

Page 1 STATE OF ALABAMA IN THE CIRCUIT COURT OF CALHOUN COUNTY MARS HILL MISSIONARY BAPTIST CHURCH, et al., Plaintiffs, CIVIL ACTION NUMBER versus CV-96-243 MONSANTO COMPANY, et al., Defendants. DEPOSITION OF WILLIAM B. PAPAGEORGE, P.E. The deposition of WILLIAM B. PAPAGEORGE, P.E., was taken before Deborah Salers Garrett, Certified Shorthand Reporter, Registered Professional Reporter, as Commissioner, commencing at 1:20 p.m. on March 31, 1998, by the Plaintiffs, at the law offices of Lightfoot, Franklin & White, 300 Financial Center, 505 North 20th Street, Birmingham, Alabama, pursuant to the stipulations set forth herein. Regional Reporting Service, Inc. 755 Walnut Street Gadsden, Alabama 35901-0755	Page 3 1 EXHIBITS 2 Plaintiffs' Marked Offered 3 One 7 Two 11 4 Three 25 Four 28 5 Five 47 Six 53 6 Seven 58 Eight 69 7 Nine 78 Ten 87 8 Eleven 88 Twelve 90 9 Thirteen 95 Fourteen 98 10 Fifteen 101 Sixteen 103 11 Seventeen 108 Eighteen 112 12 Nineteen 114 Twenty 117 13 Twenty-one 137 Twenty-two 140 14 Twenty-three 142 Twenty-four 145 15 Twenty-five 148 Twenty-six 152 16 Twenty-seven 154 Twenty-eight 157 17 Twenty-nine 162 Thirty 171 18 Thirty-one 183 Thirty-two 184 19 Thirty-three 193 Thirty-four 203 20 Thirty-five 214 Thirty-six 216 21 Thirty-seven 221 Thirty-eight 222 22 Thirty-nine 224 Forty 231 23
Page 2 1 APPEARANCES 2 For the Plaintiffs: 3 CHARLES CUNNINGHAM, Esq. Morrissey Building, Suite 200 4 304 West Liberty Street Louisville, Kentucky 40202 5 6 JACK ATKIN, Esq. KASOWITZ, BENSON, TORRES & FRIEDMAN 1301 Avenue of the Americas 7 New York, New York 10019 8 For the Defendants: 9 ADAM PECK, Esq. LIGHTFOOT, FRANKLIN & WHITE 10 300 Financial Center 505 North 20th Street 11 Birmingham, Alabama 35203 12 GERARD H. DAVIDSON, JR., Esq. SMITH, HELMS, MULLISS & MOORE 13 P. O. Box 21927 Greensboro, North Carolina 27420 14 15 16 INDEX 17 Stipulations Page 5 18 Reporter's Certificate 300 19 20 EXAMINATIONS 21 Witness: WILLIAM B. PAPAGEORGE, P.E. Page 22 By Mr. Atkin 6 23	Page 4 1 EXHIBITS 2 Plaintiffs' Marked Offered 3 Forty-one 234 Forty-two 237 4 Forty-three 244 Forty-four 248 5 Forty-five 259 Forty-six 269 6 Forty-seven 273 Forty-eight 279 7 Forty-nine 281 Fifty 286 8 Fifty-one 293 Fifty-two 298 9 10 11 No other exhibits were marked for identification, offered or attached as exhibits hereto. 12 13 14 15 16 17 18 19 20 21 22 23

Page 5 1 S T I P U L A T I O N S 2 IT IS STIPULATED AND AGREED by the 3 parties, through their respective counsel, 4 that the deposition of WILLIAM B. PAPAGEORGE, 5 P.E., may be taken before Deborah Salers 6 Garrett, CSR, RPR, as Commissioner and Notary 7 Public, Alabama at Large, at Birmingham, 8 Alabama, on March 31, 1998, at 1:20 p.m. 9 IT IS STIPULATED AND AGREED that the 10 signature to and reading of the deposition by 11 the witness is waived, the deposition to have 12 the same force and effect as if full 13 compliance were had with all laws and rules of 14 Court relating to the taking of depositions. 15 IT IS STIPULATED AND AGREED that it 16 shall not be necessary for any objections to 17 be made by counsel to any questions except as 18 to form or leading questions and that counsel 19 may make objections and assign grounds at the 20 time of trial or at the time said deposition 21 is offered in evidence or prior thereto. 22 IT IS STIPULATED AND AGREED that notice 23 of filing by the Commissioner is waived.	Page 7 1 into between counsel that 2 this deposition may be 3 recorded by videography. 4 (Plaintiffs' Exhibit Number 5 One was marked for 6 identification.) 7 Q. Can you state your full name, please, 8 for the record? 9 A. William B. Papageorge. 10 Q. And how do you spell Papageorge? 11 A. P-a-p-a-g-e-o-r-g-e. 12 Q. Where do you presently reside, 13 Mr. Papageorge? 14 A. In St. Louis County, Missouri. 15 Q. Is that near St. Louis? 16 A. Yes. 17 Q. Are you presently employed? 18 A. I'm self-employed. I guess that's 19 appropriate. 20 Q. Okay. What do you do? 21 A. Consulting. 22 Q. What type of consulting do you do? 23 A. Technical.
Page 6 1 STATE OF ALABAMA, BIRMINGHAM, MARCH 31, 1998 2 3 WILLIAM B. PAPAGEORGE, P.E., 4 after having been first duly sworn, was 5 examined and testified as follows: 6 7 MR. ATKIN: Should we just put 8 this on the record, the joint 9 stipulation allowing for 10 videography? 11 MR. PECK: Sure. You can make it 12 an exhibit or whatever. 13 14 EXAMINATION 15 BY MR. ATKIN: 16 Q. Good afternoon, Mr. Papageorge. How are 17 you? 18 A. Fine. 19 MR. ATKIN: Good. Before we 20 begin, I just want to have 21 this marked as an exhibit. 22 And this is the joint 23 stipulation that was entered	Page 8 1 Q. When you say technical, what do you 2 mean? 3 A. It deals with such things as engineering 4 and chemistry. 5 Q. Okay. You have testified before in 6 other cases involving PCBs; is that 7 correct? 8 A. That's correct. 9 Q. Approximately how many cases have you 10 testified in? 11 A. I've never kept score, frankly. I would 12 suggest in depositions and trials is 13 approaching thirty or forty. 14 Q. Okay. Do you recall how many trials you 15 testified in as opposed to depositions? 16 A. Oh, six to ten, somewhere in there. 17 Q. When was the last time you testified at 18 a trial in connection with a PCB case? 19 A. I'm trying to recall. It's about two 20 years ago. 21 Q. Do you remember where that case was 22 venued? 23 A. East St. Louis, Illinois.

Page 9 1 Q. Do you know who the parties were? 2 A. Cerro Copper, C-e-r-r-o, versus 3 Monsanto. I believe that's the 4 designation or close to it. 5 Q. Was that in state court as opposed to 6 federal court? 7 A. I'm hesitating because I was under the 8 impression it was a federal district 9 court over there, but I'm not positive. 10 Q. Can you briefly tell us your educational 11 background? 12 A. I'm sorry? 13 Q. I'm sorry. I should speak louder. Can 14 you briefly tell us your educational 15 background? 16 A. I received a bachelor of science degree 17 in chemical engineering from Washington 18 University located in St. Louis, 19 Missouri in 1943. I received a master 20 of science degree in chemical 21 engineering also from Washington 22 University in 1947. Additional formal 23 credits were earned at Oklahoma A & M,	Page 11 1 A. Okay. 2 Q. Once you give the answer, we are going 3 to assume that you understood my 4 question. Okay? 5 A. I understand. 6 Q. Okay. Did you -- Can you tell us 7 briefly your employment history at 8 Monsanto, just what titles you held and 9 approximately what years, to the best of 10 your recollection? I know this goes 11 back a while. 12 A. I know it does. I joined Monsanto in 13 1951, late '51. My initial assignment 14 was as a process engineer in the plant's 15 engineering department. 16 MR. PECK: That's his CV. 17 MR. ATKIN: Why don't we mark that 18 as Exhibit Two. 19 (Plaintiffs' Exhibit Number 20 Two was marked for 21 identification.) 22 Q. Maybe that will help refresh your 23 recollection.
Page 10 1 now known as Oklahoma State University, 2 in Stillwater, Oklahoma, toward a doctor 3 of science degree in the period 1947 to 4 1951. 5 Q. Before I go any further, let me just -- 6 Obviously you have been involved in a 7 lot of depositions. You are familiar 8 with the whole process, correct? 9 A. I'm learning all the time. 10 Q. Let me just state, I'm sure you know the 11 rules. But the one rule I want to 12 emphasize is that if I ask you a 13 question, please make sure that you 14 understand the question before I ask -- 15 before you answer it. Okay? 16 A. I understand what you're saying. But 17 sometimes what I understand is not what 18 you had intended for me to understand. 19 The question may not quite fit. 20 Q. Well, if there is any need for 21 clarification, you know, feel free to 22 ask me to try to clarify it for you. 23 Okay?	Page 12 1 A. Should I continue referring to this, 2 or will this speak for itself? 3 Q. Whatever -- If you could continue 4 referring to that, if that will refresh 5 your recollection, and that way we have 6 it on the record. 7 A. Very good. Following that assignment, 8 which lasted until 1954, I became 9 designated as a senior chemical engineer 10 still within the same engineering 11 department. In 1955 I was appointed a 12 production supervisor. 13 Q. What did you do as a production 14 supervisor? 15 A. I supervised the actual operations 16 related to the manufacture of chemicals. 17 Q. Okay. 18 A. Not all the chemicals in the plant, but 19 an assigned group. 20 Q. Do you recall what the assigned group 21 was? 22 A. My initial assignment, as sort of a 23 trainee, was in the manufacture of

Page 13 1 materials called plasticizers. These 2 are materials that are added to brittle 3 plastics to make them flexible. 4 Q. Uh-huh (indicating yes). 5 A. The second assignment as a production 6 supervisor was the supervision of a 7 department that made chemicals that were 8 eventually used in making other 9 chemicals that were used as rubber 10 additives to improve automobile tire 11 performance and rubber tubing and that 12 kind of products. 13 Q. Okay. 14 A. In 1956 I was appointed a maintenance 15 supervisor. And that assignment 16 involved the supervision of a team of 17 craftsmen who were involved in 18 installing minor new projects, like a 19 new pump or a new tank or a new 20 instrument. Following that I was 21 appointed as maintenance superintendent 22 at the same plant. That was in 1957. 23 Q. Which plant is this now?	Page 15 1 In 1961 I was appointed a general 2 superintendent of warehouse, 3 inventories, and utilities. 4 Q. This is still at the Queeny Plant? 5 A. Still at the same plant. This 6 particular operation really provided 7 services to the manufacturing 8 supervisors other than the maintenance 9 function. 10 We would deliver the raw material. 11 We'd pick up the finished product. We'd 12 supply power, electrical power or clean 13 water or pick up the trash, whatever 14 assistance they needed to help the 15 processes continue ongoing. 16 Q. Okay. 17 A. All of the assignments I just described 18 with Monsanto up to now were with this 19 John F. Queeny Plant. 20 In 1964 I was assigned to the 21 plant located in Sauget, Illinois, 22 S-a-u-g-e-t, of Monsanto, as a general 23 superintendent of manufacturing. I was
Page 14 1 A. This is the plant that Monsanto referred 2 to as the J. F. Queeny Plant located in 3 St. Louis. 4 Q. Okay. 5 A. As maintenance superintendent I was 6 responsible for the activities of eight 7 to ten supervisors covering all of the 8 mechanical repair and installation 9 activities in the plant. 10 In 1959 I became an assistant 11 engineering superintendent, which takes 12 me back to the original engineering 13 department where I now supervised the 14 engineering activities for anywhere from 15 six to twelve engineers and three to six 16 technicians who were assigned the task 17 of responding to the production 18 department's needs for a bigger tank or 19 a different pump or a new process or a 20 new agitator, whatever required some 21 engineering calculations to help them 22 decide on what would be the best 23 approach.	Page 16 1 one of, as best I remember, a half a 2 dozen or so general superintendents. 3 Each of us were assigned a list of 4 products that we were responsible for 5 producing. In 1965 I was appointed 6 plant manager at the Anniston, Alabama 7 plant. In 1970 I was appointed manager, 8 environmental control. 9 Q. At Anniston? 10 A. No. Reporting back to St. Louis. 11 Q. You were located in St. Louis then? 12 A. Yes. 13 In 1973 my title -- Well, let me 14 go back a bit. The title, manager, 15 environmental control, was changed after 16 a few months to manager, environmental 17 protection. So if you see documents 18 with those two titles, I hope that 19 explains the difference. 20 Q. Okay. 21 A. In 1973 I was appointed manager, product 22 acceptability, of the operating unit 23 within Monsanto referred to as the

Page 17 1 Monsanto Industrial Chemical Company. 2 Q. Still stationed in St. Louis? 3 A. Yes. 4 Q. Okay. 5 A. In 1977 I was appointed the manager of 6 product acceptability for the chemical 7 -- sorry -- Monsanto Chemical 8 Intermediates Company. 9 Q. What does the manager of product 10 acceptability do, or what did you do? 11 A. I was assigned a group of Monsanto 12 products, and I was responsible for 13 monitoring the safety of these products, 14 the proper packaging, the proper 15 labeling, the information in their 16 brochures, describing these products, 17 any communications that were required by 18 regulatory agencies, both local, state, 19 federal, international. 20 Q. Okay. 21 A. Later on in 1977 I was appointed a 22 director of environmental operations for 23 Monsanto Chemical Intermediates Company.	Page 19 1 group of plants. 2 In 1986 I was named manager of 3 occupational health for another 4 reorganization within Monsanto. This 5 was referred to as the Monsanto Chemical 6 Company. And I finally retired at the 7 end of that year. 8 Q. The end of 1986? 9 A. '86. 10 Q. Have you been a consultant ever since? 11 A. I'm sorry? 12 Q. I'm sorry. Have you been a consultant 13 ever since? 14 A. Yes. 15 Q. Mr. Papageorge, did you meet with anyone 16 to prepare for your testimony, your 17 deposition testimony here today? 18 A. Yes, I did. 19 Q. Who did you meet with? 20 A. Mr. Michael Kelly, Mr. Gerard Davidson, 21 Mr. Adam Peck, and Mr. Bud Cox. 22 Q. When did you meet with them? 23 A. Well, with Mr. Davidson and Mr. Kelly I
Page 18 1 Q. And what did your duties involve in that 2 position? 3 A. In addition to the product type matters 4 that I just described for the product 5 acceptability job, I picked up such 6 things as industrial hygiene at the 7 plants of individuals working with these 8 chemicals produced at plants. And this 9 is a situation where the plants were 10 assigned to the unit I was working with 11 rather than the chemicals assigned. 12 Q. Okay. 13 A. And also as the title indicates, I was 14 involved with environmental issues 15 relating to the plants and the products 16 produced at these plants. 17 Q. Okay. 18 A. In 1983, as a result of a reorganization 19 within Monsanto, I was appointed a 20 director, environmental operations, for 21 the operating unit referred to as the 22 Monsanto Industrial Chemicals Company, 23 the same kind of assignments, different	Page 20 1 met last week, as I remember. 2 Q. Where was that meeting? 3 A. In St. Louis. 4 Q. How long did you meet with them for? 5 A. Oh, less than half a day the first day, 6 from, say, after lunch until four 7 thirty. 8 Q. Okay. 9 A. And the next day I met from, say, eight 10 thirty to noon. 11 Q. Okay. 12 A. And then I met with those two gentlemen 13 and Mr. Peck and Mr. Cox yesterday. 14 Q. For how long? 15 A. Actual meeting time was a couple of 16 hours in the late afternoon. 17 Q. Any other time? 18 A. And this morning I met with 19 Mr. Davidson, Mr. Kelly, and Mr. Peck 20 from about -- Let's see. It was roughly 21 eight thirtyish, quarter to nine until 22 about a quarter to twelve. 23 Q. Did you review any documents in

Page 21 1 preparation for your testimony here 2 today? 3 A. Yes, I did. 4 Q. What did you review? 5 A. I recall there was a mound of paper. I 6 recall -- 7 Q. Like that right (indicating) -- 8 A. Oh, it was a box full, sir. And really 9 most of it was the transcript of a 10 deposition taken for what I'm going to 11 call the Nevada Power versus Monsanto 12 case. 13 Q. Okay. Did you review any of the -- 14 Withdrawn. 15 It was the transcript of a 16 deposition? 17 A. Yes. 18 Q. And did you review any of the exhibits 19 that were part of the deposition in that 20 case? 21 A. Some of them. As I read through the 22 transcripts -- And I had to refresh my 23 memory as to what are they talking	Page 23 1 testifying as a fact witness. 2 Q. Are you being compensated for your time? 3 I didn't mean to imply it was for your 4 testimony. I meant in preparing for a 5 deposition and to appear here today. 6 A. No. I'm being paid for consulting with 7 attorneys, with reviewing the past. I 8 suppose you would call that part of the 9 preparation. 10 Q. Yeah. That is what I meant. 11 A. And I am paid for that. But the time 12 that I am involved, say, in this 13 deposition, I'm not paid for that. 14 Q. Okay. 15 A. I'm not paid for the time I sit in the 16 airplane either. 17 Q. But you are paid for the hours, the time 18 you spent consulting with the attorneys 19 regarding the deposition? 20 A. Yes. 21 Q. Okay. How much are you compensated? 22 A. About -- I usually charge a hundred 23 fifty to two hundred dollars an hour.
Page 22 1 about. I would go back and find the 2 exhibit and refresh my memory, yes. 3 Q. Can you tell us -- Without looking at 4 the documents, can you tell us offhand 5 specifically which documents you looked 6 at? 7 A. I recall seeing a copy of correspondence 8 that I had issued back in the '70s 9 regarding the status of the 10 environmental issue as it related to 11 PCBs. I have forgotten the date now and 12 the specifics in it. It is interesting. 13 I don't remember the details. I have so 14 many documents in mind that it gets 15 confusing. 16 Q. Well, I'm going to show you a lot of the 17 documents that I have, and perhaps that 18 will refresh your recollection. 19 A. That's good. That will be helpful. 20 Q. Are you being compensated by Monsanto 21 for your time in preparing for the 22 deposition and testifying here today? 23 A. I don't receive any compensation for	Page 24 1 Q. Okay. And can you tell us 2 approximately -- Withdrawn. 3 Have you already submitted a bill 4 for the time you spent consulting with 5 the attorneys? 6 A. On this particular deposition? 7 Q. Yes, yes. 8 A. I have not. I haven't sat down to 9 calculate anything. 10 Q. Can you tell us approximately how many 11 hours you have spent altogether that you 12 plan to bill in connection with 13 consulting with the attorneys? 14 A. It is going to be about fourteen hours. 15 Q. Okay. Do you have any plans to be out 16 of the country during June of this year? 17 A. No, sir. 18 Q. Sir, do you know if Monsanto ever 19 conducted departmental waste audits of 20 the Anniston plant? 21 A. Will you help me with the expression 22 "departmental waste audits"? I'm not 23 familiar with that terminology.

Page 25 1 Q. Sure. Did Monsanto ever conduct an 2 audit to identify the waste components 3 from its operating departments? 4 A. I'm not aware of any program that was 5 conducted that would cover the full 6 spectrum of waste from each operating 7 unit within the plant. 8 MR. ATKIN: Let's mark this as 9 Exhibit Number Three, if we 10 could. 11 (Plaintiffs' Exhibit Number 12 Three was marked for 13 identification.) 14 Q. I'd ask you to look at the document, if 15 you could. And I might apologize. I 16 don't have another set for you. With 17 logistics being what they were, it just 18 didn't work out that way. 19 A. I have scanned the exhibit. It does 20 refresh my memory about this activity. 21 I misunderstood your question up to the 22 point when you asked about Monsanto 23 audit, outside of all forty Monsanto	Page 27 1 of the -- the purpose of the Anniston 2 plant conducting departmental waste 3 audits? I believe that is reflected 4 right where it says, "Objective." 5 A. Yes. 6 Q. Okay. And is it fair to say that the 7 purpose of the audits was to identify 8 major waste components from all the 9 operating departments and to provide 10 reliable flow data so that waste laws 11 can be accurately calculated? 12 A. Yes. 13 Q. Do you recall, Mr. Papageorge, whether 14 audits were done of the Aroclor 15 department? And to refresh your 16 recollection, I'm referring to page 17 number three. 18 And just for the record, let me 19 state that this document is a February 20 24th, 1969, progress report from the 21 technical services department of the 22 Anniston, Alabama plant, and it bears 23 Bate stamp designation DSW 014277
Page 26 1 plants conducting general audits. 2 Q. And I don't mean to interrupt you, but 3 let me just say I know these documents 4 go back a long ways. I know you are 5 going to have to refresh your 6 recollection about a lot of them, and 7 that is fine. 8 I'm sorry. So this does refresh 9 your recollection about departmental 10 waste audits that were done? 11 A. Well, it does refresh my memory in terms 12 of this particular exhibit describes a 13 plan to conduct the audits. 14 Q. Okay. 15 A. I'm having still some problems recalling 16 when and if the audit was ever conducted 17 and what the results were. I can't 18 place that just yet. 19 Q. That's okay. We will get to that in a 20 minute. All right? 21 A. All right. 22 Q. As identified in this document, do you 23 know what the purpose of the audit was,	Page 28 1 through DSW 014281. Okay. I'm sorry. 2 A. Your question, as I remember it, was did 3 the Anniston plant conduct an audit of 4 the Aroclor department. 5 As I said earlier, this document 6 doesn't refresh my memory on that. It 7 does indicate a plan to do so. I don't 8 know if that plan was executed. 9 Q. Okay. 10 A. I don't remember that the plan was 11 executed. 12 Q. Got you. Let me show you another 13 document. And we will mark this as 14 Papageorge Four for identification. 15 This is a progress report from the 16 technical services department of the 17 Anniston, Alabama plant dated July 23rd, 18 1969, bearing Bate stamp designation DSW 19 014284 through DSW 014295. 20 (Plaintiffs' Exhibit Number 21 Four was marked for 22 identification.) 23 Q. If you can look at that document,

Page 29 1 perhaps it would refresh your 2 recollection. 3 MR. PECK: Do you want to go off 4 the record when he reads or 5 just want the tape to run? 6 MR. ATKIN: I guess you can let it 7 run, whatever you prefer. 8 Let it run. 9 Q. Let me just indicate now that you have 10 reviewed the document, this was a 11 document that was prepared apparently by 12 Mr. Wright; is that correct? 13 A. That is correct. 14 Q. Okay. Who was Mr. Wright? 15 A. He was the individual at the Anniston 16 plant who was the -- who was given the 17 assignment to monitor environmental 18 issues at that plant. I have forgotten 19 his title, but it was something like 20 environmental supervisor or some such 21 words. 22 Q. Okay. And I note that you are listed as 23 one of the recipients of this document.	Page 31 1 A. No, it doesn't. 2 Q. Okay. Do you have any reason to believe 3 that an audit was done of the Aroclor 4 department prior to July of 1969? 5 A. I cannot speak for the years before 6 1965, so I just would be guessing. 7 Q. Okay. Was the reason that an audit was 8 being done of the Aroclor department in 9 1969 because of the concern over PCBs 10 being found in the tissue of some animal 11 and the concern over the effect that the 12 PCBs were having on the palatability of 13 the fish? 14 And I don't mean to trick you. 15 Why don't I refer you back to Papageorge 16 Three. It would also expedite things a 17 bit. 18 A. I see the sentence that you are 19 referring to. 20 Q. Okay. 21 A. The fact that the Aroclor materials, 22 which I think today we would call PCB 23 materials --
Page 30 1 Is that correct? 2 A. That is correct. 3 Q. Do you recall receiving this document? 4 A. I do now that I have glanced at it, yes. 5 Q. And this document reflects that an audit 6 was in fact done of the Aroclor 7 department; is that correct? 8 A. That is correct. 9 Q. And apparently the audit was completed 10 sometime in or about July of 1969; is 11 that correct? 12 A. That is correct. 13 Q. Okay. Did you have any involvement at 14 all in the conducting of the audit? 15 A. My involvement is one where I am the 16 plant manager of the plant in which 17 Mr. Wright worked, and the department 18 that he audited was under my 19 responsibility. 20 Q. Does this refresh your recollection as 21 to whether or not an audit had ever been 22 done previously of the Aroclor 23 department?	Page 32 1 Q. We can do that. 2 A. -- were being found in the tissue of 3 some animals certainly triggered some 4 thinking regarding where are these 5 things, what are they, and where are 6 they coming from. 7 I recall the use of the word 8 "palatability," and I have no 9 information from anywhere over the 10 decades that anybody indicated that the 11 palatability of fish was an issue in 12 1969. It just doesn't ring any kind of 13 memory bell. 14 Q. Okay. Do you know whether the contents 15 of this document was actually prepared 16 by Mr. Wright? 17 A. Which document? Are we looking at Three 18 or Four? 19 Q. Three. 20 A. Three. I have no reason to believe -- 21 Q. Otherwise? 22 A. -- otherwise. 23 Q. And the same would hold true for

Page 33 1 Papageorge Four; is that correct? 2 A. That is correct. 3 Q. There was no reason that Monsanto 4 couldn't have done audits of the Aroclor 5 department before 1969; is that correct? 6 A. There was one very limiting shortcoming. 7 Q. Okay. 8 A. The ability to measure PCBs in part per 9 million or less levels was not available 10 until roughly 1968. And even then there 11 was some difficulty experienced in 12 duplicating results. And it depended an 13 awful lot on the laboratory and the 14 experience of the chemist. And so it 15 was undergoing a period of development 16 in '68. 17 So without that technology being 18 available, a true audit -- Well, an 19 audit could have been held, but the 20 answers would have come out zero PCBs. 21 Q. Prior to 1968? 22 A. Yes. And even during '68. We would 23 have gotten some answers that always	Page 35 1 A. So I just don't know how much of that, 2 if any, is PCB. 3 Q. Well, according to this document, I 4 believe it says the major sources of 5 organic -- primarily Aroclors, but with 6 smaller amounts of biphenyl, Santowax, 7 and HB-40. 8 Does that refresh your 9 recollection as to whether the major 10 component of the organic waste was from 11 Aroclors? 12 A. Not really, because when they speak of 13 Aroclor, at that point in time, at the 14 Anniston plant within Monsanto, the word 15 "Aroclor" covered chlorinated biphenyls 16 as well as chlorinated terphenyls. 17 Also, within that operation, 18 because of their use as starting 19 materials, there were other organic 20 materials present. 21 So again, the expression "organic 22 materials" is not really definitive. 23 Q. Does this document reflect an audit that
Page 34 1 would have a question mark after them. 2 Q. Okay. Looking at Papageorge Four -- 3 A. I have it. 4 Q. Okay. Was a determination made as to 5 how much the average total loss -- the 6 average daily losses of organic PCBs 7 were? 8 A. Well, I see -- 9 Q. I'm actually referring you to the 10 summary on the first page, to the second 11 sentence, which reads, "The average 12 total losses of organic material from 13 these departments is approximately 14 twenty-seven pounds per day." 15 A. My hesitation is due to the fact that 16 there are many chemicals involved in 17 this particular operating unit that are 18 called organics. Some of them are PCBs. 19 There is also, as I remember, benzene 20 and biphenyl and hydrogenated biphenyl 21 and many other materials which would 22 come out as organic material. 23 Q. Okay.	Page 36 1 was also done of the HCl department? 2 A. Yes, it does. 3 Q. And it also reflects the results of the 4 amounts of HCl, average losses of HCl 5 per day; is that correct? 6 A. I believe I saw that here. Let me look 7 at it. 8 Q. Actually I'm referring to the first 9 page, to DSW 014284. 10 A. Well, the number that I see on that 11 first page is the number we mentioned 12 earlier referring to organic material of 13 twenty-seven pounds a day. And it -- 14 Q. When you said may, may also encompass 15 not only PCBs but other organic 16 materials? 17 A. In terms of organic material, correct, 18 right. 19 Q. Right. 20 A. And then when you say -- 21 Q. I'm referring to the last sentence on 22 the first paragraph on the summary which 23 states, "The chlorinated sewer showed an

Page 37 1 average loss of eleven hundred pounds of 2 HCl per day, and the HCl department 3 losses were an average of fifteen 4 thousand five hundred pounds per day." 5 A. I see that, yes. 6 Q. So this does in fact report or give 7 reporting on the HCl losses, the average 8 HCl losses? 9 A. You are correct. 10 Q. And at or about the time that this audit 11 was conducted, did Monsanto become 12 concerned about the effects of PCBs in 13 the plant effluent water on Snow Creek 14 and Choccolocco Creek? And I am 15 referring to the first page, the last 16 paragraph on the first page. 17 A. I see the reference, yes. 18 Q. Does this refresh your recollection, 19 sir, as to whether or not -- Withdrawn. 20 Do you know whether Monsanto 21 became concerned about the effects of 22 PCBs on Snow Creek and Choccolocco Creek 23 prior to July of 1969?	Page 39 1 A. Well, that tells me that the observer 2 who went out looking for evidence of 3 PCBs, which look an awful lot like the 4 motor oil that drips out of your car on 5 the garage floor -- he went out looking, 6 and he spotted what he thought might be 7 a PCB. Remember, he didn't analyze for 8 it. He just saw that stain, if you 9 will. And it was at most a block -- And 10 I'm assuming that is a city block -- a 11 typical city block away from the plant 12 boundary line. 13 Q. Okay. Did Monsanto take samples of mud 14 and water downstream from the plant at 15 that time? 16 A. I'd have to refresh my memory. 17 Q. Also on the first page. 18 A. Yes, they did take samples. 19 Q. Okay. How many samples did they take? 20 A. It indicates here six samples of mud and 21 water. 22 Q. Do you know where they were taken from? 23 A. I'd have to look at the map that's
Page 38 1 A. Not to my recollection. 2 Q. Now, in or about July 1969 Monsanto 3 visually checked Snow Creek and 4 Choccolocco Creek for PCBs; is that 5 right? And I'm referring you to the 6 document. 7 A. Yes. 8 Q. And this document reflects that -- what 9 the results of that visual inspection 10 were; is that correct? 11 A. I recall seeing it as I scanned it. 12 Q. I'm on the first page, actually. 13 A. Still? 14 Q. Yeah. 15 A. It is the last paragraph, first page. 16 Yes, sir, I see it. 17 Q. It reflects that none was noted more 18 than one block from the plant 19 boundaries. 20 A. I see that, yes. 21 Q. Does that mean, sir, that up to one 22 block from the plant boundaries Monsanto 23 was able to visually detect PCB waste?	Page 40 1 referred to here. 2 Q. Okay. 3 A. But I don't find a map. 4 Q. Neither do I. That is why I asked you. 5 A. It's for some reason missing. 6 Q. But you don't remember offhand? 7 A. Oh, no, I don't. 8 Q. Now, if you turn to page DSW 014289, 9 which is page six of this document -- 10 A. I have it. 11 Q. That reflects that samples were taken of 12 -- two sets of samples, mud and water, 13 were collected from Snow Creek in 14 September of 1968. Is that correct? 15 A. I'm having difficulty finding reference 16 to two here. 17 Q. Do you see where -- Let me help you out. 18 Do you see where it says, "Sample 19 location"? 20 A. Yes. 21 Q. The paragraph just above that. It says, 22 "During September of 1968 two sets of 23 samples, mud and water, were collected

Page 41 1 from Snow Creek." 2 A. I see that, yes. 3 Q. And it also reflects that these samples 4 were analyzed for PCBs by the organic 5 research method, correct? 6 A. I'm confused by your use of the word 7 "method." 8 Q. It says, "By organic research." 9 A. Yes, sir. 10 Q. Do you know what is meant by the term 11 "organic research"? 12 A. This refers to the team of analytical 13 chemists assigned to Monsanto's central 14 research department to work on new 15 technology for analyzing for chemicals, 16 and PCB was one of their projects. 17 Q. Okay. And this in fact gives the 18 results of the samples that were taken 19 in 1968; is that correct? 20 A. Are we still on the same page as the two 21 samples? 22 Q. Yes. 23 A. As I read it, it shows me analyses were	Page 43 1 million or parts per billion. 2 I'm sorry. I read it now. I read 3 it. 4 Q. It is percent, right? 5 A. Percent, yes, sir. 6 Q. So this would be parts per hundred, 7 would it not? 8 A. Yes. It would be point two, plus or 9 minus point oh two in percent. 10 Q. Parts per hundred? 11 A. Yes. 12 Q. And does the second sample one block 13 below the plant have one? 14 A. Yes. It is one point six four pounds 15 per hundred pounds. 16 Q. Okay. Now, this progress report is 17 labeled on top "Company Confidential" on 18 the first page. 19 A. Yes, sir. 20 Q. What does that mean? 21 A. Well, it is information that someone in 22 the company, generally the author of a 23 document, believed that it was unique to
Page 42 1 completed on the two samples of the 2 sediment and the one sample of water. 3 Apparently the second sample of water 4 was dropped and broken. 5 Q. Right. What is the figure given for the 6 parts per billion of the one water 7 sample? 8 A. Fifty-eight, plus or minus two. 9 Q. And it also gives results for the 10 sediments; is that right? 11 A. I'm sorry? It also gives results? 12 Q. Yes, for the sediment. 13 A. Yes, it does. 14 Q. And are you able to determine from the 15 results of the sediment how many 16 thousands of parts per million of PCBs 17 were found in the samples, in the two 18 samples of sediment? 19 A. Thousands of parts per million? 20 Q. Yes. 21 A. Well, this number you see there is not 22 identified as to the magnitude of that 23 number. We don't know if it's parts per	Page 44 1 the company's operation and that his 2 opinion ought to be kept confidential 3 and for use within the company to manage 4 its affairs. 5 Q. Okay. 6 A. It is the author's judgment call. 7 Q. Okay. To your knowledge, sir, did 8 Monsanto ever disclose to the residents 9 of Anniston in 1968 or 1969 that 10 twenty-seven pounds of organic and acid 11 waste from the Aroclor and HCl 12 departments were being lost from the 13 plant? 14 A. There was no reason to talk those 15 numbers. They were meaningless. 16 Q. But the answer is no? 17 A. That is correct. 18 Q. Thank you. Did anyone ever tell the 19 residents of Anniston at that time that 20 Monsanto was visually checking Snow 21 Creek and Choccolocco Creek to determine 22 the effects of the PCBs in the plant 23 effluent water?

Page 45 1 A. Sir, this is no different than a service 2 station man telling his neighbors he has 3 got motor oil on the curb by his service 4 station. Those things are just 5 nonproductive comments that one can make 6 to others. 7 Q. I'm going to move to strike. But the 8 answer, though, is no; is that right? 9 A. Yeah. 10 Q. Okay. Did anyone ever tell the 11 residents of Anniston that Monsanto had 12 taken samples of mud and water 13 downstream from the plant in Choccolocco 14 Creek and Snow Creek in 1968 and 1969? 15 A. Again, there was no rational reason for 16 talking to anybody, so they didn't do 17 it. 18 Q. Okay. The answer is no; is that right? 19 A. That is what you heard me say. We 20 didn't do it. 21 Q. Okay. And did Monsanto ever disclose to 22 the residents of Anniston in 1968 or 23 1969 that it had taken fish samples to	Page 47 1 And by the way, Mr. Papageorge, if 2 you need at any time to take a break, 3 just let me know. 4 (Plaintiffs' Exhibit Number 5 Five was marked for 6 identification.) 7 A. I will do that. I have read the 8 document. 9 Q. Thank you. This document is a memo -- 10 Let me just identify it for the record. 11 This is a one-page memorandum from 12 Mr. Wright dated November 14th, 1969, 13 addressed to yourself; is that correct? 14 A. That is correct. 15 Q. And the subject is Aroclor spill on 16 March 6, 1969. 17 A. It is. 18 Q. Okay. And this reflects that in 19 November 1969 there was a loss of 20 fifteen hundred gallons of Aroclor 1242 21 to the plant acid sewer; is that 22 correct? 23 A. That is correct.
Page 46 1 be analyzed for PCB content as reflected 2 in this document? 3 A. The same rationale applies, sir. The 4 reason for doing so was not present, and 5 we didn't do it. 6 Q. Thank you. If I ask you a question that 7 calls for a yes or no answer, I would 8 appreciate it if you could confine your 9 answers to a yes or no. 10 A. Sir, you may appreciate it, but 11 sometimes a yes or no is not truthful, 12 nor accurate. 13 Q. Okay. By the way, sir, have you seen -- 14 did you review Papageorge Three and Four 15 with the attorneys before coming to 16 testify here today? 17 A. I don't remember. No. 18 Q. Okay. You don't remember or no? 19 A. I don't remember seeing them, so I did 20 not see them. 21 Q. Okay. I'm going to show you another 22 document, which we will mark as 23 Papageorge Five for identification.	Page 48 1 Q. And it also reflects how this happened, 2 correct? 3 A. It does. 4 Q. And it says that the line on the bottom 5 of the number three Aroclor still 6 receiver failed, correct? 7 A. Yes. 8 Q. And did you first learn about this spill 9 in this memorandum? 10 A. This confirmed an oral report that was 11 given to me back when it happened. 12 Q. By Mr. Wright? 13 A. No. I believe it was the supervisor of 14 the Aroclor operation that told me. 15 Q. And who was that? 16 A. Jack Malloy. 17 Q. And do you recall how many gallons of 18 PCBs Monsanto was able to recover from 19 the fifteen hundred gallons that had 20 been lost? 21 A. I had to refresh my memory. It does 22 refer to three hundred fifty gallons of 23 material recovered for reuse.

Page 49 1 Q. Okay. What happened to the remainder of 2 the PCBs that had spilled? 3 A. As best I recall -- 4 Q. You may want to refresh your 5 recollection from the document. If your 6 recollection is different from this, 7 that is okay. 8 A. As I recall, there were efforts made to 9 recover any material they could from the 10 sewer itself, and then there were 11 cleanup efforts of the neutralization 12 pit to which some of this leakage went. 13 And in both of those situations the 14 material would normally be put in drums 15 and hauled to the landfill for disposal. 16 Q. Okay. This memo reflects that the 17 remainder of the PCBs was probably lying 18 in the sewer and had been mixed with the 19 dirt and sand at the head of the acid 20 neutralization pit. 21 A. It does say. 22 Q. Is that consistent with your 23 recollection?	Page 51 1 Q. I'm talking specifically as a result of 2 this spill. 3 A. Sure. That's no different than any 4 other accident or event. 5 Q. Okay. And Monsanto in fact collected 6 samples from Snow Creek to determine how 7 much of the spill material had entered 8 Snow Creek; is that right? 9 A. How much, if any, yes. 10 Q. Yes. Who collected the samples; do you 11 recall? 12 A. No, I don't. 13 Q. Do you know where they were sent? 14 A. At that point in time they were probably 15 sent to this group we referred to 16 earlier, the organic research analytical 17 group. 18 Q. Do you know what the results were? 19 A. No, I don't remember. 20 Q. And did Mr. Wright make any 21 recommendations to prevent a recurrence 22 of this type incident? 23 A. Well, a recommendation is reflected in
Page 50 1 A. Yes. There are ways to absorb the 2 liquids in sewers and then shovel them 3 out. 4 Q. Okay. Was a portion of this material 5 leaking through the limestone at the 6 effluent end of the pit, the limestone 7 pit? 8 A. Through the limestone? 9 Q. Yes. 10 A. Yes. It has to trickle down through the 11 limestone until it reaches the clay bed. 12 Q. And Mr. Wright believed it was highly 13 unlikely that Monsanto would be able to 14 recover any more of this material, 15 correct? 16 A. Yes. And keep in mind recovering means 17 reuse, profitable recovery. 18 Q. Okay. Was Monsanto concerned about how 19 much of the spilled PCBs might be 20 getting into Snow Creek? 21 A. At this point in time, yes, we were very 22 careful in monitoring that kind of 23 activity.	Page 52 1 the memorandum, Exhibit Five. 2 Q. Okay. And what was the recommendation? 3 A. The recommendation he refers to there is 4 the installation either of a second 5 catch basin, which is this limestone 6 pit, or what he calls another device 7 between the PCB producing department and 8 the neutralization pit. 9 Q. Okay. Was that recommendation ever 10 implemented? 11 A. Yes. 12 Q. Okay. Do you know when? 13 A. About 1970. We installed a second 14 neutralization pit, and they also 15 installed a catch basin underneath the 16 operation to catch any leak of this 17 type. 18 Q. Okay. To your knowledge, sir, was this 19 incident the first time that hundreds of 20 gallons of PCBs had spilled into the 21 acid sewer? 22 A. To my knowledge, yes, this is the only 23 incident I'm aware of.

Page 53 1 Q. Are you aware of any incidents like this 2 occurring after this point in time? 3 A. There were no other incidences like 4 this. 5 Q. Okay. We are going to mark this for 6 identification as Papageorge Six. And 7 this is a document bearing Bate stamp 8 number -- Bate stamp designation DSW 9 013186 through 013191. 10 (Plaintiffs' Exhibit Number 11 Six was marked for 12 identification.) 13 Q. But before you go to that document -- 14 I'm sorry to do this out of order, but 15 the document I just showed you before, 16 Papageorge Five -- 17 A. Yes. 18 Q. -- did you review that document with the 19 attorneys when you met with them to 20 consult regarding the deposition today? 21 A. No. 22 MR. PECK: I'm starting to think 23 we didn't do a good job of	Page 55 1 handwritten memo that was sent to you by 2 Mr. Hodges? 3 A. Yes. 4 Q. All right. Okay. Who is Mr. Hodges? 5 A. Mr. Hodges was the individual in 6 Monsanto's organic division, organic 7 chemicals division, who was assigned the 8 task of monitoring environmental issues 9 in the organic division's plant. 10 Q. Okay. The memo reflects on page 11 013187 -- 12 A. I see it. 13 Q. It is referring now to Bill Papageorge, 14 and then it says, "Anniston." Do you 15 see that right underneath that? 16 A. Yes. 17 Q. It says, "Twenty-five to fifty pounds of 18 Aroclors originally lost with some 19 trapping of three Aroclors at the 20 limestone neutralization." 21 A. I see that. 22 Q. Do you know for how long twenty-five to 23 fifty pounds per day of Aroclors were
Page 54 1 it. 2 Q. If you can look at this document, I will 3 tell you that I'm only going to be 4 interested in the first paragraph on 5 page DSW 013187. 6 MR. PECK: But if you want to look 7 at all of it, go ahead. 8 Q. Please, absolutely. Actually, in 9 looking at the document, probably I 10 think DSW 013186 and 13187 go together 11 and probably the rest of the document 12 somehow got attached. The reason I say 13 that is because the summary is for 14 September 1970, the summary reflected in 15 the technical service department's 16 monthly report. And the handwritten 17 notes that I'd like to ask you about are 18 dated April 6, 1970. Do you see that? 19 A. I see that. 20 Q. Okay. Have you had a chance to look 21 through DSW 013187? 22 A. I have. 23 Q. Are these handwritten notes or a	Page 56 1 being lost to the sewer at the Anniston 2 plant? 3 A. I have no idea. It might have been one 4 minute and it might have been days. 5 Q. Okay. If you look at the -- that first 6 paragraph still, it does reflect that 7 present losses in April 1970 -- See 8 where it says, "Present losses are about 9 five pounds per day"? 10 A. Yes. It is the last part of that 11 statement. 12 Q. Yes. Five pounds per day or five 13 hundred parts per billion, correct? 14 A. That's what it says, yes. 15 Q. So that reflects, sir, that as of April 16 6, 1970, the plant was experiencing 17 losses of PCBs to the sewer of five 18 hundred parts per billion or five pounds 19 per day, correct? 20 A. I hesitate because you used the words 21 "lost to the sewer." I see this as 22 material entering the pit. 23 Q. Okay. So when it says, "present

Page 57 1 losses," you are referring to material 2 entering the pit? 3 A. Yeah. By losses, it's from the 4 production unit down to the pit. 5 Q. To the pit. Okay. I'm sorry. Thank 6 you for clarifying that. 7 And the goal was to reduce that 8 level to ten parts per billion per day 9 by October 1st, 1971, correct? 10 A. Correct. 11 MR. ATKIN: Let us mark for 12 identification the next 13 document, which is the July 14 21st, 1970, progress report. 15 Do you have that? I'm 16 sorry. You do not have that. 17 Okay. That's all right. We 18 will take this one, but I 19 guess we will have to 20 stipulate for the record that 21 the highlighted portions of 22 this were done by me. 23 Obviously the original	Page 59 1 1970, titled Aroclor Losses at the 2 Anniston Plant, bearing Bate's number 3 MONS 056663 through 056673. 4 If you could turn to page 056667. 5 A. I have it. 6 Q. Okay. According to that sheet, the 7 average Aroclor concentration from April 8 22nd, 1970 through May 4th, 1970 was 9 eighteen hundred and thirty-three parts 10 per billion in the warehouse sewer. Is 11 that correct? 12 A. That is correct. 13 Q. And the average Aroclor losses per day 14 listed on that document were one point 15 forty-three pounds? 16 A. That is correct. 17 Q. If you could turn to the document MONS 18 056670. 19 A. I have it. 20 Q. Okay. According to that sheet the 21 Aroclor concentration in the total plant 22 effluent averaged fourteen hundred sixty 23 parts per billion per day for April
Page 58 1 documents did not have any 2 highlighting on it. 3 MR. PECK: Okay. I've marked that 4 Plaintiffs' Exhibit Seven for 5 you. 6 (Plaintiffs' Exhibit Number 7 Seven was marked for 8 identification.) 9 MR. ATKIN: Thank you. Let's go 10 off for one second. 11 MR. PECK: Sure. 12 (Discussion held off record.) 13 Q. Okay. Well, have you had a chance to 14 review that document? 15 A. I have scanned it, not totally, 16 thoroughly reviewed. 17 Q. Okay. I'm going to try to direct you to 18 certain portions of the document. 19 Let me just say that -- for the 20 record that Plaintiffs' Exhibit Seven 21 for the Papageorge deposition is a 22 progress report from the technical 23 services department dated July 21st,	Page 60 1 15th, 1970 through June 30th, 1970. Is 2 that correct? 3 A. That is correct. 4 Q. And the Aroclor losses per day averaged 5 fifteen point seventy-four pounds for 6 that period? 7 A. Yes. 8 Q. And in fact got as high on one of the 9 sample days, on May 4th, 1970, as a 10 hundred and ninety-eight pounds, 11 correct? 12 A. I see that, but I note that it is 13 included in a bracketed set of numbers 14 with an asterisk. 15 Q. Do you know what that bracket and 16 asterisk means? 17 A. I cannot at the moment determine what 18 that is trying to tell us. 19 Q. Okay. If you could look at MONS, the 20 next page, 056671. 21 A. I have it. 22 Q. As well as the document after it, 23 056672. Those two sheets give the

Page 61 1 results for the Snow Creek sampling 2 station; is that correct? 3 A. Yes. 4 Q. Okay. Do you know where the Snow Creek 5 sampling station was? 6 A. I'm confused by your -- Was when? 7 Q. At that time, when they took these 8 samples, the station, do you know where 9 it was? It says the Snow Creek sampling 10 station. 11 A. Oh, the actual spot where the samples 12 were taken? 13 Q. Yes. 14 A. Not specifically, no. 15 Q. Generally do you know? I mean, could 16 you give us some geographic description 17 that would enable us to pinpoint where 18 it was? 19 A. Not really, not without being 20 misleading. 21 I know the asterisk, sir, refers 22 to the note on page MONS 056672. Yes. 23 It is the limestone pit was being	Page 63 1 hundred parts per billion; is that 2 correct? 3 A. Do I have the right page, sir? Is that 4 MONS 056670? 5 Q. 6671. 6 A. 71? 7 Q. Look at 5-10. 8 A. 5-10, yes. 9 Q. And most of the samples that are 10 reflected on these sheets in fact 11 reflect levels that are beyond 12 saturation; isn't that right? 13 A. I hesitate, sir, because when we speak 14 of saturation, I need some guidance 15 regarding saturated in what. Is it 16 distilled water or filtered water or 17 water containing sediment to which PCBs 18 could adhere? So I don't know that I 19 could answer that, because a natural 20 material, when a sample is grabbed, 21 could be all kinds of degrees of 22 sediment in it. 23 Q. Okay. Fair enough. If you could take a
Page 62 1 cleaned out when those bracketed numbers 2 were incurred. 3 Q. I see. It says, "Data not included in 4 average." What does that mean? 5 A. Each of these data sheets that have a 6 total at the bottom called average, any 7 bracketed numbers in each of those 8 columns are not included in the average. 9 Q. I see. Okay. Do you know how many 10 samples were set up on Snow Creek? 11 A. No, I don't. 12 Q. Okay. According to these two sheets, 13 the average amount of PCBs -- I guess if 14 you look at 056672, the parts per 15 billion at Snow Creek from April 15th, 16 1970 through June 21st, 1970 was seven 17 hundred sixty-eight parts per billion. 18 Is that right? 19 A. That's what it indicates, yes. 20 Q. And on some days -- I'm referencing now 21 in particular May 10th, 1970 -- the 22 amount of PCBs in parts per billion in 23 Snow Creek reached as high as ninety-six	Page 64 1 look at the last page, MONS 056673. 2 A. I have it. 3 Q. This page lists the amounts of PCBs in 4 parts per billion found in eleven 5 different samples in Snow Creek and 6 Choccolocco Creek, correct? 7 A. That is correct. 8 Q. And it also breaks the PCB concentration 9 down by mud and water samples? 10 A. Correct. 11 Q. Let's just take a look at the first 12 sample there, which is dated 10-8-69. 13 A. I see it. 14 Q. The sample location is Snow Creek at 15 Glenaddie? 16 A. Yes. 17 Q. Where is Glenaddie in relation to the 18 plant? I guess by that, how far down -- 19 how far is it from the plant? 20 A. I don't know that I ever measured it. 21 I'm going to say three miles, 22 thereabouts, less than five. 23 Q. According to this sheet, there were two

Page 65 1 point three six times ten to the seventh 2 parts per billion Aroclor concentration 3 in that sample of mud; is that right? 4 A. That's what it indicates, yes. 5 Q. How much is that in terms of parts per 6 million; do you know? 7 A. I'd need a paper and pencil to calculate 8 it. That would be -- Unless I'm reading 9 wrong and by mental arithmetic, about 10 twenty-three point six parts per 11 million. 12 Q. Okay. 13 A. A million has six zeros. This has ten 14 to the seventh. So I take that ten and 15 multiple by two point three six by ten. 16 That gives me twenty-three point six for 17 ten to the sixth million. I apologize. 18 The whole column is parts per million. 19 Q. Right. Isn't it in fact twenty thousand 20 parts per million? 21 A. Should I take the time to do the 22 arithmetic? It is only an arithmetic 23 answer. Somebody can calculate that.	Page 67 1 A. All right. My arithmetic may be off, 2 but I came up with two hundred 3 thirty-six parts per million. 4 Q. Okay. Is that a high concentration of 5 PCBs? 6 A. As I started to ask earlier -- I don't 7 know how to define "high." If I were 8 looking for a practical use of that 9 mixture, I would suggest it's too low to 10 do any good to anything. If I look at 11 any other kind of indicator, I could 12 come up with an answer that says it is 13 high. I don't know what to compare it 14 to, sir. 15 Q. Okay. There is -- Sample number four -- 16 Actually -- I'm sorry. Sample number 17 three dated October 8th, 1969. 18 A. I see it. 19 Q. It is Choccolocco Creek at the city 20 treatment plant? 21 A. I see it. 22 Q. That was seven hundred thirty-eight 23 thousand parts per billion, correct?
Page 66 1 Q. Okay. That is a high level of PCBs, 2 isn't it? 3 A. Compared to what, sir? 4 Q. Well, let's just say it is twenty 5 thousand parts per million. Is that a 6 high level of PCBs? 7 MR. PECK: Object to the form of 8 the question. The whole 9 column is parts per billion. 10 THE WITNESS: Yes, parts per 11 billion. 12 MR. PECK: So it wouldn't be 13 twenty-three thousand parts 14 per million. 15 THE WITNESS: This is parts per 16 billion. 17 Q. Two thousand parts per million; is that 18 right? Two point three six times ten to 19 the seventh parts per billion is two 20 thousand parts per million, isn't it? 21 A. All right. I might as well take the 22 time and do it. 23 Q. Thank you. Thank you.	Page 68 1 A. Parts per billion? 2 Q. Parts per billion, yes. 3 A. Yes. 4 Q. I'm sorry. I need to speak a little 5 louder sometimes. 6 A. My hearing is not that good. 7 Q. I'm sorry. I'll try to speak up. 8 Now, was the city treatment plant 9 more than a half mile from the plant? 10 A. Yes. 11 Q. Okay. Were the results of those -- of 12 these samples ever disclosed to anyone 13 outside of Monsanto Company? 14 A. Not to my knowledge. 15 Q. Okay. How far is Mars Hill Missionary 16 Baptist Church from the plant? 17 A. I've never measured it. I don't know 18 that anybody ever told me. Five city 19 blocks or so. 20 Q. Okay. Less than a mile? 21 A. Yes. 22 Q. Now, how far would you say the church is 23 from the south landfill of the plant?

Page 69 1 A. About that order or magnitude of 2 distance. 3 Q. Something similar? 4 A. Similar, yes. 5 Q. Let us mark this for identification as 6 Papageorge Eight, Plaintiffs' Eight, for 7 the Papageorge deposition. 8 (Plaintiffs' Exhibit Number 9 Eight was marked for 10 identification.) 11 A. I have reviewed the exhibit. 12 Q. Okay. Thank you. This exhibit, for the 13 record, is a memorandum that was sent to 14 you, to W. B. Papageorge, from E. S. 15 Tucker; is that correct? 16 A. That's correct. 17 Q. Dated August 6th, 1970, bearing 18 apparently two different sets of Bate's 19 numbers. We will just give one of them, 20 NPC 0108099 through NPC 0108101. Was 21 this a memorandum -- Is it Dr. Tucker? 22 A. Yes. 23 Q. What is Dr. Tucker's first name?	Page 71 1 Q. Okay. 2 A. E. P. Wheeler was a member of Monsanto's 3 corporate medical department. 4 Q. A doctor? 5 A. Not a medical doctor. He had a master's 6 in public health, as I remember. He was 7 for a while the assistant director, 8 reporting to Dr. Kelly, and he later 9 became manager of industrial health. 10 Q. Okay. 11 A. E. G. Wright, we discussed earlier, was 12 the manager of the Anniston plant 13 involved in environmental issues. 14 And P. B. Hodges is the individual 15 in the organic division's manufacturing 16 staff involved with environmental 17 decisions. I think we described him 18 earlier also. 19 Q. Right. Who is Mr. Garrett? 20 A. I'm sorry. I missed him. J. T. Garrett 21 was a member of Monsanto's medical 22 department who headed the industrial 23 hygiene group.
Page 70 1 A. Scott. I'm sorry. He went by Scott. I 2 never knew what the E stood for. 3 Q. Okay. What was his position at 4 Monsanto? 5 A. He was an analytical chemist in 6 Monsanto's corporate research department 7 who was the principal research person in 8 developing PCB analytical methodologies. 9 Q. Okay. Now, I may as well ask you this 10 at this point so I don't lose too much 11 time. There were several people copied 12 on this memo. 13 A. There are. 14 Q. Can you tell us who they are? 15 A. M. W. Farrar is the director of research 16 involved with the PCB products used as 17 what Monsanto called plasticizers, which 18 really is another word for miscellaneous 19 use. 20 R. E. Keller was in Monsanto's 21 corporate research who headed the unit 22 in which Dr. Tucker worked, the 23 analytical research unit.	Page 72 1 Q. Okay. The first sentence of this memo 2 says, "During the October 1969 3 semiannual survey of the Choccolocco 4 Creek, a number of fish were collected, 5 quick frozen, and shipped to us for PCB 6 residue analysis." Do you see that? 7 A. I do. 8 Q. When did Monsanto start doing semiannual 9 surveys of Choccolocco Creek? 10 A. As best -- I'm trying to recall. It 11 seemed to me in April of '70. And I'm 12 trying to tie that in with the audit 13 programs that we saw earlier. 14 And the audits originally were 15 designed to look at samples of soil and 16 sediment and water and the like. And 17 while they were out there, they took 18 some fish samples. And I interpret this 19 to tell me that this was the second 20 batch of fish that they received in the 21 year 1970. 22 Q. But the sample was actually taken and 23 the survey of the creek was taken in

Page 73 1 October of 1969? 2 A. Yeah. But I'm trying to remember those 3 audits that we reviewed earlier. I 4 thought they were '69 audits. You may 5 recall in Exhibit Three -- 6 Q. Right. 7 A. -- there was an audit plan developed for 8 the Anniston plant. That was in '69. 9 Q. Uh-huh (indicating yes). 10 A. Okay. And then there was this audit. 11 I have forgotten the question now. You 12 mentioned '68, did you? 13 Q. Yes. It says, "During the October '69 14 semiannual survey of the creek." I'm 15 wondering if you know when semiannual 16 surveys of the creek first began. 17 A. It is my recollection at the moment that 18 it began in the early part of 1969. 19 Q. Okay. 20 A. On or about the April period. 21 Q. Okay. And what did these surveys 22 consist of; do you know? 23 A. It's the collection of samples of water	Page 75 1 received. After it's defrosted and 2 thawed out, they weigh it and then 3 analyze the given weight of that 4 material. 5 The lipid weight, they take the 6 sample and extract it to remove all the 7 fat from it and then analyze the PCBs in 8 that fat. 9 Q. Okay. 10 A. Thank you. 11 Q. Now, on page NPC 0108100, which is the 12 second page -- I think the one you are 13 holding right there -- this reflects 14 that there were as many as one thousand 15 ninety-seven parts per million of PCBs 16 per wet weight for some species of fish. 17 I'm referring to the last figure, the 18 last column -- not the last column, for 19 the species <i>Notropis venustus</i>. 20 A. That's the last entry on the page? 21 Q. Yes. 22 A. Ten ninety-seven. 23 Q. That is parts per million, right?
Page 74 1 and sediment and fish. 2 Q. Okay. 3 A. And the subsequent analyses of these 4 samples. 5 Q. Okay. And how long did Monsanto do 6 these surveys for? 7 A. I just don't remember when they stopped. 8 Q. Okay. Were they still doing them when 9 you left Monsanto's employment? 10 A. I don't know. 11 Q. Okay. Pages two and three of this 12 document give the PCBs in parts per 13 million calculated as Aroclor 1254 for 14 various species of fish sampled at 15 Choccolocco Creek above and below the 16 confluence with Snow Creek, correct? 17 A. Correct. 18 Q. Do you know what the difference is 19 between the wet weight and the lipid 20 categories? 21 A. I'll give you my understanding. 22 Q. Great. 23 A. The wet weight is the sample as	Page 76 1 A. Parts per million as PCB of the type 2 represented by Aroclor 1254, yes. 3 Q. Which is one of the many Aroclor 4 compounds that were manufactured by 5 Monsanto, correct? 6 A. One of several mixtures of PCBs that are 7 sold by Monsanto. 8 Q. And if you look at that same species, it 9 also reflects that there were as many as 10 thirty-seven thousand eight hundred 11 parts per million of Aroclor 1254 PCBs 12 per lipid content, correct? 13 A. Yes. 14 Q. And people shouldn't eat fish with that 15 level of PCBs in them, should they? 16 A. Oh, I don't know, sir. You would have 17 to ask a nutritionist or a toxicologist. 18 This is the concentration in the fat. 19 How much fat is in the whole fish, I 20 don't know. So -- And at the same time, 21 even if I did know, I wouldn't know 22 what, if anything, would happen if they 23 ate it.

Page 77 1 Q. Okay. Do you know, sir, today, what the 2 maximum amount of PCBs allowed in fish 3 is? 4 A. Today? I haven't kept up to date on 5 today's levels. At one time I remember 6 it was five parts per million. 7 Q. That's the last that you recall? 8 A. Yes. 9 Q. Was the information in this memorandum 10 ever conveyed to Monsanto's customers? 11 A. No. 12 Q. Okay. The -- I'm sorry. You may want 13 to give it back to him for a second. 14 I'm sorry. 15 The top of the document -- 16 Actually withdrawn. Withdrawn. That's 17 okay. 18 And the information in that 19 memorandum was never conveyed to the 20 residents of Anniston either; is that 21 correct? 22 A. Not to my knowledge. 23 Q. We will mark this as Plaintiffs' Exhibit	Page 79 1 functional fluids that were part of the 2 business group that he was responsible 3 for? 4 A. That is correct. 5 Q. Okay. For the record, this document 6 bears Bate's number MONS 033851 through 7 033854. 8 A. I have scanned the exhibit. 9 Q. Thank you. What were Mr. Bergen's 10 responsibilities as the director of the 11 functional fluids of the business 12 group -- director of functional fluids 13 business group, I should say. 14 A. He was the individual responsible for 15 managing that group and make certain 16 that all of its activities resulted in 17 an acceptable performance, whether it be 18 environmental concerns or profit 19 concerns or public relations or -- 20 Q. Everything? 21 A. Everything. The buck stopped there 22 insofar as the functional fluids 23 business was concerned.
Page 78 1 Number Nine. 2 (Plaintiffs' Exhibit Number 3 Nine was marked for 4 identification.) 5 Q. For identification, while you are 6 looking at it, I will just identify it 7 for the record. This is a memorandum 8 written by Mr. Hodges to Mr. H. S. 9 Bergen, Jr., dated August 7th, 1970. 10 And I note that you are a -- you were 11 apparently a recipient of this document. 12 Is that correct? 13 A. That is correct. 14 Q. Do you recall seeing this document 15 before? 16 A. Yes, as I read it, I recall it, yes. 17 Q. Who was Mr. Bergen? 18 A. Mr. Bergen was the director of the 19 functional fluids business group in the 20 organic chemicals division of Monsanto 21 Company. 22 Q. And PCBs would have fallen under his 23 jurisdiction or been among the	Page 80 1 Q. And you received a copy of this memo, 2 correct? 3 A. Yes. 4 Q. You will note that it says at the top of 5 the memo, "Confidential, for your 6 information, and destroy." Do you see 7 that? 8 A. I do. 9 Q. Who determined that this memo should be 10 treated as confidential, for your 11 information, and destroy? 12 A. As I indicated earlier, it's a 13 judgmental call on the part of the 14 author. 15 Q. So that would have been Mr. Hodges? 16 A. Yes. 17 Q. Do you know why this memo was given that 18 designation by Mr. Hodges? 19 A. No. I can't speak for Mr. Hodges. 20 Q. Fair enough. The first sentence of the 21 memo says, "Following are the moves 22 underway resulting from the FDA findings 23 of high levels of PCB in fish taken from

Page 81 1 Choccolocco Creek downstream from its 2 confluence with Snow Creek." Do you see 3 that? 4 A. I do. 5 Q. Do you recall what the FDA's findings 6 were? 7 A. I recall an incident where FDA 8 representatives out of Atlanta, Georgia, 9 reported the findings of PCBs in some 10 fish that were taken. I don't recall 11 too many of the other details. I do 12 recall that a group from the Anniston 13 plant went to the FDA offices to discuss 14 this matter. I don't recall the exact 15 timing. 16 Q. Okay. Were you a part of that group? 17 A. No. 18 Q. Do you know -- When it says it is 19 referring to the FDA's findings, you 20 don't recall when the findings were 21 made, do you? 22 A. As best I can come up with is late 23 spring, early summer 1970.	Page 83 1 Q. Okay. Do you know who at Monsanto 2 discussed with Mr. Crockett his handling 3 the problem quietly without release of 4 the information to the public? 5 A. I'm not under any impression that it was 6 discussed. There was a request on 7 Mr. Crockett's part to Monsanto people 8 to handle data in this manner. And when 9 you say who, it's this group that met 10 with Mr. Crockett and the federal FDA 11 people in Atlanta, as I recall, when 12 this matter came up. 13 Q. And your recollection -- I don't want to 14 put words in your mouth. But your 15 recollection is it was Mr. Crockett's 16 desire and request of Monsanto that the 17 problem be handled without releasing the 18 information to the public; is that 19 correct? 20 A. That is true, yes. 21 MR. ATKIN: I think we are going 22 to have to switch tapes. 23 THE VIDEOGRAPHER: The time is
Page 82 1 Q. The first item under status states, "We 2 are presently discharging to Snow Creek 3 about sixteen pounds a day of PCBs." Do 4 you see that? 5 A. I do. 6 Q. Were you aware that as of August 1970 7 Monsanto was discharging sixteen pounds 8 per day of PCBs to Snow Creek? 9 A. I was certainly made aware by the plant 10 reports, yes. 11 Q. The third paragraph states, "Joe 12 Crockett, secretary of the Alabama Water 13 Improvement Commission, will try to 14 handle the problem quietly, without 15 release of the information to the public 16 at this time." Do you see that? 17 A. I do. 18 Q. Did Monsanto request that Mr. Crockett 19 try to handle the problem quietly, 20 without releasing the information 21 regarding the high levels of PCBs in 22 fish from Choccolocco Creek? 23 A. I'm certain they did not.	Page 84 1 three thirty-one p.m., and we 2 are off record to change 3 tapes. 4 (A break was taken.) 5 THE VIDEOGRAPHER: The time is 6 three forty-two, and this is 7 the beginning of tape two. 8 Q. We are back on the record, 9 Mr. Papageorge, and we were discussing, 10 I believe, Papageorge Nine, is it? 11 A. Yes. 12 Q. Papageorge Nine. Had Monsanto had prior 13 dealings with Mr. Crockett before this, 14 before this memorandum? 15 A. Oh, yes, many. 16 Q. Concerning what? 17 A. Findings of PCBs in water and sediment 18 samples and also sharing with him data 19 on how we made PCBs. We shared with him 20 diagrams, charts. 21 Q. Do you recall when you first had 22 dealings with Mr. Crockett on a PCB 23 issue?

Page 85 1 A. The best I can do is early 1970. 2 Q. Okay. Did you review this document with 3 Monsanto's attorneys when you were 4 consulting on getting ready for this 5 deposition? 6 A. This Exhibit Nine? 7 Q. Yes. 8 A. No. 9 Q. The last sentence of that first 10 paragraph, on the first page, says, "Dr. 11 Myers, Director of Public Health of 12 Alabama, wants toxicity information on 13 PCBs, and this will be conveyed 14 personally to him by Jack Garrett next 15 week." Do you see that? 16 A. I do. 17 Q. And Mr. Garrett, you told us, was 18 involved in Monsanto's medical 19 department; is that right? 20 A. Yes, that is correct. 21 Q. Do you know if he ever conveyed the 22 information that was requested, the 23 toxicity information that was requested	Page 87 1 And let me just identify it for 2 the record. It is a September 8th, 3 1970, memorandum from W. B. Papageorge, 4 St. Louis, to numerous people, beginning 5 with Cameron, C-a-m-e-r-o-n. It bears 6 Bate's number DSW 013975 through DSW 7 013987. If I could get -- 8 (Plaintiffs' Exhibit Number 9 Ten was marked for 10 identification.) 11 Q. Before I ask you something about the 12 document, the list of people you sent 13 this document, who is P. S. Park? 14 A. He used to be one of Monsanto's 15 attorneys. 16 Q. Was he the head of the legal department? 17 A. No. 18 Q. Was he the attorney who worked on the 19 PCB matter? 20 A. As part of his assignment, yes. 21 Q. Okay. If I could direct your attention 22 to page nine of the memorandum bearing 23 Bate's number DSW 013983.
Page 86 1 by Dr. Myers? 2 A. He did, yes. 3 Q. Did he convey it personally? 4 A. Yes. 5 Q. Page four of that document, the last 6 page, talks about fish, mud, and water 7 sampling. And it states, "Since our 8 fish samples from nearby Choccolocco 9 Creek also showed high levels of PCBs, 10 we are instituting more samplings to 11 determine the extent of the problem." 12 Do you see that? 13 A. I do. 14 Q. Was that ever done? 15 A. Certainly. 16 Q. When was it done? 17 A. Following the date of this memo, on into 18 '71. 19 Q. Okay. Do you know what the results 20 were? 21 A. I don't remember them offhand, sir. 22 Q. That's fine. Okay. We are done with 23 Papageorge Nine.	Page 88 1 A. I have page nine. 2 Q. This discusses Anniston. And it 3 reflects that in August 1970 the Aroclor 4 losses in the plant effluent increased 5 to a level of seven thousand two hundred 6 eighty parts per billion, equal to 7 eighty-eight pounds per day; is that 8 correct? 9 A. Yeah. I found that in the second 10 paragraph, yes. 11 Q. Okay. That's all I have on that. 12 We are going to mark for 13 identification as Papageorge Eleven a 14 memorandum dated September 15th, 1970, 15 to Mr. Wright from Dr. Tucker. The 16 recipients are Papageorge, Wheeler, 17 slash, Garrett, Keller, and Hodges. 18 (Plaintiffs' Exhibit Number 19 Eleven was marked for 20 identification.) 21 Q. I will ask you to take a look at it, if 22 you could. 23 A. I have scanned the exhibit.

Page 89 1 Q. Thank you. This document -- The subject 2 of this document is fish samples from 3 the Coosa River, Choccolocco Creek 4 collected 8-9-70, correct? 5 A. Correct. 6 Q. And this reflects that fish samples 7 taken in February 1970 -- no -- 8 collected in August 1970 were as high as 9 thirty-three point six parts per million 10 for Aroclor 1248 and sixty-four point oh 11 parts per million for Aroclor 1254; is 12 that correct? 13 A. You are referring to the highest number 14 for each type of Aroclor? 15 Q. Yes. 16 A. Well, they are on the page, yes, sir. 17 Q. Okay. And in fact, the thirty-three 18 point six parts per million of Aroclor 19 1248 was for a sample of catfish ten 20 miles upstream from Choccolocco; isn't 21 that right? 22 A. That's what it indicates, yes, sir. 23 (Plaintiffs' Exhibit Number	Page 91 1 A. Mr. Bell was at the Anniston plant in 2 part of the analytical laboratory, and 3 I'm trying to recall. At some point in 4 time he was closely related with Mr. 5 E. G. Wright in terms of supervision and 6 activity monitoring. 7 Q. Okay. This memo is marked confidential, 8 correct? 9 A. That's what it shows, yes, sir. 10 Q. The first sentence states, "In reviewing 11 your proposed letter to Joe Crockett 12 with legal, et al., we requested latest 13 emissions data on flow to Snow Creek." 14 Do you know what letter he is 15 referring to? 16 A. I don't recall any draft of any proposed 17 letter. I just don't recall that. 18 Q. Do you know why -- I know you don't 19 recall the letter, but do you know why a 20 proposed letter to Mr. Crockett would be 21 reviewed with legal? 22 A. Again, this is an example of the 23 author's perceptions and his judgment
Page 90 1 Twelve was marked for 2 identification.) 3 MR. PECK: It looks like it should 4 only be one document. 5 MR. ATKIN: Yes. Thank you. 6 Q. This document, while you're looking at 7 it is, for identification, a September 8 18th, 1970 memo from Paul Hodges to Toby 9 Bell, Anniston, with seven recipients, 10 Mr. Papageorge being one of them. 11 A. I have read the exhibit. 12 Q. Okay. Who was Mr. Savage? 13 A. Mr. Savage was the member of the organic 14 chemical division's manufacturing group 15 who was assigned the Anniston plant as 16 some of his responsibilities. 17 Q. Okay. Who was Mr. Hosmer? 18 A. Mr. Hosmer was Mr. Savage's supervisor. 19 He was the head of that group. 20 Q. Okay. 21 A. Which also included the author, 22 Mr. Hodges. 23 Q. Okay. Who was Mr. Bell?	Page 92 1 regarding what is confidential and what 2 isn't. 3 Q. Okay. Do you know who the et al. is 4 referring to when it says, "In reviewing 5 your proposed letter to Mr. Crockett 6 with legal, et al."? 7 A. I would be guessing. 8 Q. I don't want you to guess. 9 Was it customary for Monsanto's 10 management to review proposed letters 11 regarding PCBs to government officials 12 with the legal department? 13 A. Not customary, no. Again, it depended 14 on the person putting it together and 15 whether he felt he ought to consult with 16 anyone or do it on his own. 17 Q. Okay. Mr. Hodges says, "We had hoped 18 that it" -- This is referring to the 19 latest emissions data on the flow to 20 Snow Creek. "We had hoped that it might 21 show an improvement over the first week 22 in September and thus demonstrate a 23 favorable trend to Crockett. Instead,

Page 93 1 the emissions are considerably 2 increased, with 9-13-70 at six point two 3 five parts per million, or about eighty 4 pounds of PCBs for the day." Do you see 5 that? 6 A. I do. 7 Q. That level was considerably above what 8 Monsanto had targeted by September 1970; 9 isn't that right? 10 A. That is correct. 11 Q. Okay. In the next sentence Hodges says, 12 "From the legal standpoint, there is 13 extreme reluctance to report even the 14 relatively low emission figures because 15 the information could be subpoenaed and 16 used against us in legal actions." 17 Do you know, sir, if Monsanto in 18 fact reported the September 1970 PCB 19 emissions data for Snow Creek to 20 Mr. Crockett? 21 A. Well, eventually it was. But I don't 22 know the date. 23 Q. What do you mean by eventually? How	Page 95 1 A. No, I didn't. I believe I had 2 discussions, but they were related to 3 sampling and analytical methodology, 4 which always resulted in different 5 numbers every time. It was difficult to 6 pinpoint the numbers. 7 Q. Is it fair to say, sir, that Monsanto 8 had a lack of control over the PCB 9 problem throughout the history of the 10 Anniston plant? 11 A. Lack of control, no, sir. We did a 12 better job than any industry has ever 13 done with any chemical. 14 Q. Okay. Let's mark this for 15 identification as Papageorge Thirteen. 16 For identification purposes, this 17 is a one-page memo or letter from 18 Mr. Foresman, F-o-r-e-s-m-a-n, to 19 Mr. Engman, with multiple recipients, 20 including Mr. Papageorge. 21 (Plaintiffs' Exhibit Number 22 Thirteen was marked for 23 identification.)
Page 94 1 long after this memo was written? 2 A. Within a few weeks, a month, before the 3 end of the year. 4 Q. You remember that? 5 A. Yes. There is continuing dialogue. 6 Q. Okay. To your knowledge, 7 Mr. Papageorge, did Monsanto ever 8 withhold information regarding PCB 9 emissions data from any governmental 10 agency? 11 A. No, sir, not to my knowledge. 12 Q. Mr. Hodges states -- goes on to state, 13 "Obviously, having to report these gross 14 losses multiplies enormously our 15 problems because the figures would 16 appear to indicate lack of control." Do 17 you see that? 18 A. I do see it. 19 Q. Did you ever have any discussions with 20 Mr. Hodges or Mr. Bell about the fact 21 that the PCB losses to Snow Creek appear 22 to indicate lack of control by Monsanto 23 to the PCB problems?	Page 96 1 Q. Do you see that? 2 A. I do, yes. 3 Q. This memo discusses air sampling that 4 was done at the Krummrich Plant; is that 5 correct? 6 A. It relates to air sampling, proposed air 7 sampling program at the plant. 8 Q. At the Krummrich plant? 9 A. The Krummrich plant, yes. 10 Q. Were air samplings ever done at the 11 Anniston plant? 12 A. Yes. 13 Q. Okay. When? 14 A. We took some samples, as I remember, in 15 1970. 16 Q. Okay. Do you know how many samples you 17 took? 18 A. I don't remember now. We took enough to 19 assure ourselves that the releases were 20 below the acceptable for the worker who 21 is right on top of the fuming tank, so 22 to speak. And then the air program, the 23 technology for developing the sampling

Page 97 1 of air was transferred to the Krummrich 2 plant to develop the technology. And 3 then the intent was to share that 4 technology with anybody, including the 5 Anniston plant. 6 Q. Okay. You say that the samples were 7 done in 1970 to the best of your 8 recollection, correct? 9 A. Some sampling was done at the Anniston 10 plant, yes. 11 Q. And were there any samples done at the 12 Anniston plant after 1970? 13 A. I'm hesitating because the unit was shut 14 down in '71. 15 Q. Which unit? 16 A. The PCB unit in Anniston was shut down 17 in '71. I think it was about the middle 18 of the year. So the technology that was 19 developed at Krummrich did not get a 20 chance to be implemented at Anniston 21 before the unit shut down. 22 Q. Okay. Do you know if air samples were 23 ever done in Anniston, outside the	Page 99 1 report, correct? 2 A. That's what it indicates. 3 Q. Okay. Who was Mr. V. R. Haupt? 4 A. He was a member of the Anniston plant's 5 technical services department and headed 6 up one of the engineering sections. 7 Q. Okay. And what were his 8 responsibilities? 9 A. They included the supplying of any 10 technical information relating to 11 modifying equipment, purchasing new 12 equipment, preparing projects for 13 approval of funds to do these 14 engineering types of activities. 15 Q. Okay. Do you know why Mr. Haupt 16 designated this report as confidential, 17 read and destroy? 18 A. Again, author's judgment. 19 Q. Did you destroy the memo after reading 20 it? 21 A. Who? 22 Q. You. You did receive it, didn't you? 23 A. Yes. I didn't destroy it.
Page 98 1 plant? 2 A. No. Because the samples taken right 3 near the source of the PCBs showed us 4 that safe levels were there, and we 5 couldn't imagine that they would be any 6 worse at a distance from the plant. 7 Q. Okay. So the answer is no? 8 A. That is correct. 9 (Plaintiffs' Exhibit Number 10 Fourteen was marked for 11 identification.) 12 MR. ATKIN: Is that Papageorge 13 Fourteen? 14 MR. PECK: Uh-huh (indicating 15 yes). 16 Q. For the record, for identification 17 purposes, Papageorge Fourteen, is a 18 monthly report from the technical 19 services department for October 1970, 20 bearing Bate's number DSW 013900 and DSW 21 013901. 22 A. I have scanned the exhibit. 23 Q. Thank you. You received a copy of this	Page 100 1 Q. Did Monsanto have a policy at that time, 2 in October 1970, about destroying 3 documents that were generated 4 internally? 5 A. They had a records retention program, 6 based on some parameters, on how long to 7 keep certain kinds of documents. I 8 don't know if that's what you are 9 referring to. There was a booklet 10 issued to employees that was supposed to 11 guide them as to how long you keep 12 files. 13 Q. Okay. And do you recall reading that 14 booklet? 15 A. Oh, yes. 16 Q. Did that booklet have a policy in it 17 regarding retention of documents that 18 had been labeled "read and destroy"? 19 A. I don't recall such guidance, no. 20 Q. In this report, in the first paragraph, 21 Mr. Haupt reports that there were four 22 high daily values of the PCB levels in 23 the sewer of the Anniston plant, from

Page 101 1 one thousand to four thousand parts per 2 billion. Do you see that? 3 A. I see it. 4 Q. Do you recall having any discussions 5 with anybody at Monsanto about this 6 memo? 7 A. Not any more than the normal discussions 8 I have with most memos. Nothing stands 9 out here in my memory. 10 (Plaintiffs' Exhibit Number 11 Fifteen was marked for 12 identification.) 13 A. I have reviewed the document. 14 Q. Okay. This is Papageorge Fifteen -- 15 thank you -- for identification. And it 16 is a memorandum dated October 7th, 1970, 17 apparently written by Mr. Savage. 18 A. That is correct. 19 Q. And directed to your attention; is that 20 correct? 21 A. Correct. 22 Q. And this discusses the September 1970 23 PCB levels in Snow Creek from losses	Page 103 1 Q. What is the target they were shooting 2 for? 3 A. As I remember, we were all shooting for 4 ten parts per billion based on the 5 ability of the analytical technology to 6 detect that with confidence. It is not 7 based on any other consideration, only 8 the ability to measure and believe the 9 number when you got it. 10 MR. ATKIN: Okay. Okay. Why -- 11 It is all right. It is only 12 one page. 13 Adam, could we just get 14 copies of these two 15 documents, if we could? 16 Thank you. That will make it 17 easier for everybody. 18 MR. PECK: Off the record. 19 MR. ATKIN: Off the record. 20 (Discussion held off record.) 21 (Plaintiffs' Exhibit Number 22 Sixteen was marked for 23 identification.)
Page 102 1 from the Anniston plant; is that 2 correct? 3 A. That is one of the subjects, yes. 4 Q. And it reports that the average PCB loss 5 for the month of September 1970 was high 6 at twenty-six hundred parts per billion 7 or thirty-two pounds a day. Do you see 8 that? 9 A. I do. 10 Q. And it reflects that the PCB levels in 11 Snow Creek were still very high in 12 September 1970, doesn't it? 13 A. Well, this is the author's comparison of 14 the finding of twenty-six hundred parts 15 per billion, with some target that was 16 lower than that that they were shooting 17 for. So this is where the description 18 "high" comes from. 19 Q. That is the author's description? That 20 is Mr. Savage's description? 21 A. Certainly it's his, but it's based on 22 what the plant and Mr. Savage had all 23 agreed in shooting for a target.	Page 104 1 Q. Mr. Papageorge, I show you a document, 2 one page, bearing Bate's number DSW 3 014091. This is a document to W. F. 4 Taffee from E. G. Wright. Mr. Wright 5 you have already told us about. Who was 6 Mr. Taffee? 7 A. Mr. Taffee was a member of the technical 8 services department at the Anniston, 9 Alabama plant, to whom Mr. E. G. Wright 10 reported. 11 Q. Okay. Have you ever seen this memo 12 before? I note that you are not a 13 recipient. 14 A. I don't recall this memo, but I recall 15 the information that it contains. 16 Q. Okay. Towards the middle of the memo -- 17 this is probably the information you are 18 referring to -- Mr. Wright says, 19 "Several samples have been collected 20 from the ditch upstream from the sump." 21 And it gives the results which show that 22 there were sixty-four thousand eight 23 hundred parts per billion of PCBs, 1242

Page 105 1 only, on October 15th, 1970; thirty-five 2 thousand parts per billion of 1242, 3 only, on October 21st; and twenty-eight 4 hundred parts per billion of 1242, only, 5 on October 22nd. Correct? 6 A. Yes. 7 Q. Do you know what ditch it is referring 8 to? 9 A. This is a newly constructed ditch at the 10 landfill designed to collect rainwater, 11 surface water. And not only was it 12 designed to collect, but it also gave an 13 opportunity to grab samples and see how 14 well this ditch with the sump was 15 working to keep the PCBs from going 16 anywhere. 17 Q. Okay. And it reflects that the samples 18 taken on October 15th and October 21st 19 from the ditch contained visible PCBs; 20 is that correct? 21 A. That's what it says. Apparently they 22 saw something other than crystal clear 23 water.	Page 107 1 biphenyls and Aroclors that were 2 chlorinated terphenyls. 3 Q. Okay. 4 A. And the idea was to communicate with the 5 Alabama authorities the chlorinated 6 biphenyls, not to confuse the picture 7 with this other line of products. 8 Q. I'm talking within the chlorinated 9 biphenyl group. Do you recall seeing 10 any memoranda, letters, anything, or 11 having any discussions with anyone 12 regarding the reporting of only certain 13 Aroclors within that group to the 14 Alabama Water Improvement Commission? 15 A. I remember the distinction made between 16 the polychlorinated biphenyls and the 17 monochlorinated biphenyls. Is that what 18 you have in mind? 19 There was one of the -- Aroclor 20 1221 is a -- strictly speaking, a 21 monochlor biphenyl. It doesn't really 22 fit under a PCB category. 23 Q. Okay.
Page 106 1 Q. Okay. That's all I have on that. 2 Did there come a point in time, 3 Mr. Papageorge, that Monsanto began 4 reporting daily -- daily PCB losses to 5 the Alabama Water Improvement 6 Commission? 7 A. Yes. 8 Q. Do you recall when that was? 9 A. Starting at about the time of these 10 memos, the middle to latter part of 11 1970. 12 Q. And what Aroclor losses were reported, 13 for which Aroclors? 14 A. Any that the analysts detected. 15 Q. Okay. Do you recall seeing any 16 memoranda, internal memoranda, stating 17 that Monsanto would only report certain 18 Aroclors to the Alabama Water 19 Improvement Commission? 20 A. The only memo of that type or only 21 incident of that type that I recall was 22 the attempt to clarify the difference 23 between Aroclors that were chlorinated	Page 108 1 A. I remember some reference to that kind 2 of distinction. I don't know if that is 3 what you had in mind or not. 4 Q. Okay. Let me hand you a document that 5 we will mark for identification as 6 Plaintiffs' Exhibit Seventeen, a 7 one-page memorandum to yourself from 8 Mr. Mason dated October 1st, 1970, 9 bearing Bate's number MONS 098219. 10 Okay? 11 (Plaintiffs' Exhibit Number 12 Seventeen was marked for 13 identification.) 14 A. Yes. 15 Q. I'm sorry. I should look up every once 16 in a while. Who is Mr. Mason? 17 A. Mr. Mason was an assistant general 18 manager in the organic -- I'm sorry -- 19 in the -- at that time -- I'm trying to 20 remember. There were so many company 21 reorganizations. 22 He was an assistant general 23 manager in the Monsanto Industrial

Page 109 1 Chemicals Company. 2 Q. Okay. This memo discusses the problem 3 of PCB contaminated fish at Anniston, 4 correct? 5 A. Yes, it does. 6 Q. And in the second paragraph, Mr. Mason 7 states, "I think it would be useful if 8 you and I could tour Anniston to discuss 9 the subject in more detail, both with 10 our consultants and with the plant 11 personnel involved." 12 Do you recall touring the Anniston 13 plant with Mr. Mason to discuss the 14 problem? 15 A. Yes, I do, very much. 16 Q. Okay. Who are the consultants he is 17 referring to? 18 A. I'm trying to remember their names at 19 the time. We had some fish experts, I'm 20 going to call them, ethologists from 21 Tulane University helping us. 22 Q. Do you recall their names? 23 A. Suttkus and Gunning, if my memory serves	Page 111 1 Q. What was your idea? 2 A. My idea was that the fish obviously were 3 in an environment, in a situation where 4 PCBs were present, and it was found in 5 their tissues because they consumed it. 6 Q. Okay. Did you ever consider the 7 landfill as a source of the PCBs that 8 the fish had consumed? 9 A. No. I found that very difficult, to 10 look at that landfill and associate that 11 with the places these fish were taken. 12 Just -- I couldn't do it. I didn't have 13 any information to help me there. 14 Q. Okay. Just so that -- I think we 15 covered this already, but I just want to 16 make sure I'm absolutely clear on this. 17 Monsanto never took air samples -- 18 PCB levels from the air anywhere outside 19 the Anniston plant; is that correct? 20 A. That is correct. 21 Q. This is Eighteen. 22 While Mr. Peck is putting the 23 designation on, let me just for the
Page 110 1 me right, Gunning and Suttkus. 2 Q. In the first paragraph of this 3 memorandum, Mr. Mason says that, "He 4 thought it would be useful if we obtain 5 additional information on the exact 6 location of PCB deposits and have a 7 better idea of where the fish are 8 picking up this material." Do you see 9 that? 10 A. Yes, I do. 11 Q. Did you ever provide Mr. Mason with the 12 information on the exact location of PCB 13 deposits? 14 A. We thought we were, but Mr. Mason needed 15 some more touring, and this was his way 16 of getting personally exposed to the 17 site and the situation. 18 Q. Okay. Did you ever get a better idea of 19 where the fish were picking up the PCBs, 20 as discussed in this paragraph? 21 A. I don't think I personally got a better 22 idea. It may be that Mr. Mason did. I 23 can't evaluate that.	Page 112 1 record indicate this is a two-page 2 document bearing Bate's number DSW 3 013117 through 013118. 4 Apparently the first page is a 5 cover slip from the desk of 6 Mr. Papageorge, dated 12-8-1970, and the 7 letter underneath is dated December 7th, 8 1970. 9 (Plaintiffs' Exhibit Number 10 Eighteen was marked for 11 identification.) 12 Q. This is a memorandum addressed and 13 written by Mr. Papageorge; is that 14 correct? 15 A. Correct. 16 Q. To Mr. Savage? 17 A. Correct. 18 Q. Okay. In this memorandum you state that 19 one of the important objectives of the 20 PCB control program was to control the 21 losses of PCBs in Monsanto's plant 22 through the waste water effluent to 23 fifty parts per billion by January 1st,

Page 113 1 1971, and ten parts per billion by 2 September 1st, 1971, but that in 3 November 1971 Anniston had fourteen 4 hundred and ten parts per billion in its 5 waste water effluent, correct? 6 A. That's correct. 7 Q. So two months after the date Monsanto 8 had targeted to get the PCB levels in 9 the plant's waste water down to ten 10 parts per billion, the plant was in fact 11 experiencing PCB losses of one hundred 12 and forty times greater than the 13 targeted amount. Isn't that correct? 14 A. No, sir. That ten parts per billion was 15 targeted for 1971. This is referring to 16 November 1970. 17 Q. I'm sorry. Excuse me. Also you say -- 18 You also say, "Because of the 19 seriousness of the PCB problem, this 20 level of performance cannot be allowed 21 to continue." What did you mean by the 22 seriousness of the PCB problem? 23 A. Its presence in places that we never	Page 115 1 greater than the targeted level for 2 January 1971; isn't that right? 3 A. That is correct. 4 Q. By the way, did Monsanto ever set a 5 specific target for the quantity of PCBs 6 that would be tolerated in the plant in 7 the ambient air, atmospheric 8 concentration of PCBs? 9 A. Monsanto didn't set that. The American 10 Conference of Industrial -- I mean of 11 Governmental Industrial Hygienists set 12 the standard for the amount of PCB 13 vapors in the air that a person should 14 be exposed to during his normal 15 eight-hour working day, five days a 16 week, for a lifetime of exposure. 17 Q. Do you recall what that level was in or 18 about January 1971? 19 A. For the PCB that represented Aroclor 20 1242, it was one milligram per cubic 21 foot of air. 22 Q. Okay. 23 A. And for the PCB that was a similar to
Page 114 1 suspected was perceived to be 2 unacceptable, and we were trying to 3 reduce the opportunity for PCBs to get 4 there in the future. 5 Q. Okay. I hand you what will be marked as 6 Papageorge Exhibit Number Nineteen. For 7 identification purposes, this is the 8 summary of the January 1971 technical 9 services department monthly report, 10 bearing Bate's number DSW 013907 and 11 013908. 12 (Plaintiffs' Exhibit Number 13 Nineteen was marked for 14 identification.) 15 Q. Have you had a chance to look at that? 16 A. Yes, I have. 17 Q. This memo reflects -- This monthly 18 report reflects that in January 1971 19 Aroclor losses were three hundred seven 20 parts per billion or one point eight 21 pounds per day, correct? 22 A. Yes. 23 Q. Okay. And that was still six times	Page 116 1 Aroclor 1254 -- 2 Q. What do you mean by similar to 1254? 3 A. Chemically it contains those types of 4 PCBs that are in this commercial mixture 5 which Monsanto called Aroclor 1254. 6 Q. Thank you. 7 A. The vapor for such a mixture was limited 8 by this group of industrial hygienists. 9 Q. By the HCGIH? 10 A. HCGIH, to a half of a milligram per 11 cubic meter of air. I believe that's 12 the standard that exists today. 13 MR. PECK: Just for clarification, 14 I first heard you on 1242 -- 15 you said one milligram per 16 cubic foot of air. 17 THE WITNESS: I'm sorry. Cubic 18 meter. 19 MR. PECK: In the second you said 20 point five per cubic meter. 21 THE WITNESS: All of the units are 22 in metrics. So it's 23 milligrams and meters.

Page 117 1 MR. ATKIN: Thank you for 2 clarifying that. 3 Q. We will mark for identification 4 purposes, as Exhibit Twenty to your 5 deposition, a document bearing Bate's 6 number MONS 098414, dated January 29th, 7 1971. It appears to be a memorandum 8 from Mr. Papageorge to Mr. Savage, with 9 several recipients. 10 (Plaintiffs' Exhibit Number 11 Twenty was marked for 12 identification.) 13 A. I have read the exhibit. 14 Q. Okay. By January 1971, you had 15 concluded that high levels of PCBs would 16 continue to exist in the plant waste 17 streams because of the PCBs trapped in 18 the soil and the sewer system, correct? 19 A. That is correct. 20 Q. Okay. What did you mean when you said 21 that high levels would continue because 22 of the PCBs trapped in the soil? 23 A. What I had in mind was the fact that	Page 119 1 sources can be economically 2 impractical." Do you see that? 3 A. I do. 4 Q. What did you mean by that? 5 A. I was theorizing in a way what kinds of 6 technology could be applied to extract 7 the PCBs in soil. And with my quick, 8 off the top of head kind of study, I 9 visualized that this could be a 10 monstrous task in terms of equipment and 11 successful achievement. So I quickly 12 extrapolated that into an economic kind 13 of thought, and I was hoping that by 14 getting others involved we could get 15 perhaps a different perspective that 16 could still get to the solution without 17 my high costs estimates, which were, as 18 I said earlier, not based on any 19 highfalutin calculations or science. It 20 was just a gut feel I had that this 21 could be a monster. 22 Q. Okay. You also concluded that the PCB 23 contamination in the plant was so
Page 118 1 PCBs tenaciously hang onto soil 2 particles like little magnets. And 3 since they aren't destructible in the 4 environment, they will be there forever, 5 such that any time a water flow occurs 6 in this soil, the chances of that soil, 7 with its PCB being transported, will 8 remain. And later if a sample of that 9 contaminated water is taken, sure 10 enough, PCBs will be found in it. 11 Q. Which soil were you referring to? 12 A. Well, this was soil in the plant where 13 previous contamination had occurred, 14 like an overflow of those neutralization 15 pits, for example. 16 Q. Okay. And what did you mean when you 17 said that the PCBs were trapped in the 18 soil? 19 A. It is another way of expressing my 20 magnetism the PCB has for surfaces, 21 clinging to them. 22 Q. In the last sentence of the second 23 paragraph you state, "Cleanup of these	Page 120 1 widespread that all of the plant's 2 effluents must be treated; is that 3 correct? 4 A. Yes. 5 Q. And that this would result in a system 6 more complex and costly than anyone had 7 anticipated, correct? 8 A. Yes. 9 Q. You also said the type treatment needed 10 approaches tertiary treatment -- that's 11 t-e-r-t-i-a-r-y -- which at Krummrich is 12 scheduled for completion by 1973. 13 What did you mean by tertiary 14 treatment? 15 A. There was at the time a proposal made by 16 the technical community in Monsanto, 17 which included researchers in the 18 engineering department, to subject any 19 contaminated soil to a three-step 20 process. That is where the word 21 "tertiary" came from. 22 I at this point in time don't 23 recall all of the details. But it

Page 121 1 involved dissolvents to extract. It 2 involved exposing it to a temperature to 3 drive off PCBs. And I forget the third 4 approach. Nevertheless, there was a 5 plan to introduce this at the Krummrich 6 plant. 7 Q. And was this in fact introduced at the 8 Krummrich plant? 9 A. No. 10 Q. Do you know why not? 11 A. It was determined to be impractical, and 12 the need was never established. 13 Q. When you say impractical, what do you 14 mean by that? Do you mean economically? 15 A. Economically impractical for the 16 perceived benefits when the problem up 17 front was never really determined, why 18 do this, what is the harm. We never 19 were able to pin that down. Presence is 20 one thing; harm is totally different. 21 Q. Okay. You then propose that one pound 22 per day of PCBs in the water effluent be 23 achieved by September 1971 in Monsanto's	Page 123 1 (The deposition was continued 2 to April 1 at 9:00 a.m.) 3 THE VIDEOGRAPHER: Beginning of 4 tape three. 5 THE COURT REPORTER: 6 Mr. Papageorge, I will remind 7 you you are still under oath. 8 Q. (By Mr. Atkin) Good morning, 9 Mr. Papageorge. 10 A. Good morning. 11 Q. How are you today? 12 A. Fine. 13 Q. Yesterday you told us that you are now a 14 self-employed consultant, correct? 15 A. That is correct. 16 Q. Do you do work for Monsanto as a 17 self-employed consultant? 18 A. No. 19 Q. Okay. What type of work do you do as a 20 self-employed consultant? 21 A. It is generally of a technical nature 22 involving engineering principles, some 23 chemistry, and advising those with whom
Page 122 1 plants and one pound per day to the air 2 by the end of 1971, correct? 3 A. Correct. 4 Q. Were those levels in fact achieved by 5 those dates? 6 A. Well, the Anniston plant, as you recall, 7 was shut down. So the remaining 8 plant -- 9 Q. When was the Anniston plant shut down? 10 A. As best I remember, about May or so of 11 1971. Now, the Krummrich plant -- They 12 did achieve it, but I don't recall the 13 date anymore. 14 Q. Okay. You based your proposal -- your 15 proposed levels on the fact that you 16 believed that governmental agencies 17 might tolerate those levels, correct? 18 A. Yes. 19 MR. ATKIN: Okay. 20 MR. PECK: Off the record just a 21 second. 22 MR. ATKIN: Sure. 23 (Discussion held off record.)	Page 124 1 I am consulting to consider certain 2 approaches, search for certain 3 documents, supplying names of 4 individuals who might be of further 5 help. 6 Q. Okay. 7 A. That type activity. 8 Q. Who do you consult for? 9 A. Well, there are several here lately. A 10 law firm, Smith, Helms, Mulliss and 11 Moore. 12 Q. Is that in connection with the PCB 13 litigation? 14 A. Correct. 15 Q. Okay. 16 A. Then I served as an expert witness, I 17 believe is the terminology, for the 18 Syntax Company on the west coast. 19 Q. What do they do? 20 A. I don't propose to know everything they 21 do. They are in pharmaceuticals, 22 agricultural chemicals, and the like. 23 And then I also did some

Page 125 1 consulting for the Chrysler Corporation 2 as an expert witness. 3 Q. In connection with what kind of 4 litigation? 5 A. This involved the presence of PCBs in 6 waterways around the Will Run plant. 7 And I don't know all the legal 8 ramifications. It appears there was 9 some dispute regarding who was 10 responsible of the many operators in 11 that facility, in that area. 12 Q. The work you did for Syntax Company, was 13 that also in connection with a PCB 14 matter? 15 A. No. 16 Q. What kind of matter was that? 17 A. Well, the issue was primarily one of the 18 presence of dioxins generated at one of 19 their plants in Missouri. 20 Q. Dioxins at a plant in Missouri? 21 A. Yes. 22 Q. And what was the nature of your 23 involvement in that case?	Page 127 1 Q. Okay. 2 A. I don't recall which company. 3 Q. But Syntax Company was one of the 4 defendants in the case? 5 A. Was the defendant. 6 Q. The defendant. Okay. Where was that 7 case venued? 8 A. By venue you mean -- 9 Q. Where was it, what jurisdiction? 10 A. San Francisco is as close as I can -- 11 Q. Do you know if it was state court or 12 federal court? 13 A. I don't know that. 14 Q. How about the Chrysler Corporation 15 matter? 16 A. That was up in the Detroit, Michigan 17 area. 18 Q. Do you know if that was state court or 19 federal court? 20 A. I don't. 21 Q. Do you know the name of the plaintiff in 22 that matter? 23 A. Some of them. I can't propose to recall
Page 126 1 A. I was asked to give my opinions 2 regarding the role of the plant manager 3 in the operations of a chemical 4 producing facility. 5 Q. Do you recall when you were involved in 6 that case? 7 A. 1994, 1995. 8 Q. Okay. And when did you do work as an 9 expert witness for Chrysler Corporation? 10 A. Chrysler Corporation was '96, as best I 11 remember. 12 Q. Did you testify in either of those 13 cases? 14 A. In court? 15 Q. Did you give a deposition? 16 A. Depositions, yes. 17 Q. In both cases? 18 A. Yes. 19 Q. Okay. Do you know where the Syntax 20 Company matter -- Well, first of all, do 21 you know who the name of the plaintiff 22 in that case was? 23 A. It was an insurance company.	Page 128 1 all. As I remember, there was -- 2 General Motors was involved. Of course, 3 Chrysler was a defendant -- Well, all of 4 these were defendants: General Motors, 5 Chrysler, the operator of the airport, 6 the air field, the air terminal next to 7 the operating facility. I just don't 8 remember all the others. 9 Q. Okay. You say that you have done -- 10 Withdrawn. 11 Other than the litigation -- the 12 consulting work you did in connection 13 with the litigation for Syntax Company 14 and the consulting work you did in 15 connection with the Chrysler Corporation 16 matter in Detroit, Michigan, do you 17 recall the names of any of the other 18 companies that you have done consulting 19 work for? 20 A. No. There weren't any others. 21 Q. Those are the only two? 22 A. Including the law firm I mentioned 23 earlier.

Page 129 1 Q. How long have you done consulting 2 work -- What firm was that? 3 A. Smith, Helms, Mulliss, and Moore. 4 Q. How long have you done consulting work 5 for Smith, Helms? 6 A. The activity started in the middle of 7 1987. 8 Q. What type of work have you done for 9 them? 10 A. It was primarily -- I'm going to use the 11 word "tutorial approach." And in the 12 earlier periods, in every case it 13 involved the introduction to attorneys 14 who had no background regarding PCBs. 15 So I played the role of, in laymen's 16 terminology, trying to get them familiar 17 with the chemistry, the manufacturing 18 procedures, the uses of the materials, 19 why they were so used, and of course 20 some idea of Monsanto's role in the PCB 21 situation and my impressions regarding 22 the overseas producers. 23 Q. What do you mean by the overseas	Page 131 1 A. Yes. 2 Q. Okay. You haven't done work directly as 3 a consultant for Monsanto since you 4 retired; is that correct? 5 A. That is correct. 6 Q. And you began as a consultant in 1987; 7 is that correct? 8 A. That's correct. 9 Q. How much have you been paid per year in 10 connection with your consulting work 11 that you have provided to Smith, Helms? 12 A. I'd suggest about one hundred thousand a 13 year. 14 Q. Since 1987? 15 A. Yes. 16 Q. And how much have you charged -- or how 17 much did you receive in connection with 18 the consulting work you did for Chrysler 19 Corporation? 20 A. Two hundred fifty dollars an hour. 21 Q. Any idea how many hours you put in on 22 that matter? 23 A. I don't recall the hours. As best I can
Page 130 1 producers? Who are you referring to? 2 A. I'm referring to the PCB producers in 3 Europe and in Japan. 4 Q. Okay. Now, you say from -- that that 5 was your involvement -- your time as a 6 consultant with Smith, Helms was a 7 tutorial approach at the beginning. Has 8 that changed over time? Has that role 9 evolved at all? 10 A. It has evolved to a degree, primarily 11 because their attorneys now involved are 12 already pretty well tuned in on the 13 situation. So my time spent in that 14 kind of activity has been reduced. And 15 now it revolves primarily around the 16 recollection of activities and people 17 and documents that they're looking for 18 and can't seem to find or can't 19 identify. And I try to help them with 20 what I can recall regarding those 21 questions. 22 Q. Still in connection with the PCB 23 litigation; is that right?	Page 132 1 remember, it's about thirty thousand 2 dollars total. 3 Q. Okay. 4 A. And that is a guess right now. I don't 5 have the numbers vividly in mind. 6 Q. Sure. And what about in connection with 7 the Syntax Company matter? How much did 8 you bill them for your services? 9 A. A hundred and fifty dollars an hour. 10 Q. Any idea approximately how much the 11 total bill was? 12 A. Approximately forty thousand. 13 Q. Okay. You said you have received 14 approximately one hundred thousand 15 dollars a year for your consultation 16 work in connection with Smith, Helms. 17 Has that been for every year from 1987 18 to the present, approximately? 19 A. I want to be sure I understand. Do you 20 mean per year or total for the ten years 21 or whatever? 22 Q. No. I'm saying per year. 23 A. Yes.

Page 133 1 Q. Do you get a pension from Monsanto? 2 A. Yes. 3 Q. How much does that pension come to 4 annually? 5 A. Annually about sixty thousand. 6 Q. Do you own any Monsanto stock? 7 A. Yes. 8 Q. How many shares do you have? 9 A. I'm trying to recall. About eighteen 10 thousand. 11 Q. Have you been given any options on the 12 acquisition of Monsanto stock? 13 A. At what point in time? 14 Q. At any point in time. 15 A. Yes. 16 Q. Okay. Tell me when. 17 A. Starting in -- when I became director, 18 environmental operations -- that is 1977 19 -- I began to receive option 20 opportunities on an annual basis. 21 Q. Okay. And did you exercise those 22 options? 23 A. Eventually.	Page 135 1 A. No. 2 Q. Other than the pension you receive from 3 Monsanto, are there any other benefits 4 that you receive from Monsanto today? 5 A. Medical insurance to back up my Medicare 6 coverage. 7 Q. Okay. Anything else? 8 A. There is a life policy available to my 9 beneficiaries when I'm gone. 10 Q. Okay. Do you get a monthly retainer 11 from Smith, Helms? 12 A. Yes. 13 Q. How much is that? 14 A. It's been running eighty-five hundred a 15 month. 16 Q. And how long have you had that retainer? 17 A. I'm not certain of the year. It's 18 either '88 or '89, somewhere in that 19 area. 20 Q. Through the present? 21 A. Yes. 22 Q. Now, if you -- Do you have an hourly 23 billing rate that you bill Smith, Helms
Page 134 1 Q. Okay. When you say eventually, do you 2 recall what year? 3 A. As best I recall, the initial 4 opportunity to participate in the option 5 program gave me a six-year period, 6 holding period. So that would drive the 7 date in the 1983 point. 8 Q. And that's when you exercised the 9 option? 10 A. Not all of them. That first -- The 11 others all had what I'm going to call 12 waiting periods. 13 Q. Okay. Have you exercised any options 14 since 1987? 15 A. Yes. 16 Q. Okay. How many shares have you 17 exercised options for since 1987? 18 A. I just don't remember. 19 Q. Approximate? 20 A. Eight to ten thousand. That's very 21 approximate. 22 Q. Were any of the options to purchase 23 Monsanto stock given to you after 1987?	Page 136 1 at? 2 A. On occasion. 3 Q. Okay. And what is it on occasion? 4 A. A hundred and fifty an hour. 5 Q. What would the occasions be? 6 A. I don't know that we have clearly 7 defined that. There are times when I am 8 involved in an activity and I 9 communicate I spent so many hours, and 10 they know it's a hundred and fifty. So 11 what they do back at the office 12 accounting-wise, I'm not aware of. All 13 I know is a check arrives, and it 14 actually becomes a part of that 15 retainer. So it's a way to help account 16 for some of the activity. 17 Q. Okay. For example, in connection with 18 appearing for depositions, such as 19 appearing here today for a deposition, 20 do you bill -- would you send Smith, 21 Helms a bill for that time? 22 A. No, no. 23 Q. So that would fall within the time --

Page 137 1 The time you spend would fall within the 2 monthly retainer that you are getting; 3 is that correct? 4 A. That is correct. 5 Q. Okay. Okay. Let us mark as Papageorge 6 Twenty-one, for identification, a 7 three-page document, the first page 8 bearing Bate's numbers DSW 013422 9 through DSW 013424, the first page being 10 apparently a cover slip from the desk of 11 William B. Papageorge and the remainder 12 being a document from Mr. Wright to 13 Mr. Crockett. 14 (Plaintiffs' Exhibit Number 15 Twenty-one was marked for 16 identification.) 17 Q. Is that correct? 18 A. Correct. 19 Q. And this document reports on the 20 December 1970 Aroclor losses for Aroclor 21 1242 and 1254 from the Anniston plant, 22 correct? 23 A. Right.	Page 139 1 Q. And when was that? 2 A. It was later in 1971. As best I 3 remember -- Let me think. The last 4 quarter of '71 is as close as I can come 5 to it. 6 Q. Okay. Did Mr. Crockett agree with 7 Mr. Wright's request that this data be 8 held as confidential material? 9 A. Yes. 10 Q. And do you know why? 11 A. Well, it fit in with his own request 12 that he had made previously to us, that 13 we not share this data and let the state 14 agency decide when and how. 15 Q. Were you ever privy to any conversations 16 with Mr. Crockett regarding the treating 17 of this data as confidential material? 18 A. By the word "privy," do you mean was I 19 present in the room when it was 20 discussed? 21 Q. Yes. 22 A. I was not. 23 Q. Who discussed it with him?
Page 138 1 Q. And Mr. Wright asks that this data be 2 held as confidential material. Do you 3 know why he asked that? 4 A. Yes. 5 Q. Why? 6 A. It has to do with the confidence that 7 had yet to be established regarding the 8 ability of the analytical equipment to 9 give accurate data. And as long as 10 Monsanto was still in the process of -- 11 I'm going to use the term -- fine-tuning 12 its method to the point where they had a 13 lot of confidence in the analytical 14 results, at that point the promise, as I 15 recall, was made to the AWIC that we 16 would inform them when that day occurs, 17 and it was up to the AWIC then to do 18 whatever they wanted with the data. 19 Q. Did Monsanto ever get the type of 20 confidence in the analytical abilities 21 of its equipment that you are referring 22 to? 23 A. Yes.	Page 140 1 A. As I remember, the representatives from 2 the plant, Mr. Wright, the plant 3 manager, Gene Jessee, and Toby Bell. 4 Those names come to mind. 5 Q. Okay. Did you participate in any 6 meetings in which Monsanto 7 representatives had discussions 8 regarding the fact that they were going 9 to ask Mr. Crockett to treat this data 10 as confidential material? 11 A. No. 12 Q. Okay. Okay. That's all I have on that 13 document. 14 (Plaintiffs' Exhibit Number 15 Twenty-two was marked for 16 identification.) 17 Q. The next document is Papageorge 18 Twenty-two. For identification 19 purposes, it bears Bate's number DSW 20 013408 and DSW 013409. 21 I'd ask you to take a look at it, 22 if you could. 23 A. I have read the document.

Page 141 1 Q. Thank you. And you were a recipient of 2 this document, correct? 3 A. Correct. 4 Q. And this is a document reporting on the 5 daily Aroclor 1242 and 1254 losses from 6 the Anniston plant for the month of 7 March 1971, from Mr. Wright to 8 Mr. Crockett, correct? 9 A. That is correct. 10 Q. And in April 1971 the average Aroclor 11 losses for Aroclor 1242 and 1254 from 12 the Anniston plant were four point three 13 three pounds per day, correct? 14 A. You said April. This is the average for 15 the month of March reported in April. 16 Q. I'm sorry. I meant March. Is that 17 correct? 18 A. That is correct for March. 19 Q. Okay. By the way, was your proposal 20 that the PCB losses in the water and air 21 not exceed one pound per day ever 22 adopted by Monsanto? 23 A. The proposal, yes. It was adopted as a	Page 143 1 Mr. Wright to Dr. Gerald Gunning, 2 correct? 3 A. That is correct. 4 Q. And you were a recipient of this letter, 5 correct? 6 A. Correct. 7 Q. And who was Dr. Gunning? 8 A. Dr. Gunning was a professor of fish 9 biology at Tulane University who had a 10 consulting firm and had done some 11 consulting for Monsanto. 12 Q. Why was Mr. Wright sending Dr. Gunning 13 residue data from the March 1971 survey 14 of Choccolocco Creek fishes? 15 A. As part of his assistance to the plant 16 regarding fish in area waterways, 17 Dr. Gunning had taken some fish samples. 18 And these samples were sent to the St. 19 Louis Monsanto analytical center for 20 analyses. And the results we see here 21 were obtained by that laboratory. 22 Q. Okay. Let's look at the results for a 23 second, if we could. I'd like for you
Page 142 1 target, yes. 2 Q. Was that target ever reached at the 3 Anniston plant? 4 A. I understand it eventually was, yes. 5 Q. Do you know what "eventually" means? 6 A. It was after the shutdown of the 7 PCB-producing facilities and the 8 dismantling of the facilities. And with 9 continued sampling and analyzing, it 10 eventually reached that point. 11 Q. Any idea what year? 12 A. I'm going to say early 1980s. 13 Q. Okay. 14 A. That's a guess on my part. I was not 15 involved. 16 Q. Fair enough. 17 Q. Okay. We will mark for identification 18 Papageorge Twenty-three, bearing Bate's 19 number DSW 014798 through DSW 014800. 20 (Plaintiffs' Exhibit Number 21 Twenty-three was marked for 22 identification.) 23 Q. And this is a May 24th, 1971 letter from	Page 144 1 to turn to DSW 014799. 2 This data shows that as of March 3 1971 some of the fish sampled in 4 Choccolocco Creek had as many as one 5 thousand seven hundred ninety-one parts 6 per million of PCBs, isn't that right, 7 if you look at sample number three? 8 A. I believe I see that number. 9 Q. Okay. 10 A. I'm personally confused by this. I'd 11 have to study it a little longer. I see 12 two sets of numbers with each box, one 13 in parentheses and -- 14 MR. PECK: I think the 15 parenthetical may be the 16 lipid weight, maybe the fat 17 analysis, and the 18 non-parenthetical may be the 19 wet. I'm not sure. 20 THE WITNESS: That is what I 21 assumed. It doesn't say 22 that. 23 MR. PECK: And I think the number

Page 145 1 he asked about was in the 2 parenthetical, which I think 3 would have been the fat 4 analysis. 5 Q. Is that your understanding as well? 6 A. That -- Yes. 7 Q. Thank you. 8 A. May I point out something? 9 Q. I haven't asked you anything else, so 10 the answer is no. 11 A. It has to do with the parentheses. It 12 is on the document. 13 Q. Okay. Thank you. Let's take a look at 14 Papageorge Twenty-four for 15 identification. 16 (Plaintiffs' Exhibit Number 17 Twenty-four was marked for 18 identification.) 19 Q. For identification purposes, it is a 20 two-page document. For identification 21 purposes, Papageorge Twenty-four bears 22 Bate's number DSW 013395 through -- 23 Well, I'm sorry. It looks like	Page 147 1 A. Yes. 2 Q. And this document, again, is marked 3 confidential, read and destroy, correct? 4 A. Yes. 5 Q. And that would have been Mr. Haupt's 6 determination, correct? 7 A. Yes. 8 Q. And it reflects that the PCB losses 9 during July 1971 averaged two point one 10 four pounds per day or two hundred and 11 forty parts per billion, correct? 12 A. Yes. 13 Q. And that is more than twice the target 14 amount; isn't that right? 15 A. Would you repeat that last -- 16 Q. Sure. That is more than twice the 17 targeted amount; isn't that right? 18 A. Correct. 19 Q. Okay. And that brings us to Papageorge 20 Twenty-five for identification. For 21 identification purposes, Papageorge 22 Twenty-five bears Bate's numbers DSW 23 013382 through 013384.
Page 146 1 these might be -- probably should not be 2 together, these two documents. I take 3 that back. Let's just take the first 4 page, take the front page of that 5 document. I apologize for that. 6 So Papageorge 7 Twenty-four is a one-page 8 document. It is the 9 technical services -- the 10 technical services department 11 monthly report summary for 12 July 1971 bearing Bate's 13 number DSW 013395. 14 Q. Have you had a chance to look at that 15 document? 16 A. I have. 17 Q. Okay. And this is a summary of a 18 monthly report from the technical 19 services department for the current 20 level of Aroclor waste for July 1971, 21 correct? 22 A. Correct. 23 Q. Prepared by Mr. Haupt, H-a-u-p-t?	Page 148 1 (Plaintiffs' Exhibit Number 2 Twenty-five was marked for 3 identification.) 4 A. I have scanned the document. 5 Q. Okay. This report, the first page of 6 the report, discusses the fact that two 7 EPA representatives and Mr. Crockett 8 visited the Anniston plant to collect 9 several samples for PCB analysis from 10 the plant effluent and that they also 11 took samples from Choccolocco Creek, 12 correct? 13 A. Correct. 14 Q. Did you participate in the meeting 15 between them and Monsanto? 16 A. No. 17 Q. The next document, the next page, DSW 18 013383, says at the top, "Confidential. 19 This pollution control section is for 20 immediate information purposes only. 21 Detach and destroy upon reading. Do not 22 file." Do you see that? 23 A. I do.

Page 149 1 Q. You were one of the people who received 2 this memorandum, correct? 3 A. Yes. 4 Q. Did you destroy this document after 5 reading it? 6 A. No, sir. This came out of my file, this 7 copy. 8 Q. Okay. The next page, DSW 013384, the 9 final page, it appears that the average 10 losses of PCBs reported to the AWIC were 11 less than the total average losses 12 actually experienced by the plant; isn't 13 that right? 14 A. I see two numbers reported as average 15 pounds per day. 16 Q. Right. 17 A. The higher number includes in it -- 18 Q. Well -- 19 A. It is not clear. 20 Q. It appears to me -- Maybe we can figure 21 this out together. It appears the total 22 average, the first set of figures for 23 parts per billion is thirty-two, and	Page 151 1 Q. Were there other Aroclor mixtures 2 manufactured at the Anniston plant? 3 A. Yes. 4 Q. How many? 5 A. Oh, there were Aroclor 1260, Aroclor 6 1268, Aroclor 1232. 7 Q. Any others? 8 A. That's all I can recall. 9 MR. PECK: Did you say -- 10 MR. ATKIN: I'm sorry? 11 THE WITNESS: I didn't mention 12 Aroclor 1221 because it was 13 not perceived as a PCB. It 14 was a monochloro biphenyl. 15 Q. But Aroclor 1260 and 1268 and now 1232 16 were PCBs, isn't that right? 17 A. Yes. 18 Q. Okay. Thank you. That's all I have on 19 that document. 20 For identification purposes, 21 Papageorge Twenty-six is a document 22 bearing Bate's numbers -- two sets of 23 Bate's numbers. We will use the one
Page 150 1 pounds per day is zero point two 2 eight -- 3 A. I see that. 4 Q. -- for PCB losses. The next section 5 says, "The average losses, which will be 6 reported to the Alabama Water 7 Improvement Commission, are as follows: 8 Average pounds per day, zero point one 9 two pounds per day, Aroclor 1242 and 10 1254," correct? 11 A. I see that, yes, sir. 12 Q. So is that because Monsanto was only 13 reporting to the Alabama Water 14 Improvement Commission the PCB losses, 15 average pounds per day for Aroclor 1242 16 and 1254? 17 A. Yes. 18 Q. And why was that? 19 A. Those were the major commercial PCB 20 mixtures that were of interest, not only 21 to Monsanto but literally everybody 22 involved with the PCB environmental 23 issue.	Page 152 1 with the first designation, which is NEV 2 093668 through NEV 093704. 3 (Plaintiffs' Exhibit Number 4 Twenty-six was marked for 5 identification.) 6 Q. I'd ask you just to take a look at it if 7 you could. I should just tell you, I'm 8 only going to be asking you questions 9 about the first two pages, so that is 10 all you really need to look at. 11 A. I have reviewed the first three pages. 12 Q. Okay. One more than necessary. Have 13 you ever seen this document before? 14 A. I don't recall it at all. 15 Q. Okay. Did you know -- Were you aware 16 that Monsanto, federal, and state 17 authorities had collected sediment 18 samples from eight different sites along 19 a one and three quarter mile segment of 20 Choccolocco Creek in 1983? 21 A. I don't recall that at all. 22 Q. Okay. And the -- In the summary 23 section, it gives the results of those

Page 153 1 samples under gas chromatography; is 2 that right? 3 A. Yes. 4 Q. And it says that PCB concentrations 5 average nine point nine ug/g. Can you 6 tell me what that means? 7 A. Parts per billion. 8 Q. Is that reading above background levels? 9 A. I'm sorry. 10 Q. Is that reading above background levels? 11 MR. PECK: Object to the form of 12 the question. 13 A. I have no idea. 14 Q. September 28th, 1983. That's it for 15 that. 16 And that brings us to Papageorge 17 Twenty-seven for identification, which 18 is a document bearing Bate's number DSW 19 015232 through -- I'm not sure. Well, 20 we'll keep it together. 015272. 21 I think perhaps the last three 22 pages might be a separate document. 23 MR. PECK: It looks like the first	Page 155 1 Have you looked at that? 2 A. I have. 3 Q. Okay. And this is a letter dated 4 January 15th, 1985, from Juanita 5 Settine, S-e-t-t-i-n-e, supervisor of 6 laboratories for the University of 7 Alabama in Birmingham, directed to 8 Mr. Geary, G-e-a-r-y, Allen, office of 9 the attorney general in Montgomery, 10 Alabama. Have you ever seen this 11 document before? 12 A. I have not. 13 Q. This document reports on the results of 14 the University of Alabama's GC/MS 15 analyses of samples taken by the 16 attorney general on December 12th, 1984, 17 correct? 18 A. The date is correct, sir, but I don't 19 know if the attorney general took the 20 samples. 21 Q. Well, the reason I say that is in the 22 first sentence it says, "Enclosed are 23 the results of our GC/MS analyses of
Page 154 1 two pages are DSW 015232 and 2 233, and then it goes to a 3 MONS number, 023540. 4 MR. ATKIN: Okay. I see. Let us 5 take off the first two pages 6 and use those. Then maybe we 7 will talk about the rest. 8 MR. PECK: Okay. Although I 9 suspect there was an 10 enclosure to this document, 11 because it says, "Enclosed 12 are the results." And y'all 13 may have just mixed and 14 matched your documents 15 somehow. 16 MR. ATKIN: Okay. Thank you. I'm 17 sorry. 18 (Plaintiffs' Exhibit Number 19 Twenty-seven was marked for 20 identification.) 21 Q. So Papageorge Twenty-seven is now a 22 document -- a two-page document bearing 23 Bate's numbers DSW 015232 and 015233.	Page 156 1 your samples of 12 December 1984." When 2 I say -- Apparently there was an 3 analysis being done of samples, at 4 least, that were provided by the 5 attorney general, is that correct, by 6 the attorney general's office? 7 MR. PECK: Object to the form of 8 the question. 9 A. I would suggest that that implies that 10 the supervisor of the laboratories 11 received samples from the office of 12 Mr. Allen, and she was reporting on the 13 results of the analyses. 14 Q. You are correct. Okay. 15 Were you aware that the attorney 16 general took samples for PCB analysis of 17 soil from the Anniston area in December 18 1984? 19 A. I was not. 20 Q. Okay. Do you see the results for the 21 ditch at church 1310? 22 A. I see that, yes. 23 Q. And those results are two hundred

Page 157 1 twenty-six parts per million of PCBs, 2 correct? 3 A. That is reported here, yes. 4 Q. Okay. Do you know what church it is 5 referring to? 6 A. No, I don't. 7 Q. In December 1984 the samples taken from 8 Snow Creek, the ditch at church 1310, 9 and a Monsanto ditch one hundred yards 10 below galvanized pipe 1300 showed that 11 PCBs were present ranging from 12 twenty-seven parts per million to two 13 hundred twenty-six parts per million, 14 correct? 15 A. That's what is indicated, yes. 16 Q. Were you aware of the results of those 17 samples? 18 A. No. 19 Q. I'm done with that. Thank you. The 20 next document is Papageorge 21 Twenty-eight, for identification. 22 (Plaintiffs' Exhibit Number 23 Twenty-eight was marked for	Page 159 1 Q. You were no longer at the Anniston plant 2 at that time, were you? 3 A. That is correct. 4 Q. Have you ever seen this letter before? 5 A. I do not recall ever seeing it. 6 Q. Okay. Were you aware that the United 7 States Department of Agriculture took 8 samples from Choccolocco Creek for PCB 9 sampling in 1983? 10 A. I was not. 11 Q. So obviously you weren't aware of the 12 results of any of those samples, 13 correct? 14 A. That is correct. 15 Q. Were you ever told by anyone that in 16 1983 soil samples from Choccolocco Creek 17 were showing results in the hundreds of 18 parts per million? 19 A. No. 20 Q. Between the early 1970s and early 1980s 21 did Monsanto ever take samples from 22 Choccolocco Creek? 23 A. Yes. I remember some sampling on the
Page 158 1 identification.) 2 Q. And this is a November 14th, 1983 letter 3 from Robert Thompson, of the United 4 States Department of Agriculture, Soil 5 Conservation Service, addressed to 6 Mr. Jerry Brown of Monsanto Agricultural 7 Products Company in Anniston, Alabama, 8 correct? 9 A. That is correct. 10 Q. And the letter is dated November 14th, 11 1983? 12 A. That is correct. 13 Q. Okay. Do you know who Jerry Brown is? 14 A. Yes, sir. 15 Q. Who is Jerry Brown? 16 A. He is a Monsanto employee at the 17 Anniston, Alabama plant. 18 Q. Do you know what his duties are? 19 A. Through the years his duties did change. 20 As I understood it, in 1983 he was 21 perceived to be the top individual 22 relating to environmental issues at the 23 plant.	Page 160 1 creek. 2 Q. When was that? 3 A. In the early '70s. 4 Q. I guess what I'm trying to get at is 5 between the -- Let me rephrase it. 6 Between the mid 1970s and early 7 1980s did Monsanto take samples from 8 Choccolocco Creek? 9 A. I do not know. 10 Q. Do you know who would know that? 11 A. Middle '70s to -- The obvious answer 12 that comes to mind is the plant manager. 13 Q. Who was that between the mid '70s and 14 early '80s? 15 A. I'm trying to recall. I believe 16 Mr. Jessee, Gene Jessee, J-e-double 17 s-double e. And I don't remember the 18 names of his successors. 19 Q. Okay. Fair enough. Do you know if 20 Monsanto ever took samples from Snow 21 Creek between the mid 1970s and early 22 1980s? 23 A. I do not.

Page 161 1 Q. Okay. What types of sampling, if any, 2 did Monsanto do from the mid 1970s 3 through the early 1980s to detect PCBs 4 in soil in the Anniston area? 5 A. I do not know. 6 Q. Do you know who would know that? 7 A. The only name that comes to mind is -- a 8 strong possibility is Mr. Brown and of 9 course the plant manager in charge at 10 the time. 11 Q. Okay. Can you just refresh my 12 recollection? When did you leave the 13 Anniston plant? 14 A. The end of 1969. 15 Q. And did you return to the Anniston plant 16 for any period of time on a regular 17 basis? 18 A. Not regular. I've had two-day visits, 19 that kind of thing. 20 Q. Okay. What types of air samples, if 21 any, did Monsanto do from the mid 1970s 22 through the early 1980s to detect PCBs 23 in air in the Anniston area?	Page 163 1 Q. Okay. When was the last time you saw 2 this document? Withdrawn. Let me make 3 it easier. 4 Did you review this document in 5 connection with your meetings with 6 counsel when you consulted in connection 7 with -- for this deposition? 8 A. With this deposition? 9 Q. Yes. 10 A. No, sir. 11 Q. Okay. This document is dated March 12 30th, 1970. It appears to be either a 13 memorandum or a letter from Mr. R. Emmet 14 Kelly -- Dr. R. Emmet Kelly, that would 15 be, to W. B. Papageorge, correct? 16 A. That is correct. 17 Q. Dated March 30th, 1970, correct? 18 A. Correct. 19 Q. Who are the recipients of this letter? 20 Who is H. S. Bergen? 21 A. Bergen was my supervisor, the director 22 of the functional products business 23 group.
Page 162 1 A. I do not know. 2 Q. Again, do you think that Jerry Brown 3 would be the person to be most 4 knowledgeable about that? 5 A. That's my strong suspicion. 6 Q. Okay. What types of sampling, if any, 7 did Monsanto do from the mid 1970s 8 through the early 1980s to detect PCBs 9 in fish in the Anniston area? 10 A. I do not know. 11 Q. And again, you think perhaps Jerry Brown 12 would be the most knowledgeable person? 13 A. I'd start with him. 14 Q. Okay. We will. 15 Let us mark for identification 16 purposes Papageorge Twenty-nine. And 17 this is a document -- a one-page 18 document bearing Bate's number STR 19 029900. 20 (Plaintiffs' Exhibit Number 21 Twenty-nine was marked for 22 identification.) 23 A. I have reviewed the documents.	Page 164 1 Q. And who was Mr. Minckler? 2 A. Mr. Minckler was the general manager of 3 the organic chemicals division in 4 Monsanto Company under which the 5 functional products business group 6 reported. 7 Q. And Mr. Park was legal, correct? 8 A. Correct. 9 Q. And Mr. Springgate? 10 A. Mr. Springgate was Mr. Bergen's 11 counterpart in the plasticizer business 12 group. 13 Q. Okay. And you became aware from this 14 memo that the Ohio Health Department had 15 found PCBs, particularly Aroclor 1254, 16 in samples of milk from at least three 17 herds in Ohio, correct? 18 A. That is correct. 19 Q. Had you ever become aware before this 20 memo of the possibility of milk being 21 contaminated by PCBs? 22 A. Yes. 23 Q. When?

Page 165 1 A. Early 1970, as best I recall. 2 Q. And how did that come about? 3 A. I received a report of the findings of 4 milk in cattle in Georgia that was later 5 attributed to the fact that cattle were 6 grazing under -- on land under power 7 lines. And these areas were sprayed 8 with oils to discourage dense weed 9 growth. And it was eventually 10 determined that these oils contained 11 PCBs in them. 12 Q. Okay. In seeing what's reported here, 13 the Ohio Health Department traced the 14 contamination to the PCBs in the paint 15 in the silos, correct? 16 A. That is correct. 17 Q. Now, the third paragraph says, "All in 18 all this could be quite a serious 19 problem, having legal and publicity 20 overtones." Do you see that? 21 A. I do. 22 Q. What legal overtones was Mr. Kelly 23 concerned about?	Page 167 1 to use any Aroclor in any paint 2 formulation that contacts food, feed, or 3 water for animals or humans? I think it 4 is very important that this be done." 5 Do you see that? 6 A. I do. 7 Q. Before this incident in Ohio, did 8 Monsanto ever consider telling its 9 customers not to use PCBs in any paint 10 formulation that contacted food, feed, 11 or water for animals or humans? 12 A. At this point in time there was serious 13 consideration given to those very 14 thoughts of PCBs in relationship to food 15 for animals or humans. 16 Q. When you say at this point in time, do 17 you mean after receipt of the memo, 18 before receipt of the memo? 19 A. Before. We were in the process of 20 coming up with a PCB phase-out program. 21 Dr. Kelly was not aware of that 22 activity. So what he was proposing was 23 already being seriously considered and
Page 166 1 MR. PECK: Object to the form of 2 the question. 3 A. I don't know. You'd have to ask 4 Dr. Kelly on that. That's his -- 5 Q. Did you have any legal overtones you 6 were concerned about when you received 7 this memorandum? 8 A. The only overtones I gathered is when I 9 read Dr. Kelly's reactions, and that 10 brought the thought to my mind. 11 Q. Do you know what publicity overtones 12 Dr. Kelly was concerned about? 13 A. I do not. 14 Q. Did you have any publicity overtones 15 that you were concerned about when you 16 saw this memo? 17 A. I don't recall ever being overly 18 impressed with publicity so much as 19 trying to explain the presence of PCBs 20 in that particular situation. 21 Q. Okay. The last paragraph states, "This 22 brings us to a very serious point. When 23 are we going to tell our customers not	Page 168 1 resulted in Monsanto's program that was 2 announced in -- oh, in a couple of 3 months after that, about May of 1970 or 4 thereabouts. Early summer is the best I 5 can recall now. And the part I have in 6 mind here is that reference to the 7 termination of sales of PCBs to the open 8 uses, including paints. 9 Q. Okay. After you received this memo, did 10 you discuss its content with Dr. Kelly? 11 A. Oh, yes, yes. 12 Q. Okay. Do you recall the sum and 13 substance of the conversations you had? 14 A. Oh, he was certainly surprised that we 15 were thinking the way he was, let's 16 stop. 17 Q. Did you discuss it with anybody else? 18 MR. PECK: The contents of this 19 memo? 20 MR. ATKIN: Yes. 21 A. Well, I recall mentioning that I had 22 received the memo and that they, 23 Mr. Bergen and Mr. Springgate, had

Page 169 1 received copies of it, and these two 2 individuals were part of the discussion 3 of phasing out PCB sales. All we did 4 was touch base with each other that 5 things were going quite well, the way we 6 hoped they would. 7 Q. Did Monsanto ever tell its customers not 8 to use Aroclor in paint formulation that 9 contacts food, feed, or water for 10 animals or humans? 11 A. There was a reference, as I remember, on 12 a label about keeping it away from 13 animal feed and human food. 14 Q. Do you remember when, when these labels 15 were issued that had that specific 16 warning? 17 A. I don't know specifically, '71, about 18 '71. 19 MR. ATKIN: Okay. That's all I 20 have. 21 MR. PECK: Why don't we take a 22 quick break? 23 MR. ATKIN: Sure.	Page 171 1 part of this consulting 2 service. 3 MR. ATKIN: Okay. 4 THE WITNESS: But the minute I'm 5 under oath, the pay stops. 6 It's not reported. 7 MR. ATKIN: Okay. That's fine. 8 THE WITNESS: I don't know if I 9 made that clear earlier. And 10 the more I thought about it, 11 I thought I better reiterate 12 it. 13 MR. ATKIN: I thought that is what 14 you meant. That's fine. 15 Thank you for clarifying. 16 (Plaintiffs' Exhibit Number 17 Thirty was marked for 18 identification.) 19 Q. Let me show you Papageorge Thirty for 20 identification. This is a two-page 21 document dated February 10th, 1967, 22 apparently a letter from Dr. Kelly to 23 Mr. D. Wood in London. And it bears
Page 170 1 (A break was taken.) 2 THE WITNESS: I'd like to review 3 briefly what we talked about 4 in retainers and what I get 5 paid for and what I don't. 6 MR. ATKIN: Well, I'll tell you 7 what, your counsel will have 8 a chance to ask any questions 9 of you when I'm done and -- 10 THE WITNESS: I may have answered 11 correctly. The more I 12 thought about it, I wondered 13 if I heard you correctly, 14 sir. Because I wanted to 15 make sure that it's 16 understood I don't get paid 17 when I'm under oath. That's 18 about as clear as I can make 19 it. 20 MR. ATKIN: Okay. 21 THE WITNESS: But in preparation, 22 like I met with the attorney 23 last week or so, that time is	Page 172 1 Bate's number NEV 0237645 and NEV 2 0236 -- 3 MR. PECK: I think you said that 4 wrong. 5 MR. ATKIN: 023645? 6 MR. PECK: Yeah. 7 Q. And NEV 023646. I'd ask you to review 8 that if you could. 9 A. I have reviewed the exhibit. 10 Q. Okay. Who was Mr. Wood? 11 A. Mr. Wood was a Monsanto employee in the 12 marketing department working out of 13 Brussels, Belgium. 14 Q. Okay. Was he responsible for the 15 marketing of Aroclor products? 16 A. He was one of several, yes. 17 Q. Who else was responsible for marketing 18 Aroclor products? 19 A. Oh, I don't know the whole team. They 20 had Europe and Africa divided into 21 areas. I remember a Don Cameron. 22 Q. Okay. Who was responsible for marketing 23 Aroclors in the United States at or

Page 173 1 about this time period? 2 A. There were two individuals. Don Olson 3 was responsible for marketing of the 4 functional fluids products. And Walter 5 Schalk, S-c-h-a-l-k, was responsible for 6 the marketing of PCBs in plasticizers. 7 Q. Okay. Who are the folks who are CCed on 8 this memo; do you know? Mr. Buchanan? 9 A. Mr. Buchanan was a marketing 10 representative working out of St. Louis. 11 As best I recall he was at that time in 12 plasticizers marketing. I do not 13 recognize the other three names listed. 14 Q. Okay. Did you ever see a copy of this 15 before? 16 A. Yes. 17 Q. And when did you see it? 18 A. I first saw copies of this document when 19 I underwent my tutorial with Elmer 20 Wheeler of Monsanto's medical department 21 in early January or February 1970. 22 Q. What was that tutorial about? 23 A. Mr. Wheeler was bringing me up to date	Page 175 1 in the states when the various technical 2 and lay news media pick up the subject. 3 This is especially" -- Well, let me just 4 stop there. 5 Do you know what Dr. Kelly meant 6 by that paragraph? 7 MR. PECK: Object to the form of 8 the question. 9 A. Anybody reading could -- Dr. Kelly was 10 concerned that the sketchy kinds of 11 information that he was hearing 12 regarding PCBs that was unconfirmed and 13 hadn't been thoroughly studied might get 14 into the news media, the public press 15 and all and really create concerns that 16 would not be justified. 17 Q. Okay. And did he discuss those concerns 18 with you? 19 A. Yes. He was concerned about health 20 effects that weren't proven, allegations 21 that were being made with no basis. 22 Q. Allegations regarding what? 23 A. A specific, the fact that some of the
Page 174 1 on what was known about PCBs as of 2 January 1970. 3 Q. Okay. And that's when you first saw 4 this document? 5 A. Yes. 6 Q. Do you recall any discussions with 7 Mr. Wheeler about this document? 8 A. Of course not word for word, but in 9 essence this document was Mr. Wheeler's 10 way of bringing up the subject of how 11 PCBs were being found in environmental 12 samples at a Swedish laboratory and how 13 Monsanto received the first information 14 regarding that study. 15 Q. That was a study done by Jenssen? 16 A. Yes. 17 Q. Okay. This memo reflects that by 1967 18 Monsanto was getting concerned about 19 PCBs in the air and in fish and other 20 living reservoirs, correct? 21 A. Correct. 22 Q. The third paragraph states, "We are very 23 worried about what is liable to happen	Page 176 1 symptoms that were later attributed to 2 DDT were being automatically, if you 3 will, transferred to PCBs, without any 4 real scientific support for that 5 conclusion. 6 Q. Okay. Anything else? 7 A. That's just an example. I don't 8 remember all the -- 9 Q. The other allegations that he was 10 concerned about? 11 A. Correct. 12 Q. Would you go to the second page, NEV 13 023646, the last paragraph? 14 A. I see it. 15 Q. This paragraph, the beginning of the 16 paragraph states, "The consensus in St. 17 Louis is that while Monsanto would like 18 to keep in the background in this 19 problem, we don't see how we will be 20 able to in the United States." 21 Did Dr. Kelly ever discuss with 22 you the fact that Monsanto wanted to 23 keep in the background regarding the PCB

Page 177 1 problem? 2 A. No. 3 Q. Did you ever hear it mentioned from 4 anyone at Monsanto that Monsanto wanted 5 to keep in the background regarding the 6 PCB problem? 7 A. Never. 8 Q. Okay. The next sentence states, "We 9 feel our customers, especially NCR, may 10 ask us for some sort of data concerning 11 the safety of these residues in humans." 12 Do you see that? 13 A. I do. 14 Q. Was this the first time to your 15 knowledge that Monsanto first considered 16 that its customers might ask for some 17 sort of data concerning the safety of 18 these residues in humans? 19 A. No. The questions regarding health 20 effects of PCBs were shared with 21 customers like NCR. They already knew 22 what Monsanto knew. 23 Q. When was this, as of 1967?	Page 179 1 to express a concern that at this point 2 in time Monsanto's customers may ask for 3 that type of data? 4 MR. PECK: Object to the form of 5 the question. 6 A. Dr. Kelly was expressing a concern about 7 requests for data that is not at that 8 point in time run for an industrial 9 chemical. He was concerned that the 10 emphasis would be to conduct studies 11 similar to those run for Food and Drug 12 Administration registration, either as a 13 food additive or as a pharmaceutical. 14 And that just wasn't deemed appropriate 15 for an industrial chemical. 16 Q. Deemed by who? 17 A. Just everybody in the world that worked 18 with industrial chemicals. 19 Q. So are you saying that the type of data 20 that is referenced here in this memo by 21 Dr. Kelly that the customers might be 22 concerned about relates to the type of 23 data that would go towards FDA
Page 178 1 A. Yes. 2 Q. Okay. What did they know? What did 3 they know regarding the health effects 4 of PCBs? 5 A. Well, it is the kind of information that 6 appeared in the product brochures, and 7 they knew about skin effects. And these 8 are all at levels that really shouldn't 9 be permitted in terms of exposure, skin 10 problems, breathing problems. 11 Q. Anything else? 12 A. Do not ingest kind of thought, don't get 13 it in your food. And since NCR is 14 mentioned here, as an example, a company 15 like NCR would typically have their 16 medical man talk to Monsanto's medical 17 man, as one professional talking to the 18 other, so they are both talking the same 19 technical language. 20 Q. If Monsanto had already provided its 21 customers with data concerning the 22 safety of PCBs in humans, do you know 23 why Dr. Kelly seemed to feel or seemed	Page 180 1 registration? 2 MR. PECK: Object to the form of 3 the question. 4 A. That is what the next sentence 5 emphasizes. 6 Q. What type of data is that? 7 A. It is referred to here as toxicological, 8 slash, pharmacological. It's extensive, 9 multi-year study with test animals. 10 Q. Which at that point in time had not been 11 done, is that correct, by Monsanto? 12 A. For what? 13 Q. For PCBs. 14 A. That is correct. That is typical of an 15 industrial chemical, yes. 16 Q. When you talk about the warnings that 17 had been provided to customers by 18 Monsanto, you mentioned certain health 19 hazards, correct? 20 A. Yes. 21 Q. Did those warnings also include 22 information about liver problems? 23 A. In some cases, yes. I remember some

Page 181 1 reference to continued excessive 2 exposure could damage the liver to the 3 point where it could no longer recover 4 itself. 5 Q. Did those warnings ever talk about 6 possible systemic injury from PCB 7 exposure? 8 A. Yes. 9 Q. Do you recall when for the first time 10 the warnings included information about 11 possible liver trouble? 12 A. I don't remember a specific date. It 13 seems like it was in product brochures 14 and product literature for decades. I 15 just don't remember a date. 16 Q. And I guess the same would hold true for 17 possible systemic injury, that you 18 wouldn't recall the exact date? 19 A. That is correct. 20 Q. Did you have any involvement in 21 formulating the warning labels that 22 Monsanto put on its PCB products? 23 A. Some of them.	Page 183 1 A. No. 2 (Plaintiffs' Exhibit Number 3 Thirty-one was marked for 4 identification.) 5 Q. Let's take a look at Papageorge 6 Thirty-one, for identification. This is 7 a two-page document dated December 5th, 8 1958, authored by D. F. Smith and 9 addressed to Mr. R. D. Minter at the 10 general offices of Monsanto in St. 11 Louis. 12 A. I have read the exhibit. 13 Q. Okay. Who is Mr. Smith? 14 A. Mr. Smith was a Monsanto employee in the 15 organic division of Monsanto Company in 16 that business group that sold hydraulic 17 fluids and other industrial fluids. 18 Q. And who is Mr. Minter? 19 A. Mr. Minter had so many different 20 assignments, I personally don't know 21 exactly what his assignment was in the 22 date of this memo, which reads like it's 23 1958.
Page 182 1 Q. Okay. What was your involvement? 2 A. I was involved in the wording of the 3 paragraph that referred to the findings 4 of PCBs in the environment and the 5 precautionary statements included in 6 that paragraph, to handle it carefully 7 and not allow it to escape into the 8 environment. And eventually there was a 9 phrase or a sentence included referring 10 to prevention of entry into animal feed 11 and human food. 12 Q. And one of the things that Monsanto did 13 tell its customers was they should avoid 14 prolonged breathing of PCB vapors or 15 mists, correct? 16 A. Oh, yes, definitely. 17 Q. That's all I have on that document. 18 Before we go on to Thirty-one, did 19 Monsanto ever provide the residents of 20 Anniston with any data concerning the 21 health hazards of PCBs in humans? 22 A. Uh-uh (indicating no). Why would they? 23 Q. The answer is no?	Page 184 1 Q. Right. 2 A. He was involved with the marketing of 3 hydraulic fluids, but I don't recall his 4 exact title or position at that time. 5 Q. Okay. Do you know who -- Well, we know 6 who Mr. Wheeler is. Do you know who the 7 other recipients of this memo were? 8 A. I don't remember Mr. Newcombe. 9 Mr. Casperi was an attorney. 10 Q. Okay. Have you ever seen this letter 11 before? 12 A. I don't recall it. 13 Q. Okay. Were you ever told by anyone that 14 Monsanto wanted to disclose the minimum 15 information necessary to comply with 16 regulations regarding PCB labeling and 17 not to disclose information which could 18 damage its sales position in the 19 synthetic hydraulic fluid field? 20 A. No, I was never told that. 21 Q. Okay. Thank you. 22 (Plaintiffs' Exhibit Number 23 Thirty-two was marked for

Page 185 1 identification.) 2 Q. For identification purposes, this is a 3 document bearing Bate's number MONS 4 096865 and MONS 096866 dated February 5 14th, 1969, either a memorandum or 6 letter written from Mr. -- written by 7 Mr. Roush, R-o-u-s-h, Don Roush, to 8 J. J. Roder, R-o-d-e-r, in Chicago; 9 subject, inquiry from Vapor Corporation 10 on toxic effects of chlorinated 11 biphenyl. Have you had a chance to look 12 at this? 13 A. I am reading it, reviewing it now. 14 Q. Take your time, please. 15 A. I have read the exhibit. 16 Q. Okay. Who is Mr. Roush? 17 A. Mr. Roush was a representative of 18 Monsanto's marketing department located 19 in St. Louis that was responsible for 20 the marketing of heat transfer fluids. 21 Mr. Roush was the technical person on 22 that staff who would work with the 23 customers on technical matters involving	Page 187 1 was advised of the bran oil poisoning of 2 quite a number of Japanese citizens 3 attributed to PCBs. That's what became 4 known as the Utsu incident, correct? 5 A. You meant the first paragraph. I think 6 you said the second. 7 Q. I'm sorry. The second sentence of the 8 first paragraph. 9 A. I see that, yes, sir. 10 Q. And that's what became known as the Utsu 11 incident? 12 A. Correct. 13 Q. How many people got sick in the Utsu 14 incident? 15 A. Oh, I don't recall the number. 16 Q. Several hundred? 17 MR. PECK: Object to the form of 18 the question. 19 A. That's a good estimate. 20 Q. Do you know how many people died? 21 A. I don't recall any deaths. 22 Q. Okay. Did Monsanto ever tell customers 23 about the Utsu incident?
Page 186 1 the use of heat transfer fluids. 2 Q. Who was Mr. Roder? 3 A. Mr. Roder was a field salesman, field 4 representative located in the Chicago 5 office of Monsanto. 6 Q. When you say field representative, what 7 were his responsibilities? 8 A. He is the individual that was given the 9 responsibility for a geographic area, 10 and he would call on the customers and 11 potential customers in that area. 12 Q. He was a sales rep? 13 A. Yes. 14 Q. Do you know who Mr. Gustaf is, referred 15 to in this memorandum? 16 A. No, I don't. 17 Q. Okay. This memo apparently concerns 18 inquiries that were being made by a 19 customer, Vapor Corporation, about the 20 toxic effects of PCBs, correct? 21 A. Yes. 22 Q. In the second sentence of the first 23 paragraph Mr. Roush says that Monsanto	Page 188 1 A. I know personally that starting in 1970 2 we instructed the field representatives 3 at their sales meetings of the incident 4 and what occurred and what was found. I 5 know I personally talked to groups of 6 customers. 7 Q. I understand. But was there a corporate 8 policy either to tell or not to tell 9 Monsanto's customers about the Utsu 10 incident? 11 A. The policy was to share whatever 12 information we had. 13 Q. So to your knowledge, Monsanto did share 14 that information with its customers? 15 A. Yes. 16 Q. And was a letter sent out to the 17 customers about the Utsu incident? 18 A. No. 19 Q. How was the information to be shared 20 with them? 21 A. Telephone conversations, personal 22 visits, one-on-one type of thing, or at 23 customer group meetings, either within a

Page 189 1 customer's plant or meetings at which 2 several customers would gather at a 3 Monsanto conference room, for example. 4 Q. Was there a directive issued to Monsanto 5 field reps that they should tell 6 Monsanto customers about the Utsu 7 incident? 8 A. Yes. 9 Q. Was that directive in writing? 10 A. I never saw it in writing. 11 Q. Okay. Do you know who issued that 12 directive? 13 A. Mr. Bergen passed that on to Mr. Fallon, 14 who was the individual in charge of the 15 heat transfer business. 16 Q. Did Monsanto ever tell the FDA about the 17 Utsu incident? 18 A. I know we discussed it with the FDA, but 19 my exposure to that discussion -- The 20 FDA knew about it already. I don't know 21 where they found out. 22 Q. Do you know when Monsanto first 23 discussed the FDA -- with the FDA the	Page 191 1 included representatives from the 2 Department of Agriculture, the Interior 3 Department, the Department of Commerce, 4 FDA. I'm sure I left out some, but it 5 was supposedly representative of any 6 federal activity that might be involved 7 with PCBs. 8 Q. Did Monsanto ever tell any of the 9 residents of Anniston, Alabama about the 10 Utsu incident? 11 A. Not that I know of. 12 Q. Can PCBs cause certain toxic and 13 systemic effects as indicated in 14 paragraph two of this memorandum? 15 MR. PECK: Object to the form of 16 the question. 17 A. Yes. 18 Q. Okay. And did Monsanto ever tell any of 19 the residents of Anniston, Alabama, that 20 PCBs could cause certain toxic and 21 systemic effects? 22 A. No. 23 Q. Okay. The next to last sentence in the
Page 190 1 Utsu incident? 2 A. It was in 1970. My hesitation is 3 because it wasn't specific FDA. FDA 4 representatives were in the room along 5 with the Department of Agriculture and 6 so on, the Interagency Task Force on 7 PCBs. This was one of the subjects 8 discussed. 9 Q. And that was sometime in 1970? 10 A. Yes. 11 Q. Do you remember if it was the earlier or 12 latter part of 1970? 13 A. I would suggest late summer, early fall. 14 Q. You mentioned Interagency Task Force on 15 PCBs. What was that? 16 A. The government agencies were attempting 17 to learn what they could about the PCB 18 environmental issue in 1970, and they 19 had informally formed a study group at 20 the encouragement of the head of the -- 21 it is the office of science and 22 technology, but I don't recall exactly 23 what its title was at that time. And it	Page 192 1 third paragraph states -- I take it 2 back. It is the last sentence in the 3 third paragraph. It states, in quotes, 4 "I can only suggest that you attempt to 5 put Gustaf's mind at ease regarding the 6 toxic aspects of these chlorinated 7 biphenyls by playing down the medical 8 reports and playing up proper system 9 design." Do you see that? 10 A. I do. 11 Q. Did Monsanto ever attempt to put its 12 customers' minds at ease regarding PCB 13 toxicity by playing down the medical 14 reports of injuries caused by PCBs? 15 A. Not to -- 16 MR. PECK: Object the form of the 17 question. 18 A. Not to my knowledge. 19 Q. Okay. That's all I have on that 20 document. 21 For identification purposes, 22 Papageorge Thirty-three is a document 23 bearing Bate's numbers NEV 027584

Page 193 1 through -- well, yeah -- through NEV 2 027591. My hesitation was apparently 3 one page doesn't have -- There it is. 4 MR. PECK: It is in the middle of 5 the page. 6 MR. ATKIN: Yeah, the middle of 7 the page. 8 (Plaintiffs' Exhibit Number 9 Thirty-three was marked for 10 identification.) 11 Q. Take your time to look at this. This is 12 a memo from Mr. Richard of the research 13 center to Mr. Wheeler, dated September 14 9th, 1969, regarding subject, defense of 15 Aroclor fluids. 16 A. I have scanned the exhibit. 17 Q. Okay. Part of the strategy that 18 Monsanto devised to defend PCBs was to 19 question the evidence that PCBs were 20 harmful to the environment and to fish; 21 isn't that right? 22 A. That's correct. 23 Q. The last sentence on the first page	Page 195 1 Dr. Richard's counterpart in the 2 plasticizer business team. 3 Q. Okay. 4 A. And Mr. Bergen was Dr. Richard's 5 supervisor, the head of the functional 6 products business group. 7 Q. Well, Mr. Richard expressed the opinion 8 in this document that Monsanto would 9 have to clean up as much as we can, 10 starting immediately, correct? 11 A. I don't know if it is Dr. Richard 12 personally or whether copying from the 13 blackboard where the notes were jotted 14 down. Someone else might have offered 15 this as a thought. 16 Q. In any event, it is incorporated into a 17 document that is authored by 18 Mr. Richard? 19 A. Correct. 20 Q. And addressed to Mr. Wheeler? 21 A. Correct. 22 Q. Did Monsanto ever adopt the policy that 23 it had to clean up PCBs as much as it
Page 194 1 indicates that Monsanto decided that it 2 had to clean up as much PCBs as it 3 could, starting immediately, correct? 4 A. I don't know that I can -- This 5 represents a very rough draft of some 6 preliminary thoughts brought together by 7 a group. So it's a first pass attempt 8 to jot down all the thoughts that were 9 shared at the time. So when you use the 10 expression "this is Monsanto's 11 decision," at this point in time it 12 wasn't an official Monsanto program as 13 displayed in this document. 14 Q. Who was Mr. Richard? 15 A. Mr. Richard was the director of research 16 for the functional products business 17 group. 18 Q. And he wrote this memo to Mr. Wheeler? 19 A. He addressed it to Mr. Wheeler, but it 20 was intended for the recipients as well. 21 Q. Who were the recipients? 22 A. Mr. Hodges was the environmental person 23 in manufacturing. Dr. Farrar was	Page 196 1 could? 2 A. Yes. 3 Q. Okay. How much of the PCBs in Anniston, 4 Alabama did Monsanto in fact clean up? 5 MR. PECK: Object to the form of 6 the question. 7 A. I don't think I understand your 8 question. Do you mean in terms of 9 pounds? 10 Q. Yeah. 11 A. I have no idea. I don't think anybody 12 does. 13 Q. In terms of pounds, how many pounds of 14 PCBs were put into the landfill on 15 Monsanto's property in Anniston, 16 Alabama? 17 A. I don't know. 18 Q. Have any idea? 19 A. No. 20 Q. How long did Monsanto manufacture PCBs 21 for in Anniston, Alabama? 22 A. Monsanto itself from early '30, '31 or 23 thereabouts, until 1971. Forty years.

Page 197 1 Q. In 1971, do you know how many pounds 2 approximately of PCBs Monsanto was 3 manufacturing? 4 MR. PECK: In Anniston or 5 anywhere? 6 Q. In Anniston, Alabama. 7 A. Was manufacturing in '71? 8 Q. Yes. 9 A. In '71 there was only about a five-month 10 operation. I don't recall the numbers. 11 It was a much reduced quantity for that 12 part year. 13 Q. How about in the 1960s, on average? Do 14 you know how many pounds per year 15 Monsanto was manufacturing? 16 MR. PECK: In -- 17 MR. ATKIN: In Anniston, Alabama, 18 yes. Thank you. 19 A. They were approaching the thirty million 20 pound a year quantity. 21 Q. Is it accurate to say that there were at 22 a minimum millions of pounds of PCBs 23 manufactured by Monsanto in Anniston,	Page 199 1 in Anniston to dispose of PCBs? 2 A. No. 3 Q. Why not? 4 A. When the unit was installed, which was, 5 as I remember, the '71 period, 1971 or 6 thereabouts, the decision had been made 7 to limit the sale of PCB products to 8 many uses, which in turn required the 9 shutdown of one of the two U.S. plants. 10 And it was decided that the Anniston 11 plant would be the one to go out of 12 production. And the incinerator was 13 then put at the east St. Louis, Illinois 14 plant or Sauget, S-a-u-g-e-t, Illinois 15 plants because that is where the 16 operation was perceived to continue. 17 Q. Okay. 18 A. I'm sorry. I misunderstood. 19 Q. No. I guess what I'm trying to 20 understand is why did Monsanto not put 21 an incinerator in Anniston? 22 A. Because Anniston was no longer going to 23 be a PCB center of activity.
Page 198 1 Alabama from -- 2 A. Yes. 3 Q. -- the 1930s through 1971? 4 A. Yes. 5 Q. And do you have any idea how many pounds 6 of PCBs manufactured in Alabama, in 7 Anniston, were put by Monsanto into a 8 landfill on its property? 9 A. No, I don't. 10 Q. Okay. Did Monsanto ever ship PCBs from 11 other sites to the landfill in Anniston, 12 Alabama? 13 A. Not to my knowledge, no. 14 Q. If you turn to page NEV 027590 -- 15 A. I have it. 16 Q. According to this page, the second full 17 paragraph specifically, it indicates 18 that part of Monsanto's plan in 19 September 1969 was to set up an 20 incinerator to handle Aroclor disposal, 21 correct? 22 A. Correct. 23 Q. Did Monsanto ever set up an incinerator	Page 200 1 Q. What about the millions of pounds of 2 PCBs that were in the landfill? 3 MR. PECK: Object to the form of 4 the question. 5 A. I think there is a definite 6 misunderstanding. The incinerator will 7 burn pumpable liquids. It was not 8 designed to incinerate solid material. 9 Q. Were all the materials in the landfill 10 at Anniston solids? 11 A. The vast majority were solidified or 12 absorbed on solids. 13 Q. What do you mean by the vast majority? 14 A. Let me put it a different way. At no 15 time were liquid PCBs put in drums and 16 hauled up to the landfill. If the 17 material was a liquid, it was introduced 18 back into the manufacturing process to 19 be recycled, to be recovered, because it 20 was a product. It had some value. The 21 only material sent to the landfill was 22 the material for which there was no 23 known use or no known way to make it

Page 201 1 useful. And it included the tars that 2 looked like road asphalt. It included 3 dirty rags. It included sawdust with 4 drippage on them, that kind of material. 5 And they in turn were put in sealed 6 containers. So it's erroneous to 7 conceive of leaking, oozing liquid out 8 of drums. 9 MR. ATKIN: Okay. I think this 10 might be a good place to 11 stop, because the tape is 12 going to run out in about a 13 minute. 14 (A lunch break was taken.) 15 Q. (By Mr. Atkin) Good afternoon, 16 Mr. Papageorge. 17 A. Good afternoon. 18 Q. Monsanto land-filled some returned 19 Aroclors in its own landfill, correct? 20 A. Yes. 21 Q. A little bit before lunch we were 22 talking about the incineration of PCB 23 contaminated solid waste?	Page 203 1 two thousand degrees Fahrenheit. I 2 personally could never find any 3 technology that demonstrated that such 4 units could be built and operate 5 dependably. 6 Q. At any point in time or in the early 7 '70s? When are you referring to? 8 A. At any point, to this day. 9 Q. Okay. Let me mark this as Papageorge 10 Thirty-five for identification -- 11 Thirty-four. 12 These are several pages of 13 deposition testimony that you gave in 14 the matter of the City of Bloomington, 15 et al., plaintiffs, versus Westinghouse 16 Electric Corporation, defendants. 17 (Plaintiffs' Exhibit Number 18 Thirty-four was marked for 19 identification.) 20 MR. PECK: This objection is 21 probably reserved, too. But 22 as a practical matter, I just 23 generally object to the
Page 202 1 A. We referred to the solid waste and 2 incineration, yes. 3 Q. Yes. Incineration of PCB contaminated 4 solid waste was technically feasible for 5 Monsanto, wasn't it? 6 MR. PECK: Object to the form of 7 the question. 8 A. I don't know how to evaluate the 9 feasibility to Monsanto, sir. We made a 10 survey of such units throughout the 11 country of the service. They were not 12 available. 13 Q. What do you mean, they were not 14 available? 15 MR. PECK: Are you talking about 16 1970? 17 Q. Whenever. Tell me when. 18 A. I'm talking the period of 1970, yes. 19 Q. What do you mean, they weren't 20 available? 21 A. In order to safely destroy PCBs you have 22 to exceed, as I recall, sixteen hundred 23 degrees Fahrenheit and preferably reach	Page 204 1 admission of prior deposition 2 testimony as an exhibit, 3 whether this will be offered 4 at trial. It is an improper 5 way to use prior testimony. 6 But since this is a 7 deposition, I'll obviously 8 allow it to go forward. 9 Q. I refer you to page two thirty-nine, 10 sir, of that deposition, which I believe 11 is the last page. 12 A. It is. 13 Q. Okay. And the question reads: "Did you 14 ever develop a solid waste destruction 15 system?" 16 Answer: "Yes." 17 Question: "Is it in operation 18 now?" 19 Answer: "No." 20 Question: "Why not?" 21 Answer: "We could not find enough 22 support for the use of that unit to 23 justify building it."

Page 205 1 Question: "Not enough customer 2 base?" 3 Answer: "Correct." 4 Question: "But it is technically 5 feasible, is it not?" 6 Answer: "We demonstrated it, 7 yes." 8 Question: "So that the goal of 9 destroying solid waste through PCB -- 10 through PCB contaminated solid waste 11 through incineration has been 12 demonstrated to be technically feasible; 13 isn't that correct?" 14 Answer: "Yes." 15 Do you recall giving that 16 testimony, sir? 17 A. Obviously, I did. 18 Q. And do you recall testifying that it was 19 technically feasible for the destruction 20 of solid waste through incineration? 21 A. I think what we're describing here is a 22 technology that is offered as more of a 23 theory rather than actually	Page 207 1 sounds appropriate. 2 Q. Okay. So in fact Monsanto did increase 3 production of solid Aroclors in Anniston 4 in or about April 1969? It took on a 5 capital project to do that, didn't it? 6 A. Yes, sir. But this is terphenyls. I 7 don't want to confuse you. This is -- 8 Solid Aroclors are chlorinated 9 terphenyls. 10 Q. Okay. You would agree with me, sir, 11 wouldn't you, that Anniston, Alabama and 12 Sauget, Illinois should have been 13 treated with equal levels of concern and 14 precaution by Monsanto? 15 A. They were. 16 Q. And the same goes for the workers at the 17 two plants, right? 18 A. Yes. 19 Q. And were the workers at the two plants 20 protected with ventilation systems? 21 A. Certainly. 22 Q. And were they given gloves and booties 23 to wear?
Page 206 1 demonstrated. What disturbs me is where 2 I said yes to has it been demonstrated 3 as technically feasible. 4 What I had in mind there, in the 5 laboratory you can reach those 6 temperatures; you can show destruction; 7 you can show that the off gasses that 8 are generated don't contain PCBs. 9 When I answered your question 10 previously, I was talking about a 11 commercial unit, a full-size commercial 12 unit operating at the high temperatures 13 and not creating a pollution problem of 14 a different type. 15 Q. All right. Thank you. I'm done with 16 that exhibit. 17 Sir, do you recall whether in or 18 about April 1969 Monsanto spent more 19 than a million dollars to increase 20 production of solid Aroclors at 21 Anniston? 22 A. I recall the project. I don't recall 23 the total dollars involved, but it	Page 208 1 A. Yes, sir. 2 Q. And were they told to change their 3 clothes? 4 A. Yes, sir. 5 Q. And was there any medical monitoring 6 done? 7 A. Yes, sir. 8 Q. And they were given advice and warnings 9 about PCBs? 10 A. Yes. 11 Q. Okay. Did Monsanto ever conduct an 12 epidemiological or health study of its 13 Anniston workers, those who had worked 14 with the manufacture of PCBs? 15 A. Epidemiology? I don't recall any. That 16 doesn't mean it didn't happen. 17 Q. Okay. Did Monsanto ever conduct an 18 epidemiological or health study of the 19 residents of Anniston? 20 A. Not to my knowledge. 21 Q. Did Monsanto ever determine or attempt 22 to determine the body burdens of PCBs in 23 Anniston residents?

Page 209 1 A. Not to my knowledge. 2 Q. Did Monsanto ever tell the residents of 3 Anniston that they might have elevated 4 body burdens of PCBs? 5 A. Not that I know of. 6 Q. Did Monsanto analyze or determine the 7 body burdens of PCBs in the workers at 8 the Anniston plant? 9 A. I do not know of any. 10 Q. Okay. Or at the Krummrich facility? 11 A. I don't know that either. 12 Q. Sir, if you took your grandchildren to 13 church with you and the yard of the 14 church was contaminated with PCBs, would 15 you think it prudent to warn them at 16 all? 17 MR. PECK: Object to the form of 18 the question. 19 A. If I took them to church and they what? 20 Q. And the yard of the church was 21 contaminated with PCBs, would you think 22 it prudent to warn them at all? 23 MR. PECK: Object to the form of	Page 211 1 PCBs? 2 A. No. 3 Q. Did Monsanto ever examine the church for 4 PCBs? 5 MR. PECK: What church? 6 MR. ATKIN: The Mars Hill 7 Missionary Baptist Church. 8 A. No, sir. No church. Nobody examined 9 any church for PCBs or any other 10 chemical, cyanides or ammonia or on and 11 on. 12 Q. Okay. If your daughter was pregnant, 13 sir, you wouldn't want her dusting a PCB 14 contaminated room or gardening in PCB 15 contaminated dirt or eating PCB 16 contaminated fish, would you? 17 MR. PECK: Object to the form. 18 A. Sir, again, from what I know of the 19 health effects of PCBs on humans, I 20 don't find that a disturbing question in 21 terms of do I tell my pregnant daughter. 22 I'd have to know in particular the 23 levels of exposure to my daughter, not
Page 210 1 the question. 2 A. Well, sir, I'd have to know the degree 3 of contamination and the opportunity for 4 that contamination to expose my children 5 to levels that would result in harm. I 6 don't quite know how to -- I know 7 personally -- I took PCBs home in my 8 shoes. So you are talking about my 9 children being near PCBs, yeah, on the 10 garage floor and the kitchen as I walked 11 in the house. So they were exposed to 12 PCBs. 13 Q. That wasn't my question. My question is 14 would you think it prudent to warn your 15 grandchildren if you took them to church 16 with you and you knew that the church 17 was contaminated with PCBs? 18 MR. PECK: Object to the form of 19 the question. 20 A. Based on what I know of PCBs, I saw no 21 reason to mention PCBs, as any other 22 material that might be in that church. 23 Q. Did you ever examine the church for	Page 212 1 the levels present. There is a 2 difference. 3 Q. Would you let your daughter eat fish 4 that were contaminated with seventeen 5 hundred parts per million of PCBs? 6 MR. PECK: Object to the form of 7 the question. 8 A. Yes, because I have nothing that tells 9 me it is going to hurt her. 10 Q. Okay. 11 A. Nothing exists, can't find it anywhere, 12 and I suspect you can't either. 13 Q. Isn't it true, sir, that Monsanto has 14 not had any off-site contamination 15 problems at the Krummrich plant, PCBs? 16 A. Well, there have been allegations of 17 off-site PCB problems. I don't know 18 what you mean by Monsanto has no 19 problems. 20 Q. Off-site PCB contamination problems. 21 A. Yes. 22 Q. Is that true? 23 A. It has been -- The Monsanto plant in

Page 213 1 Sauget, Illinois has been accused of 2 being the source of off-site PCBs -- not 3 accused, alleged to be the source of. 4 Q. Now, sir, even if PCBs weren't 5 considered an environmental contaminant, 6 you would agree with me, wouldn't you, 7 that it wasn't prudent or responsible 8 for Monsanto to discharge PCBs or any 9 other materials straight into the 10 environment? 11 MR. PECK: Object to the form of 12 the question. It is unclear 13 as to time and a number of 14 other factors. 15 A. I'd like to make a clarification or a 16 distinction between the deliberate 17 introduction into the environment of a 18 stream resulting from a process as 19 compared to the occasional incident that 20 occurs due to a repair or maintenance 21 problem or a leak that was not 22 anticipated and was corrected. There is 23 a difference between the occasional	Page 215 1 A. Okay. I've read it. 2 Q. The question reads: "(By 3 Mr. Cunningham) I guess I'm curious as 4 to why you would have bothered putting 5 that stuff out in the lagoon, why you 6 wouldn't just let it get out into a 7 drainage ditch and go out to the creek 8 or whatever. Was it your perspective 9 that good engineering practices in the 10 '60s would have mandated that a waste 11 stream that potentially would have 12 contained PCBs should have been 13 segregated in the manner that you have 14 described that you all did in that 15 facility, at a minimum?" 16 The answer: "At a minimum, it is 17 just not prudent to discharge knowingly 18 any kind of industrial chemical, whether 19 it be PCBs or any other material, and 20 the sediment that collected in that pond 21 was just the type thing you wouldn't 22 want to discharge out into the 23 environment. It just wasn't a practice
Page 214 1 introduction and the deliberate 2 continual introduction. 3 Q. Okay. We are going to mark as an 4 Exhibit, Number Thirty-five to your 5 deposition pages of testimony that you 6 gave in a case called Commonwealth of 7 Kentucky versus Rockwell International 8 Corporation and apparently several other 9 cases consolidated with that case on 10 September 3rd, 1993. 11 MR. PECK: Let me register the 12 same objection to this being 13 used as an exhibit. It is 14 improper use of prior 15 testimony. 16 (Plaintiffs' Exhibit Number 17 Thirty-five was marked for 18 identification.) 19 Q. I'm referring specifically to the 20 question and answer at the bottom of 21 page fifty-nine and the top of page 22 sixty. Or I will be referring to that 23 in a minute.	Page 216 1 that was considered to be responsible. 2 That's all." 3 Do you remember giving that 4 testimony? 5 A. Yes. This is another way of describing 6 what I just described to you earlier, 7 the deliberate disposal continuously, 8 openly, as compared to the leak caused 9 by a mishap of some sort. 10 Q. Okay. We are done with that. 11 Let me mark Papageorge Thirty-six 12 for identification, which are copies of 13 photographs of the Anniston facility and 14 its environs in mid February 1982. And 15 these were supplied to us by Monsanto's 16 counsel. 17 (Plaintiffs' Exhibit Number 18 Thirty-six was marked for 19 identification.) 20 Q. I'd like you to look at the lower 21 photograph, if you could. 22 A. I'm looking at it. 23 Q. And I'll ask you, if you could, to

Page 217 1 identify, from this February 1982 photo, 2 the Mars Hill Missionary Baptist Church. 3 A. I believe I see it in the -- about a 4 half inch from the upper edge. 5 Q. Okay. 6 A. And almost to the middle. 7 Q. Can I ask you just to designate with an 8 A what you believe to be the Mars Hill 9 Missionary Baptist Church? 10 A. I will put an A above it. 11 Q. That will be great. 12 Can you identify from this 13 photograph the plant boundary on the 14 east near Mars Hill? 15 A. I am turned around. By east, are you 16 talking about toward the bottom of the 17 page? 18 Q. Closest to the top, I guess. 19 A. Close to the top. 20 Q. Right, the plant boundary. Would it be 21 right by that road (indicating)? 22 MR. PECK: That photograph is a 23 shot taken -- that photograph	Page 219 1 identified here near the upper 2 right-hand corner. 3 Q. Yeah. Okay. 4 A. How should I designate it? 5 Q. I guess you can put a B there. 6 A. I will put a B in this upper right-hand 7 corner. 8 Q. Thank you. And do you see any ponds on 9 the landfill? 10 A. My eyesight is not quite that good. 11 Q. Are those the ponds (indicating)? 12 A. This looks like the pond, but I'm not 13 positive. 14 Q. Okay. Can you put a C next to what you 15 think appears to be the pond? 16 MR. PECK: Object to the form of 17 the question. 18 A. I will put a C right over that area. 19 Q. Terrific. Now, sir, a lot of water runs 20 off that landfill, doesn't it? 21 A. I don't know what we mean by a lot. Do 22 you mean during a cloud burst? 23 Q. I mean during the course of a year. Do
Page 218 1 is a shot looking toward the 2 east. 3 A. I'm confused, sir. When you said plant 4 boundary -- 5 Q. Right. 6 A. I see that boundary is -- Are you saying 7 Monsanto property line -- 8 Q. Yes. 9 A. -- or the plant boundary? To me the 10 plant boundary was the roadway there. 11 Q. Okay. That's fine. 12 A. Just below here. 13 Q. Can you just draw a line and indicate 14 where that is? 15 A. On that one side of the plant. 16 Q. That will be great. 17 A. That was the plant as the terminology 18 used by -- 19 Q. Right. 20 A. That's the plant boundary. 21 Q. Can you identify the south landfill for 22 us on that photograph? 23 A. The south landfill I believe I	Page 220 1 you know how many inches of rain fall on 2 that landfill every year? 3 A. I don't know. But what you are talking 4 about is water created by rains? 5 Q. Yeah. 6 A. Okay. There is water obviously. 7 Q. Do you know how much? 8 A. No, I don't. 9 Q. Well, the water that -- The amount of 10 water, the rainfall that falls on that 11 landfill, it runs down right through 12 Mars Hill Missionary Baptist Church, 13 doesn't it? 14 A. I'm not a hydrogeologist, sir. I 15 can't -- 16 Q. Well, looking at that photograph, would 17 you agree that the rainwater that falls 18 on that landfill runs down right through 19 Mars Hill Missionary Baptist Church? 20 MR. PECK: Object to the form of 21 the question. 22 A. I can visualize some of that water 23 headed in that direction. I can also

Page 221 1 see other streams radiating down that 2 hillside across the highway and so on. 3 Q. Okay. 4 A. It is not channeled directly to the area 5 you described. 6 Q. Okay. We're done with that exhibit. 7 Let's mark for identification 8 Papageorge Thirty-seven, which is 9 another series of photographs provided 10 by Monsanto's counsel. 11 (Plaintiffs' Exhibit Number 12 Thirty-seven was marked for 13 identification.) 14 Q. Okay. These series of photographs show 15 pumps being used to empty the ponds on 16 the landfill; is that right? 17 MR. PECK: Object to the form of 18 the question. 19 A. I don't know. I see a pump on a 20 platform, and one of the photographs 21 shows a body of water next to it. I'm 22 not familiar with the setup. 23 Q. Okay. That's fair enough.	Page 223 1 Q. Can you identify the pond on the 2 landfill? 3 A. Yes. 4 Q. Okay. Could you put a B next to that? 5 A. (Executed by the witness.) 6 Q. And do you see -- Can you identify a 7 waste pile uncovered on the landfill 8 near the pond? 9 A. I see a difference in colors here. I 10 don't know -- 11 MR. PECK: I object to the form of 12 the question. 13 A. I don't know what is a waste pile and 14 what is -- 15 Q. Okay. Fair enough. 16 Can you designate with a C the 17 location where the old PCB production 18 unit used to be? 19 A. I will put the C in the clear area. And 20 of course the area was on each side of 21 the position of that C. 22 Q. Okay. Can I see that? 23 (Witness hands document to
Page 222 1 Let's mark this for identification 2 as Papageorge Thirty-eight. This is 3 just one photograph provided to us also 4 by Monsanto's counsel. 5 (Plaintiffs' Exhibit Number 6 Thirty-eight was marked for 7 identification.) 8 MR. PECK: Wherever I put it, I'm 9 going to cover up a slight 10 portion of the photograph. 11 MR. ATKIN: Put it on the bottom, 12 then. 13 Q. Now, from this last photograph taken 14 around 1978, can you identify for us 15 Mars Hill Missionary Baptist Church? 16 A. Yes, sir. 17 Q. I would put an A there, if you could. 18 A. (Executed by the witness.) 19 Q. Can you identify the old PCB production 20 unit? 21 A. The old unit is gone. 22 Q. Is it gone already in this photograph? 23 A. Yes, sir.	Page 224 1 counsel.) 2 MR. ATKIN: Thank you. I'm sorry 3 to do this, but I have to 4 take a second break. 5 (A break was taken.) 6 (Plaintiffs' Exhibit Number 7 Thirty-nine was marked for 8 identification.) 9 Q. Mr. Papageorge, we are going to hand you 10 Exhibit Thirty-nine in a second. For 11 identification purposes, this is a 12 document bearing Bate stamp number -- 13 It's two sets. I'll give you one set. 14 The first set is -- The second set is 15 FGL 0011379 through FGL 0011402. Okay? 16 A. I have it. 17 Q. Okay. This appears to be a rough draft, 18 11-10-69, of an outline for the PCB 19 environmental pollution abatement plan, 20 correct? 21 A. Correct. 22 Q. Do you know who drafted this? 23 A. There were several authors putting

Page 225 1 together portions. 2 Q. Can you tell me who put together what? 3 A. I don't know that I can do it quite that 4 precisely. I know that Mr. Elmer 5 Wheeler was involved and Dr. Richard. 6 Q. Doctor -- 7 A. W. R. Richard. 8 Q. What was Dr. Richard's title? 9 A. He was director of research for the 10 functional products group. 11 Q. Okay. Anybody else? 12 A. And Dr. Farrar, who was Dr. Richard's 13 counterpart in the plasticizer group, 14 and Mr. Hodges, Paul Hodges. 15 Q. Okay. Have you ever seen this document 16 before? 17 A. Yes, I have. 18 Q. Can you turn to page FGL 011387, please? 19 A. I have it. 20 Q. Section A there is called "Legal 21 Liability." Do you see that? 22 A. I see it. 23 Q. It says, "Direct lawsuits are possible.	Page 227 1 one. 2 Q. Okay. Any other allegations? 3 A. I can't think of any right now. 4 Q. Were those allegations subsequently 5 borne out? 6 A. No. 7 Q. When you say no, do you mean that PCBs 8 were not shown to have effects on 9 reproduction of wild birds or other 10 creatures? 11 A. The allegations that it affected wild 12 bird reproduction were later attributed 13 by the leaders of the study groups that 14 published these reports, were attributed 15 to DDTs and its degradation product, 16 DDD. 17 Q. So to your knowledge, the effects that 18 you are talking about on reproduction of 19 animals has never been shown or proven 20 to be caused by PCBs? 21 A. The wild animals reported at that time. 22 Q. Which animals were those? 23 A. I recall the brown pelican off the coast
Page 226 1 The materials are already present in 2 nature, having done their alleged 3 damage." Do you know what the alleged 4 damage being referred to here is? 5 MR. PECK: Object to the form of 6 the question. 7 A. There were several allegations made 8 regarding the kinds of things that PCBs 9 could do in the environment. They were 10 all at that point in time unconfirmed. 11 This is why the expression "alleged 12 damages" in this document appears in 13 quotation marks. 14 They referred to effects on the 15 reproduction of wild birds in 16 particular. The other allegations were 17 suspected ailments, similar to the kinds 18 of things the DDTs were being accused of 19 at that time. 20 Q. What kinds of things were those? 21 A. Presence in wild creatures and the 22 possible effects on their ability to 23 reproduce properly. That's the primary	Page 228 1 of Southern California. I recall the 2 peregrine falcon in studies by the 3 Cornell University researchers. I 4 recall the allegation that was made that 5 as a result of a north sea storm in 6 which whales and birds were presumed 7 initially to have been affected by PCBs 8 -- And later it was determined that it 9 was primarily a lack of sufficient food 10 as well as severe storms. 11 Q. Okay. At some point in time were PCBs 12 linked -- or PCBs shown, rather, to in 13 fact have reproductive effects on 14 certain animals? 15 A. Yes. 16 Q. Okay. Which ones? 17 A. There was the study sponsored by 18 Monsanto which demonstrated that some of 19 the PCBs had an effect on the 20 reproduction ability of chickens. 21 Q. And what do you mean by it had an effect 22 on the reproductivity of chickens? 23 A. The eggs would not hatch. I have

Page 229 1 forgotten the levels of PCB in the diet. 2 But there was a level before the effect 3 was noted. 4 Q. Okay. Other than the chickens, any 5 other animals or species that you recall 6 were shown -- that PCBs were shown to 7 have an effect, reproductive or 8 otherwise? 9 A. When you say otherwise, there was a 10 study made at a fisheries laboratory in 11 Gulf Shores, Alabama, I think it is. It 12 might be Florida, Gulf Shores, Florida. 13 MR. PECK: Gulf Shores is Alabama. 14 A. Alabama. But anyway -- 15 MR. PECK: At least the one I'm 16 thinking of is. 17 MR. CUNNINGHAM: But I think he is 18 right. I think it was Gulf 19 Shores Laboratory in 20 Pensacola. 21 A. Off Pensacola, there is an island, a 22 laboratory in which they conducted a 23 study and determined that low levels of	Page 231 1 I show you what will be marked as 2 Papageorge Exhibit Forty for 3 identification. This is a two-page 4 document bearing Bate's number DSW 5 014096 through 014097. It appears to be 6 a memo from Mr. Landwehr of the Anniston 7 plant to the medical department, dated 8 August 18th, 1970. 9 (Plaintiffs' Exhibit Number 10 Forty was marked for 11 identification.) 12 A. I'm confused, sir. You said to the 13 medical department -- 14 Q. I'm sorry. From the medical department 15 to Mr. Landwehr. Thank you. Thank you 16 for clarifying that. 17 And I think you told us yesterday, 18 but could you just tell us who is 19 Mr. Landwehr? 20 A. Mr. Landwehr was the individual that 21 headed up the technical services 22 department at the Anniston plant. 23 Q. And this is written to him by
Page 230 1 PCBs affected newly hatched shrimp, 2 juvenile shrimp, the very young. 3 Q. When you say affected, what do you mean 4 by affected? 5 A. Killed them. 6 Q. What levels of PCBs? 7 A. I don't remember the number. It is a 8 very low level. 9 Q. Okay. If you look at that paragraph we 10 were just looking at, the next sentence 11 says, "All customers using the products 12 have not been officially notified about 13 known effects, nor do our labels carry 14 this information." 15 Is it accurate to say that as of 16 November 1969 Monsanto's customers had 17 not been notified about the known 18 effects of PCBs? 19 A. In '69, no, because those effects were 20 recent news. 21 Q. So it is accurate to say that? 22 A. Yes. 23 Q. Okay. We can put that one away.	Page 232 1 Mr. Garrett of the medical department, 2 correct? 3 A. Correct. 4 Q. Have you ever seen this before? 5 A. Have I seen it, yes, sir. 6 Q. Okay. Do you recall when you last saw 7 it? 8 A. Just the other day. 9 Q. Is this -- What do you mean, just the 10 other day? When did you see it? 11 A. I was talking to our attorneys, as I 12 remember. 13 Q. And you reviewed this document with 14 them? 15 A. I believe I did. It looks very 16 familiar. 17 Q. Okay. In the last paragraph -- 18 MR. PECK: Now we know he did 19 something with them. 20 Q. The last paragraph states, "Crockett 21 told me that if this PCB issue hits the 22 Alabama press, the Alabama Water 23 Improvement Commission would be forced

Page 233 1 to close Choccolocco Creek and the 2 Martin Logan Reservoir to commercial and 3 sport fishing unless we can prove that 4 the contamination level does not reach 5 the reservoir." 6 Were you aware that Crockett had 7 warned Mr. Garrett about the possible 8 closure of Choccolocco Creek in August 9 of 1970? 10 A. I was aware of it a few weeks after the 11 date of this memo. 12 Q. Did the AWIC close Choccolocco Creek at 13 any time? 14 A. Not that I'm aware of. 15 Q. Okay. Did Monsanto take any steps or 16 actions in response to this memo? 17 A. Well, certainly we were in the midst of 18 doing many things that would lead to 19 actions that would respond to this in 20 terms of how to sample, how to analyze, 21 where to sample, how to prevent further 22 generation of waste, all the -- The 23 whole program was aimed to this kind of	Page 235 1 reason I put them together is 2 it appears that the 3 handwritten document -- the 4 text of that actually makes 5 its way into item 4(c) on 6 page DSW 013776. 7 Q. Do you see that? 8 A. I see some similarities, and yet it is 9 not exactly alike. I see a reference on 10 the handwritten copy of ten man days 11 compared to the typewritten on the 12 second page of twelve man days. 13 Q. Right. I was actually referring to the 14 first part, which states, "Clean up Snow 15 Creek." On the handwritten part it 16 states, "Clean up Snow Creek, PCB 17 removal from any specified area from our 18 fence to Choccolocco." And then it 19 says, "1971, avoid if possible, but 20 prepare for action." 21 And when you compare that to the 22 text under item 4(c) on page DSW 013776, 23 that states, "Clean up Snow Creek and
Page 234 1 end results. 2 Q. Okay. I'm done with that memo. 3 (Plaintiffs' Exhibit Number 4 Forty-one was marked for 5 identification.) 6 Q. I'm going to hand you two documents 7 together as the next exhibit and mark 8 them together as Exhibit Forty-one. 9 They are -- The first document -- It is 10 two pages. The first document bears 11 Bate's number DSW 013810. It appears to 12 be handwritten notes. And the second 13 document is page three of another 14 document. I don't have the first couple 15 of pages here with me. It is page three 16 of a document that is signed by 17 Mr. Landwehr, bearing Bate's number DSW 18 013776. 19 MR. PECK: These documents don't 20 originally go together, but 21 they are stapled now? 22 MR. ATKIN: They don't appear to 23 go together. Okay. The	Page 236 1 area monitoring, PCB removal from any 2 area from our fence to Choccolocco, 3 avoid if possible, but be prepared for 4 action." That is the part I'm referring 5 to. 6 Does this indicate that this 7 handwritten document, DSW 013810, was in 8 fact written by Mr. Landwehr? 9 MR. PECK: Object to the form of 10 the question, speculation. 11 A. That I don't know, sir. It could be one 12 of Mr. Landwehr's staff. 13 Q. Do you recognize the handwriting on this 14 document? 15 A. No, I do not. 16 Q. Okay. Is it true, sir, that in 1971 17 Monsanto wanted to avoid cleaning up 18 Snow Creek if at all possible? 19 A. Not Monsanto, no. 20 Q. Well, Mr. Landwehr? 21 A. Somebody. 22 Q. Somebody at Monsanto? 23 A. Handwrote that thought on this first

Page 237 1 page. 2 Q. And that thought is actually also 3 expressed on the second page that is 4 signed by Mr. Landwehr, is it not? 5 A. That is true. 6 (Plaintiffs' Exhibit Number 7 Forty-two was marked for 8 identification.) 9 Q. Thank you. I hand you for 10 identification Papageorge Forty-two, 11 which is a one-page document bearing 12 Bate's number MONS 099126. It appears 13 to be a memo from W. R. Richard to N. W. 14 Farrar dated September 1st, 1971, 15 correct? 16 A. September 1st. 17 Q. September 1st. What did I say, 18 December? 19 A. December. You lost three months. 20 Q. I'm getting a little tired. I'm sorry. 21 September 1st, 1971. And you were a 22 recipient of this memo, correct? 23 A. I was.	Page 239 1 deemed successful, and their results 2 were never published. 3 Q. Do you know why they weren't deemed 4 successful? 5 A. I do not. 6 Q. Was there a concern at Monsanto about 7 the FDA's request for Aroclor samples? 8 A. I don't think it's a concern, but it's 9 an observation that this is unusual for 10 the FDA to ask for industrial chemical 11 samples. 12 Q. Okay. In the second paragraph 13 Dr. Richard states, "This is a clear 14 signal that the chlorinated terphenyl 15 Aroclor 5460 is on the target list." 16 Do you know what Dr. Richard meant 17 by the "target list"? 18 A. I believe I do. 19 Q. Can you tell us? 20 A. Dr. Richard at that point in time 21 thought the target list was the 22 chlorinated biphenyls, the 1221 through 23 1262 types. That's his target list.
Page 238 1 Q. Do you recognize this document? 2 A. I've seen it before, yes. 3 Q. Have you seen it recently? 4 A. No. 5 Q. Who was Mr. Farrar, again? 6 A. He was Dr. Richard's counterpart over in 7 the other business group involving PCBs. 8 Q. In the first paragraph -- Is it 9 Mr. Richard or Dr. Richard? 10 A. Doctor. 11 Q. -- Dr. Richard indicates the FDA was 12 asking for samples of Aroclor 5460, 1221 13 through 1262, 5060, and 5460. 14 Do you know why the FDA was asking 15 for samples of those Aroclors at that 16 time? 17 A. They were interested in the toxic 18 effects of these commercial chemicals. 19 Q. Did the FDA conduct any feeding studies 20 or teratogenic testing on these 21 Aroclors? 22 A. As best I recall, they started them, but 23 for some reason or other they were not	Page 240 1 And he is pointing out that now we see a 2 chlorinated terphenyl added to that 3 list. 4 Q. What did he mean by "target list"? 5 MR. PECK: Object to the form of 6 the question. 7 A. A list -- It's a list containing 8 materials of interest in this case to 9 the FDA, that they are going to conduct 10 some further studies on their own. 11 Q. So the terminology "target list," was 12 that the FDA's terminology? 13 A. No. It was Dr. Richard's terminology. 14 Q. Okay. At the end of the second 15 paragraph Dr. Richard states, 16 "Replacement products are indicated 17 unless you gentlemen think that the 18 above compounds will be medically 19 acceptable." 20 Do you know what Dr. Richard meant 21 when he said medically acceptable? 22 A. I can tell you my interpretation of 23 that, because when he says, "you

Page 241 1 gentlemen," I'm part of that group. 2 Q. Okay. 3 A. What it meant to me, I would consult 4 with our medical department and get an 5 opinion whether or not these industrial 6 chemicals are hazardous or not; and if 7 so, under what conditions and what uses 8 should we continue making them. 9 Q. And was a determination made -- 10 Withdrawn. I'm sorry. 11 When he said replacement products, 12 was he referring to replacement products 13 for Aroclor 5460, or were all of the 14 Aroclors mentioned in the memorandum? 15 MR. PECK: Object to the form of 16 the question. 17 A. All of them, because it is plural, above 18 compounds. 19 Q. And was a determination in fact made at 20 some point in time as to whether or not 21 these compounds were in fact medically 22 acceptable? 23 A. Yes, it was made.	Page 243 1 plasticizer sales group. 2 Q. Okay. Do you know who they were? 3 A. There must have been thirty or forty of 4 them. I don't propose to know them all. 5 The field salesmen, their district 6 managers, and the team leaders back in 7 the St. Louis home office. 8 Q. Do you know who it was specifically that 9 indicated that -- or gave the response 10 that A1221 and A5460 were okay? 11 A. I don't know who he talked to. 12 Q. Okay. Do you know what Dr. Farrar meant 13 when he said that 1221 and 5460 were 14 okay? 15 A. I have an opinion. 16 Q. Could you offer it to us? 17 A. That it was okay because from his 18 contacts with individuals and obviously 19 conversations and what have you, he came 20 back with the information that Aroclor 21 1221 and 5460 were not known to cause 22 any kind of health problems by anybody. 23 And if you recall, the 1221 was the
Page 242 1 Q. When was that determination made? 2 A. The animal studies conducted on the PCBs 3 were completed in -- by 1972 and 4 demonstrated that high levels of some of 5 these materials could cause sicknesses. 6 And it was not demonstrated that they 7 were extremely toxic and hazardous. So 8 medically speaking, not only within 9 Monsanto but FDA, they were medically 10 acceptable under proper usage 11 conditions. 12 Q. In the notes, handwritten notes on the 13 side of that memo -- 14 A. I see them -- 15 Q. Okay. Is it Dr. Farrar or Mr. Farrar? 16 A. Doctor. 17 Q. Dr. Farrar states that the marketing 18 people told him that A1221 and A5460 are 19 okay, perhaps this will change. 20 Do you know which marketing people 21 Dr. Farrar was referring to? 22 A. These were the marketing individuals in 23 the Monsanto group referred to as the	Page 244 1 monochloro biphenyl and the 5460 is a 2 chlorinated terphenyl. 3 Q. Okay. And did Monsanto's position that 4 1221 and 5460 were okay ever change? 5 A. No. It stays the same. 6 Q. Okay. I'm done with that. And that 7 brings us to Papageorge Exhibit Number 8 Forty-three. 9 (Plaintiffs' Exhibit Number 10 Forty-three was marked for 11 identification.) 12 MR. PECK: It looks like 13 Plaintiffs' Exhibit 14 Forty-three is kind of -- the 15 Bate's numbers just don't run 16 together. It looks like an 17 amalgamation. It looks like 18 the first Bate's number is 19 FGL 0100442, and the next 20 stapled page is FGL 02406 - 21 that is four maybe -- five, 22 which is obviously not an 23 exact consecutive page.

Page 245 1 MR. ATKIN: Right. Okay. Well, 2 why don't we do this: 3 We'll keep them together. 4 Q. You could look specifically at the last 5 two pages. 6 A. I have glanced at them. 7 Q. Okay. Thank you. Do you know what this 8 document is? 9 A. Yes. 10 Q. What is it? 11 A. This is a copy of a special undertaking 12 between General Electric and Monsanto 13 regarding the continued supply of 14 polychlorinated biphenyls to General 15 Electric Company. 16 Q. This is a hold harmless agreement? 17 A. That is an expression that is used to 18 describe it, yes. 19 Q. Especially by lawyers. Were you 20 involved at all in drafting this 21 document? 22 A. No. 23 Q. Do you know who was?	Page 247 1 and its people would be monitored by the 2 top officials of the company in terms of 3 what was being done to prevent PCBs from 4 being misused, mishandled, on and on. 5 And also it was believed that if a vice 6 president signed a document like this 7 and his plants or his organization 8 needed funding, like more doctors or 9 more industrial hygienists or more 10 environmental analysts, they would see 11 to it that the funds and authority was 12 given to pursue these projects that 13 would be required to control PCBs. So 14 it was at least a two-fold purpose. One 15 was to get it in writing, a commitment, 16 and the other one is to prod for the 17 right kind of action. 18 Q. Okay. At the bottom of the first page 19 -- Not the first page of that exhibit, 20 the first page of the hold harmless 21 agreement. It states that the buyer of 22 PCBs will hold Monsanto harmless from 23 any adverse effect of PCBs on humans.
Page 246 1 A. Not specifically. It was a legally 2 developed document. 3 Q. Okay. Do you know when Monsanto first 4 requested that its customers sign hold 5 harmless agreements in connection with 6 their purchase of PCBs? 7 A. It started in December of 1971, when 8 they were first approached. 9 Q. Did Monsanto begin asking its customers 10 to sign hold harmless agreements because 11 it was concerned about being held liable 12 for PCB-related injuries? 13 MR. PECK: Object to the form of 14 the question. 15 A. Well, that was one of the concerns, but 16 there were other concerns that were 17 deemed much more important. 18 Q. What were the other concerns? 19 A. For example, it was sincerely believed 20 that if a high official of vice 21 president level in the customer's 22 organization signed off a document like 23 this, it's more likely that the customer	Page 248 1 Do you see that? 2 A. I do. 3 Q. What adverse effects of PCBs on humans 4 was Monsanto insisting it be held 5 harmless for? 6 MR. PECK: Object to the form of 7 the question. 8 A. Anything that would be alleged, real or 9 imagined. 10 Q. Okay. I'm done with that. Thank you. 11 I hand you what will be marked as 12 Papageorge Forty-four for 13 identification. It's a document bearing 14 Bate's number DSW 014379 through DSW 15 014382, which is a three-page document 16 with a cover memo, a document written by 17 Mr. D. B. Hosmer, H-o-s-m-e-r, and 18 numerous recipients, including 19 Mr. Papageorge. 20 (Plaintiffs' Exhibit Number 21 Forty-four was marked for 22 identification.) 23 A. That is correct.

Page 249 1 Q. Do you recall seeing this memo before? 2 A. Yes, sir. 3 Q. Okay. Do you recall when you last saw 4 this memo? 5 A. About a week ago. 6 Q. Okay. Is that when you met with your 7 attorneys? 8 A. Yes, sir. 9 Q. This is one of the documents that you 10 reviewed in connection with the 11 preparation for your deposition today? 12 A. Yes, sir. 13 Q. Who is Mr. Hosmer? 14 A. At that point in time Mr. Hosmer was the 15 individual in the organic chemicals 16 division manufacturing unit that 17 addressed, among several things, the 18 environmental issues for that organic 19 chemicals division. 20 Q. Is he still with the company; do you 21 know? 22 A. No. He is deceased. 23 Q. On the first page of text, which is DSW	Page 251 1 Anniston plant that were in fact in 2 violation of the Federal Refuse Act? 3 A. Not to my knowledge. 4 Q. Well, did Mr. White represent that 5 emissions had been detected from the 6 Anniston plant that were in violation of 7 the Federal Refuse Act? 8 MR. PECK: Object to the form, 9 lack of foundation. 10 A. Yes, he did represent that. 11 Q. In the next paragraph -- Withdrawn. 12 Okay. In the first full paragraph 13 on the second page, DSW 014381, do you 14 see that? 15 A. The first full paragraph? 16 Q. The first full paragraph. 17 A. The one that starts with, "There was 18 considerable"? 19 Q. Yes. 20 A. I see that. 21 Q. It states, "There was considerable 22 discussion concerning the limiting level 23 of PCB that should be permitted in the
Page 250 1 014380 -- 2 A. I have it. 3 Q. -- Mr. Hosmer indicates that John White 4 of the EPA requested a meeting with 5 Monsanto. Do you know why? 6 A. Do I know Mr. White? 7 Q. No. Do you know why he requested a 8 meeting? 9 A. As best I recall, it had something to do 10 with the FDA and its interest in PCBs in 11 fish. And the Atlanta EPA was involved 12 because this source of PCBs was presumed 13 to be environmental as distinguished 14 from animal feeds. 15 Q. Okay. Now, subparagraph one on that 16 page -- 17 A. I see it. 18 Q. -- states that Mr. White had recommended 19 that a suit be initiated against the 20 Anniston plant for PCB emissions under 21 the Federal Refuse Act, correct? 22 A. That's what it states, yes. 23 Q. And had emissions been detected at the	Page 252 1 discharge. Mr. White suggested no 2 detectable amounts." And it also 3 indicates that Mr. Crockett and the 4 Monsanto personnel pointed out that this 5 was an undesirable approach. 6 Were you -- You weren't at the 7 meeting, were you? 8 A. I was not. 9 Q. Why did Monsanto and Mr. Crockett feel 10 that no detectable amount of PCBs was an 11 undesirable approach? 12 MR. PECK: Object to the form of 13 the question. 14 A. I can -- 15 MR. PECK: Go ahead. 16 A. One can reach the no detectable amount 17 by introducing extreme volumes of water, 18 diluting the concentration down to the 19 point where the instrumentation will 20 show no detectable amount. This does 21 not reduce the amount of PCBs that are 22 there and escaping the system. 23 So it was suggested, if you read

Page 253 1 further on, there is a better way to 2 control the PCBs to the environment, 3 which would include reducing the water 4 volume and also reduce the concentration 5 down to a detectable amount so you can 6 manage it and you know what you are 7 losing rather than losing it because the 8 technology can't detect it. 9 Q. In the paragraph that is paragraph one 10 on that page -- 11 A. Yes. 12 Q. It says, "As a result of the meeting the 13 following agreements were reached: One, 14 Mr. Crockett and Mr. White will agree 15 upon an interim permissible level for 16 PCB emissions to be provided in the 17 Refuse Act permit. Obviously, 18 Mr. Crockett will press for a number in 19 excess of our zero point three pounds 20 per day current level." Do you see 21 that? 22 A. I do. 23 Q. How did Monsanto know that Mr. Crockett	Page 255 1 the question. 2 A. That is normal procedure, sir. If there 3 is a group of individuals representing 4 Monsanto, they kind of get together and 5 describe what they are expected to do 6 when they get to a meeting and what each 7 of them knows about the issue and what 8 each one can contribute. So there is 9 coordination of a team effort, if you 10 will. 11 MR. PECK: He is asking you 12 whether or not -- 13 Q. I'm asking you whether or not they got 14 together with Mr. Crockett, not whether 15 they got together themselves. 16 A. I didn't understand your question. 17 MR. ATKIN: Thank you for 18 clarifying that. 19 A. Oh, that I don't know. 20 Q. The subparagraph three on that page 21 states, "A summary report outlining our 22 past work and future plans will be 23 written and sent to the EPA office via
Page 254 1 was going to press for an emission limit 2 above Monsanto's then existing emissions 3 limit? 4 A. Since I wasn't there, sir, I don't know 5 personally. 6 Q. Okay. Did you ever have any discussions 7 with anyone about that, about what is 8 written right here? 9 A. I have had discussions, yes. And I was 10 led to believe that Mr. Crockett was 11 preferring starting at a higher level in 12 case he was forced to drop it. 13 Q. Okay. Did Monsanto coordinate its 14 strategy regarding this meeting with 15 Mr. Crockett before the meeting took 16 place? 17 MR. PECK: Object to the form of 18 the question. 19 A. Did Monsanto do what, sir? 20 Q. Coordinate its strategy regarding this 21 meeting with Mr. Crockett before the 22 meeting took place? 23 MR. PECK: Object to the form of	Page 256 1 Mr. Crockett's office." Do you see 2 that? 3 A. I do. 4 Q. Do you know if such a summary was ever 5 sent? 6 A. I know a summary was sent to 7 Mr. Crockett's office. 8 Q. Do you know why it was sent to 9 Mr. Crockett's office before going to 10 the EPA? Why wasn't it sent directly? 11 A. Well, we got the impression that 12 Mr. Crockett was representing the PCB 13 activity in the state, and he's the one 14 that had the contact with EPA. And we 15 felt that we would continue that 16 procedure of working through 17 Mr. Crockett's office. 18 Q. Okay. Do you know if Mr. Crockett 19 reviewed or commented on the summary 20 before it actually went to the EPA? 21 MR. PECK: Object to the form of 22 the question. 23 A. I do not know.

Page 257 1 Q. Do you know if Mr. Crockett made any 2 suggestions, any suggested changes to 3 the summary before it was sent to the 4 EPA? 5 A. I do not know. 6 Q. Paragraph -- subparagraph four states 7 that Monsanto's monthly reports on PCB 8 effluents would be sent to Mr. White via 9 Mr. Crockett. 10 Were such monthly reports ever 11 sent to Mr. White? Do you know? 12 A. I do not. 13 Q. And obviously you don't know whether 14 Mr. Crockett ever reviewed or commented 15 on monthly reports before they were sent 16 to the EPA? 17 A. I do not. 18 Q. Or made any suggested changes to the 19 reports before they were sent to the 20 EPA? 21 A. I don't know that. 22 Q. Okay. On the last page of the document, 23 the third to last paragraph, it states	Page 259 1 PCBs and create further problems, and 2 you ended up with a collection of 3 diggings that had to be taken somewhere 4 else. So all you would do is transplant 5 your problem rather than solve it. 6 Q. So this -- Withdrawn. 7 And that is why in your view 8 Monsanto believed that dredging Snow 9 Creek was undesirable; is that right? 10 A. Dredging Snow Creek with the technology 11 known at the time, it was perceived to 12 be undesirable and preferably leave it 13 alone, don't disturb it, and you won't 14 hurt anything. 15 Q. Was Snow Creek ever dredged? 16 A. I'm not so informed. I don't know. 17 Q. I'm done with that. 18 (Plaintiffs' Exhibit Number 19 Forty-five was marked for 20 identification.) 21 Q. I'm going to hand you what is being 22 marked as Papageorge Forty-five for 23 identification. This is a document
Page 258 1 -- Mr. Hosmer is writing -- "It was 2 suggested by Mr. White that it might be 3 desirable to dredge Snow Creek. I 4 believe we convinced him that this is 5 undesirable." 6 Do you know why Mr. White believed 7 that Snow Creek should be dredged? 8 MR. PECK: Object to the form of 9 the question. 10 A. As I understood it at the time, 11 Mr. White was really just beginning to 12 understand the PCBs and how they be 13 behave in the environment. And he 14 assumed that PCBs were like most other 15 materials, you just scoop them up and 16 you can get rid of them. Well, PCBs are 17 not that -- What is the word I want? 18 They are not that easy to deal with. 19 And the concern amongst those who had 20 experienced PCBs to a greater extent, it 21 appeared to be a case of if one went in 22 there with bulldozers and shovels and 23 what have you, you would stir up those	Page 260 1 bearing Bate's number ACM 002501 through 2 ACM 007294. 3 MR. PECK: Well, the document -- 4 The Bate's number -- 5 MR. ATKIN: There aren't that many 6 pages. That would have to be 7 two hundred pages, right? 8 MR. PECK: Yeah. The page numbers 9 take a jump, it looks like, 10 at ADM -- It looks like you 11 have got ADM 002501 through 12 ADM 002504, and then we 13 change to a new Bate's number 14 set that goes from ADM 15 007275, it looks like, 16 successively to 007295. 17 MR. ATKIN: Right. It looks like 18 there are two documents 19 again. 20 MR. PECK: Did you want to keep 21 them together? 22 MR. ATKIN: Well, I think so, 23 because I think that the

Page 261 1 latter documents are 2 attachments perhaps that 3 Mr. Papageorge forwarded on, 4 but I guess we'll ask him and 5 see if it becomes clear. 6 MR. PECK: Okay. 7 Q. Let me ask you first about the first 8 document, which is a January 18th, 1974 9 letter that you wrote to the hearing 10 clerk of the U.S. EPA. 11 A. Yes. 12 Q. Do you recognize this letter? 13 A. I do. 14 Q. Do you recall writing it? 15 A. Yes, sir. 16 Q. Is that your signature on page four? 17 A. It is. 18 Q. Why did you write this letter? 19 A. It was in response to a proposal in the 20 federal register in which they solicited 21 comments from interested parties. 22 Q. On page one, in the third paragraph, you 23 state that Monsanto felt that the EPA	Page 263 1 the technology of analytical chemistry 2 available. Those are the -- some of the 3 thoughts that came out. But I'd have to 4 see the write-up to be able to be more 5 specific. 6 Q. Okay. Do you recall what then existing 7 conditions of manufacture and use made 8 the proposals objectionable to Monsanto? 9 A. Not, again, in detail. I'd have to see 10 the listing. As I recall, they were in 11 a way discounting the beneficial 12 characteristics of the PCBs, like fire 13 resistance and how effective they were, 14 for example, in electrical uses, without 15 explosions and the like. 16 Q. How does that relate to Monsanto's then 17 existing conditions of manufacture and 18 use? 19 A. Well, the use here is for Monsanto and 20 its customers. The manufacture would 21 apply to Monsanto. There are two 22 populations involved here. 23 Q. Do you recall how the proposal was
Page 262 1 proposals were unrealistically 2 restrictive, not supported by currently 3 available data, and not warranted under 4 the present conditions of manufacture 5 and use. Do you see that? 6 A. Yes, I do. 7 Q. Which EPA proposals were you objecting 8 to? 9 A. I'd have to see the federal register to 10 read this subpart one referred to. I 11 don't remember the details on that. 12 Q. Okay. Do you recall -- Without getting 13 into all the specifics, do you recall 14 what it was about the proposal that you 15 felt was unrealistically restrictive? 16 A. Not specifically. I recall their 17 attempt to define what PCBs are, and it 18 was not scientifically accurate, as I 19 remember. And then there was, as best I 20 recall, a proposal regarding the amount 21 of PCBs which would be tolerated in 22 water samples. And it appeared that the 23 -- that requirement couldn't be met with	Page 264 1 deemed objectionable because of the 2 conditions of manufacture by Monsanto? 3 A. What about the proposal? 4 Q. I'm sorry. 5 A. As best as I recall, it had to do with 6 the requirement that any water 7 associated with the process would have 8 such a level of PCBs that the analytical 9 methodology would not be able to detect. 10 That is just one example of the kinds of 11 things they were referring to. 12 Q. Okay. At the bottom -- Rather, at the 13 top of page two, you state that Monsanto 14 wanted to testify regarding its 15 objections to the EPA proposals, 16 correct? 17 A. It does. 18 Q. Okay. Did Monsanto ever testify at a 19 hearing on those proposals? 20 A. Yes, sir. 21 Q. Who testified on behalf of Monsanto? 22 A. If I recall correctly, I think I was the 23 one.

Page 265 1 Q. Okay. Do you recall when? 2 A. No, I don't. 3 Q. Do you recall what the substance was of 4 your testimony? 5 A. Again, not in detail. But I do recall 6 proposing the ten parts per billion 7 level of detection and the -- I'm trying 8 to also recall -- I think we commented 9 on the analytical methodology and 10 offered copies of Monsanto's 11 methodology. 12 Q. Do you recall what the EPA's response 13 was to your testimony? 14 A. Not in detail, but it was favorable. 15 They listened. 16 Q. Did they change their proposals in any 17 way? 18 A. To a degree, yes, they did. They did 19 not go back to their original. They did 20 modify it as a result of these hearings; 21 not just Monsanto, but others that were 22 there. So I'm under the impression that 23 some of what we said impressed them	Page 267 1 Q. On page four of the minutes, which is 2 Bate's number ADM 007284 -- 3 A. I have it. 4 Q. -- Dr. Tucker of Monsanto indicates that 5 "Researchers other than Monsanto have 6 found bacterial degradation of PCBs and 7 that PCBs have been found to undergo 8 metabolism in both aviarian and 9 mammalian animals." Do you see that? 10 A. I do. 11 Q. Do you know what other research 12 Dr. Tucker was talking about when he was 13 talking about researchers other than 14 Monsanto? 15 A. Not at the moment. I don't recall. 16 Q. Okay. Do you recall whether the 17 degradation and metabolism effects that 18 Dr. Tucker was talking about were found 19 for all of the PCB products that 20 Monsanto was manufacturing? 21 A. Well, portions of all the products. 22 Q. What do you mean by that? 23 A. There are components within these
Page 266 1 enough for them to reconsider. 2 Q. Do you recall specifically which aspects 3 of the proposed regulations were 4 changed? 5 A. Not really. I'd have to see the final 6 regulations. 7 Q. Now, attached to this letter, the second 8 document, is a -- Not that letter, the 9 next document. I'm sorry. Keep going. 10 No. The other way. Right -- are 11 minutes of meeting on proposed PCB 12 effluent standards. 13 A. I see it. 14 Q. You were the chairman of that meeting, 15 correct? 16 A. I was. 17 Q. Did Monsanto organize that meeting? 18 A. No. The National Electrical 19 Manufacturers Association was the host 20 group. 21 Q. Was Monsanto a member of that 22 organization? 23 A. No.	Page 268 1 commercial mixtures that were affected, 2 but not all of the PCBs that were 3 present were affected. 4 Q. Okay. We can go on to the next 5 document. 6 MR. PECK: Can we take a break? 7 MR. ATKIN: Absolutely. Take a 8 break. 9 (A break was taken.) 10 MR. ATKIN: We are going to mark 11 Papageorge Forty-six for 12 identification. That is a 13 document bearing Bate's 14 numbers -- well, I'm sorry -- 15 a document bearing Bate's 16 numbers -- beginning 11 -- 17 I'm sorry -- 1006 -- 18 MR. PECK: I think what is wrong 19 is there is a number cut off, 20 a number of numbers cut off. 21 MR. ATKIN: Right. Why don't we 22 use the other Bate's 23 designation? There is

Page 269 1 another designation of 2 smaller numbers, a 3 document -- This is an 4 affidavit of Mr. Papageorge 5 bearing Bate's numbers 175 6 through 189. And the 7 affidavit is sworn to on 8 March 14th, 1974. 9 (Plaintiffs' Exhibit Number 10 Forty-six was marked for 11 identification.) 12 THE WITNESS: I have briefly 13 reviewed the documents. 14 Q. Okay. Do you recognize it? 15 A. I do. 16 Q. Do you recall making this affidavit? 17 A. I do. 18 Q. Did you draft it yourself? 19 A. I had help. 20 Q. Who helped you? 21 A. Dr. Tucker for the analytical portions, 22 Elmer Wheeler with the toxicity data. 23 Q. Did you have any help from legal	Page 271 1 referring? 2 A. In 1974 there were no further studies by 3 anyone. 4 Q. Okay. Were effluent standards set for 5 the unique conditions existing at each 6 point source? 7 A. No. 8 Q. On page four of the document, in the 9 third paragraph, you point out that as 10 of 1974 there were forty million pounds 11 of PCB being manufactured in the U.S., 12 compared to eighty million pounds prior 13 to 1971. And you state that, in quote, 14 "This lends perspective to the current 15 debate over modest losses of PCBs to 16 waterways." Do you see that? 17 A. Yes. 18 Q. What did you mean by that? 19 A. The reference -- The inference here is 20 that the forty million pounds still 21 being sold at that point in time were 22 contained in systems that were 23 considered to be closed systems. By
Page 270 1 drafting this document? 2 A. I let them see drafts of it as I was 3 developing and asked for their comments. 4 I don't recall any sections that they 5 modified. 6 Q. Did they give you their comments? 7 A. Yes. 8 Q. Okay. The primary purpose of this 9 affidavit was for Monsanto to set forth 10 objections to the proposed federal 11 regulations on PCBs, correct? 12 A. The primary purpose was to comment, and 13 they turned out to be objections. 14 Q. Okay. On the bottom of page two, the 15 last sentence on page two, you state, 16 "We recommend studies be conducted to 17 obtain the relevant data and that 18 effluent standards be established which 19 are appropriate for the unique 20 conditions existing at each point 21 source." 22 Were studies ever undertaken to 23 obtain the data to which you were	Page 272 1 closed systems, it was understood that 2 the PCBs in the system would not be 3 permitted to enter the environment. So 4 with that kind of application, it does 5 lend itself to a perspective regarding 6 losses to waterways that didn't exist 7 when PCBs were used in paints and 8 sealants and on and on. 9 Q. Okay. And what did you mean when you 10 said there were modest losses of PCBs to 11 waterways? 12 A. Well, that is the realistic way to 13 describe industrial chemical. You can't 14 say zero losses. By modest losses, it 15 indicates small amounts. 16 Q. Which waterways were you referring to? 17 A. No particular type. If you mean lakes 18 or rivers, it is just in general. 19 Q. Okay. Let me ask you this: Did you 20 believe that the PCB contamination of 21 Choccolocco Creek and Snow Creek were 22 modest? 23 MR. PECK: Object to the form of

Page 273 1 the question. 2 A. In that day and age, yes. 3 Q. What do you mean by that? 4 A. I associate the PCBs in Choccolocco 5 Creek with the PCBs that were generated, 6 created, produced over decades from the 7 1930s to the 1960s. With the 8 understanding that existed in that 9 period, the PCBs that were introduced 10 into the environment were still 11 perceived to be modest since no effects 12 were noted. They were perceived to be 13 innocuous industrial chemicals out there 14 in the river. 15 Q. Okay. That's all I have on that 16 document, which brings us to Papageorge 17 Forty-seven. 18 (Plaintiffs' Exhibit Number 19 Forty-seven was marked for 20 identification.) 21 MR. PECK: Are you going to 22 identify it? 23 MR. ATKIN: Yes. I'm sorry.	Page 275 1 himself or one of his associates. I 2 don't know. 3 Q. If the first paragraph it states, "Last 4 month when Randy Graham and I visited 5 your plant to discuss the PCB problem, 6 we did not intend to cause undue alarm 7 or create any panic concerning the use 8 and handling of polychlorinated 9 biphenyls." 10 Did you have a sense from 11 Mr. Cavanaugh that you had in fact 12 caused undue alarm or created panic 13 concerning the use and handling of PCBs? 14 A. I don't recall if it was Mr. Cavanaugh, 15 but somebody in his organization 16 expressed this concern. 17 Q. In the second paragraph you state that 18 Aroclors do affect some species of birds 19 and marine life. Do you see that? 20 A. Yes. 21 Q. Was that information ever conveyed by 22 Monsanto to the residents of Anniston, 23 Alabama?
Page 274 1 Two-page document bearing 2 Bate's number DSW 018254 and 3 DSW 018255. It is a letter 4 from Mr. Papageorge to Mr. 5 D. E. Cavanaugh dated July 6 6, 1970. 7 Q. Do you recognize this document, sir? 8 A. I do, yes. 9 Q. Do you remember writing it? 10 A. Yes. 11 Q. What prompted you to write this letter? 12 A. In the summer of 1970 I visited plants 13 that used PCBs in electrical equipment 14 manufacture. And while visiting this 15 particular company plant, Espey 16 Manufacturing Company in Saratoga 17 Springs, New York, I was requested to 18 put in writing a summary of the topics 19 we discussed. And this was my attempt 20 to do so. 21 Q. When you say you were requested to 22 prepare a summary, who requested that? 23 A. I don't recall if it was Mr. Cavanaugh	Page 276 1 A. No. 2 Q. On page two of the letter, in the second 3 paragraph, you state that unusable 4 Aroclors should be disposed of by 5 incineration. Do you see that? 6 A. Yes. 7 Q. Is incineration the most effective 8 method of disposing of PCBs? 9 A. Under the proper conditions, yes. 10 Q. In that same paragraph you caution that 11 improper incineration of PCBs can result 12 in the production of highly toxic 13 materials. What types of highly toxic 14 materials can be produced by the 15 improper incineration of PCBs? 16 A. Well, as I understood it, there are many 17 chemicals that could be formed when you 18 have of course carbon, hydrogen, 19 chlorine, and oxygen. And depending of 20 course on the rates of destruction and 21 the amount of oxygen present and the 22 temperatures, one could get a real 23 mixture of chemicals.

Page 277 1 Q. Are you talking about chemicals such as 2 furans? 3 A. That is an example, yes. 4 Q. And dioxins? 5 A. Dioxins, yes. 6 Q. Okay. 7 A. And in this instance, at that point in 8 time, I was -- I'm going to call it 9 overly conservative in terms of guessing 10 that the worst would happen in order to 11 avoid anything happening. 12 Q. Now, you also indicate in this letter it 13 is also important that contamination of 14 the atmosphere be eliminated, correct? 15 A. Certainly. 16 Q. Jumping back for a second, when you 17 talked about the types of the certain 18 highly toxic materials can be produced 19 by improper incineration of PCBs, does 20 that also hold true that certain highly 21 toxic materials can be created during 22 the production of PCBs? 23 A. First let me correct something. I don't	Page 279 1 Forty-eight was marked for 2 identification.) 3 A. I have looked at it, scanned it, yes. 4 Q. This is a 1970 press release issued by 5 Monsanto? 6 A. Yes. 7 Q. Do you recognize this? 8 A. Yes. 9 Q. Did you participate in the drafting or 10 approval of this press release? 11 A. Yes. 12 Q. What was the nature of your 13 participation? 14 A. It was accomplished really by my 15 person-to person discussion with Mr. 16 E. V. John. 17 Q. Who was Mr. John? 18 A. He was the public relations 19 representative with Monsanto. 20 Q. Is he still with the company? 21 A. No. 22 Q. Do you know when he left? 23 A. Oh, about the mid '70s.
Page 278 1 know that I said they can be produced -- 2 will be produced. I said may yield 3 materials. 4 Q. Okay. 5 A. Because it was a theory rather than a 6 fact at this point in time. 7 Now, you asked if highly toxic 8 materials can be produced during 9 manufacture? 10 Q. To use your terminology, why don't we 11 say "may be yielded." 12 A. May be yielded. It is possible if the 13 operation isn't controlled properly, too 14 much time is taken, and the temperature 15 is too high, again, all the factors that 16 should be controlled are not, you are 17 going to end up with something other 18 than the PCB you are looking for. 19 Q. Okay. That's fine. The next document, 20 this is Papageorge Forty-eight for 21 identification. It bears Bate's numbers 22 GSW 009731 through DSW 009734. 23 (Plaintiffs' Exhibit Number	Page 280 1 Q. Do you know if he is still alive? 2 A. I don't know. 3 Q. Okay. On page two it indicates that, 4 "Commenting on a recent report that PCB 5 can induce birth defects in animals, 6 Minckler said" -- By the way, who is 7 Mr. Minckler? 8 A. He was the general manager and was a 9 vice president of the organic chemicals 10 division of Monsanto Company. 11 Q. "Mr. Minckler said, 'Monsanto is not 12 aware of any scientific data that 13 indicates polychlorinated biphenyls may 14 cause birth defects.'" Was that a true 15 statement -- 16 A. Yes. 17 Q. -- at that time? 18 A. Yes. 19 Q. And on page four of the press release it 20 states that Monsanto's incineration 21 system could break down PCBs into 22 harmless materials, correct? 23 A. Correct.

Page 281 1 Q. In the next to last paragraph it 2 indicates Monsanto stated that the loss 3 of PCB from our manufacturing plants has 4 been negligible. 5 That wasn't a true statement, was 6 it? 7 A. Why not? It was not a storm of PCBs 8 flowing down the city streets. I don't 9 know what you mean by not negligible. 10 Q. What do you mean by negligible? 11 A. An amount that doesn't result in any 12 known harm. 13 Q. Do you know what the total amount of 14 PCBs that were lost in Anniston over the 15 years was? 16 A. I thought we answered that earlier. I 17 don't know. 18 Q. I'm done with that. How did I refer to 19 it, Forty-eight -- Let's call that -- 20 (Discussion held off record.) 21 (Plaintiffs' Exhibit Number 22 Forty-nine was marked for 23 identification.)	Page 283 1 Department of Health, I believe, or some 2 regulatory agency that had to do with 3 water and landfills and the like. 4 Q. Now, is it accurate to say that Monsanto 5 was interceding with Mr. -- that you 6 were attempting to intercede with 7 Dr. Loughry on behalf of Westinghouse to 8 obtain permission for Westinghouse to 9 dispose of PCB wastes in a Pennsylvania 10 landfill? 11 A. I was asked to. 12 Q. Who asked you to do that? 13 A. Mr. Viland. 14 Q. At the bottom of the first page and on 15 to the top of the second page, you 16 discuss a study that was undertaken by 17 Monsanto of soil in which PCBs were 18 deposited approximately thirty years 19 earlier. Actually, it is thirty-two 20 years earlier, correct? 21 A. Yes. 22 Q. The results show on page two -- the 23 results shown on page two indicate that
Page 282 1 Q. This is Bate's numbers NEV 003895 2 through 003896, a two-page document, a 3 letter, from Mr. Papageorge to 4 Mr. Viland, V-i-l-a-n-d, dated October 5 1st, 1970, with CCs to -- with BCs to 6 Mr. Benignus and Mr. Graham. 7 Do you recognize this? 8 A. I do, yes, sir. 9 Q. Do you remember writing it? 10 A. Yes, sir. 11 Q. When was the last time you saw this 12 letter? 13 A. I'm sorry? 14 Q. I'm sorry. When was the last time you 15 saw this letter? 16 A. I don't know specifically. 17 Q. It wasn't in the last week, was it? 18 A. No. A half a dozen years ago. I just 19 don't recall. 20 Q. That's fine. In the second paragraph, 21 you mention a Dr. Loughry, 22 L-o-u-g-h-r-y. Do you know who he was? 23 A. He was a scientist with the Pennsylvania	Page 284 1 after thirty years the Aroclor 1242 was 2 still present in the soil, correct? 3 A. Correct. 4 Q. Isn't it fair to say, Mr. Papageorge, 5 similarly, that the PCBs that are 6 present at Mars Hill Missionary Baptist 7 Church in the soil will be present there 8 for decades? 9 MR. PECK: Object to the form of 10 the question. It calls for 11 speculation. 12 A. You can't draw a direct analogy because 13 the environment is different in terms of 14 what microbes are in the soil, what 15 plant growth is involved, and all the 16 other factors. So I cannot predict how 17 long it will last. I don't think 18 anybody can. 19 Q. Okay. The last sentence, you state, 20 "Apparently we do not have anyone within 21 the Monsanto organization who can talk 22 Dr. Loughry's language." Do you see 23 that?

Page 285 1 A. I do. 2 Q. What did you mean by that? 3 A. It meant that I couldn't communicate 4 with Dr. Loughry in a way that I 5 believed he understood what our needs 6 were and how he could cooperate, nor did 7 I get from him any indication he was 8 willing to try. 9 Q. You found him to be very opinionated 10 regarding the types of wastes he would 11 tolerate in the landfill, correct? 12 A. He was -- Yes, he was very opinionated. 13 Q. And he insisted that he had to have 14 research data on the behavior of PCBs on 15 various Pennsylvania soils over long 16 periods of time before he would allow 17 them to be introduced to a landfill in 18 Pennsylvania, correct? 19 A. That is correct. 20 Q. Let me give you what will be marked as 21 Papageorge Fifty for identification. 22 For identification purposes, this 23 is a memo or a letter from D. B. Hosmer	Page 287 1 to here? 2 A. East Coast Terminals is a facility 3 located in North Carolina, as I 4 remember, which received fish meal. 5 Q. I'm sorry. Received what? 6 A. Fish meal from Peru and introduced it 7 into a heat treating system to 8 pasteurize it. The system was heated 9 with PCB type fluid. 10 The material, as it was processed, 11 was conveyed by screw conveyers in 12 troughs that were jacketed. And between 13 the trough and the outer jacket the 14 heated PCB fluid would circulate. And 15 the material as it traversed through 16 this system would be heated long enough 17 to pasteurize out the other end. 18 A leak developed between the outer 19 jacket and the trough, and PCBs were 20 introduced into the fish meal. The 21 operators of the unit continued to 22 operate. The fish meal of course 23 contained PCBs now. It was eventually
Page 286 1 to Mr. Papageorge, dated August 11th, 2 1971, with a cc to Mr. John. Have you 3 had a chance to look at that? 4 (Plaintiffs' Exhibit Number 5 Fifty was marked for 6 identification.) 7 A. I have. 8 Q. Do you recognize this document? 9 A. I do. 10 Q. Do you recall receiving it? 11 A. Yes. 12 Q. Have you reviewed it any time in the 13 recent past? 14 A. No. 15 Q. In the first paragraph, Mr. Hosmer 16 states that he was contacted by a John 17 Piccorello of Science Magazine 18 concerning PCBs? 19 A. Yes. 20 Q. And that Piccorello had asked about the 21 incident at East Coast Terminals. 22 What was the incident at the East 23 Coast Terminals that was being referred	Page 288 1 sold to poultry feed formulators, and in 2 turn the poultry feed was sold to the 3 poultry operators, and it got into the 4 poultry. That is in general the 5 situation that occurred. 6 Q. What happened to the poultry? 7 A. There were several symptoms noted. For 8 one, the eggs wouldn't hatch. Another 9 was the -- as I recall, that the 10 chickens showed symptoms of illnesses, 11 like water accumulation. I believe it's 12 called edema by medical people. 13 Q. Swelling? 14 A. Swelling, because of water retention. 15 In fact, I believe some of the poultry 16 actually died. That's what happened to 17 the poultry. 18 Q. Do you know how many died? 19 A. I don't recall anymore. 20 Q. Okay. In the second paragraph of this 21 memo -- 22 A. Yes. 23 Q. It states as follows: "Finally,

Page 289 1 Mr. Piccorello brought up the testimony 2 about PCBs in Washington. He said he 3 understood that fish in a river in 4 Alabama contained a great deal more PCBs 5 than was permitted and our plant 6 discharged to this river. Three hundred 7 parts per million were quoted." Do you 8 see that? 9 A. I do. 10 Q. Do you know what river in Alabama was 11 being referred to here? 12 MR. PECK: Object to the form of 13 the question. 14 A. Right or wrong, I assume he was 15 referring to the Coosa River. 16 Q. Okay. And Hosmer states, "I said the 17 stream was a creek, not a river. And 18 there were many other discharges to it 19 and doubted if I would want to wade in 20 the creek for many reasons." 21 Is the Coosa River a creek? 22 A. Not in my understanding. 23 Q. What difference, if any, does it make if	Page 291 1 MR. PECK: Object to the form of 2 the question. 3 Q. What are they? 4 MR. PECK: Object to the form of 5 the question. 6 A. In the area in which the Anniston plant 7 -- Monsanto's plant is located, it is an 8 industrial area and had several 9 foundries, for example, that spewed all 10 kinds of materials, quench waters, 11 acids, fires blazing with fumes going 12 out in the atmosphere. It was quite a 13 site at night at that time, a lot of 14 industrial activity. So I can 15 understand why Mr. Hosmer, who 16 incidentally used to be a plant manager 17 at Anniston, was aware of the conditions 18 in that industrial area. 19 Q. Okay. And Mr. Hosmer indicated that he 20 doubted if he would want to wade in the 21 creek for many reasons, correct? 22 A. Yes, he did. 23 Q. And is that because the creek was so
Page 290 1 the body of water being referred to as 2 being contaminated by PCBs was a creek 3 or a river? 4 MR. PECK: Object to the form of 5 the question, calls for 6 speculation. 7 A. It doesn't. 8 Q. It doesn't make any difference? 9 A. In my way of thinking, there could be 10 differences. Not all creeks are capable 11 of supporting fish, for example; whereas 12 a river is more capable of supporting 13 several species. So when they are 14 talking here about contaminated fish, I 15 tend to think of a river as 16 distinguished from a creek. That 17 doesn't make it right, but that is the 18 way it struck me. 19 Q. Okay. He refers to the fact that there 20 were many other discharges to this -- 21 what he calls a creek. Do you know what 22 other discharges he is talking about? 23 A. I believe I do, yes.	Page 292 1 contaminated that he believed it was 2 dangerous? 3 MR. PECK: Object to the form of 4 the question, calls for 5 speculation as to what Hosmer 6 thought, whatever he did. 7 A. I can't speak for Mr. Hosmer, but it was 8 an industrial area with many materials 9 present in that neighborhood. 10 Q. Did you ever ask -- Did you ever discuss 11 the contents of this letter with 12 Mr. Hosmer? 13 A. Yes, I did. I don't remember the 14 specifics any longer. 15 Q. Do you remember whether or not you 16 discussed that specific statement about 17 doubting whether he would want to wade 18 in the creek? 19 A. He said, "Oh, man, there is all this 20 stuff in there, Bill. It would chew the 21 skin off of my legs," that kind of talk. 22 Q. Okay. Thank you. I hand you what will 23 be marked for identification as

Page 293 1 Papageorge Fifty-one. 2 (Plaintiffs' Exhibit Number 3 Fifty-one was marked for 4 identification.) 5 Q. I hand you for identification what will 6 be marked as Papageorge Fifty-one. And 7 for identification purposes, this is a 8 letter dated August 15th, 1971, with two 9 pages of attachments. The designation 10 -- the Bate's designation on the 11 letter -- Here we go. The designation 12 is MONS 0N899 -- 089995 through 089999. 13 And I'd ask you to take a look at that, 14 please, sir, if you could. 15 A. I have scanned the exhibit. 16 Q. Thank you. Do you recognize this 17 letter? 18 A. I do. 19 Q. Did you receive a copy of this letter? 20 A. I don't believe I did. 21 Q. Okay. How do you recognize it? 22 A. I saw it the other week, last week. 23 Q. When you met with the attorneys?	Page 295 1 levels, as Aroclor 1254, compared with 2 the controls. There is a seventeen 3 percent difference." Do you see that? 4 A. Yes. 5 Q. On page two of the letter, in the middle 6 section, Dr. Suttikus refers to a second 7 test in which fish exposed to PCBs 8 similarly did not show a reduction in 9 their PCB levels compared to the 10 controls. Is that correct? 11 A. Yes. The word "similar" is your word. 12 I was looking for it in the text. 13 Q. Okay. 14 A. That's correct. 15 Q. In fact, it indicates and states 16 specifically, "However, the results are 17 not good since both analyses show us 18 that Aroclor 1254 residues have not 19 reduced as we had hoped they would," 20 correct? 21 A. That's what it states, yes. 22 Q. It then goes on to refer to analysis 23 three, correct?
Page 294 1 A. Yes. 2 Q. Okay. This letter appears to be a 3 summary of a study of PCB levels in fish 4 in Choccolocco Creek, the Coosa River, 5 and its tributaries, correct? 6 A. Correct. 7 Q. And at the time, at the bottom of the 8 first page, Dr. Buttkus indicates 9 that -- 10 MR. PECK: Suttikus. 11 MR. ATKIN: I'm sorry? 12 MR. PECK: Suttikus. 13 MR. ATKIN: Oh, Suttikus. Thank 14 you. 15 Q. Dr. Suttikus indicates that fish exposed 16 to PCBs did not show a decrease in PCBs 17 in their system, is that correct, 18 compared with the controls? 19 A. At the very bottom of the first page? 20 Q. Yes. The part that states, "This 21 comparison shows that the fishes in the 22 experimental area do not show a 23 corresponding decrease in PCB residue	Page 296 1 A. It does. 2 Q. Okay. And the final sentence in that 3 section states, "At this point we would 4 have to say that the data are 5 detrimental to Monsanto," correct? 6 A. It does say that, yes. 7 Q. Okay. On the last page of this letter 8 it indicates that the fish in the 9 Anniston area not only had high levels 10 of PCBs but also were deformed, sick, 11 and listless, correct, referring to 12 the -- 13 A. I do see it, yes. 14 Q. In the first paragraph? 15 A. That is correct. 16 Q. Specifically it states, "Of course 17 visual observations won't tell us what 18 caused these fishes to become deformed 19 or sick, but we must consider the total 20 observations as a crude indication that 21 something is indeed wrong in these 22 areas," correct? 23 A. Yes.

Page 297 1 Q. On the last page he also indicates that 2 he understands that Monsanto's discharge 3 of PCBs was decreased as compared to 4 previous years, correct? 5 A. Yes. 6 Q. Do you know how much more extensive 7 Monsanto's PCB releases to the river 8 were before this period of time? 9 MR. PECK: Object to the form of 10 the question. 11 A. I don't know how far back he goes, sir, 12 to make his comparison. 13 Q. Okay. In that same paragraph -- Well, 14 hold on. In that same paragraph, he 15 states -- Dr. Suttkus states, "Certainly 16 you would not want to give the discharge 17 figures" -- Well, he doesn't say -- "you 18 would not want to give the figures in a 19 news release," correct? 20 A. It does say that, yes. 21 Q. Were the discharge figures, the 22 discharge levels that he is referring 23 to, ever released publically in a news	Page 299 1 some planes and the fact that 2 I have more questioning. We 3 are going to pick this up at 4 another time. 5 (At 4:20 p.m. the deposition 6 was continued to an 7 unspecified date and time.) 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
Page 298 1 release? 2 A. I think the local newspaper had 3 reference to them, but I don't recall 4 the specifics anymore. 5 Q. Okay. That's all I have on that. 6 We'll mark this for identification 7 as Monsanto Exhibit Fifty-two. 8 (Plaintiffs' Exhibit Number 9 Fifty-two was marked for 10 identification.) 11 MR. PECK: Can we take a short 12 break? 13 MR. ATKIN: Sure. 14 (A break was taken.) 15 MR. ATKIN: Just for the record, 16 we are going to adjourn the 17 deposition of Mr. Papageorge 18 at this time to be continued 19 at another date upon 20 agreement of counsel, given 21 the hour of the day and the 22 fact that counsel and 23 Mr. Papageorge have to catch	Page 300 1 I do hereby certify that the witness 2 whose attached deposition was taken before me 3 was by me first duly cautioned and sworn to 4 tell nothing but the truth in the cause 5 aforesaid; that the testimony contained herein 6 was by me reduced to writing in the presence 7 of said witnesses by means of stenography and 8 afterwards transcribed by means of computer 9 aided transcription. The foregoing is a true 10 and accurate transcript of the whole of the 11 testimony given by said witness, as aforesaid. 12 I do further certify that I am not 13 connected by blood or marriage with any of the 14 parties or their attorneys or agents and that 15 I am not an employee of any of them, nor 16 interested in the matter of controversy. 17 IN WITNESS WHEREOF, I have hereunto set 18 my hand and affixed my notarial seal at 19 Gadsden, Alabama, County of Etowah, this 15th 20 day of April 1998. 21 22 <u>Deborah Salers Garrett</u> 23 Certified Shorthand Reporter Registered Professional Reporter Notary Public, Alabama-at-Large My Commission expires: 3-7-2001

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