTER: Objection. Lack of
6 relevance.
7 Q. Let's go to the last -- last -- last
8 paragraph in the article.
9 A. The last paragraph in the article?
10 Q. Yeah. "Lack of Comprehensive Data," do you
11 see that heading, sir?
12 A. I see it.
13 Q. It reads, "This entire dissertation points up
14 the lack of comprehensive data on the effects of
15 industrial waste on living organisms." Would you
16 agree with that statement as made by Mr. Garrett in
17 1957?
18 MS. RUTTER: Objection, overbroad and
19 vague, lack of foundation.
20 A. I don't know that there's a lack of
21 comprehensive data, but there might be a shortage, an
22 inadequate amount of data.
23 Q. Was that the case in 1970 when you were
24 Director of Environmental Operations with respect to
25 PCBs?

Page 500

1 A. In 1970, there was more data than in '57, but
2 it's still being generated to this day.
3 Q. Now, I missed an exhibit so I want to go back
4 to Exhibit 68.
5 A. Exhibit...
6 MS. RUTTER: Did you hand him a copy?
7 MR. OAAS: Yeah. You should have --
8 A. Here's 65.
9 Q. Look for a 68.
10 A. A 64, a 67 and 70.
11 MR. OAAS: I think I might have stuck one
12 together here.
13 MS. RUTTER: I was going to say I didn't
14 see a 68 in my packet.
15 MR. OAAS: Well, that's because it's stuck
16 to 67.
17 MS. RUTTER: Oh! Was that it? I was
18 going to say to speed things up I have a copy here.
19 BY MR. OAAS:
20 Q. Okay. I'm going to hand you what I've marked
21 as Plaintiff's Exhibit 68, Mr. Papageorge, and ask you
22 to look at it, please.
23 A. I have scanned the article.
24 Q. What is this? What is Exhibit 68?
25 A. What is Exhibit 68?

Page 501

40 (Pages 498 to 501)

1 Q. Right.	1 "the potential toxic effects".
2 A. It's correspondence between my office and	2 MS. RUTTER: I see it. I'm with you.
3 Mr. Dan Albert of Westinghouse Electric at South	3 Thank you.
4 Boston, Virginia.	4 BY MR. OAAS:
5 Q. Okay. And apparently he had sent to you some	5 Q. Are you with me, Mr. Papageorge?
6 questions that he had about Inerteen?	6 A. Yes.
7 A. Yes.	7 Q. Okay. I'll go back to -- to the -- and read
8 Q. And just to refresh everybody's recollection,	8 it over again. "The potential toxic effects in humans
9 what was Inerteen again?	9 from excessive exposure to polychlorinated biphenyls
10 A. Inerteen is a PCB material, and it could be	10 include injury to the liver and chloracne. In
11 any one of the Aroclors that Monsanto manufactures and	11 animals, the liver effect is demonstrated by increased
12 sells.	12 liver weights and injury to cellular tissue. Although
13 Q. Including 1254?	13 chloracne is difficult to evaluate in animals, in
14 A. It could be. But it doesn't tell us which	14 humans this takes the form of comedones (large
15 Inerteen they're specifically addressing here.	15 blackheads with typical acute pustules) and may be an
16 Q. That's okay. And apparently Mr. Albert sent	16 extended (sic.) symptom of over exposure preceding
17 you a question that he wanted you to answer or a set	17 serious liver injury." Did I read that correctly?
18 of questions that he wanted you to answer; correct?	18 A. Yes.
19 A. Yes. Yes.	19 MR. BROWN: "To the extent it's an
20 Q. And the first question that he wanted you to	20 external symptom."
21 answer was there on page two, the question, "Does	21 MS. RUTTER: An external symptom.
22 Inerteen have permanent effects on the human body? If	22 Q. I'm sorry. External symptom of over exposure
23 so, what type of permanent damage and how long a	23 preceding serious liver injury. Excuse me. Thanks,
24 period of time does it take for this to develop? If	24 Max, for correcting me.
25 not, explain why, if possible." Did I read that	25 That's the information you gave to
Page 502	Page 504
1 question correctly?	1 Mr. Albert at GE -- at Westinghouse in 1975; correct?
2 A. Yeah.	2 A. Uh-huh. The key word there is "excessive".
3 Q. And you gave an answer, and I'm going to	3 Q. Now, this information was known to Monsanto
4 offer the entire exhibit at trial, but I just want to	4 in 1970; correct?
5 direct your attention for the purposes of this	5 A. Yeah.
6 deposition to the paragraph the second paragraph from	6 Q. When all the letters went out to -- We had
7 the end of the answer that starts with "the potential	7 all these questions about the letters that went out to
8 toxic effects in humans". Do you see that? It's on	8 your direct customers and distributors in 1970. This
9 page two.	9 information that I just read was known to -- known to
10 A. On page two.	10 Monsanto; correct?
11 Q. As a part of your answer --	11 A. Yeah. It was even -- On the labels of the
12 A. Oh, okay.	12 products there would be warnings against exposures.
13 Q. -- to question number one.	13 Q. All right. Now, let's go to question three
14 A. All right.	14 in your answer, which is on page three of the exhibit.
15 Q. Okay. It reads, "The potential toxic effects	15 Have you read the question and the answer you gave to
16 in humans from excessive exposure to polychlorinated	16 question three?
17 biphenyls include injury to the liver." Are you with	17 A. Yes.
18 me there now, Mr. Papageorge?	18 Q. Okay. Your answer to that question was,
19 MS. RUTTER: I'm not. Could you show me	19 "There is a potential real effect to humans -
20 where you are?	20 including death - as discussed in the answer to
21 MR. OAAS: It's MONS number 1 -- Are you	21 question number one." Did I read that correctly?
22 on the right page. 100143.	22 A. Yes.
23 MS. RUTTER: All right.	23 Q. And that was known to Monsanto back in 1970?
24 MR. OAAS: And the paragraph that's part	24 A. Yes.
25 of the answer to question number one that starts with	25 Q. And then the next paragraph reads, "Due to
Page 503	Page 505

41 (Pages 502 to 505)

1 differences in metabolism of food (and food
2 contaminants) in birds and humans (and particularly
3 the difference in the reproduction process in birds
4 and mammals - including humans), birds are
5 particularly sensitive to many chlorinated
6 hydrocarbons, including polychlorinated biphenyls."
7 Did I read that correctly?
8 A. Yes.
9 Q. Wasn't that information known to you as the
10 Director of Environmental Operations --
11 A. Yes.
12 Q. -- of Monsanto back in 1970?
13 A. Yes.
14 Q. And wasn't it known to you as the Director of
15 Environmental Operations back in 1970 that the major
16 route of exposure for birds to get PCBs in their
17 symptoms (sic.) was eating fish?
18 MS. RUTTER: Objection, overbroad and
19 vague, lack of foundation.
20 A. I'm not -- I don't recall specific reference
21 to eating fish as being the key source.
22 Q. Okay. But it was at least one of the
23 sources?
24 MS. RUTTER: Same objection, lack of
25 foundation, calls for speculation, conjecture.

Page 506

1 Q. Did you hear my question, Mr. Papageorge?
2 A. No, I didn't. I'm sorry.
3 Q. I'm sorry. I'll repeat it. The question
4 that was out there for you to answer was that -- I
5 think you said that you didn't know back in 1970
6 that -- that eating fish was a major source of PCB
7 ingestion by birds. I think that was the answer you
8 gave. Was that -- My question was, it was at least
9 one route of exposure, whether it was the major one or
10 not?
11 MS. RUTTER: Objection, lack of
12 foundation, calls for speculation and conjecture.
13 A. I would suggest that there were one possible
14 route. There was no evidence that it was a widespread
15 situation.
16 Q. Okay. And you're speaking as -- That answer
17 was you speaking as the Director of Environmental
18 Affairs for Monsanto in 1970?
19 A. Yes.
20 Q. Now, how long did Monsanto -- By 1970, how
21 long had Monsanto been making PCBs?
22 A. Since '34, '35.
23 Q. Can you tell me how it came to be that one or
24 two scientists from Sweden working on their own were
25 the first ones to identify PCBs as a global pollutant?

Page 507

1 MS. RUTTER: Objection to the form of the
2 question in that it assumes facts not in evidence,
3 lack of foundation, but he -- You may answer the
4 question to the best of your ability.
5 Q. I mean, Monsanto's -- I'll rephrase the
6 question. Monsanto's been making PCB -- By 1970,
7 they'd been making PCBs for 30 -- 30 years?
8 A. Yes.
9 Q. Selling them all over the United States;
10 correct?
11 A. Right.
12 Q. Outside of the United States. Large market
13 outside of the United States, correct, for PCBs?
14 A. Yes.
15 Q. For hundreds of uses; correct?
16 A. Right.
17 Q. Maybe thousands of uses; correct?
18 A. Right.
19 Q. I believe, if I remember correctly, the
20 figures I've seen show that in 1969 and 1970 Monsanto
21 was making and marketing some 80 million pounds of
22 PCBs. Does that number sound fair?
23 A. All right.
24 Q. And the question that's always intrigued me
25 about this case is how it came to be that two Swedish

Page 508

1 scientists -- Who were not employees of Monsanto;
2 correct? *
3 A. Correct.
4 Q. They lived in Sweden as far as -- as far as we
5 know; correct?
6 A. Correct.
7 Q. Made the PCB discovery in Sweden; correct?
8 A. Correct.
9 Q. How -- Do you have any idea or opinion on how
10 it came to be that two -- these two scientists, Jensen
11 and Widmark, came to discover PCBs in the environment
12 before Monsanto did?
13 MS. RUTTER: Objection to the form of the
14 question.
15 A. Jensen and Widmark were really looking at DDT
16 and DDE.
17 Q. And that makes my question more -- I meant to
18 add that in my question. They found PCBs and they
19 weren't even looking for them.
20 A. They found it by accident because the
21 instrument they were using was extremely more
22 sensitive than instruments of that nature available to
23 the rest of the world, and even when they found it, it
24 took them a while to try to identify it. They didn't
25 know what it was. They didn't know it was PCB. So

Page 509

42 (Pages 506 to 509)

1 it's -- Everything that developed there was a
2 challenge to them because they kept running into all
3 sorts of problems.
4 Q. Is it your testimony as Director of
5 Environmental Operations for Monsanto that an
6 international chemical company like Monsanto, the size
7 of Monsanto, did not have as easy access to gas
8 chromatography and mass spectrometry in 1966 and 1967
9 as Jensen and Widmark did?

10 MS. RUTTER: Objection to the form of the
11 question.

12 A. No. Because, as individuals, they had a lot
13 more opportunity to do research and experiment in that
14 particular area. The rest of the world didn't have
15 that. It isn't just Monsanto.

16 Q. Well, isn't it Monsanto's responsibility as
17 the manufacturer of PCBs to know everything it can
18 about the product that it's putting out on the market?

19 A. Everything it can, yes, with the knowledge
20 and instruments and -- available to the world at that
21 time. They were ahead -- They were there with the
22 rest of the world.

23 Q. Now, there's been some talk, a lot of talk
24 about a guy named Scott Tucker that came onboard at
25 Monsanto in '69 or '70. Do I have the dates right?

Page 510

1 MS. RUTTER: Objection to the form of the
2 question in that those dates are wrong.

3 Q. When did Scott Tucker first become employed
4 with Monsanto?

5 A. Scott was active in late -- late '60s,
6 after --

7 Q. That's what I said, '69, '70.

8 MS. RUTTER: Objection to the form of the
9 question.

10 Q. Do you know when he first became employed by
11 Monsanto?

12 A. I don't know the dates, but he was involved
13 before 1970.

14 Q. And he was an analytical chemist?

15 A. Correct.

16 Q. Was he the first analytical chemist that
17 Monsanto had ever hired?

18 A. Oh, no.

19 Q. How many analytical chemists did Monsanto
20 have onboard in staff in 1966?

21 A. Analytical chemists? Every plant Monsanto
22 has has at least two of them, so there must have been
23 a hundred of the analytical chemists.

24 Q. And wasn't -- Wasn't it Monsanto's philosophy
25 at the time in the 1960s to keep these analytical

Page 511

1 chemists stocked with the most up-to-date and
2 sophisticated chemistry equipment available?

3 A. Yes. But these instruments we talked about
4 with Jensen and Widmark were not available. They had
5 just been developed coincidentally with their study of
6 DDT. It's pure coincidence.

7 Q. Pure coincidence. Okay. Now, if your
8 counsel could hand you her Exhibit 5 in Notebook A.

9 MS. RUTTER: Okay.

10 Q. That's the Rising & Strand letter. If you'd
11 look over tab five, Mr. Papageorge, please.

12 A. Five?

13 Q. Yeah.

14 A. I have it.

15 Q. This is the letter from Ola?

16 A. Yes.

17 Q. And she was writing to somebody you already
18 identified as a Monsanto Europe employee by the name
19 of David Wood?

20 A. Correct.

21 Q. And apparently at least this letter appears
22 to indicate that Ola Palm was a lawyer that worked for
23 this Rising & Strand law firm?

24 MS. RUTTER: Objection to the
25 characterization of Rising & Strand as a law firm.

Page 512

1 MR. OAAS: Well, that's what I always
2 thought they were. Do you know something different?

3 MS. RUTTER: Yeah. They are not a law
4 firm.

5 MR. OAAS: What are they?

6 MS. RUTTER: I believe they were -- I
7 don't know what they were. I know what they were not.
8 They were not a law firm.

9 MR. OAAS: You learn something new every
10 day.

11 BY MR. OAAS:

12 Q. Let's go to the last page of that letter,
13 please, Mr. Papageorge.

14 A. I have it.

15 Q. Do you know who -- what Rising & Strand did?

16 A. I'm sorry. The who?

17 Q. Rising & Strand.

18 A. No, I don't know anything about them.

19 Q. But apparently David Wood was told by Ola
20 Palm in the last paragraph of her letter that she had
21 no doubt that what Soren Jensen had found were -- were
22 Aroclor? Correct?

23 A. That's true.

24 Q. All right.

25 MS. RUTTER: Well, objection to the form.

Page 513

43 (Pages 510 to 513)

1 The sentence says "suppose," but...
 2 Q. And the date of that is in November of 1966;
 3 correct?
 4 A. Yes.
 5 MR. SHAW: Five minutes of tape left.
 6 MR. OAAS: Why don't we just switch now?
 7 MR. SHAW: This will end tape number five
 8 in the continued deposition of William Papageorge. We
 9 are off the record at 3:22 p.m.
 10 (Whereupon, there was a brief recess.)
 11 MR. SHAW: We are back on the record at
 12 3:28 p.m. This will begin tape number six in the
 13 continued deposition of William Papageorge.
 14 BY MR. OAAS:
 15 Q. Mr. Papageorge, would you go to Exhibit 32
 16 under tab 32 in Notebook A, please?
 17 A. I have the exhibit.
 18 Q. Do you recall Miss Rutter asking you some
 19 questions about this exhibit earlier this morning?
 20 A. Yes.
 21 Q. And this letter does indicate that Monsanto
 22 had a practice in the '66 to '70 time frame, and maybe
 23 even later, of providing anybody who requested an
 24 Aroclor sample; correct?
 25 A. Correct.

Page 514

1 Q. And wouldn't it be fair to say that one of
 2 the reasons Monsanto was cooperating in this regard is
 3 that it wanted these research scientists to make an
 4 accurate determination of the substance they were
 5 testing in the environment to make sure that it was
 6 Aroclor or PCBs and not something else; right?
 7 MS. RUTTER: Objection to the overbroad
 8 and form -- overbroad and vague form of the question
 9 given the area of analytical chemistry, but you may
 10 answer to the extent you're able.
 11 A. I have a bit of hesitation. I think you
 12 mentioned '50s to '70s.
 13 Q. '60s.
 14 A. '60s.
 15 Q. '66 to '70?
 16 A. Late '60s, all right. Yeah. That was the
 17 reason for cooperating.
 18 Q. You didn't want to be accused of putting
 19 something into the environment that wasn't a PCB;
 20 correct?
 21 MS. RUTTER: Objection to the form of the
 22 question.
 23 Q. And that's why you were providing everybody
 24 with an Aroclor sample?
 25 MS. RUTTER: Same objection.

Page 515

1 A. Well, we were providing an Aroclor sample
 2 primarily because we were hoping that all of these
 3 entities that received the sample could contribute to
 4 the knowledge of the system used to determine accurate
 5 data relating to PCBs.
 6 Q. Okay. And one of the accurate data was you
 7 wanted to make sure that -- that they knew what a PCB
 8 was when they were looking at it on a gas
 9 chromatograph; correct?
 10 A. Well, that's one of the reasons, but you will
 11 note many of those entities in 1969 that are listed in
 12 this particular memorandum already had done some work
 13 with PCBs, so they are not totally new.
 14 Q. I understand that, and thank you, sir. Did
 15 Monsanto cooperate with these agencies, and I'm
 16 just -- the Department of Interior, Fish and Wildlife
 17 Service, Bureau of Sport Fisheries, and on and on,
 18 FDA, U.S.D.A., everybody that's listed here, did
 19 Monsanto cooperate with these agencies by giving them
 20 its customer list for PCBs?
 21 A. Customer list?
 22 Q. Yeah.
 23 A. I'm confused. I don't know that they ever
 24 got a customer list.
 25 Q. Okay. Now, let's go to the exhibit under tab

Page 516

1 41.
 2 A. I have it.
 3 Q. Okay. If you'd go to the last page of that
 4 exhibit, I believe Miss Rutter characterized this
 5 exhibit as containing a 12 point action plan for
 6 Monsanto to deal with the PCB issues.
 7 A. Yes.
 8 Q. And then you see there's a number one through
 9 12 on the back; correct?
 10 A. Yes.
 11 Q. Can you tell me what particular points in one
 12 through 12 have to deal with the issue of the PCBs
 13 that were out there and already in use?
 14 A. I see the PCBs out there and already in use
 15 affected by every one of those.
 16 Q. You do?
 17 A. It will touch -- Every one of them can be
 18 affected by the results of that activity.
 19 Q. Now, we saw a Technical Bulletin, I can find
 20 it here, but I think I can do it without looking at
 21 it, a Technical Bulletin that Monsanto put out in
 22 March or April of 1970 warning against putting PCBs in
 23 paint for swimming pools.
 24 A. Uh-huh.
 25 Q. Do you recall that document?

Page 517

44 (Pages 514 to 517)

1 A. Uh-huh.
2 Q. What -- What -- What did Monsanto or what
3 kind of programs or warning letters -- Can you point
4 to anything where Monsanto dealt with the swimming
5 pool owner who had already had PCBs in his swimming
6 pool coating? What was he supposed to do?
7 A. Well, that advice has to come from the
8 individuals who provided that swimming pool paint
9 blender or seller with information regarding what PCBs
10 can do and what concentrations are possible under what
11 conditions. Just because it's in a coating on a
12 swimming pool wall doesn't say anything. It doesn't
13 say a thing because that PCB isn't going to go into
14 the water by itself. It just isn't going to do that.
15 Q. So your testimony is, if I understood your
16 answer correctly, and correct me if I'm wrong, is that
17 responsibility to assist the prior -- in my example,
18 the prior swimming pool owner that already had
19 PCB-containing paint on his swimming pool --
20 A. Yeah.
21 Q. -- that was the responsibility of the person
22 that sold him the paint?
23 A. Yeah. Because that person knew if PCBs were
24 in it.
25 Q. Okay.

Page 518

1 A. The owner of that swimming pool doesn't know
2 what's in that paint.
3 Q. Okay.
4 A. And Monsanto didn't know the owner had a
5 swimming pool with that paint. How can they
6 communicate when they -- There's no information.
7 Q. Okay. And what was the... To my
8 hypothetical, to follow it up, what's the paint, the
9 seller of the paint to the swimming pool customer
10 supposed to tell the swimming pool owner in that -- in
11 that situation?
12 A. Well, there isn't much he can tell until he
13 somehow gets information regarding the possibility of
14 that PCB material in the paint formulation he made can
15 get to a human being and in what quantities. There's
16 no one else that can help him on that. They don't
17 even know it exists.
18 Q. Okay. Now I want you to go -- If counsel
19 would hand you Exhibit WBP M-43. It's in a separate
20 notebook.
21 MS. RUTTER: M-43B I'm not finding in
22 Notebook B. Which --
23 MR. OAAS: WBP M-43.
24 MS. RUTTER: Oh, M-43. I thought you said
25 M-43B. All right. M-43.

Page 519

1 Q. Do you have that exhibit in front of you,
2 sir?
3 A. I do.
4 Q. Okay. That's a letter dated February 19th,
5 1970, to Great Western Chemical Company?
6 A. Yes.
7 Q. And it's sent by -- authored by W. E. Schalk,
8 who at that time was the director of sales of
9 plasticizers; correct?
10 A. Yes.
11 Q. Okay. And is it your testimony under oath,
12 Mr. Papageorge, that this letter by Mr. Schalk is a
13 true, honest, and complete disclosure by Monsanto
14 about what it knew at that time about PCBs?
15 MS. RUTTER: Objection to the overbroad
16 and vague form of the question.
17 A. Yes.
18 Q. Thank you. Now, let's go to Exhibit WBP M-90
19 and Bates number -- It's Bates number MCL 1110.
20 MS. RUTTER: What's the date of that
21 letter?
22 MR. OAAS: The letter we just referred to
23 is February 19th, 1970. This exhibit is the suggested
24 letter from distributors to Aroclor customers.
25 Doesn't have a date on it.

Page 520

1 MS. RUTTER: It's in Notebook D if someone
2 has that. Here.
3 MR. OAAS: That's the notebook right here?
4 MS. RUTTER: Yes. Notebook D. I can
5 direct him to that.
6 MS. RUSSO: I have it here, Carol.
7 MS. RUTTER: Okay. Thanks. Thank you.
8 There you go.
9 BY MR. OAAS:
10 Q. Do you see what I'm looking at there,
11 Mr. Papageorge? It says at the top "Suggested Letter
12 From Distributor to Aroclor Customers"?
13 A. I do.
14 Q. Down at the bottom it has M -- the Bates
15 stamp MCL 000110?
16 A. Correct.
17 Q. And apparently this letter was included with
18 the February 19th, 1970, letter, and it was Monsanto's
19 idea that the distributors were to send this letter to
20 the distributors' own customers; correct?
21 A. Well, they were suggesting they might want to
22 use this letter or compose their own.
23 Q. Now, wouldn't it be fair to say that in
24 February of 1970 the distributors of PCBs that
25 Monsanto used, their best source of information about

Page 521

45 (Pages 518 to 521)

1 PCBs was Monsanto itself?
 2 A. Yes.
 3 Q. Okay. And is this letter that was included,
 4 this proposed, suggested letter, let's call it,
 5 proposed letter, that the distributors were to send to
 6 their customers, was that a true and complete and
 7 accurate disclosure of what Monsanto knew about PCBs
 8 as of February of 1970?
 9 MS. RUTTER: Objection to the overbroad
 10 and vague form of the question.
 11 A. Yes.
 12 Q. And this is the -- And this is the letter
 13 that Great Western -- you wanted Great Western to send
 14 to somebody like Columbia Paint Company; correct?
 15 A. That was possible, yes.
 16 Q. Now, could Monsanto -- Was there any method
 17 in place where Monsanto could force its distributors
 18 to send this letter on to the distributors' own
 19 customers?
 20 A. No. Forcing, no.
 21 Q. And there was no way for Monsanto to ensure
 22 compliance with Monsanto's wish that the distributors
 23 send these letters on to their own customers; correct?
 24 A. No. Monsanto had no authority or power to
 25 enforce that.

Page 522

1 Q. Okay. And are you aware --
 2 A. The only --
 3 Q. I'm sorry. I didn't mean to interrupt you.
 4 A. The only -- Monsanto could only stop selling
 5 the material to customers who ignored Monsanto's
 6 advice and that ignoring the advice would create
 7 problems that Monsanto didn't think should be
 8 tolerated.
 9 Q. All right. Are you aware of any situation
 10 where that occurred?
 11 A. No.
 12 Q. To your knowledge, as Director of
 13 Environmental Operations, did -- did Mr. Schalk, for
 14 example, keep -- do any follow-up? Did he ask Great
 15 Western, for example, to send proof to Monsanto that
 16 these letters had been sent?
 17 A. I don't remember any written summary of that,
 18 but --
 19 Q. Do you recall --
 20 A. -- I do know -- recall -- I do recall
 21 discussions where all the representatives in Monsanto
 22 that were involved with PCBs were out there talking
 23 and twisting arms, if necessary, to get the audience
 24 to listen to them, and they would report back to their
 25 headquarters in St. Louis their findings. All that

Page 523

1 was going on constantly.
 2 Q. And Exhibit 67 is a document that references
 3 that effort; correct?
 4 MS. RUTTER: Objection. Please be sure to
 5 look at the document, Mr. Papageorge. Objection to
 6 lack of foundation since this is the authorless,
 7 dateless document.
 8 MR. OAAS: Came from you.
 9 MS. RUTTER: Didn't come from me. It came
 10 from files. It was a document production.
 11 MR. OAAS: That's how it was presented to
 12 us.
 13 A. Yeah. This describes the thinking at the
 14 time and how -- how to approach that, yeah.
 15 Q. Thank you very much.
 16 (Mr. Miller entered deposition.)
 17 Q. Now, for example, and just to follow up on
 18 the point I'm trying to make, did Monsanto request
 19 that its distributors CC Monsanto on the letters that
 20 it sent to its own customers in this regard?
 21 A. Not that I'm aware of.
 22 MR. OAAS: Now, if I can locate the -- Or
 23 if counsel can help me locate the August 14th, 1970,
 24 letter.
 25 MS. RUTTER: It's under tab H of the

Page 524

1 notebook you're in, Exhibit M-60, and I will help
 2 Mr. Papageorge locate it as well. There are actually
 3 two August 14ths, at least two August 14th letters
 4 under that tab.
 5 Mr. Oaas, do you have an estimate how much
 6 longer you'll be?
 7 MR. OAAS: About 10 minutes.
 8 MS. RUTTER: Okay.
 9 MR. OAAS: I want the witness to look at
 10 MCL 000397, please.
 11 MS. RUTTER: That's not -- What notebook
 12 are you in?
 13 MR. OAAS: Your notebook WBP M-102.
 14 MS. RUTTER: Ah, you are in the right
 15 notebook. There you go.
 16 THE WITNESS: M-102.
 17 MS. RUTTER: And the Bates number is 397?
 18 MR. OAAS: Correct.
 19 MS. RUTTER: All right. I think we're all
 20 on the same page.
 21 BY MR. OAAS:
 22 Q. Now, Mr. Papageorge, it's my understanding
 23 that this letter was sent out by Mr. Schalk to
 24 Monsanto's direct plasticizer customers about two
 25 weeks before Monsanto withdrew the sales of Aroclors

Page 525

46 (Pages 522 to 525)

1 for plasticizer applications. Do I have my time frame
2 correct?
3 A. Uh-huh.
4 Q. Is that correct?
5 A. Yes.
6 Q. Okay. And correct me if I'm wrong, but this
7 letter was directed to your direct customers as to
8 what -- Since they weren't going to be able to buy
9 Aroclor anymore for plasticizer uses, it appears to
10 me, and correct me if I'm wrong, that the main purpose
11 of this letter was to let them know what they should
12 do with any inventory that they had on hand and might
13 be selling after August 14th, 1970.
14 A. Well, yeah. It does cover that, with this
15 additional information that was included.
16 Q. What are you referring to?
17 A. Attached to that letter of August 14th --
18 Q. Was the Technical Bulletin?
19 A. Was a revised Technical Bulletin with new
20 information regarding the PCB situation.
21 Q. Okay. And the only point I want to make, I
22 think I understand it correctly, but this letter went
23 out about two weeks before you discontinued all sales
24 of PCBs for use in the plasticizer applications;
25 correct?

Page 526

1 A. Yes.
2 Q. Okay. And isn't it true that by August of
3 1970 Monsanto had developed replacement products for
4 its Aroclors that were used in plasticizer
5 applications?
6 A. Yes.
7 Q. And those products, or at least some of those
8 products, had been developed in the 1969 and 1970 time
9 frame; correct?
10 MS. RUTTER: Objection, overbroad and
11 vague, calls for speculation.
12 A. I'm not aware of any of those products being
13 that newly developed. They were existing plasticizers
14 that were now being recommended for use as
15 replacements in those applications where PCBs were
16 withdrawn.
17 Q. Okay. Well, maybe -- Maybe I don't
18 understand the time frame, and I just want to get it
19 right. Are you saying that -- that Monsanto
20 terminated its PCB sales for use in plasticizer
21 applications when it felt ready to recommend these
22 replacement products for use in its plastic -- in its
23 plastic -- former plasticizer applications that it
24 used PCBs?
25 MS. RUTTER: Objection to the overbroad

Page 527

1 and vague form of the question.
2 A. Being ready was not the issue. They were
3 ready. Those products were old products that Monsanto
4 had been selling to other applications for years, and
5 all they had to do was inform the customer that
6 replacement with these products could take place.
7 It's available. Let us know how much you want.
8 Q. Right. So -- So if Monsanto had decided to
9 terminate sales of PCBs for plasticizer uses in 1967,
10 for instance, they already had a whole array of
11 non-PCB plasticizers that could be used by its
12 customers; correct?
13 MS. RUTTER: Objection to the overbroad
14 and vague form of the question since it doesn't take
15 into consideration the numerous varied uses and the
16 potential issues with potential unspecified
17 replacement products.
18 A. Well, the products were there, but the wisdom
19 of replacing them was not apparent until this period
20 of time.
21 Q. Until August of 1970?
22 A. Well...
23 Q. Or thereabouts?
24 A. Or thereabouts. August 1970 was the target
25 date.

Page 528

1 Q. Okay. And just so I understand, the
2 replacement materials that you recommended for use in
3 your plasticizer applications that had formerly used
4 PCBs had been made by Monsanto for a long, long time?
5 MS. RUTTER: Objection, mischaracterized
6 his testimony.
7 A. For some time. I don't know long, long.
8 Q. Tell me a time. Since the mid '50s?
9 A. Some of them maybe a couple years. Some of
10 them maybe 20 years. A whole mixture.
11 Q. All right. Mr. Papageorge, isn't it true by
12 August of 1970 Monsanto knew that Columbia Paint
13 Company was a customer of Great Western?
14 A. That I don't know. I'd have to look at
15 paperwork.
16 Q. Well, let's dig out Exhibit 70. If you'd get
17 my Plaintiff's Exhibit 70 in front of you, please.
18 MR. OAAS: Do you want to help him?
19 MS. RUTTER: I would help if I knew what
20 it was. What I thought you were talking about --
21 MR. OAAS: The bill of lading.
22 MS. RUTTER: Okay. That -- You told me
23 that was Plaintiff's Exhibit 80.
24 MR. OAAS: No. No. That's 70. It's
25 marked 70.

Page 529

47 (Pages 526 to 529)

1 MS. RUTTER: Mine's marked 17, but okay.
2 You think this is 70?
3 MR. OAAS: Yes. I know it's 70.
4 BY MR. OAAS:
5 Q. Remember that exhibit, Mr. Papageorge?
6 A. Yes. I recognize it.
7 Q. I asked you some questions about it earlier.
8 A. Yes.
9 Q. And my question this time is isn't it true
10 that Monsanto knew by August of 1970 that Columbia
11 Paint Company of Helena, Montana, was a customer of
12 Great Western?
13 A. Yes, they did.
14 Q. Thank you. Now, your counsel had you -- I'm
15 not going to dig them out unless she wants to -- had
16 you identify some correspondence that was sent to a
17 professor at MSU and Carroll -- MSU in Bozeman,
18 Montana, and Carroll College in Helena, Montana. Do
19 you recall?
20 A. I do.
21 Q. And that was an opportunity that Monsanto had
22 to inform those individuals about anything they wanted
23 to tell them about the PCB situation; correct?
24 A. It was an opportunity, yes.
25 Q. Mr. Papageorge, can you tell me when Monsanto

Page 530

1 knew that paint containing PCBs was getting into the
2 environment?
3 MS. RUTTER: Objection to the overbroad
4 and vague form of the question. Calls for speculation
5 and conjecture.
6 A. Will you describe your expression "getting
7 into the environment"? In what way? I'm thinking now
8 let's take this traffic lane. The yellow line
9 disappears.
10 Q. Sure.
11 A. You can say, yeah, we knew that was getting
12 into the -- into the environment. That's the only
13 place it could go.
14 Q. And when do you -- When do you think Monsanto
15 became -- acquired that knowledge?
16 A. From day one.
17 MS. RUTTER: In relation to traffic lane
18 lines?
19 A. In fact, when the -- When that paint
20 disappears, it's going somewhere.
21 Q. I think we finally agree on something. When
22 house paint -- When exterior house paint disappears,
23 it's going somewhere; correct?
24 A. If it disappears, yes.
25 Q. And when traffic paint disappears, it's going

Page 531

1 somewhere; correct?
2 A. Correct.
3 Q. And it's going into the environment; correct?
4 A. The environment covers everything, so --
5 Q. And when swimming pool paint that has PCBs in
6 it flakes off and chips off, gets rubbed off by
7 swimmers, is abraded just by the action in the water,
8 it's going into the environment; correct?
9 MS. RUTTER: Objection to the overbroad
10 and vague form of the question, assumes facts that are
11 not and will not be in evidence in this particular
12 case, but you are free to answer --
13 MR. OAAS: You're wrong --
14 MS. RUTTER: -- the question.
15 MR. OAAS: -- about that.
16 Q. You can answer the question.
17 A. Yeah. That material containing the PCBs is
18 in the environment.
19 Q. Sure. Just common sense; right?
20 A. I don't know how common it is.
21 Q. When paint flakes off, blisters, chips off,
22 it's blown off by the wind, rain, snow, where does it
23 go?
24 A. Wherever the elements take it.
25 Q. I have five more exhibits that I have a brief

Page 532

1 period of time on. Here. You can have those as a
2 copy.
3 MS. RUTTER: All right. Thank you.
4 (Mr. Miller no longer present.)
5 Q. Mr. Papageorge, were you aware that there was
6 a national conference on PCBs in 1975?
7 A. A national conference?
8 Q. Yeah.
9 A. Will you describe that for me?
10 Q. Sure. I'll just show you the heading on my
11 exhibit. Counsel can have it marked. I mean, it
12 reads "National Conference on Polychlorinated
13 Biphenyls, November 19 - 20, 1975, Chicago, Illinois,
14 Sponsored By the Environmental Protection Agency in
15 Cooperation with" --
16 A. Yeah. I attended that.
17 Q. You went there?
18 A. Yes.
19 Q. I'm not surprised. That's what I'm going to
20 ask you about, some of the papers that were presented
21 there. Okay?
22 A. Uh-huh.
23 Q. Did you go to Mr. Train's introductory
24 remarks?
25 A. Yes. I was there.

Page 533

48 (Pages 530 to 533)

1 Q. And did you know who Mr. Train was at the
2 time?
3 A. Yes. Environment Protection leader.
4 Q. Okay. Was there -- Was there -- He was the
5 Environmental Protection leader?
6 A. Yes.
7 Q. You smile when you say that. Is there a
8 reason for that?
9 A. Well, I kind of smile at the word "leader".
10 Q. You didn't think too highly of Mr. Train?
11 A. Huh?
12 Q. You didn't think too highly of Mr. Train?
13 A. No. No. No. Russell Train was -- he was
14 all right.
15 Q. Okay.
16 A. He's a professional.
17 Q. Now, if you'd turn to page seven of Exhibit
18 71.
19 A. I have it.
20 Q. If you could just read to yourself that page,
21 just take a minute and read it to yourself.
22 A. I have read that page.
23 Q. All right. You recall listening to his
24 opening remarks at the conference?
25 A. Yes.

Page 534

1 Q. Okay. That page, he states, and, again, I'm
2 reading from the right-hand column at the top, "We
3 believed that all these measures added up to an
4 effective, comprehensive program that would 'take
5 care' of the PCB problem, and would enable us to
6 continue to take commercial advantage of the unique
7 properties of PCBs while insulating the public and the
8 environment against exposure to hazardous levels of
9 those chemicals." Correct?
10 A. Yes.
11 Q. Okay. And one of the things -- He mentioned
12 a number of things. One of them was that by that time
13 Monsanto has ceased selling PCBs for use in what we
14 described as open systems; correct?
15 A. Correct.
16 Q. Then he goes on to say -- I mean -- He goes
17 on to say, "Instead, more than three years later, we
18 find that although PCB levels in food have steadily
19 declined PCBs are present in our environment to a far
20 greater degree and at higher levels than we previously
21 thought."
22 Now, as Director of Environmental
23 Operations for Monsanto at the time, did you agree or
24 disagree with that statement that Mr. Train made?
25 A. Oh, I agreed with him.

Page 535

1 Q. All right. That's all with that exhibit.
2 Thanks, Mr. Papageorge. Let's go to the next exhibit,
3 which is Exhibit No. 72, I believe.
4 A. 72?
5 Q. Yeah.
6 MS. RUTTER: Have these exhibits been
7 produced before, Mr. Oaas?
8 MR. OAAS: Yes. They were produced to
9 Adam Miller at Dr. Madison's deposition.
10 Q. I'm having you look at a paper that was
11 presented at the 1975 conference entitled "Sources of
12 Polychlorinated Biphenyls in Wisconsin" authored by
13 somebody named Kleinert, K-L-E-I-N-E-R-T. Do you see
14 that, Mr. Papageorge?
15 A. I do.
16 Q. And apparently Mr. Kleinert is the Chief of
17 Surveillance of the Wisconsin Department of Natural
18 Resources in Madison, Wisconsin. Would you agree with
19 that?
20 A. Yes.
21 Q. Okay. I'm going to direct your attention to
22 a paragraph on page 124, the right-hand column.
23 Begins with the words "tracing sources of PCBs". Do
24 you see where I'm reading from?
25 A. I do.

Page 536

1 Q. Mr. Kleinert as the Chief Surveillance
2 Officer of the Department of Natural Resources in
3 Madison, Wisconsin, is telling the 1975 PCB conference
4 that tracing -- that, quote, "Tracing sources of PCBs
5 reaching a large municipal wastewater treatment plant
6 is a difficult and time consuming task. The
7 department is attempting to trace sources of PCBs
8 reaching treatment systems where the final effluent
9 exceeds one part per billion. At the present time, we
10 know of only two municipal wastewater treatment plants
11 in Wisconsin which exceed one part per billion, the
12 Sheboygan and Portage facilities." Do you see where I
13 was reading from?
14 A. Yes.
15 Q. Did I read that accurately?
16 A. Yes.
17 MS. RUTTER: Where are you reading from,
18 counsel?
19 MR. OAAS: Page 124.
20 MS. RUTTER: All right.
21 MR. OAAS: You can go ahead and look at it
22 a minute, counsel, before I ask him a question.
23 MS. RUTTER: Page 124. Mine starts with
24 127.
25 MR. OAAS: You don't have the right

Page 537

49 (Pages 534 to 537)

1 exhibit.
2 MS. RUTTER: I have a document that starts
3 with 284, one that starts with 254, and one that
4 starts with 127.
5 MR. OAAS: Do you mind sharing with the
6 witness? I think that's the only one. He's got two
7 of them or it got lost somewhere in the mound of paper
8 here.
9 MS. RUTTER: Yes. I do not have that one.
10 MR. OAAS: Go ahead and take a minute
11 to -- Take all the time you need, actually.
12 MS. RUTTER: Let's move along. We're --
13 MR. OAAS: All right.
14 BY MR. OAAS:
15 Q. All right. Now, Mr. Papageorge, here we have
16 a report, do we not, from the head of the Department
17 of Natural Resources in Madison, Wisconsin, where they
18 were having a great deal -- it indicates that they're
19 having a great deal of trouble trying to track down
20 the sources of PCBs that were reaching the waters in
21 Wisconsin.
22 A. Yeah.
23 Q. Would that be true?
24 A. That's true.
25 MS. RUTTER: What's the date of this?

Page 538

1 What's the date of this document?
2 MR. OAAS: 1975.
3 MS. RUTTER: Okay.
4 Q. Did you -- Did you -- Do you recall going to
5 this presentation?
6 A. Yes. I was there.
7 Q. And wouldn't it be true that one of the
8 reasons that the Department of Natural Resources in
9 Madison, Wisconsin, was having a difficult time
10 locating the sources of PCBs going into the waters of
11 Wisconsin is that they did not have Monsanto's
12 plasticizer or any customer list; correct?
13 MS. RUTTER: Objection to the overbroad
14 and vague form of the question. Calls for
15 speculation. Lack of foundation.
16 A. I don't attribute the difficulty only to the
17 lack of a customer list. It's a much more complex
18 problem than you make it out to be. They not only
19 have to decide where to take a sample, but even if
20 they pick a site, they have to determine do they want
21 to take it at the top of the water, down at the very
22 bottom, do they want mud, do they want to -- how close
23 do they want it to the possible source of the
24 contamination. It's a very complex situation they're
25 looking at. It's not that easy where you go to a list

Page 539

1 and say, "Oh, here it is."
2 Q. Wouldn't you at least agree with me,
3 Mr. Papageorge, that the list certainly would have
4 helped the officials of the Department of Natural
5 Resources in Wisconsin locate the sources of PCBs that
6 were getting into their waterways?
7 MS. RUTTER: Objection, calls for
8 speculation and conjecture, assumes facts not in
9 evidence, that that particular department even asked
10 for such a list.
11 A. I --
12 Q. That brings up a good question.
13 A. I'd have to know much more about the
14 activities at that site in terms of how the PCB
15 arrived at that plant, what did it undergo as it went
16 through their system, where did it end up. It isn't
17 just a name of a company. Just about every industrial
18 company on that riverfront they're looking at could
19 have a source of PCBs. It could be their transformer;
20 it could be their hydraulic pump; it could be the
21 product they're making. It's not that easy.
22 MS. RUTTER: I would ask our videographer
23 how much longer we have on this tape.
24 MR. SHAW: We have 16 minutes.
25 MR. OAAS: Okay.

Page 540

1 MS. RUTTER: Mr. Oaas, you said 10 minutes
2 ago --
3 MR. OAAS: Right.
4 MS. RUTTER: -- or you said 20 minutes --
5 MR. OAAS: I'm going to be done --
6 MS. RUTTER: -- ago that you had 10
7 minutes.
8 MR. OAAS: I'm going to be done by the end
9 of this tape.
10 MS. RUTTER: That's for sure?
11 MR. OAAS: Yeah.
12 BY MR. OAAS:
13 Q. Well, won't you at least give me this much,
14 Mr. Papageorge? If the Department of Natural
15 Resources in Madison, Wisconsin, had had the list of
16 PCB customers, that certainly would have assisted them
17 in locating where the -- at least helped at least a
18 little bit in helping them locate where the PCBs were
19 getting into the waters of Wisconsin?
20 MS. RUTTER: Objection. Calls for total
21 speculation and conjecture.
22 A. I'd have to guess, Mr. Oaas. I --
23 Q. Okay.
24 A. I don't see any --
25 Q. And if --

Page 541

50 (Pages 538 to 541)

1 A. -- true benefit.
2 Q. Okay. And if, in fact -- If, in fact, the
3 Department of Natural Resources in Wisconsin had asked
4 Monsanto in 1970 or '71 for a list of Monsanto's
5 direct customers for PCBs, that request would have
6 been denied; correct?
7 MS. RUTTER: Objection. Calls for
8 speculation and conjecture, assumes facts that are not
9 and will not be in evidence.
10 A. Monsanto was willing to give those lists as
11 long as they were held confidential.
12 Q. Right. So, in other words, the Department of
13 Natural Resources couldn't use the list to go out and
14 find out where the PCBs were coming from; correct?
15 A. I don't -- just don't know how they would use
16 the list, and I don't know how confidential they could
17 keep that information.
18 Q. You're certainly aware of the letters that we
19 talked about at your last deposition from John Mason
20 to Congressman Ryan of Ohio where Mr. Mason refused to
21 turn over to the United States Congress Monsanto's
22 customer lists in 1970 and '71; correct?
23 A. That's right.
24 Q. Okay.
25 MS. RUTTER: Objection. Mischaracterizes

Page 542

1 the letter. There was correspondence with one
2 particular Congressman.
3 MR. OAAS: And that makes a difference to
4 you?
5 Q. All right. Let's go on to Exhibit seventy --
6 the next exhibit. What number is that?
7 A. 73.
8 Q. 73?
9 MS. RUTTER: Who's the author on this one?
10 MR. OAAS: John Hesse.
11 Q. You're referring to an exhibit entitled
12 "Polychlorinated Biphenyl Usage and Sources of Loss to
13 the Environment in Michigan". Correct,
14 Mr. Papageorge?
15 A. Yes.
16 Q. Authored by John L. Hesse, H-E-S-S-E?
17 A. Yes.
18 Q. And he appears to be the supervisor of the
19 Toxic Materials Unit of the Department of Natural
20 Resources in Michigan?
21 A. Yes.
22 Q. Okay. So -- So here at this conference we
23 had two papers being given by lead officials of the
24 Department of Natural Resources of Wisconsin and
25 Michigan; correct?

Page 543

1 A. Yes.
2 Q. Did you go to the -- Did you go to
3 Mr. Hesse's presentation?
4 A. I don't think so. I don't remember this.
5 MS. RUTTER: Objection then, lack of
6 foundation for any further questions.
7 Q. Now, if you go to page 129 of that exhibit,
8 Mr. Papageorge.
9 A. I have it.
10 Q. Up in the top right-hand column it reads,
11 "From 1971 through 1973, Michigan identified at least
12 12 facilities discharging PCBs to surface waters or
13 municipal sewers from this usage. Concentrations in
14 some discharges were as high as 5.2 milligrams per
15 liter." And they're talking about heat transfer
16 systems. Do you see that?
17 A. Yes.
18 Q. Okay. Wouldn't it be fair to say that at
19 least the Department of -- the supervisor of the
20 Department of Natural Resources in Lansing, Michigan,
21 was -- was interested in finding out how PCBs were
22 getting into lakes, rivers, and streams in the state
23 of Michigan?
24 A. Yes.
25 Q. Then he goes on to say on page 130 in the

Page 544

1 right-hand column, second full paragraph down under
2 the heading "Discussion," "Since new industrial
3 sources of loss are continuously being found, we feel
4 we are far from eliminating the PCB inputs to surface
5 waters by searching for point sources and taking
6 corrective measures on a case-by-case basis. We are
7 far from understanding the impact or comparative
8 contribution of atmospheric losses, but we feel these
9 are probably very significant also." Did I read that
10 correctly?
11 A. Yes.
12 Q. Okay. Apparently he's feeling quite
13 frustrated at the slow progress that Michigan is
14 making in identifying the point sources of PCBs
15 discharges into Michigan waters?
16 MS. RUTTER: Is that a question or a
17 speech?
18 Q. Would that be a fair characterization of that
19 particular passage in his paper?
20 MS. RUTTER: Objection. Calls for
21 speculation and conjecture in relation to the thought
22 processes of someone who gave a speech that
23 Mr. Papageorge was not even present at.
24 Q. You can answer the question, sir.
25 A. I can't answer because I just don't feel I

Page 545

51 (Pages 542 to 545)

1 have enough information.
2 Q. Okay. Let's go to the next exhibit, please.
3 I'm finished with that one, but go to the next
4 numbered exhibit, No. 74.
5 A. Yes.
6 Q. Do you know who Ian Nisbet is?
7 A. I don't remember him.
8 Q. Okay. He presented a report at this
9 conference entitled "Environmental Transport and
10 Occurrence of PCBs in 1975"?
11 A. That's what it's titled, yes.
12 Q. And the report, the written report indicates
13 that he's identified as the Director of the Scientific
14 Staff of the Massachusetts Audubon Society; correct?
15 A. Correct.
16 Q. And I direct your attention to the abstract
17 of the article. Mr. Nisbet states, "Despite
18 curtailment of some dispersive uses, environmental
19 levels and rates of transport of PCBs have not changed
20 greatly since 1972. This is probably due in part to
21 the continued release of materials in service prior to
22 1971 and in part to time lags in environmental
23 transport and dissipation."
24 As Director of Environmental Operations
25 for Monsanto, would you agree or disagree with that

Page 546

1 statement?
2 MS. RUTTER: Objection, calls for
3 speculation and conjecture, total lack of foundation.
4 A. I just don't have an answer for that. I
5 don't know.
6 Q. And then the last exhibit, please. That's
7 Exhibit 75.
8 A. I have it.
9 Q. Okay. Do you recall attending a presentation
10 by Alan N-E-B-E-K-E-R, I don't know how it's
11 pronounced, Ph.D., entitled "Summary of Recent
12 Information Regarding Effects of PCBs on Freshwater
13 Organisms"?
14 A. That's the title.
15 Q. Do you know who Dr. Nebeker is?
16 A. I don't remember him.
17 Q. Is he identified in this document as an
18 employee of the Western Fish Toxicology -- Toxicology
19 Station at the Corvallis Environmental Research
20 Laboratory, U.S. Environmental Protection Agency,
21 Corvallis, Oregon? Do you see that down at the
22 bottom?
23 A. Yes, I see that.
24 Q. Didn't he report that, and I'll direct your
25 attention to page 286 under the heading

Page 547

1 "Bioconcentration," didn't Dr. Nebeker report at this
2 conference that fish could uptake PCBs directly from
3 water?
4 MS. RUTTER: Objection, lack of
5 foundation. There's no evidence that this witness
6 attended this particular presentation, and can you
7 please provide the date at which you're asking this
8 question? I don't have the cover page to your book.
9 Q. Dr. Papageorge -- or, Mr. Papageorge, I'm
10 looking at page 286, and I'm directing your attention
11 to the second paragraph under the heading
12 "Bioconcentration". Do you see that?
13 A. I see that.
14 MS. RUTTER: These are comments made at a
15 conference in 1975?
16 MR. OAAS: A National Conference on PCBs
17 in 1975.
18 BY MR. OAAS:
19 Q. And it reads, "Exposure of fish to water
20 containing PCBs demonstrate that they can
21 bioconcentrate PCBs directly from the water, in
22 addition to uptake in food." Do you see what I'm
23 reading there?
24 A. I see what you're reading, but --
25 Q. Would that have been -- In 1975, would that

Page 548

1 have been new information to you as Director of
2 Environmental Operations at Monsanto?
3 MS. RUTTER: Objection. Lack of
4 foundation, calls for speculation.
5 A. I don't know that I'd call it new. It's
6 questionable whether the PCB they're referring to as
7 being in the water is, in truth, in solution in the
8 water or in particles in that water.
9 Q. Okay. Then it goes on to say, "The
10 bioconcentration factor (concentration in fish
11 tissue/concentration in the water) for PCBs is
12 essentially independent of the PCB concentration in
13 the water." Do you see where I read?
14 A. Yes.
15 Q. You agree or disagree with that statement?
16 MS. RUTTER: Objection, overbroad and it's
17 vague.
18 MR. OAAS: I'll strike that.
19 Q. Is that new information to you as the
20 Director of Environmental Operations at Monsanto?
21 MS. RUTTER: In 1975?
22 MR. OAAS: In 1975.
23 MS. RUTTER: Objection.
24 A. I don't know that I call it information.
25 This is one man's opinion based on some information he

Page 549

52 (Pages 546 to 549)

1 had.
2 Q. As of 1975, are you telling me that as the
3 Director of Environmental Operations for Monsanto you
4 didn't know whether or not fish could uptake PCBs
5 directly from water?
6 A. I did not know that. I knew that there was a
7 relationship between the PCBs found within the fish
8 and the environment in which they were taken. That's
9 the only connection I have. I don't know how it
10 happened, whether the fish just absorbed it or whether
11 they ate it or whether it went through their gills.
12 MS. RUTTER: You've got four minutes --
13 Q. When did you --
14 MS. RUTTER: -- Mr. Oaas.
15 Q. When did you know that as Director of
16 Environmental Operations?
17 A. Know what.
18 Q. Know that fish could uptake PCBs from their
19 environment.
20 A. Because they kept -- The reports I kept
21 seeing reported the presence of PCBs in these fish,
22 and then they extrapolated that by determining PCBs in
23 their environment and those investigators at the time
24 made the connection, a direct connection.
25 Q. All right.

Page 550

1 A. None of them were able to positively
2 demonstrate that the amount of PCB in fish and type
3 was directly related to the presence in the
4 environment.
5 Q. And that includes Dr. Nebeker?
6 A. Yeah.
7 MR. OAAS: Let me just look through my --
8 Why don't we just go off the record for a minute? I
9 just want to look through my things here --
10 MR. SHAW: We're off the record --
11 MR. OAAS: -- and I'm done.
12 MR. SHAW: -- at 4:24 p.m.
13 (Whereupon, an off-the-record discussion
14 was held.)
15 MR. SHAW: We are back on the record at
16 4:27 p.m. This will begin tape number seven in the
17 continued deposition of William Papageorge.
18 EXAMINATION
19 QUESTIONS BY MS. RUTTER:
20 Q. Mr. Papageorge, I'll be quick. I know those
21 are famous last words for a lawyer. Do you recall
22 Plaintiffs' counsel asking you questions about chronic
23 toxicity studies for PCBs?
24 A. Yes.
25 Q. And you referred to some studies you were

Page 551

1 aware of about LD-50s before the 1968/69 time period;
2 is that correct?
3 A. Correct.
4 Q. Right. Now, Monsanto's Medical Department
5 was in charge of toxicity testing; is that correct?
6 A. That is correct.
7 Q. That would be under the auspices of Dr. Emmet
8 Kelly and Elmer Wheeler?
9 A. Correct.
10 Q. Correct. So if Dr. Kelly has previously
11 testified under oath that in 1955 subchronic toxicity
12 tests were run on PCBs by the Kettering Laboratory or
13 Dr. Treon, you wouldn't dispute that his knowledge --
14 he has direct knowledge of those tests, more direct
15 than you do?
16 A. Oh, yes. Definitely.
17 MR. OAAS: I'd just object to the form of
18 the question.
19 Q. Okay. And you've heard of the Dr. Treon
20 Kettering studies?
21 A. Yes.
22 Q. You may or may not have been aware that
23 Dr. Kelly has characterized those as subchronic?
24 MR. OAAS: Object to the form of the
25 question.

Page 552

1 A. That's true.
2 Q. Okay. But, in any event, Monsanto had some
3 extensive and expensive toxicity testing run by the
4 Kettering Laboratory, I believe that's in Cincinnati,
5 Ohio, in about 1955 or that time frame by Dr. Treon.
6 Do you recall those studies?
7 A. I recall that, yes.
8 Q. Mr. Papageorge, in response to some of
9 Plaintiffs' counsel's questions, you referred to the
10 fact that because highway stripes disappear you assume
11 they are disappearing into the environment. You
12 recall that testimony?
13 A. That was an assumption.
14 Q. Right.
15 A. It had to go somewhere.
16 Q. Right. But, now, Monsanto during the early
17 time period didn't realize that PCBs were persisting
18 in the environment and getting into the food chain; is
19 that correct?
20 MR. OAAS: Object to the form of the
21 question.
22 A. There was no evidence of any kind -- of that
23 kind at all, so it was just assumed to be harmless
24 like every other paint job.
25 Q. Plaintiffs' counsel asked you a number of

Page 553

53 (Pages 550 to 553)

1 questions about substitutes for PCB plasticizers. The
2 appropriate substitute depended on the particular
3 application; did it not?
4 A. Oh, yes. Definitely.
5 MR. OAAS: Object to the form of the
6 question.
7 Q. And there were also issues, were there not,
8 of making sure that the proposed substitute wouldn't
9 have toxicity issues or environmental concerns of its
10 own?
11 MR. OAAS: Object to the form of the
12 question.
13 A. Yes. That's true.
14 MS. RUTTER: This is redirect, counsel.
15 MR. OAAS: I know it is.
16 Q. Mr. Papageorge, let me hand you Exhibit 67.
17 This is the undated, anonymous author document. Do
18 you know whether that document was ever distributed to
19 anyone in Monsanto beyond the original author or a
20 relatively small group?
21 MR. OAAS: Object to the form of the
22 question.
23 A. I know it was definitely available to the
24 leaders of the activities associated with these kinds
25 of things, like the Marketing Director, the members of

Page 554

1 the Medical or Health Department, lawyers, the public
2 relations types, but whether it was distributed more
3 or less universally within the company, I've never
4 heard of that one.
5 MR. OAAS: I'll withdraw my objection.
6 Q. In relation to Westinghouse, you recall the
7 exhibit that Plaintiffs' counsel showed you about your
8 correspondence with Westinghouse in -- Was it Sharon,
9 South -- or South Boston, Pennsylvania?
10 A. Yes. Yes. I...
11 Q. Let me just find the exhibit quickly. The
12 exhibit is Plaintiff's 68, and the exhibit you were
13 asked about was to Mr. Dan Albert of Westinghouse at
14 South Boston, Virginia.
15 A. South Boston.
16 Q. On March 18th, 1975.
17 A. What was the question? Did I remember that
18 you said?
19 Q. Yes. You remember this exhibit that was
20 shown to you by Plaintiffs' counsel? It related to
21 toxicity questions being asked by Westinghouse.
22 A. '75...
23 Q. My questioning will be fairly quick. Was
24 Aroclor 1254 used in capacitors?
25 A. Was Aroclor?

Page 555

1 Q. Was Aroclor 1254 used in capacitors?
2 A. No.
3 Q. What Aroclor was used in capacitors?
4 A. Primarily 42, 1242, 1232, in some cases 1221.
5 Q. And perhaps later on Aroclor 1016?
6 A. 1016.
7 Q. The more biodegradable 1242?
8 A. Correct.
9 Q. Correct. So assuming that South Boston,
10 Virginia, was a capacitor plant, there would have been
11 no Aroclor 1254 at that plant?
12 A. No.
13 Q. Now, Mr. Oaas asked you questions about
14 toxicity of PCBs and some of the statements you made
15 in response to Mr. Albert's questions. First let me
16 ask you, did Westinghouse have its own medical
17 department?
18 A. They certainly had a medical department, but
19 I have no idea whether they ever got involved in -- in
20 this matter.
21 Q. That would have been Dr. Emmet Kelly and
22 Dr. Elmer Wheeler who would have knowledge of that
23 information?
24 A. If there was any medical question, that
25 communication would take place in that fashion.

Page 556

1 Q. And so the name Wilbur Speicher as an
2 industrial hygienist at Westinghouse who corresponded
3 with Elmer Wheeler frequently doesn't ring a bell with
4 you?
5 A. No.
6 Q. Okay. Mr. Papageorge, can almost any
7 industrial chemical, if there is excessive exposure,
8 cause death?
9 MR. OAAS: Gee, I object to the form of
10 the question.
11 A. Certainly.
12 Q. Have there been cases reported where drinking
13 too much water can cause death?
14 A. Yes.
15 Q. Anything that's excessive exposure can result
16 in adverse circumstances?
17 A. Correct.
18 Q. And PCBs --
19 MR. OAAS: I object to all these leading
20 questions.
21 Q. PCBs are a chlorinated hydrocarbon; is that
22 correct?
23 A. Correct.
24 Q. And are all chlorinated hydrocarbons known
25 generally to act upon the liver if there is -- if

Page 557

54 (Pages 554 to 557)

1	there is excessive exposure?	1	MS. RUTTER: Let's go off the record for a
2	A. That's the general understanding, yes.	2	second.
3	Q. The EPA has subpoena power, do they not,	3	MR. SHAW: We are off the record at 4:38
4	Mr. Papageorge?	4	p.m.
5	A. My understanding is they do have that.	5	(Whereupon, there was a brief recess.)
6	Q. And Congress has subpoena power, too; do they	6	MR. SHAW: We are back on the record at
7	not?	7	4:40 p.m.
8	A. Certainly.	8	MS. RUTTER: And I believe all counsel
9	Q. Did any governmental entity to your	9	have agreed that our questioning is done other than
10	knowledge, be it Congressman Ryan, be it the EPA, be	10	I'm going to go over some exhibit foundations with
11	it some other member of Congress, ever subpoena	11	Mr. Papageorge, but we've agreed to do that off the
12	Monsanto's customer records?	12	video tape.
13	A. No.	13	MR. SHAW: This concludes the video
14	Q. And in relation to the Interdepartmental Task	14	portion -- video tape portion of the deposition of
15	Force report that was published in May 1972, that's	15	William Papageorge. We are off the video record at
16	Exhibit 72, did Monsanto provide production and PCB	16	4:40 p.m.
17	use information in relation to the public -- in	17	MR. OAAS: I'm not going to stipulate for
18	reference to the publication of that report?	18	the record that something might come up where
19	A. I think, yes, they did.	19	plaintiffs would want to seek to additionally depose
20	Q. In fact, I think if we took the time to	20	Mr. Papageorge. I can stipulate we're done for today.
21	examine the report there would be information in there	21	MS. RUTTER: You know, people do that.
22	that -- discussing information provided by Monsanto.	22	People do what they are going to do.
23	A. Correct.	23	Faith, let's go off the record for a
24	Q. Finally, let me hand you a copy of	24	minute.
25	Exhibit 30, that's Plaintiff's Exhibit 30, which	25	THE REPORTER: Okay.

Page 558

Page 560

1	during your earlier deposition was identified on the	1	(Whereupon, there was an off-the-record
2	record as "Ambio, The PCB Story" by Soren Jensen, a	2	discussion.)
3	publication that didn't occur until 1972. Can you	3	EXAMINATION
4	please read into the record the first paragraph of	4	QUESTIONS BY MS. RUTTER:
5	Soren Jensen's article called "The PCB Story" that was	5	Q. Mr. Papageorge, is Exhibit M-1 a Monsanto
6	published in "Ambio" in 1972?	6	business record?
7	A. "PCB pollution in nature was discovered at a	7	A. Yes.
8	rather late date, but considering the circumstances	8	Q. It's on Monsanto letterhead?
9	it's perhaps surprising that it was discovered at	9	A. Yes.
10	all."	10	Q. It's dated May 1982. That's a date when you
11	MS. RUTTER: Thank you. Let's go off the	11	were still employed by Monsanto?
12	record for a minute.	12	A. Yes.
13	MR. OAAS: I have one question.	13	MR. OAAS: Well, if you want to just go
14	MS. RUTTER: Okay.	14	through that, I'm just going to reserve for the record
15	EXAMINATION	15	any objections I have to those exhibits in terms of
16	QUESTIONS BY MR. OAAS:	16	foundation, so I don't have to keep interrupting if
17	Q. Mr. Papageorge, isn't DDT a chlorinated	17	that's okay with you.
18	hydrocarbon?	18	MS. RUTTER: That's fine.
19	A. Yes.	19	MR. OAAS: You want to do the same action,
20	Q. And Monsanto manufactured chlorinated	20	Steve?
21	hydrocarbons; correct?	21	MR. BROWN: Say it again, Torger.
22	A. Yeah.	22	MR. OAAS: Are you going to reserve
23	MR. OAAS: That's all I have.	23	objections? We have about a thousand exhibits --
24	MR. SHAW: You want to go off the record	24	well, not a thousand, but a hundred exhibits we're
25	for a second?	25	going to go through that we haven't discussed yet, and

Page 559

Page 561

55 (Pages 558 to 561)

1 I just wanted to put on the record that I'm going to	1 December 9th, 1966. Do you recognize this as a
2 reserve any and all objections I have to these	2 business record of Monsanto Europe?
3 exhibits just in the interest of saving some time here	3 A. I do.
4 so I don't have to object for every one, and I just	4 Q. And you personally knew D.V.N. Hardy?
5 wanted to know if you guys wanted to do the same thing	5 A. Yes.
6 or not.	6 Q. And he prepared this memo in the ordinary
7 MR. DAVIS: Well, obviously we haven't	7 course of his business as an employee of Monsanto
8 even seen them.	8 Europe?
9 MR. OAAS: Well, that's why I was giving	9 A. Correct.
10 you the opportunity.	10 Q. Exhibit M-8 is a memo from Gene Wilde,
11 MS. RUTTER: Actually, most of them	11 St. Louis General Offices, to R. Emmet Kelly, M.D.,
12 have -- most, if not all of them, have been produced.	12 dated February 13th, 1967?
13 MR. DAVIS: They may have been produced --	13 A. Uh-huh.
14 MS. RUTTER: I appreciate you don't have	14 Q. And you recognize this as a Monsanto business
15 the volumes. I'm sorry. I didn't hear that. We were	15 record?
16 talking over each other.	16 A. Yes.
17 MR. DAVIS: I said they may have been	17 Q. Prepared in the ordinary course of business
18 produced at some point, but I'm not looking at them	18 of the Monsanto employee, Gene Wilde, who prepared it?
19 now.	19 A. Yes.
20 MS. RUTTER: I understand.	20 Q. And you personally know Dr. or knew Dr. Emmet
21 MR. DAVIS: All I've got are the ones that	21 Kelly, M.D., the recipient of the memo?
22 Torger used at his prior deposition of Mr. Papageorge.	22 A. Yes.
23 MR. OAAS: So you're reserving your	23 Q. Exhibit M-9 is a Monsanto business record?
24 objections?	24 A. Yes.
25 MR. DAVIS: Yeah. I don't know I'll have	25 Q. By D.V.N. Hardy to the Government Chemist,

Page 562

Page 564

1 any objections, but I certainly won't give them away	1 the Government Laboratory in London?
2 sight unseen.	2 A. Yes.
3 MR. OAAS: Steve?	3 Q. Dated February 20th, 1967?
4 MR. BROWN: Yeah. Same with us. We'll	4 A. Yes.
5 reserve our objections.	5 Q. And Mr. Hardy prepared this memo in the
6 BY MS. RUTTER:	6 ordinary course of Monsanto Europe's business?
7 Q. All right. And Exhibit M-1, Mr. Papageorge,	7 A. Yes.
8 was prepared by Larry O'Neill of Monsanto Company?	8 Q. Let's go through here and establish all of
9 A. Yes.	9 the Monsanto London and Monsanto -- Mr. Papageorge, to
10 Q. And he was an employee of Monsanto Company at	10 kind of shorten this up a bit, let's just establish
11 the time?	11 for the record which documents are Monsanto business
12 A. Yes.	12 records. We're now on Exhibit M-10. Is that a
13 Q. And he prepared this in the ordinary course	13 business record of Monsanto Europe?
14 of his duties?	14 A. That's correct.
15 A. Yes.	15 Q. It's dated February 23rd, 1967?
16 Q. Exhibit M-4 was -- is a document dated	16 A. Yes.
17 December 1st, 1966, from David Wood of Monsanto	17 Q. And, once again, D.V.N. Hardy is an employee
18 Europe, Brussels, Belgium. You personally knew David	18 or was at the time of Monsanto Europe with whom you
19 Wood?	19 were personally familiar?
20 A. Yes.	20 A. Yes.
21 Q. Do you know this to be a Monsanto business	21 Q. Is Exhibit M-11 a Monsanto business record?
22 record?	22 A. Yes.
23 A. Yes.	23 Q. And, again, it was prepared by David Wood of
24 Q. M-6 is a memo prepared by D.V.N. Hardy of	24 Monsanto Europe from Brussels, Belgium, and sent to
25 London addressed to D. Wood, Brussels, dated	25 Dr. R. Emmet Kelly at Monsanto U.S.?

Page 563

Page 565

56 (Pages 562 to 565)

1 A. Yes.
2 Q. On or about February 22nd, 1967?
3 A. Correct.
4 Q. And you recognize this as a Monsanto business
5 record?
6 A. Yes.
7 Q. Exhibit M-12, is this a Monsanto business
8 record?
9 A. Yes.
10 Q. Prepared by Dr. R. Emmet Kelly, M.D., who you
11 personally knew?
12 A. Yes.
13 Q. And it's to Dr. D.V.N. Hardy in London?
14 A. It is.
15 Q. It's on Monsanto letterhead?
16 A. Yes.
17 Q. And it's dated February 23rd, 1967?
18 A. Correct.
19 Q. And you know this to be a business record of
20 Monsanto?
21 A. I do.
22 Q. Exhibit M-14 is dated February 27th, 1967.
23 It's signed by David Wood. It's on Monsanto Europe
24 S.A. letterhead, and it's to D.V.N. Hardy in London.
25 Do you recognize this to be a Monsanto Europe business

Page 566

1 record –
2 A. Yes.
3 Q. – Mr. Papageorge?
4 A. Yes.
5 Q. And you personally knew David Wood?
6 A. Yes.
7 Q. Exhibit M-15 is from D.V.N. Hardy, London, to
8 D. Wood in Brussels, dated March 3rd, 1967. Do you
9 recognize this exhibit, Mr. Papageorge, as a business
10 record of Monsanto Europe?
11 A. You mentioned D. Wood. Carbon copy. Yes.
12 Q. And that's because it's Brussels, Ruabon and
13 London, all European locations?
14 A. Uh-huh.
15 Q. Exhibit M-16, do you recognize this to be a
16 business record of Monsanto?
17 A. I do.
18 Q. And it's prepared on or about March 27th,
19 1967?
20 A. Yes.
21 Q. It's an Outbound Shipping Report of the type
22 of which you're very familiar, and you believe this to
23 be an authentic Monsanto business record?
24 A. It is.
25 Q. Exhibit M-20 is a memo from approximately

Page 567

1 January 1968 with R. E. Keller listed as one of the
2 authors. Do you recognize this to be a business
3 record of Monsanto in the U.S.?
4 A. I do.
5 Q. And you personally knew Dr. Keller, who
6 prepared it?
7 A. Yes.
8 Q. Exhibit M-21, dated July 18th, 1968, with the
9 names E. Wheeler, Scott Tucker, P. Benignus, and R. H.
10 Munch associated with it. Do you recognize this as a
11 Monsanto –
12 A. I do.
13 Q. As a Monsanto U.S. business record?
14 A. I do.
15 Q. And you knew at one time all four of the
16 authors of this memo?
17 A. Yes.
18 Q. Exhibit M-22 is dated January 8th, 1968, and
19 it is a memo from S. A. Heininger to C. E.
20 Anagnostopoulos dated January 8th, 1968. Do you
21 recognize this to be a business record of Monsanto
22 U.S.?
23 A. I do.
24 Q. Exhibit M-29 is dated December 9th, 1968.
25 It's from W. R. Richard to E. Wheeler. You knew both

Page 568

1 W. R. Richard and E. Wheeler?
2 A. I did.
3 Q. You recognize this to be a Monsanto business
4 record?
5 A. Yes, I do.
6 Q. Exhibit M-29.1 is from Elmer Wheeler to
7 Dr. Joseph C. Calandra of Industrial Bio-Test
8 Laboratories, dated December 20th, 1968. Do you
9 recognize this as a Monsanto business record?
10 A. Yes, I do.
11 Q. And Exhibit M-30 is the March 3rd, 1969
12 letter from Elmer P. Wheeler to a distribution list
13 concerning the "San Francisco Chronicle" article. Do
14 you recognize this to be a business record of
15 Monsanto?
16 A. I do.
17 Q. Do you recognize Exhibit M-31, March 3rd,
18 1969, a press release as a business record of
19 Monsanto?
20 A. Yes.
21 Q. Do you recognize Exhibit M-32, March 7th,
22 1969, by W. R. Richard and Monsanto's Research Center
23 as being a business record of Monsanto?
24 A. Yes.
25 Q. Prepared by Mr. Richard in the ordinary

Page 569

57 (Pages 566 to 569)

1 course of his duties?
 2 A. Yes.
 3 Q. Exhibit M-33, dated March 18th, 1969, is a
 4 letter from Elmer Wheeler to Professor Gunnar Widmark.
 5 Do you recognize this as a business record of
 6 Monsanto?
 7 A. Yes.
 8 Q. Dr. -- Exhibit M-34 is signed by Elmer
 9 Wheeler to Dr. Joseph Calandra, dated April 15th,
 10 1969. Do you recognize this Exhibit M-34 as being a
 11 business record of Monsanto?
 12 A. I do.
 13 Q. Exhibit M-35 is dated April 30th, 1969. It
 14 is from a Mr. Mainprize in Ruabon, which I believe is
 15 in Whales?
 16 A. It is.
 17 Q. To R. A. Baxter, also of Ruabon, and CC R. A.
 18 Lidgett in Ruabon?
 19 A. Right.
 20 Q. Do you recognize this document as being a
 21 business record of Monsanto Europe?
 22 A. Yes.
 23 Q. Created by Mr. Mainprize on or about the date
 24 it bears, April 3rd, 1968, in the ordinary course of
 25 business?

Page 570

1 A. '69.
 2 Q. '69, thank you. In the ordinary course of
 3 business?
 4 A. Yes.
 5 MR. OAAS: Can we just stop for a minute?
 6 MS. RUTTER: Sure.
 7 (Whereupon, there was an off-the-record
 8 discussion.)
 9 Q. Exhibit M-36, Mr. Papageorge, do you
 10 recognize this as being a business record of Monsanto?
 11 It says "Rough Draft - 6-12-69" by R. E. Keller?
 12 A. Yes.
 13 Q. "Notes From European Trip"?
 14 A. I do.
 15 Q. I've got three more in this notebook.
 16 Mr. Papageorge, do you recognize Exhibit M-38, dated
 17 August 25th, 1969, as a business record of Monsanto
 18 from E. V. John to Dr. Martin Farrar?
 19 A. I do.
 20 Q. Do you recognize Exhibit M-39, dated
 21 October 27th, 1969, as being a business record of
 22 Monsanto prepared by Howard S. Bergen?
 23 A. Yes.
 24 Q. Do you recognize Exhibit M-40 as being a
 25 business record of Monsanto that purports to have been

Page 571

1 prepared by Mr. Bergen on October 30th, 1969?
 2 A. Uh-huh. I do.
 3 Q. And the final document in this notebook, the
 4 minutes of the meeting of the Corporate Development
 5 Committee dated November 17th, 1969, Exhibit M-41, do
 6 you recognize this as being an authentic Monsanto
 7 Company business record?
 8 A. Yes.
 9 Q. And, Mr. Papageorge, all of those Monsanto
 10 exhibit numbers, be it Monsanto U.S. or Monsanto
 11 London that I just read into the record, had you seen
 12 all of those documents shortly after you commenced
 13 your job as Director of Environmental Control
 14 January 2nd, 1970?
 15 A. When you use the word "shortly after" --
 16 Q. Sometime during the year 1970.
 17 A. Yes, I did.
 18 Q. There wasn't any document in here that you
 19 thought you were seeing for the first time?
 20 A. That's true.
 21 Q. Right. And the non-Monsanto documents that
 22 are in this notebook, Exhibit A, are documents that,
 23 although they are not Monsanto business records
 24 because they are not authored by Monsanto, are
 25 documents that were in Monsanto's file when you

Page 572

1 started your job --
 2 A. Yes.
 3 Q. -- as Environmental Control Manager in 1970?
 4 A. Correct.
 5 Q. Okay. And I think for the rest of the
 6 records, given the volumes of notebooks that we have
 7 sitting around here and the lateness of the hour, we
 8 will simply stipulate or submit an affidavit, but it's
 9 routine business records foundations.
 10 MR. OAAS: Okay. For the record, we'll
 11 respond at that time.
 12 MS. RUTTER: Any comments from Mr. Brown
 13 or Mr. Davis?
 14 MR. DAVIS: Max Davis. I have no comments.
 15 MR. BROWN: Steve Brown. I don't either.
 16 MS. RUTTER: He will review.
 17 MR. DAVIS: Are we off the record now?
 18 MS. RUTTER: We're about to be. He will
 19 review the transcript and sign it. We can now go off
 20 the record unless you want to stay on.
 21 MR. DAVIS: No.
 22
 23
 24
 25

Page 573

58 (Pages 570 to 573)

1	STATE OF MISSOURI	1	Gore Perry Gateway & Lipa Reporting
2		2	
3	SS.	3	
4	CITY OF ST. LOUIS	4	Ms. Carol A. Rutter
5		5	Husch & Eppenberger
6	I, Faith A. Olliges, a Notary Public in	6	190 Carondelet Plaza
7	and for the State of Missouri, duly commissioned,	7	Clayton, Missouri 63105
8	qualified and authorized to administer oaths and to	8	
9	certify to depositions, do hereby certify that	9	Enclosed please find the Original Signature pages
10	pursuant to Notice in the cause now pending and	10	and errata sheets for the deposition of:
11	undetermined in the Circuit Court of the City of St.	11	William Papageorge, Vol. III taken 5/17/2007 in the case of:
12	Louis, to be used in the trial of said cause in said	12	Marty Paulson, et al. vs. Monsanto Chemical Company, etc., et al.
13	court, I was attended at the offices of Husch &	13	Please read your copy of the transcript, noting
14	Eppenberger, 190 Carondelet Plaza, Clayton, Missouri,	14	any corrections on the enclosed errata sheets,
15	by the aforesaid witness; and by the aforesaid	15	and return all pages for filing in court to:
16	attorneys; on May 17, 2007.	16	Ms. Carol A. Rutter
17	That the said witness, being of sound mind	17	Husch & Eppenberger
18	and being by me first carefully examined and duly	18	190 Carondelet Plaza
19	cautioned and sworn to testify the truth, the whole	19	Clayton, Missouri 63105
20	truth, and nothing but the truth in the case	20	
21	aforesaid, thereupon testified as is shown in the	21	Your prompt cooperation will be appreciated.
22	foregoing transcript, said testimony being by me	22	Sincerely,
23	reported in Stenotype and caused to be transcribed	23	
24	into typewriting, and that the foregoing pages	24	Gore Perry Gateway & Lipa Reporting
25	correctly set forth the testimony of the	25	
Page 574		Page 576	
1	aforementioned witness, together with the questions	1	Page Line Should Read:
2	propounded by counsel and remarks and objections of	2	Reason for change:
3	counsel thereto, and is in all respects a full, true,	3	
4	correct and complete transcript of the questions	4	Page Line Should Read:
5	propounded to and the answers given by said witness;	5	Reason for change:
6	that the signature of the deponent was not waived by	6	
7	agreement of counsel.	7	Page Line Should Read:
8	I further certify that I am not of	8	Reason for change:
9	counsel or attorney for either of the parties to said	9	
10	suit, not related to nor interested in any of the	10	Page Line Should Read:
11	parties or their attorneys.	11	Reason for change:
12	Witness my hand and notarial seal at	12	
13	St. Louis, Missouri, this 30th day of May, 2007.	13	Page Line Should Read:
14	My Commission expires April 20, 2009.	14	Reason for change:
15		15	
16		16	Page Line Should Read:
17		17	Reason for change:
18	Notary Public in and for the	18	
19	State of Missouri	19	Page Line Should Read:
20		20	Reason for change:
21		21	
22		22	Page Line Should Read:
23		23	Reason for change:
24		24	
25		25	
Page 575		Page 577	

59 (Pages 574 to 577)

1	Page Line Should Read:	1	COURT MEMO
2	Reason for change:	2	.
3		3	4
4	Page Line Should Read:	5	Marty Paulson, et al. vs. Monsanto Chemical Company, etc., et al.
5	Reason for change:	6	DV-04-55
6		7	
7	Page Line Should Read:	8	CERTIFICATE OF OFFICER AND
8	Reason for change:	9	STATEMENT OF DEPOSITION CHARGES
9		10	
10	Page Line Should Read:	11	DEPOSITION OF WILLIAM PAPAGEORGE, VOL. III
11	Reason for change:	12	TAKEN ON BEHALF OF THE DEFENDANT
12		13	5/17/2007
13	Page Line Should Read:	14	Name and address of person or firm having custody of
14	Reason for change:	15	the original transcript:
15		16	Carol A. Rutter
16	Page Line Should Read:	17	Husch & Eppenberger
17	Reason for change:	18	190 Carondelet Plaza, Suite 600
18		19	St. Louis, MO 63105
19	Page Line Should Read:	20	
20	Reason for change:	21	
21		22	
22	Page Line Should Read:	23	
23	Reason for change:	24	
24		25	
25			
Page 578		Page 580	
1	Comes now the witness, William Papageorge, Vol. III,	1	ORIGINAL TRANSCRIPT TAXED IN FAVOR OF:
2	and having read the the foregoing transcript	2	Carol A. Rutter
3	of the deposition taken on the 5/17/2007,	3	Husch & Eppenberger
4	acknowledges by signature hereto that it is a	4	190 Carondelet Plaza, Suite 600
5	true and accurate transcript of the testimony given	5	St. Louis, MO 63105
6	on the date hereinabove mentioned.	6	Total:
7		7	1 ONE COPY - TAXED IN FAVOR OF:
8		8	Torger S. Oaas
9		9	Oaas, Law Office of Torger S.
10	<u>William Papageorge, Vol. III</u>	10	P.O. Box 76,
11		11	Lewistown, MT 59457
12	Subscribed and sworn to me before this	12	Total:
13	____ day of _____, 2007.	13	1 ONE COPY - TAXED IN FAVOR OF:
14	My Commission expires	14	Stephen R. Brown
15		15	Garlington, Lohn & Robinson, PLLP
16		16	P.O. Box 7909,
17		17	Missoula, MT 59807
18	<u>Notary Public</u>	18	Total:
19		19	1 ONE COPY - TAXED IN FAVOR OF:
20		20	Maxon Davis
21		21	Davis, Hatley, Haffeman & Tighe, P.
22		22	P.O. Box 2103,
23		23	Great Falls, MT 59403
24		24	Total:
25			
Page 579		Page 581	

60 (Pages 578 to 581)

1
2 Upon delivery of transcripts, the above
3 charges had not been paid. It is anticipated
4 that all charges will be paid in the normal course
5 of business.
6 GORE PERRY GATEWAY & LIPA REPORTING COMPANY
7 515 Olive Street, Suite 700
8 St. Louis, Missouri 63101
9 IN WITNESS WHEREOF, I have hereunto set
10 my hand and seal on this _____ day of _____
11 Commission expires
12 _____
13 Notary Public
14
15
16
17
18
19
20
21
22
23
24
25

Page 582

61 (Page 582)

1 STATE OF MISSOURI

3 SS.

4 CITY OF ST. LOUIS

5
6 I, Faith A. Olliges, a Notary Public in
7 and for the State of Missouri, duly commissioned,
8 qualified and authorized to administer oaths and to
9 certify to depositions, do hereby certify that
10 pursuant to Notice in the cause now pending and
11 undetermined in the Circuit Court of the City of St.
12 Louis, to be used in the trial of said cause in said
13 court, I was attended at the offices of Husch &
14 Eppenberger, 190 Carondelet Plaza, Clayton, Missouri,
15 by the aforesaid witness; and by the aforesaid
16 attorneys; on May 17, 2007.

17 That the said witness, being of sound mind
18 and being by me first carefully examined and duly
19 cautioned and sworn to testify the truth, the whole
20 truth, and nothing but the truth in the case
21 aforesaid, thereupon testified as is shown in the
22 foregoing transcript, said testimony being by me
23 reported in Stenotype and caused to be transcribed
24 into typewriting, and that the foregoing pages
25 correctly set forth the testimony of the

Gore Perry Gateway Lipa Baker Dunn & Butz
St. Louis 314.241.6750 St. Charles 636.940.0926

1 aforementioned witness, together with the questions
 2 propounded by counsel and remarks and objections of
 3 counsel thereto, and is in all respects a full, true,
 4 correct and complete transcript of the questions
 5 propounded to and the answers given by said witness;
 6 that the signature of the deponent was not waived by
 7 agreement of counsel.

8 I further certify that I am not of
 9 counsel or attorney for either of the parties to said
 10 suit, not related to nor interested in any of the
 11 parties or their attorneys.

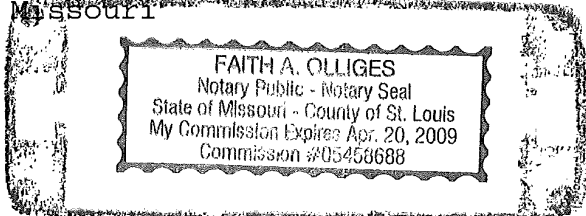
12 Witness my hand and notarial seal at
 13 St. Louis, Missouri, this 30th day of May, 2007.

14 My Commission expires April 20, 2009.

15
 16 *Faith A. Olliges*

17 -----
 18 Notary Public in and for the

19 State of Missouri



1 Gore Perry Gateway & Lipa Reporting

2
3
4 Ms. Carol A. Rutter

5 Husch & Eppenberger

6 190 Carondelet Plaza

7 Clayton, Missouri 63105

8
9 Enclosed please find the Original Signature pages

10 and errata sheets for the deposition of:

11 William Papageorge, Vol. III taken 5/17/2007 in the case of:

12 Marty Paulson, et al. vs. Monsanto Chemical Company, etc., et al.

13 Please read your copy of the transcript, noting

14 any corrections on the enclosed erratta sheets,

15 and return all pages for filing in court to:

16 Ms. Carol A. Rutter

17 Husch & Eppenberger

18 190 Carondelet Plaza

19 Clayton, Missouri 63105

20
21 Your prompt cooperation will be appreciated.

22 Sincerely,

23
24 Gore Perry Gateway & Lipa Reporting

25
Gore Perry Gateway Lipa Baker Dunn & Butz
St. Louis 314.241.6750 St. Charles 636.940.0926

1 COURT MEMO

2 .

3 4

5 Marty Paulson, et al. vs. Monsanto Chemical Company, etc., et al.
6 DV-04-55

7
8 CERTIFICATE OF OFFICER AND

9 STATEMENT OF DEPOSITION CHARGES

10
11 DEPOSITION OF WILLIAM PAPAGEORGE, VOL. III
12 TAKEN ON BEHALF OF THE DEFENDANT

13 5/17/2007

14 Name and address of person or firm having custody of
15 the original transcript:

16 Carol A. Rutter

17 Husch & Eppenberger

18 190 Carondelet Plaza, Suite 600

19 St. Louis, MO 63105

20

21

22

23

24

25

Gore Perry Gateway Lipa Baker Dunn & Butz
St. Louis 314.241.6750 St. Charles 636.940.0926

1 ORIGINAL TRANSCRIPT TAXED IN FAVOR OF:

2 Carol A. Rutter

3 Husch & Eppenberger

4 190 Carondelet Plaza, Suite 600

5 St. Louis, MO 63105

6 Total:

7 1 ONE COPY - TAXED IN FAVOR OF:

8 Torger S. Oaas

9 Oaas, Law Office of Torger S.

10 P.O. Box 76,

11 Lewistown, MT 59457

12 Total:

13 1 ONE COPY - TAXED IN FAVOR OF:

14 Stephen R. Brown

15 Garlington, Lohn & Robinson, PLLP

16 P.O. Box 7909,

17 Missoula, MT 59807

18 Total:

19 1 ONE COPY - TAXED IN FAVOR OF:

20 Maxon Davis

21 Davis, Hatley, Haffeman & Tighe, P.

22 P.O. Box 2103,

23 Great Falls, MT 59403

24 Total:

Gore Perry Gateway Lipa Baker Dunn & Butz
St. Louis 314.241.6750 St. Charles 636.940.0926

1
2 Upon delivery of transcripts, the above
3 charges had not been paid. It is anticipated
4 that all charges will be paid in the normal course
5 of business.

6 GORE PERRY GATEWAY & LIPA REPORTING COMPANY

7 515 Olive Street, Suite 700

8 St. Louis, Missouri 63101

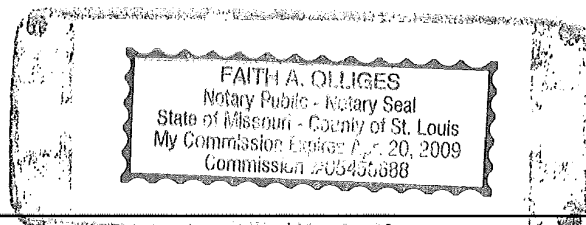
9 IN WITNESS WHEREOF, I have hereunto set

10 my hand and seal on this _____ day of _____

11 Commission expires

12 *Faith A. Olliges*

13 Notary Public



Gore Perry Gateway Lipa Baker Dunn & Butz
St. Louis 314.241.6750 St. Charles 636.940.0926

A				
ability 353:13 432:2 481:25 508:4	412:4 423:13,18 424:15 425:8 426:9,12,21 466:6 466:9 517:5 532:7 561:19	563:25 addressee 410:10 420:16 421:5,7 Addresses 430:21 addressing 502:15 Adelphi 417:5 ADF 465:25 adhesives/molds 411:21 administer 348:4 574:8 Administration 377:2,5 415:16 Administrator 437:9 admitted 459:18 461:7 advantage 535:6 adverse 433:13 557:16 adversely 497:3 498:10 advertisement 385:11 advice 489:2 518:7 523:6,6 advising 443:12 advisor 496:4 aesthetic 499:24 Affairs 507:18 affect 497:3 498:11 affidavit 573:8 affiliated 372:21 affirmative 423:13 423:18 affixed 449:11 aforementioned 575:1 aforesaid 348:10 574:15,15,21 afraid 429:25 afternoon 439:13,14 467:7,8 age 348:8	agencies 403:14 422:22 423:4,20 430:23 431:6,14 431:22,23 452:15 516:15,19 agency 402:4,9 431:2 440:3 460:20,22 533:14 547:20 Agenda 401:4 agents 405:9 411:21 431:5 aggressive 422:20 ago 366:1 467:9 541:2,6 agree 365:15 474:13 496:20 499:19 500:1,16 531:21 535:23 536:18 540:2 546:25 549:15 agreed 497:4 535:25 560:9,11 agreement 575:7 Agricultural 375:18 Agriculture 375:22 431:2,8 Ah 525:14 ahead 466:21 479:24 510:21 537:21 538:10 aimed 432:1 Air 381:4 al 342:4,11 343:4,11 347:10,10 576:12 576:12 580:5,5 Alabama 350:15 352:2 357:18 497:12 Alan 547:10 Albert 502:3,16 505:1 555:13 Albert's 556:15	alert 483:21 486:9 487:6 allegations 421:14 alleged 411:16 Allied 417:7 allowable 415:18 alls 487:12 alphabetical 452:4 alternate 386:13 alternates 425:17 alternative 440:17 Alumni 375:14 Amanda 345:19 347:21 Ambio 559:2,6 Amchem 417:9 American 410:6,16 417:12 amount 476:21 500:22 551:2 amounts 371:20 395:2 404:19,19 455:9 492:24 Anagnostopoulos 568:20 analyses 460:10,13 analysis 359:19 370:21 371:5 385:3,7 396:1 analytical 360:5,10 369:22 371:3 374:3,4,4 381:12 381:24 382:23 385:12 395:6,7 422:24 444:16 446:14 455:11 490:15 511:14,16 511:19,21,23,25 515:9 analyze 358:4 analyzed 357:22 Angeles 452:7 animal 404:22

animals 391:10 405:10 415:24 499:4 504:11,13 Ann 375:25 Anniston 350:14,18 352:1 357:18 376:25 377:6 392:25 451:12,15 470:21,24 472:17 497:12,13 announced 440:1 announcement 440:10 445:11 anonymous 554:17 ANSI 388:14 481:9 481:15 answer 351:13 398:22 414:23 424:22,22 483:5 485:17 491:15 492:5,12,23 493:7 493:8,23,24 494:3 494:22,25 497:1 497:17,21 502:17 502:18,21 503:3,7 503:11,25 505:14 505:15,18,20 507:4,7,16 508:3 515:10 518:16 532:12,16 545:24 545:25 547:4 answered 475:15 478:23 493:20 494:4,19 498:3 answers 575:5 anticipated 490:3 491:9 582:3 anybody 416:19 514:23 anymore 526:9 Anyway 475:13 App 483:16 apparent 528:19	apparently 378:23 410:9 415:16 430:14 475:5 495:24 502:5,16 512:21 513:19 521:17 536:16 545:12 appear 373:5 380:25 385:21 386:9 464:10 appearance 499:16 APPEARANCES 344:1 appeared 392:18 435:15 443:1 462:6 appearing 467:19 appears 362:13 369:25 372:23 373:10 378:18 379:1,15,24 403:13 406:15 413:18 448:8 458:1,17,22 472:22 473:1 475:4 480:7 490:2 491:8 512:21 526:9 543:18 application 405:5 423:15 425:13 463:13 554:3 applications 405:6 411:15,19 412:1,5 415:22,25 421:19 425:16,19 426:2 427:10 429:13,14 441:23 442:1 458:10,15 494:8 526:1,24 527:5,15 527:21,23 528:4 529:3 applied 355:24 applying 447:16	Appoint 387:14 appreciate 365:23 380:17 391:24 453:25 562:14 appreciated 576:21 appreciation 500:1 appreciative 423:5 approach 359:5 524:14 approaching 363:13 appropriate 412:3 425:8 554:2 approved 428:17 approximate 350:8 approximately 350:2,19,22 352:9 383:22 434:21 567:25 April 409:14,16,23 410:23 411:3 412:11 422:7 448:7,17 451:13 454:5,12 517:22 570:9,13,24 575:14 April/May 450:20 aquatic 498:11,15 499:15,22 Arbor 375:25 area 350:11,16 391:8 412:23 510:14 515:9 areas 348:20 359:1 argumentative 479:1 arms 523:23 aro 377:15 Aroclor 368:22 374:23 377:8,9,10 377:12,22 379:9 379:17 386:19 387:20 389:1,11 390:7,8,8,17 400:2	404:13,15,15,15 404:15,16,16,16 404:17 405:13 411:18 413:16,20 420:5 424:16 425:11 426:15 449:2,15 450:8,18 454:1,22,23 456:1 458:7 472:24 473:14,24 475:6 477:22 478:20 494:13 513:22 514:24 515:6,24 516:1 520:24 521:12 526:9 555:24,25 556:1,3 556:5,11 Aroclors 377:19 381:16 382:1,4,7 387:25 390:10 391:9 395:13 404:3 420:10 427:9 458:15 459:4 491:24 502:11 525:25 527:4 aromatics 377:16 array 528:10 arrived 469:19 481:18 482:2 540:15 art 497:19 article 442:25 456:20,23 457:3,5 457:18 483:1 495:12,25 496:3 496:12 499:9 500:8,9 501:23 546:17 559:5 569:13 articles 378:22 askarel 354:13,14 asked 392:3 410:21	412:11 431:4 434:17 437:2 445:21 446:5,10 461:1 462:11 475:14 478:22 480:6 485:17 490:5 492:9,11 493:6,17 494:17 497:8 530:7 540:9 542:3 553:25 555:13,21 556:13 asking 351:3 379:16 388:12 397:11 462:22 480:2 482:3 483:10 485:19 486:25 487:13 493:4 497:22 514:18 548:7 551:22 assemble 361:1 assembled 361:3 Assess 382:9 assign 387:25 assigned 350:14 assist 518:17 assistance 400:18 assistant 347:20 assisted 541:16 associated 373:19 432:3 468:8 554:24 568:10 Association 375:19 assume 482:3 488:1 488:4 553:10 assumed 553:23 assumes 508:2 532:10 540:8 542:8 assuming 477:20 487:19 556:9 assumption 553:13 assure 386:24 ate 550:11
---	--	---	--	---

Atlas 383:14 385:1 Atlas-MAT 383:12 383:13 atmospheric 545:8 attach 367:12 attached 398:5 400:2,10 407:1,13 420:4,7 438:2 526:17 attachment 369:20 370:11 464:15,19 attained 429:9 435:11 attempt 359:6 489:9 attempting 383:24 537:7 attend 400:22 468:4 attendance 402:5 433:1 452:14,16 attended 392:17 401:13 432:17,19 452:3,7 533:16 548:6 574:13 attendees 401:18 401:19 402:19 422:13 432:23 451:21,25 452:2 attending 401:9 547:9 attention 367:21 415:15 453:6 454:23 455:5 467:16 483:19 489:21 491:3 496:11 503:5 536:21 546:16 547:25 548:10 attitude 466:6 attorney 348:2 575:9 attorneys 574:16 575:11 attribute 539:16	audience 443:10 523:23 auditorium 401:14 Audubon 546:14 August 414:1,13 415:8 416:6,13 421:19 426:4,24 426:25 427:10 429:13 464:2 465:6,13,18 524:23 525:3,3 526:13,17 527:2 528:21,24 529:12 530:10 571:17 auspices 449:23 552:7 authentic 567:23 572:6 authentication 466:20,24 author 367:16 369:13,15 372:10 378:6 419:20,20 419:21 420:16,17 421:4,6 442:17,20 443:22 447:24 448:1 463:25 464:1 489:13,13 491:14 543:9 554:17,19 authored 363:24 367:4,19 372:12 406:12 412:22 485:2 495:25 520:7 536:12 543:16 572:24 authority 522:24 authorized 574:8 authorless 524:6 authors 380:25 381:7 382:15 568:2,16 availability 386:13	available 386:15,19 389:23 433:15 509:22 510:20 512:2,4 528:7 554:23 Avenue 409:19 413:2 417:23 420:20 421:9 average 473:23,25 474:1 avoid 394:3,8 avoided 405:7 avoids 477:10 awarded 349:18,24 aware 355:13 396:1 480:14 487:13 498:21 523:1,9 524:21 527:12 533:5 542:18 552:1,22 awareness 358:13 awful 498:5 a.m 347:2 376:12,15 405:21 406:1	495:24 501:3 504:7 505:23 506:12,15 507:5 514:11 517:9 523:24 551:15 560:6 background 348:19 bad 431:4 499:18 ban 434:6 banned 434:1 bare 394:12 barrelful 474:4 barrels 414:8 Barton 451:4 based 469:17 549:25 basic 360:23 basis 365:21 414:17 423:14 545:6 Bates 365:15 404:8 407:17 408:5 416:4,13 430:17 432:11 433:5 446:1 449:15 450:19 454:3 458:12 459:5,11 465:11 489:21 520:19,19 521:14 525:17 Baxter 570:17 bearing 406:7 bears 365:15 370:23 373:1 449:15 456:7 570:24 becoming 358:6 beg 439:2 began 447:21 beginning 358:11 459:7 Begins 536:23 behalf 342:18 343:17 580:12 behooves 496:17	Beland 453:14 454:6 Belgium 367:7 563:18 565:24 belief 487:1 believe 351:15 384:16 392:2 432:23 443:8 490:20 508:19 513:6 517:4 536:3 553:4 560:8 567:22 570:14 believed 535:3 believes 486:11 488:12,20 bell 557:3 belt 389:3 benefit 356:21 542:1 Benignus 381:14,15 568:9 Benignus/R 381:9 Benjamin 417:9 benzene 377:14,14 Bergen 571:22 572:1 Berry 345:12 best 349:6 352:17 355:10 360:23 361:7 366:20 387:18 391:8 397:3,11 398:15 481:25 508:4 521:25 better 459:23 487:5 beyond 554:19 Biemann 383:19 big 473:15 477:6 bigger 447:10 biggest 352:15,17 352:20 bill 451:7 477:4 529:21
---	---	--	---	---

billion 537:9,11	blackheads 504:15	Brown 344:12	buy 526:8	440:2 556:10
binder 361:20	blaming 379:19	347:25,25 475:9	B-R-E-M-A-N	capacitors 353:3,9
382:12	blender 518:9	475:12,20 477:17	384:12	353:12,25 355:21
binders 351:18	blisters 532:21	477:18 504:19	B.S 349:15	386:16 389:23
bioconcentrate	blown 532:22	561:21 563:4	B/L 420:7	390:12 426:13
548:21	board 386:3 402:16	573:12,15,15		429:18 433:25
bioconcentration	Bock 386:2	581:14	C	434:2,7,12 447:3
548:1,12 549:10	body 502:22	Browning 345:12	C 346:13 409:11,12	555:24 556:1,3
biodegradable	book 367:15 548:8	Brussels 364:19	409:13,17 421:7	capacity 467:19
426:19 556:7	born 348:21	367:7 563:18,25	452:18,24 453:4	493:5 497:11
biodegradation	boss 374:10	565:24 567:8,12	453:12 464:1	capillary 383:20
390:16 391:1	Boston 502:4 555:9	Buchanan 367:5	465:12 568:19	captain 349:12
biological 380:14	555:14,15 556:9	bucketful 473:15	569:7	capture 371:7
biologists/ecologi...	bottom 381:7 383:6	474:9	Calandra 569:7	453:23
446:15	404:9 408:8 428:5	Building 408:12	570:9	carbon 464:6,9
Bioscience 375:21	430:18 432:11	buildings 353:21	California 376:5	567:11
Bio-Test 376:6	433:5 444:23	405:9	408:22 418:21	care 404:22 448:20
391:18,20 569:7	458:17 483:16	built 389:4	419:9 443:3	535:5
biphenols 359:14	521:14 539:22	bullet 423:2	call 354:7 360:20	careful 405:3
360:9 366:18	547:22	bulletin 404:2,9,13	393:2 435:13	carefully 574:18
368:5,10 445:11	Box 344:6,15,23	405:14 458:7,24	453:6 458:6	careless 393:12
biphenyl 364:22	473:4 581:10,16	459:3 517:19,21	470:21 472:15	carful 474:4
378:1 440:5	581:22	526:18,19	476:20 522:4	Carol 345:4 347:19
543:12	boxes 366:6 397:10	Bureau 375:13,24	549:5,24	521:6 576:4,16
biphenyls 358:2	398:9	403:11 460:13,16	called 381:3 401:4	580:16 581:2
359:14 366:19	Bozeman 454:7	461:18,20 462:1,5	415:3 559:5	Carolin 380:17
371:13,20 379:12	530:17	516:17	calling 406:6	Carolina 365:13
379:15,19 404:18	brand 354:3,6	bureaus 461:23	calls 435:24 488:9	376:6
425:19 426:2,23	break 439:15	burning 386:21	493:10,21 506:25	Carondelet 343:19
430:8 431:22	479:20	business 386:23	507:12 527:11	345:8 347:4
445:11 448:19	Bremen 384:12	387:24 463:16	531:4 539:14	574:14 576:6,18
453:24 466:5	brief 363:12 376:13	479:10 561:6	540:7 541:20	580:18 581:4
503:17 504:9	405:24 514:10	563:21 564:2,7,14	542:7 545:20	Carroll 455:21
506:6 533:13	532:25 560:5	564:17,23 565:6	547:2 549:4	456:6 530:17,18
536:12	briefly 348:20 349:5	565:11,13,21	Cameron 402:15	carry 426:10
birds 492:23 493:1	350:6 367:2	566:4,7,19,25	465:8	carrying 379:13
506:2,3,4,16 507:7	brings 540:12	567:9,16,23 568:2	Canada 402:16	388:15
Bishop 438:16,18	brittle 356:1	568:13,21 569:3,9	capabilities 383:20	carry-over 423:2
bit 357:16 362:8	Broadway 377:3	569:14,18,23	capability 383:17	case 342:8 343:8
363:6 419:13	brochure 458:1	570:5,11,21,25	capable 385:2 396:5	348:10,17 356:24
515:11 541:18	459:15,18 462:10	571:3,10,17,21,25	466:13	378:18 457:24
565:10	463:19	572:7,23 573:9	capacitor 389:12	461:7 468:13
bi-phenols 369:3	brought 415:15	582:5	436:1 437:11	492:13 500:23

508:25 532:12 574:20 576:11 cases 425:18 470:21 470:24 556:4 557:12 case-by-case 365:21 545:6 cast 413:16 category 356:11 443:4 473:3 Catherine 345:11 catheters 411:20 Cathy 347:17 479:21 cause 347:9,12 400:14 491:25 557:8,13 574:10 574:12 caused 466:7 574:23 caution 428:18 449:16,18 450:6 cautioned 429:10 574:19 CC 524:19 570:17 CCs 373:21 464:4 CC's 464:6 CDC 429:15 ceased 440:21 451:15 535:13 cellular 504:12 Center 403:11 452:1 569:22 Central 410:13,17 cents 473:20,20 474:11 certain 404:21 411:15 414:8 415:18 certainly 363:2 365:15 390:21 400:25 401:19 433:7 495:15	540:3 541:16 542:18 556:18 557:11 558:8 563:1 CERTIFICATE 580:8 Certified 347:6 certify 574:9,9 575:8 cetera 492:6 chain 553:18 chairman 386:2,3,4 386:5 455:20 challenge 510:2 chance 345:14 424:22 change 376:8 394:6 476:3 577:2,5,8,11 577:14,17,20,23 578:2,5,8,11,14 578:17,20,23 changed 546:19 characteristics 379:10 458:9 characterization 512:25 545:18 characterized 517:4 552:23 charge 381:16 390:20,23 456:2 477:11 552:5 charges 580:9 582:3 582:4 check 469:4,6,18 Chem 408:20 chemical 342:10 343:10 345:2 347:10 349:16,20 351:4,16 359:25 361:14 394:11,12 399:7,11 408:2 409:18 413:1,18 418:9,19,23 419:1	419:25 420:19 421:8 453:16 476:24 479:4 484:19,23 485:10 485:22,23 496:5 510:6 520:5 557:7 576:12 580:5 chemicals 360:4 375:18 377:14,18 381:18 410:13,17 431:21 438:16 440:12 535:9 chemist 374:3 378:24 381:12 444:17 511:14,16 564:25 chemistry 369:22 374:5 381:24 382:23 385:4 454:7 512:2 515:9 chemists 359:11 385:13 455:11 511:19,21,23 512:1 Chicago 391:8 410:14 533:13 chickens 391:16 Chief 536:16 537:1 chips 532:6,21 chloracne 504:10,13 chlorinated 369:2,3 371:20 377:23,25 379:12,14,19 390:9,13 425:18 426:2,23 449:17 449:18 493:1,12 506:5 557:21,24 559:17,20 chlorination 371:15 chlorine 371:8 377:17 395:13 choose 366:8,9 chose 393:7	Christmas 411:22 chromatograph 371:11,23 516:9 chromatographic 369:2 453:24 chromatographic... 385:8 chromatography 371:6 383:16,24 510:8 chronic 498:18,18 498:23 499:2,5,7 551:22 Chronicle 443:1 569:13 chronological 460:12 CH-4B 383:13,14 384:8,9 CH4B 385:2 Cincinnati 376:22 377:3,6 553:4 circuit 432:24 574:11 circumstances 357:17 557:16 559:8 cities 353:21 city 417:23 418:20 574:4,11 claims 486:12 488:21 Clayton 343:19 345:9 574:14 576:7,19 cleaning 411:20 cleanup 466:8 Cleveland 419:16 clip 459:21,21 clipped 458:19 close 397:13 425:15 426:1,13 457:8 459:3 539:22	closed 357:4 446:12 closely 395:24 466:2 clothes 394:7,7 coating 518:6,11 coatings 344:9 413:7,17 416:1,2,2 418:9 codes 353:18 cognizant 425:2 coincidence 512:6,7 coincidentally 512:5 collaboration 380:16 collection 366:2 College 375:20 376:6 455:21 456:6 530:18 Color 408:2 417:5 Colorado 375:13 Columbia 344:9 348:1 402:2,13 417:14,17,21 473:3,12 475:5,19 476:22 477:2,21 478:19 522:14 529:12 530:10 column 375:7 383:20 385:6 408:16 473:3 499:10 535:2 536:22 544:10 545:1 columns 383:18 combined 371:11,22 383:23 395:9 combining 385:12 come 393:5 394:20 397:13 421:17 432:23 436:25 446:13 518:7 524:9 560:18 comedones 504:14
--	---	--	--	---

comes 377:16 579:1 coming 542:14 commenced 572:12 commended 428:14 429:8 commented 446:12 comments 358:23 548:14 573:12,14 Commerce 431:9 commercial 375:25 460:14,16,22 461:18,20 462:2,6 535:6 Commission 575:14 579:14 582:11 commissioned 574:7 committee 385:19 385:21 386:4,5 387:3 388:14 422:7,8 423:10,11 424:5,7,13,14 425:9 427:8 428:4 428:21,25 429:2 481:10,15 572:5 common 497:22 532:19,20 communicate 484:8 519:6 communicated 423:19 communicating 380:1 442:24 484:3 communication 368:20 556:25 communications 441:10 489:6 Communipaw 417:23 community 421:16 companies 352:19 352:20	company 342:10 343:10 344:10 345:2,25 347:10 351:4,16 355:15 358:22,24 359:6 361:8 364:6 373:20 385:23 399:7,11 408:11 408:21 409:18 410:7,14,16,17 413:1,19 417:7,12 417:14,18,22 418:1,12,17,19,23 419:1,4,6,8,9,10 419:11,15,25 420:19 421:8 422:9 424:7 429:2 434:9 435:10 438:17 440:1,12 441:11 442:5,21 453:16 465:8 466:13 473:4 475:5,19 476:22 477:21 478:20 479:4 484:20,23 485:10,22 496:5 510:6 520:5 522:14 529:13 530:11 540:17,18 555:3 563:8,10 572:7 576:12 580:5 582:6 company's 364:5 441:24 comparative 545:7 compared 368:23 Competence 383:9 compilation 460:10 complete 426:24 461:10 484:16 520:13 522:6 575:4 completely 417:20	completion 426:3 complex 360:22 539:17,24 compliance 522:22 component 405:2,11 components 379:9 compose 521:22 compounds 371:9 371:11,13 380:15 411:20 458:7 comprehensive 500:10,14,21 535:4 compression 357:13 comprised 385:21 concentration 549:10,12 concentrations 518:10 544:13 concern 390:1 concerned 421:15 423:4,19 466:2 concerning 353:19 372:7 400:16 411:13 421:15 466:3 483:9 569:13 concerns 554:9 concluded 422:16 concludes 466:18 560:13 conclusion 379:18 428:11 433:10,22 conclusions 423:8 432:5 433:8 conditions 353:24 494:2 518:11 conduct 353:6 422:25 conducted 494:1 conference 400:22 432:13,16 451:19 452:1 533:6,7,12	534:24 536:11 537:3 543:22 546:9 548:2,15,16 confident 400:18 confidential 542:11 542:16 Confidentially 486:10 488:12,19 confirm 459:4 461:2 confirmed 481:3 confused 472:1 516:23 Congress 542:21 558:6,11 Congressman 542:20 543:2 558:10 conjecture 493:10 493:22 506:25 507:12 531:5 540:8 541:21 542:8 545:21 547:3 connect 487:20 connection 550:9,24 550:24 connects 427:14 considerable 360:25 consideration 390:6 528:15 Considerations 496:1 considered 434:3 492:25 499:17 considering 559:8 constantly 524:1 constituents 379:17 constitute 433:17 constraints 373:25 consult 468:9 consultant 470:15 consultation 470:7 consuming 537:6	contact 388:1 394:17 441:8 contacting 413:19 contain 371:20 404:17 416:18 contained 355:16 412:10 container 405:11 449:12 containers 447:17 containing 371:9 381:16 396:12 517:5 531:1 532:17 548:20 contains 361:23 448:18 449:17,18 contaminant 448:20 contaminants 506:2 contaminated 394:7 contamination 382:4 411:17 415:23 434:8 539:24 contemplating 423:6 contention 365:17 contents 462:20 continue 347:8 390:16 391:5 426:7 428:18 466:8 535:6 continued 376:10,16 405:20 406:2 433:24 434:2,6 439:6,11 476:12 514:8,13 546:21 551:17 continuing 383:15 394:24 423:21 429:10 continuously 545:3 contribute 516:3 contribution 545:8
--	---	---	---	--

control 358:11 362:18 369:1 377:2,5 381:5 388:5,9 411:21 443:17 496:1,5 572:13 573:3 conversations 466:12 conveyor 389:3 cooking 356:22 cooling 353:2,8 cooperate 380:2 436:9 516:15,19 cooperating 374:23 375:2 515:2,17 cooperation 533:15 576:21 cooperative 422:21 coordinate 380:2 coordination 431:25 cope 394:3 copied 464:11 copies 400:6 407:8 428:8 452:22 464:7,9 copy 350:5 351:10 362:2 367:12 372:4,17,20,23 373:5,10 376:21 385:18 400:10 407:12 420:7 427:23 437:22 438:1 456:13,19 457:21,22 464:20 464:22,24 467:2 471:16 478:12 479:17,20 480:7 481:6 495:7 501:6 501:18 533:2 558:24 567:11 576:13 581:7,13 581:19 copying 425:14	Cornell 375:21 corner 458:18 corporal 349:10 corporate 357:19 364:3 385:19,20 385:25 422:7,8 424:4,6,14 425:9 427:8 428:3,24 429:2 440:11 572:4 Corporation 345:1 correct 350:2 351:13,15 366:23 366:24 367:25 368:3 369:8 378:2 378:16 381:13 384:22 388:19 392:2,7 406:21 408:25 409:21,22 416:24 424:16 426:20 427:19 450:13 458:25 459:12,15,16 467:20,21 472:22 475:4,7,8 477:16 479:5 480:8 481:10 493:8 502:18 505:1,4,10 508:10,13,15,17 509:2,3,5,6,7,8 511:15 512:20 513:22 514:3,24 514:25 515:20 516:9 517:9 518:16 520:9 521:16,20 522:14 522:23 524:3 525:18 526:2,4,6 526:10,25 527:9 528:12 530:23 531:23 532:1,2,3,8 535:9,14,15 539:12 542:6,14	542:22 543:13,25 546:14,15 552:2,3 552:5,6,9,10 553:19 556:8,9 557:17,22,23 558:23 559:21 564:9 565:14 566:3,18 573:4 575:4 correcting 504:24 corrections 576:14 corrective 545:6 correctly 486:13 492:7 493:2 503:1 504:17 505:21 506:7 508:19 518:16 526:22 545:10 574:25 corresponded 557:2 correspondence 502:2 530:16 543:1 555:8 Corvallis 547:19,21 cost 395:12 coulometric 371:7 counsel 344:1 347:13 348:18 351:3 362:3 365:9 365:12,16 388:12 392:3 398:9 410:21 412:11 434:17 437:2 439:2 450:14 456:14 457:21,23 459:7 461:1,5,9 462:11,22 466:18 476:2 479:18 481:5 489:12 490:21 512:8 519:18 524:23 530:14 533:11 537:18,22 551:22 553:25 554:14	555:7,20 560:8 575:2,3,7,9 counsel's 406:5 410:24 416:16,21 436:13 553:9 count 409:4 457:8 countries 355:1 country 354:24 482:2 County 342:2 343:2 347:12 couple 378:22 408:6 451:19 529:9 course 359:5 392:14 400:12 412:4 465:14 479:10 563:13 564:7,17 565:6 570:1,24 571:2 582:4 court 342:1 343:1 347:6,12 348:3 574:11,13 576:15 580:1 cover 368:18 372:10 400:9,11 455:4,8 455:25 461:4 526:14 548:8 covered 388:16 409:10 431:13 covering 420:4 covers 532:4 Cowley 402:20,21 crash 423:14 create 446:21 523:6 created 384:20 429:16 442:5 498:1,5 570:23 credit 414:9 420:13 creek 498:7 Crowley 402:20 CRR 343:21 Cumming 412:10 current 440:7	454:24 currently 347:11 433:14,16 465:1 Curt 345:24 347:5 curtailment 546:18 custody 580:14 customer 386:14,24 407:9 408:9,16 417:17 419:14 420:12 422:21 426:10 443:9 472:23 473:1,8,12 475:13,17 476:23 480:11 484:6 485:6 489:3 516:20,21,24 519:9 528:5 529:13 530:11 539:12,17 542:22 558:12 customers 352:15 352:17 355:9 387:20 388:1,8,17 388:18,21 396:3 396:23 397:1,7,7,8 397:15,20 398:1,3 398:16,25 400:2,7 400:10,15 405:16 406:20 408:24 411:4,11,25 416:12,17 421:22 427:7,15,21 440:3 443:4,11 482:7 483:22 484:4,4,6 484:11,17,17 486:9 487:6 489:5 490:4 491:10 505:8 520:24 521:12,20 522:6 522:19,23 523:5 524:20 525:24 526:7 528:12 541:16 542:5
---	---	---	--	---

cut 455:7 CV 350:5 C-L-O-R 377:16 C.C.R 343:20,21 D D 346:14 367:21 372:12 383:3 405:23 406:6,9 410:1,2 419:19 420:14 460:3 521:1,4 563:25 567:8,11 damage 393:14 486:13 488:22 494:1 499:22 502:23 damaged 393:1,3 Dan 438:16 502:3 555:13 danger 357:14 492:22,25 data 358:5 433:15 446:14 460:11 462:6 498:18,23 499:2,11,14 500:10,14,21,22 501:1 516:5,6 date 347:2 352:14 363:10,23 367:3,8 367:9,17 368:2 369:14,15 372:11 375:8 376:25 378:7 380:24 381:1,2 383:2,2,4 384:17 404:5 412:21 415:6,8 419:20,20 420:16 421:5 426:3 430:14 437:3,5 442:7,17,22 447:25 448:5 450:25 451:3,22	454:11 456:7 458:17 463:9,25 464:2 465:18 482:4 487:17,18 487:21,22 489:14 491:14 514:2 520:20,25 528:25 538:25 539:1 548:7 559:8 561:10 570:23 579:6 dated 364:1,25 366:21 369:21 372:13 373:16 378:9 380:10 387:8 396:20 399:5 405:14 406:13 409:14,16 410:4 411:2 412:10 413:2 414:1 419:23 421:10 430:10 437:19 438:17 439:17 441:3 443:11 444:15 453:15 454:5 455:19 456:2 460:3 465:6,17 520:4 561:10 563:16,25 564:12 565:3,15 566:17 566:22 567:8 568:8,18,20,24 569:8 570:3,9,13 571:16,20 572:5 dateless 524:7 dates 350:5,8 406:7 451:24 463:7 510:25 511:2,12 date's 420:17 Dave 364:17,19,25 365:23 366:17 David 361:6,7	366:22 367:4,20 368:1 402:12 451:8 512:19 513:19 563:17,18 565:23 566:23 567:5 Davis 344:21,22 347:23,23 418:1 490:25 491:3 562:7,13,17,21,25 573:13,14,14,17 573:21 581:20,21 day 360:20 470:11 482:1 501:2 513:10 531:16 575:13 579:13 582:10 days 362:1 472:17 Dayton 453:17 DDE 359:17,19 509:16 DDT 359:17 369:5 369:7 379:2 380:1 509:15 512:6 559:17 DDTs 359:19 De 418:9 dead 443:25 499:16 499:24 deadline 426:25 deal 365:20 517:6 517:12 538:18,19 dealing 406:23,24 deals 385:3 dealt 518:4 Dean 460:4 Dear 367:20 death 505:20 557:8 557:13 decades 393:16 deceased 444:1,3 December 367:9 369:16 380:10	420:12 437:5 451:24 563:17 564:1 568:24 569:8 decide 436:10 539:19 decided 360:3,15 423:18 528:8 decision 400:10 412:2 421:17 declined 535:19 defendant 342:18 343:17 344:9,18 345:1 417:18 580:12 Defendants 342:13 343:13 Defendant's 346:9 362:4 396:14 405:22 453:3 Defense 465:6,9,12 465:17,21 define 372:25 defined 376:21 377:8 499:2 defining 360:15 definite 360:11 definitely 393:21 405:7 492:14 552:16 554:4,23 definition 493:13 degradation 466:7 degree 371:15 499:25 535:20 deliberate 497:24 498:4 deliberately 393:5 497:15,16 deliver 360:17 delivered 355:15 360:24 436:1 delivery 582:2 demonstrate 548:20	551:2 demonstrated 504:11 denied 542:6 dental 411:21 Denver 375:13 376:4 depart 349:9 department 344:18 347:24 373:20 374:2,5 375:6,12 376:2 377:2 380:16 381:11,15 382:24 402:19,21 408:3 431:2,8,8,10 448:2,3,4 449:24 450:10 454:7 485:1 486:10 488:12,20,24 495:20 516:16 536:17 537:2,7 538:16 539:8 540:4,9 541:14 542:3,12 543:19 543:24 544:19,20 552:4 555:1 556:17,18 Department's 487:1 depended 554:2 depending 392:14 deponent 575:6 depose 560:19 deposes 348:10 deposition 342:16 343:16 347:7,8 348:17 352:13 362:2,9,11 368:16 376:10,16 388:11 388:13 405:20 406:2 439:6,11 457:24 459:8 467:18,24 468:5,8 468:16,19 469:14
---	---	---	--	--

470:2,7,18 471:20 471:21 476:6,12 479:14 480:4 503:6 514:8,13 524:16 536:9 542:19 551:17 559:1 560:14 562:22 576:10 579:3 580:9,11 depositions 574:9 derivatives 377:15 derived 377:17 describe 350:6 358:1,18 377:14 425:6 458:1 531:6 533:9 described 354:15 360:8 393:18 443:2 535:14 describes 354:16 458:8 524:13 describing 458:7 description 358:12 473:9 descriptive 358:7 designed 355:14 360:13 Despite 546:17 destination 473:12 destroyed 396:7,9 destruction 396:5 detail 432:20 detectable 371:20 detected 371:9 detecting 364:21 detector 371:7,8 determination 497:1 515:4 determine 359:19 395:12 481:1 496:18 516:4 539:20 determined 357:23	359:22 determining 359:16 550:22 develop 382:7 388:25 447:4 502:24 developed 355:21 389:14,15 423:14 430:8 438:15 448:17 449:7 450:20 510:1 512:5 527:3,8,13 developing 443:12 447:20 development 385:19,20 466:3 572:4 developments 381:24 devised 387:3 dictated 444:14 dielectric 353:4,8 353:11,19 354:5,7 390:11 436:10 440:5,6,18 Dietrich 382:16 difference 506:3 543:3 differences 506:1 different 350:7 360:3 377:25 379:11 381:18 387:24 415:4 472:2 497:20 513:2 difficult 484:7 494:2 504:13 537:6 539:9 difficulty 539:16 dig 529:16 530:15 Digby 445:5 direct 394:17 398:1 411:25 427:20	433:12 440:7 489:5,20 496:11 503:5 505:8 521:5 525:24 526:7 536:21 542:5 546:16 547:24 550:24 552:14,14 directed 410:11 526:7 directing 467:15 483:19 491:10 548:10 directly 379:23 415:23 477:13 548:2,21 550:5 551:3 director 357:19 364:5 374:12 378:20 396:21 399:8 406:13 408:1,11 409:16 410:5 414:2 421:6 437:23 440:12 465:9 485:3 487:14 492:10 493:5,18 494:18 496:20 497:4 500:24 506:10,14 507:17 510:4 520:8 523:12 535:22 546:13,24 549:1,20 550:3,15 554:25 572:13 disagree 535:24 546:25 549:15 disappear 553:10 disappearing 553:11 disappears 531:9,20 531:22,24,25 discharge 349:13 497:9,13,19,25 498:3,4,16	discharged 497:3,7 497:8,25 498:2,10 discharges 422:24 544:14 545:15 discharging 544:12 disclosure 520:13 522:7 discontinue 421:17 424:15 425:11 434:13 discontinued 420:10 423:23 427:9 526:23 discover 509:11 discovered 358:8 559:7,9 discovery 359:13 363:16 365:10 394:25 509:7 discuss 379:21 413:20 414:4 discussed 457:23 505:20 561:25 discussing 348:18 451:20 558:22 discussion 439:16 476:8 545:2 551:13 561:2 571:8 discussions 523:21 disguised 436:5 dispersal 386:20 dispersive 546:18 disposal 382:7 396:6 404:25 448:22 492:5 dispute 552:13 disruption 434:5 dissertation 500:13 dissipation 546:23 distinguish 361:25 distributed 405:15 456:20 554:18	555:2 distribution 397:9 397:23,25 398:3,5 406:19 407:17,23 408:17 434:10 438:4 443:9 569:12 distributor 399:13 412:2 421:22 427:12,18 485:6,9 521:12 distributors 399:14 409:24 410:18 411:2 414:14 483:21 484:11 489:5 505:8 520:24 521:19,20 521:24 522:5,17 522:18,22 524:19 District 342:1 343:1 347:12 division 375:21,23 376:4 412:23 417:10 418:10,14 422:19,20 423:11 428:6,7,14,18 429:8 453:16 455:21 485:4 doctor 392:18 393:1 393:4 document 363:10,24 365:2,18 367:3,8 367:16,18 369:13 370:1,23 372:22 374:21 375:5 376:19 380:8,25 381:1,7,8,21 382:14,14 383:21 384:7,10,18,20,24 385:17,22 400:25 404:5 406:11 420:15 425:7 430:6,11,13
--	--	---	--	--

432:22 433:2 434:22 437:4,5,8 437:17 438:4,13 446:1 448:24,25 449:3 453:5,11 454:3 457:23 459:14 460:2 461:16,22 463:2,5 463:6,9 464:16 465:1 466:19 477:19 478:18 482:13 485:2 489:13,18 490:8 491:8,15 495:4 517:25 524:2,5,7 524:10 538:2 539:1 547:17 554:17,18 563:16 570:20 572:3,18 documents 362:10 362:16,16,20,23 362:23,25 363:3,4 365:14 366:5,7 397:9 409:6 450:11 452:20 467:14 468:2,10 482:17 565:11 572:12,21,22,25 Dogs 391:12 doing 358:17 382:3 396:5 445:6 478:4 498:14 domestic 434:9 Donald 396:21 406:12 407:13 dose 499:3 Double 477:10 doubt 513:21 doubted 491:4 downstorm 498:5 dozen 433:3 Dr 359:10,10,22 361:12 364:8	365:4 366:17,18 366:23 372:13 373:18 374:9,15 378:9,18,19 379:1 382:18,21,23 390:19,24 392:2,5 395:8,8 443:2 444:2,16,19,19,20 445:7,15 449:24 454:13,20 455:20 456:5 495:21 536:9 547:15 548:1,9 551:5 552:7,10,13,19,23 553:5 556:21,22 564:20,20 565:25 566:10,13 568:5 569:7 570:8,9 571:18 draft 400:11 444:12 444:14 571:11 drafted 400:8 drinking 557:12 Drs 359:8 360:6 361:10 Drug 415:16 drum 475:6 478:20 drums 389:5,6 420:5 DSW 458:12,20 489:21 DSW-263731 459:2 459:6 DT 369:5 due 373:24 493:11 505:25 546:20 Duluth 400:22 401:10 403:19 duly 348:8 574:7,18 duplicate 410:10 Durkee 418:14,15 dust 411:20 Dustman 403:9,10 duties 358:9 465:14	563:14 570:1 duty 400:15 DV-04-55 342:8 343:8 347:12 580:6 D.C 375:19,22 376:2 402:7 430:10 D.V.N 378:8,11 563:24 564:4,25 565:17 566:13,24 567:7 E E 345:5 373:25 374:14,15 381:9 382:16,16 399:8 409:15 410:5 412:17 414:2 415:9 420:17,25 421:1,2,6 427:3,4 437:9 444:14 520:7 568:1,9,19 568:25 569:1 571:11,18 earlier 388:13 395:18 411:13 457:24 481:24 483:13 514:19 530:7 559:1 early 362:17 364:4 379:25 429:15 437:14 440:13 553:16 ears 358:19 easier 354:25 easy 510:7 539:25 540:21 eating 506:17,21 507:6 ecological 433:15 Ecology 375:21 economic 466:15	Educate 388:8 education 422:21 426:10 effect 496:18 504:11 505:19 effective 390:11 421:19 427:10 429:11,13 436:12 535:4 effectively 388:5,9 effects 354:1 359:18 382:10 395:1 433:13 499:11,14 500:14 502:22 503:8,15 504:1,8 547:12 effluent 490:15 497:2,7,10 498:10 498:12 537:8 effluents 388:5,9 effort 360:25 394:25 524:3 efforts 358:15 422:21 423:5 431:25 egg 379:15 eight 383:6 391:4 394:22 470:11 either 354:24 386:20 415:22 464:22 476:19 573:15 575:9 electric 352:18,21 352:25 354:3,11 435:5 502:3 electrical 352:24 354:17 381:4 388:18 429:17 434:5,11,19 436:9 440:7,16 electricity 353:6,14 electron 371:7 453:23	elements 532:24 eleven 376:11 elicit 450:3 eliminate 405:3 422:24 486:11 488:21 eliminating 395:13 434:10 545:4 Elmer 374:16,17 442:20 443:22 552:8 556:22 557:3 569:6,12 570:4,8 Emery 382:16 Emmet 364:1,2 372:13 374:11 378:9 444:2 552:7 556:21 564:11,20 565:25 566:10 Emphasis 383:15 employed 350:1 419:22 454:15 511:3,10 561:11 employee 361:7,9 378:14 392:25 394:16 412:24 442:5 495:19,22 512:18 547:18 563:10 564:7,18 565:17 employees 491:17 509:1 employment 496:9 empty 420:25 enable 535:5 enclosed 437:22 576:9,14 ended 390:11 495:21 ends 356:3 444:23 448:25 454:3 enforce 522:25 engineering 349:16
--	--	---	--	--

349:21 453:16 English 372:5 enrollment 349:11 ensure 522:21 enter 349:8 entered 349:10 392:21 524:16 entire 411:9 459:14 459:18 461:6 500:13 503:4 entirely 434:1 entities 516:3,11 entitled 385:24 401:8 404:14 430:7 441:3 536:11 543:11 546:9 547:11 entity 558:9 entry 358:15 404:24 435:13 445:4 452:6 environment 358:14 358:16 359:15,17 360:7 366:19 382:1 386:25 395:2 404:20,24 405:4 426:8 430:8 432:9 433:17 440:3 443:7 445:12 448:21 466:2 491:25 492:24 494:15 509:11 515:5,19 531:2,7,12 532:3,4 532:8,18 534:3 535:8,19 543:13 550:8,19,23 551:4 553:11,18 environmental 357:20 358:10 362:18 382:3 390:2 404:12,14 411:12,16 434:8	441:10,23 442:21 443:17 447:16,21 448:12,16,20 449:6 450:17 465:6,9,12,17,21 466:4,7 486:9,12 487:6,14 488:21 492:10 493:5,18 494:18 496:21 497:5 500:24 506:10,15 507:17 510:5 523:13 533:14 534:5 535:22 546:9,18 546:22,24 547:19 547:20 549:2,20 550:3,16 554:9 572:13 573:3 EPA 431:9 434:18 437:9,11,23 558:3 558:10 Eppenberger 343:18 345:7,20 347:3 469:7 574:14 576:5,17 580:17 581:3 equipment 352:18 353:15 355:14,15 356:9 358:6 360:5 360:11,13,17,24 361:1 371:3 389:7 395:9 416:2 429:17 440:9 490:16 512:2 Ernest 420:18 errata 576:10 erratta 576:14 escape 494:13 escapes 386:19 essence 358:16 436:8 essential 432:6 433:11	essentially 423:2 549:12 establish 359:17 386:23 479:8 565:8,10 established 391:7 415:17 450:12 estimate 397:3,11 398:16 401:12 470:6,9 525:5 et 342:4,11 343:4,11 347:10,10 492:6 576:12,12 580:5,5 Europe 355:6 359:15 380:2 512:18 563:18 564:2,8 565:13,18 565:24 566:23,25 567:10 570:21 European 360:1 444:13 567:13 571:13 Europe's 565:6 evaluate 395:1 433:18 504:13 evaluating 381:18 evaporation 448:22 Evelyn 421:2 event 354:2 394:16 450:17 553:2 eventually 350:17 356:3 359:22,25 372:4,8 396:8 440:4 everybody 489:9 515:23 516:18 everybody's 502:8 evidence 386:18 459:18 499:18 507:14 508:2 532:11 540:9 542:9 548:5 553:22	evolved 358:4 exact 378:12 440:13 examination 346:3 346:4,5,6,7 348:12 411:14 467:5 551:18 559:15 561:3 examine 558:21 examined 574:18 example 354:10 355:2 356:15,21 392:20 401:21 431:1 484:19 518:17 523:14,15 524:17 Examples 415:24 exceed 537:11 exceeds 537:9 excellent 428:15 429:9 excerpts 459:15 excessive 503:16 504:9 505:2 557:7 557:15 558:1 excuse 353:3 367:11 376:11 398:6 436:19 442:19 471:9 476:2 490:24 504:23 Executive 465:9 exert 428:18 exhibit 346:9,11,12 346:13,14,16,17 346:18,19,20,21 346:22 351:18 352:12 361:20,23 362:4,11,11 363:19,22,24 364:17 365:8 366:21,25 367:11 367:15 368:14,15 368:18 369:12	370:8,11 373:3,5 373:11 376:19 378:3 380:7,19 382:11,12 383:6 384:4 385:15,16 387:8 388:10,24 396:14,17,17 398:5,18,20 399:2 399:3,4 400:20,23 401:4 403:24 405:14,22 406:9 406:16 407:14 408:5 410:22,24 411:6 412:7,12 414:12,22 415:2,4 416:18,22,23 418:5 421:20 422:1,4 423:25 427:4,24,24 428:1 429:15 430:2 434:16 436:14,22 436:25 437:1,16 438:7,9 439:18,25 441:1,3,8 442:15 442:17 443:19 444:4 447:9,24 449:5 450:15,22 451:22 453:3 455:15 456:4,12 456:15,16 457:20 457:22 458:4 459:9 460:1,24,25 460:25 461:2,6,10 461:13 462:9 463:23 467:15 471:4,19,20 472:2 477:13 479:15 480:3 481:6 482:15,18,25 483:5 501:3,4,5,21 501:24,25 503:4 505:14 512:8 514:15,17,19
--	--	--	---	--

516:25 517:4,5 519:19 520:1,18 520:23 524:2 525:1 529:16,17 529:23 530:5 533:11 534:17 536:1,2,3 538:1 543:5,6,11 544:7 546:2,4 547:6,7 554:16 555:7,11 555:12,12,19 558:16,25,25 560:10 561:5 563:7,16 564:10 564:23 565:12,21 566:7,22 567:7,9 567:15,25 568:8 568:18,24 569:6 569:11,17,21 570:3,8,10,13 571:9,16,20,24 572:5,10,22 exhibits 351:11 361:20,24 362:1 362:12 363:15 396:12 412:8 467:3 482:18 532:25 536:6 561:15,23,24 562:3 existed 452:13 existing 527:13 exists 519:17 expand 390:16 expect 470:1,3 expected 359:21 361:5 expeditiously 409:6 expensive 553:3 experience 348:19 385:5 392:8,12,23 experiment 510:13 experiments 379:14	433:18 expert 360:10 expires 575:14 579:14 582:11 explain 502:25 explosion 357:14 explosions 357:2 434:4 explosion-resistant 354:18 explosive 353:16 exposure 392:13,13 394:4 432:8 433:13,19 443:7 495:23 503:16 504:9,16,22 506:16 507:9 535:8 548:19 557:7,15 558:1 exposures 495:22 505:12 expressed 491:18 expression 354:16 357:24 358:1 377:15 493:14 531:6 extend 383:20 extended 349:7 504:16 extension 428:16 extensive 553:3 extent 354:23 504:19 515:10 exterior 413:7,17 531:22 external 504:20,21 504:22 extra 458:19 extrapolated 550:22 Extreme 404:22 extremely 509:21 eyes 358:19	F F 350:10 410:12 440:10 451:4 face 451:1 facilities 350:7 416:1 537:12 544:12 facility 389:4 394:1 451:16 fact 427:2,23 441:4 441:9 442:4 446:17 450:14 456:5 463:15 481:2 493:11 497:25 531:19 542:2,2 553:10 558:20 factor 549:10 facts 442:10 508:2 532:10 540:8 542:8 fair 508:22 515:1 521:23 544:18 545:18 fairly 555:23 Faith 343:20 347:6 560:23 574:6 Falls 344:24 408:3 581:23 familiar 386:9 398:10 470:20 472:20 565:19 567:22 famous 551:21 far 426:13 509:4,4 535:19 545:4,7 farm 416:3 farming 392:20 Farrar 571:18 fashion 556:25 fast 428:19 fauna 371:6 FAVOR 581:1,7,13	581:19 FDA 375:22 382:4 423:5 431:9,15 516:18 feasibility 395:12 February 364:1 366:21 372:13 378:10 396:20,24 398:17 399:5,18 400:3 406:14 407:13,24 408:10 408:18 520:4,23 521:18,24 522:8 564:12 565:3,15 566:2,17,22 federal 377:1,5 402:8 431:22 452:16 460:20,22 461:18,20,23 462:1,5 feed 416:3 feel 385:22 400:15 545:3,8,25 feeling 545:12 felt 423:11 527:21 Fergus 342:2 343:2 347:12 FG 376:22 field 490:5 491:10 figures 508:20 file 373:16 414:25 451:4 572:25 files 400:5 460:11 524:10 filing 478:17 576:15 fill 366:5 filled 474:20 final 429:6,7 537:8 572:3 finally 466:6 531:21 558:24 financially 403:1 find 359:1 392:15	434:22 436:21 446:13,20,25 448:25 449:2,15 463:7 483:20 495:6 517:19 535:18 542:14 555:11 576:9 finding 489:13 519:21 544:21 findings 366:18 372:7 380:3 432:4 523:25 fine 348:16 490:13 561:18 finished 546:3 fire 354:1 357:14 425:16 434:4 fires 357:2 fire-resistant 354:17 firm 365:13 420:6 469:6 512:23,25 513:4,8 580:14 first 348:8 350:1 360:6 362:17 365:3 366:17 367:10 368:4,12 371:1 374:16,21 374:21 381:20 382:14 386:12 387:13 396:17 401:17,18,20 406:9 408:16 413:4,8,11,12 415:13,14 420:2 421:12 423:9,16 424:15 428:21 430:20 431:18 433:23 437:21 439:21,22,23 440:25 441:1 445:3 450:12 452:6,7 453:5,18
---	---	---	---	---

454:19,19 455:23 455:24 457:25 461:3 462:15 481:23 484:5 486:20 496:12 499:10 502:20 507:25 511:3,10 511:16 556:15 559:4 572:19 574:18 fish 344:18 347:24 375:12 376:4 382:5 402:2,12 403:2 415:20 462:2 492:23,25 493:19 499:17,23 499:25 506:17,21 507:6 516:16 547:18 548:2,19 549:10 550:4,7,10 550:18,21 551:2 Fisheries 375:13,25 402:16,19,22 403:11 460:14,16 461:19,21 462:2,6 516:17 fit 359:13,20 361:2 Fitzgerald 435:16 435:25 437:23 440:11,15 Fitzgerald's 435:22 five 374:18 388:23 403:21 415:19 431:22 472:11 476:11 491:21,22 512:11,12 514:5,7 532:25 five-gallon 474:3 five-pound 474:9 fixed 487:23 flakes 532:6,21 flame 411:22 flammable 353:16	flexible 355:25 fluid 353:4,8,14 354:7 356:17,19 356:24 357:10,11 390:12 406:25 fluids 353:3,8,11,19 354:5,16 355:4 356:8,9,14,18 357:24 381:4,19 396:22 397:18 399:1 406:13 407:3 428:17 440:6,6,18 441:25 442:1 Fluornoy 410:14 folder 456:10 follow 381:23 412:4 519:8 524:17 following 374:24 381:23 387:12 395:24 411:18 412:5 460:10 495:22 497:2 follows 348:11 370:4 446:12 follow-up 523:14 food 356:22 405:9 405:12 415:16,23 416:2 423:7 462:16,23 506:1,1 535:18 548:22 553:18 foods 415:18 force 430:9,24 431:7,24 432:4 433:9 522:17 558:15 Forcing 522:20 Ford 369:18 418:12 464:1 465:13 foregoing 574:22,24 579:2 foreign 481:24	Forestry 402:20,22 forget 402:7 460:18 form 365:6 370:2 380:5 384:1 387:4 387:9 390:4 393:22 394:14 397:6 398:19 406:23 412:14 413:22 414:16 416:15 417:16 424:18 426:19 435:24 441:20 447:6 453:21 457:5 463:20 464:17 465:3,23 472:15,21 473:5 474:15,17,19,20 475:1,10,15 477:17,23,24 478:5,13,16 480:19 484:13 486:24 504:14 508:1 509:13 510:10 511:1,8 513:25 515:8,8,21 520:16 522:10 528:1,14 531:4 532:10 539:14 552:17,24 553:20 554:5,11,21 557:9 formed 351:16 former 527:23 formerly 529:3 forms 404:21 formulated 405:2 formulation 519:14 Formulations 459:5 forth 415:17 574:25 forwarded 454:22 forwarding 455:25 Foster 417:10 found 358:14 359:2 369:10 392:15	404:20 436:11 459:21 492:24 509:20,23 513:21 545:3 550:7 foundation 375:14 414:17 416:9,15 436:6 441:21 443:15 484:2 486:18 488:9 489:18 490:8 491:14 493:22 498:25 500:19 506:19,25 507:12 508:3 524:6 539:15 544:6 547:3 548:5 549:4 561:16 foundational 466:19 466:24 foundations 560:10 573:9 found 509:18 four 381:21 382:9 388:7,15 436:18 439:10 476:5 496:12 550:12 568:15 fourth 408:8 Fowler 382:16,21 382:21 fowls 379:14 Fox 420:19 fractions 385:8 frame 514:22 526:1 527:9,18 553:5 France 355:2 Francis 419:21 Francisco 443:1 569:13 Frank 412:25 413:14 Frederick 453:14 454:6	free 366:7 532:12 freight 414:10 frequently 557:3 Fresh 402:6 Freshwater 402:17 547:12 front 361:25 370:11 427:3 449:3 465:1 481:7 520:1 529:17 frustrated 545:13 full 401:14 414:9 420:12 481:23 545:1 575:3 fully 400:15 436:8 fumes 389:7 function 486:8,16 487:5 functional 373:19 381:19 396:22 397:17 399:1 406:13,25 407:3 437:19 Fund 465:6,9,12,17 465:21 further 360:15 400:8 404:25 428:19 456:3 486:1 544:6 575:8 future 434:3 FWPCA 402:7 F-O-W-L-E-R 382:22
G				
G 412:16,18,19 451:4 game 499:23 Garlington 344:14 581:15 Garrett 495:15,17 495:18,21 498:9 500:2,16				

gas 357:13 371:6,11 371:23 383:16,23 385:7 453:23 510:7 516:8 Gateway 576:1,24 582:6 GC 383:20 385:13 395:9 GE 354:7,10 435:13 505:1 gears 357:16 Gee 431:1 557:9 Gene 363:25 364:10 564:10,18 general 350:16 352:21,24 354:3 354:11 356:11 359:3 364:13 397:7 413:5,6 414:4 420:21 435:5 442:17 478:17 499:19 558:2 564:11 generally 353:23 362:15 387:22,24 403:25 410:23 452:11,12 462:1 462:12 557:25 generated 358:5 501:2 generating 440:8 generic 354:15 gentleman 401:20 George 367:5 Georgia 412:20 German 355:15 360:17 Germany 355:2,14 355:17 360:13,25 384:15 getting 531:1,6,11 540:6 541:19 544:22 553:18	gills 550:11 Giloth 410:13 gist 414:7 442:23 give 356:15 385:22 424:21 467:1 470:6,9 485:10,15 494:25 495:7 541:13 542:10 563:1 given 363:13 405:3 405:5 409:6 414:9 420:12 424:13 482:20 492:12 494:22 515:9 543:23 573:6 575:5 579:5 giving 516:19 562:9 Glens 408:3 Glidden 418:14,14 global 507:25 gloves 393:12 394:5 go 362:19 363:18 373:24 374:6 386:10 401:19 406:8 410:1 412:16 419:12 420:25 427:20 429:20 448:24 451:18 466:21 467:16 475:2 479:24 481:4 482:14 486:1 489:20 492:16 494:6 500:4,7 501:3 504:7 505:13 513:12 514:15 516:25 517:3 518:13 519:18 520:18 521:8 525:15 531:13 532:23 533:23 536:2 537:21 538:10	539:25 542:13 543:5 544:2,2,7 546:2,3 551:8 553:15 559:11,24 560:1,10,23 561:13,25 565:8 573:19 goal 431:24 goes 498:1,9 499:21 535:16,16 544:25 549:9 going 363:6,14 370:2 379:20 381:20 382:13 393:1 406:22 414:16 416:8,14 416:16 424:18 433:7 435:1,13,23 436:21,25 439:24 448:17,23 452:18 452:19 456:10 457:4,19 458:6 464:17 467:13,15 470:20 472:15 475:9 479:13 480:23 481:5 495:3 496:15 499:9 501:13,18 501:20 503:3 518:13,14 524:1 526:8 530:15 531:20,23,25 532:3,8 533:19 536:21 539:4,10 541:5,8 560:10,17 560:22 561:14,22 561:25 562:1 good 348:3,14,16 376:7 405:17 439:13,14 457:18 459:22 466:9 467:7,8 491:4,20 540:12	goods 414:5 Gore 342:23 345:25 576:1,24 582:6 government 378:24 430:23 431:2,5 432:1 564:25 565:1 governmental 422:22 423:20 452:15 558:9 Government's 432:2 great 344:24 357:14 399:6,10 408:20 409:18 413:1,18 418:19,23 419:1 419:25 420:19 421:8,22 466:15 473:11 476:24 478:3 479:3,8 484:19,23 485:10 485:22 520:5 522:13,13 523:14 529:13 530:12 538:18,19 581:23 greater 385:2 535:20 greatly 546:20 Greensboro 365:13 grew 348:25 group 361:14,16 373:19 386:23 396:22 397:18,18 399:1 403:2 406:13 407:3 554:20 grouping 415:3 groups 387:25 388:1 422:23 423:4 growing 388:3 guess 541:22 guidance 399:23 400:1	guidelines 415:17 Gulch 345:14 gun 379:19 Gunnar 369:15 370:24 380:9 570:4 guy 510:24 guys 562:5
H				
H 381:9,17 413:24 524:25 568:9 Haffeman 344:22 581:21 halfway 444:25 Hamsters 391:15 391:16 hand 358:17,17 388:10 394:17 421:25 423:24 428:1,22 429:21 437:1 457:19,22 460:24 462:9 467:13 479:13 481:5 495:3 501:6 501:20 512:8 519:19 526:12 554:16 558:24 575:12 582:10 handed 481:5 handful 484:15 handing 456:12 handle 489:3 handled 393:13 handling 393:20,24 400:16 416:2 449:21 hands 393:1,3,19 394:12,17 handwritten 369:24 370:4,13 444:7,11 444:11 483:16 489:25				

happened 354:2 366:20 550:10	heat-transfer 441:25	hold 400:5 453:1 470:14	449:17,19 506:6 557:24 559:21	identifying 381:25 545:14
happening 492:15	heavily 390:25 393:2	holding 465:11	hygienist 495:22 496:4 557:2	identity 484:11
happy 452:19	Heininger 568:19	honest 520:13	hypothetical 519:8	ignored 358:23 523:5
hardships 423:22	held 476:9 542:11 551:14	honorable 349:13	H-A-R-D-Y 378:8	ignoring 523:6
Hardy 378:8,11,17 378:18 563:24 564:4,25 565:5,17 566:13,24 567:7	Helena 345:15 455:21 456:6 473:4 477:8,15 530:11,18	hopefully 486:11 488:13,20	H-E-S-S-E 543:16	III 342:17 343:17 576:11 579:1,10 580:11
harmful 404:21	helium 383:19	hoping 516:2	I	Illinois 343:21 350:12 352:4 410:8,14 477:3,14 533:13
harmless 553:23	help 400:8 449:2 519:16 524:23 525:1 529:18,19	hoppers 416:3	Ian 546:6	imagine 472:16
hash 365:16	helped 540:4 541:17	hospitals 353:21	idea 509:9 521:19 556:19	immediate 374:9
Hatley 344:22 581:21	helping 541:18	host 497:20	identification 362:5 396:15 403:2 405:23 453:4 467:4	immediately 412:2 423:22
hazardous 415:25 535:8	Hempelmann 412:22	Hotel 401:9	identified 360:7 365:7 380:9 388:13 416:22 439:18 473:2 496:3 512:18 544:11 546:13 547:17 559:1	impact 433:19 466:4 545:7
hazards 404:12,14 432:3	Hercules 408:1 463:18	house 531:22,22	identify 347:13 363:8 367:2,16 369:13 372:10 376:19 378:5 385:17 396:18 399:3 403:25 406:10 409:11 410:1 413:25 419:19 420:15 422:4,23 423:25 428:2,22 430:5 437:17 438:8,13 441:2 442:16 445:23 447:23 451:22 453:10 454:4 455:17 456:15 459:25 463:24 464:25 507:25 509:24 530:16	impart 478:18
head 373:18 489:16 538:16	hereinabove 579:6	Howard 571:22	human 432:8 433:13 433:14,17 497:3 502:22 519:15	imparted 480:10
headed 495:20	hereto 579:4	huge 365:11,14	humans 382:10 405:10 415:24 492:23,25 503:8 503:16 504:8,14 505:19 506:2,4	Imperiar 408:2
heading 367:18 453:14 457:8 492:17 494:8 498:17 500:11 533:10 545:2 547:25 548:11	hereunto 582:9	Huh 534:11	hundred 511:23 561:24	implement 388:25
headquarters 350:21 357:19 362:19 443:18 523:25	hesitate 431:1	human 432:8 433:13 433:14,17 497:3 502:22 519:15	hundreds 508:15	implication 417:16
health 433:14,17 442:21 555:1	hesitation 493:11 515:11	Huschen 343:18 345:7 345:20 347:3 469:7 574:13 576:5,17 580:17 581:3	Husch 343:18 345:7 345:20 347:3 469:7 574:13 576:5,17 580:17 581:3	implied 494:23
healthy 392:18	Hesse 543:10,16	hydraulic 356:9 357:11 425:19 428:17 442:1 540:20	hundred 511:23 561:24	implies 497:6,19
hear 507:1 562:15	Hesse's 544:3	hydrocarbon 557:21 559:18	hundreds 508:15	imply 488:15
heard 552:19 555:4	high 353:21 386:6 544:14	hydrocarbons	hundred 511:23 561:24	importing 480:11,18 480:23 481:2 482:8
hearsay 435:24 436:6,7	highly 371:14 390:9 390:13 535:20		hundred 511:23 561:24	imports 355:11 481:18,24 482:1
heat 356:14,14,20 356:22,24,25 425:16 544:15	highway 553:10		hundred 511:23 561:24	impressed 465:25 466:5,10
heated 356:19	highways 356:5		hundred 511:23 561:24	improve 422:24
heating 356:24	Hinchen 383:3		hundred 511:23 561:24	inadequate 500:22
	hired 511:17		hundred 511:23 561:24	inadvertently 420:24
	historically 356:16 357:8		hundred 511:23 561:24	inch-thick 398:4
	history 364:5 441:4 442:4		hundred 511:23 561:24	incineration 395:21 396:2
			hundred 511:23 561:24	incinerator 396:5
			hundred 511:23 561:24	include 482:10

503:17 504:10 included 365:18 441:25 521:17 522:3 526:15 includes 362:12 378:22 551:5 including 360:1 361:16 382:4 403:14 421:22 502:13 505:20 506:4,6 Incorporated 408:2 408:12,21 417:5,9 418:9 419:8,9 increased 434:4 504:11 independent 549:12 INDEX 346:1,9,16 indicate 365:6 371:12 433:15 480:7,16 481:14 484:4 512:22 514:21 indicated 400:19 404:21 411:15 420:7 423:5 477:23 indicates 445:4 458:24 477:19 538:18 546:12 indication 416:18 indirectly 415:23 individual 381:17 402:11 456:19 467:19 individuals 361:17 375:1,5 382:20 385:23,24 387:25 393:11 396:6 435:6 510:12 518:8 530:22 industrial 376:5 391:20 394:10	438:16 440:12 458:15 495:21 496:4 499:18 500:15 540:17 545:2 557:2,7 569:7 industries 388:21 462:24 industry 352:24 368:25 369:1 388:18 389:12 437:19 440:2 447:5 457:13 industry's 440:17 Inerteen 354:12 502:6,9,10,15,22 inform 528:5 530:22 informal 466:12 information 359:20 359:24 365:14 378:19 411:5 412:10 449:12,21 451:1,6,7 466:3 480:10 481:18 482:1,7,11 484:5 484:18,23 485:11 488:7,22 493:25 494:23 504:25 505:3,9 506:9 518:9 519:6,13 521:25 526:15,20 542:17 546:1 547:12 549:1,19 549:24,25 556:23 558:17,21,22 informed 400:16 411:10,11 440:2 informing 388:2 ingestion 507:7 ingredient 355:24 356:2,7 ingredients 440:8 initial 361:10 484:17	initialed 367:20 initially 414:18 injury 503:17 504:10,12,17,23 ink 425:14 inks 457:15 inputs 545:4 inquiries 489:3 inside 357:3 installed 396:4 instance 457:14 528:10 instances 446:24 Institute 369:22 380:17 402:17,23 institutes 452:16 institutions 375:1 instrument 383:17 509:21 instrumentation 369:24 instruments 509:22 510:20 512:3 insulating 353:2,7 440:6 535:7 intend 400:1 401:19 intended 357:25 361:3 449:9,10 intends 440:4 Interdepartmental 430:9 431:24 558:14 interest 466:14,15 562:3 interested 544:21 575:10 interesting 392:16 Interior 375:12 376:2 377:2 431:10 516:16 internally 478:7 international 430:24 431:6 510:6	interpreted 426:6 interrogatories 348:11 interrupt 363:11 418:2 523:3 interrupting 561:16 intimately 442:11 intrigued 508:24 Introduce 389:10 introduced 357:25 introductory 533:23 inventory 526:12 investigation 480:25 investigators 374:24 550:23 invite 466:21 involve 423:22 433:12 involved 352:18 358:12 381:17 387:25 390:21,25 392:15 395:22 442:11 471:2 477:3 484:25 511:12 523:22 556:19 involving 434:18 446:11 Island 403:15 isomers 455:10 issue 388:3 443:12 452:13 517:12 528:2 issued 437:25 464:9 issues 390:2 397:1 446:21 517:6 528:16 554:7,9 Italy 355:2 item 360:20 387:19 388:4,7,15,23 390:14 391:4 424:15 426:9,12	426:21 446:19 items 416:3 446:17 It'd 470:10 J J 350:10 383:3 402:15,21 410:6 419:18 440:10 455:20 456:5 Jack 435:8,9 437:23 495:15,17 James 455:20 456:5 January 350:22 358:11 364:20,25 383:4,22 387:18 419:23 437:20,24 438:1,5,17 439:17 443:18 568:1,18 568:20 572:14 Japan 355:3,6 480:14 Japanese 480:11,17 480:18 481:2 Jensen 359:8,10,22 360:6,13 361:10 361:12,18 365:1,4 366:17,23 369:9 370:24 375:11 379:16,18,20,25 380:2 509:10,15 510:9 512:4 513:21 559:2 Jensen's 366:18 372:5,17,23 373:6 559:5 Jensen/Widmark 394:25 Jersey 417:23,24 419:10,10 job 358:9,12 362:17 378:12 387:17 435:13 443:17,20 553:24 572:13
--	--	--	---	---

573:1 jog 350:4 John 464:3 542:19 543:10,16 571:18 joined 361:17 Jordan 419:4 Joseph 569:7 570:9 Jr 413:1 Judicial 342:1 343:1 347:11 July 381:2 413:3,14 413:19 480:21 568:8 jumped 379:18 June 411:19 444:15	Kettering 392:1,5 552:12,20 553:4 key 505:2 506:21 kind 354:15 356:23 468:12 498:4 518:3 534:9 553:22,23 565:10 kindly 439:18 kinds 355:3 362:25 554:24 Kleinert 536:13,16 537:1 knew 364:8 382:18 435:17 438:19,20 443:22 454:13 477:21 516:7 518:23 520:14 522:7 529:12,19 530:10 531:1,11 550:6 563:18 564:4,20 566:11 567:5 568:5,15,25 know 358:17,18 366:9,11 370:3 371:22 378:12 382:20 390:19,22 390:23 397:15 398:12 399:12 409:9 427:14 438:18,19 443:25 449:22 450:1 452:21 456:3 469:2,3 470:3,5,10 470:21,24 471:1 471:16 472:14 473:25 479:19 480:22 484:10 490:14 493:25 495:15 497:25 498:12 499:3 500:20 507:5 509:5,25,25 510:17 511:10,12	513:2,7,7,15,18 516:23 519:1,4,17 523:20 526:11 528:7 529:7,14 530:3 532:20 534:1 537:10 540:13 542:15,16 546:6 547:5,10,15 549:5,24 550:4,6,9 550:15,17,18 551:20 554:15,18 554:23 560:21 562:5,25 563:21 564:20 566:19 knowing 480:15 492:14 knowledge 355:10 355:18 369:6 380:13 470:25 473:23 510:19 516:4 523:12 531:15 552:13,14 556:22 558:10 known 359:25 375:15 385:12 393:7 431:21 433:16 484:15 505:3,9,9,23 506:9 506:14 557:24 Kohler 419:6 Koppers 408:11,12 419:8,9,10,11 Krummrich 350:13 352:3,7 420:6 Krupp 384:11 K-L-E-I-N-E-R-T 536:13 K-R-U-P-P 384:11	label 446:1 447:21 448:12,16 449:2,6 449:6,10,15,15,19 450:12,18,18 452:18 454:3 458:20 459:11 labeled 363:8 404:8 407:17 408:5 409:21 410:2 416:4 430:18 432:11 433:5,21 445:17 450:19 453:11 458:12 459:2,4,6 465:11 labelled 416:13 labels 365:15 447:16 448:13 449:11,20 450:8 505:11 laboratories 358:4 360:18 382:3 569:8 laboratory 376:1 378:23 391:8 392:1 547:20 552:12 553:4 565:1 Labs 376:4,4,6 lack 484:1 486:17 488:8 489:17 490:7 491:13 493:22 498:24 500:5,10,14,19,20 506:19,24 507:11 508:3 524:6 539:15,17 544:5 547:3 548:4 549:3 Lacquer 417:12 459:5 ladder 358:24 lading 529:21 lags 546:22 lakes 544:22	Lambou 402:6 lane 531:8,17 language 372:5 Lansing 544:20 large 366:10 371:8 401:15 433:1 452:15 474:5 504:14 508:12 537:5 larger 368:23 Larry 441:10 563:8 late 349:7 350:2 357:17,21 358:3 363:5 366:20 379:25 511:5,5 515:16 559:8 lateness 573:7 latest 379:21 Laughner 345:11 347:17,17 Laurel 403:12 law 365:13 469:6 512:23,25 513:3,8 581:9 lawful 348:8 laws 440:23 499:23 lawsuit 417:18 lawyer 512:22 551:21 lawyers 555:1 LD-50 499:3 LD-50s 552:1 lead 415:22 437:10 441:23 443:7 447:3 543:23 leader 534:3,5,9 leaders 554:24 leadership 359:5 386:1 leading 380:6 381:24 557:19 leakage 404:24 432:8 448:22
K K 460:3 Kaleczyc 345:12 Karl 410:12 Katie 344:13 348:1 keep 382:2 400:15 429:11 511:25 523:14 542:17 561:16 Keller 374:8,9 382:17,18 444:14 444:16,20 445:4 454:10,13 568:1,5 571:11 Keller's 382:23 395:8 454:20 Kelly 364:1,2,8 372:13 374:11,11 378:9,19 444:2 449:24 495:21 552:8,10,23 556:21 564:11,21 565:25 566:10 Kelly's 374:15 kept 359:20 472:18 478:15 479:9 510:2 550:20,20	L L 382:16 420:14 543:16 Lab 376:3 402:2,12			

492:5 learn 452:19 513:9 leeching 386:20 left 358:17 458:23 499:10 514:5 left-hand 375:7 449:5 458:18 473:3 legal 347:5,20 486:10 487:1 488:12,19,24 497:20 Len 402:21 lessen 466:7 lesser 474:6 letter 367:11,12,18 368:5,9 369:21 372:19 380:9 396:18,20,24,25 398:17,24 399:5,7 399:10,14,18 400:2,3,6,9,11 406:12,15,16,19 406:20 407:2,13 407:24,25 408:10 408:18 409:11,15 409:20,23 410:4,9 410:10,12 411:9 411:13 412:20,21 412:22 413:5,14 413:25 414:1,4,13 415:6,11 416:6,7 416:13,17,23 420:22,24 421:4,5 421:12,21 427:6 427:11,18,20,23 428:12 437:7,10 437:18 438:5 442:18,24 443:4 443:11,19,19,23 453:13,19 454:5 454:11,16,21 455:17,19,24	456:1,4 465:12,16 465:21 479:15 480:7,8,16 485:5 486:5 487:10 512:10,15,21 513:12,20 514:21 520:4,12,21,22,24 521:11,17,18,19 521:22 522:3,4,5 522:12,18 524:24 525:23 526:7,11 526:17,22 543:1 569:12 570:4 letterhead 441:5 460:2 464:1 465:5 491:14 561:8 566:15,24 letters 397:4 407:10 410:2 411:1,4 412:8 483:9,11 486:16 487:24 488:7 489:4 491:12 505:6,7 518:3 522:23 523:16 524:19 525:3 542:18 let's 357:16 375:7 409:4 410:1 412:16 416:11 417:11,13 419:3 439:21 442:14 444:4 447:9 451:18 471:4 488:4 489:20 492:16 494:6 498:17 500:4,7 505:13 513:12 516:25 520:18 522:4 529:16 531:8 536:2 538:12 543:5 546:2 559:11 560:1,23 565:8,10	level 349:8,9 358:22 385:22 386:6 423:6 433:19 435:10 levels 415:18,19 433:16 535:8,18 535:20 546:19 Lewistown 344:7 581:11 Lidgett 570:18 life 404:22 497:3 498:11,15 499:15 499:22 light 394:25 436:13 likelihood 432:8 limitations 425:4 limited 366:6 423:21 497:10 line 356:5 367:10 420:11 425:22 446:2,4 498:7 531:8 577:1,4,7,10 577:13,16,19,22 578:1,4,7,10,13 578:16,19,22 lines 356:5,6 400:19 531:18 Lipa 576:1,24 582:6 liquid 353:5 liquids 394:4 436:10 list 397:9,23,25 398:3,5 401:8,17 401:20 403:8 406:19,24,25 407:1,2,5,12,17 407:23 408:15,17 408:25 416:6,20 416:23 417:2 438:4 443:9 451:25 452:14 484:7,16 485:6 516:20,21,24 539:12,17,25	540:3,10 541:15 542:4,13,16 569:12 listed 375:11 396:22 401:20 402:4 408:17 460:12 473:19 516:11,18 568:1 listen 523:24 listening 534:23 listing 431:3 452:3 lists 387:11 407:9 460:10 542:10,22 liter 544:15 little 473:16 486:1 541:18 lived 509:4 liver 503:17 504:10 504:11,12,17,23 557:25 living 380:15 443:25 500:15 LK 364:20 LKB-9000 371:12 LKD-9000 370:6 LLC 345:7 locate 524:22,23 525:2 540:5 541:18 located 350:11 351:24 352:1,3 353:20,25 359:11 367:5 locating 539:10 541:17 location 356:19,20 356:25 475:2 478:8,11 locations 567:13 Lohn 344:14 581:15 London 361:8,14,18 378:13,15,24 563:25 565:1,9	566:13,24 567:7 567:13 572:11 long 450:1 483:4,4 499:17 502:23 507:20,21 529:4,4 529:7,7 542:11 longer 451:16 525:6 533:4 540:23 long-standing 450:4 long-term 433:19 466:14 look 362:7 366:25 371:1 382:13 401:17 407:5 415:2 416:4 427:3 437:16 441:13 442:14 444:4 457:7 462:15 463:8 471:4,8 482:24 495:5 501:9,22 512:11 524:5 525:9 529:14 536:10 537:21 551:7,9 looked 362:14 406:17 looking 411:1 413:4 452:3,6 458:18 461:15 472:7 490:2,12 491:7 509:15,19 516:8 517:20 521:10 539:25 540:18 548:10 562:18 looks 364:20 458:12 458:19 473:14 490:9 loop 425:16 426:1 426:13 Los 452:7 lose 429:25 436:24 439:3 495:8 loss 386:25 448:21
---	--	---	---	---

543:12 545:3 losses 545:8 lost 538:7 lot 498:5 510:12,23 loud 460:9 Louis 342:25 347:4 349:1,22 350:9,11 350:16,22 362:19 364:14 367:6 369:19 378:9 496:6 523:25 564:11 574:4,12 575:13 580:19 581:5 582:8 low 433:19 499:3 lower 384:17 lowest 358:22 lunch 439:8	408:15,25 414:25 416:6,23 main 386:14 389:19 389:22 526:10 Mainprize 570:14 570:23 maintain 407:8 maintained 422:20 major 423:12,22 506:15 507:6,9 making 440:10 488:25 507:21 508:6,7,21 540:21 545:14 554:8 mammals 371:21 506:4 management 358:20,25 386:6 422:7,8 424:5,6,14 425:9 427:8 428:4 428:25 429:2 manager 350:18 357:18 358:10 362:18 387:14 412:23 441:11 442:20 443:17 472:17 497:12,13 573:3 managers 489:2 managing 437:23 440:11 mandates 424:12 425:15 Manion 455:20 456:5 manner 429:11 440:15 manufacture 369:4 434:14 440:22 manufactured 351:19 352:1 355:3,13 479:6 496:17 559:20	manufacturer 354:24 360:24 384:9 510:17 manufacturers 354:19 355:6 418:1 434:11,19 436:2 437:12 447:2 manufacturer's 446:11 manufactures 502:11 manufacturing 351:22 352:7,18 394:1 417:7 440:19 477:14 496:18 man's 549:25 March 373:16 376:25 377:6 379:20 400:23 401:5,5,9 404:6,8 404:8,12 405:14 428:25 429:4,16 442:22 443:11,19 453:15 454:21 455:19 456:2,7 517:22 555:16 567:8,18 569:11 569:17,21 570:3 mark 361:22 396:12 452:23 marked 362:4,10 367:1 368:15 372:22 388:11 396:14 398:17 405:22 406:3,10 406:16 410:11 416:22 422:1 423:24 427:24 436:15 452:25 453:3 457:20 467:4,14 476:25	479:14 482:14 495:4 501:20 529:25 530:1 533:11 market 386:24 389:10 508:12 510:18 marketed 458:8 marketing 381:15 448:4 485:1,16 508:21 554:25 marking 444:23,25 Martin 571:18 Marty 342:4 343:4 347:9 576:12 580:5 Maryland 403:12 Mason 464:3 542:19,20 mass 370:5,5 371:12,23 383:13 383:14,16,23 385:1,13 395:9 510:8 Massachusetts 546:14 Masspectra 371:10 master 366:2,8 Master's 349:20 material 355:25 357:22,23 360:16 377:1 379:10 394:8 396:8,9 420:4 426:7 454:25 456:2 478:8 498:1 502:10 519:14 523:5 532:17 materials 355:25 377:4 381:16 405:1,2 458:9 529:2 543:19 546:21	matter 400:18 411:14 413:5,6 419:24 420:21 442:18 452:10 488:3 556:20 matters 400:16 466:20 470:15,18 Max 347:23 491:2 504:24 573:14 maximum 415:17 Maxon 344:21 581:20 McCall 399:6 409:17 420:19 421:8 MCL 407:19 416:5 520:19 521:15 525:10 McLister 419:6 MCS 395:17 Meacham 410:7 mean 355:24 364:14 377:12 391:17 418:2 426:5 431:11 470:22 508:5 523:3 533:11 535:16 meaning 363:2 426:6 means 371:6 meant 493:13 509:17 measures 535:3 545:6 media 437:25 medical 364:5 374:12 376:6 378:20 381:11 392:19 448:3 449:24 450:10 495:20 552:4 555:1 556:16,18 556:24
--	--	---	--	--

Medicine 375:20	mentioned 515:12	433:12 434:7	Mitchell 460:3	424:7,15 426:9
medium 383:14	535:11 567:11	minimize 432:7	mixture 356:3	427:6 429:2 434:8
meet 365:3 426:25	579:6	486:11 488:13,20	529:10	434:13,19 437:8
meeting 366:22	message 435:25	minimized 354:1	mixtures 356:8	437:11 438:16
385:18 401:4,9,13	474:21	mining 355:14	MO 580:19 581:5	440:1,12,18,21
403:19 422:6,13	Messrs 445:4	ministerial 466:21	modified 390:8	441:5,11,19,22
422:16 424:4,14	met 440:18 445:14	minute 362:7 363:12	modifier 421:18	442:5,21 443:11
427:8 428:3,24	447:4	432:23 434:23	molded 413:16	443:18 444:17
434:18,22 435:3	metabolic 379:13	436:22 471:8	moment 351:18	445:5,5,9 446:17
435:15,22 436:4	metabolism 506:1	472:8 482:24	356:10	446:21,24 447:16
436:20 437:10,14	method 522:16	491:5 495:5	monitor 481:25	449:20 451:14
437:24 445:7,9	methods 358:3	534:21 537:22	MONS 365:15	453:15 454:15
451:25 452:8,11	381:25 382:6	538:10 551:8	446:1 503:21	458:8 460:2
572:4	422:24	559:12 560:24	Monsanto 342:10	461:18,23 462:5
member 374:1,15	Michigan 375:25	571:5	343:10 344:18	463:12,15 464:1
421:16 558:11	403:14 543:13,20	minutes 374:18	345:2 347:10,20	465:8,14,17,21
members 448:2,3	543:25 544:11,20	385:18 386:8	350:1,7,9,13,14	474:16,19,21
450:10 554:25	544:23 545:13,15	403:21 422:6,15	350:15,16,21	475:2,25 476:18
memo 363:9,23	micro 371:7	424:4,9 425:10	351:3,6,16,19,23	476:19 477:20,21
364:14,25 365:7	microphone 398:4	428:3,8,24 429:1	352:7,16,25	478:2,12,19 479:2
365:22 366:21	429:25	429:15 436:18	354:20 355:8	479:6,7,9 480:10
367:4 368:18	mid 529:8	472:11 514:5	357:23 359:2,4	481:17,17 483:9
372:10,15 373:13	middle 364:16	525:7 540:24	360:14,16,18	484:3,10 489:2,6
373:15,21 375:2	407:22 408:9	541:1,4,7 550:12	361:7,8,11,14,16	490:3 491:8,9,17
378:5,17 387:8	432:12 439:16,19	572:4	361:17 365:19	491:24 492:13,14
388:13 410:23	459:2,6 460:6	miscellaneous	368:20 369:4,7,18	495:19 496:5,9,21
411:3 412:10	483:19	442:2	372:4 373:20	497:5 498:22
414:24 419:20	midnight 393:7	mischaracterized	375:1 378:13,14	502:11 505:3,10
420:3 425:23	Mike 437:18	529:5	378:14 379:25	505:23 506:12
441:2,12 444:6	military 349:3	mischaracterizes	380:10 383:23	507:18,20,21
447:19 448:5,9,11	milk 415:20 423:6	485:20 542:25	385:23,25 386:3	508:20 509:1,12
450:25 451:2,3,10	Miller 345:5 524:16	missed 501:3	387:23 388:6	510:5,6,7,15,25
461:4 463:24	533:4 536:9	missing 464:20	390:20,25 391:1,6	511:4,11,17,19,21
464:13,16 465:10	milligram 455:9	Missoula 344:16	391:7,25 392:11	512:18 514:21
482:4 563:24	milligrams 544:14	581:17	392:22 393:25	515:2 516:15,19
564:6,10,21 565:5	million 415:20,20	Missouri 342:25	394:23 396:3,4	517:6,21 518:2,4
567:25 568:16,19	508:21	343:19,20 345:9	399:12 403:1,18	519:4 520:13
580:1	mind 398:23 498:4	347:4 402:3,13	404:3 405:15	521:25 522:1,7,16
memorandum	538:5 574:17	496:6 574:1,7,14	407:8 408:19	522:17,21,24
516:12	Mine 537:23	575:13,19 576:7	410:18 412:24	523:4,7,15,21
memory 350:4	Mineral 410:6,16	576:19 582:8	413:19 414:1,9	524:18,19 525:25
485:8,13	Mine's 530:1	misspoke 436:19	415:12,21 419:23	527:3,19 528:3,8
Menace 457:6	minimal 386:25	misuse 446:15	421:21 422:9	529:4,12 530:10

530:21,25 531:14 535:13,23 542:4 542:10 546:25 549:2,20 550:3 553:2,16 554:19 558:16,22 559:20 561:5,8,11 563:8 563:10,17,21 564:2,7,14,18,23 565:6,9,9,11,13 565:18,21,24,25 566:4,7,15,20,23 566:25 567:10,16 567:23 568:3,11 568:13,21 569:3,9 569:15,19,23 570:6,11,21 571:10,17,22,25 572:6,9,10,10,23 572:24 576:12 580:5 Monsanto's 352:15 355:19 356:13 357:19 360:1 362:18 364:3 365:3 374:1,11 377:6,13 378:20 393:19 396:8 409:24 411:2 412:9 414:14 427:20 435:14 448:2,3,4 450:6,10 466:1,4,6 475:1 477:3 478:4,17 486:5 490:4 491:16 495:20 508:5,6 510:16 511:24 521:18 522:22 523:5 525:24 539:11 542:4,21 552:4 558:12 569:22 572:25	Montana 342:1 343:1 344:7,16,24 345:15 347:11,23 453:13 454:6,8 455:21 456:6 473:4 477:8,15 530:11,18,18 Montar 404:17 months 366:1 month's 428:16 Moore 365:13 366:1 morning 348:14,16 514:19 mound 538:7 mounted 389:7 move 428:19 538:12 MSU 530:17,17 MT 581:11,17,23 mud 539:22 Munch 381:10,14 381:17 568:10 municipal 537:5,10 544:13 M-A-T 383:12 M-E-N 384:13 M-1 361:24 362:12 441:8 561:5 563:7 M-10 378:4 565:12 M-102 415:3 416:13 525:13,16 M-11 372:9 565:21 M-11.2 372:22 373:3,5 M-12 566:7 M-14 566:22 M-148 458:4 459:6 M-149 456:13 M-15 567:7 M-155 459:20 461:6 461:10,15 M-16 376:19 567:15 M-20 382:11 383:6	567:25 M-21 380:19 568:8 M-22 568:18 M-29 568:24 M-29.1 569:6 M-3 384:4 M-30 442:15,17 443:19 569:11 M-31 569:17 M-32 373:11 569:21 M-33 570:3 M-34 570:8,10 M-35 570:13 M-36 444:4 571:9 M-38 571:16 M-39 571:20 M-4 367:1,11 368:18 563:16 M-40 571:24 M-41 361:24 385:16 572:5 M-42 396:13,17,25 398:18 406:16 M-43 399:3 519:19 519:23,24,25 M-43B 519:21,25 M-44 400:20,23 M-45 404:9 405:14 M-48 422:1,4 M-5 368:14 M-50 409:21 M-51 447:9,24 M-51.4 449:5 M-52 423:25 M-53 421:20 427:4 427:24 M-6 563:24 M-60 525:1 M-60.1 414:12 M-62 428:1 M-63 428:22 429:15 M-69 451:18,22 M-7 369:12 370:11	380:7 M-71 450:22 M-72 430:2 M-74 436:15 437:16 438:10 M-74.1 438:4 M-74.2 438:7,10 439:18 M-75 396:13 M-79 453:7 M-79.3 453:11 M-8 363:8,22 366:21 564:10 M-81 455:15,16 456:4 M-87 398:5 M-88 398:6 406:10 407:14 408:5 M-9 564:23 M-90 520:18 M-96 427:24 M.D 364:1,2 564:11 564:21 566:10	536:17 537:2 538:17 539:8 540:4 541:14 542:3,13 543:19 543:24 544:20 naturally 482:11 nature 353:22 371:14 392:23 509:22 559:7 NCR 423:15 424:16 425:12,13 near 434:3 438:24 441:13 Nebeker 547:15 548:1 551:5 necessarily 493:16 necessary 358:25 382:7 434:3 440:8 499:11,14 523:23 need 350:4 362:2 388:8 397:24 434:23 451:16,18 459:20,20 476:2 494:23 538:11 needs 372:19 400:6 440:17 447:5 negative 359:2 392:23 Netherlands 355:2 never 472:18 481:3 484:25 491:4 555:3 Nevertheless 393:11 new 371:23,25 375:20,20 376:1 383:14,18 384:8,9 385:1 388:25 395:9 408:3 417:23 419:9,10 443:20 488:7,22 496:16,25 497:7 513:9 516:13
N				
N 406:6 412:25 name 354:22,24 356:13 370:23 374:16 403:5 417:1 460:18 464:10 478:4 484:8 512:18 540:17 557:1 580:14 named 510:24 536:13 names 354:3,6 383:1 385:21 416:12 430:21 568:9 national 533:6,7,12 548:16 Natural 375:18				

526:19 545:2 549:1,5,19 Newark 419:9 newly 450:19 527:13 newly-available 385:11 newly-created 358:10 news 438:15 next-to-last 368:9 372:14 380:11 403:5 404:4 451:9 nine 395:4 417:8 432:4 433:8 Nisbet 546:6,17 nonbiodegradable 425:18 426:1,22 nonconducting 354:18 noncontrollable 426:23 nonreplaceable 432:7 non-conductors 440:7 non-Monsanto 572:21 non-PCB 528:11 non-replaceable 433:12 normal 472:20 582:4 North 345:14 365:13 409:18 413:2 421:9 Northwest 412:23 notarial 575:12 Notary 343:21 574:6 575:18 579:18 582:13 notations 370:14 note 369:24 397:16	469:2 516:11 notebook 351:11 361:23 362:5,7,10 362:11,16 365:8 366:3,12,13 378:4 385:16 396:11,12 396:15,17 400:21 405:23 406:5,6,9 406:16 408:5 409:10 419:19 420:14 422:3 424:3 427:2 429:20,21,25 430:3 436:15 441:1 442:14 443:9 444:5 447:10,10,11 452:18,22,24,25 453:4,6,12 463:24 464:16,20,21 512:8 514:16 519:20,22 521:1,3 521:4 525:1,11,13 525:15 571:15 572:3,22 notebooks 453:8 495:8 573:6 notes 444:7,11,13 444:13 571:13 notice 420:4 478:18 574:10 notification 491:11 notify 387:20 397:1 notifying 400:7,9 411:25 noting 576:13 November 368:2 385:19 387:3,8 388:24 394:23 514:2 533:13 572:5 number 355:5 371:8 373:21 376:9,15	382:2,6,9 387:19 388:4,15,23 391:4 398:16,23,25 401:15 403:15 405:19 406:1 408:14,24 410:21 415:4 417:1,6,8,11 417:13,17,25 418:8,11,13,16,18 419:3,5,14 433:10 433:22 438:9 439:5,10 447:12 452:15 462:11 464:4,6 471:15,20 472:4 476:5,11 488:15,16,17 492:19 494:10 503:13,21,25 505:21 508:22 514:7,12 517:8 520:19,19 525:17 535:12 543:6 551:16 553:25 numbered 383:6 546:4 numbers 398:21 419:7 430:18 489:25 572:10 numerous 365:19 528:15 N-E-B-E-K-E-R 547:10 n/k/a 342:11 343:11	393:22 394:14 397:5,14,17,21,24 398:7,10,12,19 406:22 407:3,6,19 407:21 412:14 413:22 414:16 416:8,14 417:3,15 418:2,7 422:2 424:2,18,21,25 425:3 434:24 435:23 436:3,5,19 438:9 439:24 441:18,20 443:13 443:15 445:23 446:2,6 447:6 453:1,21 457:4 458:2 459:17 461:5 463:20 464:17,22 465:3 465:23 467:1,6 471:11,13,15,19 471:23,25 472:3,6 472:13 476:4,13 476:14 479:19,23 480:1 482:17,20 482:23 486:22 487:19 489:15,19 491:2,4,6 495:6,9 496:23 497:22 501:7,11,15,19 503:21,24 504:4 513:1,5,9,11 514:6 514:14 519:23 520:22 521:3,9 524:8,11,22 525:5 525:7,9,13,18,21 529:18,21,24 530:3,4 532:13,15 536:7,8 537:19,21 537:25 538:5,10 538:13,14 539:2 540:25 541:1,3,5,8 541:11,12,22	543:3,10 548:16 548:18 549:18,22 550:14 551:7,11 552:17,24 553:20 554:5,11,15,21 555:5 556:13 557:9,19 559:13 559:16,23 560:17 561:13,19,22 562:9,23 563:3 571:5 573:10 581:8,9 oath 348:4 468:6 484:9 520:11 552:11 oaths 574:8 object 365:5 370:2 380:5 384:1 387:4 387:9 390:4 393:22 394:14 397:5 398:19 406:22 412:14 413:22 414:16 416:8,14,16 417:15 424:18 435:23 439:24 441:20 447:6 453:21 457:4 463:20 464:17 465:3,23 475:9,15 477:17 489:17 552:17,24 553:20 554:5,11,21 557:9 557:19 562:4 objection 398:22 417:3 436:3,5,6,14 441:18 443:13,15 459:17 473:5 475:14,20 477:24 478:22 480:19 484:1,12 485:20 486:17,23 487:20 488:8 490:7
---	--	--	---	--

491:13 493:9,21 493:23 494:20 497:18,21 498:24 500:5,18 506:18 506:24 507:11 508:1 509:13 510:10 511:1,8 512:24 513:25 515:7,21,25 520:15 522:9 524:4,5 527:10,25 528:13 529:5 531:3 532:9 539:13 540:7 541:20 542:7,25 544:5 545:20 547:2 548:4 549:3 549:16,23 555:5 objectionable 358:21 objections 363:14 363:18 406:5 416:22 418:4 561:15,23 562:2 562:24 563:1,5 575:2 Objective 381:22,23 objectives 381:21 observations 357:21 obtain 372:4 479:20 485:5 obtained 371:11 451:6,7 obviously 562:7 occasion 461:23 occur 559:3 occurred 352:10 434:22 523:10 Occurrence 546:10 October 451:3,8 456:17,25 571:21 572:1	offense 499:24 offer 396:3 503:4 offered 396:6 office 364:19 378:13 400:4 408:20 502:2 581:9 Officer 537:2 580:8 offices 343:18 347:3 350:16 364:13 564:11 574:13 official 460:18 officially 349:10 officials 540:4 543:23 off-the-record 476:8 551:13 561:1 571:7 Oh 354:9 356:13 367:23 368:12 373:2 375:9 380:23 385:1 402:21 409:1 412:19 413:12 414:19,21 415:13 427:17 431:11 444:3 450:7 453:8 455:6 458:23 459:22 461:12 462:18 464:8,8,20 471:18 479:3 488:18 501:17 503:12 511:18 519:24 535:25 540:1 552:16 554:4 Ohio 377:3 419:16 453:17 542:20 553:5 oil 356:22 okay 375:9 397:21 397:21 398:7,10 398:11,15 403:23 407:21 409:9	414:23 418:7 424:20,25 427:6 432:25 435:2 439:4 446:6 458:23 467:23 468:21,24 469:4,6 469:13,17,21 470:1,5,9,12 471:4 471:16,18,23 472:6,16,22 473:1 473:9,13,16 474:5 474:15,19,23,25 475:4 476:4 477:1 477:5 478:4,9,12 478:15,18 479:6,8 479:12 480:13 481:4,9,14 482:10 482:24 483:2,15 486:1,8,15 488:2,4 489:1,8,11 490:2 490:17 491:20 492:16 493:15 494:6,17 495:9,15 496:3,8 498:17,21 501:20 502:5,16 503:12,15 504:7 505:18 506:22 507:16 512:7,9 516:6,25 517:3 518:25 519:3,7,18 520:4,11 521:7 522:3 523:1 525:8 526:6,21 527:2,17 529:1,22 530:1 533:21 534:4,15 535:1,11 536:21 539:3 540:25 541:23 542:2,24 543:22 544:18 545:12 546:2,8 547:9 549:9 552:19 553:2 557:6 559:14	560:25 561:17 573:5,10 Ola 367:13,20 512:15,22 513:19 old 528:3 Olive 342:24 582:7 Olliges 343:20 347:6 361:22 396:11 452:23 574:6 Olson 396:21 406:12 407:13 onboard 510:24 511:20 once 396:4 429:1 565:17 ones 382:8 507:25 562:21 Ooh 392:12 449:22 open 429:14 441:22 443:7 451:16 535:14 opening 534:24 operate 356:8 357:11,11 operations 357:20 360:1 487:14 492:10 493:5,18 494:18 496:21 497:5 500:24 506:10,15 510:5 523:13 535:23 546:24 549:2,20 550:3,16 opinion 359:23 509:9 549:25 opportunity 363:18 392:13 396:7 510:13 530:21,24 562:10 optical 411:21 oral 348:11 order 360:16,20	363:17 460:12 472:15,23 473:13 474:19,24 475:24 476:17 477:23 478:7,13,16 ordered 383:19 474:10 orderly 440:15 orders 474:5 ordinary 371:10 465:13 479:9 563:13 564:6,17 565:6 569:25 570:24 571:2 Oregon 409:19 413:2 418:24 421:9 547:21 organic 385:4 412:23 428:6,7 organisms 380:15 500:15 547:13 Organization 430:21 organizations 422:22 organochlorine 379:11 original 361:13 372:24 373:6 396:11 554:19 576:9 580:15 581:1 originally 445:10 originated 449:25 Outbound 376:21 567:21 outcome 385:4 outside 508:12,13 overall 452:12 overbroad 484:12 486:23 493:9 494:20 500:18 506:18 515:7,8
--	---	---	--	--

520:15 522:9 527:10,25 528:13 531:3 532:9 539:13 549:16 owner 518:5,18 519:1,4,10 O'Neill 441:10 563:8 O-L-S 360:9 368:6 368:10	463:1,4,7 481:12 481:13 483:15,16 483:20 486:2 489:23,24,25 490:19,20,22,25 492:16 494:6 499:8 502:21 503:9,10,22 505:14 513:12 517:3 525:20 534:17,20,22 535:1 536:22 537:19,23 544:7 544:25 547:25 548:8,10 577:1,4,7 577:10,13,16,19 577:22 578:1,4,7 578:10,13,16,19 578:22	457:15 Palatine 410:7 Palm 367:13 512:22 513:20 Papageorge 342:16 343:17 347:7,9 348:7,14 349:15 351:2 357:9,16 359:9 362:6 363:21 366:16 367:1,15 368:17 369:4,23 370:20 371:22 374:20 376:10,16,18 378:4 379:24 380:8,20 382:14 383:22 384:5 385:16 389:18 392:10 395:23 396:16 398:15 400:21 403:19,25 405:20 406:2,8 407:8 408:23 410:20 412:16,21 416:5,21 418:3,8 419:18 421:25 422:5,12 425:6 428:1 429:12 430:3 432:10 433:20 436:24 439:6,11,13 440:21 442:3 443:16 445:15 446:9 447:15 449:4 450:23 451:7,20 452:24 453:5,10 455:18 456:14 457:19,25 459:25 461:9 462:10 463:8,11 464:23,25 465:10 466:17,20 467:7 467:17,22,24	470:15 471:5 472:9,14 475:25 476:6,12,15 479:13 480:2 481:15 482:14 486:2 490:10 491:7 495:3,13 496:13 499:9 501:21 503:18 504:5 507:1 512:11 513:13 514:8,13,15 520:12 521:11 524:5 525:2,22 529:11 530:5,25 533:5 536:2,14 538:15 540:3 541:14 543:14 544:8 545:23 548:9,9 551:17,20 553:8 554:16 557:6 558:4 559:17 560:11,15 560:20 561:5 562:22 563:7 565:9 567:3,9 571:9,16 572:9 576:11 579:1,10 580:11 paper 368:25 372:5 372:18 408:2 459:21 472:7 478:6 491:19 536:10 538:7 545:19 papers 457:16 533:20 543:23 paperwork 529:15 para 455:23 paragraph 364:18 368:4,8,9 371:1,17 372:15 379:5 380:11 383:1,11	386:12 399:22 404:12 413:4,8,11 413:12 415:10,14 420:3,9 421:12 422:18 423:9,17 429:6 432:12 433:23 439:19,20 441:13 460:6 465:20 481:22,23 488:5,17 500:8,9 503:6,6,24 505:25 513:20 536:22 545:1 548:11 559:4 paragraphs 439:21 455:24 496:12 pardon 439:2 Parks 344:19 347:24 Parlon 462:10,16,23 463:19 part 349:7 360:25 364:16 366:1 381:4 388:15 411:9 444:12 503:11,24 537:9 537:11 546:20,22 participants 347:22 participated 430:22 431:6 435:2 participating 430:24 431:14 participation 431:23 particles 549:8 particular 365:8,17 377:18 398:24 417:21 427:11 447:5 449:21 475:2 476:21,21 478:16 490:5 510:14 516:12 517:11 532:11 540:9 543:2
P				
P 381:9 442:20 568:9 569:12 581:21 packaging 388:25 405:12 Packed 383:18 packet 501:14 page 346:2 367:14 368:12 370:7,16 370:20 381:1,6,20 382:13 383:5 384:23 386:10 387:2,7 389:18,19 399:17,19,22 401:3,7 402:18 403:7 404:4,7 407:16 408:4,6,15 415:13,14 416:4 417:11,13,25 418:13 419:3 421:11 422:11,19 423:3 428:6,12 429:7 430:17 432:11 433:4,21 433:22 437:7 441:7,12 444:22 445:17,25 446:2 452:4,7 456:16 458:11,14,17 459:1,4,7,7 460:6 460:11 462:15,17	pages 345:5 401:8,8 408:6,14 460:13 461:3,3,16,17 574:24 576:9,15 paid 467:23 468:4,7 468:21,22,24 469:1,3,4,10,23 470:1 473:16 582:3,4 paint 344:9 348:1 356:3,4,4 417:5,7 417:14,18,22 418:1,12 419:4,6 459:5 462:16 473:4 475:5,19 476:22 477:2,21 478:19 517:23 518:8,19,22 519:2 519:5,8,9,14 522:14 529:12 530:11 531:1,19 531:22,22,25 532:5,21 553:24 paints 405:7,8			

545:19 548:6 554:2 particularly 390:17 415:25 435:7 506:2,5 parties 575:9,11 parts 360:23 413:16 415:19,20 470:4 pass 379:23 456:11 passage 545:19 Paton 411:5 Paton's 412:10 Patuxent 376:3 403:10 Paulson 342:4 343:4 347:9 576:12 580:5 pay 414:10 Paying 491:3 pays 476:23 PCB 351:22 355:5,9 358:8 377:10 387:12,20 388:3,5 388:9 396:5 397:1 398:25 401:4,9 404:18,19 405:1,2 405:4,7 411:14 428:7 429:14 432:16 434:6 440:5,19 441:3,24 442:4 443:12 446:13 451:15,25 452:12 457:6 460:11 463:15 466:5,8 470:15,21 470:24 477:12 491:11 492:22 497:14 502:10 507:6 508:6 509:7 509:25 515:19 516:7 517:6 518:13 519:14 526:20 527:20	530:23 535:5,18 537:3 540:14 541:16 545:4 549:6,12 551:2 554:1 558:16 559:2,5,7 PCBs 348:19 351:19 352:1,7,16 352:24 353:8,11 354:19 355:8,11 355:13,16,19,21 357:25 358:4,14 358:14 359:4 377:19 386:25 390:10,13 391:2 392:10,10 393:13 393:15,25 394:18 395:2 396:7 403:2 407:10 411:13 414:8 415:18,21 420:22 421:15 430:9 431:21,24 432:1,6,14 433:11 433:16,19 434:1,7 434:10,14 440:22 441:22 446:11,12 446:20 447:17 451:10,12,14 457:13 462:2 463:12,19 480:11 480:18 481:2 482:8 493:16,19 498:23 500:25 506:16 507:21,25 508:7,13,22 509:11,18 510:17 515:6 516:5,13,20 517:12,14,22 518:5,9,23 520:14 521:24 522:1,7 523:22 526:24 527:15,24 528:9 529:4 531:1 532:5	532:17 533:6 535:7,13,19 536:23 537:4,7 538:20 539:10 540:5,19 541:18 542:5,14 544:12 544:21 545:14 546:10,19 547:12 548:2,16,20,21 549:11 550:4,7,18 550:21,22 551:23 552:12 553:17 556:14 557:18,21 PCB-containing 354:4 356:16 404:23 421:18 518:19 PCB-related 470:18 peak 373:9 peaks 369:10 peeling 393:2 pending 347:11 363:21 574:10 Pennsylvania 408:13 419:11 555:9 Pentachlorophen.. 368:24 Pentachlorophenol 368:24 people 401:12 433:3 464:11 485:16 560:21,22 percent 441:25 499:3 perform 361:4 performed 361:3 392:1 perfumes 411:20 period 363:5 366:7 414:9 447:20 450:20 463:16 502:24 528:19	533:1 552:1 553:17 permanent 448:12 502:22,23 Perry 342:23 345:25 576:1,24 582:6 persistent 390:12 persisting 553:17 person 392:19 518:21,23 580:14 personal 392:8,12 personally 364:8 382:18 393:14 395:22,25 435:2 435:17 443:23 445:14 454:13 563:18 564:4,20 565:19 566:11 567:5 568:5 personnel 490:5 491:11 Persons 401:8 Pesticide 370:21 402:2,12 pesticides 371:10 375:23 379:2 493:1,12 Petrilli 437:18 Pharmacia 342:11 342:18 343:11,18 345:1 347:18,20 467:20 phase 440:4 phased 441:22 phase-out 440:14 442:12 phasing 428:16 phenol 359:24 360:2 phenols 369:2 phenyl 360:2 philosophy 511:24 phrasing 416:16 physician 364:3	Ph.D 547:11 pick 481:23 539:20 piece 360:12 472:7 477:6 478:6 491:18 pieces 361:2 Pierre 465:7 Pittsburgh 408:12 419:11 place 376:7 434:24 436:25 474:24 478:7 484:5 522:17 528:6 531:13 556:25 placed 360:16 383:15 389:5,17 places 353:22 361:2 plaintiffs 342:6 343:6 344:3 347:16 348:18 351:2 362:3 365:9 365:12 388:11 392:2 406:4 410:21,23 412:11 434:17 436:13 437:2 450:14 456:14 457:21,23 459:7 461:1,5,9 462:11,22 551:22 553:9,25 555:7,20 560:19 plaintiff's 346:16 361:25 368:15 388:10 410:22 411:3 437:1 457:22 459:8 460:24 461:2,14 462:9 467:3,14 495:4 501:21 529:17,23 555:12 558:25 plan 386:11,22 387:2,19 388:24
--	---	---	---	--

389:9 394:23 395:5,11,20 397:1 425:8 453:20 517:5 planet 498:6 planned 440:14 plant 350:9,10,12 350:13,14,18 351:25 352:1,3 357:18 377:6 392:25 393:1 396:8 420:6 451:12 472:17 477:3,14 496:18 497:11,12,12,13 511:21 537:5 540:15 556:10,11 plants 351:22 388:6 388:9 537:10 plastic 527:22,23 plasticizer 386:18 397:7,18 405:13 410:17 411:2 421:19,21 427:9 429:12 442:1 463:13 485:3 525:24 526:1,9,24 527:4,20,23 528:9 529:3 539:12 plasticizers 355:23 399:9 404:3,13 409:16 410:5 414:3 421:7 520:9 527:13 528:11 554:1 plastics 457:14 Plaza 343:19 345:8 347:4 574:14 576:6,18 580:18 581:4 please 347:13 348:4 350:6 351:10 361:19,22 362:2,6	363:7,8,22 364:16 364:18,24 366:16 366:25 367:2,8,10 367:14,16 368:18 368:19 369:12,20 370:7 371:1,16 372:9,10,14,22 373:11,14 374:20 374:25 376:18,20 378:3,5 379:4 380:7,11,19,24 381:21 382:11 383:2,5,11 384:4 384:23 385:15,17 386:10 387:1,22 388:14,23 389:20 390:14 391:4 395:4 396:12,16 396:18 399:3,17 399:25 400:20 401:3,7 403:5,24 404:1,7,11 406:8 406:10 407:16,23 408:4,9,14,23 409:11 410:1 411:8 412:21 413:9,24,25 414:12 415:2,10 416:4 417:1,21 418:8,11 419:18 419:19 420:2,8,14 420:15,25 421:5 421:11 422:4,12 422:18 423:1,9 424:12 425:6 427:3 428:2,11,23 429:6,20,24 430:2 430:5,16,17,22 431:18 432:10 433:4,9,20 436:14 437:3,17,21 438:7 438:14 439:1,19 440:25 441:2,12	441:16 442:15,16 444:5,5,22 445:3 445:17 446:7 447:10,23 448:15 448:25 449:14,16 450:22 451:5,9,21 452:23 453:10,18 454:2,18 455:6,14 455:17 456:3,15 457:2,12 458:1,11 458:16 459:1,4,25 460:5,9 461:2,15 463:1,9,24 464:25 465:20 467:16 479:16 483:25 495:5 499:9 501:22 512:11 513:13 514:16 524:4 525:10 529:17 546:2 547:6 548:7 559:4 576:9,13 pleased 430:1 PLLP 344:14 581:15 plus 431:14 PO 473:4 point 358:5 387:2 388:24 389:9 393:5 394:22,22 395:4,5,11,11,20 395:20 396:25,25 425:25 433:21 447:15 481:23 498:9 517:5 518:3 524:18 526:21 545:5,14 562:18 pointing 432:5 points 423:2 446:8 446:16 500:13 517:11 policy 414:5,7 420:11	polish 411:20 pollutant 507:25 pollutants 499:15 pollution 376:1 377:1,5 381:5 386:17 389:24 486:9,12 487:7 488:22 492:1 496:1,5 559:7 polychlorinated 358:1 359:23 360:8 364:22 368:5 371:13 404:17 430:7 431:22 440:5 448:18 453:24 466:5 503:16 504:9 506:6 533:12 536:12 543:12 polyester 413:7,17 polyurethane 413:7 413:16 pool 518:5,6,8,12,18 518:19 519:1,5,9 519:10 532:5 pools 405:8 517:23 popular 356:4 Portage 537:12 portion 444:6 449:19 460:25 483:5 560:14,14 Portland 409:19 413:2 418:23 421:9 pose 386:17 389:24 390:2 position 358:10 379:21 446:11 470:24 positive 446:14 positively 551:1 possibility 357:1	405:4 519:13 possible 382:9 389:12 409:6 411:12 426:14 428:19 446:20 458:9 502:25 507:13 518:10 522:15 539:23 postscript 368:19 potential 395:1 432:3 486:9 487:6 503:7,15 504:1,8 505:19 528:16,16 potentiated 371:14 pound 420:5 473:19 473:20,20,24 474:11 pounds 473:14 508:21 power 440:8,16 522:24 558:3,6 ppm 423:6,7 practice 499:18 514:22 practices 393:20,24 preceding 504:16 504:23 preface 363:6 prelabeled 361:20 premarked 351:11 361:24 456:13 preparation 469:14 470:2,7 prepared 356:23 363:17 396:21 424:10 428:9 429:3 437:25 448:5 454:16 456:5 491:8 563:8 563:13,24 564:6 564:17,18 565:5 565:23 566:10 567:18 568:6
--	--	---	---	---

569:25 571:22 572:1 presence 358:14 359:17,18,19 377:17 380:14 550:21 551:3 present 345:17 361:15 380:13 382:6 390:10 395:6 429:21 533:4 535:19 537:9 545:23 presentation 403:18 539:5 544:3 547:9 548:6 presented 460:14 524:11 533:20 536:11 546:8 presently 383:18 460:11 presents 434:7 president 400:4 408:20 409:17 410:13 421:8 428:14 429:8 435:14 440:11 presidents 385:25 press 364:20 437:25 438:1,22 439:17 452:7 569:18 pressure 428:18 pretty 355:1 prevent 404:23 448:21 495:23 previous 362:1 406:5 427:15 479:14 previously 391:25 398:9 426:17 437:2 535:20 552:10 price 473:19,24 474:2,6,8,10	476:23 primarily 353:5 432:5 516:2 556:4 primary 352:23 353:2 486:8 487:5 Primate 375:24 principal 499:16 printed 448:13 printing 449:20 457:15 prior 348:17 363:16 365:9 368:15 388:11 389:18 409:10 420:11 471:19 518:17,18 546:21 562:22 probably 352:13 376:7 405:17 545:9 546:20 problem 380:18 386:17 387:21 389:25 411:12 422:23 423:12 486:10 487:7 495:10 535:5 539:18 problems 385:3 386:15 389:19,22 446:21 510:3 523:7 process 447:20 506:3 processed 475:24 476:18 processes 545:22 processing 462:17 462:23 produced 360:13 365:25 397:9 398:8 451:11,12 536:7,8 562:12,13 562:18 producer 360:17	434:9 producers 359:25 producing 365:24 451:14 product 377:23 386:15 389:15,20 389:23 423:14 431:20 448:18 466:4,8 476:21 496:17 497:7 510:18 540:21 production 365:12 365:18 366:8,10 440:4 441:4 442:4 454:25 524:10 558:16 productions 365:19 products 373:19 386:13,16,20 389:10,17,24 395:21 400:17 404:23 405:1,10 405:12 411:18 412:1,3,5 417:9 421:18 428:17 437:19 447:4 496:19 505:12 527:3,7,8,12,22 528:3,3,6,17,18 professional 534:16 professor 454:6 530:17 570:4 Professors 359:8 program 359:16 386:23 390:17,20 391:5 394:24 395:6,7 396:1,2,6 422:21 428:15,19 428:20 429:9 466:8 535:4 programs 392:16 518:3 progress 428:15,20	545:13 project 381:3,4 387:14 promoting 463:18 prompt 576:21 prompted 489:4 pronounced 547:11 pronouncing 401:24 401:25 proof 523:15 proper 390:23 properly 396:9 properties 535:7 proposed 522:4,5 554:8 proposing 448:11 propounded 348:11 575:2,5 protect 432:2 protection 353:17 393:12 402:6,8 440:3 533:14 534:3,5 547:20 protective 394:6 provide 453:25 457:21 548:7 558:16 provided 353:16 365:9 372:6 518:8 558:22 providing 456:13 514:23 515:23 516:1 public 343:22 359:3 423:22 432:3 484:7 500:1 535:7 555:1 558:17 574:6 575:18 579:18 582:13 publication 442:18 558:18 559:3 published 372:6 404:2 411:14	430:14 558:15 559:6 pull 352:12 pump 540:20 pumping 389:3 purchase 475:6 478:2 purchased 477:22 478:1,2,20,24 479:3 purchaser 361:1 purchasers 359:4 purchaser's 359:6 Purchases 408:1,11 purchasing 480:17 480:17 pure 379:9,16 512:6 512:7 purely 466:21 purports 451:23 571:25 purpose 488:6 526:10 purposes 503:5 pursuant 574:10 pursued 387:11 pustules 504:15 put 431:15 440:13 449:11 453:9 517:21 562:1 putting 510:18 515:18 517:22 Pydrauls 425:20 Pyranol 354:11 P-H-E-N-O-L 359:24 P-H-E-N-Y-L 360:3 P.C 344:22 345:13 p.m 439:7,10 476:7 476:11 514:9,12 551:12,16 560:4,7 560:16 P.O 344:6,15,23
--	---	---	---	--

581:10,16,22	505:21 507:1,3,8	545:12	431:11,18 433:8,9	499:16,23 515:17
Q	508:2,4,6,24	quote 537:4	433:22 437:3,21	534:8 577:2,5,8,11
Quail 432:13 451:19	509:14,17,18	quoting 425:7	439:20,21 441:16	577:14,17,20,23
451:25 452:10	510:11 511:2,9	R	442:11 444:5	578:2,5,8,11,14
qualified 574:8	515:8,22 520:16	R 344:12 364:1,2	446:7 448:15	578:17,20,23
quantities 368:22	522:10 528:1,14	372:13 373:15,17	451:5,9 453:18	reasons 393:6
519:15	530:9 531:4	374:8,9,11,11	454:18 455:1,23	423:20 499:15
quarter 428:21	532:10,14,16	378:9 381:17	457:2,11,18 460:5	515:2 516:10
Queeney 350:10	537:22 539:14	382:16 438:16	460:9 465:16,20	539:8
question 362:20	540:12 545:16,24	444:14 564:11	486:4,13 488:5	reassigned 350:15
363:21 365:6	548:8 552:18,25	565:25 566:10	492:6 493:2	recall 351:2 352:17
366:9 370:3 373:4	553:21 554:6,12	568:1,9,25 569:1	496:15 499:9	361:13 362:24
375:3 380:6 384:2	554:22 555:17	569:22 570:17,17	502:25 504:7,17	364:11 366:20
387:5,10 390:5,24	556:24 557:10	571:11 581:14	505:9,15,21 506:7	377:21 382:21
393:23 394:15	559:13	rain 532:22	534:20,21,22	387:18 410:22,25
397:6 398:20	questionable 549:6	raised 481:24	537:15 545:9	433:1 456:22
406:23 412:15	questioned 450:15	ran 439:16	549:13 559:4	462:12,22 464:13
413:23 414:17	questioning 410:20	rapid 383:16	572:11 576:13	464:15 467:9
416:15,16 417:4	466:18,22 555:23	rate 469:18,20,21	577:1,4,7,10,13	469:9 480:2,12,24
417:16,17,19	560:9	rates 546:19	577:16,19,22	480:25 483:10
424:19,22 427:15	questions 348:13	rats 391:13,14	578:1,4,7,10,13	484:18,22 489:1
431:4 435:24	351:3 388:12	RDR 343:21	578:16,19,22	499:1 506:20
436:6 441:21	392:3 410:22,24	reach 405:4 498:7	579:2	514:18 517:25
447:7 453:22	418:4 434:17	reaching 537:5,8	reading 468:2	523:19,20,20
463:21 464:18	437:2 457:5 461:1	538:20	481:22 535:2	530:19 534:23
465:4,24 473:6	462:11,13,23	read 364:18,23	536:24 537:13,17	539:4 547:9
475:10,15 476:15	467:6,11 480:3	367:10 368:19	548:23,24	551:21 553:6,7,12
476:16 477:18,25	482:18 483:2,8	369:23 371:2,16	reads 370:4 486:4	555:6
480:20 482:4	489:3 490:3 491:9	372:14 374:21,25	492:5,22,24	Receivable 400:4
483:6 484:13	497:2 502:6,18	379:4 380:11	494:13 500:13	receive 465:11
485:17,19 486:24	505:7 514:19	381:21 383:11	503:15 505:25	received 367:12
486:25 487:5	530:7 544:6	384:24 386:11	533:12 544:10	408:18 416:12,17
490:6 491:15,21	551:19,22 553:9	389:20 390:14	548:19	416:19 460:15
491:21 492:9,11	554:1 555:21	395:4 399:25	ready 439:3 475:3	476:18 491:11
492:19,22 493:1,6	556:13,15 557:20	401:18 403:5	527:21 528:2,3	516:3
493:12,17 494:3	559:16 561:4	404:11 408:9,16	ready-made 360:19	receiving 464:13
494:10,15,17	575:1,4	411:8,23 413:8	real 476:16 505:19	496:19 497:14
495:1 496:16	quick 359:6 551:20	415:10 416:11	realize 553:17	499:17
497:6,8,9 498:3	555:23	417:1,20,21 420:2	really 358:12	recess 376:13
502:17,20,21	quickly 442:15	420:8 421:12,20	377:23 470:13	405:24 439:8
503:1,13,25	452:18 555:11	422:18 423:1,9,16	494:23 509:15	514:10 560:5
505:13,15,16,18	quite 364:8 379:11	428:12 429:6	reask 362:20	recipient 463:25
	409:2 472:16,18		reason 411:17 471:9	564:21

recipients 372:19 447:25 448:1	421:13 422:5 424:1 428:2,13,23 430:6 431:19 433:9 437:17 438:8,14 439:7,9 439:19,20,21 441:2,16 442:11 442:16 444:6 446:8 447:24 448:15 449:1 451:22 453:19 454:4,18 455:18 455:24 457:11 458:2 460:1 465:2 465:22 476:7,10 477:20 479:9 485:12 486:5 514:9,11 551:8,10 551:15 559:2,4,12 559:24 560:1,3,6 560:15,18,23 561:6,14 562:1 563:22 564:2,15 564:23 565:11,13 565:21 566:5,8,19 567:1,10,16,23 568:3,13,21 569:4 569:9,14,18,23 570:5,11,21 571:10,17,21,25 572:7,11 573:10 573:17,20	reduced 441:24 refer 364:16 368:5,9 406:25 414:18 reference 414:18 418:5 432:13,14 468:12,15,18 470:22 480:12 481:12,16 506:20 558:18 referenced 400:23 477:12 references 524:2 referred 350:10,12 365:7 375:5 425:15 461:4 520:22 551:25 553:9 referring 370:8,10 391:18,23 398:13 444:7 458:2 471:5 473:7 474:9 481:21 487:24 492:17 498:19 526:16 543:11 549:6 refers 364:13 366:22 383:2 385:7 395:7 462:19 471:19 483:8,24 484:3 490:15 reflect 412:7 418:3 422:6 461:22 reflected 461:17 refresh 352:13 447:19 502:8 refuse 485:10 refused 485:15 542:20 regard 387:23 389:2 391:2,6 515:2 524:20 regarding 373:4	518:9 519:13 526:20 547:12 regardless 443:10 regional 375:23 489:2 regret 400:13 Regulation 375:23 regulations 353:18 relate 396:25 related 493:12 551:3 555:20 575:10 relates 493:1 relating 393:15 404:3 516:5 relation 354:4 366:17 388:20 393:25 441:8 531:17 545:21 555:6 558:14,17 relations 555:2 relationship 399:11 550:7 relatively 554:20 release 364:20 437:25 438:1,15 438:22,24 439:17 546:21 569:18 released 389:8 releases 441:24 relevance 500:6 relevancy 439:25 reliable 358:7 reluctant 484:6 remain 374:19 403:22 remaining 436:18 460:13 461:3 472:11 remarked 471:20 remarks 372:24 373:6 435:22 437:22 533:24	534:24 575:2 remember 349:6 352:9 354:23 355:1 361:8 364:12 391:9 432:20 434:16,21 435:6 469:25 488:24 495:14 508:19 523:17 530:5 544:4 546:7 547:16 555:17,19 remembered 451:21 remove 390:9 repeat 507:3 rephrase 390:24 508:5 replace 425:17,18 426:14 replacement 386:15 386:16 389:10,15 389:16,20,22,23 390:1 413:15 423:13 527:3,22 528:6,17 529:2 replacements 413:20 436:11 527:15 replacing 528:19 reply 348:10 report 361:10 376:22 379:25 428:7 430:7,25 431:7,20 481:9 523:24 538:16 546:8,12,12 547:24 548:1 558:15,18,21 567:21 reported 359:14 366:18 379:22 393:4 434:9 550:21 557:12 574:23
--	--	--	---	---

reporter 347:6 348:4,5 362:4 396:14 405:22 453:3 475:11 560:25 reporting 342:23 345:25 411:6 576:1,24 582:6 reports 360:8 379:9 411:13 550:20 represent 347:14 474:4 representative 363:4 454:24 467:20 474:2,3 representatives 361:16 403:13 489:7 523:21 representing 347:16 347:17,19 reproduction 506:3 request 362:9 400:13 476:20 524:18 542:5 requested 366:2 378:19 428:16 456:1 514:23 requesting 413:15 454:21 484:22 requests 365:10 required 429:10 440:23 requirements 386:14 research 373:18 374:2 375:14,22 375:24 376:2 381:17 382:3 402:2,12,16 403:10 422:22 443:2 448:2 452:16 453:16 510:13 515:3	547:19 569:22 researchers 380:1 researching 369:7 369:10 379:1 reserve 363:14 561:14,22 562:2 563:5 reserved 482:17 reserving 466:23 562:23 residue 423:6 residues 379:11 404:19 resistance 425:17 resolution 383:14 resolve 423:12 Resources 536:18 537:2 538:17 539:8 540:5 541:15 542:3,13 543:20,24 544:20 respect 446:16,19 466:15 500:24 respectively 410:3 respects 575:3 respirators 394:5 respond 573:11 response 358:23 406:4 411:5 412:9 442:25 454:20 553:8 556:15 responses 359:3 490:4 responsibility 466:11 483:21 485:1 510:16 518:17,21 responsible 400:14 421:16 466:1 rest 393:9 509:23 510:14,22 573:5 restrict 446:12 restricted 432:6	433:11 result 349:11 384:24,25 385:1 405:5 424:13 434:6 557:15 resulted 396:1 results 379:21 429:9 517:18 retain 478:12 retardants 411:22 retired 350:17,25 392:21 retirement 350:23 392:16 return 379:23 420:4 576:15 returned 414:5,8 420:5,11 review 362:9 421:14 431:21 452:12 479:15 483:5 573:16,19 reviewed 386:14 428:20 revised 526:19 Rhode 403:15 Richard 373:15,17 373:18 401:21 445:5 568:25 569:1,22,25 Richardson 379:8 379:19 Richardson's 379:21,22 Richmond 408:21 418:21 419:8 right 358:17 361:2,2 363:2 367:24 368:4 370:16 374:20 375:4,10 378:3,17 383:1 391:20 397:11 398:2 399:20,21	403:8 407:6 425:3 427:13,16,23 431:16 449:18 463:8,11 464:8 466:24 467:1,12 469:17,24 470:14 471:4,13,22,25 472:3 473:13,21 474:12 477:9 479:23 481:4 482:13 483:3,6,7 485:24 488:18 491:1,2 493:17 495:3 499:6 500:3 502:1 503:14,22 503:23 505:13 508:11,16,18,23 510:25 513:24 515:6,16 519:25 521:3 523:9 525:14,19 527:19 528:8 529:11 532:19 533:3 534:14,23 536:1 537:20,25 538:13 538:15 541:3 542:12,23 543:5 550:25 552:4 553:14,16 563:7 570:19 572:21 right-hand 384:17 408:16 456:18 535:2 536:22 544:10 545:1 ring 557:3 rinsing 498:6 Risebrough 443:3 rises 353:21 Rising 367:19 512:10,23,25 513:15,17 risk 434:4,8 riverfront 540:18	rivers 544:22 Riverside 376:5 Road 410:7 Robert 443:2 444:2 454:10 Robinson 344:14 581:15 Roderick 465:8 role 387:17 Rome 375:25 376:1 room 347:21 366:5 Roost 432:13 451:19,25 452:10 rotating 393:9 ROTC 349:11 rough 444:12,14 571:11 roughly 473:19 474:10,12 route 506:16 507:9 507:14 routine 573:9 row 407:22 408:8 Ruabon 567:12 570:14,17,18 rubbed 532:6 rubber 457:15 rules 353:18,23 rumor 480:23 run 552:12 553:3 running 510:2 Russell 434:18 437:9 534:13 Russo 345:19 347:21 351:9 361:19 396:10 429:24 452:21 456:9,13 457:20 459:22 521:6 Rutter 345:4 346:3 346:5,7 347:19,19 348:13 351:9 361:19 363:20
--	--	---	--	--

365:11,25 366:4 366:13,15 370:10 370:15,18,19 376:7,17 391:19 396:10 397:8,16 397:19,22 398:2,8 398:11,14 403:23 405:17 407:1,5,7 407:20 418:6 422:2 424:2,20,24 425:1,4,5 429:24 436:21,23 438:10 439:4,12 445:25 446:4 452:21 453:2 456:9 458:4 459:20,24 461:8 464:23 466:17 467:21 468:2 469:3 471:9,12,14 471:18,22,24 472:1,4,8,12 473:5 475:12,14 477:24 478:22,25 479:17 479:22,25 480:19 482:3,16,19,22 483:9 484:1,12 485:20 486:17,20 486:23 487:17 488:8 489:12,17 490:7,20 491:13 493:9,21 494:20 495:6 496:22 497:18 498:24 500:5,18 501:6,13 501:17 503:19,23 504:2,21 506:18 506:24 507:11 508:1 509:13 510:10 511:1,8 512:9,24 513:3,6 513:25 514:18 515:7,21,25 517:4 519:21,24 520:15	520:20 521:1,4,7 522:9 524:4,9,25 525:8,11,14,17,19 527:10,25 528:13 529:5,19,22 530:1 531:3,17 532:9,14 533:3 536:6 537:17,20,23 538:2,9,12,25 539:3,13 540:7,22 541:1,4,6,10,20 542:7,25 543:9 544:5 545:16,20 547:2 548:4,14 549:3,16,21,23 550:12,14 551:19 554:14 559:11,14 560:1,8,21 561:4 561:18 562:11,14 562:20 563:6 571:6 573:12,16 573:18 576:4,16 580:16 581:2 Ryan 542:20 558:10 S S 344:5 568:19 571:22 581:8,9 safe 356:19 393:19 393:24 400:16 449:21 safely 356:25 safer 382:7 safety 353:16 sake 419:12 sale 421:17 424:16 425:11 434:14 440:22 sales 396:22 399:8 406:13 409:16 410:5 411:17 414:2 421:7 423:21 426:22	437:19 441:22,25 451:15 520:8 525:25 526:23 527:20 528:9 sample 456:1 514:24 515:24 516:1,3 539:19 samples 371:5,18 371:19,21 374:24 377:8 379:8,17 395:25 454:1,21 454:23 461:24 San 443:1 569:13 sapstain 368:25 satisfied 440:16 472:6 satisfy 386:14 Sauget 350:12 352:4 477:3,14 save 351:18 saving 562:3 saw 358:20 362:17 362:23,23,25 363:4 422:15 429:3 430:13 438:22 443:20 472:16 482:19 517:19 saying 472:5 488:25 527:19 says 348:10 364:17 367:21 370:20 379:5 383:8 386:2 386:11 389:19 399:23 430:21 431:14,16 441:13 444:12,25 445:18 445:20 451:6 453:7 457:9 472:25 473:22 486:6 488:11,14 488:19 491:24 499:14 514:1	521:11 571:11 scan 383:16 scanned 483:1 495:11 501:23 Schalk 399:8 409:15 410:5 414:2 415:9 420:17 421:6 485:4,5 520:7,12 523:13 525:23 schedule 393:9 Schoet 401:23 Schoettger 401:22 401:24,25 school 348:25 Science 455:21 scientific 431:25 546:13 scientist 445:8,10 scientists 507:24 509:1,10 515:3 SCM 418:14 scope 422:23 score 472:18 Scott 374:6 381:12 390:19,24 395:8 444:19 510:24 511:3,5 568:9 seal 575:12 582:10 sealants 405:8 sealant/adhesive/... 494:14 searching 545:5 Seattle 419:1,25 420:20 second 350:11 368:8 381:1 384:23 386:10 410:9 420:8 421:11 422:2,11 422:19 437:7 446:4 465:20 477:10 481:22 486:21 487:12	488:5,10,11,14,17 488:18 499:8 503:6 545:1 548:11 559:25 560:2 section 428:12 451:5 462:16 463:3 sediment 462:3 see 359:21 370:20 379:20 383:8 393:5 399:22 424:9 428:8 432:14 441:15 444:25 445:20,22 449:17 450:24 452:5 457:9,10 458:22 462:19 471:5,21,22 472:8 473:7,8,11 474:16 477:1 482:16 483:17,18,22 486:6 488:15 491:21 492:3,17 492:20 494:8,11 494:15 498:11,19 498:20 499:11,13 500:11,12 501:14 503:8 504:2 517:8 517:14 521:10 536:13,24 537:12 541:24 544:16 547:21,23 548:12 548:13,22,24 549:13 seeing 359:20,23 456:22 495:14 550:21 572:19 seek 560:19 seeking 484:18 seen 363:15,16 386:8 392:25 400:25 414:24
--	---	--	---	--

430:11 485:2,5 495:12 508:20 562:8 572:11 seldom 499:25 select 366:7 seller 518:9 519:9 selling 447:17 463:12 508:9 523:4 526:13 528:4 535:13 sells 502:12 send 396:8 400:5 521:19 522:5,13 522:18,23 523:15 sending 372:16,17 427:15 454:23 seniority 393:6,8 sense 497:23 532:19 senses 499:24 sensitive 381:25 506:5 509:22 sensitivity 385:7 466:11 sent 363:25 364:19 367:4 398:18,24 399:14 407:10,24 408:10 409:23 411:4 414:14 418:20 421:21 427:6 437:8 443:5 455:8 456:5 478:10 483:9 486:19 489:4 502:5,16 520:7 523:16 524:20 525:23 530:16 565:24 sentence 364:23 371:17 374:21 389:21 423:17 437:21 445:4,20 446:7,8 451:10	453:19 454:19 455:3,6 457:11 481:21 483:20 486:20,21 487:12 488:5,11,14,17,18 514:1 sentences 411:24 431:19 454:19 457:8 separate 455:4,8,25 519:19 separated 385:8 separator 383:19 September 369:22 420:18 428:4,9 460:3 482:4,6 sequence 406:4 452:25 454:3 series 390:17 411:18 491:7,9 serious 504:17,23 serve 349:3 served 350:12 412:5 service 349:5,6,12 354:17,17 375:12 375:23 382:5 434:5 456:3 516:17 546:21 set 360:4 387:7 388:16 425:8,22 490:3 502:17 574:25 582:9 setting 415:17 Settum 376:23 seven 390:14 417:6 534:17 551:16 seventy 543:5 sewer 498:7 sewers 544:13 share 464:24 484:6 491:19 sharing 461:23 462:6 538:5	Sharon 555:8 Shaw 345:24 347:1 347:5 348:3 374:18 376:9,14 403:21 405:19,25 436:18 439:2,5,9 472:11 476:2,5,10 514:5,7,11 540:24 551:10,12,15 559:24 560:3,6,13 Sheboygan 537:12 sheet 441:4,9 442:4 sheets 576:10,14 Shell 379:8 Sherwin 418:17 419:15 Shett-ger 401:24 shift 393:8 ship 473:3 475:3 477:7 shipment 477:10 480:14 shipments 411:17 shipped 360:21 377:1,4 476:22,22 477:2,13 479:7 shipping 376:22 473:12 477:4,11 567:21 shoe 411:19 shoes 394:6 short 375:17 432:24 439:15 460:5 470:11 shortage 500:21 shorten 565:10 shortening 419:13 shortly 424:9 427:7 428:8 429:3 443:20 572:12,15 short-term 466:15 Shote-ger 401:25 show 369:2 370:15	412:4 433:2 449:6 456:18 493:24 503:19 508:20 533:10 showed 459:8 555:7 shown 448:19 450:18 459:14 555:20 574:21 shows 375:5 407:24 452:14 shut 440:19 sic 353:20 392:5 408:2 430:24 431:6 466:12 504:16 506:17 side 384:17 449:5 456:18 sight 563:2 sign 573:19 signaled 466:12 signature 448:8 575:6 576:9 579:4 signed 399:7 409:15 410:4 414:2 415:7 415:8 437:18 453:14 454:10 455:22 460:3 465:8 566:23 570:8 significance 380:14 significant 545:9 significantly 434:4 silos 405:9 416:3 similar 362:13 369:2 390:2 427:20 simple 476:16 simpler 362:21 simply 573:8 Sincerely 576:22 single-stage 383:19 sir 348:21 467:10 473:7 482:25 483:17,24 486:6	498:19 500:11 516:14 520:2 545:24 sit 354:23 377:21 site 539:20 540:14 sitting 397:10 573:7 situation 358:21 379:22 386:24 387:12 392:24 499:22 507:15 519:11 523:9 526:20 530:23 539:24 six 389:9 433:21,22 460:12 461:3 490:25 514:12 six-month 431:20 size 510:6 skin 393:2,2 skip 402:14 409:10 423:8 482:13 498:17 skipped 420:24 slow 545:13 small 398:25 404:19 554:20 smell 499:24 smile 534:7,9 Smith 365:13 366:1 snow 532:22 society 466:14 546:14 Sodium 368:24 softeners 457:14 Sohrage 410:6 soil 371:19 sold 476:25 518:22 sole 355:8 434:9 solution 549:7 solve 358:21 Solvent 417:12 Solvents 410:13,17 somebody 477:20
---	---	---	---	--

512:17 522:14 536:13 somewhat 371:14 480:5 Sonnenborn 480:17 481:1 482:10 soon 392:21 440:15 sophisticated 358:6 360:12 512:2 Soren 370:24 372:5 513:21 559:2,5 sorry 368:12 370:5 372:25 380:21 403:6,7 413:10 414:15 415:13 445:6 453:8 454:11 455:4,7 458:4 464:5,8 467:25 468:1,17 468:25 475:11,16 476:4 490:11 504:22 507:2,3 513:16 523:3 562:15 sorts 497:19 510:3 Soto 418:9 sound 350:2 508:22 574:17 sounds 355:5 455:11 source 355:18 411:16 451:1 506:21 507:6 521:25 539:23 540:19 sources 506:23 536:11,23 537:4,7 538:20 539:10 540:5 543:12 545:3,5,14 South 376:6 410:7 502:3 555:9,9,14 555:15 556:9	spaces 451:19 speak 358:24 398:20 491:19 speaking 462:1 507:16,17 spec 383:23 385:13 395:9 Specialist 437:19 specific 362:24 364:11 381:25 388:16 405:6 485:18,23 506:20 specifically 468:15 468:18 488:25 495:25 502:15 specified 353:24 spectral 370:5 spectrometer 370:5 371:12,23 383:13 383:15 385:2 spectrometry 510:8 spectrometry(GC... 383:17 speculate 434:23 speculation 488:9 493:10,22 506:25 507:12 527:11 531:4 539:15 540:8 541:21 542:8 545:21 547:3 549:4 speech 383:3 545:17,22 speed 362:8 434:25 448:23 501:18 Speicher 557:1 spelled 359:24 spent 348:18 467:23 470:6 spillage 389:6 spilled 394:8 spills 404:24 448:21 492:6	Spirits 410:7,16 split 461:24 Spokane 477:7 spoke 353:7 403:20 Sponsored 533:14 Sponsoring 430:21 Sport 375:13 516:17 Sports 403:11 spreading 394:8 sprinkler 411:22 SS 574:3 St 342:25 347:4 349:1,22 350:9,11 350:16,22 362:19 364:14 367:6 369:19 378:9 496:6 523:25 564:11 574:4,11 575:13 580:19 581:5 582:8 stack 467:13 471:10 stadiums 353:22 staff 374:15 511:20 546:14 Stalling 402:12 stamp 521:15 start 352:7 363:6 387:17 430:16 431:5 433:25 447:16 started 362:17 379:25 380:15 443:16,20 450:2 573:1 starting 422:19 423:9 499:10 starts 371:18 372:15 383:11 411:9 451:10 471:12 496:16 503:7,25 537:23 538:2,3,4 state 363:12,17,22	375:19 380:24 403:14 451:1 452:15 453:13 454:7 499:23 544:22 574:1,7 575:19 stated 381:22 statement 437:24 488:25 496:20 497:4 499:19 500:16 535:24 547:1 549:15 580:9 statements 500:2 556:14 states 355:12,16,19 360:18 361:17 368:21 403:16 481:19 508:9,12 508:13 535:1 542:21 546:17 Station 547:19 stations 357:13 Status 428:7 stay 573:20 steadily 535:18 Stenotype 574:23 Stephen 344:12 581:14 steps 423:12 Steve 347:25 475:21 477:18 561:20 563:3 573:15 sticker 471:17 stick-on 448:12,16 449:6 stipulate 434:24 461:6 560:17,20 573:8 stipulated 461:10 stock 475:3 stocked 512:1	Stockholm 359:11 361:11,15 367:13 369:23 stop 376:8 405:18 451:14 523:4 571:5 stored 405:10 Story 559:2,5 Strand 367:19 512:10,23,25 513:15,17 stream 496:4,19 497:14 498:3,7 499:17 streams 544:22 Street 350:11 408:21 410:14 582:7 strengthening 432:2 strike 549:18 stripes 553:10 strongly 415:21 struck 392:19 structure 474:8 stuck 501:11,15 studies 360:15 391:1 404:20 422:25 448:19 453:24 494:1 499:1,5,7 551:23 551:25 552:20 553:6 study 382:6 395:21 405:3 512:5 Stupfell 419:21 subchronic 552:11 552:23 subject 398:22 413:5,6 416:21 419:20,24 420:6 420:21 442:18 452:10 488:3 493:23 497:21
--	---	---	--	---

submit 573:8	suppose 514:1	Syracuse 375:20	423:12,13,19	telephone 344:10
submitted 379:12	supposed 518:6	system 357:4 389:3	448:20 550:8	344:19 347:21
subpoena 558:3,6	519:10	475:2 478:17	576:11 579:3	474:21 476:20
558:11	sure 365:23,25	516:4 540:16	580:12	tell 349:5 362:15
Subscribed 579:12	370:18 373:1	systems 356:18	takes 504:14	365:2 366:16
subsequent 365:19	400:17 417:20	388:25 411:22	talk 510:23,23	372:22 387:22
411:12	426:7 466:9	446:13 492:6	talked 357:24 512:3	388:14 407:23
substance 360:7	472:10 480:15	535:14 537:8	542:19	411:1 414:13
435:21 515:4	487:11 515:5	544:16	talking 395:17	416:5 422:12
substantially 379:15	516:7 524:4	S-C-H-A-L-K 399:8	397:6,15,19,25	430:22 445:3
substantive 466:22	531:10 532:19	S.A 566:24	398:2 455:11	449:4,16 458:17
substitute 446:13	533:10 541:10		481:17 490:18	461:15 463:9
446:20,25 447:4	554:8 571:6	T	523:22 529:20	483:24 489:15
554:2,8	surface 389:6 498:6	T 460:4 495:15	544:15 562:16	490:12 502:14
substitutes 554:1	544:12 545:4	tab 363:7 372:9	tank 474:4	507:23 517:11
success 364:21	surprised 533:19	378:4 406:9 409:5	tape 374:18 376:8,9	519:10,12 529:8
sufficient 400:6	surprising 559:9	409:8,9,11,12,13	376:15 403:21	530:23,25
suggest 363:3	surveillance 429:10	410:1,2 412:16,17	405:19 406:1	telling 427:8 537:3
365:20 383:21	536:17 537:1	413:24,24 415:4	436:18 439:5,10	550:2
507:13	Sutton 376:24	419:18 420:14,25	439:15,16 472:11	tells 480:22
suggested 415:17	Swann 351:4,7,16	427:3,4 438:11	476:3,5,11 514:5,7	tend 495:8
490:4 520:23	351:20,23,25	448:24 449:1	514:12 540:23	Tenth 342:1 343:1
521:11 522:4	352:4,6,16 353:1	453:7 455:15	541:9 551:16	347:11
suggesting 384:20	Sweden 365:4	512:11 514:16	560:12,14	tenure 497:13
521:21	368:23 507:24	516:25 524:25	Taped 342:16	term 355:24 473:10
suggestions 359:3	509:4,7	525:4	343:16	497:19
suit 575:10	Swedish 359:10	table 462:20	target 528:24	terminate 426:22
Suite 342:24 580:18	364:21 366:19	tabs 406:6,7	task 430:9,24 431:7	528:9
581:4 582:7	371:5 445:8,10	tailored 386:23	431:24 432:4	terminated 349:11
summarize 424:12	508:25	take 358:23 362:6	433:8 537:6	527:20
486:5	swimmers 532:7	372:20 394:10	558:14	terminating 429:12
summarizing 365:1	swimming 405:8	395:25 429:21	Tatton 375:11	terms 398:21
summary 523:17	517:23 518:4,5,8	433:7 471:8	378:23 379:1	540:14 561:15
547:11	518:12,18,19	479:20 482:24	taught 394:4	terphenyl 377:24
supervisor 374:10	519:1,5,9,10 532:5	483:4 495:5,9	TAXED 581:1,7,13	terrestrial 371:21
543:18 544:19	switch 357:16 514:6	502:24 528:6,14	581:19	test 390:16 391:5,9
supplied 379:8	switched 453:8	531:8 532:24	team 489:10 491:19	391:10 394:24
supplier 355:8	swore 348:5	534:21 535:4,6	Technical 383:8	395:6,7 499:4
400:14	sworn 348:8 574:19	538:10,11 539:19	404:2,13 405:14	testified 426:17
supplies 415:24	579:12	539:21 556:25	458:6 517:19,21	470:17 552:11
supply 440:16	symptom 504:16,20	taken 342:18	526:18,19	574:21
support 400:17	504:21,22	343:17 347:9	technology 371:24	testify 348:8 574:19
403:1	symptoms 506:17	388:20 404:22	372:1 385:12	testimony 439:3

450:11 484:9 485:21 510:4 518:15 520:11 529:6 553:12 574:22,25 579:5 testing 383:14 391:8 392:1 461:17 462:2 515:5 552:5 553:3 tests 392:6 552:12 552:14 thank 348:16 366:14 370:17 391:24 408:23 430:5 442:3 453:2 458:5 459:23 461:8 466:17 476:13 479:12,23 494:6 504:3 516:14 520:18 521:7 524:15 530:14 533:3 559:11 571:2 Thanks 413:14 504:23 521:7 536:2 thereabouts 528:23 528:24 thereto 575:3 Therminol 356:12 356:13,17 357:3 they'd 508:7 thing 426:15 518:13 562:5 things 362:8 419:13 434:25 448:23 497:20 501:18 535:11,12 551:9 554:25 think 356:10 359:11 376:23 382:21 403:20 409:9 431:13 435:12	444:1 449:2 450:14 470:23 480:6 487:13 491:24 501:11 507:5,7 515:11 517:20 523:7 525:19 526:22 530:2 531:14,21 534:10,12 538:6 544:4 558:19,20 573:5 thinking 368:22 492:14 497:24 524:13 531:7 third 401:3 432:12 499:23 third-to-last 407:22 thorough 366:10 thought 513:2 519:24 529:20 535:21 545:21 572:19 thoughts 491:17 thousand 561:23,24 thousands 508:17 threat 433:17 three 382:6 384:6,7 388:4 401:19 406:1 417:1 428:15 431:18 435:6 439:5 446:8 446:13,16 471:3 483:15,16,20 486:2 496:12 505:13,14,16 535:17 571:15 three-sentence 460:6 Tighe 344:22 581:21 timber 369:1 time 347:13 348:18 352:6,21 357:25	361:4 362:21 363:1,5 364:4 366:6 367:6 373:24 385:23 389:13 405:18 414:8 425:2,22 433:7 438:20,24 440:23 442:6 447:15,20 450:20 454:15 456:11,16 456:19,22 457:18 460:17 465:14 467:23 468:4 470:5,6 478:10 482:21 485:4,9 487:15 494:5 495:9 496:9 502:24 510:21 511:25 514:22 520:8,14 524:14 526:1 527:8,18 528:20 529:4,7,8 530:9 533:1 534:2 535:12,23 537:6,9 538:11 539:9 546:22 550:23 552:1 553:5,17 558:20 562:3 563:11 565:18 568:15 572:19 573:11 times 452:7 478:25 timetable 440:13 timing 365:3 488:3 tiny 395:1 tissue 504:12 tissue/concentrati... 549:11 title 364:11 378:12 380:25 384:7,8 428:5 457:2 458:14 547:14 titled 495:25 546:11	today 347:7 348:15 348:23 354:23 362:8 377:21 440:1 468:19 469:14,15 470:15 483:13 488:7,23 560:20 Today's 347:2 told 379:16 481:15 495:2 513:19 529:22 tolerated 499:25 523:8 Tom 464:1 465:12 top 358:24 359:5 408:16 432:12 441:13 444:5 445:18 446:5 467:14 471:4 474:16 478:5 489:16 521:11 535:2 539:21 544:10 topic 373:6 430:20 Torger 344:5 347:15 561:21 562:22 581:8,9 total 368:22 398:25 541:20 547:3 581:6,12,18,24 totally 516:13 touch 348:20 379:6 379:7 382:2 394:11 517:17 touches 494:22 toxic 382:9 493:19 503:8,15 504:1,8 543:19 toxicity 391:7,25 392:6,10 422:25 492:17 496:1 498:18,18,23 499:2,5 551:23	552:5,11 553:3 554:9 555:21 556:14 toxicological 391:5 394:24 433:15 toxicologists 380:18 toxicology 380:16 433:14 547:18,18 to-wit 348:11 trace 537:7 traces 369:3 tracing 536:23 537:4,4 track 538:19 trade 356:13 trademark 354:11 354:12 377:13 trade-offs 393:10 traffic 356:5 531:8 531:17,25 Train 434:18 437:9 534:1,10,12,13 535:24 Train's 533:23 transcribed 574:23 transcript 482:19 573:19 574:22 575:4 576:13 579:2,5 580:15 581:1 transcripts 582:2 transfer 353:14 356:14,24 425:16 544:15 transfermers 353:20 transferred 356:20 357:1,17 389:5 transferring 356:14 transformer 426:2 436:1 437:11 440:2 540:19 transformers 353:3
---	--	--	--	--

353:9,12,20,24 354:10 355:20 429:18 433:24 434:2,7,11 447:3 transmitted 396:21 transmitting 378:19 transport 546:9,19 546:23 transportation 477:6 treatment 368:25 416:1 537:5,8,10 tree 411:22 Treon 392:2 552:13 552:19 553:5 trial 459:19 461:7 461:11 503:4 574:12 trip 444:13,14 571:13 trouble 538:19 true 393:17 394:13 447:1 463:22 482:9 488:4 493:7 513:23 520:13 522:6 527:2 529:11 530:9 538:23,24 539:7 542:1 553:1 554:13 572:20 575:3 579:5 truncated 461:13 truth 348:9,9,9 549:7 574:19,20 574:20 try 358:21 487:2 509:24 trying 358:16 409:5 432:24 447:4 450:3 457:17 475:25 481:25 485:5 524:18 538:19	Tucker 373:25 374:1 381:9,12 390:19,25 444:19 444:19 510:24 511:3 568:9 Tucker's 374:9 395:8 turbines 357:12,13 Turbinol 357:8,10 turn 363:7 367:14 368:17 369:12,20 370:7 372:9,21 373:11 376:18 378:3 380:7,19 382:11 383:5 384:4,23 385:15 387:1 389:19 396:16 399:2,17 400:20 401:3,7 403:24 404:4,7 407:16 408:4,14 408:24 409:5 413:24 414:12 417:11,13 418:13 419:3,13,18 420:14 421:11 422:11 428:11 430:2,16,17 432:10 433:4,20 436:14 438:3,7 439:19 440:25 441:7,12 444:22 445:17 447:9 449:14 450:22 451:18 454:2 455:14 458:11,16 459:1 463:1,23 483:15 499:8 534:17 542:21 Turning 402:18 417:25 turns 393:11 twisting 523:23	two 354:14 376:15 382:2 387:19 396:25 399:17,21 405:19 410:2 411:23 423:1 430:18 439:21,22 439:23 441:12 446:13,19 454:19 455:24 464:21 488:15 498:10 502:21 503:9,10 507:24 508:25 509:10,10 511:22 525:3,3,24 526:23 537:10 538:6 543:23 two-page 363:24 type 353:19 354:16 356:4,15 357:3 358:7 360:5 371:2 371:3 463:12 468:7 502:23 551:2 567:21 typed 370:1 444:10 444:12 491:18 493:7 typed-on 473:2 types 353:15 404:18 416:12 555:2 typewriting 574:24 typical 356:23 362:25 391:10 472:20 504:15 typically 357:4 474:7	517:24 518:1 526:3 533:22 564:13 567:14 572:2 uh-uh 468:6 ultimate 499:18 ultimately 396:2 unable 446:24 unchanged 379:15 undated 490:8 554:17 undergo 540:15 understand 371:25 384:15 415:19 474:5,15 496:9 516:14 526:22 527:18 529:1 562:20 understanding 360:11,19,22 372:3 385:10 432:1 460:21 466:23 467:18 486:15 487:9,25 488:6 497:23 525:22 545:7 558:2,5 understood 360:2 360:23 489:10 518:15 undertook 391:1 underway 433:18 499:7 undetermined 574:11 unidentified 373:7 unique 535:6 unit 361:3 440:20 543:19 United 355:12,16,19 360:18 361:17 368:21 481:18 508:9,12,13	542:21 universally 555:3 Universities 382:4 University 349:16 349:21 359:12 369:23 375:19,21 376:3,5 403:15 443:3 453:14 454:7 unknown 369:10 371:8,13 379:10 unopened 414:7 unseen 563:2 unsigned 490:8 unspecified 528:16 upper 358:19 491:1 uptake 548:2,22 550:4,18 up-to-date 512:1 usable 440:17 usage 543:12 544:13 use 354:4 355:20 356:16,23 375:7 381:18 386:18 389:17,24 394:5,5 400:9,11 404:25 405:5,6 411:15 413:7,17 425:14 429:14,17 433:24 434:1,2,6,6,13 436:11 439:24 452:20 456:10 461:10 462:16,23 463:12 473:10,25 496:24 497:18 517:13,14 521:22 526:24 527:14,20 527:22 529:2 535:13 542:13,15 558:17 572:15 users 404:23 405:16 436:9
---	---	---	---	---

uses 352:23 353:2 355:21 358:13 386:16 389:24 411:21 423:21 426:24 429:14 432:7 433:12 441:24 442:2 443:6 451:16 508:15,17 526:9 528:9,15 546:18 usually 463:7 Utrecht 359:12 U-T-R-E-C-H-T 359:12 U.S 355:9 374:1 375:24 440:2,3 547:20 565:25 568:3,13,22 572:10 U.S.D.A 375:22 382:5 516:18 U.S.D.I 376:3	418:12 459:5 vary 392:14 varying 404:18 verbally 388:2 versus 347:10 VI 381:4 vice 385:24 410:13 435:14 440:11 Victor 402:6 video 342:16 343:16 374:18 376:8 403:21 439:16 560:12,13,14,15 videographer 345:22 347:5 430:1 540:22 violating 393:19 violation 499:22 Virginia 502:4 555:14 556:10 visit 361:12,18 365:1,3 visited 361:15 366:17 vital 425:17 vividly 362:24 Vol 342:17 343:17 576:11 579:1,10 580:11 volume 362:13 368:23 volumes 562:15 573:6 voluntarily 434:10 440:19 vs 342:8 576:12 580:5	454:10 520:7 568:25 569:1,22 Wait 445:23 waived 575:6 walk 475:23 476:17 walking 394:8 wall 518:12 Walter 414:2 415:9 want 363:12 365:5 397:5,14,15,25 398:19 417:15 418:3 429:22 431:11 453:6 466:19 479:8,19 483:4,20 486:1 489:20 491:20 501:3 503:4 515:18 519:18 521:21 525:9 526:21 527:18 528:7 529:18 539:20,22,22,23 551:9 559:24 560:19 561:13,19 573:20 wanted 366:11 396:7 398:12 475:6 502:17,18 502:20 515:3 516:7 522:13 530:22 562:1,5,5 wants 468:9 530:15 WARF 375:15 402:23 warning 407:9 408:10,18 447:16 447:21 449:21 450:18 517:22 518:3 warnings 505:12 Washington 349:16 349:21 375:19,22 376:2 402:7 419:2	420:1,20 430:9 477:7 wasn't 363:2 369:7 372:6 394:11 435:10 497:16 506:9,14 511:24 511:24 515:19 572:18 waste 496:19 497:14 500:15 wastewater 537:5 537:10 watch 466:8 watched 466:2 water 368:25 371:19 377:1,5 381:5 402:6,8,8 403:3 415:24 416:1 462:3 498:5 518:14 532:7 539:21 548:3,19 548:21 549:7,8,8 549:11,13 550:5 557:13 waterproofing 405:8 waters 538:20 539:10 541:19 544:12 545:5,15 waterways 540:6 way 363:13 467:17 473:11 480:15 492:15 522:21 531:7 ways 457:14 495:22 497:21 WBP 461:6 519:19 519:23 520:18 525:13 wear 394:6 wearing 393:12 weeks 525:25 526:23 weights 504:12	Welsh 435:7,8,9 went 348:25 361:14 377:1 505:6,7 526:22 533:17 540:15 550:11 weren't 509:19 526:8 West 409:18 410:14 413:2 421:9 Western 399:6,10 408:20 409:18 413:1,18 418:19 418:23 419:1,25 420:19 421:8,22 473:11 476:24 478:3 479:3 484:19,23 485:10 485:22,23 520:5 522:13,13 523:15 529:13 530:12 547:18 Westfield 419:10 Westinghouse 352:22,25 354:4 354:12 502:3 505:1 555:6,8,13 555:21 556:16 557:2 we'll 351:18 352:12 363:6 407:5 409:10 563:4 573:10 we're 347:2 370:10 406:23 439:3,15 442:14 448:23 457:17 472:6 525:19 538:12 551:10 560:20 561:24 565:12 573:18 we've 560:11 Whales 570:15 Wharf 408:21
V V 571:18 vague 484:13 486:24 493:10 494:21 500:19 506:19 515:8 520:16 522:10 527:11 528:1,14 531:4 532:10 539:14 549:17 vapor 389:3 vaporization 404:25 vapors 394:3 Varian 383:13 varied 394:2 528:15 variety 365:14 various 391:9 403:14 404:18 406:7 426:23 Varnish 417:14,22	W W 373:15,17 382:16 399:8 409:15,17 410:5,6 412:22 420:17 421:6,7			

what-have-you 498:8	419:15	words 425:7 473:2 497:9 499:11 536:23 542:12 551:21	W-I-L-D-E 363:25	0.5 423:6
Wheeler 374:14,15 381:11 442:20,23 443:22,25 445:5 552:8 556:22 557:3 568:9,25 569:1,6,12 570:4,9	willing 542:10 willingness 466:1 wind 532:22 Winnipeg 402:17,20 Wisconsin 375:13 375:14,24 376:3 402:24 403:15 536:12,17,18 537:3,11 538:17 538:21 539:9,11 540:5 541:15,19 542:3 543:24	work 380:18 383:25 393:7 394:7,20 395:8 400:13 403:2 443:2 468:8 468:12,21,22 469:13 470:2 516:12	Y yeah 468:3,11,23 470:3 471:11 478:14 479:11,12 481:3 487:4 490:19 492:2,4,8 492:13 494:16 496:23,24 498:16 499:20 500:10 501:7 503:2 505:5 505:11 512:13 513:3 515:16 516:22 518:20,23 524:13,14 526:14 531:11 532:17 533:8,16 536:5 538:22 541:11 551:6 559:22 562:25 563:4	000021 407:19 000110 521:15 000397 525:10 07304 417:24 084-003344 343:21
Wheeler/Scott 381:9	wisdom 528:18 wish 400:9 522:22 withdraw 555:5 withdrawn 527:16 withdrew 525:25 witness 348:4,5 366:9 466:23 471:2 472:10 525:9,16 538:6 548:5 574:15,17 575:1,5,12 579:1 582:9	worked 350:7,8,9 350:21 444:19 512:22 worker 392:14 393:6,18 workers 392:11,17 393:10,25 working 392:9,9 393:16 429:11 495:19 507:24	year 351:6,15 467:9 468:19 469:14,16 473:24 572:16 years 355:22 385:4 392:9,9 449:20 508:7 528:4 529:9 529:10 535:17 yellow 356:5 531:8 Yeon 409:18 413:2 421:9 York 375:20,20 376:1 408:3 Youngman 413:1 Y-L-S 360:9	1 1 361:20 404:17 411:19 503:21 581:7,13,19 1st 367:9 387:18 563:17 1:27 439:10 10 364:20 378:4 380:21 383:4 395:11 445:18,25 525:7 541:1,6 10-600 420:5 10:34 376:11 10:40 376:15 100143 503:22 1013 430:18 1014 377:2 1016 390:7,8,11 395:17 426:15 556:5,6 102 416:7,24 102.1 416:22 1021 432:11 1023 433:5 1024 433:21 108 481:12,13 11 395:20 410:4 424:5 456:17 11th 412:8 424:14 425:9 427:7 11:39 405:21 11:46 406:1 1110 520:19 117 418:13 118 418:13 12 387:2,11 388:24
Widmark 359:9,10 360:6,14 361:11 361:12,18 369:9 369:15 370:24 375:11 380:9 445:7,14,15 446:11 509:11,15 510:9 512:4 570:4	witnessed 392:24 393:15 Wood 361:6,7 364:17,19,25 365:23 366:17,22 367:4,6,22 368:1 368:20 372:12 451:8 512:19 513:19 563:17,19 563:25 565:23 566:23 567:5,8,11 Wood's 368:18 word 354:15 377:12 390:24 466:9 473:8,25 496:24 505:2 534:9 572:15	working 392:9,9 393:16 429:11 495:19 507:24 Works 417:5 world 354:20 421:16 509:23 510:14,20 510:22 wouldn't 515:1 521:23 539:7 540:2 544:18 552:13 554:8 wrap 409:5 wrapping 405:11 write 469:18 writing 388:2 485:7 512:17 written 364:25 365:23 368:20 492:12 523:17 546:12 wrong 472:23 473:9 473:10 475:5 511:2 518:16 526:6,10 532:13	\$ \$220 469:22 \$30 473:16 \$4,000 469:19,23 0 0.2 415:20	
Wilbur 557:1 wild 470:10 Wilde 363:25 364:10 564:10,18 wildfire 422:23 Wildlife 344:19 347:24 375:12 376:1,4 382:5 403:10,11 516:16 wild-life 371:6 Wilkins 465:7 William 342:16 343:16 347:7,8 348:7 350:13 376:10,16 405:20 406:2 439:6,11 467:22 476:6,12 514:8,13 551:17 560:15 576:11 579:1,10 580:11 Williams 418:17	worded 497:6 W-A-R-F 375:15			

394:22 395:4,11 395:20 396:25 430:20 444:15 517:5,9,12 544:12 12-30-70 420:6 12:47 439:7 1200 411:18 122 418:16 1221 556:4 123 418:18 1232 404:15 449:2 556:4 124 418:18,22 536:22 537:19,23 1242 390:8,9,10,17 395:13 404:15 424:16 425:12 426:14,19 556:4,7 1242B 426:14,15 1248 390:17 395:14 404:15 125 418:18,25 1254 389:4,11 390:18 404:16 413:16,20 420:5 449:15 450:18 454:1,22,23 456:1 472:24 473:14,24 475:6 477:22 478:21 502:13 555:24 556:1,11 1254/1260 389:1 494:13 1260 377:9,10 389:4 389:11 404:16 454:24 1262 404:16 454:22 454:24 1268 404:16 127 537:24 538:4 129 544:7 13 364:1 417:11 430:19 448:7	451:3 13th 366:22 410:23 412:11 564:12 130 544:25 139 345:14 14 414:1 415:8 428:4 437:24 14th 414:13 416:6 416:13 482:4 524:23 525:3 526:13,17 14ths 525:3 142 419:3 148 457:20 149 419:5 456:15,16 15 385:4 490:20 15th 570:9 150 419:7 153 419:7 155 460:1,25 16 413:14 489:23,25 490:19,22,23 540:24 17 342:19 343:19 385:19 471:14,19 492:16 530:1 574:16 17th 347:2 387:8 401:5,9 572:5 1704 473:4 18th 555:16 568:8 570:3 183 345:5 19 399:5 498:21 533:13 19th 399:18 520:4 520:23 521:18 190 343:18 345:8 347:3 574:14 576:6,18 580:18 581:4 192 345:6 1922 348:21	1929 351:8,15 451:13 1930s 351:4 450:16 1935 351:17,20 352:16 353:1 1942 349:7 1943 349:18 1946 349:7 1947 349:24 1950s 495:24 498:22 1951 350:2 1953 458:24 1955 552:11 553:5 1957 495:25 499:1 500:17 1958 384:19 1960s 511:25 1965 350:19 1966 363:5 366:20 367:9 368:2 369:16,22 371:24 380:10 384:19,21 510:8 511:20 514:2 563:17 564:1 1967 364:1,21 366:22 372:13 376:25 377:7 378:10 510:8 528:9 564:12 565:3,15 566:2,17 566:22 567:8,19 1968 383:4,22 568:1 568:8,18,20,24 569:8 570:24 1968/69 552:1 1969 350:19 357:18 363:5 373:16 385:19 387:3,8 388:24 394:23 442:22 443:11,19 445:6 462:7	474:10 508:20 516:11 527:8 569:11,18,22 570:3,10,13 571:17,21 572:1,5 1970 350:22 358:11 361:15 362:17 387:18 396:20,24 398:17 399:5,18 400:23 401:5,9 404:8,8,13 405:14 406:14 407:13,25 408:10,18 409:14 409:17,23 410:4 410:23 411:3,3,19 412:8,11 413:3,19 414:2,13 415:8 416:6,13 420:12 421:10,19,23 422:7 424:5,9,14 425:9 426:4,24,25 427:7,10 428:4,9 429:13 441:13,17 442:10 443:18 445:6,15 448:7,17 450:20 453:7,15 454:5,12 460:3 462:7 464:2 465:7 465:13,18 473:24 477:22 478:19 483:10 484:14,15 484:19,24 485:9 485:22 486:19 487:19,24 489:4 492:11 493:6,18 494:18 496:22 497:5 499:6,7 500:23 501:1 505:4,8,23 506:12 506:15 507:5,18 507:20 508:6,20 511:13 517:22 520:5,23 521:18	521:24 522:8 524:23 526:13 527:3,8 528:21,24 529:12 530:10 542:4,22 572:14 572:16 573:3 1971 419:23 420:18 428:21,25 429:4 429:15 451:24 452:13 456:17,25 480:21 482:5,6 544:11 546:22 1972 430:10,14 441:17 442:10 451:13,15 455:15 455:19 456:7 546:20 558:15 559:3,6 1973 414:24 544:11 1975 434:25 437:6 505:1 533:6,13 536:11 537:3 539:2 546:10 548:15,17,25 549:21,22 550:2 555:16 1975-ish 435:1 1976 437:14,20,24 438:1,5,17 439:17 451:3,8 1977 434:15 440:22 1978 463:10,11,15 463:19 1982 441:3 442:3 561:10 1986 350:25
2				
2 412:9				
2nd 379:20 443:18 572:14				
2.2 455:9				
2.3 455:9				

2.4 455:9	28th 368:2	4:24 551:12	53 458:22	524:2 554:16
2.5 455:9	284 538:3	4:27 551:16	5460 377:8,22	68 381:2 482:18
2:26 476:7	286 547:25 548:10	4:38 560:3	551 346:5	501:4,9,14,21,24
2:28 476:11	29 369:16 409:17	4:40 560:7,16	559 346:6	501:25 555:12
20 371:21 422:7	29th 380:10 409:14	400 401:14	56 410:22,24 411:4	69 358:3 444:15
455:8 529:10	409:23	405 346:14	411:6 412:12	510:25 511:7
533:13 541:4		41 351:12 361:21	561 346:7	571:1,2
575:14	3	362:12 387:8	57 501:1	6900 420:19
20th 565:3 569:8	3 456:2	388:24 517:1	59 417:13,17	
20-21 451:24	3rd 442:22 443:11	416 416:5	59403 581:23	7
200 371:18,19	443:19 567:8	42 556:4	59403-2103 344:24	7 373:16
2007 342:19 343:19	569:11,17 570:24	420 417:13	59457 344:7 581:11	7th 569:21
347:2 574:16	3,000 469:11	433 419:14	59601 345:15	70 346:17 401:5
575:13 579:13	3.3 455:10	4465 404:17	455:22	404:6 417:25
2009 575:14	3:22 514:9	45 403:24	59715 454:8	467:3,15 471:4,15
205 419:14	3:28 514:12	452 417:23	59807 581:17	471:20 501:10
21 380:22,23 382:12	30 421:19 426:24,25	453 346:13	59807-7909 344:16	510:25 511:7
407:17 494:6	427:10 508:7,7	467 346:4,17,18,19		514:22 515:15
21st 378:10 477:22	558:25,25	346:20,21,22	6	529:16,17,24,25
478:19	30th 429:13 570:13	48 408:15	6th 455:19 456:7	530:2,3
2103 344:23 581:22	572:1 575:13		6-12-69 571:11	70s 515:12
22 372:13 437:5	31 413:3 420:12	5	60 457:22 459:9	70-A 495:4
438:1	460:25 461:2,14	5 451:8 512:8	473:14	700 342:24 582:7
22nd 566:2	3100 410:7	5th 445:1,6	60s 357:21 511:5	71 346:18 429:16
225 489:22	318235 489:21	5.O 423:7	515:13,14,16	452:13 534:18
23 408:5	32 373:12 514:15,16	5.2 544:14	60-pound 475:6	542:4,22
23rd 565:15 566:17	34 507:22	5/17/2007 576:11	60.1 414:22	72 346:19 430:4
24 465:6	34754 444:22	579:3 580:13	600 580:18 581:4	441:14 536:3,4
24th 465:18	34757 445:18 446:1	5/6 395:13	60067 410:8	558:16
25 421:10	348 346:3	50 437:1 473:20,20	60612 410:15	73 346:20 543:7,8
25th 421:23 571:17	35 507:22	474:11 499:3	61 462:9 463:23	74 346:21 418:8
254 538:3	362 346:11	50s 496:10 515:12	62 454:1	436:16,25 546:4
2540 410:14	3720 409:18 413:1	529:8	63101 342:25 582:8	75 346:22 435:1
26th 365:1 437:20	421:9	50-pound 473:15	63105 345:9 576:7	467:3 547:7
438:5,17 439:17	3748 458:20	478:20	576:19 580:19	555:22
263711 458:12	396 346:12	51 368:15 447:13,14	581:5	750 408:12
27 376:25 400:3	397 525:17	448:24	64 441:25 501:10	754 444:23
420:18 454:5,12		51.4 449:1	65 501:8	76 344:6 436:20
454:21 464:2	4	515 342:24 582:7	65-A 479:15 480:3,7	581:10
27th 453:15 465:13	4 388:10 419:23	52 473:20	66 379:25 514:22	77 434:15
566:22 567:18	455:9 481:6 580:3	52-A.1 410:3,4	515:15	7909 344:15 581:16
571:21	4,000 469:11	52-A.2 410:3,11	67 379:25 482:15,18	
28 460:3	4.4 455:10	52.A.1 412:9	482:25 501:10,16	8

8 363:8 428:25
483:16
8th 429:4 568:18,20
80 508:21 529:23
807 343:20
82 442:8
84 348:23
856 404:8,9
860 408:21
8633 448:25
8635 449:16 450:19
8641 465:11
8669 452:4
8712 454:3
88 398:20

9

9 396:20 406:14
9th 396:24 398:17
407:13,24 408:10
408:18 414:24
564:1 568:24
9:35 347:1
95 418:11
97210 409:19 413:2
421:9
98108 420:20