UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS
-oOo-

TOWN OF LEXINGTON on behalf of itself and all others similarly situated,

Plaintiff,

vs. Case No. 12-CV-11645

PHARMACIA CORPORATION, SOLUTIA INC., and MONSANTO COMPANY,

Defendants.
_____/

VIDEOGRAPHIC DEPOSITION OF ROBERT G. KALEY, II, Ph.D.

June 26, 2014, at 8:00 (8:05) a.m.

Before: LAUREN M. GOODMAN
RPR, CCR 1037

Taken at:
Husch Blackwell
St. Louis, Missouri

TOWOLDMON0007308

INDEX OF EXAMINATION

Examination by:	PAGE
MR. HILL	7
MS. RUTTER	162
MR. HILL	166

EXHIBITS

NUMBER		PAGE
1	(Revised Notice of Deposition)	10
2	(Amended Settlement Agreement)	29
3	(Abatement Plan)	30
4	(Plasticizer Guide)	39
5	(Aroclor Compounds Guide)	42
6	(Aroclor Plasticizer Guide)	46
7	(Aroclor Plasticizer Withdrawal Plan)	50
8	(Technical Bulletin)	52
9	(Plasticizer Patter Packet)	55
10	(PCB Report)	57
11	(PCB Presentation)	60
12	(Monsanto Internal Memorandum)	66
13	(Report of Bayer Meeting)	68
14	(Monsanto Customer Letter)	70
15	(Monsanto Customer Letter)	73
16	(Monsanto Customer Letter)	76
17	(Call Report)	79

TOWOLDMON0007309

EXHIBITS (CONT.)

NUMBER		PAGE
18	(Call Report).....	83
19	(Article).....	96
20	(PCB Exposure Letter).....	97
21	(Monsanto Toxicity Letter).....	100
22	(Monsanto Medical Department Memo).....	103
23	(Monsanto Testing Memo).....	110
24	(Monsanto Medical Director Letter).....	113
25	(Monsanto Medical Department Memo).....	114
26	(Aroclor Memo).....	115
27	(Monsanto Medical Director Letter).....	116
28	(John Mason Document).....	123
29	(Aroclor 1254 Product Questionnaire).....	124
30	(Aroclor 1260 Product Questionnaire).....	125
31	(Xylene Document).....	125
32	(Monsanto Press Query).....	127
33	(Monsanto Press Query).....	130
34	(Dr. Craddock PCB Letter).....	132
35	(Monsanto Press Release).....	134
36	(Plasticizer Product Building Bulletin).....	142
37	(Aroclor - Wildlife Memo).....	145
38	(Call Report - Organic Division).....	147
39	(Biodegradability of Aroclor Memo).....	148
40	(Plasticizer Document).....	152

TOWOLDMON0007310

EXHIBITS (CONT.)

NUMBER		PAGE
41	(Pharmacia's Responses).....	153
42	(Pharmacia's Objections).....	167

-oOo-

(All exhibits attached to original transcript in addition to all electronic transcript copies requested by counsel at conclusion.)

APPEARANCES

For the Plaintiffs:

Eisner Jaffe Gorry Chapman & Ross, P.C.
JON-JAMISON HILL, ESQ.
9601 Wilshire Boulevard, Suite 700
Beverly Hills, California 90210
(310) 855-3200

For the Defendants:

Husch Blackwell, LLP
CAROL A. RUTTER, ESQ.
DOMINIQUE SAVINELLI, ESQ.
190 Carondelet Plaza, Suite 600
St. Louis, Missouri 63105
(314) 480-1934

Campbell Campbell Edwards & Conroy, P.C.
RICHARD P. CAMPBELL, ESQ.
One Constitution Center
Boston, Massachusetts 02129
(617) 241-3000

Videographer:

Depobook Reporting Services
ED FOPPE, CLVS
1600 G Street, Suite 101
Modesto, California 95354
(800) 830-8885

-oOo-

THE VIDEOGRAPHER: This is the video deposition of Robert Kaley as the corporate representative of Pharmacia Corporation. Today's date is June 26, 2014. The time is 8:05 a.m. central standard time.

This deposition is taking place in the matter of Town of Lexington on behalf of itself and all others similarly situated vs. Pharmacia Corporation, Solutia Incorporated, and Monsanto Company. This case is pending in the United States District Court for the District of Massachusetts, Case No. 12-CV-11645.

My name is Ed Foppe. I'm a certified legal video specialist representing Depobook Court Reporing. The court reporter is Lauren Goodman.

Counselors, will you please state your appearance.

MR. HILL: Good morning. My name is Jon-Jamison Hill of Eisner Jaffe on behalf of Plaintiff Town of Lexington.

MS. RUTTER: Good morning. Carol Rutter on behalf of defendants.

MR. CAMPBELL: Richard Campbell for the defendants.

MS. SAVINELLI: Dominique Savinelli for the defendants.

TOWOLDMON0007313

THE VIDEOGRAPHER: The court reporter will now swear in the witness.

ROBERT G. KALEY, II, Ph.D., the Witness herein, having been duly and regularly sworn by the Certified Court Reporter, deposed and testified as follows:

EXAMINATION

QUESTIONS BY MR. HILL:

Q. Good morning, Dr. Kaley. Can you please give your full name for the record.

A. Yes. It's Robert George Kaley, II.

Q. My name's Jon Hill. I'm an attorney for the Town of Lexington. Is there any reason this morning why you can't give your best testimony?

A. No, no, there's not.

Q. Have you been deposed before?

A. I have.

Q. How many times?

A. Probably between 10 and 20.

Q. When was the last time you were deposed?

A. I believe about a year ago.

Q. What type of matter was that in connection with?

A. It was a -- a lawsuit, a personal injury lawsuit against Pharmacia.

Q. Have you testified -- You understand this morning that you're testifying on behalf of Pharmacia Corporation, correct?

A. I do.

Q. Have you testified as the corporate designee of Pharmacia Corporation before?

A. Yes.

Q. How many times?

A. Once or twice. I -- Excuse me. Once or twice, I guess.

Q. Since you're on old pro at this, I'll keep the admonitions to a minimum, but I'd like to go through a couple of them. You've taken an oath this morning. It is the same oath that you'd take in a court of law if you were testifying, and although we're in the relative comfort of a conference room here, that oath has the same force and effect as it would if you were testifying in court.

Do you understand that?

A. I do. Geeze. Yes, I do. My voice is changing. Excuse me. (laughter)

Q. Do you need a drink of water?

A. No. I don't know why it's doing that.

Q. Okay.

A. It will -- It will go away.

Q. If at any time this morning you need to break to grab a drink or use the restroom, please ask. I'm happy to accommodate you there unless there's a question pending.

A. Right.

Q. In which case I'd ask you to answer the question before you do.

A. Understood.

Q. I'm going to ask you some questions this morning. I can be at times inartful in the way I ask them, so if I don't under -- you don't understand the question I'm asking, please speak up. Will you do that?

A. I will.

Q. Conversely, if you don't say that you don't understand the question or you have some issues with a term I've used or the way I've asked it, I'm going to assume that you understood what I've asked you. Is that fair?

A. That's fair enough.

Q. Okay. I understand today we're going to be talking about topics and events that happened quite a long time ago. You may not have perfect recall. You may not have precise dates available, but I am entitled to an estimate if you have it.

Do you understand that?

A. Fair enough.

Q. Conversely, I don't want you to speculate or guess. So if you have no basis to give me an answer to a question I've asked, I don't want you to speculate or guess. Do you understand that?

A. That's fine.

Q. Okay. I'm going to mark as Exhibit 1 the -- a document entitled "PLAINTIFF TOWN OF LEXINGTON'S REVISED NOTICE OF DEPOSITION." And, actually, she's going to give you the marked one.

(Thereupon, the court reporter marked Deposition Exhibit No. 1, for identification.)

MR. HILL: Numbers, please.

We've been doing numbers, right, Dick?

MR. CAMPBELL: I haven't sat through any of the depositions, but our practice is to use numbers consistent, not plaintiff or defendant. Just 1 through whatever. And we renumber -- Typically, we renumber -- We start the numbering process all over again with each deposition.

Q. (By Mr. Hill) Feel free to take a moment to flip through. Have you seen this document before?

A. I think I've -- I'm not sure I've seen

the revised notice, but I have seen a notice of deposition. Whether it was this one or the original, I don't -- I'm not sure, but I have seen a notice of deposition, yes.

Q. Starting on page 2, there's a list of topics that we have asked for a corporate designee on. They are numbered 1 through 8. Can you take a look through that list --

A. Yes.

Q. -- and let me know if you're prepared to testify about all those topics this morning?

A. I am.

Q. And there's no topic on there you aren't prepared to testify about this morning; is that correct?

A. I don't believe so. I mean, I believe you are correct.

Wait. Which -- Which question was that? I am prepared to testify on the topics listed on the document.

Q. Thank you. What steps did you take to prepare for your deposition today?

A. I had some discussions with counsel, I reviewed the deposition notice, and I reviewed Monsanto's -- Or I'm sorry. I understand I'm a

representative of Pharmacia, but I worked for Monsanto for a number of years, so I sometimes lapse into that language. I -- I reviewed Pharmacia's responses to discovery requests.

Q. Okay. Who did you talk to specifically?

A. Ms. Rutter and Mr. Campbell.

Q. Apart from Mr. Campbell and Ms. Rutter, did you talk to anybody else in preparation for your deposition this morning?

A. No, I did not.

Q. You talked about discovery responses that you looked at. Other than those discovery responses, did you review any documents in preparation for your deposition this morning?

A. No, not specifically.

Q. Okay. Did you read any prior deposition transcripts from anyone in order to prepare for your deposition this morning?

A. No, I did not.

Q. Who's your current employer, if anyone?

A. I'm self-employed.

Q. Who was your last employer?

A. Solutia.

Q. And that's Solutia, Inc., one of the defendants here?

A. Yes.
Q. How long were you employed by Solutia?
A. Approximately six years.
Q. When did you leave Solutia?
A. I left Solutia when that company was spun off from -- Oh, when did I leave Solutia? I left Solutia in August of 2003.
Q. And since that time you've been self-employed?
A. Yes, I have.
Q. And you worked for Solutia about six years, so that puts it in about 1997?
A. Correct.
Q. Who was your employer before that?
A. Monsanto Company.
Q. Did you work out of St. Louis offices?
A. Yes, I did.
Q. And how long were you employed by Monsanto?
A. About 24 years.
Q. Let me ask it this way: When did you become employed by Monsanto?
A. I joined Monsanto in December of 1973.
Q. And between 1990 -- 1973 and 1997, you were continuously employed by Monsanto?

A. That's correct.

Q. What was your job title with Solutia when you started?

A. Director of environmental affairs.

Q. Did you have the same job position there throughout the time you were with Solutia?

A. I did, yes.

Q. What were your job responsibilities?

A. Primarily to manage issues around Solutia, former chemicals manufactured by Solutia.

Q. What did that entail?

A. It entailed assuring our plants were in compliance with regulations. It assured staying abreast of the scientific and medical literature. Sometimes it involved working with attorneys in litigation support, a variety of responsibilities.

Q. Any other primary responsibilities with that job?

A. I don't believe so.

Q. When you first started with Monsanto in 1973, what was your position there?

A. I was a senior research chemist.

Q. And what did that job entail?

A. I was in the laboratory working with a group that was doing scientific research on

polychlorinated biphenyls.

Q. What type -- Now, when I use the term PCBs, will you understand that to be polychlorinated biphenyls?

A. Sure will.

Q. Okay. What type of research did you do into PCBs?

A. I -- I was an analytical chemist, so I worked with people doing a variety of types of studies: biodegradation studies, chemical -- Excuse me. Boy, I don't know why I have such a raspy throat. Excuse me. Synthesis chemists making new chemicals, primarily just doing analytical chemistry.

Q. You were at Monsanto for quite a while. Did you hold any different positions other than a senior research chemist during your time there?

A. Yes, I did.

Q. What was your next job?

A. Well, at some point I was a -- a research group leader.

Q. When did you start in that role?

A. I believe around 1976.

Q. And were there additional responsibilities from your job -- from your prior position as a senior research chemist when you moved

to the role of research group leader?

A. Yes. I had a group of people that reported to me doing similar kinds of work, but I also had some management responsibilities.

Q. In that role as research group leader, did you continue to do, for lack of a better term, hands-on chemistry too?

A. Yes, I did.

Q. Did you have any other positions besides research group leader when you worked at Monsanto?

A. Yes.

Q. What was your next position?

A. Around 1979 I became a senior research specialist, where I no longer had responsibilities for -- for managing a group, but I still was doing hands-on laboratory work.

Q. What type of laboratory work were you doing at that point?

A. Primarily gas chromatography and mass spectrometry.

Q. Did you have any other positions with Monsanto after being a senior research specialist?

A. Yes. In about 1985 I moved out of the laboratory into a -- a management position in the -- what was then called the environmental policy staff.

Q. What types of responsibilities did you have in that job position?

A. My first responsibilities were primarily product stewardship for polychlorinated biphenyls, for PCBs, doing many of the same things we discussed earlier: making sure plans were in compliance, following regulations, staying abreast of the scientific literature, answering phone calls that came into the company with regard to PCBs and other chemicals, primarily PCBs.

Q. Were you still doing any hands-on research at that point?

A. No, I was not.

Q. Did you have any other job positions at Monsanto?

A. Well, not really job positions. The titles changed through -- through time, eventually getting to director of environmental affairs, but the responsibilities stayed the same, primarily.

Q. Do you recall when the job title changed to director of environmental affairs?

A. It was in the early 1990s, probably 1991. I don't -- I don't recall specifically.

Q. As I mentioned before, you may not always be able to give me a precise date, but if

you can give me an estimate --

A. Right. That's ballpark.

Q. -- I'd appreciate that.

Okay. Have you ever given any expert opinions in a lawsuit before?

A. Yes, I have.

Q. On how many occasions?

A. Three or four that I can think of.

Q. Were you ever deposed as an expert witness?

A. Yes.

Q. How many times?

A. Well, that would be those same three or four. That's what I was thinking of, depositions I had given.

Q. Have you given any trial testimony as an expert witness?

A. Yes. Once.

Q. Was that in a case you were also deposed in?

A. I believe so. I don't -- I don't recall. I assume I was deposed in the case. I don't really remember, though. It was a long time ago.

Q. When was the most recent occasion you testified as an expert witness?

A. Probably -- Testified in court or by deposition?

Q. Either.

A. Either by deposition, by probably six years ago, five, six years ago.

Q. What was the general subject matter of the expert opinions you were giving in that deposition?

A. It was basically opinions about the physical properties and chemical properties of PCBs and their environmental behavior.

Q. Were the prior times you gave expert testimony either at deposition or in trial also connected to PCBs?

A. Yes.

Q. So at the time that you gave an expert opinion, the subject matter was PCBs?

A. Yes. I'm a one-trick pony.

Q. When was Pharmacia Corporation formed?

A. I believe around 1999 or 2000.

Q. Was it a new company, or was it a successor to a prior company?

A. It was a result of a -- from what I understand was a merger between Pharmacia Upjohn and old Monsanto Company.

Q. What are you referring to when you use the term "old Monsanto"?

A. Well, the Monsanto Company that existed before the formation of Pharmacia.

Q. And I'm not trying to trick you on that.

A. I understand. That's fine.

Q. I just want it to be clear for the record.

A. That's fine.

Q. Is Pharmacia Corporation a successor to, we'll just use, old Monsanto?

MS. RUTTER: Objection; calls for a legal conclusion from a lay witness.

A. Well, I -- It is a successor in the sense that it was formed as a merger with Monsanto with -- with Pharmacia Upjohn. So if that's a successor corporation, it was. I don't really know what the term means specifically.

Q. (By Mr. Hill) Was Pharmacia Corporation ever a subsidiary of another company?

A. I believe it is now. I don't believe it was at that time.

Q. What company is it a subsidiary of now?

A. Pfizer.

Q. Do you know when Pharmacia Corporation

became a subsidiary of Pfizer?

A. I believe it was around 2003. I don't -- I'm sorry. I don't recall specifically, in the early 2000s.

Q. Early 2000s is your best estimate?

A. Yes.

Q. Other than Pfizer, has Pharmacia been a subsidiary of any other company?

A. Not that I'm aware of.

Q. Was Monsanto Chemical Company a division of old Monsanto?

A. Well, Monsanto Chemical Company was the name of old Monsanto in one of its incarnations.

Q. Do you know when old Monsanto used that name?

A. I believe through the -- through the mid -- mid-1950s through the '60s. I don't know specifically.

Q. Do you know when it started using that name?

A. Not specifically, no.

Q. Was it before the 1940s?

A. I -- I really don't know.

Q. Old Monsanto has a PCB manufacturing business, correct?

A. That's correct.

Q. Did old Monsanto have any subsidiaries that had an interest in that PCB manufacturing business?

A. There were -- There were two other operations, and I don't know specifically what the arrangement was, whether they were subsidiaries. At one point there was, I believe, a licensing agreement with Monsanto Mitsubishi, a Japanese licensee to manufacture PCBs, and Monsanto also manufactured PCBs in Britain. The company there was Monsanto Limited or Monsanto Europe. And, I don't, again, don't know the specific relationship between those, whether it was subsidiary or -- or what, but those were the other two companies that would have -- would have had a PCB interest.

Q. Did Monsanto Mitsubishi have any operations in the United States?

A. No.

Q. And did Monsanto Limited or Europe, whichever name was attached to that company, did that company have any operations in the United States?

A. No.

Q. When was Solutia formed?

A. Solutia was formed in 1997.

Q. Was that a spin-off from Pharmacia?

A. I believe it was a spin-off from Monsanto -- old Monsanto.

Q. Okay. I'm already getting the names confused. Thank you for clarifying that.

A. It's easy to do.

Q. Was a particular business line spun off with Solutia?

A. Yes. It was the industrial chemicals division.

Q. Now, there's currently a company named Monsanto Corporation, correct?

A. Monsanto something. I don't know whether it's Corporation or Company. I don't know what the ending is, but there is a new Monsanto, yes.

Q. And we'll -- You're already getting there. You're -- You're ahead of me. We'll, just for the sake of ease, call that new Monsanto.

A. Okay.

Q. If I use "new Monsanto," you'll understand that to be the company that's around today that's named Monsanto either Company or Corporation. Is that --

A. That's correct, yes.

Q. Okay. One thing I've noticed -- and I'm

doing it too, so I'm just as guilty as you are -- but we're going pretty quickly with our question and answer, and we tend to talk over each other a little bit. That's fine in normal dialogue, but we have a court reporter here trying to take everything down. So I will do my best to let you finish your answer before I start asking my next question, and I ask that you let me finish my question before you give your answer. Is that fair?

A. That's fair. I'm fine. I'm sorry. I didn't realize we were doing that. That -- That's fair enough. I understand.

Q. No. It -- It happens. A deposition is an odd animal, a little different than everyday conversation, so it's -- it's hard to get out of that habit.

When was new Monsanto formed?

A. I believe in 2000 -- or 2002, I believe.

Q. Was it eventually spun off from either old Monsanto or Pharmacia?

A. It was spun off from Pharmacia, yes.

Q. When was the spin-off?

A. Well, I believe it was 2002, 2003, that time frame.

Q. Was there a specific product line that

was spun off as part of new Monsanto?

A. Yes. It was their agricultural products division.

Q. Does Pharmacia carry any liability for the PCB manufacturing business of old Monsanto?

MS. RUTTER: Objection; calls for a legal conclusion from a lay witness.

A. It's my understanding they do, yes.

Q. (By Mr. Hill) Does Pharmacia remain potentially liable for any lawsuits that arise from old Monsanto's PCB manufacturing business?

MS. RUTTER: Objection; calls for a legal conclusion from a lay witness.

A. I know there are agreements among the companies. I -- I don't know the specifics of those agreements.

Q. (By Mr. Hill) Does new Monsanto carry any responsibility for the defense of any PCB-related cases?

A. It's my understanding they do, yes.

Q. Has new Monsanto assumed any liability stemming from lawsuits that arise out of old Monsanto's PCB manufacturing business?

A. I'm sorry.

MS. RUTTER: Objection; calls for a

legal conclusion from a lay the witness.

A. I'm sorry. Could you restate that question? I'm sorry.

Q. (By Mr. Hill) Sure. Has new Monsanto assumed any liabilities that stem from old Monsanto's PCB manufacturing business?

MS. RUTTER: And let me get my legal -- my objection in --

MR. HILL: Sure.

MS. RUTTER: -- for the record. Object to the form of the question. That calls for a legal conclusion from a lay witness interpreting numerous complex legal documents.

You may answer to the best of your ability subject to that objection.

A. It's my understanding they do, yes.

Q. (By Mr. Hill) Does Solutia, Incorporated, carry any responsibility for the defense of PCB-related lawsuits?

MS. RUTTER: Same objection: calls for a legal conclusion from a lay witness.

A. And I don't know the answer to that one.

Q. (By Mr. Hill) Has Solutia assumed any -- any response -- Or sorry. Let me start over.

Has Solutia assumed any liabilities that stem

from old Monsanto's PCB manufacturing business?

MS. RUTTER: Let me get an objection in. Object to the form of the question; calls for a legal conclusion by a lay witness and a legal interpretation of a number of complex legal documents.

Subject to that objection, to the extent you feel able to answer the question, you may do so.

A. It's my understanding they do have some environmental remediation liabilities.

Q. (By Mr. Hill) At any time has there been an indemnification agreement between Pharmacia and Solutia concerning PCB-related liabilities?

A. It's my understanding there has been, yes.

Q. Was that a written agreement?

A. I -- I don't really know.

Q. At any time has there been any liability sharing or division agreement between Pharmacia and Solutia concerning PCB-related liabilities?

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

A. I'm not sure exactly what -- what all those terms mean, but, I mean, there -- I believe there are agreements that address the liabilities regarding PCBs, yes.

Q. (By Mr. Hill) At any time has there been an indemnification agreement between Pharmacia and new Monsanto concerning PCB-related liabilities?

A. I believe there is one, yes.

Q. And at any time has there been an indemnification agreement between Solutia and new Monsanto concerning PCB-related liabilities?

A. I believe so, yes.

Q. Do you know if that agreement's still in effect?

A. I don't.

Q. Regarding the indemnification agreement between Pharmacia and new Monsanto, do you know if that agreement's still in effect?

A. It's my understanding it is, yes.

Q. Do you know when that agreement became -- Sorry. I hit my microphone.

Do you know when the agreement between Pharmacia and new Monsanto became effective?

A. Not really, no.

Q. Do you know if it's been amended over the years?

A. I don't know.

Q. I'm going to mark as Exhibit 2 document entitled "AMENDED AND RESTATED SETTLEMENT AGREEMENT."

(Thereupon, the court reporter marked Deposition Exhibit No. 2, for identification.)

MR. HILL: No. That's fine.

Q. (By Mr. Hill) Please take a look through that.

A. I've flipped through it.

Q. I am going to have very limited questions on this. My -- It's --

A. I'll probably have very limited answers.

Q. Have you seen this document before?

A. I have not.

Q. Okay. If you -- I'll tell you what. You've never seen this document before?

A. I have not.

Q. You've never heard about this document before?

A. I understand there was a settlement agreement, but -- So to the extent there was an agreement, I assume there was a document; but other than that, I don't know any details.

Q. Okay. Do you know if Pharmacia Corporation has made any claim for insurance coverage for this lawsuit? And when I say "this lawsuit," I mean the Town of Lexington v. Pharmacia and Solutia and Mon -- Monsanto Company.

MS. RUTTER: I object to that question as being outside the scope of any of the topics. If you're asking him in his individual capacity does he know that, he can answer if he knows it.

A. I don't know.

Q. (By Mr. Hill) When did Monsanto Company begin selling PCBs?

A. In 1935.

Q. Did Monsanto Company also sell a line of products called Aroclors?

A. Yes.

Q. Did those contain PCBs?

A. Some of them.

Q. Not all, though?

A. That's correct.

Q. When did Monsanto Company start selling Aroclors as a brand?

A. In 1935.

Q. Did Aroclor 1254 contain PCBs?

A. Yes.

Q. How about Aroclor 1260?

A. Yes.

Q. I'm going to mark Exhibit No. 3.

(Thereupon, the court reporter marked Deposition Exhibit No. 3, for identification.)

MR. HILL: For the record, the document title is "OUTLINE PCB ENVIRONMENTAL POLLUTION ABATEMENT PLAN." Sorry.

A. Okay.

Q. (By Mr. Hill) Have you had a chance to flip through it?

A. I flipped through it.

Q. There are numbers. We call them Bates numbers, and on the first page it's not quite at the bottom. It's begins with "MONS."

A. Yes.

Q. And on the first page it's 035310. Do you see that?

A. I do.

Q. All right. Just for sake of reference, as I flip through the document, I'm going to use those as the page numbers instead of the page numbers of the actual document. Okay?

A. That's fine.

Q. Have you seen this document before?

A. Yes, I have.

Q. If you flip to page -- It's the Bates number ending in 13.

A. Okay. I'm there.

Q. There's a line. It's the third line

from the top. It says: "The first load of Aroclor which incidentally was Aroclor 1254 -- went out of Anniston, Alabama to GE in 1931."

Do you know what that's a reference to?

A. It's a -- Yes.

Q. Okay. And was -- Is that factually accurate, that the first -- first Aroclor 1254 produced was produced in 1931?

A. I have no reason to believe it's not correct.

Q. Okay. That was before Monsanto actually began producing PCBs; is that correct?

A. Yes.

Q. Was -- Was that produced by a predecessor to Monsanto?

A. It was produced by a company that Monsanto purchased in 1935, yes.

Q. Which company was that?

A. Swann Chemical, S-w-a-n-n.

Q. Did Monsanto purchase Swann's entire PCB manufacturing business?

A. Among other things, yes.

Q. Did Monsanto have a line of products called Santicizer? Am I pronouncing that right?

A. Yes.

Q. And that's S-a-n-t-i-c-i-z-e-r?
A. Yes.
Q. Did those products contain PCBs?
A. Some of them did.
Q. Not all of them, I take it?
A. Not all of them.
Q. Can you list which Santicizer products contain PCBs?
A. Not as I sit here, no.
Q. Did Monsanto have a line of products called Montars?
A. Yes.
Q. Did those contain PCBs?
A. Some of them.
Q. But not all of them, I take it?
A. Not all of them, no.
Q. Okay. Apart from the Aroclor line, the Santicizer line, and the Montar line, did Monsanto have any other PCB-containing products?
A. Yes.
Q. Were there particular brand names associated with them?
A. There were.
Q. What other Monsanto products contain PCBs?

A. Well, there was a -- a line of hydraulic fluids trade-named Pydraul, P-y-d-r-a-u-l, and a -- There was a line of heat transfer fluids trade-named Therminol, T-h-e-r-m-i-n-o-l, capital F, capital R, Therminol FR. It's FR, not RF.

And there were some other minor lines. There was a line of vacuum pamp (phonetic) -- pump fluids called Santovac. There may have been some other minor product -- Those are the major product lines that may have contained PCBs.

Q. We talked about the Aroclor line; some contain PCBs, some didn't.

A. (Witness nodded.)

Q. Was there ever an attempt to change the PCB-containing ones so that they no longer contained PCBs?

MS. RUTTER: Let me just object here to the record. I think you've -- You're straying from the 30(b)(6) deposition topics. I'm certainly going to allow you some leeway to question him in his individual capacity as opposed to as a company representative.

So you may answer the question, and you may need to have it read back.

THE WITNESS: I would appreciate that.

Thank you.

(Thereupon, the court reporter propounded the pending question.)

A. No. The Aroclor product line, the -- the portion of it that contained -- And let me -- Can I clarify an earlier answer? That there were -- All of the Aroclor product line probably contained PCBs, but some of -- In some of those products, they were only present at trace levels, 1 or 2 percent. The -- The primary line that contained PCBs was not changed because that was the line, the Aroclor. PCB containing PCBs was -- were PCBs, and there was no attempt to change it. They wouldn't have been Aroclors anymore.

Q. (By Mr. Hill) Now, the line of Aroclors has numbered designations. Is there a particular reason for those designations? What do they denote?

A. Well, the -- the reason was developed by Swann. They basically denote -- The -- The last two numbers denote the percentage of chlorine by weight in the particular Aroclor mixture. The first two numbers are numbers relating to the Aroclor processes that was designed by Swann. So they really -- Other than allow you to recognize which were PCB containing and which were nominally not PCB containing, they have no

specific significance other than to the -- the company.

Q. Let's use Aroclor 1254 as an example. What does "1254" denote?

A. It's a polychlorinated mixture of PCBs that is -- contains 54 percent chlorine by weight.

Q. You're starting to choke up. Do you want a drink quick?

A. It's -- It's -- No. It's not something that water's going to help. I'm sorry. I -- It's -- It's a frog in my throat for some reason.

Q. That's okay. I just wanted to make sure --

A. No.

MR. CAMPBELL: He's choking up because of the emotion of it.

THE WITNESS: That's right. I'm trying to clear it away, but it's not being very successful.

Q. (By Mr. Hill) Were any PCB-containing products sold as plasticizers?

A. Yes.

Q. Were there particular lines of PCB products -- I know we covered most of them before -- that were sold for plasticizer use?

A. My understanding is that it was the

Aroclor line that was sold for plasticizer use.

Q. Were there any particular --

A. Now, as I say that, Santicizers were -- I'm sorry.

Q. That's okay. Please finish your answer.

A. Santicizers were plasticizers, so there were some PCB-containing mixtures, trade name Santicizers that also would have been sold as plasticizers.

Q. And if I -- If you take a pause, I'll assume you're done; but if you're not, just let me know. I'm happy to let you finish your answer.

A. I was continuing after I thought I was done, so you did not jump in on inappropriately.

Q. Were there particular types of Aroclors, you know, the numbered designations, that were sold for plasticizer use?

A. Some of -- Some of the various products were sold for plasticizer use, yes. It was not a single product.

Q. Can you identify which ones?

A. Well, certainly 1254 and 1260. I believe 1262 also had -- may have had plasticizer applications. I'm not sure about the others.

Q. With the Santicizer line, were there

particular products that were sold for plasticizer use?

A. It would have been -- The PCBs in those products would have been the -- the ones I previously mentioned, as far as I know.

Q. Was there some crossover between the Aroclor and Santicizer line?

A. My understanding is the Aroclor line was PCBs. The Santicizer line would have been, to the extent they contained PCBs, would have been PCBs mixed with some other chemicals.

Q. When did Monsanto begin selling PCBs for plasticizers use?

A. I believe that was probably when they purchased the company in 1935. I think there was some plasticizer use at that point.

Q. I understand that at some point Monsanto terminated sales of PCBs, and we'll get to that for a little while. My question right now is pretty general.

From 1935 until the time it stopped selling PCBs, did it always sell PCBs for plasticizer use?

A. Well, no.

Q. Okay. When -- Why don't I clear up the foundation on this one.

A. Thank you.

Q. At any time did Monsanto stop selling PCBs?

A. Stop selling PCBs?

Q. Yes, just general.

A. Yes. There -- Yes. There is a time.

Q. When was that?

A. 1977.

Q. And at no time after that did it sell PCBs; is that correct?

A. That's correct.

Q. At any time prior to 1977, when it stopped selling PCBs for all purposes, did it ever stop selling PCBs for plasticizer use?

A. Yes.

Q. When was that?

A. 1970.

Q. Between 1935 and 1970, did it continuously sell PCBs for use in plasticizers?

A. As far as I know, yes.

Q. This is Exhibit No. 4.

(Thereupon, the court reporter marked Deposition Exhibit No. 4, for identification.)

Q. (By Mr. Hill) Just look through there.

A. Okay.

Q. For the record, Exhibit No. 4 is a document. At the top left-hand corner it says "Your guide to..." And then it says "TOP-QUALITY PLASTICIZERS."

Dr. Kaley, have you seen this document before?

A. I have.

Q. And can you describe what the document is?

A. Well, it's basically a document prepared for marketing purposes to summarize Monsanto's plasticizers line to potential customers.

Q. Do you know when this document was created?

A. I don't know specifically. There's a number on the back that would -- might be able to tell me if I could read it, but I can't read it. I note there's an 11/66 handwritten on the top of the document. I can make an assumption that that's when it was created, but I -- I really don't know that that's the fact.

Q. You said there was a number that you -- if you could read it, it would tell you. Where is that number?

A. It's at the very bottom of page 4615.

Q. In the lower left-hand corner?

A. Yes.

Q. Okay. As I mentioned before, some of the events in the documents we're looking at are very old, so we've endeavored to get the best copies we can, but unfortunately --

A. I know.

Q. -- some of the print may not be legible.

A. I understand.

Q. Did this document cover the entire plasticizer line that Monsanto was selling around this time?

A. I would -- I -- I -- I don't know for sure. I assume it did, but it looks fairly complete.

Q. If you'll look on -- again, I'll go by Bates numbers -- page 4614 --

A. Yes.

Q. -- that's a description of the Aroclor line that we were discussing before; is that correct?

A. Yes.

Q. And that included Aroclor 1254 and 1260?

A. Yes.

Q. You mentioned this was marketing materials. Who would Monsanto give this type of document to?

A. I don't know. I don't know

specifically. Potential customers would be my best answer or customers.

Q. And this was a document that was created by Monsanto Company?

A. Yes.

Q. And it was used as part of their sales operations?

A. Yes.

Q. Did Monsanto ever advertise its Aroclor line for use in caulks or other sealants?

A. I don't know.

MR. HILL: We'll mark Exhibit No. 5.

(Thereupon, the court reporter marked Deposition Exhibit No. 5, for identification.)

MS. RUTTER: And once again, Counsel, just let the record reflect that these questions are being directed to Dr. Kaley in his individual capacity rather than as a corporate representative for Pharmacia. Since these -- this is not one of the topics on the 30(b)(6) notice --

MR. HILL: Counsel, I believe this falls under sales.

THE WITNESS: I flipped through it.

MR. CAMPBELL: Well, give her a second. She's --

THE WITNESS: Oh, I'm sorry.

MR. HILL: She's looking.

MS. RUTTER: Right. What was -- What is the pending question?

MR. HILL: I don't have one. I was just asking him to take a look --

MS. RUTTER: All right.

MR. HILL: -- at the document real quick.

Q. (By Mr. Hill) For the record, Exhibit No. 5 is a document. Across the front it reads "THE aroclor COMPOUNDS," and it has a Bates number LEXOLDMON004616.

Dr. Kaley, have you seen this document before?

A. I have.

Q. Was this a document that was created by Monsanto?

A. Yes.

Q. And do you know what the purpose of this document was?

A. Like the other document, I think it's to provide customers or potential customers information about the Aroclor line of products. This is not specific to plasticizers. It's more general.

Q. Do you know about when this document was

created?

A. Again, using the handwritten information on the front, it looks to be 1960, early 1960s, but I -- but I don't see any other notification that would give me specific information other than the handwritten notes.

MR. CAMPBELL: It sounds like speculation to me. He started the deposition by asking you not to speculate.

MR. HILL: If he has an estimate, I'm happy to have his estimate.

Q. (By Mr. Hill) Do you have an estimate of when it was created or used?

A. Well, all I have is what I stated was what is on the front of the document. Specifically, I don't know when it was created or used.

Q. You do believe this was a Monsanto-created document, though, correct?

A. I do believe that, yes.

Q. Okay. If you look at the page that's numbered 4642 --

A. Yes.

Q. -- in the middle of that page there's a heading that says "MASTICS, SEALING AND CAULKING COMPOUNDS."

A. Yes.

Q. Does that indicate to you that Monsanto was advertising its plasticizer line for use in sealing and other calking compounds?

A. Well --

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

A. Well, when -- when you ask your question, my reading or my understanding of advertising was an ad in a magazine or something like that. So if -- if -- if -- if this fits your definition of advertising, they certainly were mentioning it in product bulletins.

Q. (By Mr. Hill) These product bulletins, the -- Let me ask it this way: Exhibit 5 would be an example of a product bulletin that went to customers?

A. Or potential customers, yes.

Q. Or potential customers. And when I use "advertising," just for future reference in the -- the deposition, I do mean it in the broadest sense. So that would include bulletins and other materials that Monsanto provided directly to its customers, not just magazine articles. When I use "advertising" or "marketing materials" in that sense during the rest of the deposition, will you understand it to mean that

broad definition?

A. I will.

Q. Okay. If I'm trying to qualify it to magazine articles or -- or -- sorry, magazine advertisements, I'll be specific. Is that fair?

A. That's fair.

Q. And apart from this marketing guide, do you know that Monsanto's customers were using the Aroclor line in caulking compounds?

MS. RUTTER: Object to the form of the question referring to this document as a "marketing guide."

A. I -- I don't know specifically, but certainly, it is mentioned in this document.

MR. HILL: We'll mark Exhibit No. 6.

(Thereupon, the court reporter marked Deposition Exhibit No. 6, for identification.)

MS. RUTTER: And once again, for the record, I object to this line of questioning as being outside the scope of the 30(b)(6) deposition topics. Dr. Kaley is welcome to answer any questions he feels able to answer in his individual capacity. Product bulletins is not one of the designated topics.

MR. HILL: And, again, I believe it falls under other categories such as sales, and

TOWOLDMON0007353

there's categories about documents produced and documents that Monsanto maintains in the regular course of business.

MS. RUTTER: Well, then we'll have to agree to disagree.

MR. HILL: That's fine. At this time, though, you're not instructing him not to answer the question; is that correct?

MS. RUTTER: No. But I'm objecting, for the record, that your questions have strayed far beyond the 30(b)(6) topics and that he is answering to the best of his ability in his individual capacity rather than on behalf of the company but go ahead.

Q. (By Mr. Hill) Exhibit No. 6 is a document. On the front it reads "AROCLOR PLASTICIZERS." At the bottom the Bates number is LEXOLDMON003559.

Dr. Kaley, have you seen this document before?

A. Yes, I have.

Q. Was it created by Monsanto?

A. Yes, it was.

Q. Do you know about when it was created?

A. On this one I have -- I am confident it was created in 1960.

Q. How can you tell that?

A. On the last page, page 3613, at the very bottom on the left-hand side is a -- a small designation with a "12/60," and I am aware that that is a publication date in Monsanto's system.

Q. What was the purpose of this document?

A. This would have been a document to -- Monsanto would use for customers or potential customers to describe the properties of their Aroclor plasticizers.

Q. If you look at page 3587 --

A. Yes.

Q. -- at the bottom of the page there's a heading. It says "POLYBUTENE."

A. Yes.

Q. Do you see that?

A. Yes.

Q. What is polybutene?

A. It's a -- It's a polymer that is made out of butene subunits. I can't be more specific. It's basically a plastic.

Q. Was it blended at times with the Aroclor plasticizers?

A. Apparently so, according to this document. I wouldn't have known that without reading that line.

Q. So you have no knowledge about that?

A. Correct.

Q. If you flip to the next page, at the very top it says: "Excellent sealing and caulking compounds are made with blends of AROCLOR compounds and polybutenes and inorganic fillers." (as read) Were you aware that the products were being mixed that way and used for that purpose?

MS. RUTTER: Objection to the form of the question; vague.

A. Again, I -- I -- I -- I can read that here. I would point out that throughout this section they're talking about Aroclor 5460, which is a polychlorinated terphenyl product, not a polychlorinated biphenyl product.

Q. (By Mr. Hill) What is the difference between the two?

A. Well, the -- the biphenyl structure has two benzene rings connected together, while the terphenyl product -- "ter," meaning three -- has three benzene rings connected together. So they are not PCBs. They are what we call PCTs.

MR. HILL: Okay. We've been going for about an hour. Do you want to take a quick break?

MR. CAMPBELL: Yeah. I -- I -- I think

that's fine, and I think it's appropriate to take a break when you reach the point where you have to make a determination as to what a PCB versus a PCT is.

MR. HILL: We're off the record.

THE VIDEOGRAPHER: We're going off the record at 9:02 a.m.

(Thereupon, a short break was taken.)

THE VIDEOGRAPHER: We're back on record at 9:18 a.m.

Q. (By Mr. Hill) Good morning, Dr. Kaley --

A. Good morning.

Q. -- again.

MR. HILL: I'd like to mark Exhibit No. 7.

(Thereupon, the court reporter marked Deposition Exhibit No. 7, for identification.)

THE WITNESS: Thank you.

Q. (By Mr. Hill) Please take a look -- look through there and let me know when you're ready.

For the record, Exhibit No. 7 is titled "AROCLOR PLASTICIZER WITHDRAWAL PLAN," and the Bates number on the first page is MONS 043545.

(Thereupon, a short colloquy was had between Ms. Rutter and the videographer, off the record.)

TOWOLDMON0007357

A. I've reviewed it.

Q. (By Mr. Hill) Have you had a chance to look through it?

A. Yes, I have.

Q. Do you recognize this document?

A. I don't believe I've seen this document, no.

Q. I'll limit my questions then on it. If you can flip to -- It's the third page of the document. The last two numbers of the Bates number are -47.

A. Yes.

Q. We talked about the Santicizer line before. You see a list of Santicizer numbers there.

A. Yes.

Q. Did all of those contain PCBs?

A. I would have to check to be sure. I -- I -- I don't know specifically whether they did or not. They -- They may -- They may have, but I don't really know as I sit here.

Q. Do you know if the Montar 5 product contained PCBs?

A. Yes, it did.

Q. You don't recall ever seeing this document before?

A. I don't. I -- I don't recall having seen it.

Q. Do you have any reason to doubt it's a document created by Monsanto?

MS. RUTTER: Objection; calls for speculation.

A. No.

Q. (By Mr. Hill) Do you know who W. S. Clark is?

A. I don't.

Q. Have you ever seen a type of document at Monsanto called a technical bulletin?

A. I don't -- That name doesn't ring a bell with me, but I may -- I may very well have. I mean, if you --

Q. I'll show you an --

A. -- have an example, I'll look at it.

Q. I'll show you an example. We'll mark it as Exhibit No. 8.

(Thereupon, the court reporter marked Deposition Exhibit No. 8, for identification.)

A. I flipped through this.

Q. (By Mr. Hill) Have you seen this particular document before?

A. Yes, I have.

Q. Okay.

A. Sorry.

Q. Were technical bulletins something that Monsanto used in its sales and marketing efforts?

A. Yes.

Q. And who would these technical -- technical bulletins be given to?

A. Well, customers or potential customers.

Q. Can you tell from this document when it was created?

A. I believe it's a April 1962 date on the front, which appears to be part of the original document.

Q. Were there any other -- other reasons that Monsanto published these technical bulletins?

A. Not that I'm aware of.

Q. Did Monsanto suggest particular formulations of products for its customers that used PCBs?

A. They may have suggested general formulations, but I don't -- not specific to a customer and his needs that I'm aware of.

Q. If you look at the "LEXOLDMON" document numbers at the bottom, page 4000 --

A. Okay.

Q. -- at the top it says "Joint-Sealant Compounds."

A. Yes.

Q. Do you see that?

A. Yes.

Q. Would this be a -- an example formulation of a joint sealant compound that was being suggested to Monsanto's customers?

A. Well, it's an -- it's an illustration. They use the term "illustration." So, as I said, I think they may have suggested general things; but to the specific customer, no specific formulation.

Q. Did you ever help develop any of these general -- general formulations?

A. No, I did not.

MR. HILL: I apologize. Can we take a break for one second? I lost my microphone.

MR. CAMPBELL: Not a problem.

THE VIDEOGRAPHER: You're fine.

MR. HILL: Is that okay? I'm back on?

THE VIDEOGRAPHER: Yeah. Just raise it up a little. There you go.

We're still on record.

Q. (By Mr. Hill) Did Monsanto have a separate sales division for plasticizers?

A. I believe they did, yes.

Q. Do you know where that division was located physically?

A. The headquarters would have been in St. Louis. I'm sure there were other sales offices.

MR. HILL: Mark Exhibit No. 9.

(Thereupon, the court reporter marked Deposition Exhibit No. 9, for identification.)

THE WITNESS: Thank you.

THE COURT REPORTER: You're welcome.

A. Okay. I've flipped through it.

Q. (By Mr. Hill) Have you seen this document before?

A. I've seen other documents titled "PLASTICIZER PATTER," but I -- I don't know whether I've seen this specific one.

Q. Were these plasticizer patter documents, documents that were created by Monsanto?

A. Yes.

Q. And they were used by its plasticizer sales department?

A. For internal use, yes.

Q. So these documents didn't go to customers?

A. That's -- That's correct.

Q. Okay. And they weren't sent to potential customers as a marketing tool where --

A. Not that I know of, no.

Q. Okay. Was there a particular use or reason for this type of document internally?

A. My understanding was it was just basically to share information that salesmen had on an individual basis with -- with other salesmen just so they, you know, could share potential uses for the particular product lines internally.

Q. Were they used to help develop other marketing materials or marketing pitches to potential clients?

MS. RUTTER: Objection; calls for speculation.

A. Yeah. I don't know how the salesmen would have used them specifically.

Q. (By Mr. Hill) Do you know when Monsanto established its plasticizer sales division?

A. I don't know. They -- Throughout the history, they've arranged and rearranged and things, so I don't -- I don't know specifically.

Q. Did Monsanto track the volume of PCBs sold for plasticizer use?

A. Certainly, in later years there is --

that information is available, yes.

Q. What do you mean by "later years"?

A. Well, this -- My understanding is, is that sales records basically only exist from 1957 on that would allow them to do that, so prior to that time I don't know.

MR. HILL: We're on Exhibit 10?

THE COURT REPORTER: (Nodded head)

(Thereupon, the court reporter marked Deposition Exhibit No. 10, for identification.)

A. I'm familiar with this document.

MR. CAMPBELL: You could wait for the question.

Q. (By Mr. Hill) That will -- That will save some time.

I take it you've seen this document before; is that correct?

A. I have.

Q. Okay. Do you know if it was created by Monsanto?

A. Yes, it was.

Q. Do you know when it was created?

A. Not specifically -- Oh, wait. Apparently 1980.

Q. Why was this document created?

A. It was basically a -- a -- a document to summarize Monsanto's understanding of the -- the PCB issues at that time and at that point in time.

Q. And what was it used for?

A. Basically was used to respond to inquiries to Monsanto Company about PCBs.

Q. Did you have any part in creating this document?

A. I did not.

Q. Using the LEXOLDMON Bates numbers at the bottom, can you flip to page 3347?

A. I'm there.

Q. And it's a chart. It's on two pages, and it appears to track -- to track the PCB manufacturing and sales figures for Monsanto. Do you see that?

A. Yes.

Q. Are these accurate figures for sales and manufacturing for the periods 1957 to 1977?

MS. RUTTER: Objection; lack of foundation.

A. I don't know. I assume so, but I'm not supposed to assume; so frankly, I don't know. I have no reason to believe they're not.

Q. (By Mr. Hill) That was my next

question. Do you have any reason to believe these are not accurate figures?

A. No.

Q. If you look partway down on the chart, it says "Plasticizer Applications"?

A. Yes.

Q. Is that a breakout of the sales for plasticizer use of PCBs?

A. Yes, it is.

Q. Did Monsanto track the volume of particular Aroclors that were sold for plasticizer use?

MR. CAMPBELL: Are you asking him with regard to that document? Because now he's thumbing through the --

MR. HILL: Yeah.

MR. CAMPBELL: -- document. You put the document away, so --

MR. HILL: I put the document away. I'm asking generally if it was tracked.

MR. CAMPBELL: Yeah. That's what I thought you were doing.

A. Yeah. And I'm looking here because it -- my understanding is if they had, it would be in here, and I don't see that information in here. So to

that extent, I don't know whether they did or not.

Q. (By Mr. Hill) Okay. So apart from this document, you're not aware of any other place that would track that sort of information?

A. That's correct.

MR. CAMPBELL: Can you -- Can you just go back to the original question in that like two-question series? I want to make sure I understand what specific information was requested with respect to tracking. So could you find that question and read it to me, please?

(Thereupon, the court reporter propounded the previous three questions and two answers.)

MR. CAMPBELL: Okay. That was the question.

MR. HILL: We're on 12?

THE COURT REPORTER: Eleven.

MR. HILL: Eleven. I'll mark Exhibit No. 11.

(Thereupon, the court reporter marked Deposition Exhibit No. 11, for identification.)

THE WITNESS: Thank you.

THE COURT REPORTER: You're welcome.

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.
Q. Is it a document created by Monsanto?
A. Yes, it is.
Q. Do you know about when it was created?
A. It would have been sometime in the fall of 1969.
Q. Using the bottom Bates numbers, I'd like you to flip to page 37000.
A. Okay.
MS. RUTTER: Which exhibit number is this, Lauren?
MR. HILL: Eleven.
MS. RUTTER: Eleven.
MR. CAMPBELL: And you referred him to three-seven, three zeros?
MR. HILL: Three-seven -- Yeah.
MR. CAMPBELL: Okay. Thanks.
Q. (By Mr. Hill) Now, this appears to break out PCB sales for plasticizer use for Aroclor 1254 and 1260. Do you see that?
A. Yes, I do.
Q. Are -- Are you aware of any other place where or document where Monsanto tried to break out the sales of particular Aroclors?
A. No, I'm not. I had forgotten this was

in here.

Q. Did the figures here in this table appear to be accurate?

A. I don't know.

Q. Are there any other records you're aware of that I could use to check to see if these figures are accurate?

A. Not that I'm aware of.

Q. If you flip to the page that's numbered 36997 --

A. I'm there.

Q. -- at the bottom of the printed part there's a section that says "OTHER PRODUCERS." Do you see that?

A. I do.

Q. And it lists Bayer and Prodelec and Caffaro. I'm having a little trouble with the last one on that line. Does that say Flick?

A. I believe so, yes.

Q. Kanegahuchi?

A. That's what it says, yeah.

Q. Okay. Do you know if any of those companies sold PCBs in the United States?

A. I don't know specifically.

Q. Do you have any knowledge or

understanding that they actually did?

A. I -- I -- I don't have any information.

Q. You can set that one aside. We're done with that.

Did Monsanto have plasticizer products that did not contain PCBs?

A. Yes.

Q. Do you know roughly the percentage of plasticizer products that contained PCBs versus plasticizer products that did not contain PCBs?

A. I don't have a specific number. My general understanding is that the PCBs were a minor component of that product line.

Q. What do you mean by "minor"?

A. Again, I can't be very quantitative about it. I don't know. I'd have -- I have no information.

Q. Would you estimate less than 10 percent?

MS. RUTTER: Objection; calls for speculation.

A. Yeah. I -- I -- I -- I -- I -- I hesitate to put a number out there. I really don't know.

Q. (By Mr. Hill) So the -- the majority of Monsanto's plasticizer line did not contain PCBs; is

that correct?

A. Correct. That's my understanding, yes.

Q. Can you give some examples of types of plasticizer products that did not contain PCBs?

A. Yes. Monsanto made phthalate esters. That's p-h-t-h-a-l-a-t-e. They made adipates, a-d-i-p-a-t-e-s. They made phosphate esters. All of those were plasticizers that did not contain PCBs.

Q. What was Monsanto's market share of PCB sales in the United States in 1950?

A. I don't know specifically.

Q. Are you aware of any other manufacturer that sold PCBs in the United States in 1950?

A. No.

Q. Throughout the 1950s did -- are you aware of any other PCB manufacturer that sold PCBs in the United States?

A. No.

Q. What about the 1960s?

A. Same answer.

Q. How about the 1970s? Are you aware of any other PCB manufacturer that sold PCBs in the United States?

A. Yes.

Q. What company is that?

A. That was a company in Texas called Geneva Industries.

Q. Do you know where in Texas they were located?

A. I don't.

Q. Do you know when they began selling PCBs in the United States?

A. Sometime in the early 1970s. That's all I know.

Q. Do you know the type of sales volume they had?

A. I don't.

Q. Other than Geneva, are you aware of any other company that sold PCBs in the United States?

A. Yeah. There's a -- There was a company called Raychem, R-a-y-c-h-e-m, I think. I think that's how you spell it. There was a company called Raychem. I believe the spelling is R-a-y-c-h-e-m.

Q. Do you know when they sold PCBs in the United States?

A. My understanding is the early 1970s.

Q. Do you know what type of sales volume they had for PCBs?

A. I do not. I'm sorry. I do not.

Q. Do you know for what types of

applications they sold PCBs for?

A. Not as I sit here, no.

Q. What about Genova (phonetic)? Do you know what types of applications they sold PCBs for?

A. Yes.

Q. What types?

A. Oh, it was basically as a casting -- casting wax for lost investment casting.

Q. Are you aware of any other types of uses Genova was selling PCBs for in the United States?

A. It's actually Geneva.

Q. Geneva.

A. And the answer is no.

Q. With Raychem do you know if they were selling PCBs for use as plasticizers?

A. I don't know.

Q. Do you have any information that would lead you to believe -- lead you to believe they were?

A. I -- I don't have any information.

MR. HILL: We're on 12?

THE COURT REPORTER: (Nodded head)

MR. HILL: Mark Exhibit No. 12.

(Thereupon, the court reporter marked Deposition Exhibit No. 12, for identification.)

Q. (By Mr. Hill) Have you had a chance to

TOWOLDMON0007373

look through the document?

A. I have.

Q. Have you seen this document before?

A. I've seen the last two pages, but other than that, no.

Q. It appears to be a Monsanto-created document. Have you seen other documents in this format before?

A. In the format?

Q. Yes.

A. Yes.

Q. Do you know if this was an internal memorandum?

A. Yes, it was.

Q. And it was a -- This was the general format for internal memoranda that Monsanto was using in the mid-1970s?

A. Yes.

Q. Do you have any reason to believe this document wasn't created by Monsanto?

A. No.

Q. Do you have any reason to believe it wasn't created around May of 1976?

A. No.

MR. HILL: Mark Exhibit No. 13.

(Thereupon, the court reporter marked Deposition Exhibit No. 13, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes.

Q. Is this a document that was created by Monsanto?

A. Yes.

Q. When was it created, approximately?

A. According to the date on the top -- Oh, when was it created? It looks to have been created in January of 1970.

Q. If you flip to the second page of the document, in the middle there are now -- throughout the page there are numbers --

A. Yes.

Q. -- that start each paragraph. I'm looking specifically at paragraph 4, the last sentence. It says: "Plasticizer sales come under" -- and then I'm having trouble with that -- "Beub" --

A. That's -- That's --

Q. Beeb (phonetic)?

A. -- as good as I could do.

Q. B-e-u-b.

A. Right.

Q. -- "and his department will be represented at the next meeting." Do you know who that's referring to?

A. No, I don't. It's not a name I've seen before.

Q. Did Monsanto meet with other PCB manufacturers to discuss PCB manufacturing and sales?

A. I don't know that they discussed manufacturing and sales. They did meet with other manufacturers.

Q. Do you have any understanding of what the purpose of the meeting referenced in this document was?

A. My understanding is it was to discuss with Bayer their positions on the presence of PCBs that was reported in the -- has been -- was being reported in -- in the environment.

Q. Do you know if Monsanto maintained reports of all of its meeting with other PCB manufacturers on environmental issues?

A. I don't know.

Q. We talked about Geneva and Raychem, and they were companies that were based in the United States; is that correct?

A. That's correct.

Q. At least that's your understanding?

A. That's correct.

Q. Are you aware of any non-U.S. companies that sold PCBs in the U.S. market at any time?

A. Not specifically.

Q. Can PCBs occur naturally?

A. Yes.

Q. Did Monsanto have any sales offices in Massachusetts?

A. I don't know specifically whether they did or not.

Q. Let's see if I can help you out with that.

MR. HILL: This will be Exhibit No. 14.

(Thereupon, the court reporter marked Deposition Exhibit No. 14, for identification.)

Q. (By Mr. Hill) Have you had a chance to flip through the document?

A. I have.

Q. Have you seen this document before?

A. Yes.

Q. Can you describe the document?

A. It's basically a -- an example of a letter that was sent by the plasticizer director of sales to customers announcing that Monsanto was going

to discontinue the sale of PCB-containing products for plasticizers effective August 30, 1970.

Q. Is August 1970 roughly the date on which Monsanto discontinued sales of PCBs for plasticizer use?

A. With one exception, that's my understanding, yes.

Q. What was the exception?

A. The use of PCBs as a encapsulant on carbonless copy paper.

Q. If you look on, I believe it's, the third page of the document you have, at the bottom the Bates number is MCL215.

A. Yes.

Q. It references an Everett office in Boston, Massachusetts. Do you see that?

A. That's a plant. It's not an office. I see Everett Plant.

Q. Plant. So the plant would be a production facility?

A. Yes.

Q. Is that correct?

A. Yes.

Q. Were there any -- At -- At the top it says "MONSANTO COMPANY REGIONAL SALES OFFICES." Was

there also a sales office in Boston?

A. Judging by that title, it would appear to be so, but I don't really know.

Q. So you have no specific recollection or knowledge of whether there was a Boston sales office?

A. No.

Q. If you flip to the very next page, 216, the document talks about replacement suggestions for certain Aroclors. Do you see that?

A. I do.

Q. Did Monsanto make recommendations of products that it could use -- that its customers could use to replace the Aroclor line that they had previously been purchasing?

A. Yes.

Q. Do you know when the Everett facility was opened?

A. I don't.

Q. Do you know if it was closed prior to the time that Monsanto discontinued sales of PCBs?

A. I believe it was closed after that time. My recollection is it was closed after that time.

Q. Were PCB products sold to customers located in Massachusetts?

A. I don't know specifically.

(Thereupon, the court reporter marked Deposition Exhibit No. 15, for identification.)

Q. (By Mr. Hill) Exhibit 15. Have you had a chance to flip through the document?

A. Yes, I have.

Q. Have you seen this document before?

A. I've certainly seen the front matter up to starting with page 415. I -- I may have seen the list of addressees to the letter, but I don't recall whether specifically I've seen that or not. I've certainly seen the front matter.

Q. Can you describe at least the front document for the record?

A. Yes. This is a follow-up to the letter that we -- to Exhibit 14 where Monsanto is re-emphasizing to their plasticizer customers that they are withdrawing from the business and giving them information about certain findings that have been reported in the literature and some regulatory activities.

Q. If you look on page -- It's Bates-numbered MCL414. It's about halfway through the document I handed you.

A. Yes.

Q. Do you see that?

A. Yes.

Q. And again there's a reference to a -- to district sales offices, all divisions?

A. Yes.

Q. Do you see that?

A. I do.

Q. And then it lists a number of addresses. There's a left-hand and a right-hand column. If you look in the left-hand column about a quarter of the way down, do you see a Boston, Massachusetts, address?

A. I do.

Q. And it says "Everett Station"?

A. Yes.

Q. Do you have any reason to doubt that the Everett Station facility was being used as a district sales office?

A. No.

MS. RUTTER: Objection; calls for speculation.

A. No.

Q. (By Mr. Hill) And you mentioned the second part of the document, and I think you're referring to what starts on -- on Bates number 415; is that correct?

A. Yes.

Q. There's a list of addressees?

A. Yes.

Q. Do you have any understanding of what that is?

A. My understanding is that this is a list of all the -- the parties to whom the front matter -- the cover letter and the bulletin were sent.

Q. If you can flip to page 421, and there are numbers on the left-hand column. If you look at No. 73, it says Dennison Manufacturing Company and then it lists an address of Framingham, Massachusetts. Was that one of Monsanto's PCB customers?

A. Based on my understanding of the letter, that would be true, yes -- Or the -- My understanding of this document, that would be true, yes.

Q. And if you look at page 433, No. 206 is Silibond Products Inc. Do you see that?

A. Yes.

Q. Was that -- And the address listed as Arlington, Massachusetts. Was that one of Monsanto's PCB customers?

A. It was certainly one of Monsanto's plasticizer customers. I don't -- I don't know whether this -- I frankly don't know whether this letter only went to people that were using PCBs or

whether it went to all plasticizers.

Q. Okay. So your understanding of this list would be plasticizer customers generally, not necessarily customers who were utilizing PCB plasticizers; is that correct?

A. I don't know that one way or the other.

Q. Okay. But your understanding is that this list of companies were all Monsanto customers; is that correct?

A. Yes.

Q. Okay. Exhibit No. 16.

(Thereupon, the court reporter marked Deposition Exhibit No. 16, for identification.)

Q. (By Mr. Hill) Have you had a chance to flip through the document?

A. I have flipped through it, yes.

Q. Have you seen it before?

A. I'm not sure. I think I have.

Q. Can you describe what the document appears to be, for the record?

A. Yes. It's basically a -- The cover is a cover letter to plasticizer customers basically describing that the -- the plasticizers that would be available after the withdrawal of PCBs from the plasticizer market in 1970.

Q. And the format of the document is similar to the Monsanto letters we looked at just a moment ago --

A. Yes.

Q. -- is that correct?

A. That's correct. Sorry.

Q. Do you have any reason to doubt this is -- this was a document created by Monsanto?

A. No.

Q. If you look at the subject line on the first page it says "Aroclor Plasticizers - A new series." After 1970 did Monsanto sell any products under the Aroclor brand?

A. Yes.

Q. Did those Aroclor products sold after 1970 contain PCBs?

A. Some of them did. May I explain?

Q. Sure, please.

A. All right. In this time frame -- Okay. We -- We talked about earlier about the polychlorinated terphenyls.

Q. Yes.

A. Okay. And -- And those -- those products it describes on page, I'm sorry, LEXOLDMON000958 that those products were chlorinated

terphenyls. So they were still Aroclors, but they weren't PCBs other than a small percentage of PCB contaminant.

The 6000 series was a blend of those polychlorinated terphenyls with Aroclor 1221, which was a -- is monochlorobiphenyl. It's -- It's biphenyl with only had one chlorine on it, and it's very biodegradable. It had not even been reported in the environment. So Monsanto at the time -- The understanding was that, because it was biodegradable and because it was not being found in the environment, it would be acceptable to continue -- continue marketing products with that Aroclor in it.

So thank you for allowing me to expound.

Q. If you look at the later part of the document beginning with -- I'm going to use the LEXOLDMON Bates number. It's page 996.

A. I'm there.

Q. It appears to be a customer list. So your understanding is this is the -- the same type of list that we saw with the last letter. It's the list of customers that the letter was sent to?

A. That's my understanding, yes.

Q. Can you tell if the list attached to that letter that we just looked at, Exhibit 16, is a

complete list of Monsanto's plasticizer customers at that time?

A. It was intended to be. I -- I -- I couldn't verify whether it was or not.

MR. HILL: Exhibit No. 17.

(Thereupon, the court reporter marked Deposition Exhibit No. 17, for identification.)

Q. (By Mr. Hill) Have you had the chance to flip through the document?

A. I have.

Q. Have you seen this document before?

A. I have.

Q. What's a call report? What were those types of documents used for at Monsanto?

A. It's basically a -- a report by a salesman back to, presumably, his supervisor.

Q. And if you flip to the second page, at the top it says "W. R. Grace Company." Do you know who W.R. Grace Company was?

A. It was a -- To my knowledge, it was a chemical company. It says "CONSTRUCTION PRODUCTS" here, but it was a -- it was a chemical company.

Q. They were a customer of Monsanto's, weren't they?

A. Yes.

Q. If you look at this document, it appears to be a call report that was -- The date of the call was June 18, 1970; is that correct?

A. That's correct.

Q. And at least at the upper right-hand corner, it purports to have been typed on June 23, 1970; isn't that correct?

A. That's what the document represents, yes.

Q. Is this a document that was created by Monsanto?

A. Yes.

Q. Now, if you look at about halfway down the document, there's a header called "PURPOSE OF CALL."

A. I see that.

Q. And there's numbers 1 and 2. Number 1 says: "Force customer into quick decision on stock up order for Aroclor 1200 series." Do you see that?

A. I do.

Q. Was there a push by the sales department in the summer of 1970 to have Monsanto customers stock up on PCB-containing products?

MS. RUTTER: Objection; calls for speculation.

A. I'm -- I was not aware -- Or I am not aware of such a -- a -- a -- an order or decision, although, apparently, this salesman was undertaking it for some reason.

Q. In the upper header of the document, if you see, there's a section that says "SERVICE CENTER," and it says "Everett." Do you see that?

A. I do.

Q. Based on the format of this document, would that indicate the sales office that was placing the call?

A. That would be my understanding, yes.

Q. Back under the heading PURPOSE OF CALL, No. 2 says: "Suggest replacements for Aroclor 1248 through 1260 for polysulfide sealant." Do you see that?

A. I do.

Q. Did Monsanto have other plasticizers or other chemicals available that a customer could use to replace those Aroclors in its -- in its product line?

A. At this particular time, I don't -- I mean, it says "suggest replacements." I think at this time Monsanto was actively researching replacements for -- for plasticizers for various applications. Whether they actually had something at this time, I'm

not aware, don't know.

Q. And if you look at partway through the document, there's a header that says "CUSTOMER REACTION." Do you see that?

A. Yes.

Q. And about halfway through that paragraph it says "Total consumption of Aroclor 1200."

A. Yes.

Q. Do you see that?

A. I do.

Q. Was there an Aroclor 1200, or is that a reference to the series?

A. Based on the first sentence you read, it talks about the Aroclor 1200 series, so it appears to be a reference to the series. There was no Aroclor 1200.

Q. Now, if you read the whole sentence it says -- it says: "Total consumption of Aroclor 1200 by the W.R. Grace Construction Products Division was in the neighborhood of 200 to 250,000 pounds for 1969." (as read) Did Monsanto track individual customers' product purchase volumes?

A. The only thing I can say is that, with regard to this document and this company, they apparently had some information -- general

information on the volume.

Q. Do you know where that information would have been maintained or what documents would be available in order to verify a particular customer's purchase history?

A. I don't -- I don't have that.

MR. CAMPBELL: You mean available now?

MR. HILL: Available at any time.

MR. CAMPBELL: Including historically?

MR. HILL: Yes.

A. I -- I don't know.

MR. HILL: Can we go off the record for one second?

THE VIDEOGRAPHER: We're going off the record at 10:08 a.m.

(Thereupon, a short colloquy was had between counsel, and at which time the court reporter marked Deposition Exhibit No. 18, for identification.)

THE VIDEOGRAPHER: We're back on the record at 10:09 a.m.

Q. (By Mr. Hill) We went off the record temporarily to take care of a little exhibit problem. You have Exhibit 17 before you yet --

A. Yes, I do.

Q. -- in front of you?

And we've marked as Exhibit 18 a one-page document with Bates number LEXOLDMON006720. You have that in front of you too, Dr. Kaley?

A. I do.

Q. Okay. Have you seen this document before?

A. Yes, I have.

Q. And, again, it's another call report?

A. Yes.

Q. And at the bottom -- About halfway down the page, it has a results heading. Do you see that?

A. Yes.

Q. And it says: "Grace purchased 200,000 pounds of Aroclor 1254 in August." (as read) Do you see that?

A. Yes.

Q. Do you have any reason to doubt that sale was actually made?

A. I have no reason to doubt that.

Q. Are there any documents either historical or currently maintained that you're aware of that we could use to verify that type of a purchase?

A. I'm not aware of any other documents, no.

Q. Are you aware of a company called DAP Inc., D-A-P?

A. Yes.

Q. Do you know if they were a Monsanto customer?

A. I believe they were, yes.

Q. Did they purchase any PCB products from Monsanto?

A. I believe their name is on some of those plasticizer letter lists, so I -- They certainly purchased plasticizers.

Q. Do you know where they were located?

A. I don't.

Q. Do you know if they had operations in Massachusetts?

A. I don't know.

Q. Was there a particular reason that Monsanto discontinued sales of PCBs for plasticizer use?

A. Yes.

Q. What was that reason --

A. That --

Q. -- or reasons?

A. Well, PCBs have been detected in the environment in the mid- to late 1960s, and increasing

information suggested that what later came to be called open uses of PCBs should be curtailed, so Monsanto curtailed sales for those open uses.

Q. We talked specifically about plasticizers. Were -- After 1970 did Monsanto sell PCBs for use in other open system applications?

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

But you may answer.

A. All right. I guess at that point then we have to talk about what you mean by "open."

Q. (By Mr. Hill) You brought up the term, so I'll ask you for what your definition of "open system applications" is.

A. All right. Well -- Okay. As I mentioned -- Well, my definition would be materials that were not used in some sort of enclosure, like a transformer or capacitor where they were sealed inside a -- a box or something, like, similar to that. And plasticizers would fall into that category. So with that in mind, I mentioned that there --

Q. I'll -- I'll just ask a new question at this point --

A. Okay.

Q. -- but I appreciate you getting us on

the same page as to --

A. Okay.

Q. -- what system open applications are.

MR. CAMPBELL: You should at least ask whether his answer was complete, because it sounded like he was in mid-sentence when you stepped on his thought.

Q. (By Mr. Hill) I'm just going to re-ask the question I asked before, and that is: At what time did Monsanto terminate sales of PCBs for use in open system applications?

A. Oh, all right. So with regard to plasticizers, 1970, with the exception I mentioned earlier.

Q. That was --

A. That was the --

Q. Just to clarify: That was carbonless copy paper?

A. Carbonless copy paper, yes, for about another six months to a year, I believe. Hydraulic fluid sales were stopped in 1971. Those are somewhere in between open and closed uses, and that they are contained in -- generally in cylinders; but by the very nature of hydraulic systems, there's some leakage, so most people would call those an open use.

That -- Those sales were stopped in 1971, I said.

Heat transfer systems I would consider to be a closed system. Monsanto stopped -- But, again, there were reports of leaks. Monsanto stopped sales of what we'll call the Therminol heat transfer fluids in 1970 for food applications where there was a possible contact with food or feed, and they stopped sales totally of those in 1972.

Q. And termination of those types of sales, all of those were voluntary terminations by Monsanto; is that correct?

A. That's correct.

Q. Was Monsanto aware of any customers stockpiling the PCB products in 1970 for use in later years?

A. Well, we looked at Exhibit 18, and it says something to that effect; so, apparently, somebody with Monsanto was, yes.

Q. Do you know what an MSDS is?

A. Yes.

Q. Can you describe what that is?

A. It's basically a document that describes the -- There's, I don't know, a dozen sections. They describe the -- the product identity, toxicology information, regulatory information, shipping

information. It's basically a sheet that is created, basically, so that people using a product are aware of all the issues around that particular product.

Q. Is MSDS an acronym for something?

A. It is.

Q. What's the acronym for?

A. Material Safety Data Sheet.

Q. Did Monsanto create MSDSs for its Aroclor line?

A. Yes.

Q. Did it provide those to customers?

A. Yes.

Q. Did those have specific warnings about product use and potential problems with product on them?

A. It, as I mentioned, it had toxicology information, safe handling information, yes.

Q. Apart from the MSDS sheets, did Monsanto provide other warnings to its customers about toxicology issues associated with the Aroclor line?

A. Yes. There was toxicology information in all of the product bulletins or at least most of them and safe handling, appropriate use considerations, how to use the product safely.

Q. You mentioned the product bulletins. Those were documents that were disseminated to customers?

A. Yes.

Q. Did those come directly with the product to the customer?

A. I don't know. I mean, it --

Q. Can you generally describe the types of toxicology warnings that were included in the product bulletins?

A. Well, the -- I would say the toxicology information wasn't warnings, per se. It was information so that knowledgeable people in the companies could make their own decisions, but it was results of animal tests and in some cases results of the human experience; but there was also a safe handling section, which was a warning which alerted the customers to under conditions which where special precautions should be taken to protect the workers or the users.

And I would add that there were labels attached to all of our products -- Aroclor products which also contained safe handling information. So those were attached to -- to the products as they were sold.

Q. You mentioned there were safe handling

warnings for users; is that correct?

A. Yes.

Q. I don't want to misstate what you said.

A. Well, customers that were using the -- the product as -- The state that it was shipped to from Monsanto, yes.

Q. And those were directed to Monsanto's customers, not necessarily the end user of a product; is that correct?

A. That would be my understanding, yes.

Q. We mentioned the MSDSs. We mentioned the product bulletins. Are there any other ways in which Monsanto disseminated warnings or information of toxicology to its customers?

A. I believe that there are -- there are customer letters where customers had inquires, and -- and Monsanto responded to those inquires. I believe I've seen call reports where those kinds of issues were discussed in a salesmen call. So, you know, that -- Those -- Those were other examples I would think of.

MR. HILL: We're about through another hour. I'm going to move to another topic, so if you want to take a break --

MR. CAMPBELL: Sure, yeah. It's a good

pattern to follow.

THE VIDEOGRAPHER: We're going off the record at 10:19 a.m.

(Thereupon, a short break was taken.)

THE VIDEOGRAPHER: We're back on the record at 10:39 a.m.

Q. (By Mr. Hill) Before we broke, Dr. Kaley, we were talking about some of the warnings or information that Monsanto provided to its customers about potential toxicological effects of PCBs. Do you recall that?

A. I do.

Q. Okay. You had mentioned information about animal tests, and I -- I don't remember if you said human tests. I don't want to mischaracterize what you said before.

Did -- Did you say that information was given to customers about human tests or studies?

A. Human information, not tests.

Q. Human information. Specifically with the animal studies or tests, what information was provided to customers?

A. Well, depending on the document, it -- it would have discussed the various kinds of tests that were performed on -- on PCBs, whether they

were, you know, short-term tests of, you know, acute effects or long-term tests of studies. I mean, it's -- Without seeing a particular document, it's hard to say what was in each one, but it was just general toxicological information.

Q. Did Monsanto conduct any of its own tests or studies on the toxicological effects of PCBs on animals?

A. Monsanto sponsored studies at outside organizations, but they didn't do any of their own actual animal testing.

Q. What studies did it sponsor?

A. Well, the ones that come to mind are a study done in the 1930s at Harvard. There was also a study -- some studies done in the 19 -- early 1950s at the Kettering Institute in Cincinnati. There was a study done in the 1970s at a company called Bionetics.

Q. Can you spell Bionetics?

A. B-i-o-n-e-t-i-c-s, I believe. And then there were numerous, numerous tests done in testing labs in St. Louis. Scientific Associates was the name of one of the labs. The other ones, it will come to me, but right now it's escaping my recall.

Q. The studies conducted by Scientific

Associates, were those sponsored by Monsanto?

A. Yes.

Q. When were those conducted?

A. Basically, I think starting in the '50s and basically throughout the '60s and probably slowed down by the early 1970s. It may have stopped but certainly during the '50s and '60s largely.

Q. Did Monsanto conduct itself any studies or tests about the toxicological effect of PCBs on humans?

A. There was one study done in the late 1940s, which was a skin patch test where PCBs were put on a, I believe, on a piece of gauze and -- and attached to -- to people's skin to see what the effects might be on -- on the skin.

Q. Do you know what the results of that test were or study?

A. With a minor exception, they were largely negative. There was no effect. I believe there was one person that had showed some sort of a rash, and then on retest that same person didn't show a rash but -- So it wasn't completely negative, but they were generally negative.

Q. Did Monsanto warn its customers in these product bulletins about any potential adverse

toxicological effects from PCBs on humans?

A. I would -- I would have to review them to see what the -- I hate to say. I'm not going to -- I can't say without reviewing the document --

Q. Do you know if --

A. -- or a document.

Q. Do --

MS. RUTTER: Can you repeat the question? I just want to make sure I heard it correctly.

THE COURT REPORTER: Sure.

(Thereupon, the court reporter propounded the previous question.)

MS. RUTTER: Okay. Thanks.

A. Having heard that, can I modify my answer?

Q. (By Mr. Hill) Yes, please.

A. I believe they did. I believe they talked about the possibility of -- of skin eruptions in their warnings to their customers in the product bulletins and -- and certainly in the MSDS.

Q. What are skin eruptions?

A. Well, rashes.

Q. Okay.

MR. CAMPBELL: God, you don't remember

when you were 14?

A. It's basically -- It's an irruption, not an eruption.

Q. (By Mr. Hill) Irruption.

A. I-r-r-u-p-t-i-o-n.

MR. HILL: I misheard that.

MR. CAMPBELL: Withdraw the comment.

MR. HILL: That was my problem.

We'll mark this as Exhibit 19.

(Thereupon, the court reporter marked Deposition Exhibit No. 19, for identification.)

A. Okay.

Q. (By Mr. Hill) You've had a chance to flip through the document?

A. I have.

Q. Have you seen this document before?

A. I've -- I don't recall seeing the first page. I have seen the second page.

Q. At least as far as the second page is concerned, is that a document that was created by Monsanto?

A. No.

Q. Okay. That was an article that was -- Let me strike that and start over. That was -- I told you I'd ask some inartful questions at times, and

there was one of them.

What is the second page of the document?

A. The second page of the document is a, basically, a comment on a -- on another article that had been published, that this letter itself was published in a -- a -- a journal or a magazine called The Chemist Analyst from the J.T. Baker Chemical Company.

Q. Is -- Does this article in any way reference the studies we were talking about before that Monsanto sponsored?

A. No.

MR. HILL: This will be Exhibit No. 20.

(Thereupon, the court reporter marked Deposition Exhibit No. 20, for identification.)

A. Sorry.

Q. (By Mr. Hill) That's okay.

A. I was napping. No, I wasn't.

Q. No. That's okay. I want to make sure you've had a chance to look at these documents --

A. Sure.

Q. -- before I ask you about them.

A. I appreciate that.

Q. Have you seen this document before?

A. Yes, I have.

Q. Is this a document that was created by Monsanto?

MS. RUTTER: Objection to form. In relation to which Monsanto entity?

I'll just be clear. It says -- states Ruabon at the bottom. Dr. Kaley may know who actually employed E. Mather. I -- I do not know. I'm not purporting to speak. I just thought when you say --

MR. HILL: Okay.

MS. RUTTER: -- was it created by Monsanto, I think that's vague and ambiguous.

A. I'm sorry. Go ahead with your question.

Q. (By Mr. Hill) Do you know if this was a document created by Monsanto?

A. That's my understanding, yes.

Q. Do you know who E. Mather was or is?

A. Not -- Not specifically, no.

Q. Do you know who Mr. P. J. C. Haywood is?

A. No. I do not know that.

Q. In the second paragraph, it talks about a history of skin troubles and liver troubles, including some fatal cases attributable to heavy exposure to chlorinated diphenyls. I have a couple questions about that. I just wanted to draw your attention to that.

What is a diphenyl?

A. It's the same as a biphenyl.

Q. So it'd essentially be --

A. It's the old -- It's the --

Q. -- a PCB?

A. I'm sorry. It's the old -- Earlier, they were called chlorinated diphenyls. At some point in time, it became chlorinated biphenyls.

Q. And this document makes reference to liver troubles. Are liver troubles associated with exposure to PCB an area that Monsanto either conducted testing or studies on or sponsored testing or studies on?

A. I'm sorry. I was anticipating your question. It didn't come out the way I anticipated, so could you repeat that question, please?

Q. I can. At any time did Monsanto sponsor studies to look into potential liver troubles caused by exposure to PCBs?

A. Not in humans.

Q. The date on the document appears to be December 17, 1951. Do you have any reason to believe this document wasn't created around that time?

A. No.

MR. HILL: Mark this as Exhibit No. 21.

TOWOLDMON0007406

(Thereupon, the court reporter marked Deposition Exhibit No. 21, for identification.)

Q. (By Mr. Hill) Have you had a chance to look through the document?

A. I've looked through it briefly. Depending on your questions, I may want to look at it more --

Q. Have you seen this document before?

A. No, I have not.

Q. Do you know if it's a document that was created by Monsanto?

A. I don't know for sure -- Well, I do. Assuming the author on the last page, Mr. Benignus, is actually the author, I -- I know he worked for Monsanto.

Q. Who was P. G. Benignus?

A. He was a -- a product specialist primarily in -- for electrical fluids, PCB electrical fluids.

Q. Do you know what his job function was with Monsanto?

A. Not specifically other than to -- I mean, I know he was very knowledgeable about PCBs as electrical fluids and interacted with customers and users. So other than that, I don't know specifically

what his title or role was.

Q. Looking at the first page, it's addressed to Mr. T. K. Smith, Jr. Do you know who that is?

A. I do not.

Q. Looking at the second page of the document, the Bates number at the bottom is MONS 094552. The second paragraph -- In the second half that paragraph, there's a sentence that begins "While." I'm going to ask you --

A. Yes.

Q. I'm going to ask you a couple questions about that.

A. All right.

Q. So if you want to go ahead and read that and the area around it, please do.

A. Thank you.

I've read that paragraph.

Q. This -- You read the entire paragraph?

A. Yes, I did.

Q. Okay. Good. I just wanted to make sure you're able to put this into context.

So there's some discussion here about the "toxicity hazard of Aroclor's fumes is well established." Do you understand what

the author was talking about there?

A. Yes. He was talking about animal tests.

Q. And there's also a mention that it should thoroughly "be thoroughly understood by all." Was it common knowledge at the time that there were toxicological effects on at least animals --

A. From --

Q. -- from PCB exposure?

A. From fumes, yes. From fumes at elevated temperature, which is what this is talking about. The whole paragraph is talking about the use at elevated temperatures and the fumes that are released at elevated temperatures.

Q. It mentions elevated temperatures. Do you have any understanding of what temperature PCBs would have to reach to create those toxic fumes?

A. Hundreds of degrees.

Q. Could there be toxicological effects from the fumes at lower temperatures?

MS. RUTTER: Objection to the form.

A. Without knowing the specific temperature and -- and what toxicological effects, I'd -- I'd hesitate to answer that question.

Q. (By Mr. Hill) Do you have an understanding of what the term off-gassing means?

A. Yes.

Q. Can you describe your understanding of that?

A. It's basically usually used with materials of very low volatility to describe the -- the release of small amounts of those materials into the air from use of that material or an application of that material.

Q. Do PCBs off-gas from plasticizers?

A. At very, very, very small amounts, yes.

Q. Would they off-gas more at higher temperatures?

MS. RUTTER: Objection to form.

A. The general answer to that is yes, but even at -- Again, what -- what do you mean by "higher temperatures"? At room temperature or -- or atmospheric temperatures, hardly at all; but once you start actually applying heat to them in a -- a heat transfer system or some other application, then, yeah, it increases, sure.

MR. HILL: This will be Exhibit No. 22.

(Thereupon, the court reporter marked Deposition Exhibit No. 22, for identification.)

THE WITNESS: Thank you.

THE COURT REPORTER: You're welcome.

TOWOLDMON0007410

Q. (By Mr. Hill) You've had a chance to look at the document?

A. I have.

Q. Have you seen this document before?

A. Yes, I have.

Q. Is this a document that was created by Monsanto?

A. It appears to be. Certainly, Elmer Wheeler worked for Monsanto, yes.

Q. Can you tell from the document about when it was created?

A. Well, it's dated September 1, 1953, so I'm assuming that's correct.

Q. Do you know who Elmer Wheeler is?

A. Yes.

Q. Who was he?

A. He was a -- a -- in the medical department at Monsanto.

Q. Do you know what his job function or job role was?

A. Well, it varied over time, but -- but generally, he was considered our first industrial hygienist.

Q. Do you know what his job responsibilities entailed generally?

A. Generally understanding the -- the proper ways and proper -- Understanding the toxicology and potential effects of all the chemicals that Monsanto made, making sure our workers were protected, making sure our -- our customers' workers were protected no matter what the chemical.

Q. If you read the first sentence of the second paragraph, it begins "As I am sure you know," and it --

A. (Inaudible) Okay. I'm sorry.

Q. -- and it reads in full: "As I am sure you know, Aroclors cannot be considered nontoxic." Do you see that?

A. I do.

Q. At any time did Monsanto believe that PCBs were nontoxic?

MS. RUTTER: Objection to form of the question.

A. Well, I mean, every chemical's toxic under some circumstance, so I -- I don't think Monsanto ever believed that PCBs were nontoxic under a particular set of circumstances.

Q. (By Mr. Hill) We talked about skin rashes, and at least one of the documents mentioned potential liver problems stemming from human exposure

to PCBs. Are you aware of any other potential human effects caused by PCBs, toxicological effects?

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

A. Not by PCBs directly, no. Well, I say -- I think there are -- I think there's a report in the literature about if -- if you get the fumes in your eyes, you have eye irritation. So there's some ocular effects, but they're very rarely reported.

Q. (By Mr. Hill) Did Monsanto ever warn its customers about the potential liver effects caused by exposure to PCBs?

A. In letters and things they have, the -- the -- the information on that -- the document that we talked about earlier -- I believe, No. 20 is -- comes out of a very confused literature in the 1930s and '40s that fails to well discriminate between PCBs, polychlorinated biphenyls, and polychlorinated n-a-p-h-t-h-a-l-e-n-e-s -- -l-e-n-e-s.

So, you know, sitting here 40 or 50 years after that letter was written, I -- I don't know that it's ever been demonstrated that PCBs have liver effects -- serious liver effects anyway. They do affect liver enzymes to some effect, and Monsanto has warned and addressed that issue, elevated liver enzymes. Much

like if you have a couple beers, your liver enzymes go up; but other than that, I'm not aware that -- that -- that serious liver effects have been definitively attributed to PCBs.

So I don't know that -- I mean, Monsanto has mentioned that in letters. I don't recall whether it's mentioned in any of the bulletins or not. It may be.

Q. As far as the liver enzyme products -- or problems, what steps did Monsanto take to warn its customers about those?

A. Well, basically, if -- if you follow the -- the instructions of use, not to use at elevated temperatures without adequate ventilation, those don't occur. Those effects only occur at those elevated temperatures and exposure to the fumes. So if -- if the -- if the warnings are -- Or if the use is followed, then that's the warning that was given. Don't use them under those conditions.

Q. We talked about a 1930s study that was done by Harvard --

A. Yes.

Q. -- that Monsanto sponsored?

A. Monsanto sponsored part of the work that was done at Harvard. It wasn't the whole study. They

didn't sponsor the whole study.

Q. Can you describe generally what that study entailed?

A. It entailed studying the toxicity of polychlorinated biphenyls, polychlorinated naphthalenes, and mixtures of those to lab animals. I believe they were rats. There may have been some other animals involved also.

Q. And you talked about the 1950s studies that were done by Kettering?

A. Yes.

Q. Were there multiple studies done?

A. By Kettering?

Q. Yes.

A. Yes.

Q. Do you know about how many? And, again, I --

A. I can think of -- of -- My recollection is about three.

Q. Can you generally describe what those studies did?

A. Sure. They were basically studies of the toxicity or the toxicology of PCBs and a -- a PCB-containing product to a variety of animals by inhalation, and -- and those studies were actually

used to develop the standards used by the U.S. Government today to limit worker exposures to PCBs in air.

Q. And you talked about 1970s studies done by Bionetics. Were there -- Was that one study or multiple studies?

A. It was one study.

Q. And what did that study entail?

A. It studied -- It studies the reproductive effects of PCBs in rhesus monkeys.

Q. Do you know what its findings were?

A. There were some. It -- It did find that in high doses that rhesus monkeys were sensitive to the effects of PCBs in reproduction.

Q. You mentioned some studies conducted in the '50s and '60s by Scientific Associates.

A. Right.

Q. Do you recall that testimony?

A. Yes.

Q. And do you know about how many studies were done?

A. Hundreds.

Q. Hundreds. Okay. Generally, what were the -- What were those studies? What did those studies entail?

A. Those studies generally entailed testing animals, probably mostly rats and mice, at high doses to determine what's termed acute toxicity. If you get a lot of the material over a short period of time, what is the potential toxicity associated with it?

Q. To your knowledge, was there anything else that those studies looked at, or was it mainly aimed at acute toxicity?

A. There may have been some, you know, longer studies done, but I don't -- I don't recall specifically. Most of them were acute toxicity studies.

MR. HILL: Mark Exhibit 23.

(Thereupon, the court reporter marked Deposition Exhibit No. 23, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.

Q. Is it a document that was created by Monsanto?

A. That would be my understanding, yes.

Q. Do you know who G. Robert Sido was?

A. Yes.

Q. Who was he?

A. He was, basically, at the time the

person in charge of labeling at Monsanto for all products, not just PCBs.

Q. And just to get a little more clarification about what he did: When you say "labeling," was that the entire label including warnings and that sort of substance?

A. Yes. It was his job to make sure that the labels were -- contained all the information that needed to be contained on them.

Q. At the upper right-hand corner, there's a reference to F. H. Langenfeld. Do you see that?

A. I do.

Q. Do you know who he was?

A. I do not.

Q. There's also a reference to H. S. Litzsinger, L-i-t-z-s-i-n-g-e-r. Do you know who that -- he -- who he was --

A. I do not.

Q. -- or she?

A. I don't.

Q. Do you have any reason to doubt that this document was created in September of 1957?

A. I have no reason to doubt that.

Q. In the third paragraph partway through, the sentence begins "In Their Animal Tests." Do you

see that?

A. Yes.

Q. Why don't you take a second to read it, because I don't want to ask you about anything you haven't had a chance to look at.

A. Okay.

Q. Do you know if this is a reference to any of the studies or tests we've already talked about today?

A. It is not.

Q. Do you know what animal tests this -- this document refers to?

A. Yes.

Q. Which tests are those?

A. It was tests done by the U.S. Navy.

Q. Okay. Did Monsanto sponsor those tests in any way?

A. No.

Q. Did Monsanto have any input into those tests?

A. No.

Q. Based upon the comment in this letter, do you know if Monsanto took any steps to further study potential effects from Aroclor vapors on human skin contact, for example?

A. I don't know that they did anything specifically in response to this memo or this information, no.

Q. Based upon this information, do you know if they took any steps to further study potential liver damage or liver effects?

A. I don't know if they did anything in response to this document or the studies it refers to. I don't know.

MR. HILL: Mark this as Exhibit 24.

(Thereupon, the court reporter marked Deposition Exhibit No. 24, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. I don't believe I have, no.

Q. I'll keep my questions brief then. Do you know who R. Emmet Kelly is?

A. Yes.

Q. Who was he?

A. He was the medical director of Monsanto.

Q. Can you generally describe -- describe his job function at Monsanto?

A. Well, maybe it was -- It's just medical director. I mean, he was responsible for -- within the company for all issues that had to do with

medicine, whether it was our workers or our customers' workers or outside inquires or, you know, a variety of responsibilities that a medical director would have.

Q. Do you know if he answered customer questions about potential toxicological effects from PCB exposure?

A. Yes, he did.

Q. Looking at this document, is there any reason to doubt this -- that this was a document created by Monsanto?

A. No.

Q. Do you have any reason to doubt it was created around February 1960?

A. No.

MR. HILL: Mark this as Exhibit 25.

(Thereupon, the court reporter marked Deposition Exhibit No. 25, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. I have.

Q. Is it a document that was created by Monsanto?

A. I believe it is, yes.

Q. Do you have any reason to doubt that it was created by around November 1955?

A. No.

Q. In the subject line it talks about Department 246, and in parentheses it says "AROCLORS." Do you know what that's a reference to?

A. Yes. It's the department number where Aroclors were manufactured at the Krummrich, K-r-u-m-m-r-i-c-h, Plant.

Q. And the author of this document is Jack T. Garrett. Do you know who Mr. Garrett was?

A. Yes.

Q. Who was he?

A. He was also in the medical department.

Q. Do you have a general understanding of what his job function was?

A. Again, generally involved issues around human health and -- and medical issues. At -- At some point he had a more defined specialty as a pollution specialist, but he had general responsibilities also.

Q. Those are my only questions about that document.

MR. HILL: Mark Exhibit 26.

(Thereupon, the court reporter marked Deposition Exhibit No. 26, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.

Q. Is it a document that was created by Monsanto?

A. I believe it is, yes.

Q. Do you have any reason to doubt that it was created around August 1957?

A. No.

Q. If you look at the second page, the author of the document appears to be L. V. Sherwood, S-h-e-r-w-o-o-d. Do you see that?

A. I do.

Q. Do you know who Mr. Sherwood was or Ms. Sherwood?

A. I don't.

Q. That was my inquiry about that document.

MR. HILL: Exhibit 27.

(Thereupon, the court reporter marked Deposition Exhibit No. 27, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.

Q. Is it a document that was created by Monsanto?

A. Well, it was written by Monsanto's medical director. Other than that, there's no

identifying information, but I recognize Dr. Kelly's name.

Q. Do you have any reason to doubt that it was created by Dr. Kelly while he was at Monsanto?

A. No.

Q. Do you have any reason to doubt that it was created around February 1967?

A. No.

Q. At the top there's a bcc, and the name is R. E. Keller.

A. Yes.

Q. Do you know who Mr. Keller is?

A. Was, yes.

Q. Was.

A. Yes.

Q. Who was he?

A. He was a head of an analytical chemistry group.

Q. And that was at Monsanto?

A. Yes.

Q. Can you generally describe his job function?

A. Well, he was my boss' boss when I joined Monsanto, so he was the head of a large analytical group that did analytical chemistry work for the --

basically the chemical division of Monsanto.

Q. And in the second paragraph, the first sentence it says: "As far as the section on toxicology is concerned, it is true that" -- Can you read that next word?

A. Yes. It's chloracne, c-h-l-o-r-a-c-e -- -a-c-n-e. I'm sorry.

Q. -- "and liver trouble can result from large doses." What is chloracne?

A. It's a very serious skin disease -- skin rash. It's -- It's -- It's similar to teenage acne but more serious.

Q. And that can be caused by PCB exposure?

A. Dr. Kelly believed that, yes.

Q. Okay. Did Monsanto ever undertake any studies to determine whether PCB exposure could cause cancer?

A. In animals or humans?

Q. Let's start with animals.

A. Yes. And you remind me of a whole series of toxicology tests that I unbelievably forgot to mention. In the late 1960s, Monsanto undertook a -- an extensive set of toxicology tests at Industrial Bio-Test Laboratories near Chicago, and some of those tests involved long-term exposure of rats to PCBs to

test for carcinogenicity in -- in rats -- animals.

Q. Do you know of any other studies on animals that Monsanto either sponsored or conducted in order to determine whether PCB exposure could cause cancer?

A. Those are the only ones that I recall.

Q. And you said Industrial Bio-Test Labs, B-i-o-T-e-s-t?

A. Yes.

Q. Okay. Did Monsanto conduct any studies to determine whether PCB exposure could cause cancer in humans?

A. They did a -- a -- a short and small study of their workers at the Krummrich Plant.

Q. When was that done?

A. Late 1970s.

Q. What did that study entail?

A. It basically entailed looking at the -- the mortality experience of the -- the workers in our -- that worked in the PCB department at the plant, the Krummrich Plant.

Q. What were the findings of the study?

A. There was a slight excess of lung cancer, which was not attributable to PCBs. There was no smoking -- There were no smoking histories

taken, so it was difficult to draw any conclusions.

Q. Going back to the information and warnings we talked to about -- we talked about earlier, were there specific human toxicological effects that were discussed in the MSDSs?

A. Certainly, skin conditions were discussed. And, again, it's going to depend on the timing of which MSDS is when; but the ones I'm most familiar with I'm sure mention skin rashes or skin conditions, maybe even -- Maybe it even did mention chloracne. I don't recall. And I don't recall whether they mentioned the liver enzyme issue or not.

Q. What's the time frame of the MSDSs that you're most familiar with?

A. Well, the most familiar -- I'm most familiar with ones since about 1980, although there are ones from the -- around the 1970 time period that I've seen, but they were much -- much less complete, and I don't recall what specific information was given on those.

Q. For the 1970s MSDSs on PCB-containing materials, do you know if any information was given about toxicological effects of PCB exposure on humans?

A. I believe there was, but I would have to review a document to be sure.

Q. What about from the 1960s?

A. Well, that would have been -- Oh, in the 1906s? There were no MSDSs in the 1960s that I'm aware of.

Q. When did Monsanto begin disseminating MSDSs for PCB-containing products?

A. Around 1970, in that general time frame, I believe.

Q. We talked about the products bulletins. You mentioned there were -- there was some information given in there. Was any specific information given in any product bulletins -- I'll just be general about it now -- about the toxicological effects on humans from exposure to PCBs?

A. I believe the -- in some -- at least some of the -- of the product bulletins, the -- the information we've been generally discussing certainly with regard to -- to skin conditions has been -- was discussed in those bulletins, yes.

Q. Generally --

A. I don't recall whether there was -- whether there was other information or not as I sit here.

Q. I'm going to start generally --

A. Okay.

Q. -- and move to specifics just so I'm not hiding the ball on you here. Generally, when did Monsanto begin disseminating these product bulletins at least in connection with PCB-containing materials?

A. Oh, in the 1940s I would think.

Q. When was the first time that a product bulletin contained any information about the potential toxicological effects on humans from PCB exposure?

A. As far -- As far as potential toxicological effects, I would assume -- I'd have to look at the document to be sure, but my recollection is that those very early 1940s documents had information about avoid -- you know, avoid exposure and fumes. Whether it mentioned the -- the end point, the -- the skin rash, or liver damage or not liver damage, I don't know specifically; but certainly, the -- the use conditions were put in there to avoid any kind of health effects.

Q. In addition to the skin rashes, were -- was any information given about other potential toxicological effects on humans from exposure to PCBs in the product bulletins as far as you know?

A. Without reviewing a document, I would -- I would hesitate to answer that question.

MR. HILL: Mark this as Exhibit No. 28.

TOWOLDMON0007429

(Thereupon, the court reporter marked Deposition Exhibit No. 28, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.

Q. Is it a document that Monsanto created?

A. Mr. Mason worked for Monsanto. There's no identifying information, but -- but I would -- I have no reason to doubt that it was.

Q. Do you have any reason to doubt that it was created around April of 1970?

A. No, I don't.

Q. Do you know who John Mason is?

A. Generally, yeah. I mean, he was a -- a -- a business manager in the division that had PCB responsibility at that time. More specifically, I don't know.

Q. Do you know when he left Monsanto, what, roughly, time period?

A. I don't.

Q. I was just trying to figure out who he was.

A. Sorry.

Q. That's okay.

MR. HILL: Mark this as Exhibit 29.

(Thereupon, the court reporter marked Deposition Exhibit No. 29, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. I haven't.

Q. At the top left-hand corner it says "PRODUCT QUESTIONNAIRE." Are you familiar with this type of form?

A. No, I'm not.

Q. Do you have any reason to doubt that this is a document created by Monsanto?

A. I -- I --Based on anything here, I -- I cannot confirm that.

Q. Under product name it says: "Aroclor Compound - 1254 with 10%," and then I'll ask you to give that last word there.

A. It's toluene, t-o-l-u-e-n-e.

Q. What is toluene?

A. It's an organic solvent.

Q. And that was a solvent that was mixed with Aroclor 1254 at times?

A. In this particular mixture, yes.

Q. And that's a -- Was the full mixture sold by Monsanto as a mixture?

A. Yes. It was sold as a chlorinated

biphenyl toluene mixture, yes.

Q. Do you have any reason to doubt that this document was created around March of 1960?

A. No.

MR. HILL: Mark this as Exhibit 30.

(Thereupon, the court reporter marked Deposition Exhibit No. 30, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. No, I haven't.

Q. Again, in the upper left-hand corner it says "PRODUCT QUESTIONNAIRE." That's -- Is that a type of form you've ever seen?

A. No.

MR. HILL: Mark this as Exhibit 31.

(Thereupon, the court reporter marked Deposition Exhibit No. 31, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. I don't believe so, no.

Q. Do you have any reason to doubt that it's a document created by Monsanto?

A. No.

Q. Do you know who John H. Gannon is?

A. I -- I've heard the name. I believe he

was a salesman.

Q. Do you have any reason to doubt that the document was created around March 1971?

A. No.

Q. We've talked about W.R. Grace before, and they're a chemical company or a construction company, some -- something of that sort.

A. (Witness nodded.)

Q. If you look at the first paragraph, it talks about possibly replacements for Aroclors, and there's a reference to A-6070/10 percent -- Is that xylene?

A. Yes, it is. X-y-l-e-n-e.

Q. Can you describe what that is?

A. Well, we talked earlier about when PCBs were withdrawn from the plasticizer market, they offered alternative plasticizers in the 6000 series. So a 60/70 would have been a blend of polychlorinated terphenyl product with Aroclor 1221, that very low chlorinated material. Those were used for about a year or two, and then they were eventually withdrawn too, but that's what that is.

And then, obviously, xylene is another solvent -- Or maybe not obviously, but xylene is another solvent, and this was a mixture of that particular

Aroclor blend and xylene.

Q. And Monsanto sold that as a blend or mixture?

A. Yes.

Q. Did Monsanto have regular communications with the press?

A. I don't -- I don't know what you mean by "regular." They certainly issued press releases occasionally.

Q. Did they have a separate public relations department?

A. Yes.

Q. Where was that located, the department?

A. In St. Louis.

Q. Let me show what we'll mark as Exhibit No. 32.

(Thereupon, the court reporter marked Deposition Exhibit No. 32, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.

Q. Is this a document that was created by Monsanto?

A. The -- The people on it are -- were Monsanto employees, so I -- I have no reason to doubt

there was.

Q. In the lower right-hand corner, there's a reference to Tom Ford.

A. Yes.

Q. Was he a Monsanto employee?

A. Yes.

Q. Do you know who he was or what he did with the company?

A. He was -- He was in the communications division, public relations. I guess that's what they called it at the time.

Q. Can you describe what this document is?

A. It appears to be a response to a reporter's questions to Monsanto about a report from California on detection of PCBs in wildlife.

Q. Is this a written transcription of a conversation that a Monsanto employee had with a member of the press?

MS. RUTTER: Object to form.

A. I don't know that it's a transcription. I don't know.

Q. (By Mr. Hill) But it does reflect questions made by a member of the press and answers from Monsanto; is that correct?

MS. RUTTER: Object to form.

A. It's in that form. I don't know that those were actual questions that were asked by the reporter. It's in a question/answer format, but I -- It may have been a -- a -- an interpretation of questions or something. I don't know that it's a quote from the -- of those -- those questions.

Q. (By Mr. Hill) Do you have any reason to doubt that this document was created around March of 1969?

A. No.

Q. Looking at the lower left-hand corner of the document, there are three names listed at the bottom.

A. Yes.

Q. Howard Bergren, do you know who he is or was?

A. It's spelled -- It's Bergen actually. It's misspelled, apparently; but, yes, he was in the -- he was in the business group that had responsibility for PCBs at the time.

Q. What was his job function, if you know?

A. I -- I don't know specifically, just business.

Q. You mentioned it was misspelled. How do you actually spell his name?

A. I think it's B-e-r-g-e-n, but I could be -- I could be wrong too. Maybe -- Maybe it's a different guy. I don't know but that's -- I just thought -- I didn't know there was a second "r" in it.

Q. I think we've already talked about Bob Keller, so let's skip him. Cumming Paton, P-a-t-o-n?

A. Cumming Paton, yes. He was --

Q. Okay.

A. He was also in the business group in some capacity. I don't know specifically.

Q. No general understanding of what he did?

A. No.

MR. HILL: This will be Exhibit No. 33.

(Thereupon, the court reporter marked Deposition Exhibit No. 33, for identification.)

Q. (By Mr. Hill) Have you had a chance to look through the document?

A. I have.

Q. Is this a document you've seen before?

A. No, it's not.

Q. Do you have any reason to doubt that it's a document that was created by Monsanto?

A. No.

Q. Do you have any reason to doubt that it

was created around October 1979?

A. No.

Q. On the second page, there's a reference to handled by R. C. Isham, I-s-h-i-m?

A. Actually Ieshim (phonetic) but that's close.

Q. Ishim. Thank you for correcting that. I am bad with that.

A. I'm sure it will be really clear on the record.

Q. No. But we have a video, so --

A. Oh, that's true. Okay.

Q. -- it actually will be. I'm bad with pronunciations, so --

A. How would you know?

Q. -- if I misspeak on anybody's name, please feel free to correct me.

Was he a Monsanto employee?

A. Yes, he was.

Q. Do you know generally what he did for the company?

A. He was in the PR department.

Q. Do you know generally what those press query forms were used for by Monsanto?

A. I -- I mean, I can look at one and

assume what it was used for, but I -- I think it's pretty much self-explanatory to me. They were records of queries that had come in from -- excuse me, records of queries that had come in from the press or records of those conversations.

Q. Apart from the press queries, did Monsanto communicate with the press in other forms or fashions?

A. Well, as I mentioned earlier, there were -- Certainly, at times there were press releases.

Q. Okay. How about written letters?

A. I'm sure there were.

MR. HILL: We'll mark this as Exhibit 34.

(Thereupon, the court reporter marked Deposition Exhibit No. 34, for identification.)

Q. (By Mr. Hill) Have you had a chance to look through this document?

A. I have.

Q. Have you seen this document before?

A. I do not believe so.

Q. Do you have any reason to doubt that it's a document created by Monsanto?

A. No.

Q. Do you have any reason to doubt that the

document was created around June 1982?

A. No.

Q. On the second page, the author of the document appears to be John H. Craddock, and he's -- Underneath it says "Product and Environmental Safety Director." Do you know who Mr. Craddock was?

A. I sure do. He was my boss.

Q. At what points in time was he your boss?

A. When I transferred to -- We talked earlier about my transfer to the environmental policy staff to take over PCB responsibilities. I was the manager under Mr. -- or Dr. Craddock's directorship, so he had responsibilities for PCB stewardship.

Q. Generally, can you describe his job function?

A. Well, it was much the same as what I -- my job function was when I described it. He -- He responded to inquiries that were coming into the company with regard to PCBs, he was familiar with legislation and regulations and assured that our -- our plants and facilities were -- were abiding by those regulations. I'm missing something, but that -- that's basically what it was. And answered -- As I said, he answered inquires that would come in on PCBs.

Q. So he did communicate with the press about PCB issues?

A. At times, yes.

Q. In the third paragraph on the first page, if you look at the last sentence, there's a reference to a federal ban.

A. Yes.

Q. Was there a federal ban on sales of PCBs in the United States?

A. For most uses, there was a ban enacted in 1979, yes.

Q. Do you know when that took effect?

A. 1979, I believe. May 31st, I think.

Could I ask you a clarification? You said "sales," right?

Q. I did say sales.

A. Okay. Then my answer is correct.

MR. HILL: We'll mark this as Exhibit 35.

(Thereupon, the court reporter marked Deposition Exhibit No. 35, for identification.)

Q. (By Mr. Hill) Have you had a chance to look through the document?

A. I briefly reviewed it, yes.

Q. Is this an example of a press release

that you had mentioned earlier?

A. Yes.

Q. Okay. This is in the form that Monsanto was issuing press releases around 1970?

A. Yes.

Q. Have you seen this document before?

A. I believe so, yes.

Q. Is this a document created by Monsanto?

A. Yes.

Q. And do you have any reason to doubt that it was created around July of 1970?

A. Oh, no. I have no reason to doubt that.

Q. In the upper right-hand corner, there's a reference to E. V. John, J-o-h-n.

A. Yes.

Q. Do you know who that is?

A. He was in the public relations department.

Q. He was an employee of Monsanto; is that correct?

A. Yes, he was.

Q. You can set that aside.

A. Okay.

MS. RUTTER: Can we go off --

MR. HILL: Can we go off the record?

TOWOLDMON0007442

MS. RUTTER: -- for one second?

MR. HILL: Yes.

THE VIDEOGRAPHER: We're going off the record at 11:46 a.m.

(Thereupon, a luncheon break was taken.)

THE VIDEOGRAPHER: We're back on record at 1:02 p.m.

Q. (By Mr. Hill) Good afternoon, Dr. Kaley. We took our lunch break. I trust you're a little rested now --

A. A little bit.

Q. -- and ready to go?

A. A little bit.

Q. Any reason why you can't give your best testimony this afternoon?

A. No.

Q. Is there anything at this point that you'd like to clarify and change in your testimony from this morning?

A. We talked about one item. I think counsel is going to clarify it after, or I can do it now.

MR. HILL: I'll leave that up to you.

MS. RUTTER: If you wanted to talk about the product bulletins --

TOWOLDMON0007443

THE WITNESS: Yeah, yeah.

MS. RUTTER: -- why don't you go ahead and do that?

A. You showed me two documents that were called product questionnaires.

Q. (By Mr. Hill) Yes.

MS. RUTTER: Exhibits 29 and 30 is the note I have.

A. Yes. And you asked me if -- if I was -- had any way to confirm that these were Monsanto documents. And as -- as I was putting them away getting ready for your next question, I happened to glance at -- at the bottom of one of those documents and noticed that there is a -- a little symbol in the lower left-hand corner that appears to be a very blurry, small version of the Monsanto capital M logo. So based on that information, I have no reason to believe that these are not Monsanto documents.

Q. (By Mr. Hill) And with that, let's look at 29 specifically. Do you have that in front of you?

A. Yes.

Q. Do you have any reason to believe that this wasn't created around March of 1960?

A. No.

Q. And looking at Exhibit 30 --

A. I have it.

Q. -- same question: Do you have any reason to believe that it wasn't created around the time reflected in the date in the upper right-hand corner?

A. No.

Q. I'd like to talk to you a little bit about Pharmacia Corporation's recordkeeping, and as we go through this section of it, I will try and be specific as to the three defendants here. Okay?

A. Yes.

Q. So if I say Pharmacia, I am trying to refer just to Pharmacia; and where I am trying to be general, I'll use a phrase like the defendants or I'll name the specific entities I'm referring to. Is that fair?

A. I'll try to do my best answer with that -- with that understanding.

Q. Does Pharmacia Corporation have any historical documents or records related to Monsanto's PCB manufacturing business?

A. Yes.

Q. And, physically, where does Pharmacia maintain those historical records?

A. In a warehouse in St. Louis.

Q. Do you have an idea of the general types or categories of documents that are maintained in that warehouse --

A. Well, I --

Q. -- specifically related to the PCB business?

A. I think we've seen examples of many of those types of documents. I mean, a -- a -- a -- a very thorough sweep was done in the early 1970s and -- and throughout the next 10 or 15 years to be sure all kinds of documents related to PCBs were collected. So there's research reports, there's press releases, there's production information, there's product bulletins, just a wide range, basically everything that had to do with PCBs from all the departments in -- in Monsanto -- old Monsanto.

Q. And, obviously, Pharmacia Corporation still has access to all those historical records at this point in time?

A. Yes.

Q. Switching to Solutia, Inc., does Solutia have any historical records related to Monsanto's PCB manufacturing business?

A. My understanding would be only documents related to the former manufacturing plants that went

to Solutia at the time of the spin.

Q. Those would be manufacturing-specific-type records?

A. No. They would be basically -- My understanding is that they would be documents basically generated after the spin with regard to remediation -- remedial activities at those plants.

Q. Where are those records stored?

A. I don't know.

Q. For the documents that are maintained by Solutia, do you know if Pharmacia Corporation has access to review or view those documents?

A. I don't know.

Q. Does new Monsanto have any historical records related to Monsanto's PCB manufacturing business?

A. My understanding is that new Monsanto is the custodian of the records that are Pharmacia's. So Pharmacia has the records, but Monsanto is the custodian of those records and would have access to those records, yes.

Q. Okay. So for the Pharmacia Corporation records, both Pharmacia and new Monsanto would -- do have access to those currently; is that correct?

A. That's my understanding, yes.

Q. Okay. Do you know if Solutia has access to the records maintained by Pharmacia Corporation?

A. I don't know.

Q. Since 1970, do you know if there are particular types of documents related to Monsanto's PCB manufacturing business that have been destroyed?

A. I'm not aware of any.

Q. Have you ever seen the warehouse where those documents -- the Pharmacia Corporation documents are stored?

A. No.

Q. Do you have any sense of what the volume of records for the PCB-related business is?

A. Very large.

Q. How about in order of magnitude? Are we talking hundreds of thousands of documents or millions of documents?

A. I -- I think I've heard the number thousands of boxes, so --

Q. Thousands of boxes.

A. That could be a little bit of an over, but there -- there are lots of documents.

MS. RUTTER: Move to strike the "thousands of boxes" as speculative but lots of boxes.

Q. (By Mr. Hill) Is thousands of boxes

your best estimate?

A. All right. Hundreds. (laughter)

Q. Hundreds or thousands of boxes your best estimate?

A. There are lots of documents.

Q. Did Monsanto seek written customer feedback from its customers about its PCB-related plasticizer products?

A. Not that I'm aware of.

Q. Let me see if this helps a bit or if you've seen this. We'll mark this as Exhibit 36.

(Thereupon, the court reporter marked Deposition Exhibit No. 36, for identification.)

Q. (By Mr. Hill) Please take a look through that.

MS. RUTTER: What number is this?

MR. CAMPBELL: Thirty-six.

A. Okay.

Q. (By Mr. Hill) You've had a chance to look at it?

A. I've -- I've scanned through it, yes.

Q. Okay. Is this a document you've seen before?

A. No.

Q. Can you flip to the last page?

A. Sure.

Q. Do you have any reason to doubt this is a document created by Monsanto?

A. No.

Q. Is there anything on this document from which you can tell when the document was created? I know some of the others had --

A. Yeah.

Q. -- small legends or something that helped you.

A. I don't see anything on this document --

Q. Okay.

A. -- that would help that.

Q. If you look at the last page, there's a form on the bottom half of the page that appears to be for the purpose of soliciting customer feedback. Have you ever seen a form like that before?

A. No, I haven't.

Q. Have you seen a form like that before for any other Monsanto products?

A. No, I have not.

Q. Do you -- Do you know if Monsanto ever generated any market share reports for its PCB business?

A. I believe I have seen some for the

electrical industry, the electrical applications. I am not aware -- I don't recall any for the general business.

Q. Do you recall any of those types of reports for the plasticizer business?

A. No, I don't.

Q. Did Monsanto generate sales volume data by state at any time?

A. I don't know.

Q. You've never seen anything that would indicate what the volume of sales in, say, Massachusetts was?

A. No, I didn't. I have not.

Q. Are you aware of any types of historical records that could be used to generate that type of report now?

A. There are sales records from about 1957 on that, I guess, with great effort could be used to generate that information. I don't -- I'm not aware of the details of those records, but I know there are sales records that exist.

Q. And those are documents that one of the defendants here still has in their possession or custody?

A. Yes.

MR. HILL: We'll mark this as Exhibit 37.

(Thereupon, the court reporter marked Deposition Exhibit No. 37, for identification.)

Q. (By Mr. Hill) Have you seen this document before?

A. Yes, I have.

Q. Is this a document that Monsanto created?

A. I have no reason to believe it's not.

Q. Do you believe -- Do you have any reason to doubt that it was created around December of 1968?

A. No.

Q. At the top there's a name. It's W. R. Richard. Do you know who W. R. Richard is or was?

A. Was, yes, I do.

Q. Who was he?

A. He was director of research for the -- the business group that included PCBs at this time.

Q. The subject line reads "AROCLOR - WILDLIFE," and under that there's a reference to W. A. Kuhn.

A. Yes.

Q. Do you know who W. A. Kuhn was?

A. I know the name, but other than that, I don't -- I don't know what his role was.

Q. And on the second page, the second-to-last paragraph reads: "I believe plasticizer group marketing should know where their product is going and be able to minimize exposure risk if Aroclor has truly been identified as a pollutant." Do you see that statement?

A. I see that.

Q. Do you know if Monsanto took any specific actions to try and determine where the plasticizer product was being used, what types of products it was actually being used in?

A. I'm not of any -- aware of anything specific as how you describe it. Obviously, we went out of the business within a couple years to stop the thing; but as far as investigating uses, I think there was some -- some investigation into where products was going, but I don't know how extensive it was.

Q. Do you have any idea of any of the specifics of what was done in that investigation?

A. I don't. I -- I really don't. The one thing I recall is that, with regard to insecticides, they -- they did try to find out what sales might be using -- be using for insecticides. And that's the

one that springs to mind and the one I'm thinking of, so they did make an effort there. Whether they did that for plasticizers generally, I don't know.

MR. HILL: Mark this as Exhibit 38.

(Thereupon, the court reporter marked Deposition Exhibit No. 38, for identification.)

Q. (By Mr. Hill) And you can certainly read it all, but my questions about this document are going to be very limited.

A. All right.

Q. So with that take as much time as you need, but assuming you don't want to read the whole thing and I ask you some questions, I'll certainly give you the time to go back and --

A. Well, I will -- I will -- I will -- If I can answer your question without reading it, I will do so. If not, I'll take the time to read it.

Q. Have you ever seen this document?

A. I do not believe so, no.

Q. Do you have any reason to doubt this is a document created by Monsanto?

A. No.

Q. Do you have any reason to doubt that it was created around April of 1970?

A. No.

Q. W.R. Grace is a name we've seen before. Up in that upper right-hand corner, there's a name under salesman, L. Berlik.

A. I see that.

Q. Is that a name -- Is that a name you recognize?

A. It is not.

Q. And right below that there's the name D.H. Bechtold.

A. I don't know.

Q. If I'm pronouncing that correctly --

A. I don't know.

Q. -- is that a name you recognize?

A. Not a name I recognize, no.

Q. Now, scribbled out there's W.F. Waychoff.

A. I think his name's been on some of these other documents. It's not a name I know.

Q. Okay. And based at least on context, I don't believe Steve Cyga was a Monsanto employee, but is that a name you recognize at all?

A. No, no.

Q. Okay.

MR. HILL: Mark this as Exhibit No. 39.

(Thereupon, the court reporter marked

Deposition Exhibit No. 39, for identification.)

Q. (By Mr. Hill) Have you had a chance to look through that document?

A. I have.

Q. Have you seen this document before?

A. I'm not sure.

Q. Do you have any reason to doubt that it was a document created by Monsanto?

A. No.

Q. Do you have any reason to doubt that it was created around June 1970?

A. No, I don't.

Q. At the top there's some handwriting, and it's hard to read, but it looks like the first line is the name Bill Papageorge. Is that a name you recognize?

A. Yes.

Q. Who was Dr. Papageorge? Was it Dr. Papageorge?

A. I do not believe so.

Q. Okay.

A. Mr. Papageorge.

Q. Mr. Papageorge. Who was Mr. Papageorge?

A. Well, he was a -- a longtime Monsanto employee. In this time period, he had product

stewardship responsibilities for PCBs.

Q. There's a heading halfway down the page. It says "Information from Scott Tucker."

A. Yes.

Q. Is that a name you recognize?

A. Yes. He was my first boss.

Q. And, generally, what were his responsibilities at Monsanto around this time frame?

A. He was a -- a group leader in Bob Keller's analytical division. He -- He had specific responsibilities for instrumental analysis and did a lot of PCB work.

Q. Flipping to the second page, there's the name Bob Swisher. Is that a name you recognize?

A. Yes, it is.

Q. And who -- who was Mr. Swisher?

A. Mr. Swisher was in our detergents division and had -- had done a lot of work with biodegradation studies.

Q. Under the heading that says information from Mr. Swisher, the last paragraph it reads: "One conclusion that Bob draws from external laboratory reports is that no one really knows what Aroclor they find since each is a mixture of isomers."

Do you understand what the author was -- meant

by that statement?

A. Yes.

Q. Can you explain what that statement means?

A. I'll try. The Aroclor products are very complex mixtures containing maybe up to 100 different compounds that aren't all PCBs. There are 209 individual compounds that are -- that are PCBs, and they differ in the number of chlorines and the arrangement around those two rings that I mentioned earlier.

And because they are such complex mixtures -- For instance, Aroclor 1242 contains some but not all of the isomers -- or I'll just use the word "isomers" because that's what's here -- that are contained in Aroclor 1254. So just by looking at a sample, you don't really necessarily know which product was the source of that sample, especially once it's been in the environment because the products behave differently in the environment. So a process called weathering begins, which changes the -- the pattern of -- of PCBs in -- in those products.

Q. The next sentence reads: "All Aroclors contain common isomers." Is that a correct statement?

A. Yeah. It's -- Well, it's a correct

statement; in that -- that, over the range of Aroclors, there are common isomers overlapping throughout that range. But, for example, Aroclor 1221, which we talked about very -- or earlier, which is basically a one-chlorine PCB, would not have any common isomers with something like Aroclor 1260, which has much more highly chlorinated materials. So there's overlap as you move up the scale, but not every Aroclor has every isomer.

Q. So just to give an example, Aroclor 1254 would have common isomers with Aroclor 1260; is that fair?

A. That's correct, absolutely.

Q. Okay.

MR. HILL: We'll mark this as Exhibit 40.

(Thereupon, the court reporter marked Deposition Exhibit No. 40, for identification.)

Q. (By Mr. Hill) I will represent to you that this is a document produced by the defendants in this case.

A. Okay.

Q. My first question to you, obviously, is: Have you ever seen this before?

A. I have not.

Q. Looking at the top plasticizers part on the first page, have you seen that substance in any other Monsanto document laid out this way?

And I don't want to -- I don't want to hide the ball here. I don't know what this document is. I'm trying to find out if this is a draft of something that was created or prepared by Monsanto or what it was used for.

A. I -- I can't really tell. I have not seen any -- If you're asking have I seen something else in this format in Monsanto documents, I have not.

Q. Okay. Do you have any reason to believe this was created by Monsanto?

A. Not without speculating, no. I would have to speculate.

Q. Okay. You can set that one aside.

A. All right.

MR. HILL: We'll mark this as Exhibit 41.

(Thereupon, the court reporter marked Deposition Exhibit No. 41, for identification.)

Q. (By Mr. Hill) Is this a document you've seen before?

A. I have.

Q. Is it one of the documents you reviewed in preparation for your deposition today?

A. Briefly.

Q. You were designated on topics concerning Monsanto's identification of documents and production of documents in this case. Can you explain the process by which Monsanto identified documents responsive to these responses?

MS. RUTTER: Just for the record, we did submit written objections, which I'll make part of the record at the end of this deposition, to topics relating to discovery about discovery; but as I indicated in communications we've had, we can go down this path for a bit as long --

MR. HILL: I'm just trying to get a general sense of what was done.

MS. RUTTER: A general sense I understand, so let's take it step by step.

A. All right. My understanding would be that the requests are received by counsel representing Monsanto; and comprehensive searches of the database, the archive of Monsanto documents were made to find documents responsive to those requests. Those -- Those responses were reviewed to be sure that they were complete. I was asked to review certain sections

of the responses to see if what I knew was -- was in agreement with what they were saying, and -- and then they were presented to you or your -- you and your firm.

Q. (By Mr. Hill) My colleagues and I.

A. Your colleagues and you, not you personally maybe.

MR. CAMPBELL: United Nations of Lawyers, lawyers from ever corner of the United States.

MR. HILL: We try to be equal opportunity and pick from all across the United States for these types of cases.

Q. (By Mr. Hill) You mentioned a database. That's a data -- Let me start over again, inartful question.

When you referenced this database, what database were you talking about?

A. Well, I had mentioned the collection of documents that Monsanto made starting in the 1970s and through -- through the remaining period. That -- That is the database. At some point that database was computerized, and that is my understanding of how those searches are done.

Q. Apart from your involvement, do you know

if any other employees of the defendants were involved in the search for records responsive to these requests?

A. People actually employed by the defendants?

Q. Yes. And I'm not talking about --

A. You're not talking about their attorneys?

Q. -- attorneys or any -- No. I'm not talking about attorneys. I want to exclude attorneys and paralegals from that.

A. I would -- I would -- I would have to speculate. I don't believe so, but I don't really know. And I am not an employee of any of the defendants.

Q. I didn't --

A. The way the question was phrased --

Q. I --

A. -- it could be interpreted that way. I want to make clear I am not an employee of any of the defendants.

Q. I apologize. I -- I didn't mean to insinuate you were. And your -- your answers before, I think, were pretty clear that you're self-employed at this point?

A. That's correct.

Q. Do you do any consulting work for Solutia at this point?

A. At the -- I have -- I have in the past. I have not done any for several years.

Q. I mean, in the past, say, five years, have you done any consulting work for Pharmacia?

A. Well, yes. I mean, I'm doing -- I mean, yeah. I consult for Pharmacia, yes.

Q. Okay. Have you received any payments from Pharmacia within the last two years for your work?

A. I'm not sure I know the answer to that question. I have not received any checks from Pharmacia, no.

Q. Okay. That was my question.

A. Okay. I have not received any checks from Pharmacia.

Q. Okay. No payment of any form?

A. Not directly to me from Pharmacia.

Q. Okay. When you say you're self-employed, do you work for a business you own?

A. I -- I am it.

Q. You are it.

A. (Laughter)

Q. What I'm getting at is, you know, do you have a personal services corporation that you formed?

A. No. I'm a -- I'm -- I'm losing the term. Whatever that -- The simplest form of being self-employed, I -- that's what I am.

Q. Just you?

A. I don't have a business ID or anything like that. I'm a sole practitioner.

Q. Have you done any consulting work for new Monsanto within the last five years?

A. I have consulted on issues involving new Monsanto, yes.

Q. Has new Monsanto paid you for any of that work?

A. I have not received a check directly from Monsanto.

Q. Okay. For the consulting work you did for Pharmacia, were you compensated for that in any way?

A. No.

Q. Who did you receive payment from?

A. The Husch Blackwell Law Firm.

Q. Okay. Are you being paid to testify today?

A. I am on a retainer, so I -- This is

part -- This would be part of my retainer. I am not being paid specifically for my appearance here today, nor am I being paid extra for my appearance here today.

Q. What's the financial arrangement for your consulting work for Pharmacia Corporation?

A. I am on a -- I have a retainer for $16,000 per month.

Q. And that retainer would cover all work you do for -- on behalf of Pharmacia Corporation?

A. That's correct.

Q. So it didn't matter if you put in 2 hours or 200 hours. You'd receive that $16,000 per month?

A. That's correct.

Q. When did that financial arrangement first start?

A. Well, I -- When I retired, there was a financial arrangement with another law firm that was representing Monsanto at the time but no longer is; so, I mean, I've been an consultant under that arrangement or a similar one since 2003.

Q. Does that same arrangement cover any consulting work you do for Solutia or have done for Solutia?

A. No.

Q. There was a different arrangement for that?

A. Yes.

Q. Were you compensated for your prior consulting work for Solutia after the time you left the company, so from 2003 on?

A. To the extent I've done any work for them, I have been compensated.

Q. What was the financial arrangement for that work?

A. I submitted an invoice to the Husch Blackwell Law Firm and received payment from them. I -- I presume they receive payment from Solutia for those services.

Q. Was that a bill for a specific time spent as opposed to this monthly-retainer-type arrangement?

A. Yes, it was.

Q. For the work you did for new Monsanto, was that work compensated under one of the arrangements we've talked about so far or a different arrangement?

A. No. That's done under my retainer.

Q. The $16,000 retainer that covered the

Pharmacia work also?

A. Yes, that's correct.

MR. HILL: Okay. Can we go off the record for a minute?

THE VIDEOGRAPHER: We're going -- We're going off the record at 1:34 p.m.

(Thereupon, a short break was taken.)

THE VIDEOGRAPHER: We are back on the record at 1:39 p.m.

MR. HILL: Dr. Kaley, I'd like to thank you for your time. I don't have any further questions for you right now.

We are going to put a stipulation on the record, and we are going to certainly give you time to review and make any changes you deem necessary to your deposition transcript. If you make changes, do you understand that I'll be able to comment on those changes or Lexington's counsel will be able to comment on those changes at trial?

THE WITNESS: I do.

MR. HILL: Okay.

MR. CAMPBELL: The stipulation, for the record, is the -- the use of our usual stipulation in Massachusetts, which is that all objections, except as to the form of the question and motions to strike, are

reserved until the time of trial. And, typically, a witness is given 30 days -- at least 30 days to read and sign the transcript, which we've agreed upon.

MS. RUTTER: I do have a few questions.

EXAMINATION

QUESTIONS BY MS. RUTTER:

Q. I know those are famous last words, but Dr. Kaley, would you please find the very first exhibit, Exhibit 1? It's the deposition topics.

Would you please look at Topic 2 in Exhibit 1.

A. Yes.

Q. That refers to agreements concerning indemnification; is that correct?

A. Yes.

Q. Now, Mr. Hill asked you some questions about an indemnification agreement, and you responded that you know there do exist indemnification arrangements between and among some of the defendants regarding PCB liabilities; is that correct?

A. That's correct.

Q. In one or two questions, Mr. Hill switched his use of terminology from indemnification, which is what Topic 2 refers to, to "assumption" of liabilities. And in connection with that terminology change, let me ask you a couple of questions.

TOWOLDMON0007469

Are you an attorney, Dr. Kaley?

A. No, I'm not.

Q. If there is a legal dispute in this case about whether Solutia or new Monsanto "assumed" a particular PCB liability versus agreeing to indemnify Pharmacia against a particular PCB liability, are you qualified to give an opinion on whether a liability was legally assumed?

A. No, I'm not.

Q. You would leave that to the lawyers to untangle?

A. Yes, ma'am.

Q. Okay. I'd like to go briefly to Exhibit 7, please. And just for the record, since it's been a while, that's a memo dated 12/7/71, Aroclor Plasticizer Withdrawal Plan.

Dr. Kaley, can you please explain what Aroclor plasticizers, this plan, related to as of December 7, 1971?

A. Yes. If -- If you go to the -- the page Bates-labeled MONS, M-O-N-S, 043550 -- I may have misspoke, 0435550. That memo refers to the decision that Monsanto has made to cease the sale of polychlorinated terphenyls for use as plasticizers. Now, I want to be sure that there was no

misunderstanding that those were PCBs, and I think I may have misspoke about one of the materials that -- that you asked me about specifically on the third page, which would be 043547, which was Montar 5. And that material actually is the still bottoms from the Aroclor 50 -- 5460 process, which is a polychlorinated terphenyl. So I wanted to be sure that -- that there was clarification that these were the -- the PCT products that we had talked about in other contexts.

Q. And now I'd like to turn to Exhibit 11, please, and specifically the page Bates-labelled MONS 036997. It's a page No. 4 at the top.

A. I have that.

Q. Dr. Kaley, what is the correct pronunciation of the Japanese PCB producer that's identified on the Bates-labelled page I just called out?

A. Yes. Well, it's actually written as Kanegahuchi, but it's actually Kanegafuchi with an "f" instead of the "h."

Q. Okay. Were there other Japanese PCB manufacturers other than Kanegafuchi?

A. Yes, there were.

Q. And I'm speaking about manufacturers that had no affiliation with Monsanto.

A. That's correct.

Q. And who -- who was that?

A. There was a company called Manubeni, M-a-n-u-b-e-n-i.

MR. CAMPBELL: Marubeni.

THE WITNESS: I'm sorry. Marubeni?

MR. CAMPBELL: It's with an "r."

THE WITNESS: I'll accept that correction.

MR. CAMPBELL: I could be wrong, not likely but I could be.

Q. (By Ms. Rutter) And what is your source of information about the Marubeni Japanese producer of PCBs, Dr. Kaley?

A. It's an EPA report from 1976.

Q. And what information does that EPA report contain concerning Marubeni, the 1976 EPA report?

A. It -- It -- It notes that in the 1971/1972 time frame, the Japanese manufacturer Marubeni shipped its remaining stocks of PCBs to the United States to a, presumably, a subsidiary in the United States for sales and distribution.

MS. RUTTER: And then this is not a question.

Ms. Savinelli, would you please hand me the objections?

What's our last exhibit number, please?

THE COURT REPORTER: Forty-one.

MS. RUTTER: I'd like to mark this as Exhibit 1 -- 41, and this is purely for the record. It is just Pharmacia's objections.

THE WITNESS: Forty-two.

MS. RUTTER: Forty-two. Thank you.

Exhibit 42 is Pharmacia's previous objections filed to the 30(b)(6) notice of deposition, but I have no questions about this.

MR. HILL: I have just a couple follow-ups now.

MS. RUTTER: Okay.

MR. HILL: I had been done before, but you've prompted me for a few more.

EXAMINATION

QUESTIONS BY MR. HILL:

Q. Dr. Kaley, you mentioned Marubeni now. They were a Japanese company --

A. Yeah.

Q. -- that manufactured PCBs?

Do you have any information or knowledge -- or knowledge of them importing PCBs into the

United States prior to 1971?

A. My recollection is the document only speaks to 1971 and thereafter.

Q. Do you have any knowledge about whether the PCBs imported by that company were used for plasticizers?

A. I have no knowledge.

Q. Apart from that EPA report which you've seen, do you have any other knowledge about Marubeni importing PCBs in the United States?

A. I do not.

MR. HILL: Thank you.

THE WITNESS: You're welcome. Thanks for your courtesy.

MS. RUTTER: And he will review and sign, as we've mentioned.

THE WITNESS: Yes.

THE VIDEOGRAPHER: This is the end of the deposition. The time is 1:47 p.m. We are going off the record.

(Thereupon, the court reporter marked Deposition Exhibit No. 42, for identification.)

MR. HILL: Original with exhibits, condensed copy, and an ASCII and E-tran with all exhibits attached electronically.

TOWOLDMON0007474

MS. SAVINELLI: Full-sized, condensed, and an ASCII and E-tran copies with all exhibits attached electronically.

(Thereupon, the deposition of Robert G. Kaley, II, Ph.D., concluded at 1:47 p.m.)

-oOo-

TOWOLDMON0007475

Please be advised I have read the foregoing videographic deposition, pages_____ through_____, inclusive. I hereby state there are:

(Check one) ____ no corrections

____ corrections per attached

Executed this_____day of _____, 2014, at _____, Missouri.

_____
ROBERT G. KALEY, II, PH.D.

DEPONENT'S CHANGES OR CORRECTIONS

Note: If you are adding to your testimony, print the exact words you want to add. If you are deleting from your testimony, print the exact words you want to delete. Specify with "Add" or "Delete" and sign this form.

Deposition of: ROBERT G. KALEY, II, PH.D.
Case Title: LEXINGTON -V- PHARMACIA
Date of Deposition: JUNE 24, 2014

I, _____, have the following corrections to make to my deposition:

Page	Line	Change: "Add"/"Delete"
____	____	_____
____	____	_____
____	____	_____

STATE OF MISSOURI])
) ss.
COUNTY OF ST. LOUIS)

I, LAUREN M. GOODMAN, do hereby certify that I am a licensed Certified Court Reporter, duly qualified and certified as such by the State of Missouri;

That prior to being examined, the witness named in the foregoing videographic deposition was by me duly sworn to testify to tell the truth, the whole truth, and nothing but the truth;

That the said videographic deposition was by me recorded stenographically at the time and place herein mentioned; and the foregoing pages constitute a full, true, complete, and correct record of the testimony given by the said witness;

That I am a disinterested person, not being in any way interested in the outcome of said action or connected with, nor related to any of the parties in said action or to their respective counsel in any manner whatsoever.

DATED: July 3, 2014

_____
Lauren M. Goodman, RPR, CCR 1037

Transcript Word Index

&

&
5:3,10

0

02129
5:12
035310
31:12
036997
164:12
043545
50:23
043547
164:4
043550
163:21
0435550
163:22
094552
101:8

1

1
2:9 10:8,13,19 11:7 35:9 80:17,17 104:12 162:9,10 166:6
1:02
136:7
1:34
161:6
1:39
161:9
1:47
167:19 168:5
10
2:9,18 7:19 57:7,10 63:18 124:15 139:10
10:08
83:15
10:09
83:20
10:19
92:3
10:39
92:6
100
3:6 151:6
101
5:15
103
3:7
1037
1:16 171:24
11
2:19 60:19,21 164:10
11/66
40:17
11:46
136:4
110
3:8
113
3:9
114
3:10
115
3:11
116
3:12
11645
1:6 6:11
12
1:6 2:20 6:11 60:16 66:20 66:22,24
12/60
48:3
12/7/71
163:15
1200
80:19 82:7,11,14,16,18
1221
78:5 126:19 152:4
123
3:13
124
3:14
1242
151:13
1248
81:14
125
3:15,16
1254
3:14 30:19 32:2,7 36:3,4 37:22 41:20 61:20 84:14 124:15,21 151:16 152:10
1260
3:15 30:21 37:22 41:20 61:20 81:15 152:6,11
1262
37:23
127
3:17
13
2:21 31:23 67:25 68:2
130
3:18
132
3:19
134
3:20
14
2:22 70:14,16 73:15 96:1
142
3:21
145
3:22
147
3:23
148
3:24
15
2:23 73:2,3 139:10
152
3:25
153
4:3
16
2:24 76:11,13 78:25
16,000
159:8,13 160:25
1600
5:15
162
2:4
166
2:5
167
4:4
17
2:25 79:5,7 83:23 99:22
18
3:3 80:3 83:18 84:1 88:16
19
3:4 93:15 96:9,11
190
5:8
1906s
121:3
1930s
93:14 106:16 107:20
1931
32:3,8
1935
30:8,18 32:17 38:15,21 39:18
1940s
21:22 94:12 122:5,12
1950
64:10,13
1950s
21:17 64:15 93:15 108:9
1951
99:22
1953
104:12
1955
114:25
1957
57:4 58:19 111:22 116:6 144:17
1960
44:3 47:24 114:13 125:3 137:23
1960s
44:3 64:19 85:25 118:22 121:1,3
1962
53:11
1967
117:7
1968
145:12
1969
61:6 82:21 129:9
1970
39:17,18 68:12 71:2,3 76:25 77:12,16 80:3,7,22 86:5 87:13 88:6,14 120:17 121:7 123:11 135:4,11 141:4 147:24 149:11
1970s
64:21 65:8,21 67:17 93:17 94:6 109:4 119:16 120:21 139:9 155:20
1971
87:21 88:1 126:3 163:19 165:19 167:1,3
1972
88:8 165:20
1973
13:23,24 14:21
1976
15:22 67:23 165:15,17
1977
39:8,12 58:19
1979
16:13 131:1 134:11,13
1980
57:24 120:16
1982
133:1
1985
16:23
1990
13:24
1990s
17:22
1991
17:23
1997
13:12,24 22:25

1999
19:20

2

2
2:10 11:5 28:24 29:2 35:9 80:17 81:14 159:12 162:10 162:23
20
3:5 7:19 97:13,15 106:15
200
82:20 159:13
200,000
84:14
2000
19:20 24:18
2000s
21:4,5
2002
24:18,23
2003
13:7 21:2 24:23 159:22 160:7
2014
1:13 6:4 169:7 170:5 171:22
206
75:16
209
151:8
21
3:6 99:25 100:2
216
72:7
22
3:7 103:21,23
23
3:8 80:6 110:13,15
24
3:9 13:20 113:10,12 170:5
241-3000
5:12
246
115:3
25
3:10 114:15,17
250,000
82:20
26
1:13 3:11 6:4 115:21,23
27
3:12 116:16,18
28
3:13 122:25 123:2
29
2:10 3:14 123:25 124:2 137:7,20

3

3
2:11 30:23,25 171:22
30
2:11 3:15 34:19 42:20 46:20 47:11 71:2 125:5,7 137:7,25 162:2,2 166:11
31
3:16 125:15,17
310
5:5
314
5:9
31st
134:13
32
3:17 127:16,18
33
3:18 130:14,16
3347
58:11
34
3:19 132:14,16
35
3:20 134:19,21
3587
48:10
36
3:21 142:11,13
3613
48:1
36997
62:10
37
3:22 145:2,4
37000
61:8
38
3:23 147:4,6
39
2:12 3:24 148:24 149:1

4

4
2:12 39:21,23 40:1 68:18 164:12
40
3:25 106:20 152:16,18
4000
53:24
40s
106:17
41
4:3 153:20,22 166:6
415
73:8 74:23
42
2:13 4:4 166:10 167:22
421
75:8
433
75:16
46
2:14
4614
41:15
4615
40:24
4642
44:21
47
51:11
480-1934
5:9

5

5
2:13 42:12,14 43:11 45:15 51:21 164:4
50
2:15 106:20 164:6
50s
94:4,7 109:16
52
2:16
54
36:6
5460
49:13 164:6
55
2:17
57
2:18

6

6
2:14 34:19 42:20 46:15,17 46:20 47:11,14 166:11
60
2:19
60/70
126:18
600
5:8
6000
78:4 126:17
6070/10
126:11
60s
21:17 94:5,7 109:16
617
5:12
63105
5:9
66
2:20
68
2:21

7

7
2:3,15 50:15,17,21 163:14 163:18
70
2:22
700
5:4
73
2:23 75:10
76
2:24
79
2:25

8

8
2:16 11:7 52:19,21
8:00
1:13
8:05
1:13 6:4
800
5:16
83
3:3
830-8885
5:16
855-3200
5:5

9

9
2:17 55:6,8
9:02
50:6
9:18
50:9
90210
5:4
95354
5:16
96
3:4
9601
5:4
97
3:5
996
78:17

a

a.m.
1:13 6:4 50:6,9 83:15,20 92:3,6 136:4
abatement
2:11 31:3
abiding
133:21
ability
26:14 47:12
able
17:25 27:7 40:15 46:22 101:22 146:6 161:17,18
abreast
14:14 17:7
absolutely
152:13
accept
165:8
acceptable
78:12
access
139:18 140:12,20,24 141:1
accommodate
9:3
accurate
32:7 58:18 59:2 62:3,7
acne
118:11
acronym
89:4,6
action
171:17,19
actions
146:11
actively
81:23
activities
73:20 140:7
actual
31:18 93:11 129:2
acute
93:1 110:3,8,11
ad
45:10
add
90:21 170:2,3,7
adding
170:1
addition
4:24 122:19
additional
15:23
address
27:24 74:10 75:11,19
addressed
101:3 106:25
addressees
73:9 75:1
addresses
74:7
adequate
107:14
adipates
64:6
admonitions
8:12
adverse
94:25
advertise
42:9
advertisements
46:5
advertising
45:3,10,12,19,23
advised
169:1
affairs
14:4 17:18,21
affect
106:23
affiliation
164:25
afternoon
136:8,15
ago
7:21 9:23 18:23 19:5,5 77:3
agree
47:5
agreed
162:3
agreeing
163:5
agreement
2:10 22:8 27:11,15,18 28:2 28:6,12,16,18,25 29:18,19 155:2 162:16
agreements
25:14,16 27:24 162:12
agreement's
28:9,14
agricultural
25:2
ahead
23:17 47:13 98:12 101:15 137:2
aimed
110:8
air
103:7 109:3
alabama
32:3
alerted
90:17
allow
34:20 35:23 57:5
allowing
78:14
alternative
126:17
ambiguous
98:11
amended
2:10 28:21,25
amounts
103:6,10
analysis
150:11
analyst
97:7
analytical
15:8,13 117:17,24,25 150:10
animal
24:14 90:15 92:14,21 93:11 102:2 111:25 112:11
animals
93:8 102:6 108:6,8,24 110:2 118:18,19 119:1,3
anniston
32:3
announcing
70:25
answer
9:6 10:5 24:3,6,9 26:14,22 27:7 30:4 34:23 35:6 37:5 37:12 42:2 46:21,22 47:7 64:20 66:13 86:9 87:5 95:16 102:23 103:14 122:24 129:3 134:17 138:17 147:16 157:13
answered
114:4 133:23,24
answering
17:8 47:11
answers
29:9 60:13 128:23 156:23
anticipated
99:15
anticipating
99:14
anybody
12:8
anybody's
131:16
anymore
35:14
anyway
106:23
apart
12:7 33:17 46:7 60:2 89:18 132:6 155:25 167:8
apologize
54:16 156:22
apparently
48:23 57:24 81:3 82:25 88:17 129:18
appear
62:3 72:2
appearance
6:16 159:2,3
appearances
5:1
appears
53:12 58:14 61:18 67:6 76:20 78:19 80:1 82:14 99:21 104:8 116:9 128:13 133:4 137:15 143:15
application
103:7,19
applications
37:24 59:5 66:1,4 81:24 86:6,14 87:3,11 88:6 144:1
applying
103:18
appreciate
18:3 34:25 86:25 97:23
appropriate
50:1 89:24
approximately
13:3 68:9
april
53:11 123:11 147:24
archive
154:22
area
99:11 101:16
arlington
75:20
aroclor
2:13,14,15 3:11,14,15,22 3:24 30:19,21 32:1,2,7 33:17 34:11 35:4,7,11,21 35:22 36:3 37:1 38:7,8 41:17,20 42:9 43:12,23 46:9 47:15 48:9,21 49:5,13 50:22 61:20 72:13 77:11,13 77:15 78:5,13 80:19 81:14 82:7,11,14,16,18 84:14 89:9,20 90:22 112:24 124:14,21 126:19 127:1

aroclor (cont.)
145:21 146:6 150:23 151:5 151:13,16 152:3,6,9,10,11 163:16,17 164:6
aroclors
30:10,17 35:14,15 37:15 59:11 61:24 72:9 78:1 81:20 105:12 115:3,6 126:10 151:23 152:2
aroclor's
101:24
arranged
56:21
arrangement
22:7 151:10 159:5,16,19,22 159:23 160:2,10,18,23
arrangements
160:22 162:18
article
3:4 96:23 97:4,9
articles
45:23 46:4
ascii
167:24 168:2
aside
63:3 135:22 153:17
asked
9:17,18 10:5 11:6 87:9 129:2 137:9 154:25 162:15 164:3
asking
9:12 24:7 30:3 43:6 44:9 59:13,20 153:10
associated
33:22 89:20 99:10 110:5
associates
93:22 94:1 109:16
assume
9:18 18:22 29:19 37:11 41:13 58:22,23 122:10 132:1
assumed
25:21 26:5,23,25 163:4,8
assuming
100:13 104:13 147:12
assumption
40:18 162:23
assured
14:13 133:20
assuring
14:12
atmospheric
103:17
attached
4:23 22:21 78:24 90:21,24 94:14 167:25 168:3 169:5
attempt
34:14 35:13
attention
98:25
attorney
7:12 163:1
attorneys
14:15 156:8,9,10,10
attributable
98:22 119:24
attributed
107:4
august
13:7 71:2,3 84:14 116:6
author
100:13,14 102:1 115:8 116:9 133:3 150:25
available
9:24 57:1 76:24 81:19 83:4 83:7,8
avoid
122:13,14,18
aware
21:9 48:3 49:7 53:16,22 60:3 61:22 62:5,8 64:12,16 64:21 65:13 66:9 70:3 81:1 81:2 82:1 84:22,24 85:1 88:13 89:2 106:1 107:2 121:4 141:7 142:9 144:2,14 144:19 146:14

b

back
34:24 40:15 50:8 54:20 60:7 79:16 81:13 83:19 92:5 120:2 136:6 147:14 161:8
bad
131:8,13
baker
97:7
ball
122:2 153:5
ballpark
18:2
ban
134:6,8,10
based
69:23 75:13 81:9 82:13 112:22 113:4 124:12 137:17 148:19
basically
19:9 35:19 40:9 48:20 56:7 57:4 58:1,5 66:7 70:23 76:21,22 79:15 88:22 89:1 89:2 94:4,5 96:2 97:4 103:4 107:12 108:22 110:25
basically (cont.)
118:1 119:18 133:23 139:14 140:4,6 152:5
basis
10:4 56:8
bates
31:8,22 41:15 43:12 47:16 50:23 51:10 58:10 61:7 71:13 73:22 74:23 78:17 84:2 101:7 163:21 164:11 164:16
bayer
2:21 62:16 69:15
bcc
117:9
bechtold
148:9
beeb
68:22
beers
107:1
began
32:12 65:6
beginning
78:16
begins
31:10 101:9 105:8 111:25 151:21
behalf
1:3 6:7,18,21 8:2 47:13 159:10
behave
151:19
behavior
19:11
believe
7:21 11:16,16 14:19 15:22 18:21 19:20 20:21,21 21:2 21:16 22:8 23:2 24:18,18 24:23 27:23 28:4,8 32:9 37:23 38:14 42:21 44:17,19 46:24 51:6 53:11 55:1 58:24 59:1 62:19 65:18 66:18,18 67:19,22 71:11 72:21 85:6,9 87:20 91:15 91:17 93:20 94:13,19 95:18 95:18 99:22 105:15 106:15 108:7 113:15 114:23 116:4 120:24 121:8,15 125:20,25 132:21 134:13 135:7 137:18,22 138:3 143:25 145:10,11 146:4 147:19 148:20 149:20 153:13 156:13
believed
105:21 118:14
bell
52:13
benignus
100:13,16
benzene
49:19,21
bergen
129:17
bergren
129:15
berlik
148:3
best
7:14 21:5 24:6 26:14 41:4 42:2 47:12 136:14 138:17 142:1,3
better
16:6
beub
68:20
beverly
5:4
beyond
47:11
bill
149:15 160:16
bio
118:24 119:7
biodegradability
3:24
biodegradable
78:8,10
biodegradation
15:10 150:19
bionetics
93:18,19 109:5
biphenyl
49:15,18 78:6 99:2 125:1
biphenyls
15:1,4 17:4 99:8 106:18 108:5
bit
24:4 136:11,13 138:7 141:21 142:10 154:14
blackwell
1:19 5:7 158:22 160:13
blend
78:4 126:18 127:1,2
blended
48:21
blends
49:5
blurry
137:16
bob
130:6 150:10,14,22

boss
117:23,23 133:7,8 150:6
boston
5:12 71:16 72:1,5 74:10
bottom
31:10 40:24 47:16 48:2,12 53:24 58:11 61:7 62:12 71:12 84:10 98:6 101:7 129:13 137:13 143:15
bottoms
164:5
boulevard
5:4
box
86:19
boxes
141:19,20,24,24,25 142:3
boy
15:11
brand
30:17 33:21 77:13
break
9:2 49:24 50:2,7 54:17 61:19,23 91:24 92:4 136:5 136:9 161:7
breakout
59:7
brief
113:16
briefly
100:5 134:24 154:3 163:13
britain
22:11
broad
46:1
broadest
45:20
broke
92:7
brought
86:12
building
3:21
bulletin
2:16 3:21 45:16 52:12 75:7 122:7
bulletins
45:13,14,21 46:23 53:3,7 53:15 89:23 90:1,10 91:12 94:25 95:21 107:7 121:9,12 121:16,19 122:3,22 136:25 139:14
business
21:25 22:4 23:7 25:5,11,23 26:6 27:1 32:21 47:3 73:17 123:15 129:19,23 130:10
business (cont.)
138:21 139:6,23 140:16 141:6,13 143:24 144:3,5 145:20 146:16 157:22 158:7
butene
48:19

c

caffaro
62:17
california
5:4,16 128:15
calking
45:4
call
2:25 3:3,23 23:18 31:8 49:22 79:13 80:2,2,15 81:11,13 84:8 87:25 88:5 91:18,19
called
16:25 30:10 32:24 33:11 34:8 52:12 65:1,16,17 80:14 85:1 86:2 93:17 97:6 99:7 128:11 137:5 151:20 164:16 165:3
calls
17:8 20:12 25:6,12,25 26:11,20 27:3 52:5 56:14 63:19 74:18 80:24
campbell
5:10,10,11 6:22,22 10:16 12:6,7 36:15 42:24 44:7 49:25 54:18 57:12 59:13,17 59:21 60:6,14 61:14,17 83:7,9 87:4 91:25 95:25 96:7 142:17 155:8 161:22 165:5,7,10
cancer
118:17 119:5,11,24
capacitor
86:18
capacity
30:3 34:21 42:18 46:22 47:12 130:11
capital
34:4,4 137:16
carbonless
71:10 87:17,19
carcinogenicity
119:1
care
83:22
carol
5:7 6:20
carondelet
5:8
carry
25:4,17 26:18
case
1:6 6:9,11 9:6 18:19,22 152:21 154:6 163:3 170:5
cases
25:19 90:15 98:22 155:13
casting
66:7,8,8
categories
46:25 47:1 139:2
category
86:20
caulking
44:24 46:9 49:4
caulks
42:10
cause
118:16 119:4,11
caused
99:18 106:2,11 118:13
ccr
1:16 171:24
cease
163:23
center
5:11 81:6
central
6:4
certain
72:9 73:18 154:25
certainly
34:19 37:22 45:12 46:14 56:25 73:7,11 75:22 85:10 94:7 95:21 104:8 120:6 121:17 122:17 127:8 132:10 147:7,13 161:14
certified
6:12 7:5 171:4,5
certify
171:3
chance
31:5 51:2 66:25 70:17 73:4 76:14 79:8 96:13 97:20 100:3 104:1 112:5 130:17 132:17 134:22 142:19 149:2
change
34:14 35:13 136:18 162:25 170:7
changed
17:17,20 35:11
changes
151:21 161:15,16,18,19 170:1
changing
8:21
chapman
5:3
charge
111:1
chart
58:13 59:4
check
51:17 62:6 158:15 169:4
checks
157:14,17
chemical
15:10 19:10 21:10,12 32:19 79:21,22 97:7 105:6 118:1 126:6
chemicals
14:10 15:12 17:10 23:9 38:11 81:19 105:3
chemical's
105:19
chemist
14:22 15:8,16,25 97:7
chemistry
15:13 16:7 117:17,25
chemists
15:12
chicago
118:24
chloracne
118:6,9 120:11
chlorinated
77:25 98:23 99:7,8 124:25 126:20 152:7
chlorine
35:20 36:6 78:7 152:5
chlorines
151:9
choke
36:7
choking
36:15
chromatography
16:19
cincinnati
93:16
circumstance
105:20
circumstances
105:22
claim
29:22
clarification
111:4 134:14 164:8
clarify
35:6 87:17 136:18,21

clarifying
23:5
clark
52:9
clear
20:7 36:18 38:24 98:5 131:9 156:20,24
clients
56:13
close
131:6
closed
72:19,21,22 87:22 88:3
clvs
5:15
colleagues
155:5,6
collected
139:11
collection
155:19
colloquy
50:24 83:16
column
74:8,9 75:9
comfort
8:16
coming
133:18
comment
96:7 97:4 112:22 161:17,18
common
102:5 151:24 152:2,6,11
communicate
132:7 134:1
communications
127:5 128:9 154:13
companies
22:15 25:15 62:23 69:23 70:3 76:8 90:14
company
1:8 6:9 13:5,15 17:9 19:21 19:22,25 20:3,20,23 21:8 21:10,12 22:11,21,22 23:11 23:14,21,22 29:25 30:6,9 30:16 32:16,18 34:21 36:2 38:15 42:4 47:13 58:6 64:25 65:1,14,15,17 71:25 75:10 79:18,19,21,22 82:24 85:1 93:17 97:8 113:25 126:6,7 128:8 131:21 133:19 160:7 165:3 166:21 167:5
compensated
158:18 160:5,9,21
complete
41:13 79:1 87:5 120:18 154:25 171:14
completely
94:22
complex
26:13 27:5 151:6,12
compliance
14:13 17:6
component
63:13
compound
54:7 124:15
compounds
2:13 43:12 44:25 45:4 46:9 49:5,5 54:2 151:7,8
comprehensive
154:21
computerized
155:23
concerned
96:20 118:4
concerning
27:12,19 28:3,7 154:4 162:12 165:17
concluded
168:5
conclusion
4:25 20:13 25:7,13 26:1,12 26:21 27:4 150:22
conclusions
120:1
condensed
167:24 168:1
conditions
90:18 107:19 120:6,10 121:18 122:17
conduct
93:6 94:8 119:10
conducted
93:25 94:3 99:11 109:15 119:3
conference
8:16
confident
47:23
confirm
124:13 137:10
confused
23:5 106:16
connected
19:14 49:19,21 171:18
connection
7:23 122:4 162:24
conroy
5:10
consider
88:2
considerations
89:25
considered
104:22 105:12
consistent
10:18
constitute
171:13
constitution
5:11
construction
79:21 82:19 126:6
consult
157:9
consultant
159:21
consulted
158:11
consulting
157:2,7 158:9,17 159:6,24 160:6
consumption
82:7,18
cont
3:1 4:1
contact
88:7 112:25
contain
30:12,19 33:3,8,13,24 34:12 51:16 63:6,10,25 64:4,8 77:16 151:24 165:17
contained
34:10,15 35:5,7,10 38:10 51:22 63:9 87:23 90:23 111:8,9 122:7 151:15
containing
33:19 34:15 35:12,24,25 36:19 37:7 71:1 80:23 108:24 120:21 121:6 122:4 151:6
contains
36:6 151:13
contaminant
78:3
context
101:22 148:19
contexts
164:9
continue
16:6 78:12,12
continuing
37:13
continuously
13:25 39:19
conversation
24:15 128:17
conversations
132:5
conversely
9:15 10:3
copies
4:24 41:4 168:2
copy
71:10 87:18,19 167:24
corner
40:2,25 80:6 111:10 124:6 125:11 128:2 129:11 135:13 137:15 138:5 148:2 155:9
corporate
6:2 8:5 11:6 42:18
corporation
1:7 6:3,8 8:3,6 19:19 20:10 20:17,19,25 23:12,14,22 29:22 138:19 139:17 140:11,22 141:2,9 158:2 159:6,10
corporation's
138:8
correct
8:3 11:15,17 13:13 14:1 21:25 22:1 23:12,24 30:15 32:10,12 39:10,11 41:18 44:18 47:8 49:2 55:25 57:17 60:5 64:1,2 69:24,25 70:2 71:22 74:24 76:5,9 77:5,6 80:3,4,7 88:11,12 91:1,9 104:13 128:24 131:17 134:17 135:20 140:24 151:24,25 152:13 157:1 159:11,15 161:2 162:13,19,20 164:14 165:1 171:14
correcting
131:7
correction
165:9
corrections
169:4,5 170:1,7
correctly
95:10 148:11
counsel
4:25 11:23 42:15,21 83:17 136:21 154:20 161:18 171:19
counselors
6:15
county
171:2

couple
8:13 98:23 101:12 107:1 146:16 162:25 166:13
course
47:3
court
1:1 6:10,13,14 7:1,5 8:15 8:18 10:12 19:1 24:5 29:1 30:24 35:2 39:22 42:13 46:16 50:16 52:20 55:7,10 57:8,9 60:12,17,20,23 66:21,23 68:1 70:15 73:1 76:12 79:6 83:17 95:11,12 96:10 97:14 100:1 103:22 103:25 110:14 113:11 114:16 115:22 116:17 123:1 124:1 125:6,16 127:17 130:15 132:15 134:20 142:12 145:3 147:5 148:25 152:17 153:21 166:4 167:21 171:4
courtesy
167:14
cover
41:9 75:7 76:21,22 159:9 159:23
coverage
29:22
covered
36:23 160:25
craddock
3:19 133:4,6
craddock's
133:12
create
89:8 102:16
created
40:13,19 42:3 43:16 44:1 44:13,16,18 47:20,22,24 52:4 53:10 55:18 57:19,22 57:25 61:2,4 67:6,20,23 68:6,9,11,11 77:8 80:10 89:1 96:20 98:1,10,14 99:23 100:11 104:6,11 110:19 111:22 114:10,13 114:21,25 116:2,6,22 117:4 117:7 123:6,11 124:11 125:3,22 126:3 127:22 129:8 130:23 131:1 132:23 133:1 135:8,11 137:23 138:3 143:3,6 145:9,12 147:21,24 149:8,11 153:7 153:14
creating
58:7
crossover
38:6
cumming
130:6,8
current
12:20
currently
23:11 84:21 140:24
curtailed
86:2,3
custodian
140:18,20
custody
144:24
customer
2:22,23,24 53:22 54:12 78:19 79:23 80:18 81:19 82:3 85:5 90:6 91:16 114:4 142:6 143:16
customers
40:11 42:1,2 43:22,22 45:16,17,18,22 46:8 48:7,8 53:8,8,18 54:8 55:24 56:2 70:25 72:12,23 73:16 75:12 75:21,23 76:3,4,8,22 78:22 79:1 80:22 82:22 88:13 89:11,19 90:3,18 91:4,8,14 91:16 92:9,18,22 94:24 95:20 100:24 105:5 106:11 107:11 114:1 142:7
customer's
83:4
cv
1:6 6:11
cyga
148:20
cylinders
87:23

d

d.h.
148:9
damage
113:6 122:16,16
dap
85:2
data
89:7 144:7 155:15
database
154:21 155:14,17,18,22,22
date
6:4 17:25 48:4 53:11 68:10 71:3 80:2 99:21 138:4 170:5
dated
104:12 163:15 171:22
dates
9:24
day
169:7
days
162:2,2
december
13:23 99:22 145:12 163:18
decision
80:18 81:2 163:23
decisions
90:14
deem
161:15
defendant
10:18
defendants
1:9 5:6 6:21,23,25 12:25 138:10,14 144:23 152:20 156:1,5,15,21 162:18
defense
25:18 26:19
defined
115:17
definition
45:12 46:1 86:13,16
definitively
107:3
degrees
102:17
delete
170:3,3,7
deleting
170:2
demonstrated
106:22
dennison
75:10
denote
35:17,19,20 36:4
department
3:7,10 55:21 69:1 80:21 104:18 115:3,5,12 119:20 127:11,13 131:22 135:18
departments
139:15
depend
120:7
depending
92:23 100:6
depobook
5:14 6:13
deponent's
170:1
deposed
7:5,16,20 18:9,19,22
deposition
1:12 2:9 6:2,6 10:10,13,21 11:2,4,22,24 12:9,14,16,18 19:2,4,8,13 24:13 29:2 30:25 34:19 39:23 42:14 44:8 45:20,25 46:17,20 50:17 52:21 55:8 57:10 60:21 66:24 68:2 70:16 73:2 76:13 79:7 83:18 96:11 97:15 100:2 103:23 110:15 113:12 114:17 115:23 116:18 123:2 124:2 125:7,17 127:18 130:16 132:16 134:21 142:13 145:4 147:6 149:1 152:18 153:22 154:2,11 161:16 162:9 166:11 167:19,22 168:4 169:2 170:4,5,7 171:8,11
depositions
10:17 18:14
describe
40:7 48:8 70:22 73:12 76:19 88:21,24 90:8 103:2 103:5 108:2,20 113:21,21 117:21 126:14 128:12 133:14 146:15
described
133:17
describes
77:24 88:22
describing
76:23
description
41:17
designated
46:23 154:4
designation
48:3
designations
35:16,17 37:16
designed
35:23
designee
8:6 11:6
destroyed
141:6
details
29:20 144:20
detected
85:24
detection
128:15
detergents
150:17

determination
50:3
determine
110:3 118:16 119:4,11 146:11
develop
54:13 56:11 109:1
developed
35:18
dialogue
24:4
dick
10:15
differ
151:9
difference
49:16
different
15:15 24:14 130:3 151:7 160:2,22
differently
151:20
difficult
120:1
diphenyl
99:1
diphenyls
98:23 99:7
directed
42:17 91:7
directly
45:22 90:5 106:5 157:20 158:15
director
3:9,12 14:4 17:18,21 70:24 113:20,24 114:3 116:25 133:6 145:19
directorship
133:12
disagree
47:5
discontinue
71:1
discontinued
71:4 72:20 85:18
discovery
12:4,11,12 154:12,12
discriminate
106:17
discuss
69:7,14
discussed
17:5 69:8 91:19 92:24 120:5,7 121:19
discussing
41:18 121:17
discussion
101:23
discussions
11:23
disease
118:10
disinterested
171:16
dispute
163:3
disseminated
90:2 91:13
disseminating
121:5 122:3
distribution
165:23
district
1:1,1 6:10,11 74:3,15
division
3:23 21:10 23:10 25:3 27:18 54:25 55:2 56:19 82:19 118:1 123:15 128:10 150:10,18
divisions
74:3
document
3:13,16,25 10:9,23 11:20 28:24 29:10,13,15,19 31:1 31:16,18,20 40:2,5,7,9,12 40:18 41:9,24 42:3 43:8,11 43:14,16,20,21,25 44:15,18 46:11,14 47:15,18 48:5,6 48:24 51:5,6,10,25 52:4,11 52:24 53:9,13,23 55:13 56:5 57:11,16,25 58:1,8 59:14,17,18,19 60:3,25 61:2,23 67:1,3,7,20 68:4,6 68:14 69:12 70:18,20,22 71:12 72:8 73:4,6,13,23 74:22 75:15 76:15,19 77:1 77:8 78:16 79:9,11 80:1,8 80:10,14 81:5,9 82:3,24 84:2,5 88:22 92:23 93:3 95:4,6 96:14,16,20 97:2,3 97:24 98:1,14 99:9,21,23 100:4,8,10 101:7 104:2,4,6 104:10 106:14 110:17,19 111:22 112:12 113:8,14 114:8,9,19,21 115:8,20,25 116:2,9,15,20,22 120:25 122:11,23 123:4,6 124:4,11 125:3,9,19,22 126:3 127:20 127:22 128:12 129:8,12 130:18,20,23 132:18,20,23 133:1,4 134:23 135:6,8 142:22 143:3,5,6,11 145:6
document (cont.)
145:8 147:8,18,21 149:3,5 149:8 152:20 153:3,5,23 167:2
documents
12:13 26:13 27:5 41:3 47:1 47:2 55:14,17,18,23 67:7 79:14 83:3 84:20,24 90:2 97:20 105:24 122:13 137:4 137:11,13,18 138:20 139:2 139:8,11,24 140:5,10,12 141:5,9,9,16,17,22 142:5 144:22 148:18 153:11 154:1,5,6,7,22,23 155:20
doing
8:23 10:15 14:25 15:9,13 16:3,15,18 17:5,11 24:1,11 59:22 157:8
dominique
5:8 6:24
doses
109:13 110:2 118:9
doubt
52:3 74:14 77:7 84:17,19 111:21,23 114:9,12,24 116:5 117:3,6 123:9,10 124:10 125:2,21 126:2 127:25 129:8 130:22,25 132:22,25 135:10,12 143:2 145:12 147:20,23 149:7,10
dozen
88:23
dr
3:19 7:9 40:5 42:17 43:14 46:21 47:18 50:11 84:3 92:8 98:6 117:1,4 118:14 133:12 136:9 149:18,19 161:10 162:8 163:1,17 164:14 165:14 166:20
draft
153:6
draw
98:24 120:1
draws
150:22
drink
8:22 9:2 36:8
duly
7:4 171:5,9

e

earlier
17:6 35:6 77:20 87:14 99:6 106:15 120:4 126:15 132:9 133:10 135:1 151:11 152:4
early
17:22 21:4,5 44:3 65:8,21
early (cont.)
93:15 94:6 122:12 139:9
ease
23:18
easy
23:6
ed
5:15 6:12
edwards
5:10
effect
8:17 28:10,14 88:17 94:9 94:19 106:24 134:12
effective
28:19 71:2
effects
92:10 93:2,7 94:15 95:1 102:6,18,22 105:3 106:2,2 106:9,11,22,23 107:3,15 109:10,14 112:24 113:6 114:5 120:5,23 121:13 122:8,10,18,21
effort
144:18 147:2
efforts
53:4
eisner
5:3 6:18
either
19:3,4,13 23:22 24:19 84:20 99:11 119:3
electrical
100:18,18,24 144:1,1
electronic
4:24
electronically
167:25 168:3
elevated
102:9,12,13,14 106:25 107:13,15
eleven
60:17,18 61:12,13
elmer
104:9,14
emmet
113:17
emotion
36:16
emphasizing
73:16
employed
12:21 13:2,9,18,22,25 98:7 156:4,24 157:22 158:5
employee
128:5,17 131:18 135:19 148:20 149:25 156:14,20

employees
127:25 156:1
employer
12:20,22 13:14
enacted
134:10
encapsulant
71:9
enclosure
86:17
endeavored
41:4
entail
14:11,23 109:8,25 119:17
entailed
14:12 104:25 108:3,4 110:1 119:18
entire
32:20 41:9 101:19 111:5
entities
138:15
entitled
9:25 10:9 28:25
entity
98:4
environment
69:17 78:9,11 85:25 151:19 151:20
environmental
14:4 16:25 17:18,21 19:11 27:9 31:2 69:20 133:5,10
enzyme
107:9 120:12
enzymes
106:24,25 107:1
epa
165:15,16,17 167:8
equal
155:11
eruption
96:3
eruptions
95:19,22
escaping
93:24
especially
151:18
esq
5:3,7,8,11
essentially
99:3
established
56:19 101:25
esters
64:5,7
estimate
9:25 18:1 21:5 44:10,11,12 63:18 142:1,4
europe
22:12,20
events
9:22 41:3
eventually
17:17 24:19 126:21
everett
71:15,18 72:16 74:12,15 81:7
everyday
24:14
exact
170:2,2
exactly
27:22
examination
2:1,2 7:7 162:5 166:18
examined
171:7
example
36:3 45:16 52:17,18 54:6 70:23 112:25 134:25 152:3 152:10
examples
64:3 91:20 139:7
excellent
49:4
exception
71:6,8 87:13 94:18
excess
119:23
exclude
156:10
excuse
8:9,21 15:10,12 132:3
executed
169:7
exhibit
10:8,13 28:24 29:2 30:23 30:25 39:21,23 40:1 42:12 42:14 43:11 45:15 46:15,17 47:14 50:15,17,21 52:19,21 55:6,8 57:7,10 60:19,21 61:10 66:22,24 67:25 68:2 70:14,16 73:2,3,15 76:11 76:13 78:25 79:5,7 83:18 83:22,23 84:1 88:16 96:9 96:11 97:13,15 99:25 100:2 103:21,23 110:13,15 113:10,12 114:15,17 115:21,23 116:16,18 122:25 123:2,25 124:2 125:5,7,15,17 127:16,18
exhibit (cont.)
130:14,16 132:14,16 134:19,21 137:25 142:11 142:13 145:2,4 147:4,6 148:24 149:1 152:16,18 153:20,22 162:9,9,10 163:14 164:10 166:3,6,10 167:22
exhibits
2:7 3:1 4:1,23 137:7 167:23 167:25 168:2
exist
57:4 144:21 162:17
existed
20:3
experience
90:16 119:19
expert
18:4,9,17,25 19:7,12,16
explain
77:17 151:3 154:6 163:17
explanatory
132:2
exposure
3:5 98:23 99:11,19 102:8 105:25 106:12 107:16 114:6 118:13,16,25 119:4 119:11 120:23 121:14 122:8,14,21 146:6
exposures
109:2
expound
78:14
extensive
118:23 146:19
extent
27:6 29:18 38:10 60:1 160:8
external
150:22
extra
159:3
eye
106:8
eyes
106:8

f

facilities
133:21
facility
71:20 72:16 74:15
fact
40:20
factually
32:6
fails
106:17
fair
9:19,20 10:2 24:9,10,12 46:5,6 138:16 152:12
fairly
41:13
fall
61:5 86:20
falls
42:21 46:25
familiar
57:11 120:9,14,15,16 124:7 133:19
famous
162:7
far
38:5 39:20 47:10 96:19 107:9 118:3 122:9,9,22 146:17 160:22
fashions
132:8
fatal
98:22
february
114:13 117:7
federal
134:6,8
feed
88:7
feedback
142:7 143:16
feel
10:22 27:7 131:17
feels
46:21
figure
123:21
figures
58:15,18 59:2 62:2,6
filed
166:11
fillers
49:6
financial
159:5,16,19 160:10
find
60:10 109:12 146:24 150:24 153:6 154:22 162:8
findings
73:18 109:11 119:22
fine
10:7 20:6,9 24:4,10 29:3 31:19 47:6 50:1 54:19
finish
24:6,8 37:5,12

firm
155:4 158:22 159:19 160:13
first
14:20 17:3 31:9,12 32:1,7,7 35:21 50:23 77:11 82:13 96:17 101:2 104:22 105:7 118:3 122:6 126:9 134:4 149:14 150:6 152:23 153:2 159:17 162:8
fits
45:11
five
19:5 157:6 158:10
flick
62:18
flip
10:23 31:6,16,22 49:3 51:9 58:11 61:8 62:9 68:13 70:18 72:7 73:4 75:8 76:15 79:9,17 96:14 142:25
flipped
29:6 31:7 42:23 52:22 55:11 76:16
flipping
150:13
fluid
87:21
fluids
34:2,3,7 88:5 100:18,19,24
follow
73:14 92:1 107:12 166:14
followed
107:18
following
17:7 170:7
follows
7:6
food
88:6,7
foppe
5:15 6:12
force
8:17 80:18
ford
128:3
foregoing
169:1 171:8,13
forgot
118:21
forgotten
61:25
form
26:11 27:3,20 45:6 46:10 49:9 86:7 98:3 102:20 103:13 105:17 106:3 124:8
form (cont.)
125:13 128:19,25 129:1 135:3 143:15,17,19 157:19 158:4 161:25 170:3
format
67:8,9,16 77:1 81:9 129:3 153:11
formation
20:4
formed
19:19 20:15 22:24,25 24:17 158:2
former
14:10 139:25
forms
131:24 132:7
formulation
54:7,12
formulations
53:18,21 54:14
forty
166:4,8,9
found
78:11
foundation
38:25 58:21
four
18:8,14
fr
34:5,5
frame
24:24 77:19 120:13 121:7 150:8 165:20
framingham
75:11
frankly
58:23 75:24
free
10:22 131:17
frog
36:11
front
43:11 44:3,15 47:15 53:12 73:7,11,12 75:6 83:25 84:3 137:20
full
7:10 105:11 124:23 168:1 171:14
fumes
101:24 102:9,9,12,16,19 106:7 107:16 122:14
function
100:20 104:19 113:22 115:14 117:22 129:21 133:15,17
further
112:23 113:5 161:11
future
45:19

g

gannon
125:24
garrett
115:9,9
gas
16:19 103:9,11
gassing
102:25
gauze
94:13
ge
32:3
geeze
8:20
general
19:6 38:20 39:5 43:24 53:20 54:11,14,14 63:12 67:15 82:25 93:4 103:14 115:13,18 121:7,12 130:12 138:14 139:1 144:2 154:16 154:17
generally
59:20 76:3 87:23 90:8 94:23 104:22,25 105:1 108:2,20 109:23 110:1 113:21 115:15 117:21 121:17,20,24 122:2 123:14 131:20,23 133:14 147:3 150:7
generate
144:7,15,19
generated
140:6 143:23
geneva
65:2,13 66:11,12 69:22
genova
66:3,10
george
7:11
getting
17:18 23:4,16 86:25 137:12 158:1
give
7:10,14 10:4,11 17:25 18:1 24:8 41:23 42:24 44:5 64:3 124:16 136:14 147:14 152:10 161:14 163:7
given
18:4,15,16 53:7 92:17 107:18 120:19,22 121:11 121:11 122:20 162:2
given (cont.)
171:15
giving
19:7 73:17
glance
137:13
go
8:12,25 41:14 47:13 54:22 55:23 60:7 83:12 98:12 101:15 107:2 135:24,25 136:12 137:2 138:9 147:14 154:13 161:3 163:13,20
god
95:25
going
9:9,18,21 10:8,11 24:2 28:24 29:7 30:23 31:16 34:19 36:10 49:23 50:5 70:25 78:16 83:14 87:8 91:23 92:2 95:3 101:10,12 120:2,7 121:24 136:3,21 146:5,19 147:9 161:5,6,13 161:14 167:19
good
6:17,20 7:9 50:10,12 68:23 91:25 101:21 136:8
goodman
1:16 6:14 171:3,24
gorry
5:3
government
109:2
grab
9:2
grace
79:18,19 82:19 84:13 126:5 148:1
great
144:18
group
14:25 15:20 16:1,2,5,10,15 117:18,25 129:19 130:10 145:20 146:4 150:9
guess
8:10 10:4,6 86:10 128:10 144:18
guide
2:12,13,14 40:3 46:7,12
guilty
24:1
guy
130:3

h

habit
24:16

half
101:9 143:15
halfway
73:22 80:13 82:6 84:10 150:2
hand
40:2,25 48:2 74:8,8,9 75:9 80:5 111:10 124:6 125:11 128:2 129:11 135:13 137:15 138:4 148:2 166:1
handed
73:23
handled
131:4
handling
89:17,24 90:17,23,25
hands
16:7,16 17:11
handwriting
149:13
handwritten
40:17 44:2,6
happened
9:22 137:12
happens
24:13
happy
9:3 37:12 44:11
hard
24:15 93:3 149:14
harvard
93:14 107:21,25
hate
95:3
haywood
98:18
hazard
101:24
head
57:8 66:21 117:17,24
header
80:14 81:5 82:3
heading
44:24 48:13 81:13 84:11 150:2,20
headquarters
55:4
health
115:16 122:18
heard
29:15 95:9,15 125:25 141:18
heat
34:3 88:2,5 103:18,18
heavy
98:22
help
36:10 54:13 56:11 70:12 143:13
helped
143:10
helps
142:10
hesitate
63:22 102:23 122:24
hide
153:4
hiding
122:2
high
109:13 110:2
higher
103:11,16
highly
152:7
hill
2:3,5 5:3 6:17,18 7:8,12 10:14,22 20:19 25:9,17 26:4,9,17,23 27:10 28:1 29:3,4 30:6 31:1,5 35:15 36:19 39:24 42:12,21 43:2 43:5,8,10 44:10,12 45:14 46:15,24 47:6,14 49:16,23 50:4,10,14,19 51:2 52:8,23 54:16,20,24 55:6,12 56:18 57:7,14 58:25 59:16,19 60:2,16,18,24 61:12,16,18 63:24 66:20,22,25 67:25 68:3 70:14,17 73:3 74:21 76:14 79:5,8 83:8,10,12,21 86:12 87:8 91:22 92:7 95:17 96:4,6,8,13 97:13,17 98:9,13 99:25 100:3 102:24 103:21 104:1 105:23 106:10 110:13,16 113:10 113:13 114:15,18 115:21 115:24 116:16,19 122:25 123:3,25 124:3 125:5,8,15 125:18 127:19 128:22 129:7 130:14,17 132:13,17 134:18,22 135:25 136:2,8 136:23 137:6,19 141:25 142:14,19 145:1,5 147:4,7 148:24 149:2 152:15,19 153:19,23 154:15 155:5,11 155:14 161:3,10,21 162:15 162:21 166:13,16,19 167:12,23
hills
5:4
historical
84:21 138:20,24 139:18,22
historical (cont.)
140:14 144:14
historically
83:9
histories
119:25
history
56:21 83:5 98:21
hit
28:17
hold
15:15
hour
49:24 91:23
hours
159:13,13
howard
129:15
human
90:16 92:15,18,19,20 105:25 106:1 112:24 115:16 120:4
humans
94:10 95:1 99:20 118:18 119:12 120:23 121:13 122:8,21
hundreds
102:17 109:22,23 141:16 142:2,3
husch
1:19 5:7 158:22 160:13
hydraulic
34:1 87:20,24
hygienist
104:23

i

idea
139:1 146:20
identification
10:13 29:2 30:25 39:23 42:14 46:17 50:17 52:21 55:8 57:10 60:21 66:24 68:2 70:16 73:2 76:13 79:7 83:18 96:11 97:15 100:2 103:23 110:15 113:12 114:17 115:23 116:18 123:2 124:2 125:7,17 127:18 130:16 132:16 134:21 142:13 145:4 147:6 149:1 152:18 153:22 154:5 167:22
identified
146:7 154:7 164:16
identify
37:21
identifying
117:1 123:8
identity
88:24
ieshim
131:5
ii
1:12 7:3,11 168:5 169:10 170:4
illustration
54:9,10
imported
167:5
importing
166:25 167:10
inappropriately
37:14
inartful
9:10 96:25 155:15
inaudible
105:10
incarnations
21:13
incidentally
32:2
include
45:21
included
41:20 90:9 145:20
including
83:9 98:22 111:5
inclusive
169:3
incorporated
6:9 26:18
increases
103:20
increasing
85:25
indemnification
27:11 28:2,6,12 162:13,16 162:17,22
indemnify
163:5
index
2:1
indicate
45:2 81:10 144:11
indicated
154:13
individual
30:3 34:21 42:17 46:22 47:12 56:8 82:21 151:8
industrial
23:9 104:22 118:23 119:7

industries
65:2
industry
144:1
information
43:22 44:2,5 56:7 57:1 59:25 60:4,9 63:2,17 66:17 66:19 73:18 82:25 83:1,2 86:1 88:25,25 89:1,17,17 89:22 90:12,13,23 91:13 92:9,13,17,19,20,21 93:5 106:14 111:8 113:3,4 117:1 120:2,19,22 121:10,11,17 121:22 122:7,13,20 123:8 137:17 139:13 144:19 150:3,20 165:13,16 166:24
inhalation
108:25
injury
7:24
inorganic
49:6
input
112:19
inquires
91:16,17 114:2 133:24
inquiries
58:6 133:18
inquiry
116:15
insecticides
146:23,25
inside
86:18
insinuate
156:23
instance
151:13
institute
93:16
instructing
47:7
instructions
107:13
instrumental
150:11
insurance
29:22
intended
79:3
interacted
100:24
interest
22:3,16
interested
171:17
internal
2:20 55:22 67:12,16
internally
56:5,10
interpretation
27:4 129:4
interpreted
156:19
interpreting
26:12
investigating
146:17
investigation
146:18,21
investment
66:8
invoice
160:12
involved
14:15 108:8 115:15 118:25 156:1
involvement
155:25
involving
158:11
irritation
106:8
irruption
96:2,4
isham
131:4
ishim
131:7
isomer
152:9
isomers
150:24 151:14,14,24 152:2 152:6,11
issue
106:25 120:12
issued
127:8
issues
9:16 14:9 58:3 69:20 89:3 89:20 91:18 113:25 115:15 115:16 134:2 158:11
issuing
135:4
it'd
99:3
item
136:20

j

j.t.
97:7
jack
115:9
jaffe
5:3 6:18
jamison
5:3 6:18
january
68:12
japanese
22:9 164:15,21 165:13,20 166:21
job
14:2,5,8,18,23 15:18,24 17:2,14,16,20 100:20 104:19,19,24 111:7 113:22 115:14 117:21 129:21 133:14,17
john
3:13 123:13 125:24 133:4 135:14
joined
13:23 117:23
joint
54:1,7
jon
5:3 6:18 7:12
journal
97:6
jr
101:3
judging
72:2
july
135:11 171:22
jump
37:14
june
1:13 6:4 80:3,6 133:1 149:11 170:5

k

kaley
1:12 6:2 7:3,9,11 40:5 42:17 43:14 46:21 47:18 50:11 84:3 92:8 98:6 136:9 161:10 162:8 163:1,17 164:14 165:14 166:20 168:4 169:10 170:4
kanegafuchi
164:19,22
kanegahuchi
62:20 164:19
keep
8:12 113:16
keller
117:10,12 130:6
keller's
150:10
kelly
113:17 117:4 118:14
kelly's
117:1
kettering
93:16 108:10,13
kind
122:18
kinds
16:3 91:18 92:24 139:11
knew
155:1
know
8:23 11:10 15:11 20:17,25 21:14,17,19,23 22:6,12 23:13,14 25:14,15 26:22 27:16 28:9,13,16,18,21,23 29:20,21 30:4,5 32:4 36:23 37:12,16 38:5 39:20 40:12 40:14,19 41:6,12,25,25 42:11 43:19,25 44:16 46:8 46:13 47:22 50:20 51:18,20 51:21 52:8 55:2,15 56:3,9 56:16,18,20,22 57:6,19,22 58:22,23 60:1 61:4 62:4,22 62:24 63:8,16,23 64:11 65:3,6,9,10,19,22,25 66:4 66:14,16 67:12 69:2,8,18 69:21 70:10 72:3,16,19,25 75:23,24 76:6 79:18 82:1 83:2,11 85:4,12,14,16 88:19,23 90:7 91:19 93:1,1 94:16 95:5 98:6,7,13,16,18 98:19 100:10,12,14,20,23 100:25 101:3 104:14,19,24 105:8,12 106:20,21 107:5 108:16 109:11,20 110:9,22 111:13,17 112:7,11,23 113:1,5,7,9,17 114:2,4 115:4,9 116:12 117:12 119:2 120:22 122:13,16,22 123:13,17,18 125:24 127:7 128:7,20,21 129:1,5,15,21 129:22 130:3,4,11 131:15 131:20,23 133:6 134:12 135:16 140:9,11,13 141:1,3 141:4 143:7,22 144:9,20 145:15,25 146:1,2,5,10,19 147:3 148:10,12,18 151:17 153:5 155:25 156:14 157:13 158:1 162:7,17
knowing
102:21

knowledge
49:1 62:25 72:5 79:20 102:5 110:6 166:24,25 167:4,7,9
knowledgeable
90:13 100:23
known
48:24
knows
30:4 150:23
krummrich
115:6 119:14,21
kuhn
145:23,25

L

lab
108:6
label
111:5
labeled
163:21
labeling
111:1,5
labelled
164:11,16
labels
90:21 111:8
laboratories
118:24
laboratory
14:24 16:16,17,24 150:22
labs
93:22,23 119:7
lack
16:6 58:20
laid
153:3
langenfeld
111:11
language
12:3
lapse
12:2
large
117:24 118:9 141:14
largely
94:7,19
late
85:25 94:11 118:22 119:16
laughter
8:21 142:2 157:25
lauren
1:16 6:14 61:11 171:3,24
law
8:15 158:22 159:19 160:13
lawsuit
7:24,25 18:5 29:23,23
lawsuits
25:10,22 26:19
lawyers
155:9,9 163:10
lay
20:13 25:7,13 26:1,12,21 27:4
lead
66:18,18
leader
15:20 16:1,5,10 150:9
leakage
87:25
leaks
88:4
leave
13:4,6 136:23 163:10
leeway
34:20
left
13:5,7 40:2,25 48:2 74:8,9 75:9 123:18 124:6 125:11 129:11 137:15 160:6
legal
6:12 20:13 25:7,13 26:1,7 26:11,13,21 27:3,4,5 163:3
legally
163:8
legends
143:9
legible
41:7
legislation
133:20
letter
2:22,23,24 3:5,6,9,12,19 70:24 73:9,15 75:7,13,25 76:22 78:21,22,25 85:10 97:5 106:21 112:22
letters
77:2 91:16 106:13 107:6 132:11
levels
35:9
lexington
1:3 6:7,19 7:13 29:24 170:5
lexington's
10:10 161:18
lexoldmon
53:23 58:10 78:17
lexoldmon000958
77:25
lexoldmon003559
47:17
lexoldmon004616
43:13
lexoldmon006720
84:2
liabilities
26:5,25 27:9,12,19,24 28:3 28:7 162:19,24
liability
25:4,22 27:17 163:5,6,7
liable
25:10
licensed
171:4
licensee
22:9
licensing
22:8
limit
51:8 109:2
limited
22:11,20 29:7,9 147:9
line
23:7 24:25 30:9 31:25,25 32:23 33:10,17,18,18 34:1 34:3,7,11 35:4,7,10,11,15 37:1,25 38:7,8,9 40:11 41:10,18 42:10 43:23 45:3 46:9,19 48:25 51:13 62:18 63:13,25 72:13 77:10 81:20 89:9,21 115:2 145:21 149:14 170:7
lines
34:6,9 36:22 56:10
list
11:5,8 33:7 51:14 73:9 75:1 75:5 76:3,8 78:19,21,21,24 79:1
listed
11:19 75:19 129:12
lists
62:16 74:7 75:11 85:10
literature
14:14 17:8 73:19 106:7,16
litigation
14:16
little
24:3,14 38:19 54:22 62:17 83:22 111:3 136:10,11,13 137:14 138:7 141:21
litzsinger
111:16
liver
98:21 99:10,10,18 105:25 106:11,22,23,23,25 107:1,3 107:9 113:6,6 118:8 120:12 122:15,16
llp
5:7
load
32:1
located
55:3 65:4 72:24 85:12 127:13
logo
137:16
long
9:23 13:2,18 18:23 93:2 118:25 154:14
longer
16:14 34:15 110:10 159:20
longtime
149:24
look
11:8 29:4 39:24 41:14 43:6 44:20 48:10 50:19,20 51:3 52:17 53:23 59:4 67:1 71:11 73:21 74:9 75:9,16 77:10 78:15 80:1,13 82:2 97:20 99:18 100:4,6 104:2 112:5 116:8 122:11 126:9 130:18 131:25 132:18 134:5,23 137:19 142:14,20 143:14 149:3 162:10
looked
12:12 77:2 78:25 88:16 100:5 110:7
looking
41:3 43:2 59:23 68:18 101:2,6 114:8 119:18 129:11 137:25 151:16 153:1
looks
41:13 44:3 68:11 149:14
losing
158:3
lost
54:17 66:8
lot
110:4 150:12,18
lots
141:22,24 142:5
louis
1:19 5:9 13:16 55:5 93:22 127:14 138:25 171:2
low
103:5 126:19
lower
40:25 102:19 128:2 129:11 137:15
lunch
136:9

luncheon
136:5
lung
119:23

m

ma'am
163:12
magazine
45:10,23 46:4,4 97:6
magnitude
141:15
maintain
138:24
maintained
69:18 83:3 84:21 139:2 140:10 141:2
maintains
47:2
major
34:9
majority
63:24
making
15:12 17:6 105:4,5
manage
14:9
management
16:4,24
manager
123:15 133:12
managing
16:15
manner
171:20
manubeni
165:3
manufacture
22:10
manufactured
14:10 22:10 115:6 166:23
manufacturer
64:12,16,22 165:20
manufacturers
69:7,10,20 164:22,24
manufacturing
21:24 22:3 25:5,11,23 26:6 27:1 32:21 58:15,19 69:7,9 75:10 138:21 139:23,25 140:2,15 141:6
march
125:3 126:3 129:8 137:23
mark
10:8 28:24 30:23 42:12 46:15 50:14 52:18 55:6 60:18 66:22 67:25 96:9 99:25 110:13 113:10
mark (cont.)
114:15 115:21 122:25 123:25 125:5,15 127:15 132:13 134:18 142:11 145:1 147:4 148:24 152:15 153:19 166:5
marked
10:11,12 29:1 30:24 39:22 42:13 46:16 50:16 52:20 55:7 57:9 60:20 66:23 68:1 70:15 73:1 76:12 79:6 83:17 84:1 96:10 97:14 100:1 103:22 110:14 113:11 114:16 115:22 116:17 123:1 124:1 125:6 125:16 127:17 130:15 132:15 134:20 142:12 145:3 147:5 148:25 152:17 153:21 167:21
market
64:9 70:4 76:25 126:16 143:23
marketing
40:10 41:22 45:24 46:7,11 53:4 56:2,12,12 78:13 146:5
marubeni
165:5,6,13,17,20 166:20 167:9
mason
3:13 123:7,13
mass
16:19
massachusetts
1:1 5:12 6:11 70:9 71:16 72:24 74:10 75:11,20 85:15 144:12 161:24
mastics
44:24
material
89:7 103:7,8 110:4 126:20 164:5
materials
41:23 45:21,24 56:12 86:16 103:5,6 120:22 122:4 152:7 164:2
mather
98:7,16
matter
6:6 7:22 19:6,17 73:7,11 75:6 105:6 159:12
mcl215
71:13
mcl414
73:22
mean
11:16 27:23,23 29:24 45:20 45:25 52:14 57:2 63:14 81:22 83:7 86:11 90:7 93:2 100:23 103:15 105:19 107:5 113:24 123:14 127:7 131:25 139:8 156:22 157:6 157:8,8 159:21
meaning
49:20
means
20:18 102:25 151:4
meant
150:25
medical
3:7,9,10,12 14:14 104:17 113:20,23 114:3 115:12,16 116:25
medicine
114:1
meet
69:6,9
meeting
2:21 69:2,12,19
member
128:18,23
memo
3:7,8,10,11,22,24 113:2 163:15,22
memoranda
67:16
memorandum
2:20 67:13
mention
102:3 118:22 120:9,10
mentioned
17:24 38:5 41:2,22 46:14 74:21 86:16,21 87:13 89:16 90:1,25 91:11,11 92:13 105:24 107:6,7 109:15 120:12 121:10 122:14 129:24 132:9 135:1 151:10 155:14,19 166:20 167:16 171:13
mentioning
45:13
mentions
102:14
merger
19:24 20:15
mice
110:2
microphone
28:17 54:17
mid
21:17,17 67:17 85:25 87:6
middle
44:23 68:14
millions
141:16
mind
86:21 93:13 147:1
minimize
146:6
minimum
8:12
minor
34:6,8 63:12,14 94:18
minute
161:4
mischaracterize
92:15
misheard
96:6
missing
133:22
missouri
1:19 5:9 169:8 171:1,6
misspeak
131:16
misspelled
129:18,24
misspoke
163:22 164:2
misstate
91:3
misunderstanding
164:1
mitsubishi
22:9,17
mixed
38:11 49:7 124:20
mixture
35:21 36:5 124:22,23,24 125:1 126:25 127:3 150:24
mixtures
37:7 108:6 151:6,12
modesto
5:16
modify
95:15
moment
10:23 77:3
mon
29:25
monkeys
109:10,13
monochlorobiphenyl
78:6
mons
31:10 50:23 101:8 163:21 164:12

monsanto
1:8 2:20,22,23,24 3:6,7,8,9 3:10,12,17,18,20 6:9 12:1 13:15,19,22,23,25 14:20 15:14 16:10,22 17:15 19:25 20:2,3,11,15 21:10,11,12 21:13,14,24 22:2,9,10,11 22:12,17,20 23:3,3,12,13 23:15,18,20,22 24:17,20 25:1,5,17,21 26:4 28:3,7,13 28:19 29:25 30:6,9,16 32:11,15,17,20,23 33:10,18 33:24 38:12,17 39:2 41:10 41:23 42:4,9 43:17 44:18 45:2,22 47:2,20 48:7 52:4 52:12 53:4,15,17 54:24 55:18 56:18,23 57:20 58:6 58:15 59:10 61:2,23 63:5 64:5 67:6,16,20 68:7 69:6 69:18 70:8,25 71:4,25 72:11,20 73:15 76:8 77:2,8 77:12 78:9 79:14 80:11,22 81:18,23 82:21 85:4,8,18 86:3,5 87:10 88:3,4,10,13 88:18 89:8,19 91:6,13,17 92:9 93:6,9 94:1,8,24 96:21 97:11 98:2,4,11,14 99:11 99:17 100:11,15,21 104:7,9 104:18 105:4,15,21 106:10 106:24 107:5,10,23,24 110:20 111:1 112:16,19,23 113:20,22 114:10,22 116:3 116:23 117:4,19,24 118:1 118:15,22 119:3,10 121:5 122:3 123:6,7,18 124:11,24 125:22 127:2,5,23,25 128:5 128:14,17,24 130:23 131:18,24 132:7,23 135:3,8 135:19 137:10,16,18 139:16,16 140:14,17,19,23 142:6 143:3,20,22 144:7 145:8 146:10 147:21 148:20 149:8,24 150:8 153:3,7,11,14 154:7,21,22 155:20 158:10,12,13,16 159:20 160:20 163:4,23 164:25

monsanto's
11:25 25:11,23 26:5 27:1 40:10 46:8 48:4 54:8 58:2 63:25 64:9 75:12,20,22 79:1,23 91:7 116:24 138:20 139:22 140:15 141:5 154:5

montar
33:18 51:21 164:4

montars
33:11

month
159:8,14

monthly
160:17

months
87:20

morning
6:17,20 7:9,14 8:2,14 9:1 9:10 11:11,14 12:9,14,18 50:10,12 136:19

mortality
119:19

motions
161:25

move
91:23 122:1 141:23 152:8

moved
15:25 16:23

msds
88:19 89:4,18 95:21 120:8

msdss
89:8 91:11 120:5,13,21 121:3,6

multiple
108:12 109:6

n

name
6:12,17 7:10 21:13,15,20 22:21 37:8 52:13 69:4 85:9 93:22 117:2,9 124:14 125:25 129:25 131:16 138:15 145:14 146:1 148:1 148:2,5,5,8,13,14,18,21 149:15,15 150:5,14,14

named
23:11,22 34:2,3 171:8

names
23:4 33:21 129:12

name's
7:12 148:17

naphthalenes
108:6

napping
97:18

nations
155:8

naturally
70:6

nature
87:24

navy
112:15

near
118:24

necessarily
76:4 91:8 151:17

necessary
161:15

need
8:22 9:1 34:24 147:12 170:25

needed
111:9

needs
53:22

negative
94:19,22,23

neighborhood
82:20

new
15:12 19:21 23:15,18,20 24:17 25:1,17,21 26:4 28:3 28:6,13,19 77:11 86:22 140:14,17,23 158:10,11,13 160:20 163:4

nodded
34:13 57:8 66:21 126:8

nominally
35:25

non
70:3

nontoxic
105:12,16,21

normal
24:4

note
40:17 137:8 170:1

notes
44:6 165:19

notice
2:9 10:10 11:1,1,3,24 42:20 166:11

noticed
23:25 137:14

notification
44:4

november
114:25

number
2:8 3:2 4:2 12:2 27:5 31:23 40:15,21,23 43:13 47:16 50:23 51:10 61:10 63:11,22 71:13 74:7,23 78:17 80:17 84:2 101:7 115:5 141:18 142:16 151:9 166:3

numbered
11:7 35:16 37:16 44:21 62:9 73:22

numbering
10:20

numbers
10:14,15,18 31:8,9,17,17 35:20,21,22 41:15 51:10,14 53:24 58:10 61:7 68:15 75:9 80:17

numerous
26:12 93:21,21

o

oath
8:13,14,17

object
26:10 27:3 30:1 34:17 46:10,19 128:19,25

objecting
47:9

objection
20:12 25:6,12,25 26:8,15 26:20 27:2,6,20 45:6 49:9 52:5 56:14 58:20 63:19 74:18 80:24 86:7 98:3 102:20 103:13 105:17 106:3

objections
4:4 154:10 161:24 166:2,7 166:10

obviously
126:23,24 139:17 146:15 152:23

occasion
18:24

occasionally
127:9

occasions
18:7

occur
70:6 107:15,15

october
131:1

ocular
106:9

odd
24:14

offered
126:17

office
71:15,17 72:1,5 74:16 81:10

offices
13:16 55:5 70:8 71:25 74:3

oh
13:6 43:1 57:23 66:7 68:10 87:12 121:2 122:5 131:12 135:12

okay
8:24 9:21 10:8 12:5,16 15:6 18:4 23:4,19,25 29:12,21

okay (cont.)
31:4,18,24 32:6,11 33:17 36:12 37:5 38:24 39:25 41:2 44:20 46:3 49:23 53:1 53:25 54:20 55:11 56:1,4 57:19 60:2,14 61:9,17 62:22 76:2,7,11 77:20,23 84:5 86:15,24 87:2 92:13 95:14,24 96:12,23 97:17,19 98:9 101:21 105:10 109:23 112:6,16 118:15 119:10 121:25 123:24 130:9 131:12 132:11 134:17 135:3,23 138:10 140:22 141:1 142:18,22 143:12 148:19,23 149:21 152:14 152:22 153:13,17 157:10 157:16,17,19,21 158:17,23 161:3,21 163:13 164:21 166:15
old
8:11 19:25 20:2,11 21:11 21:13,14,24 22:2 23:3 24:20 25:5,11,23 26:5 27:1 41:4 99:4,6 139:16
once
8:9,9 18:18 42:15 46:18 103:17 151:18
ones
34:15 37:21 38:4 93:13,23 119:6 120:8,16,17
ooo
1:2 4:5 5:17 168:6
open
86:2,3,6,11,13 87:3,11,22 87:25
opened
72:17
operations
22:6,18,22 42:7 85:14
opinion
19:17 163:7
opinions
18:4 19:7,9
opportunity
155:12
opposed
34:21 160:17
order
12:17 80:19 81:2 83:4 119:4 141:15
organic
3:23 124:19
organizations
93:10
original
4:23 11:2 53:12 60:7 167:23
outcome
171:17
outline
31:2
outside
30:2 46:20 93:9 114:2
overlap
152:8
overlapping
152:2

p

p.c.
5:3,10
p.m.
136:7 161:6,9 167:19 168:5
packet
2:17
page
2:2,8 3:2 4:2 11:5 31:9,12 31:17,17,22 40:24 41:15 44:20,23 48:1,1,10,12 49:3 50:23 51:9 53:24 58:11 61:8 62:9 68:13,15 71:12 72:7 73:8,21 75:8,16 77:11 77:24 78:17 79:17 84:1,11 87:1 96:18,18,19 97:2,3 100:13 101:2,6 116:8 131:3 133:3 134:5 142:25 143:14 143:15 146:3 150:2,13 153:2 163:21 164:4,11,12 164:16 170:7
pages
58:14 67:4 169:2 171:13
paid
158:13,23 159:2,3
pamp
34:7
papageorge
149:15,18,19,22,23,23
paper
71:10 87:18,19
paragraph
68:17,18 82:6 98:20 101:8 101:9,18,19 102:11 105:8 111:24 118:2 126:9 134:4 146:4 150:21
paralegals
156:11
parentheses
115:3
part
25:1 42:6 53:12 58:7 62:12 74:22 78:15 107:24 153:1 154:10 159:1,1
particular
23:7 33:21 35:16,21 36:22 37:2,15 38:1 52:24 53:17 56:4,10 59:11 61:24 81:21 83:4 85:17 89:3 93:3 105:22 124:22 126:25 141:5 163:5,6
parties
75:6 171:18
partway
59:4 82:2 111:24
patch
94:12
path
154:14
paton
130:6,8
patter
2:17 55:15,17
pattern
92:1 151:21
pause
37:10
payment
157:19 158:21 160:13,14
payments
157:10
pcb
2:18,19 3:5,19 21:24 22:3 22:15 25:5,11,18,23 26:6 26:19 27:1,12,19 28:3,7 31:2 32:21 33:19 34:15 35:12,24,25 36:19,22 37:7 50:3 58:3,15 61:19 64:10 64:16,22 69:6,7,19 71:1 72:23 75:12,21 76:5 78:2 80:23 85:7 88:14 99:5,11 100:18 102:8 108:24 114:6 118:13,16 119:4,11,20 120:21,23 121:6 122:4,8 123:15 133:11,13 134:2 138:21 139:5,22 140:15 141:6,13 142:7 143:24 150:12 152:5 162:19 163:5 163:6 164:15,21
pcbs
15:3,7 17:5,9,10 19:10,14 19:17 22:10,10 27:25 30:7 30:12,19 32:12 33:3,8,13 33:25 34:10,12,16 35:7,10 35:12,12 36:5 38:3,9,10,10 38:12,18,22,22 39:3,4,10 39:13,14,19 49:22 51:16,22 53:19 56:23 58:6 59:8
pcbs (cont.)
62:23 63:6,9,10,12,25 64:4 64:8,13,16,22 65:6,14,19 65:23 66:1,4,10,15 69:15 70:4,6 71:4,9 72:20 75:25 76:24 77:16 78:2 85:18,24 86:2,6 87:10 92:10,25 93:7 94:9,12 95:1 99:19 100:23 102:15 103:9 105:16,21 106:1,2,5,12,18,22 107:4 108:23 109:2,10,14 111:2 118:25 119:24 121:14 122:21 126:15 128:15 129:20 133:19,25 134:8 139:11,15 145:20 150:1 151:7,8,22 164:1 165:14,21 166:23,25 167:5,10
pct
50:3 164:8
pcts
49:22
pending
6:10 9:4 35:3 43:4
people
15:9 16:2 75:25 87:25 89:2 90:13 127:24 156:4
people's
94:14
percent
35:9 36:6 63:18 126:11
percentage
35:20 63:8 78:2
perfect
9:23
performed
92:25
period
110:4 120:17 123:19 149:25 155:21
periods
58:19
person
94:20,21 111:1 171:16
personal
7:24 158:2
personally
155:7
pfizer
20:24 21:1,7
ph.d.
1:12 7:3 168:5 169:10 170:4
pharmacia
1:7 6:3,8 7:25 8:3,6 12:1 19:19,24 20:4,10,16,19,25 21:7 23:1 24:20,21 25:4,9

pharmacia (cont.)
27:11,18 28:2,13,19 29:21 29:24 42:19 138:8,12,13,19 138:23 139:17 140:11,19 140:22,23 141:2,9 157:7,9 157:11,15,18,20 158:18 159:6,10 161:1 163:6 170:5
pharmacia's
4:3,4 12:3 140:18 166:7,10
phone
17:8
phonetic
34:7 66:3 68:22 131:5
phosphate
64:7
phrase
138:14
phrased
156:17
phthalate
64:5
physical
19:10
physically
55:3 138:23
pick
155:12
piece
94:13
pitches
56:12
place
6:6 60:3 61:22 171:12
placing
81:10
plaintiff
1:5 6:19 10:9,18
plaintiffs
5:2
plan
2:11,15 31:3 50:22 163:16 163:18
plans
17:6
plant
71:17,18,19,19 115:7 119:14,20,21
plants
14:12 133:21 139:25 140:7
plastic
48:20
plasticizer
2:12,14,15,17 3:21,25 36:24 37:1,17,19,23 38:1 38:16,22 39:14 41:10 45:3 50:22 55:15,17,20 56:19,24
plasticizer (cont.)
59:5,8,11 61:19 63:5,9,10 63:25 64:4 68:19 70:24 71:4 73:16 75:23 76:3,22 76:25 79:1 85:10,18 126:16 142:8 144:5 146:4,12 163:16
plasticizers
36:20 37:6,9 38:13 39:19 40:4,11 43:24 47:16 48:9 48:22 54:25 64:8 66:15 71:2 76:1,5,23 77:11 81:18 81:24 85:11 86:5,20 87:13 103:9 126:17 147:3 153:1 163:18,24 167:6
plaza
5:8
please
6:15 7:9 9:2,12 10:14 29:4 37:5 50:19 60:11 77:18 95:17 99:16 101:16 131:17 142:14 162:8,10 163:14,17 164:11 166:1,3 169:1 170:25
point
15:19 16:18 17:12 22:8 38:16,17 49:12 50:2 58:3 86:10,23 99:8 115:17 122:15 136:17 139:19 155:22 156:25 157:3
points
133:8
policy
16:25 133:10
pollutant
146:7
pollution
31:2 115:17
polybutene
48:13,17
polybutenes
49:6
polychlorinated
15:1,3 17:4 36:5 49:14,15 77:21 78:5 106:18,18 108:5 108:5 126:18 163:24 164:6
polymer
48:18
polysulfide
81:15
pony
19:18
portion
35:5
position
14:5,21 15:25 16:12,24
position (cont.)
17:2
positions
15:15 16:9,21 17:14,16 69:15
possession
144:23
possibility
95:19
possible
88:7
possibly
126:10
potential
40:11 42:1 43:22 45:17,18 48:7 53:8 56:2,9,12 89:14 92:10 94:25 99:18 105:3,25 106:1,11 110:5 112:24 113:5 114:5 122:7,9,20
potentially
25:10
pounds
82:20 84:14
pr
131:22
practice
10:17
practitioner
158:8
precautions
90:19
precise
9:24 17:25
predecessor
32:15
preparation
12:8,13 154:2
prepare
11:22 12:17
prepared
11:10,14,19 40:9 153:7
presence
69:15
present
35:9
presentation
2:19
presented
155:3
press
3:17,18,20 127:6,8 128:18 128:23 131:23 132:4,6,7,10 134:1,25 135:4 139:12
presumably
79:16 165:22
presume
160:14
pretty
24:2 38:19 132:2 156:24
previous
60:13 95:13 166:10
previously
38:4 72:14
primarily
14:9 15:13 16:19 17:3,10 17:19 100:18
primary
14:17 35:10
print
41:7 170:1,2
printed
62:12
prior
12:16 15:24 19:12,22 39:12 57:5 72:19 160:5 167:1 171:7
pro
8:11
probably
7:19 17:22 19:1,4 29:9 35:7 38:14 94:5 110:2
problem
54:18 83:22 96:8
problems
89:14 105:25 107:10
process
10:20 151:20 154:7 164:6
processes
35:22
prodelec
62:16
produced
32:8,8,14,16 47:1 152:20
producer
164:15 165:13
producers
62:13
producing
32:12
product
3:14,15,21 17:4 24:25 34:9 34:9 35:4,7 37:20 45:13,14 45:16 46:22 49:14,15,20 51:21 56:10 63:13 81:20 82:22 88:24 89:2,3,14,14 89:23,25 90:1,5,9 91:5,8,12 94:25 95:20 100:17 108:24 121:12,16 122:3,6,22 124:7 124:14 125:12 126:19 133:5 136:25 137:5 139:13 146:5,12 149:25 151:17

production
71:20 139:13 154:5
products
25:2 30:10 32:23 33:3,7,10 33:19,24 35:8 36:20,23 37:18 38:1,4 43:23 49:7 53:18 63:5,9,10 64:4 71:1 72:12,23 75:17 77:12,15,24 77:25 78:13 79:21 80:23 82:19 85:7 88:14 90:22,22 90:24 107:9 111:2 121:6,9 142:8 143:20 146:13,18 151:5,19,22 164:9
prompted
166:17
pronouncing
32:24 148:11
pronunciation
164:15
pronunciations
131:14
proper
105:2,2
properties
19:10,10 48:8
propounded
35:2 60:12 95:12
protect
90:19
protected
105:4,6
provide
43:22 89:11,19
provided
45:22 92:9,22
public
127:10 128:10 135:17
publication
48:4
published
53:15 97:5,6
pump
34:7
purchase
32:20 82:22 83:5 84:23 85:7
purchased
32:17 38:15 84:13 85:11
purchasing
72:14
purely
166:6
purporting
98:8
purports
80:6
purpose
43:19 48:5 49:8 69:12 80:14 81:13 143:16
purposes
39:13 40:10
push
80:21
put
59:17,19 63:22 94:13 101:22 122:17 159:12 161:13
puts
13:12
putting
137:11
pydraul
34:2

q

qualified
163:7 171:5
qualify
46:3
quality
40:3
quantitative
63:15
quarter
74:9
queries
132:3,4,6
query
3:17,18 131:24
question
9:4,7,12,16 10:5 11:18 24:2 24:7,8 26:3,11 27:3,7,21 30:1 34:20,23 35:3 38:19 43:4 45:7,9 46:11 47:8 49:10 57:13 59:1 60:7,8,10 60:15 86:8,22 87:9 95:9,13 98:12 99:15,16 102:23 105:18 106:4 122:24 129:3 137:12 138:2 147:16 152:23 155:16 156:17 157:14,16 161:25 165:25
questioning
46:19
questionnaire
3:14,15 124:7 125:12
questionnaires
137:5
questions
7:8 9:9 29:8 42:16 46:21 47:10 51:8 60:13 96:25 98:24 100:6 101:12 113:16 114:5 115:19 128:14,23 129:2,5,6 147:8,13 161:11
questions (cont.)
162:4,6,16,21,25 166:12,19
quick
36:8 43:9 49:24 80:18
quickly
24:2
quite
9:23 15:14 31:9
quote
129:6

r

raise
54:21
range
139:14 152:1,3
rarely
106:9
rash
94:21,22 118:11 122:15
rashes
95:23 105:24 120:9 122:19
raspy
15:11
rats
108:7 110:2 118:25 119:1
raychem
65:16,18 66:14 69:22
reach
50:2 102:16
reaction
82:4
read
12:16 34:24 40:16,16,22 49:6,11 60:10 82:13,17,21 84:15 101:15,18,19 105:7 112:3 118:5 147:8,12,17 149:14 162:2 169:1
reading
45:9 48:24 147:16
reads
43:12 47:15 105:11 145:21 146:4 150:21 151:23
ready
50:20 136:12 137:12
real
43:8
realize
24:11
really
17:16 18:23 20:17 21:23 27:16 28:20 35:23 40:19 51:20 63:22 72:3 131:9 146:22 150:23 151:17 153:9 156:14
rearranged
56:21
reason
7:13 32:9 35:17,18 36:11 52:3 56:5 58:24 59:1 67:19 67:22 74:14 77:7 81:4 84:17,19 85:17,21 99:22 111:21,23 114:9,12,24 116:5 117:3,6 123:9,10 124:10 125:2,21 126:2 127:25 129:7 130:22,25 132:22,25 135:10,12 136:14 137:17,22 138:3 143:2 145:10,11 147:20,23 149:7,10 153:13
reasons
53:14 85:23
recall
9:24 17:20,23 18:22 21:3 51:24 52:1 73:9 92:11 93:24 96:17 107:6 109:18 110:10 119:6 120:11,11,19 121:21 144:2,4 146:23
receive
158:21 159:13 160:14
received
154:20 157:10,14,17 158:15 160:13
recognize
35:24 51:5 117:1 148:6,13 148:14,21 149:16 150:5,14
recollection
72:4,22 108:18 122:12 167:2
recommendations
72:11
record
7:10 20:8 26:10 31:1 34:18 40:1 42:16 43:10 46:19 47:10 50:4,6,8,21,25 54:23 73:13 76:20 83:12,15,20,21 92:3,6 131:10 135:25 136:4 136:6 154:9,11 161:4,6,9 161:14,23 163:14 166:6 167:20 171:14
recorded
171:12
recordkeeping
138:8
records
57:4 62:5 132:2,3,4 138:20 138:24 139:18,22 140:3,8 140:15,18,19,20,21,23 141:2,13 144:15,17,20,21 156:2
refer
138:13

reference
31:15 32:4 45:19 74:2 82:12,15 97:10 99:9 111:11 111:15 112:7 115:4 126:11 128:3 131:3 134:6 135:14 145:22
referenced
69:12 155:17
references
71:15
referred
61:14
referring
20:1 46:11 69:3 74:23 138:15
refers
112:12 113:8 162:12,23 163:22
reflect
42:16 128:22
reflected
138:4
regard
17:9 59:14 82:24 87:12 121:18 133:19 140:6 146:23
regarding
27:25 28:12 162:19
regional
71:25
regular
47:2 127:5,8
regularly
7:4
regulations
14:13 17:7 133:20,22
regulatory
73:19 88:25
related
25:18 26:19 27:12,19 28:3 28:7 138:20 139:5,11,22,25 140:15 141:5,13 142:7 163:18 171:18
relating
35:22 154:12
relation
98:4
relations
127:11 128:10 135:17
relationship
22:13
relative
8:16
release
3:20 103:6 134:25
released
102:12
releases
127:8 132:10 135:4 139:12
remain
25:9
remaining
155:21 165:21
remedial
140:7
remediation
27:9 140:7
remember
18:23 92:14 95:25
remind
118:20
renumber
10:19,20
repeat
95:8 99:16
replace
72:13 81:20
replacement
72:8
replacements
81:14,22,23 126:10
reporing
6:13
report
2:18,21,25 3:3,23 79:13,15 80:2 84:8 106:6 128:14 144:16 165:15,17,18 167:8
reported
16:3 69:16,17 73:19 78:8 106:9
reporter
6:14 7:1,5 10:12 24:5 29:1 30:24 35:2 39:22 42:13 46:16 50:16 52:20 55:7,10 57:8,9 60:12,17,20,23 66:21,23 68:1 70:15 73:1 76:12 79:6 83:17 95:11,12 96:10 97:14 100:1 103:22 103:25 110:14 113:11 114:16 115:22 116:17 123:1 124:1 125:6,16 127:17 129:3 130:15 132:15 134:20 142:12 145:3 147:5 148:25 152:17 153:21 166:4 167:21 171:4
reporter's
128:14
reporting
5:14
reports
69:19 88:4 91:18 139:12
reports (cont.)
143:23 144:5 150:23
represent
152:19
representative
6:3 12:1 34:22 42:18
represented
69:2
representing
6:13 154:20 159:20
represents
80:8
reproduction
109:14
reproductive
109:10
requested
4:25 60:9
requests
12:4 154:20,23 156:3
research
14:22,25 15:6,16,20,25 16:1,5,10,13,22 17:12 139:12 145:19
researching
81:23
reserved
162:1
respect
60:9
respective
171:19
respond
58:5
responded
91:17 133:18 162:17
response
26:24 113:2,8 128:13
responses
4:3 12:3,11,13 154:8,24 155:1
responsibilities
14:8,16,17 15:24 16:4,14 17:1,3,19 104:25 114:3 115:18 133:11,13 150:1,8 150:11
responsibility
25:18 26:18 123:16 129:20
responsible
113:24
responsive
154:8,23 156:2
rest
45:24
restate
26:2
restated
28:25
rested
136:10
restroom
9:2
result
19:23 118:8
results
84:11 90:15,15 94:16
retainer
158:25 159:1,7,9 160:17,24 160:25
retest
94:21
retired
159:18
reverse
170:25
review
12:13 95:2 120:25 140:12 154:25 161:15 167:15
reviewed
11:24,24 12:3 51:1 134:24 154:1,24
reviewing
95:4 122:23
revised
2:9 10:10 11:1
rf
34:5
rhesus
109:10,13
richard
5:11 6:22 145:15,15
right
9:5 10:15 18:2 31:15 32:24 36:17 38:19 43:3,7 68:25 74:8 77:19 80:5 86:10,15 87:12 93:24 101:14 109:17 111:10 128:2 134:15 135:13 138:4 142:2 147:10 148:2,8 153:18 154:19 161:12
ring
52:13
rings
49:19,21 151:10
risk
146:6
robert
1:12 6:2 7:3,11 110:22 168:4 169:10 170:4
role
15:21 16:1,5 101:1 104:20 146:2

room
8:16 103:16
ross
5:3
roughly
63:8 71:3 123:19
rpr
1:16 171:24
ruabon
98:5
rutter
2:4 5:7 6:20,20 12:6,7 20:12 25:6,12,25 26:7,10 26:20 27:2,20 30:1 34:17 42:15 43:3,7 45:6 46:10,18 47:4,9 49:9 50:25 52:5 56:14 58:20 61:10,13 63:19 74:18 80:24 86:7 95:8,14 98:3,10 102:20 103:13 105:17 106:3 128:19,25 135:24 136:1,24 137:2,7 141:23 142:16 154:9,17 162:4,6 165:12,24 166:5,9 166:15 167:15

s

safe
89:17,24 90:16,23,25
safely
89:25
safety
89:7 133:5
sake
23:18 31:15
sale
71:1 84:18 163:23
sales
38:18 42:6,22 46:25 53:4 54:25 55:5,21 56:19 57:4 58:15,18 59:7 61:19,24 64:10 65:10,22 68:19 69:7 69:9 70:8,25 71:4,25 72:1,5 72:20 74:3,16 80:21 81:10 85:18 86:3 87:10,21 88:1,4 88:8,9 134:8,15,16 144:7 144:11,17,21 146:24 165:23
salesman
79:16 81:3 126:1 148:3
salesmen
56:7,8,16 91:19
sample
151:16,18
santicizer
32:24 33:7,18 37:25 38:7,9 51:13,14
santicizers
37:3,6,8
santovac
34:8
sat
10:16
save
57:15
savinelli
5:8 6:24,24 166:1 168:1
saw
78:21
saying
155:2
says
32:1 40:2,3 44:24 48:13 49:4 54:1 59:5 62:13,21 68:19 71:25 74:12 75:10 77:11 79:18,21 80:18 81:6 81:7,14,22 82:3,7,18,18 84:13 88:17 98:5 115:3 118:3 124:6,14 125:12 133:5 150:3,20
scale
152:8
scanned
142:21
scientific
14:14,25 17:8 93:22,25 109:16
scope
30:2 46:20
scott
150:3
scribbled
148:15
se
90:12
sealant
54:1,7 81:15
sealants
42:10
sealed
86:18
sealing
44:24 45:4 49:4
search
156:2
searches
154:21 155:24
second
42:24 54:17 68:13 74:22 79:17 83:13 96:18,19 97:2 97:3 98:20 101:6,8,8 105:8 112:3 116:8 118:2 130:4 131:3 133:3 136:1 146:3,3
second (cont.)
150:13
section
49:13 62:13 81:6 90:17 118:3 138:9
sections
88:23 154:25
seeing
51:24 93:3 96:17
seek
142:6
seen
10:23,25 11:1,3 29:10,13 31:20 40:5 43:14 47:18 51:6 52:2,11,23 55:12,14 55:16 57:16 60:24 67:3,4,7 68:3 69:4 70:20 73:6,7,8,10 73:11 76:17 79:11 84:5 91:18 96:16,18 97:24 100:8 104:4 110:16 113:13 114:18 115:24 116:19 120:18 123:3 124:3 125:8 125:13,18 127:19 130:20 132:20 135:6 139:7 141:8 142:11,22 143:17,19,25 144:10 145:5 147:18 148:1 149:5 152:24 153:2,10,10 153:24 167:9
self
12:21 13:9 132:2 156:24 157:22 158:5
sell
30:9 38:22 39:9,19 77:12 86:5
selling
30:7,16 38:12,21 39:2,4,13 39:14 41:10 65:6 66:10,15
senior
14:22 15:16,25 16:13,22
sense
20:15 45:20,24 141:12 154:16,17
sensitive
109:13
sent
56:1 70:24 75:7 78:22
sentence
68:19 82:13,17 87:6 101:9 105:7 111:25 118:3 134:5 151:23
separate
54:25 127:10
september
104:12 111:22
series
60:8 77:12 78:4 80:19
series (cont.)
82:12,14,15 118:21 126:17
serious
106:23 107:3 118:10,12
service
81:6
services
5:14 158:2 160:15
set
63:3 105:22 118:23 135:22 153:17
settlement
2:10 28:25 29:17
seven
61:15,16
share
56:7,9 64:9 143:23
sharing
27:18
sheet
89:1,7
sheets
89:18
sherwood
116:9,12,13
shipped
91:5 165:21
shipping
88:25
short
50:7,24 83:16 92:4 93:1 110:4 119:13 161:7
show
52:16,18 94:21 127:15
showed
94:20 137:4
side
48:2 170:25
sido
110:22
sign
162:3 167:16 170:3
significance
36:1
silibond
75:17
similar
16:3 77:2 86:19 118:11 159:22
similarly
1:4 6:8
simplest
158:4
single
37:20

sit
33:9 51:20 66:2 121:22
sitting
106:20
situated
1:4 6:8
six
13:3,11 19:4,5 87:20 142:17
sized
168:1
skin
94:12,14,15 95:19,22 98:21 105:23 112:25 118:10,10 120:6,9,9 121:18 122:15,19
skip
130:6
slight
119:23
slowed
94:5
small
48:2 78:2 103:6,10 119:13 137:16 143:9
smith
101:3
smoking
119:25,25
sold
36:20,24 37:1,8,16,19 38:1 56:24 59:11 62:23 64:13,16 64:22 65:14,19 66:1,4 70:4 72:23 77:15 90:24 124:24 124:25 127:2
sole
158:8
soliciting
143:16
solutia
1:7 6:9 12:23,24 13:2,4,5,6 13:7,11 14:2,6,10,10 22:24 22:25 23:8 26:17,23,25 27:12,19 28:6 29:24 139:21 139:21 140:1,11 141:1 157:3 159:24,25 160:6,15 163:4
solvent
124:19,20 126:23,25
somebody
88:18
sorry
11:25 21:3 24:10 25:24 26:2,3,24 28:17 31:3 36:10 37:4 43:1 46:4 53:2 65:24 77:6,24 97:16 98:12 99:6 99:14 105:10 118:7 123:23
sorry (cont.)
165:6
sort
60:4 86:17 94:20 111:6 126:7
sounded
87:5
sounds
44:7
source
151:18 165:12
space
170:25
speak
9:12 98:8
speaking
164:24
speaks
167:3
special
90:18
specialist
6:13 16:14,22 100:17 115:18
specialty
115:17
specific
22:13 24:25 36:1 43:24 44:5 46:5 48:19 53:21 54:12,12 55:16 60:9 63:11 72:4 89:13 102:21 120:4,19 121:11 138:10,15 140:2 146:11,15 150:11 160:16
specifically
12:5,15 17:23 20:18 21:3 21:18,21 22:6 40:14 42:1 44:15 46:13 51:18 56:17,22 57:23 62:24 64:11 68:18 70:5,10 72:25 73:10 86:4 92:20 98:17 100:22,25 110:11 113:2 122:16 123:16 129:22 130:11 137:20 139:5 159:2 164:3 164:11
specifics
25:15 122:1 146:21
specify
170:3
spectrometry
16:20
speculate
10:4,6 44:9 153:16 156:13
speculating
153:15
speculation
44:8 52:6 56:15 63:20
speculation (cont.)
74:19 80:25
speculative
141:24
spell
65:17 93:19 129:25
spelled
129:17
spelling
65:18
spent
160:17
spin
23:1,2 24:22 140:1,6
sponsor
93:12 99:17 108:1 112:16
sponsored
93:9 94:1 97:11 99:12 107:23,24 119:3
springs
147:1
spun
13:6 23:7 24:19,21 25:1
ss
171:1
st
1:19 5:9 13:16 55:5 93:22 127:14 138:25 171:2
staff
16:25 133:11
standard
6:5
standards
109:1
start
10:20 15:21 24:7 26:24 30:16 68:17 96:24 103:18 118:19 121:24 155:15 159:17
started
14:3,20 21:19 44:8
starting
11:5 36:7 73:8 94:4 155:20
starts
74:23
state
6:15 91:5 144:8 169:3 171:1,5
stated
44:14
statement
146:8 151:1,3,24 152:1
states
1:1 6:10 22:18,22 62:23 64:10,13,17,23 65:7,14,20 66:10 69:24 98:5 134:9
states (cont.)
155:10,13 165:22,23 167:1 167:10
station
74:12,15
stayed
17:19
staying
14:13 17:7
stem
26:5,25
stemming
25:22 105:25
stenographically
171:12
step
154:18,18
stepped
87:6
steps
11:21 107:10 112:23 113:5
steve
148:20
stewardship
17:4 133:13 150:1
stipulation
161:13,22,23
stock
80:18,22
stockpiling
88:14
stocks
165:21
stop
39:2,4,14 146:16
stopped
38:21 39:13 87:21 88:1,3,4 88:7 94:6
stored
140:8 141:10
strayed
47:10
straying
34:18
street
5:15
strike
96:24 141:23 161:25
structure
49:18
studied
109:9
studies
15:10,10 92:18,21 93:2,7,9 93:12,15,25 94:8 97:10 99:12,12,18 108:9,12,21,22

studies (cont.)
108:25 109:4,6,9,15,20,24 109:25 110:1,7,10,12 112:8 113:8 118:16 119:2,10 150:19
study
93:14,15,17 94:11,17 107:20,25 108:1,3 109:5,7 109:8 112:24 113:5 119:14 119:17,22
studying
108:4
subject
19:6,17 26:15 27:6 77:10 115:2 145:21
submit
154:10
submitted
160:12
subsidiaries
22:2,7
subsidiary
20:20,23 21:1,8 22:14 165:22
substance
111:6 153:2
subunits
48:19
successful
36:18
successor
19:22 20:10,14,17
suggest
53:17 81:14,22
suggested
53:20 54:8,11 86:1
suggestions
72:8
suite
5:4,8,15
summarize
40:10 58:2
summer
80:22
supervisor
79:16
support
14:16
supposed
58:23
sure
10:25 11:3 15:5 17:6 26:4,9 27:22 36:13 37:24 41:13 51:17 55:5 60:8 76:18 77:18 91:25 95:9,11 97:19 97:21 100:12 101:22
sure (cont.)
103:20 105:4,5,8,11 108:22 111:7 120:9,25 122:11 131:9 132:12 133:7 139:10 143:1 149:6 154:24 157:13 163:25 164:7
swann
32:19 35:19,23
swann's
32:20
swear
7:2
sweep
139:9
swisher
150:14,16,17,21
switched
162:22
switching
139:21
sworn
7:5 171:9
symbol
137:14
synthesis
15:12
system
48:4 86:6,14 87:3,11 88:3 103:19
systems
87:24 88:2

t

table
62:2
taken
1:18 8:13 50:7 90:19 92:4 120:1 136:5 161:7
talk
12:5,8 24:3 86:11 136:24 138:7
talked
12:11 34:11 51:13 69:22 77:20 86:4 95:19 105:23 106:15 107:20 108:9 109:4 112:8 120:3,3 121:9 126:5 126:15 130:5 133:9 136:20 152:4 160:22 164:9
talking
9:22 49:13 92:8 97:10 102:1,2,10,11 141:16 155:18 156:6,7,10
talks
72:8 82:14 98:20 115:2 126:10
technical
2:16 52:12 53:3,6,7,15
teenage
118:11
tell
29:12 40:16,22 47:25 53:9 78:24 104:10 143:6 153:9 171:9
temperature
102:10,15,21 103:16
temperatures
102:12,13,14,19 103:12,16 103:17 107:14,16
temporarily
83:22
tend
24:3
ter
49:20
term
9:17 15:2 16:6 20:2,18 54:10 86:12 93:1,2 102:25 118:25 158:4
termed
110:3
terminate
87:10
terminated
38:18
termination
88:9
terminations
88:10
terminology
162:22,24
terms
27:23
terphenyl
49:14,20 126:19 164:7
terphenyls
77:21 78:1,5 163:24
test
94:12,17 118:24 119:1,7
testified
7:6 8:1,5 18:25 19:1
testify
11:11,14,19 158:23 171:9
testifying
8:2,15,18
testimony
7:14 18:16 19:13 109:18 136:15,18 170:1,2 171:15
testing
3:8 93:11,21 99:12,12 110:1
tests
90:15 92:14,15,18,19,21,24 93:1,2,7,21 94:9 102:2
tests (cont.)
111:25 112:8,11,14,15,16 112:20 118:21,23,25
texas
65:1,3
thank
11:21 23:5 35:1 39:1 50:18 55:9 60:22 78:14 101:17 103:24 131:7 161:10 166:9 167:12
thanks
61:17 95:14 167:13
therminol
34:4,5 88:5
thing
23:25 82:23 146:17,23 147:13
things
17:5 32:22 54:11 56:21 106:13
think
10:25 18:8 34:18 38:15 43:21 49:25 50:1 54:11 65:16,16 74:22 76:18 81:22 91:21 94:4 98:11 105:20 106:6,6 108:18 122:5 130:1 130:5 132:1 134:13 136:20 139:7 141:18 146:17 148:17 156:24 164:1
thinking
18:14 147:1
third
31:25 51:9 71:12 111:24 134:4 164:3
thirty
142:17
thorough
139:9
thoroughly
102:4,4
thought
37:13 59:22 87:7 98:8 130:4
thousands
141:16,19,20,24,25 142:3
three
18:8,13 49:20,20 60:13 61:15,15,16 108:19 129:12 138:10
throat
15:11 36:11
thumbing
59:14
time
6:4,5 7:20 9:1,23 13:8 14:6 15:16 17:17 18:23 19:16

time (cont.)
20:22 24:24 27:10,17 28:1 28:5 38:21 39:2,6,9,12 41:11 47:6 57:6,15 58:3,3 70:4 72:20,21,22 77:19 78:9 79:2 81:21,23,25 83:8 83:17 87:10 99:8,17,23 102:5 104:21 105:15 110:4 110:25 120:13,17 121:7 122:6 123:16,19 128:11 129:20 133:8 138:4 139:19 140:1 144:8 145:20 147:11 147:14,17 149:25 150:8 159:20 160:6,16 161:11,14 162:1 165:20 167:19 171:12
times
7:18 8:8 9:10 18:12 19:12 48:21 96:25 124:21 132:10 134:3
timing
120:8
title
14:2 17:20 31:2 72:2 101:1 170:5
titled
50:21 55:14
titles
17:17
today
9:21 11:22 23:21 109:2 112:9 154:2 158:24 159:2,4
today's
6:3
told
96:24
toluene
124:17,18 125:1
tom
128:3
tool
56:2
top
32:1 40:2,3,17 49:4 54:1 68:10 71:24 79:18 117:9 124:6 145:14 149:13 153:1 164:12
topic
11:13 91:23 162:10,23
topics
9:22 11:6,11,19 30:2 34:19 42:20 46:20,23 47:11 154:4 154:12 162:9
total
82:7,18
totally
88:8
town
1:3 6:7,19 7:13 10:9 29:24
toxic
102:16 105:19
toxicity
3:6 101:24 108:4,23 110:3 110:5,8,11
toxicological
92:10 93:5,7 94:9 95:1 102:6,18,22 106:2 114:5 120:4,23 121:13 122:8,10 122:21
toxicology
88:24 89:16,20,22 90:9,12 91:14 105:2 108:23 118:4 118:21,23
trace
35:9
track
56:23 58:14,14 59:10 60:4 82:21
tracked
59:20
tracking
60:10
trade
34:2,3 37:7
tran
167:24 168:2
transcript
4:23,24 161:16 162:3
transcription
128:16,20
transcripts
12:17
transfer
34:3 88:2,5 103:19 133:10
transferred
133:9
transformer
86:18
trial
18:16 19:13 161:19 162:1
trick
19:18 20:5
tried
61:23
trouble
62:17 68:20 118:8
troubles
98:21,21 99:10,10,18
true
75:14,15 118:4 131:12 171:14
truly
146:7
trust
136:9
truth
171:9,10,10
try
138:9,17 146:11,24 151:5 155:11
trying
20:5 24:5 36:17 46:3 123:21 138:12,13 153:6 154:15
tucker
150:3
turn
164:10
twice
8:9,10
type
7:22 15:2,6 16:17 41:23 52:11 56:5 65:10,22 78:20 84:22 124:8 125:13 140:3 144:15 160:17
typed
80:6
types
15:9 17:1 37:15 64:3 65:25 66:4,6,9 79:14 88:9 90:8 139:1,8 141:5 144:4,14 146:12 155:13
typically
10:19 162:1

u

u.s.
70:3,4 109:1 112:15
unbelievably
118:21
underneath
133:5
understand
8:1,19 9:11,16,21 10:1,6 11:25 15:3 19:24 20:6 23:21 24:12 29:17 38:17 41:8 45:25 60:8 101:25 150:25 154:18 161:17
understanding
25:8,20 26:16 27:8,13 28:15 36:25 38:8 45:9 56:6 57:3 58:2 59:24 63:1,12 64:2 65:21 69:11,14 70:1 71:7 75:3,5,13,14 76:2,7 78:10,20,23 81:12 91:10 98:15 102:15,25 103:2 105:1,2 110:21 115:13 130:12 138:18 139:24
understanding (cont.)
140:5,17,25 154:19 155:23
understood
9:8,18 102:4
undertake
118:15
undertaking
81:3
undertook
118:22
unfortunately
41:5
united
1:1 6:10 22:18,22 62:23 64:10,13,17,23 65:7,14,20 66:10 69:24 134:9 155:8,10 155:13 165:21,22 167:1,10
untangle
163:11
upjohn
19:24 20:16
upper
80:5 81:5 111:10 125:11 135:13 138:4 148:2
ups
166:14
use
9:2 10:17 15:2 20:1,11 23:20 31:16 36:3,24 37:1 37:17,19 38:2,13,16,22 39:14,19 42:10 45:3,19,23 48:7 54:10 55:22 56:4,24 59:8,12 61:19 62:6 66:15 71:5,9 72:12,13 78:16 81:19 84:22 85:19 86:6 87:10,25 88:14 89:14,24,25 102:11 103:7 107:13,13,17 107:19 122:17 138:14 151:14 161:23 162:22 163:24 170:25
user
91:8
users
90:20 91:1 100:25
uses
56:9 66:9 86:2,3 87:22 134:10 146:17
usual
161:23
usually
103:4
utilizing
76:4

v

vacuum
34:7
vague
49:10 98:11
vapors
112:24
varied
104:21
variety
14:16 15:9 108:24 114:2
various
37:18 81:24 92:24
ventilation
107:14
verify
79:4 83:4 84:22
version
137:16
versus
50:3 63:9 163:5
video
6:2,13 131:11
videographer
5:13 6:1 7:1 50:5,8,25 54:19,21 83:14,19 92:2,5 136:3,6 161:5,8 167:18
videographic
1:12 169:2 171:8,11
view
140:12
voice
8:20
volatility
103:5
volume
56:23 59:10 65:10,22 83:1 141:12 144:7,11
volumes
82:22
voluntary
88:10
vs
1:6 6:8

w

w.f.
148:16
w.r.
79:19 82:19 126:5 148:1
wait
11:18 57:12,23
want
10:3,5 20:7 36:8 49:24 60:8 91:3,24 92:15 95:9 97:19 100:6 101:15 112:4 147:12
want (cont.)
153:4,4 156:10,20 163:25 170:2,3
wanted
36:12 98:24 101:21 136:24 164:7
warehouse
138:25 139:3 141:8
warn
94:24 106:10 107:10
warned
106:24
warning
90:17 107:18
warnings
89:13,19 90:9,12 91:1,13 92:8 95:20 107:17 111:6 120:3
water
8:22
water's
36:10
wax
66:8
waychoff
148:16
ways
91:12 105:2
weathering
151:21
weight
35:20 36:6
welcome
46:21 55:10 60:23 103:25 167:13
went
32:2 45:16 75:25 76:1 83:21 139:25 146:15
we've
10:15 41:4 49:23 84:1 112:8 121:17 126:5 130:5 139:7 148:1 154:13 160:22 162:3 167:16
whatsoever
171:20
wheeler
104:9,14
whichever
22:21
wide
139:14
wildlife
3:22 128:15 145:22
wilshire
5:4
withdraw
96:7
withdrawal
2:15 50:22 76:24 163:16
withdrawing
73:17
withdrawn
126:16,21
witness
7:2,4 18:10,17,25 20:13 25:7,13 26:1,12,21 27:4 34:13,25 36:17 42:23 43:1 50:18 55:9 60:22 103:24 126:8 137:1 161:20 162:2 165:6,8 166:8 167:13,17 171:7,15
word
118:5 124:16 151:14
words
162:7 170:2,3
work
13:16 16:3,16,17 107:24 117:25 150:12,18 157:2,7 157:12,22 158:9,14,17 159:6,9,24 160:6,8,11,20 160:21 161:1
worked
12:1 13:11 15:9 16:10 100:14 104:9 119:20 123:7
worker
109:2
workers
90:19 105:4,5 114:1,2 119:14,19
working
14:15,24
written
27:15 106:21 116:24 128:16 132:11 142:6 154:10 164:18
wrong
130:2 165:10

x

xylene
3:16 126:12,23,24 127:1

y

yeah
49:25 54:21 56:16 59:16,21 59:23 61:16 62:21 63:21 65:15 91:25 103:19 123:14 137:1,1 143:8 151:25 157:9 166:22
year
7:21 87:20 126:21
years
12:2 13:3,12,20 19:5,5 28:22 56:25 57:2 88:15 106:20 139:10 146:16 157:5,6,11 158:10

z

zeros
61:15