

1 UNITED STATES DISTRICT COURT
2 FOR THE SOUTHERN DISTRICT OF ILLINOIS

3 UNITED STATES OF AMERICA,)

4 PLAINTIFF,)

5 v.)

NO. 99-63-DRH

6 PHARMACIA CORPORATION, ET)
7 AL.,)

8 DEFENDANTS.)

9 PHARMACIA CORPORATION AND)
10 SOLUTIA, INC.,)

11 COUNTERCLAIM)
12 PLAINTIFFS,)

13 v.)

14 UNITED STATES OF AMERICA,)
15 ET AL.,)

16 COUNTERCLAIM)
17 DEFENDANTS.)

18 DEPOSITION OF WILLIAM B. PAPAGEORGE
19 TAKEN BY RICHARD E. GREENBERG, ESQ.
20 ON BEHALF OF AMERICAN ZINC COMPANY
21 JULY 22, 2003

22 REPORTED BY JULIE ANN WHITING
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Page 2 1 UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF ILLINOIS 2 UNITED STATES OF AMERICA,) 3) 4 PLAINTIFF,) 5) 6 v.) NO. 99-63-DRH 7 PHARMACIA CORPORATION, ET) 8 AL.,) 9) 10 DEFENDANTS.) 11) 12 PHARMACIA CORPORATION AND) 13 SOLUTIA, INC.,) 14) 15 COUNTERCLAIM) 16 PLAINTIFFS,) 17 v.) 18) 19 UNITED STATES OF AMERICA,) 20 ET AL.,) 21) 22 COUNTERCLAIM) 23 DEFENDANTS.) 24) 25 DEPOSITION OF WILLIAM B. PAPAGEORGE, produced, sworn and examined on the 22nd day of July, 2003, at the offices of Husch & Eppenger, LLC, 190 Carondelet Plaza, Suite 900, in the City of St. Louis, State of Missouri, before Julie Ann Whiting, Certified Shorthand Reporter in and for the State of Missouri, in a certain cause now pending In The United States District Court, For the Southern District of Illinois, between UNITED STATES OF AMERICA, PLAINTIFF, and PHARMACIA CORPORATION, ET AL., DEFENDANTS, AND PHARMACIA CORPORATION AND SOLUTIA, INC., COUNTERCLAIM PLAINTIFFS, AND UNITED STATES OF AMERICA, ET AL., DEFENDANTS.	Page 4 1 ON BEHALF OF MOBIL OIL CORPORATION (telephonically): 2 McDermott, Will & Emery Jeffrey A. Sepesi, Esq. 3 227 West Monroe Street, Suite 4400 Chicago, Illinois 60606-5096 4 5 ON BEHALF OF SAUGET & COMPANY (telephonically): 6 Johnson & Bell, Ltd. Daniel C. Murray, Esq. 7 55 East Monroe Street, Suite 4100 Chicago, Illinois 60603-5896 8 9 ON BEHALF OF CERRO COPPER (telephonically): 10 Lowenstein Sandler Chris Hopkins, Esq. 11 Timothy Berkowski, Esq. 65 Livingston Avenue 12 Roseland, New Jersey 07068-1791 13 ON BEHALF OF AMERICAN ZINC COMPANY: 14 Greensfelder, Hemker & Gale, P.C. Richard Greenberg, Esq. 15 2000 Equitable Building 10 South Broadway 16 St. Louis, Missouri 63102-1774 17 18 INDEX 19 20 Examination by Mr. Greenberg Page 7 21 Examination by Ms. Little Page 115 22 Examination by Mr. Spector Page 121 23 Examination by Mr. Murray Page 127 24 Examination by Mr. Santangelo Page 129 25 Further Examination by Ms. Little Page 140
Page 3 1 APPEARANCES 2 3 ON BEHALF OF THE PLAINTIFF (telephonically): 4 United States Department of Justice Environmental Enforcement Section 5 Jeffrey Spector, Esq. P.O. Box 7611 6 Ben Franklin Station Washington, DC 20044 7 8 ON BEHALF OF PHARMACIA CORPORATION AND SOLUTIA, INC.: 9 Husch & Eppenger, LLC Joseph Nassif, Esq. 10 190 Carondelet Plaza, Suite 600 Clayton, Missouri 63105-3441 11 12 ON BEHALF OF ROGERS CARTAGE: 13 Schultz & Little, L.L.P. Vicki Little, Esq. 14 640 Copi Drive, Suite A Chesterfield, Missouri 63005 15 16 ON BEHALF OF KERR-MCGEE CHEMICAL LLC: 17 Stinson Monison Hecker LLP Jon Santangelo, Esq. 18 100 South Fourth Street, Suite 700 St. Louis, Missouri 63101 19 20 ON BEHALF OF THE VILLAGE OF SAUGET: 21 Law Office of Daniel J. Hayes, Esq. Daniel J. Hayes, Esq. 22 3540 North Belt West Belleville, Illinois 62223 23 24 25	Page 5 1 EXHIBITS 2 Papageorge Exhibit 1 Page 8 (Curriculum Vitae) 3 4 Papageorge Exhibit 2 Page 15 (Report on Disposal of Solid Toxic Wastes, Residues, and Trash from 5 J.F. Queney & W.G. Krummrich Plant) 6 Papageorge Exhibit 3 Page 28 (Memo dated 1/15/88) 7 8 Papageorge Exhibit 4 Page 39 (Process Description for the Manufacture of Aroclors) 9 10 Papageorge Exhibit 5 Page 53 (Document dated 2/5/69 entitled Highlight Report January 1969) 11 12 Papageorge Exhibit 6 Page 55 (Letter dated 7/31/72 entitled Polychlorinated Biphenyls and the 13 Environment) 14 Papageorge Exhibit 7 Page 57 (Document dated 12/11/72 entitled Polychlorinated Biphenyls In Hand 15 Status Report) 16 17 Papageorge Exhibit 8 Page 64 (Document entitled 10 Yr. Production) 18 Papageorge Exhibit 9 Page 68 (Progress Report dated 12/15/70) 19 20 Papageorge Exhibit 10 Page 71 (Document dated 11/6/59 entitled Aroclor Loss to Sewer) 21 22 Papageorge Exhibit 11 Page 74 (Document dated 2/21/74 entitled Proposed Polychlorinated Biphenyl Standard) 23 24 Papageorge Exhibit 12 Page 79 (Document entitled Item 5) 25

Page 6 1 EXHIBITS 2 Papageorge Exhibit 13 Page 86 3 (Document entitled PCB's Allowable 4 Discharge from Producing/Using Plants) 5 Papageorge Exhibit 14 Page 94 6 (PCB Environmental Problem December 7 Status Report dated 1/8/71) 8 Papageorge Exhibit 15 Page 99 9 (PCB - Loss Control Program Status dated 10 4/6/72) 11 Papageorge Exhibit 16 Page 101 12 (Memorandum dated 11/22/85) 13 Papageorge Exhibit 17 Page 107 14 (Progress Report dated 3/13/70) 15 Papageorge Exhibit 18 Page 120 16 (PCB Environmental Problem February 17 Status Report dated 3/9/71) 18 Papageorge Exhibit 19 Page 123 19 (October 1971 PCB Report) 20 Papageorge Exhibit 20 Page 134 21 (PCB Environmental Problem September 22 Status Report dated 10/6/70) 23 24 25	Page 8 1 the Village of Sauget, and on the phone are counsel for 2 the United States, the Village of Sauget, and Cerro 3 Copper. Do I have everybody? 4 MR. HAYES: Paul Sauget was the other one. 5 MR. MURRAY: Yeah. Dan Murray for Paul 6 Sauget. I'm not an attorney for the Village. 7 Q (By Mr. Greenberg) Mr. Papageorge, marked in 8 front of you is a document that's been marked as 9 Exhibit 1. Is that a copy of your Curriculum Vitae? 10 A. Yes. 11 Q. Is it accurate? 12 A. Yes. 13 Q. It identifies your current address as 14 321 Pebble Valley Drive. Is that your current address? 15 A. That is. 16 Q. Do you have any plans to leave the St. Louis 17 area on a permanent basis? 18 A. I do not. 19 Q. Can you give me your date of birth? 20 A. September 7th, 1922. 21 Q. And you received a degree from Washington 22 University in 1943 and then a Master's in 1947? 23 A. That is correct. 24 Q. And during 1943 to 1946, you were in the 25 military; is that right?
Page 7 1 STIPULATION 2 IT IS HEREBY STIPULATED AND AGREED by and between 3 counsel for the parties that this deposition may be 4 taken in shorthand by Julie Ann Whiting, Certified 5 Shorthand Reporter, and afterwards transcribed into 6 printing, and signature by the witness is not waived. 7 WILLIAM B. PAPAGEORGE, 8 of lawful age, being first duly sworn to tell the truth, 9 the whole truth and nothing but the truth, deposes and 10 says as follows: 11 EXAMINATION BY MR. GREENBERG: 12 Q. Mr. Papageorge, my name is Richard Greenberg. 13 I'm an attorney for Blue Tee Corp, which has an 14 affiliation with the American Zinc Company. I'll be 15 asking you some questions today. If I ask you a 16 question you don't understand, please let me know and I 17 will rephrase the question so you understand it. 18 A. I will do that. 19 Q. And please understand that if I ask you a 20 question and you do answer that question, the record 21 will reflect that you understood what it was that I was 22 asking you. Do you understand that, sir? 23 A. I do. 24 MR. GREENBERG: For the record, present here 25 in this room are counsel for Rogers Cartage, Kerr-McGee,	Page 9 1 A. Yes. 2 Q. You started working for Monsanto in 1951 and 3 you retired in 1986? 4 A. Yes. 5 Q. You worked roughly 35 years for Monsanto? 6 A. Yes. 7 Q. During that 35-year period, you resided or 8 were located here in the St. Louis area except for four 9 years; is that right? 10 A. That is correct. 11 Q. Those four years when you were gone, you were 12 located in Anniston, Alabama? 13 A. Yes. 14 Q. From 1951 to 1963, you held positions at the 15 Queeny plant of Monsanto? 16 A. You mentioned 1963. Actually, I was there 17 until '64. 18 Q. So from 1951 to 1964, you worked at the 19 Queeny plant; is that right? 20 A. Yes. 21 Q. Okay. And a variety of different positions 22 as you worked your way up the ladder; is that right? 23 A. Yes. 24 Q. And those positions are outlined in 25 Exhibit 1?

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1 A. That is correct.

2 Q. In 1961, you became General Superintendent

3 for Warehouse Inventories and Utilities at the Queeny

4 plant?

5 A. Yes.

6 Q. Did that job position also include

7 responsibility for waste disposal?

8 A. Yes.

9 Q. Had you had responsibility for waste disposal

10 prior to becoming general superintendent at the Queeny

11 plant?

12 A. Will you help me with the word responsible?

13 Q. Some operational duties pertaining to waste

14 disposal.

15 A. Well, when I, for example, was in charge of a

16 producing unit, the waste that it created as it made a

17 product came under my responsibility in terms of where

18 did I put it to be properly disposed -- to be picked up

19 and disposed. So I did have that kind of

20 responsibility.

21 Q. Okay. And then when you became general

22 superintendent, did your responsibility change as far

23 as waste disposal?

24 A. General superintendent of this category,

25 warehouse inventories and utilities?

Page 11

1 Q. Correct.

2 A. Yes. I had an involvement. Uh-huh.

3 Q. During the -- where did the wastes that were

4 generated at the Queeny plant, the solid wastes, where

5 were they disposed of during the time that you were

6 general superintendent?

7 A. As best as I recall -- well, since I wasn't

8 directly involved with the final disposal, I can only

9 share with you my understanding that it went to several

10 places.

11 Q. Okay.

12 A. But the details, I never did get involved

13 with.

14 Q. When you were working at the Queeny plant,

15 one of the products that you supervised production for

16 was nitrochlorobenzene; correct?

17 A. Yes.

18 Q. And the production of nitrochlorobenzene

19 generates still bottoms?

20 A. Yes.

21 Q. And those still bottoms were sort of a solid,

22 tarry material. Isn't that right?

23 A. When it cooled down, yes.

24 Q. And that still bottom was drummed and taken

25 to Sauget for disposal?

Page 12

1 A. That, I don't know.

2 Q. Let's start at the beginning. Were the still

3 bottoms drummed?

4 A. Yes.

5 Q. And do you know where those drums were taken?

6 A. I do not.

7 Q. Another product that you supervised the

8 production of was nitrochlorobenzene when you were at

9 the Queeny plant; correct?

10 MR. NASSIF: Wasn't that the same product you

11 just asked him about?

12 MR. GREENBERG: Oh. Yes, it is, actually.

13 Let me withdraw that.

14 MR. NASSIF: Asked and answered.

15 MR. GREENBERG: There you go.

16 MR. NASSIF: Somebody has got to be listening.

17 MR. HAYES: We were all looking at each other

18 down here.

19 Q. (By Mr. Greenberg) When you worked at the

20 Queeny plant, did you know a gentleman by the name of

21 C.N. Stutz?

22 A. I'm sorry?

23 Q. Did you know a gentleman by the name of C.N.

24 Stutz, S-T-U-T-Z?

25 A. I don't -- I don't remember that name.

Page 13

1 Q. Okay. Do you know -- do you recognize the

2 name F.J. Holzapfel, H-O-L-Z-A-P-F-E-L?

3 A. No, I don't.

4 Q. Okay. How about F.E. Rosenberger? Do you

5 recognize that name?

6 A. No, I don't.

7 Q. In your capacity as General Superintendent

8 for Warehouse Inventories and Utilities, did you

9 receive information from time to time as to the

10 quantities of wastes that were generated at the Queeny

11 plant?

12 A. Never. No.

13 Q. As you sit here today, do you have any

14 information as to where wastes generated at the Queeny

15 plant were disposed during the time that you worked at

16 the Queeny plant?

17 A. The only information I had was that it was

18 gathered and sent to several places for final disposal.

19 Q. And what were those places that you --

20 A. I don't remember. I don't know that I ever

21 knew exactly all the places that were involved.

22 Q. How about any of the places? Do you have any

23 information as to any of the places where wastes

24 generated at the Queeny plant were disposed of?

25 A. I recall that the Krummrich plant was a

Page 14 1 place. I don't remember the names of the other places 2 so much as -- I really don't remember because I was 3 never that close to it. 4 Q. Were wastes mobilized in rail cars as well -- 5 did you see wastes being gathered in rail cars as well 6 as drums when you worked at the Queeny plant? 7 A. I don't remember that at all. 8 Q. How about trucks? Did you ever see wastes 9 being deposited into trucks when you worked at the 10 Queeny plant? 11 A. Yes. 12 Q. Were those Monsanto trucks or a contractor 13 truck? 14 A. They were not Monsanto. 15 Q. Do you recall whose trucks they were? 16 A. No, I don't. 17 Q. Do you know the names of any of the truckers 18 that hauled waste from the Queeny plant? 19 A. I'm having a difficult time remembering 20 names. I really don't recall any. 21 Q. You don't recall any names as you sit here 22 today of haulers that transported waste from the Queeny 23 plant? 24 A. I just -- I just don't remember. 25 (Papageorge Exhibit Number 2 was marked for	Page 16 1 sir, did I accurately describe the title of this 2 report, Report On Disposal Of Solid Toxic Wastes, 3 Residues, and Trash from J.F. Queeny and W.G. Krummrich 4 Plant, Report Number 80. Do you see that? 5 A. I do. 6 Q. That's the title of the document? 7 A. Yes. 8 Q. Have you ever seen this document before, 9 Mr. Papageorge? 10 A. I just don't recall ever seeing it, no. 11 Q. Do you recall being involved in the 1950s in 12 a review of the waste disposal practices for the Queeny 13 and Krummrich plants to review disposal options? 14 A. I was not involved. 15 Q. Were you aware at any time that such an 16 investigation was being conducted? 17 A. I was not. 18 Q. Okay. Would you turn, sir, to page 4 of this 19 document. 20 A. I have it. 21 Q. On page 4, there is a chart designated 22 Exhibit Number 1 with a heading Toxic Waste Disposal 23 Krummrich and Queeny Plants. And under that, it says 24 Queeny Plant-pounds per month. Do you see that? 25 A. I do.
Page 15 1 identification.) 2 Q. (By Mr. Greenberg) Let me go ahead and hand 3 you what's been marked as Exhibit 2 to your deposition. 4 MR. NASSIF: Richard, do you have an extra 5 copy? 6 MR. GREENBERG: I don't. 7 MR. NASSIF: That's no problem. Let me just 8 look at one part of this. 9 A. Am I supposed to -- 10 Q. (By Mr. Greenberg) Have you had a chance to 11 sort of flip through the document to see if you're 12 familiar with it? 13 A. I'll scan it here. 14 MR. MURRAY: This is Dan Murray. For those on 15 the phone, if this document has some description or 16 title, can you read it to us? 17 MR. GREENBERG: Sure. We've referred to it as 18 the Stutz report in the past. It's a Report on Disposal 19 of Solid Toxic Wastes, Residues, and Trash from J.F. 20 Queeny and W.G. Krummrich Plant, Report Number 80. It's 21 Foresman Exhibit 19. 22 MR. MURRAY: Does it have a date? 23 MR. GREENBERG: I'll get there. 24 A. I have briefly scanned this report. 25 Q. (By Mr. Greenberg) Okay. To begin with,	Page 17 1 Q. Looking at this description set forth on page 2 4, does this appear to be a description of the waste 3 generated by the Queeny plant in 1957? 4 A. Well, sir, it's a listing by department of 5 liquids and trash and an attempt to describe the types. 6 I see no reference as to what period of time it covers. 7 Q. I'm sorry. The reference to pounds/month up 8 there on the top of the heading, is that what you're 9 looking for? 10 A. Pounds per month, yes, but I don't know if 11 that's 1957, which I think is the date of this 12 report -- 13 Q. If we turn to the second page, there's a date 14 on the bottom, November 8, 1957. You're going to have 15 to flip backwards to it. 16 A. I'm sorry. This is the date that the report 17 was issued -- 18 Q. Right. 19 A. -- but it doesn't necessarily mean that this 20 data is related to that date. 21 Q. Do you have any reason to believe it's not 22 related to that date? 23 A. I have no -- 24 Q. Let me go back to my first question, sir. 25 Looking at this listing on Exhibit Number 1, does it

Page 18 1 appear to be a description of waste volumes generated 2 by the Queeny plant at some time as demonstrated in 3 this report? 4 MR. NASSIF: I object. Calls for speculation. 5 The witness already stated he doesn't have any 6 information about volumes. Go ahead, Bill, if you can 7 answer. 8 A. I don't know how to answer because I was 9 never involved with this. I just have nothing to help 10 me reach an opinion. 11 Q. (By Mr. Greenberg) All right. So you just 12 can't tell? 13 A. I can't tell. 14 Q. Okay. In your capacity as General 15 Superintendent for Utilities, General -- Utilities 16 Inventory -- for Warehouse Inventories and Utilities, 17 your experience in that position doesn't inform you in 18 terms of telling you whether or not Exhibit Number 1 19 describes waste generated at the Queeny plant? 20 A. No, it doesn't. 21 Q. When I say Exhibit Number 1, that's page 4 of 22 Exhibit Number 2. In the left-hand column, there's a 23 listing of departments. Do you see that, sir? 24 A. I do. 25 Q. Does that appear to be names identifying	Page 20 1 Q. Do you recall any of the other references 2 listed on Exhibit Number 1 of Exhibit 2 as references 3 to departments or activities at the Queeny plant other 4 than the A-9 reference? 5 A. I do not. 6 Q. What do you recall the A-9 reference 7 referring to? 8 A. That's the facility that produced phthalic 9 anhydride. 10 Q. Is that a product that was sold or 11 manufactured at the Queeny plant? 12 A. Yes. 13 Q. Let's go over to the right-hand column where 14 it refers to type. Do you recall tars and filter 15 aid -- strike that. Do you know what the reference to 16 filter aid -- strike that. 17 Do you recognize the term filter aid? 18 A. I do. 19 Q. And what do you understand that term to be? 20 A. I don't know what they meant. 21 Q. I'm asking you what you understood filter aid 22 to mean. 23 A. That's not a term I used often, but filter 24 aid is used to describe a material that is used in a 25 manufacturing process through which a liquid is passed
Page 19 1 various departments at the Queeny plant in the 1950s? 2 A. It appears to, yes. 3 Q. Do you recognize those names as departments 4 in the Queeny plant for the 1950s? 5 A. Some of them, not all of them. 6 Q. Which ones do you recognize as departments in 7 the Queeny plant? 8 A. I recognize the A-9 group. I recall some of 9 the numbers and letters, but I cannot associate it with 10 the activities of that particular department. 11 Q. Right now all I'm asking for is looking at 12 the left-hand column, will you tell me what references 13 you recognize as references for departments at the 14 Queeny plant. 15 A. I know and recognize the A-9 group. 16 Q. Any others? 17 A. I do not associate the other numbers with any 18 activity. 19 Q. How about -- do you associate these 20 references with references of departments at the Queeny 21 plant? For example, do you see the reference to A-10? 22 A. A-10, yes. 23 Q. Do you recall the department at the Queeny 24 plant being referred to as A-10? 25 A. I do not.	Page 21 1 and any solid type impurities in that liquid are 2 trapped by this capturing material called filter aid. 3 Q. Okay. Do you recall filter aids being used 4 at the Queeny plant during the 1950s? 5 A. Not specifically, no. 6 Q. How about generally? 7 A. Huh? 8 Q. How about generally? 9 A. I don't know what you mean by generally. 10 Q. Well, you said not specifically, so I'm 11 trying to figure out what the alternative is there. 12 A. When chemicals are made, sir, filters are 13 used in laboratories and in plants to remove the 14 unwanted contents. So in a general way, that's my 15 understanding. 16 Q. Given that understanding, do you recall 17 filter aids being used in the production processes at 18 Queeny during the 1950s when you were there? 19 A. Not specifically, no. 20 Q. How about -- I'm sorry. When you say not 21 specifically, you don't recall specific use of the 22 filter aid. Do you have a general understanding that 23 filter aids were used in the Queeny plant in the 1950s, 24 Mr. Papageorge? 25 A. No.

Page 22 1 Q. Okay. How about tars? Do you recall tars 2 being created as part of the production process at the 3 Queeny plant? 4 A. Yes. 5 Q. Were there different types of tars that were 6 created as part of the production process at the Queeny 7 plant when you were there in the 1950s? 8 A. Sir, I never took samples and analyzed them 9 to determine differences, but I'm aware of at least the 10 A-9 situation where a tar would be separated from the 11 final product. I don't know if that helps the question 12 any, but -- 13 Q. Was that a tar -- that tar was unique to that 14 manufacturing process; is that right? 15 A. That particular tar? I would say yes. 16 Q. That would be different than the still bottom 17 we talked about previously with respect to 18 nitrochlorobenzene? 19 A. Different chemically, yes. 20 Q. And I think you told me before that the still 21 bottom created in the nitrochlorobenzene production 22 process if allowed to cool will result in a tarry type 23 material? 24 A. Well, I have trouble, because, to me, a tar 25 is a tar whether it's a liquid, semi-liquid, or a	Page 24 1 production processes in department A-9 that you recall? 2 A. Not that I'm aware of. 3 Q. Further down the list, there's a reference to 4 paper, rags, rubber, cinders, and concrete. Do you see 5 that? 6 A. Yes. 7 Q. Do you recall that being produced as part of 8 the production process at Queeny during the 1950s? 9 A. Yes. 10 Q. And was that material gathered together for 11 disposal as part of the production process? 12 A. Yes. 13 Q. And you don't know what happened to that 14 material; correct? 15 A. That is true. 16 Q. Further down there's reference to solvents. 17 Do you see that? 18 A. Yes. 19 Q. Do you recall solvents being generated as a 20 waste or by-product of the manufacturing processes at 21 Queeny? 22 A. I do not. 23 Q. The next reference is toxic liquid. Do you 24 see that? 25 A. I do.
Page 23 1 solid. 2 Q. Okay. Would you describe the material 3 generated in the acetylene bottoms in the production of 4 nitrochlorobenzene as a tar? 5 A. Yes. 6 Q. So we've now talked about two different types 7 of tar, the tar produced in Department A-9, as well as 8 the tar produced in the nitrochlorobenzene production 9 process; correct? 10 A. They are different. 11 Q. Any other tars you recall seeing created at 12 Queeny as part of the production processes? 13 A. Not specifically, no. 14 Q. There is another reference in the right-hand 15 column under type to organic residue. Do you see that 16 about two-thirds of the way down? 17 A. Yes. 18 Q. And that appears, if you cross over, to be a 19 reference to A-9-O department. Do you see that? 20 A. Yes. 21 Q. Do you recall an organic residue being 22 created in the A-9 department? 23 A. Well, that's the material I was referring to 24 as tar. 25 Q. Okay. Any other residue created by the	Page 25 1 Q. Do you have an understanding of what the term 2 toxic liquid refers to? 3 A. I do not. 4 Q. Do you recall any liquids being generated as 5 wastes at the Queeny plant? 6 A. Which liquids, sir? 7 Q. Any liquids being generated as a waste at the 8 Queeny plant. 9 A. I do not. 10 Q. The next reference refers to organic 11 sweepings. Do you see that? 12 A. Yes. 13 Q. Do you have an understanding of that term? 14 A. I do not. 15 Q. The next reference is organic salts. Do you 16 have an understanding of that term? 17 A. I do not. 18 Q. In 1970, you returned to the St. Louis area; 19 correct? 20 A. Yes. 21 Q. And from 1970 to 1976, you were Manager of 22 Environmental Affairs at the Krummrich plant? 23 A. What were those dates again? 24 Q. Let me do it off your resume. That would be 25 a better way to do it. Looking at your resume,

1 Exhibit 1, would you tell me which positions you held
2 where you had some responsibility for environmental or
3 waste disposal activities at the Krummrich plant?

4 A. I don't recall ever being perceived as having
5 responsibilities after 1970 at the Krummrich plant
6 directly. I had more of an oversight function.

7 Q. Were you ever stationed, posted, or your
8 office maintained at the Krummrich plant?

9 A. Only the period of time that I worked there,
10 '64, '65.

11 Q. All of the positions you held after 1970,
12 your office was not located at the Krummrich plant?

13 A. That is correct.

14 Q. Was it the corporate headquarters in
15 Olivette, Creve Coeur?

16 A. Creve Coeur, yes, sir.

17 Q. During the period of 1970 to 1986, would your
18 duties regularly take you to the Krummrich plant on a
19 weekly or monthly basis?

20 A. Would you repeat that again?

21 Q. After 1970, would you from time to time go to
22 the Krummrich plant as part of your duties and
23 responsibilities?

24 A. Yes.

25 Q. Do you recall how often you would go to the

1 disposed of away from the plant manufacturing
2 facilities to several places, and I don't recall the
3 locations of most of those places at all.

4 Q. How about any of those locations? Do you
5 recall any of the locations?

6 A. I recall some of them were disposed of at the
7 Krummrich plant, but the location of the site, I never
8 did see.

9 Q. Any other locations other than on the site of
10 the Krummrich plant?

11 A. I don't remember them now, no.

12 Q. All right.

13 (Papageorge Exhibit Number 3 was marked for
14 identification.)

15 Q. (By Mr. Greenberg) Let me hand you what's
16 been marked as Exhibit 3, which is a memorandum from
17 Donald Weber to Kenneth Storms dated January 15th,
18 1988, subject Monsanto MEHI information.

19 A. I have scanned the exhibit.

20 Q. Have you ever seen Exhibit 3 before?

21 A. No.

22 Q. It appears to be a listing of departments, a
23 description of products manufactured by departments,
24 and years of operation for the departments. Do you see
25 that?

1 Krummrich plant?

2 A. Once every six months or so. That's a big
3 guess. I didn't keep any records.

4 Q. During the time that you were at the
5 Krummrich plant, 1964 to 1965, your position was
6 General Superintendent of Manufacturing?

7 A. Yes.

8 Q. As part of your responsibilities, did you
9 have supervisory duties with respect to waste disposal?

10 A. Yes.

11 Q. What did you understand your responsibilities
12 to be in 1964 and 1965 as to waste disposal?

13 A. I was to make certain that any wastes
14 generated by the units for which I was superintendent,
15 that the supervision of those units would use the right
16 procedures for disposing of wastes. That's it.

17 Q. And do you know how wastes were disposed of
18 in 1964 and 1965 that were generated at the Krummrich
19 plant?

20 A. The whole plant? No, I don't know about the
21 whole plant.

22 Q. How about any area of the plant or any waste
23 stream generated by the plant? Do you know how in 1964
24 and 1965 those wastes were disposed of?

25 A. Well, as I said previously, they were

1 A. I do.

2 Q. Looking at Exhibit 3, does the information
3 set forth regarding the operational history of various
4 departments at the Krummrich plant, is that consistent
5 with your understanding of the operational history at
6 the Krummrich plant in terms of departments and
7 products that were produced and the years of
8 production?

9 A. When you say consistent with my
10 understanding, I recognize some of the information
11 that's there, but I personally have no specific
12 information to determine whether this information is
13 accurate. I have no way of knowing that.

14 Q. Beginning in 1970, did you become responsible
15 for supervising the production and disposal of waste
16 generated in the production of polychlorinated
17 biphenyls?

18 A. I was not responsible for the supervision of
19 the production of polychlorinated biphenyls.

20 Q. How about disposal? Was that one of your
21 responsibilities beginning in 1970 and continuing
22 during your time at Monsanto?

23 A. I was not responsible for disposing.

24 Q. Tell me, did you have any responsibility with
25 respect to PCBs beginning in 1970?

Page 30 1 A. Yes, I had responsibilities. Uh-huh. 2 Q. Can you tell me what they were? 3 A. I was responsible for communicating within 4 Monsanto and outside of Monsanto to determine virtually 5 all facets of PCBs, their use, their properties, 6 analytical procedures, how customers were handling it, 7 as an example. I don't know that I can describe the 8 job with one word. It was a matter of someone, meaning 9 I was assigned the task of being aware of any 10 activities as they related to PCBs and communicating 11 the information as I saw fit. 12 Q. Turning to Exhibit 1, can you tell us when 13 you began to have the responsibility pertaining to 14 Monsanto's production or sales of PCBs? 15 A. That's after 1970? Well, in 1970, I was 16 appointed to be the -- I'm going to use a word that 17 hasn't been used before, an overseer of the PCB issue, 18 and it was up to me to decide how to accumulate the 19 information that I was gathering and also to facilitate 20 the further gathering of information and to assist 21 where a company, Monsanto, could help in financing or 22 manning or getting the right kind of talents hired to 23 pursue the issue. 24 Q. And what was the issue in 1970 pertaining to 25 PCBs that resulted in your appointment?	Page 32 1 Q. What occurred between 1973 and 1977 that 2 resulted in you no longer having that overseer 3 responsibility? 4 A. Well, Monsanto within itself had a 5 reorganization identifying specific units within the 6 corporation. I at that time had the title of Manager 7 of Product Acceptability, and that involved several 8 products of each of those units of Monsanto. And it 9 changed in '77, and somewhere between '73 and '77, the 10 attention given to PCBs as a product was given to 11 another individual in Monsanto. 12 Q. And who was that individual? 13 A. If my memory serves me right, it was John 14 Craddock. 15 Q. Did Mr. Craddock report to you after assuming 16 that responsibility with respect to PCBs? 17 A. No. 18 Q. As I look at your resume, after 1977, you 19 continued to be Director of Environmental Operations 20 until approximately 1985. 21 A. Yes. 22 Q. In that capacity, what were your 23 responsibilities as Director of Environmental 24 Operations? 25 A. Well, it covered several areas of interest
Page 31 1 A. In nineteen -- 2 Q. Strike that. What was the issue pertaining 3 to PCBs? 4 A. The issue in 1970 was the presence in 5 unexpected places of PCBs. 6 Q. You're referring to the environmental impact 7 of PCBs? 8 A. Well, initially it was the presence and later 9 on it involved what impact, if any, was observed. 10 Q. By PCBs in the environment? 11 A. Yes. 12 Q. As overseer, for want of a better term, what 13 resources did you have at your disposal from handling 14 the PCB issue? 15 A. I don't know how to describe it. I could 16 always go to the top management and share with them my 17 observations, my recommendations. Other than a 18 part-time secretary, I had no other resources. 19 Q. As part of your role, how long did you have 20 a -- you indicated in 1970, you began that role as 21 overseer. When did you stop in the role of overseer? 22 A. Of what? 23 Q. The PCBs. 24 A. PCBs. I'm having a difficult time recalling 25 exactly, but sometime between '73 and '77.	Page 33 1 within those subdivisions of Monsanto in those periods 2 of time. It covered such things as the type of product 3 made, what were its characteristics, where was it used. 4 That came under the product acceptability function, 5 which reported to me. And there was another function 6 that was industrial hygiene related. How do these 7 products or these chemicals impact on the workers, not 8 only Monsanto, but the customer and the public, if it 9 should happen -- if an incident should happen in 10 transit. Another area was the -- I'm going to call it 11 the environmental impact within the operating unit, 12 what fumes are emitted, how is the neighborhood 13 impacted. Those are roughly the three categories. 14 Q. I'm going to turn you back to the time when 15 you were in that overseer capacity and ask you some 16 questions regarding PCBs. In that capacity, sir, did 17 you learn how PCBs were produced at the Krummrich 18 plant? 19 A. All I knew was that they were the second 20 plant to manufacture PCBs. The procedure used to 21 manufacture was similar to the one that I supervised in 22 Anniston, and other than that, I don't know that I 23 learned anything different. 24 Q. Did you ever inspect the process that was 25 being utilized to manufacture PCBs?

Page 34 1 A. No. 2 Q. Did you ever see it occurring, visit the 3 plant to watch the production process? 4 A. Well, I've been there, but it's just 5 equipment, pumps working, tanks sitting there, 6 pipelines. That's it. 7 Q. As overseer, did you attempt to learn what 8 types of wastes were generated as part of the PCB 9 manufacturing process? 10 A. Well, I already had considerable knowledge in 11 that area from my experience in Alabama. I was then in 12 a position where I relied on the supervision of the 13 operation at the Krummrich plant, as well as the 14 environmental positions held by several individuals to 15 keep me posted of any differences that might occur as 16 time went on. 17 Q. So I take it you have some understanding of 18 wastes that are generated as part of the PCB production 19 process? 20 A. Yes. Uh-huh. 21 Q. For how long did the Krummrich plant produce 22 PCBs? 23 A. I don't -- I don't recall when they started, 24 but they stopped making it in '76, as I remember. 25 Q. Is it true that PCB products were	Page 36 1 A. Oh, we're now talking about selling? I 2 thought you said utilized. 3 Q. Let's deal with utilized, then. 4 A. Utilized? Well, the obvious one, PCBs were 5 in the transformers at the plant. PCBs were also 6 present in some of the hydraulic fluids that run 7 compressors, for example. PCB products were in heat 8 transfer systems where the PCB acts as the carrier of 9 heat for a process. So those are the types of uses 10 that I call utilizing PCBs. 11 Q. Were PCBs used as a raw material for products 12 manufactured at the Queeny plant during the time you 13 were employed there? 14 A. I don't know about the timing. I just was 15 never close to that at that time, so I never did know 16 that. 17 Q. Okay. What is the difference between PCBs 18 and Aroclors? 19 A. Well, the trademark Aroclor was used to 20 define chlorinated aromatics, which included biphenyl 21 and triphenyl. So there's two types of Aroclors. 22 Q. As you said, Aroclors is a trade name for a 23 PCB product; is that right? 24 A. Yes. 25 Q. The Krummrich plant produced Aroclors as both
Page 35 1 manufactured at the Queeny plant when you were employed 2 at the Queeny plant? 3 A. PCB products manufactured at Queeny? They 4 were not. 5 Q. Were PCB products utilized at the Queeny 6 plant? 7 A. Yes. 8 Q. Were PCB products sold from the Queeny plant 9 when you were employed at the Queeny plant? 10 A. Yes. 11 Q. So at least, to your knowledge, PCBs were 12 produced either at Queeny or at Krummrich beginning in 13 1951 and continuing until 1976; is that correct? 14 A. Well, I'm somewhat confused by the use of the 15 word PCB products were manufactured at Queeny. 16 Q. How about utilized to manufacture other 17 products? 18 A. Well, they were utilized, yes. 19 Q. When you were at Queeny during the 1950s, 20 were PCB products obtained from the Krummrich plant and 21 used in the manufacturing processes at Queeny? 22 A. Yes. 23 Q. And what products were -- what products were 24 sold from the Queeny plant, then, that had or contained 25 PCB products?	Page 37 1 a liquid and as a solid material? 2 A. Yes. 3 Q. And in 1976, one of the reasons the 4 manufacturing of PCBs was discontinued was because of 5 the environmental concerns that were raised regarding 6 the impact on the environment? 7 A. In 1976, the production was terminated 8 because the customers of the PCBs who were the 9 electrical equipment manufacturers indicated they had 10 found alternatives. In terms of terminating because of 11 impact on the environment, the only impact of 12 continuing concern is the presence. And there were 13 still many questions raised about what harm, if any, 14 are they causing. 15 Q. Other than longevity of PCBs, you are unaware 16 of any harm to the environment from disposal of PCBs? 17 A. I'm not aware of any situation that was 18 proven to be in effect due to PCBs. 19 Q. An adverse effect; right? 20 A. Adverse, yes. 21 Q. It's true what you said, that PCBs are not 22 typically biodegradable? 23 A. Some of the PCBs are biodegradable and some 24 are not. 25 Q. Those PCBs that are not biodegradable will

Page 38 1 last for generations; is that right? 2 A. It will last a long time, yeah. 3 Q. It's true that PCBs become more soluble when 4 they are mixed with solvents? 5 A. I hesitate because I don't know. Soluble in 6 what, for what? 7 Q. In water. 8 A. In water? I'm not aware of any information 9 that confirms that, no. 10 Q. Okay. When you were at Anniston or 11 Krummrich, did you look at standard manufacturing 12 processes that were prepared by the plants for 13 particular manufacturing products? 14 A. I missed that one word. 15 Q. Standard manufacturing processes. 16 A. Standard manufacturing processes. Well, that 17 was the term used to describe the recipe, if you will, 18 of how to make it. 19 Q. And was it not a practice at Monsanto to 20 prepare recipes, SMPs, for particular products that 21 were being manufactured? 22 A. Yes. 23 Q. Did you ever see an SMP or recipe or 24 manufacture of PCBs or Aroclors? 25 A. Certainly, years ago.	Page 40 1 found about halfway through Exhibit 4; is that right? 2 A. That is correct. 3 Q. Okay. If you turn -- this might help use if 4 we use the Bates number -- to 020104. 5 A. 0201 -- 6 Q. 04. There is a heading Synopsis of Process. 7 Do you see that? 8 A. I do. 9 Q. It appears to me that the process is broken 10 down in this synopsis into a number of steps. Do you 11 see that? 12 A. I do see it, yes. 13 Q. The first process that they refer to is 14 chlorination, the second process step is aeration and 15 distillation, and the third process step, blending, 16 filtration, and storage. Do you see that reference? 17 A. That is correct. 18 Q. Is that consistent with your understanding of 19 the PCB production process? 20 A. Yes. 21 Q. The chlorination -- I want to go through the 22 steps one by one. The first step, they refer to 23 chlorination of biphenyl. Where did the Krummrich 24 plant receive its biphenyls? 25 A. From the Anniston, Alabama plant.
Page 39 1 (Papageorge Exhibit Number 4 was marked for 2 identification.) 3 Q. (By Mr. Greenberg) Let me hand you what's 4 been marked as Exhibit 4. Why don't you scan that and 5 see if you're familiar with it. 6 MR. GREENBERG: For the record, the title of 7 the document is Process Description for the Manufacture 8 of Aroclors in Department 246. 9 MR. MURRAY: Do you have a Bates number 10 associated with this document? 11 MR. NASSIF: Yeah. The Bates number is Cerro, 12 CER, 020061. 13 A. Well, I've quickly scanned all this. 14 Q. (By Mr. Greenberg) Does Exhibit 4 appear to 15 be the SMP for the manufacture of Aroclors at the 16 Krummrich plant? 17 A. It appears to be, yes. 18 Q. I want to use it somewhat as a guide to help 19 me understand the production process, in particular the 20 waste streams that are generated in the production of 21 PCB's. There is a synopsis of the process -- strike 22 that. 23 First of all, the SMP is organized with a 24 number of amendments in the front part of the SMP, 25 followed by a description of the original PCB process	Page 41 1 Q. And where did Anniston receive its biphenyl? 2 A. It was manufactured there. 3 Q. And what was the raw material for the 4 manufacture of biphenyl? 5 A. Benzene. 6 Q. For the chlorination process at Krummrich, 7 tanks were utilized; is that right? 8 A. I'm sorry? 9 Q. Tanks were utilized for the chlorination 10 process at the Krummrich plant? 11 A. I still didn't get that one word. Something 12 was utilized. 13 Q. Tanks. 14 A. Tanks. Oh. Yes. 15 Q. And if you turn to CER 02111. It's a little 16 further down. 17 A. Yes, I have it. 18 Q. The second -- the first line of the second to 19 last paragraph, it indicates that chlorination is 20 carried out in five chlorinators. 21 A. Can you guide me again as to where? Oh, 22 there. Okay. I see that. 23 Q. The reference to five chlorinators refers to 24 five tanks where the chlorine gas is being added to the 25 biphenyls; correct?

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1 A. That's correct.

2 Q. Were tank bottoms created as part of the

3 chlorination process in the tank?

4 A. Tank bottoms were created.

5 Q. And what would happen to the tank bottoms

6 that were created in the chlorinators?

7 A. In the final distillation of the finished

8 product, whatever was -- whatever met product

9 specifications was distilled off and eventually ended

10 up as finished product. In the distillation tank

11 itself, there was a residue which would be called --

12 well, it was called tank bottoms, it was called

13 residue, it was called tars. It's the unsaleable, as

14 far as Aroclors is concerned, part of the process.

15 Q. I'm going to get to that, but I want to make

16 sure we're on the same page. I was starting, sir, with

17 the chlorinating tanks.

18 A. Yes.

19 Q. Okay. And I was asking you about the tank

20 bottoms as part of the chlorination process, and that

21 was prior to the distillation.

22 A. I'm not aware of any tank bottoms at that

23 step.

24 Q. Okay. I'm going to come back to

25 distillation. But we talked about step one being the

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1 chlorination in the five tanks.

2 A. Uh-huh.

3 Q. And is it your understanding that those tanks

4 would not collect tank bottoms or still bottoms?

5 A. That's my understanding.

6 Q. Now, as part of the chlorination process,

7 chlorine gas is added to the chlorine tanks; correct?

8 A. Correct.

9 Q. And the material in the tank would be heated,

10 creating a mist or steam?

11 A. Yes.

12 Q. And that mist or steam at some point was

13 collected through the Brink mist eliminator?

14 A. Yes.

15 Q. And when -- do you know when the Brink mist

16 eliminator was added as part of the process?

17 A. I do not.

18 Q. Do you recall there being a time when there

19 were not mist eliminators on the chlorinated tanks, on

20 the chlorine tanks?

21 A. I do not.

22 Q. Even with the mist eliminators, this would

23 produce hydrogen chloride gas; is that right?

24 A. That is correct.

25 Q. And part of the process involved quenching

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1 and then sewerage the hydrogen chloride gas?

2 A. I'm not aware of the sewerage that you

3 mentioned, because the hydrogen chloride was recovered

4 and sold.

5 Q. Take a look at page 8 of the SMP. Use the

6 page numbers at the top if it would be easier for you.

7 If you look at the bottom of the page, it refers to

8 by-product hydrogen chloride.

9 A. I see it.

10 Q. Later on in the paragraph, it indicates if

11 Department F-218 is unable to handle the off-gas, it

12 may be sewerage at Department 246 by passing through a

13 Haveg S-K drowning jet. Do you see that reference?

14 A. I do.

15 Q. Are you aware of the times when department

16 F-218 was unable to utilize the off-gas?

17 A. No.

18 Q. So as far as you know, at all times the

19 off-gas was not quenched and sewerage as reported as an

20 option here in the SMP?

21 A. I don't remember any of that.

22 Q. Would the hydrogen chloride gas contain PCBs?

23 A. I don't remember.

24 Q. Okay. The next step in the process was

25 aeration and distillation; correct?

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1 A. Aeration and distillation of the -- are we

2 still on the hydrogen chloride?

3 Q. No. We're going back to the PCB production.

4 A. Oh, the PCBs. Yes.

5 Q. And you earlier mentioned that there would be

6 still bottoms generated in distillation tanks?

7 A. Yes.

8 Q. And that still bottoms may be known as a

9 residue and sometimes -- was it occasionally referred

10 to as Montar?

11 A. Yes.

12 Q. You understand Montar to be a reference to a

13 PCB residue?

14 A. Some of the Montars were PCB residues.

15 Q. And if the Montar did not contain PCBs, was

16 it called by a different name or was there a different

17 reference?

18 A. They were all Montars followed by a letter or

19 a number -- I forget -- to distinguish between the

20 sources.

21 Q. Were any other wastes generated as part of

22 the distillation process other than the residue in the

23 distillation tanks?

24 A. Not that I know of.

25 Q. The third step that is described in the SMP

Page 46 1 refers to blending, filtration, and storage. Part of 2 the process involved using a clay to purify the 3 product? 4 A. This is after distillation? 5 Q. Correct. 6 A. I don't remember that. 7 Q. Do you remember any use of -- I'm sure I'm 8 going to mispronounce the name -- Attapulgis clay as a 9 part of the production process for PCBs? 10 A. I do not. 11 Q. Do you know how the filtration process was 12 conducted for PCBs? 13 A. No. 14 Q. Was a filter press used as part of the 15 filtration process? 16 A. I just don't remember any of that. 17 Q. Do you recall if -- I'm sorry. You said you 18 didn't recall -- I may be mispronouncing -- Attapulgis 19 clay being used in the production process of PCBs? 20 A. That is correct. 21 Q. Let me ask you to turn to page 36 of the SMP. 22 Why don't you take a moment to look at that page. I'm 23 going to ask you some questions regarding the 24 information on this page. 25 A. I have reviewed that page.	Page 48 1 A. I don't know. 2 Q. In the 1970s, you were responsible for a PCB 3 control program that attempted to eliminate PCBs being 4 discharged from the Krummrich plant; correct? 5 A. Yes. 6 Q. As part of that program, you attempted to 7 control the HCl fumes that were generated as part of 8 the production process; correct? 9 A. I don't recall any particular attention 10 addressed to the HCl fumes regarding the PCBs to the 11 environment. 12 Q. Okay. Let's go down to the discharge to 13 sewers. It estimates as part of the SMP process that 14 6.5 pounds of waste would be generated for each 15 100 pounds of Aroclor that would be produced that would 16 be discharged to the sewers; correct? 17 A. I'm having difficulty finding the numbers you 18 quoted there. 19 Q. I was subtotalling the 2.5, the 2, and the 2, 20 adding it up to 6.5 pounds. 21 A. Oh. 22 Q. Do you see that, sir? 23 A. I see that. 24 Q. So according to the SMP, it was estimated 25 that 6.5 pounds of waste would be generated per hundred
Page 47 1 Q. Page 36 describes certain types of waste that 2 would be generated as part of the production process 3 for PCBs; correct? 4 A. It does. 5 Q. And it's broken down into discharge to the 6 atmosphere, discharge to the sewers, and discharge to 7 waste disposal. Do you see that? 8 A. Yes. 9 Q. And it looks at the amounts generated from 10 two different perspectives. The first column refers to 11 what is generated from 100 pounds of Aroclor produced 12 and the second column refers to pounds produced 13 assuming a production rate of 28.6 million pounds per 14 year; is that right? 15 A. That is correct. 16 Q. And the first four columns refers to 17 discharges to the atmosphere; correct? 18 A. Yes. 19 Q. And it indicates that as far as HCl fumes 20 from blow tanks and HCl fumes from other tanks, it is 21 estimated that 2,000 pounds per year would be generated 22 and discharged to the atmosphere, assuming a production 23 rate of 28.6 million pounds; is that right? 24 A. That's what it says. 25 Q. Would the HCl fumes contain PCBs?	Page 49 1 pounds of Aroclor produced and discharged to the 2 sewers; is that right, sir? 3 A. I have no way of knowing the accuracy in 4 terms of is it right. The author of this document is 5 the one that's the source of that estimate. 6 Q. Right. Assuming that the SMP is right, I'm 7 accurately reading this information; is that right? 8 A. Yeah. You're accurately reading, yes. 9 Q. And then flipping over to the right-hand 10 column, there is an assumed discharge to the sewers of 11 560,000 pounds per year assuming a production rate of 12 28.6 million pounds. Is that also correct? 13 A. You are correct in quoting those numbers, 14 yes. 15 Q. As far as the discharge to sewers, the first 16 reference is to HCl. Do you understand what HCl -- 17 what chemical that refers to? 18 A. Yes, sir. 19 Q. What chemical is that? 20 A. Hydrogen chloride, which is a gas. 21 Q. If it was quenched, would it be reduced to 22 liquid form? 23 A. Well, the water is the liquid and the acid is 24 dissolved in it. 25 Q. Okay. And in the chlorinators, would there

Page 50 1 be water containing HCl as part of the production 2 process? 3 A. As I indicated, I don't remember that 4 particular step in the process. 5 Q. The next reference is Cl2. Do you see that? 6 A. I'm sorry. The next -- 7 Q. The next line, is it Cl2 or Cl2? 8 A. Oh, oh. It's still under discharge to 9 sewers? 10 Q. Correct. 11 A. Yes. It refers to Cl2, yes. 12 Q. And do you understand the chemical reference 13 for Cl2? 14 A. That's chlorine. 15 Q. And do you understand how chlorine from the 16 chlorinators would be released to the sewers as part of 17 the production process? 18 A. No, I don't. 19 Q. The next line refers to condensables in 20 chlorinator off-gas. Do you see that? 21 A. I do. 22 Q. Do you understand how there would be 23 condensables in the chlorinator off-gas as part of the 24 production process released to the sewers? 25 A. I do not.	Page 52 1 Q. Would you turn to page 10 of the SMP. Right 2 under subhead B, it refers to capacity. Do you see 3 that? 4 A. Yes. 5 Q. And it indicates that the monthly production 6 capacity of Department 246 is 2,400,000 pounds of 7 Aroclor on a seven day per week basis. 8 A. It does. 9 Q. Department 246 was the department that 10 manufactured Aroclors at Krummrich, wasn't it? 11 A. Correct. 12 Q. And did it operate on a seven day per week 13 basis? 14 A. Yes. 15 Q. Do you have any reason to disagree that the 16 capacity of Department 246 was the 2,400,000 pounds 17 reported in the SMP? 18 A. I have no way of -- 19 Q. Knowing one way or the other? 20 A. -- knowing one way or the another. 21 Q. That's fine. Do you know if Department 246 22 ever operated at capacity? 23 A. I do not. 24 Q. As overseer of the PCB production process at 25 Krummrich, did you learn what volume of PCBs were
Page 51 1 Q. Finally, down at the bottom, it refers to 2 discharge to waste disposal and it lists Montar and 3 Aroclor. Do you see that? 4 A. I do. 5 Q. And if we go over to the last line, it 6 indicates that 5,000 pounds of Montar would be 7 discharged for waste disposal, assuming a production 8 rate of 28.6 million pounds; is that right? 9 A. I see that, yes. 10 Q. Is that your understanding of what would be 11 manufactured from the result of the manufacturing 12 process? 13 A. I do not have a personal understanding of 14 that. 15 Q. You understand that Montar or residue would 16 be created, you don't know how much would be created 17 given a production rate; is that right? 18 A. That is correct. 19 Q. And it also indicates that 95,000 pounds of 20 Aroclor would be generated as a waste for disposal 21 assuming the production rate of 28.6 million pounds? 22 A. It does say that. 23 Q. And do you know what the production rate was 24 at Krummrich for Aroclors? 25 A. I do not.	Page 53 1 produced by the plant of any kind? 2 MR. NASSIF: Objection. Misstates the 3 witness' testimony. 4 Q. (By Mr. Greenberg) I'll rephrase it. Do you 5 know what volume of PCBs were produced at Krummrich in 6 any year in round figures? 7 A. I do not. 8 (Papageorge Exhibit Number 5 was marked for 9 identification.) 10 A. I have read the exhibit. 11 MR. GREENBERG: Sorry. I don't have a copy of 12 it. For the record, Exhibit 5 is a memorandum dated 13 February 5, 1969 from an R.M. McCutchan, 14 M-C-C-U-T-C-H-A-N, Bates number Cerro 010142. It 15 appears to be addressed to Mr. Molloy. 16 Q. (By Mr. Greenberg) Did I accurately describe 17 that Exhibit 5? 18 A. Yes. 19 Q. Do you remember ever seeing Exhibit 5 before? 20 A. No. 21 Q. Do you recognize the names on Exhibit 5, 22 Mr. Molloy and Mr. McCutchan? 23 A. I recognize Mr. Molloy. I'm not too sure 24 about Mr. McCutchan. 25 Q. You don't recall at this time who he was?

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1 A. No, I don't.
 2 Q. Okay. But you understand Mr. Molloy was an
 3 employee of Monsanto. Isn't that right?
 4 A. Yes.
 5 Q. And he had some responsibility for operations
 6 at the Krummrich plant; is that right?
 7 A. Yes.
 8 Q. In fact, he was the general manager of the
 9 Krummrich plant at some point in time? General
 10 superintendent, perhaps.
 11 A. I think he was the plant manager. I'm not
 12 certain.
 13 Q. And at the top of the heading, it refers to
 14 W.G. Krummrich plant. Do you see that?
 15 A. Yes.
 16 Q. Does this appear to be a document that was
 17 generated at the Krummrich plant regarding activities
 18 reported in 1969?
 19 A. Yes.
 20 Q. At the top of the -- at the beginning --
 21 well, in the narrative portion of the document, it
 22 refers to PCB production. Do you see that?
 23 A. Yes.
 24 Q. It reports the January production of
 25 3,846,000 pounds established a new monthly record. Do

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1 you see that?
 2 A. Yes.
 3 Q. Do you have any reason to believe that that
 4 was not the monthly production record as reported in
 5 Exhibit 5?
 6 A. I have no reason to suspect that it is or
 7 isn't.
 8 Q. You have no reason to believe that's not
 9 accurate; is that right?
 10 A. That's correct.
 11 (Papageorge Exhibit Number 6 was marked for
 12 identification.)
 13 A. I have scanned the exhibit.
 14 MR. GREENBERG: For the record, Exhibit 6 is a
 15 memorandum dated July 31, 1972 titled Polychlorinated
 16 Biphenyls and the Environment from an E.E. Stewart to
 17 Mr. Paul Heisler previously marked as Foresman Exhibit
 18 17, Bates stamped Cerro 010968.
 19 Q. (By Mr. Greenberg) Did I accurately identify
 20 the document?
 21 A. Yes.
 22 Q. You're shown as a recipient of this
 23 memorandum; is that right, Mr. Papageorge?
 24 A. Yes.
 25 Q. Do you recall ever receiving this document?

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1 A. I don't recall this specific document.
 2 Q. Do you recall receiving documents of this
 3 type?
 4 A. Yes.
 5 Q. Do you have any reason to believe you did not
 6 get that document as a cc of -- or as reported on it?
 7 A. I do not.
 8 Q. This was a document that was generated at
 9 Monsanto; correct?
 10 A. Correct.
 11 Q. And if I turn to the third page of Exhibit 6,
 12 there is a report on production figures. Do you see
 13 that? It's a chart, actually.
 14 A. I do see it.
 15 Q. And the chart refers to the production at the
 16 Krummrich plant of PCBs; correct?
 17 A. Correct.
 18 Q. And it reports that in 1969, approximately
 19 42 million pounds of Aroclors were produced; correct?
 20 A. The reason I'm hesitating, I find one of the
 21 charts or graphs depicted on this page refers to the
 22 cumulative total production and it seems to coincide
 23 with one marked 1262. I personally don't know just
 24 which of those descriptions apply to that particular
 25 chart. But in '69, it does point to a 42 million --

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1 42,000 -- I'm sorry. Yeah. 42,000 pounds -- it's
 2 forty -- it's tendered to something as pounds, is the
 3 designation. 42 something.
 4 Q. You're having trouble reading the Exponent
 5 referring to 10 --
 6 A. Yes.
 7 Q. -- on this chart? So you're unable to tell
 8 whether we're talking about thousands or millions of
 9 pounds of PCBs; is that right?
 10 A. That's true, yes. Also this number, I think,
 11 is the number you quoted --
 12 Q. Correct.
 13 A. -- and I'm having trouble understanding this
 14 particular graph.
 15 Q. Let me give you a different graph, then.
 16 Maybe that will help. Do you understand -- strike
 17 that.
 18 (Papageorge Exhibit Number 7 was marked for
 19 identification.)
 20 MR. NASSIF: Let me see that, Bill.
 21 A. I have scanned the exhibit.
 22 Q. (By Mr. Greenberg) For the record, Exhibit 7
 23 is a memorandum dated December 11th, 1972 from E.E.
 24 Stewart to a number of gentlemen, including yourself,
 25 bearing Bates stamp CER 013898. Have I accurately

Page 58 1 described the document? 2 A. You have. 3 Q. Do you recall receiving this document, sir? 4 A. Not this specific document. 5 Q. Do you have any reason to believe you did not 6 get that document on or about the date indicated? 7 A. I do not. 8 Q. Are the recipients identified as recipients 9 of that document all employees of Monsanto? 10 A. At that time, yes. 11 Q. Do you have any reason to believe that this 12 was a -- strike that. 13 This was a record that was apparently 14 generated by Monsanto at or about the time indicated? 15 A. Yes. 16 Q. This appears to be a status report regarding 17 activities pertaining to PCBs at the Krummrich plant; 18 is that correct? 19 A. The activities it describes are defined as 20 polychlorinated biphenyls and the environment, okay, so 21 it doesn't describe everything about PCBs. 22 Q. But it does describe various activities taken 23 at the Krummrich plant pertaining to PCBs, correct, not 24 intending to be an all inclusive list? 25 A. Yes. That is right.	Page 60 1 A. Correct. 2 Q. In 1972, the amount is reduced, as reported, 3 as about 40 million pounds; is that right? 4 A. It's the amount projected for '72, not 5 produced yet. 6 Q. I stand corrected. But at least the totals 7 for 1969, '70, and '71 appears to be volume of PCBs 8 produced during those years; correct? 9 A. Correct. 10 Q. Okay. I want to turn back to Exhibit 4 to 11 your deposition, which was the SMP for the production 12 of Aroclors. And we previously looked at page 36, 13 which estimated volumes of waste, depending upon a 14 volume of PCB production. Do you recall that, sir? 15 A. I do. 16 Q. And the column on the left-hand side of 17 page 36 in the SMP refers to a production rate of 18 28.6 million pounds per year. Do you see that? 19 A. I do. 20 Q. Looking now at Exhibit 7, that production 21 rate of 28.6 million pounds was exceeded in 1969, 1970, 22 and 1971; correct? 23 A. Correct. 24 Q. The production rate in 1969 of 25 42 million pounds is roughly one and a half times the
Page 59 1 Q. On pages 2 and 3 of exhibit -- I'm sorry. 2 Let me start over. 3 On pages 2 and 3 of Exhibit 7, there is a 4 description of the volume of PCBs manufactured and a 5 chart is presented on page 3. Do you see that? 6 A. I do. 7 Q. Now, on page -- let's turn to page 3. I'd 8 like if you'd help me understand that chart, sir. 9 First of all, on the left-hand column, there's a 10 reference to M with a line above it and pounds. Do you 11 see that? 12 A. I do. 13 Q. Do you understand that the reference M with a 14 line above it pounds refers to millions of pounds; 15 correct? 16 A. Yes. 17 Q. And in 1969, page 3 of Exhibit 7 reports that 18 approximately 42 million pounds of PCBs were produced; 19 correct? 20 A. Correct. 21 Q. Okay. And in 1970, it is approximately 22 50 million pounds of PCBs being produced; correct? 23 A. Yes. 24 Q. In 1971, the amount reduces to again roughly 25 42 million pounds of PCBs produced?	Page 61 1 production rate of 28.6 million pounds? 2 A. Roughly, yes. 3 Q. So if 100,000 pounds of Montar and Aroclor 4 were to be produced with a production rate of 5 28.6 million pounds, the actual amount produced for 6 1969 would be higher because the production rate was 7 higher; is that right? 8 A. Well, the discharge that is shown on page 9 36 -- 10 (A recess was taken.) 11 Q. (By Mr. Greenberg) Are you ready, 12 Mr. Papageorge? 13 A. Yes, sir. 14 MR. GREENBERG: Could you repeat back the last 15 question? 16 (Record read.) 17 MR. NASSIF: Object to the form of the 18 question. 19 A. I don't feel that I have enough information 20 to lead me to a reasonable answer, in that the amount 21 of material for disposal depends on which of the 22 Aroclors is manufactured. And you must remember that 23 during this period of time, the plant supervision and 24 all were working on procedures for minimizing the 25 creation of further unusable materials, so just basing

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1 it on total pounds produced, in my opinion, is not a
 2 good basis.
 3 Q. (By Mr. Greenberg) Do you know if the SMP
 4 was ever revised to show a lower amount of waste
 5 discharge based upon the production of PCBs other than
 6 what's set forth at page 36?
 7 A. I do not.
 8 Q. In terms of efforts to minimize PCB waste
 9 discharges that you were responsible for, those efforts
 10 began in 1970 when you returned to the Krummrich plant;
 11 correct?
 12 A. When you say I returned to the Krummrich
 13 plant, that's not correct.
 14 Q. Okay. Let's try it again, then. Before
 15 1970, were you responsible for any actions at the
 16 Krummrich plant to minimize waste discharge in the
 17 production of PCBs?
 18 A. I was not.
 19 Q. Do you know of any actions taken by the
 20 Krummrich plant before 1970 to minimize the production
 21 of PCB wastes as part of the production process?
 22 A. I do not know.
 23 Q. At that time, the incinerator for PCB waste
 24 had not been built; correct?
 25 A. That is correct.

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1 Q. And the efforts that you later did in the
 2 '70s to minimize discharges to the sewer had not been
 3 implemented; correct?
 4 A. They were some early steps taken and the
 5 whole process evolved as more knowledge was gained, so
 6 I can't -- I can't say there was no attempt, no success
 7 in reducing.
 8 Q. As you sit here today, you can't tell me what
 9 actions were taken prior to 1970 to reduce PCB
 10 discharges to the sewers; correct?
 11 A. That is correct.
 12 Q. Prior to 1970, do you know what happened to
 13 solid wastes created by the PCB production process?
 14 A. No.
 15 Q. You know they were not incinerated on site;
 16 correct?
 17 A. That is correct.
 18 Q. Do you know of any other way those solid
 19 wastes were disposed of?
 20 A. No.
 21 Q. Okay. Would you agree, sir, that if the
 22 numbers reported on page 36 of the SMP were correct for
 23 the production rate of 28.6 million pounds, greater
 24 amounts of waste would be generated if the production
 25 amount was greater than 28.6 million pounds?

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1 MR. NASSIF: Objection. It calls for
 2 speculation.
 3 A. I don't know, because I don't know how the
 4 person who made the estimate arrived at that number.
 5 Q. (By Mr. Greenberg) But you understand that
 6 the SMP that you're looking at, Exhibit 4, is a
 7 document that was created by Monsanto as a recipe for
 8 the production of Aroclors and PCBs; correct?
 9 A. Correct.
 10 (Papageorge Exhibit Number 8 was marked for
 11 identification.)
 12 A. I have scanned the exhibit.
 13 Q. (By Mr. Greenberg) Thank you. Exhibit 8,
 14 Mr. Papageorge, is a document with a handwritten cover
 15 page with some numbers on it followed by some charts.
 16 It bears a deposition exhibit number of Molloy 20, as
 17 well as Cerro Bates number 009600. Have I identified
 18 the document correctly?
 19 A. You have.
 20 Q. On the cover page is a reference date
 21 9/7/71 by Ron Williams' group. Do you see that?
 22 A. I see it.
 23 Q. Do you recognize the name Ron Williams?
 24 A. No.
 25 Q. Have you ever seen this Exhibit 8 before?

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1 A. I don't remember it.
 2 Q. Okay. As you looked at the exhibit, did it
 3 appear to be a quantification of PCB sales from
 4 Anniston and the Krummrich plant for the years 1960 to
 5 1970?
 6 A. It appears to be, not knowing who put them
 7 together and where the information came from. That's
 8 the extent of my knowledge.
 9 Q. On the cover page for 1969, there is a
 10 reference what appears to be 42 million for the
 11 Krummrich plant. Do you see that?
 12 A. I do.
 13 Q. And that number, 42 million, is consistent
 14 with the number that we saw from Exhibit 7 for the
 15 production at the Krummrich plant in 1969?
 16 A. Yes. It is the same order of magnitude, yes.
 17 Q. Okay. It's hard to read, but there appear to
 18 be some numbers as far as production of PCBs for the
 19 Anniston plant during the years that you were located
 20 at the plant. Do you see that?
 21 A. I do.
 22 Q. Do these numbers appear to be accurate as to
 23 the volume of PCB sales from the Anniston plant on
 24 Exhibit 8?
 25 A. I don't remember them at all.

Page 66 1 Q. And as far as the numbers of volumes for PCB 2 sales from the Krummrich plant, did the numbers set 3 forth from 1960 to 1969 appear to be accurate based 4 upon your knowledge of what was sold from that plant? 5 A. I, again, have no knowledge at all. 6 Q. So other than the 1969 number which tied out 7 with Exhibit 7, you don't know or have any other 8 information as to what was sold as far as PCBs from the 9 Krummrich plant? 10 A. That's right. And that number we just 11 mentioned just confirms a previous number that someone 12 else had put together, so I don't know the validity of 13 any of those numbers. 14 Q. Let me turn to page Bates number Cerro 009615 15 and ask you to look at the names that are on the top of 16 the left-hand column. Do you recognize any of the 17 names that are written at the top of that page? 18 A. I believe I recognize two of them, but one of 19 them is misspelled. 20 Q. Okay. Tell me what names you recognize. 21 A. H.S. Burgen. It should be B-I-R if it is 22 Mr. Birgen, and then D.A. Olson. 23 Q. How do you recognize their names? 24 A. How do I recognize -- 25 Q. Who are these gentlemen?	Page 68 1 assignment I had was one of monitoring, advising, 2 assisting, communicating, as distinguished from 3 specifically saying do this. 4 Q. How about -- let me restate it by saying 5 beginning in 1970, you participated in a program at the 6 Krummrich plant to minimize PCB discharges; correct? 7 A. I did participate, yes. 8 Q. How long did you participate in that program? 9 A. I don't recall the exact timing, but it's 10 between 1973 and '77. 11 Q. Did it begin in 1970? 12 A. Yes. 13 Q. So it would be sometime between 1970 and 14 1976; is that correct? 15 A. Sometime in there, yes. 16 Q. Do you recall what the level of PCB 17 discharges from Department 246 were when the program to 18 minimize discharges was initiated? 19 A. I do not. 20 (Papageorge Exhibit Number 9 was marked for 21 identification.) 22 Q. (By Mr. Greenberg) Let me hand you what's 23 been marked as Exhibit 9, Mr. Papageorge. And it's my 24 yellow highlighting on the document. 25 A. I have scanned the exhibit.
Page 67 1 A. I'm sorry? 2 Q. Did these gentlemen work for Monsanto? 3 A. Yes, they did. 4 Q. In what plant? 5 A. Mr. Birgen was the -- I forget the specific 6 title, but he was the top individual of the group that 7 supervised and sold products like PCBs and they were 8 called functional fluids. 9 Q. Was he posted at Anniston or at -- 10 A. He was in St. Louis general offices. 11 Q. Okay. 12 A. And Mr. Olson was the individual in charge of 13 the marketing activity reporting to Mr. Birgen. 14 Q. Were they employees, to your knowledge, in 15 the early 1970s? 16 A. Yes. 17 Q. You talked earlier about a PCB control 18 program for which you were supervising beginning in 19 1970 to minimize PCB discharges? 20 A. Yes. 21 Q. And that is true, you were responsible or 22 supervising a program to minimize PCB discharges 23 beginning in 1970? 24 A. I hesitate because the word supervise to me 25 implies that I directed every effort made, whereas the	Page 69 1 Q. For the record, Mr. Papageorge, Exhibit 9 to 2 your deposition today is a document dated 3 December 15th, 1970 from W.A. Krull, Technical Services 4 Department, Cerro 014730, with many people identified 5 as recipients; correct? 6 A. Correct. 7 Q. One of the recipients that is identified is 8 you; is that right? 9 A. That is correct. 10 Q. Do you remember ever seeing Exhibit 9 before? 11 A. I don't remember that specific memorandum. 12 Q. Okay. Does it appear to be a document that 13 was generated by Monsanto on or about the date 14 indicated? 15 A. It does. 16 Q. And are the recipients identified on the 17 first page of Exhibit 9 all employees of either -- of 18 Monsanto? 19 A. Yes. 20 Q. At the top, there's a reference to summary 21 and it states as a continuation to the Aroclor 22 pollution reduction program, the losses from 23 Department 246 were measured at the beginning of 1970 24 to be in excess of 300 pounds per day with intermittent 25 large spills of two to four thousand pounds. Do you

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1 see that?

2 A. I do.

3 Q. Were the losses measured to the sewer from

4 Department 246 in excess of 300 pounds per day prior to

5 the initiation of the loss prevention measures that

6 were implemented in the 1970s?

7 A. I can only go, sir, by the wording. I have

8 no way of knowing the accuracy. But the reference here

9 is to the beginning of 1970 and this report is dated

10 December, so that would imply that those losses

11 occurred early enough in the year that they were not

12 yet reflecting what had happened during the year.

13 Q. And those losses were in excess of 300 pounds

14 per day; correct?

15 A. Well, that's the author's estimate.

16 Q. Do you recall in your capacity as overseer

17 for the PCB program that there were losses to the sewer

18 in excess of 300 pounds per day prior to the PCB

19 pollution reduction program being implemented?

20 A. I do not.

21 Q. Do you have any reason to disagree with

22 what's reported in this memorandum that the losses were

23 over 300 pounds per day?

24 A. One can -- you say do I --

25 Q. Do you have a basis for disagreeing that the

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1 losses prior to the -- let me get the question out.

2 Do you have a basis for disagreeing with

3 what's set forth in that document, that the losses to

4 the sewer in early 1970 were in excess of 300 pounds per

5 day?

6 A. I have no basis for agreeing or disagreeing.

7 Q. So you have no basis to disagree with the

8 assertion in Exhibit --

9 A. That's right.

10 Q. -- Number 9? It talks also about large

11 spills of between two and four thousand pounds. Do you

12 see that reference in Exhibit 9?

13 A. I do.

14 Q. Are you familiar with any spills of PCB

15 material to the sewers in amounts between two and four

16 thousand pounds?

17 A. I am not.

18 Q. You don't recall that happening?

19 A. No.

20 Q. Do you recall there being spills of more than

21 4,000 pounds occurring?

22 A. No.

23 (Papageorge Exhibit Number 10 was marked for

24 identification.)

25 A. I have read the exhibit.

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1 Q (By Mr. Greenberg) For the record, Exhibit 10

2 is a memorandum dated November 6th, 1969, Subject,

3 Aroclor loss to sewer from a V. Brawley with Cerro Bates

4 number 010883. Did I accurately describe Exhibit 10?

5 A. You did.

6 Q. There are a number of individuals identified

7 on this document. Do you recognize any of the names?

8 A. Yes.

9 Q. Who do you recognize?

10 A. The addressee, Clarence Buckley, Mr. Bratsch,

11 B-R-A-T-S-C-H, and Mr. Molloy.

12 Q. Okay. And the individuals you just

13 identified were all employees of Monsanto, to your

14 knowledge, in 1969?

15 A. Yes.

16 Q. Does this appear to be a document generated

17 by Monsanto on or about the time indicated?

18 A. It appears to be.

19 Q. And it reports regarding a loss to the sewer

20 of 50,000 pounds. Do you see that?

21 A. I do.

22 Q. Do you have any knowledge of a loss of

23 50,000 pounds to the sewer from some accident occurring

24 in 1969?

25 A. I do not.

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1 Q. Looking at Exhibit 10, do you have any reason

2 to believe that there was not a loss of 50,000 pounds

3 to the sewer as reported in Exhibit 10?

4 A. I have no reason to believe there was or was

5 not. Either way.

6 Q. Well, given that it's a Monsanto document

7 generated on or about the time indicated by individuals

8 you recognize as employees of Monsanto, does that lead

9 you to believe that what is reported is true as opposed

10 to fantasy?

11 MR. NASSIF: Object to the form.

12 A. Well, first of all, sir, the reference to an

13 Aroclor 1142 I find interesting in that I'm not aware

14 of any Aroclor by that number designation, so -- and

15 then when they say approximately 50,000 pounds, again,

16 that's an estimate, so I find it hard to accept the

17 number as shown here.

18 Q. (By Mr. Greenberg) You have no firsthand

19 basis to question whether this occurred; correct?

20 A. No.

21 Q. And as far as the Aroclors 1142 -- you're

22 familiar with Aroclor 1242, aren't you?

23 A. That is correct.

24 Q. Do you think that maybe there was a

25 typographical error between Aroclor 1142 and Aroclor

Page 74 1 1242? 2 MR. NASSIF: Object to the form. 3 A. I have no way of knowing what they meant by 4 1142. Could that have been a crude 1242 before it was 5 refined? I don't know that. This is just a thought 6 that entered my thinking. So I don't know that this is 7 really telling me an awful lot. 8 Q. (By Mr. Greenberg) But in any event, in your 9 experience, you're not aware of a discharge of 50,000 10 pounds of PCBs in an evening from the Krummrich plant? 11 A. I am not. 12 (Papageorge Exhibit Number 11 was marked for 13 identification.) 14 A. I have scanned the exhibit. 15 Q. (By Mr. Greenberg) For the record, Exhibit 16 11, Mr. Papageorge, is a memorandum dated February 21, 17 1974 from E.E. Stewart to Mr. P.E. Heisler bearing 18 Cerro 013748. Did I accurately describe the cover page 19 of Exhibit 11? 20 A. Yes. 21 Q. And it shows, does it not, that you were a 22 recipient of this memorandum? 23 A. It does. 24 Q. Do you recall ever seeing this memorandum 25 before?	Page 76 1 Q. Yes. Well, I'm going to lead you through it. 2 Looking at Exhibit 11, does it appear to report the 3 same volume of production in 1969 as the volume 4 produced in 1969 on Exhibit 7? 5 A. It does appear so. 6 Q. And does Exhibit 11 also indicate a volume of 7 production in 1970 of roughly 50 million pounds as 8 reported on Exhibit 7? 9 A. It does. 10 Q. In 1971, does Exhibit 11 show a production 11 volume of approximately 40 million pounds, as does 12 Exhibit 7? 13 A. It does. 14 Q. In 1972, on Exhibit 7, there's a projected 15 volume of roughly 40 million pounds. 16 A. Yes. 17 Q. On Exhibit 11, does that show an actual 18 production volume of 40 million pounds? 19 A. It does. 20 Q. And then in 1973, is there a production 21 volume shown of approximately 42 million pounds? 22 A. Yes. 23 Q. Now, under Roman numeral IV, there is a 24 discussion of measures taken to control and monitor 25 PCBs; correct?
Page 75 1 A. Not that specific one, no. 2 Q. Do you recall generally receiving a 3 memorandum similar in nature to what's shown on 4 Exhibit 11? 5 A. Yes. 6 Q. Do you have any reason to believe that 7 Exhibit 11 was not received by you at some point in 8 time? 9 A. I have no reason. 10 Q. And this Exhibit 11 is also a document 11 generated by Monsanto on or about the time indicated; 12 correct? 13 A. Yes. 14 Q. And it contains a number of pieces of 15 information regarding the PCB waste reduction program; 16 correct? 17 A. It does. 18 Q. At page 6 of Exhibit 11 is a chart regarding 19 Aroclor production that's identical to the chart we 20 previously looked at in one of the earlier exhibits; 21 correct? Actually, let me withdraw that. 22 I'd like to compare the chart on page 6 of 23 Exhibit 11 to the chart on page 3 of Exhibit 7 that you 24 previously discussed. 25 A. You want me to compare them, sir?	Page 77 1 A. Correct. 2 Q. And is there then a reporting by year from 3 1969 on as to various measures that were taken to 4 control PCB releases to the environment? Correct? 5 A. It appears to be, yes, sir. 6 Q. At the top of the report, there is a 7 statement that efforts to contain, control, and monitor 8 PCBs started in 1969 and continue at present via a 9 dynamic action control program. Do you see that? 10 A. I do. 11 Q. That appears to indicate that there were no 12 measures taken to control PCB discharges to the 13 environment prior to 1969, does it not? 14 A. One could read it that way, sir, but it's the 15 monitoring that is the new activity at that point in 16 time. 17 Q. So you think that this statement, to the 18 extent it's read, that there were no PCB -- efforts to 19 control discharges prior to 1969? That is inaccurate? 20 A. That is true. 21 Q. But you don't recall what actions were taken 22 prior to 1969 to control PCB discharges; correct? 23 A. Correct. 24 Q. Who would I ask to testify as to the measures 25 that were taken prior to 1969 to control PCB

Page 78 1 discharges? 2 A. I'm sorry? 3 Q. Who would you suggest I talk to if I wanted 4 to find out what actions were taken prior to 1969 to 5 control PCB discharges? 6 A. I don't know of any particular individual 7 that one could discuss the subject with at the moment. 8 Q. If we flip over to page 8, there's a 9 reference in 1971 to the installation of the 10 incinerator. Do you see that? 11 A. I do. 12 Q. And that was a development in 1971 to control 13 or minimize PCB discharges, the building and use of an 14 incinerator; correct? 15 A. Correct. 16 Q. Did that incinerator incinerate liquids or 17 solids? 18 A. Both. 19 Q. Were there PCB solid wastes discharges other 20 than by incineration -- strike that. 21 When the incinerator began to be operating, 22 there still continued to be PCB solid waste that was 23 generated but not incinerated; correct? 24 A. I don't know. 25 Q. Do you know -- let me ask it a different way,	Page 80 1 Q. Do you know, how often was that -- first of 2 all, do you know the reference to 510,000 pounds have 3 been landfilled -- do you see that? 4 A. I do. 5 Q. Do you know where those 510,000 pounds were 6 landfilled? 7 A. No, I do not. 8 Q. Do you know, once the incinerator was up and 9 running, how often was it operating? 10 A. 24 hours a day. 11 Q. Seven days a week? 12 A. Seven days a week. 13 Q. Do you know the volume of waste that the 14 incinerator could handle? 15 A. I don't remember it. 16 Q. Do you have any figures that you can share 17 with us as far as how many drums or trailers of what 18 was incinerated? 19 A. No. I just do not remember. 20 Q. But you do know that the incinerator was 21 operated seven days a week on a 24-hour basis? 22 A. Yes, unless repairs were necessary. 23 Q. The material that was incinerated beginning 24 in 1971, where was that material disposed of prior to 25 the incinerator beginning operation?
Page 79 1 then. 2 Is it your understanding that all liquid -- 3 all solid debris containing PCBs was incinerated once 4 the incinerator was up and running? 5 A. That's my understanding. 6 (Papageorge Exhibit Number 12 was marked for 7 identification.) 8 Q. (By Mr. Greenberg) Let me hand you what's 9 been marked Exhibit 12 to your deposition. 10 A. I have read the exhibit. 11 Q. For the record, Exhibit 12 is a one-page 12 document bearing Monsanto 049347. Have you ever seen 13 this document before? 14 A. I don't remember it. 15 Q. Under Item 5, there is a statement for the 16 years 1971 through October 1975 at the W.G. Krummrich 17 plant, Sauget, Illinois. 15,237,000 pounds of PCBs 18 have been burned. 510,000 pounds have been landfilled. 19 Do you see that? 20 A. I do. 21 Q. Do you know if those numbers are accurate? 22 A. I do not. 23 Q. Do you have any reason to disagree with the 24 numbers that are being reported there? 25 A. I have no reasons, no.	Page 81 1 A. I don't know, because much of that came from 2 customers and was sent to the Krummrich plant, 3 stockpiled until the incinerator was functioning. 4 Q. That was the customer return program that was 5 instituted by Monsanto? 6 A. Correct. 7 Q. When was the customer return program started, 8 do you know? Again, round figures would be fine. 9 A. Middle of 1970 is my best recollection. 10 Q. Were the materials returned by the customers 11 all incinerated? 12 A. Yes. 13 Q. None of that material was landfilled, to your 14 knowledge? 15 A. To my knowledge, that is correct. 16 Q. In any event, prior to the customer return -- 17 strike that. 18 Do you know if the customer return program 19 produced more PCB waste than the PCB production 20 processes at Monsanto? That was a bad question. 21 Was the volume of material returned by 22 customers in the '70s greater than the amount of PCBs 23 produced by Monsanto during that period of time? 24 A. I have no numbers to compare. 25 Q. You have no idea?

Page 82 1 A. I have no idea. 2 Q. Okay. Take a look at what I've marked in 3 1972 with the highlighter. 4 A. I have read that sentence. 5 Q. Earlier in the deposition, I asked you about 6 the HCl off-gas. Do you remember that? 7 A. I do. 8 Q. And in your testimony, you were unaware of 9 whether the HCl off-gas contained Aroclors or PCBs. 10 Looking at that, does that refresh your recollection 11 that in fact the HCl off-gas did contain PCBs? 12 A. It does not, because I have an understanding 13 the process was designed to produce HCl that was 14 eventually either sold or used at the plant without any 15 contaminants in it. That's the impression I am left 16 with. 17 Q. What I'm asking you now looking at that 18 document, Exhibit 11, it describes a PCB pollution 19 control measure addressed to the HCl off-gas and 20 reports that it contained PCBs. Do you see that? 21 A. Are you referring to this basin, collecting 22 basin? 23 Q. Actually, no, sir. I was actually looking at 24 the statement regarding the production operation 25 control measure described here and the remedial action	Page 84 1 Q. (By Mr. Greenberg) It's really the issue 2 being reported in -- described in 1972. 3 A. That's what it implies, yes. 4 Q. Let me go ahead and finish this up by asking 5 you to look at page 14. You'll see that there's a 6 description of current known and unknown losses, 7 current meaning 1974 when this memorandum was issued; 8 correct? 9 A. That is correct. 10 Q. Okay. If we go down to number 3, it reports 11 that the HCl off-gas from the Aroclor operations can 12 contain from 15 to 30 pounds per day of PCBs. Do you 13 see that? 14 A. I do. 15 Q. Does that suggest to you that in fact the HCl 16 off-gas did contain PCBs as reported in this document 17 in this location? 18 A. Well, that's what that report implies. 19 Q. Well, not implies. It actually says it, 20 doesn't it? 21 A. It says it, yes. 22 Q. And further down, it reports that 23 intermittent discharges of HCl off-gas to the sewer at 24 the Aroclor department or inadvertently at 25 Department 236 can result in losses to the sewer. Do
Page 83 1 being an HCl off-gas scrubber design was completed to 2 permit a major reduction in PCBs in the scrub gas. Do 3 you see that? 4 A. I do. 5 Q. Okay. Now looking at that, does it appear in 6 1972, according to that memorandum, Monsanto believed 7 that the HCl off-gas contained PCBs and that a scrubber 8 was to be installed to minimize the loss of PCBs? 9 A. That's what the report implies, yes. 10 Q. And do you have any reason to disagree with 11 what's reported in Exhibit 11? 12 A. Only that it's in conflict with my 13 understanding of the process. 14 Q. Do you know if that scrubber was installed as 15 reported in Exhibit 11? 16 A. I don't know. I don't remember. 17 Q. If we flip over to 1973, it reports that the 18 gas scrubber installation was in progress. Do you see 19 that? 20 A. I do. 21 Q. Does that suggest to you that in fact an 22 off-gas scrubber was installed subsequent to the 23 problem being reported in 1972? 24 MR. NASSIF: Object to the form of the 25 question.	Page 85 1 you see that? 2 A. I do. 3 Q. Did that occur at Department 246, that there 4 were losses to the sewer from the HCl off-gas? 5 A. I personally don't know. 6 Q. But you have no reason to disagree with 7 what's reported here? 8 A. Correct. 9 MR. GREENBERG: Why don't we take a two-minute 10 break. I need to find something. 11 MR. NASSIF: Okay. 12 (Off the record at 11:53 a.m.) 13 (On the record at 11:59 a.m.) 14 Q. (By Mr. Greenberg) As part of the PCB 15 control program, did Monsanto monitor the amount of 16 PCBs in its wastewater going to the treatment plant and 17 compare those levels with what was reported at the 18 treatment plant? 19 A. I am assuming you're referring to Sauget 20 Village treatment plant? 21 Q. Correct. 22 A. I'm not aware of that. I don't know. 23 Q. Do you remember there being an investigation 24 conducted in terms of why the PCB levels at the 25 sewer -- at the P-Chem plant or the waste treatment

Page 86 1 plant were higher than what Monsanto was reporting in 2 its wastewater leaving the plant at Krummrich? 3 A. I am not. 4 Q. Do you recall if Monsanto sampled waste 5 streams in 1970 or 1971 from other industries in the 6 Sauget area to determine PCB levels in their 7 wastewater? 8 A. I don't remember that at all. 9 Q. Okay. Do you, sir, remember a meeting with 10 the Environmental Production Agency in Washington that 11 occurred in 1972? 12 A. I had so many meetings in Washington with the 13 EPA, I -- 14 Q. It could have happened, but it doesn't stand 15 out? 16 A. Nothing stands out, no. 17 (Papageorge Exhibit Number 13 was marked for 18 identification.) 19 Q. (By Mr. Greenberg) Let me hand you what's 20 been marked as Exhibit 13 and have you take a look at 21 that. 22 A. I have scanned the exhibit. 23 Q. Okay. Exhibit 13 purports to be minutes of a 24 meeting of April 13, 1972 in EPA offices in Washington, 25 D.C. dated 4/28/1972 bearing Cerro 014694. Did I	Page 88 1 existed at that time. 2 Q. And do you recall what level was being 3 advocated by the EPA at that meeting, or being 4 discussed as far as PCB discharges? 5 A. Yes, I do. 6 Q. What was that level? 7 A. .01 parts per billion. 8 Q. And that was a level that you understood at 9 the time would be difficult for Monsanto to achieve; 10 correct? 11 A. It would be difficult for anyone to analyze 12 with the known instruments and knowledge that existed. 13 Q. Stated another way, at that time, Monsanto 14 was aware that its discharges to the sewer exceeded the 15 .01 parts per billion standard? 16 A. I don't remember that, but -- Monsanto's 17 position wondering if that .01 level was realistic was 18 based on its knowledge of the world wide situation, 19 producers, customers, presence, and so on. 20 MR. NASSIF: Stop for a minute. 21 (A recess was taken.) 22 Q. (By Mr. Greenberg) Before the break, 23 Mr. Papageorge, I was asking you about a meeting with 24 the Environmental Protection Agency that's described in 25 Exhibit 13. Do you recall that?
Page 87 1 accurately identify the document? 2 A. You did. 3 Q. And it shows, sir, that you were present for 4 Monsanto at the EPA offices when this meeting in April 5 occurred. 6 A. Yes. 7 Q. Do you recall a meeting with these people 8 present with the EPA in April of 1972? 9 A. I recall the meeting. I don't remember the 10 exact date. 11 Q. Do you recall what the purpose of the meeting 12 was? 13 A. Yes. 14 Q. And what was the purpose of that meeting? 15 A. EPA was trying to establish an acceptable 16 concentration of PCBs in water samples and they asked 17 Monsanto to participate in discussions, and therefore 18 we responded to their invitation to meet with them. 19 Q. Do you recall there being a discussion of a 20 no tolerance level for discharges of PCB or some other 21 level that was being advocated at the time? 22 A. I recall their basing their concentration 23 level on the ability of fish to accumulate PCB in their 24 tissues, and they were arriving at a concentration that 25 was not being met by the analytical procedures that	Page 89 1 A. I do. 2 Q. At the end of Exhibit 13, there is a four- or 3 five-page statement titled Talk Given to Federal EPA, 4 4/13/72. Do you see that? 5 A. I do. 6 Q. Do you remember Mr. Engman reading that 7 statement that's attached to Exhibit 13 to the 8 Environmental Protection Agency? 9 A. I do not remember that. 10 Q. Okay. Do you recall Mr. Engman being present 11 at that meeting? 12 A. Yes. 13 Q. Do you recall being deposed in 1994 in a 14 lawsuit titled Cerro versus Monsanto? 15 A. Shell, you say? 16 Q. Cerro Copper Products versus Monsanto 17 Company? 18 A. Okay. You're talking about Cerro? 19 Q. Correct. 20 A. Oh, yes. Okay. 21 Q. Do you recall being deposed for two days by a 22 Mr. Ritchie for that case? 23 A. Yes. 24 Q. And in that deposition, you were asked about 25 this document. Do you recall that?

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1 A. No, I don't.

2 Q. On page 320 of that deposition transcript,

3 you were asked:

4 QUESTION: Attached to the minutes is a text

5 of a talk that Mr. Engman gave at the meeting.

6 ANSWER: Yes, it is.

7 QUESTION: Do you recall Mr. Engman giving

8 this talk?

9 ANSWER: Yes.

10 Did he basically just read what was on --

11 ANSWER: Yes.

12 QUESTION: -- this sheet?

13 Do you want to see that portion of your

14 deposition?

15 A. Can you help me find the starting point here?

16 Q. Sure.

17 A. I was reading from page 320.

18 MR. NASSIF: Before you answer, Bill, let me

19 see it after you get through it.

20 Q. (By Mr. Greenberg) Mr. Papageorge, did I

21 accurately read the portion of the transcript of your

22 deposition from the earlier case?

23 A. Help me. You mentioned 320, and I'm looking

24 at 322.

25 Q. I'm sorry. 322 is the correct page

Page 91

1 reference.

2 A. All right. You asked if you read that

3 correctly?

4 Q. Yes.

5 A. You did. Uh-huh.

6 Q. That was your testimony at that time in 1994;

7 correct?

8 A. Obviously.

9 Q. Looking at that testimony, does that refresh

10 your recollection as to whether Mr. Engman essentially

11 read the statement attached to Deposition Exhibit 13 to

12 the Environmental Protection Agency?

13 A. It does.

14 Q. And did he do that?

15 A. Yes.

16 Q. At the end of the statement read by

17 Mr. Engman, there is a question and answer that is

18 presented regarding what are present levels of losses.

19 Do you see that?

20 A. I do.

21 Q. He then identifies some information regarding

22 losses at the plant versus losses at the treatment

23 center -- treatment plant. Do you see that?

24 A. I do.

25 Q. And he then -- he notes that the treatment

Page 92

1 plant is showing higher levels of PCBs than the

2 Krummrich plant is showing in its effluent; is that

3 correct?

4 A. Yes.

5 Q. And then he posits the question why the

6 difference. Do you see that?

7 A. I do.

8 Q. And in his answer, he speaks to the age of

9 the Krummrich plant and leaky sewers at the Krummrich

10 plant. Do you see that?

11 A. I do see it.

12 Q. That's the substance of what he reports as

13 the reason for the difference between the levels

14 reported at the treatment plant and the levels found at

15 the Krummrich plant; correct?

16 A. That is correct.

17 Q. Okay. At no time did Mr. Engman advise the

18 EPA that the differences in the levels found at the

19 treatment plant versus the Krummrich plant were due to

20 other industries in Sauget; correct?

21 MR. NASSIF: In this one -- hang on. You said

22 at no time.

23 Q. (By Mr. Greenberg) In that statement to the

24 EPA --

25 MR. NASSIF: In that statement, okay.

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1 Q. (By Mr. Greenberg) -- does Mr. Engman

2 explain the discrepancy or the difference in levels

3 between what's found at the treatment plant versus

4 what's found at the Krummrich plant in terms of

5 discharges from other industries in Sauget; correct?

6 A. He does not.

7 Q. Do you recall -- I think I asked you this,

8 but let me ask it again. Do you recall that at some

9 point Monsanto investigated wastewater from different

10 industries to try to determine if they were a source of

11 PCB levels reaching the treatment plant?

12 A. I don't recall that extensive of a program

13 being discussed with me.

14 Q. How about any program?

15 A. I remember the one that had to do with

16 washing tank trucks and the introduction of PCBs into

17 some environmental problem.

18 Q. And I may come back to that, but I'm speaking

19 really of sampling discharges from Midwest Rubber,

20 American Zinc, Cerro Copper, Mobil Oil, or the Village

21 to determine if that was a source of PCBs in the

22 wastewater that was reaching the treatment plant. Do

23 you recall that?

24 A. I do not.

25 (Papageorge Exhibit Number 14 was marked for

Page 94 1 identification.) 2 Q. (By Mr. Greenberg) Let me hand you what's 3 been marked as Exhibit Number 17. And why don't -- I'm 4 sorry -- Exhibit 14. I'm primarily going to direct 5 your attention to page 8. 6 A. I have scanned the exhibit. 7 Q. Okay. So let's identify it for the record. 8 Exhibit 14, Mr. Papageorge, is a memorandum dated 9 January 8, 1971 titled PCB Environmental Problem 10 December Status Report bearing Cerro Bates number 11 011584; is that correct? 12 A. That is correct. 13 Q. Were you the author of Exhibit 14? 14 A. Yes. 15 Q. And this was one of the status reports that 16 you issued from time to time as part of the PCB control 17 program; correct? 18 A. Correct. 19 Q. The folks that are identified as recipients 20 of your memorandum are all employees of Monsanto? 21 A. Yes. 22 Q. And you shipped this as far as Brussels and 23 Tokyo; is that right? 24 A. Correct. 25 Q. You created this document at a time when you	Page 96 1 A. Of course I recognize the entities described 2 and I recognize what the report is saying, but I still 3 don't remember a formal program being put together to 4 do just this item. 5 Q. How about remembering any testing of, for 6 example, the American Zinc wastewater to determine if 7 it was contributing PCBs? Do you remember that? 8 A. I really don't. 9 Q. Fine. But judging from this report that you 10 authored, it appears that that in fact was done; is 11 that right? 12 A. Yeah. Somebody reported that to me and I 13 repeated it. 14 Q. And as I understand -- I take it you do not 15 know who took the samples or where the samples were 16 taken that are described on page 8? 17 A. That's true. 18 Q. However, this information was provided to you 19 and you made a judgment, quote, the only significant 20 quantities is PCBs from the Village sewer. Do you see 21 that statement under paragraph 3? 22 A. Yes. 23 Q. Okay. Now, you did not identify American 24 Zinc as having a significant quantity of PCBs to the 25 Village sewer; correct?
Page 95 1 were an employee of Monsanto; is that right? 2 A. That is right. 3 Q. The purpose of this document was to record 4 and memorialize actions that were taken on or about 5 1971 pertaining to the environmental program? 6 A. To record and memorialize? I perceive this 7 as my way of communicating with individuals who were in 8 some way involved with the PCB activities. 9 Q. Okay. And this report describes actions that 10 were taken on or about January 1971 pertaining to the 11 PCB control program? 12 A. Correct. 13 Q. Okay. Let's go ahead and go forward to 14 page 8. 15 A. I'm sorry. Page 3? 16 Q. Page 8 -- 17 A. 8. 18 Q. -- of Exhibit 14. Have you had a chance to 19 look at page 8? 20 A. Yes, I have. 21 Q. Looking at that, does that refresh your 22 recollection that testing was conducted of various 23 industries' wastewaters to try to determine whether 24 they were contributing to the PCB levels found at the 25 treatment plant?	Page 97 1 A. I did not. 2 Q. Is that because the level of 6 parts per 3 billion is essentially a trace finding of parts per 4 billion of PCBs? 5 A. It is. 6 Q. And I take it that if you calculated that a 7 level of 2,110 parts per billion is equivalent of 2 to 8 3 pounds per day -- do you see that there -- 9 A. I do. 10 Q. -- then what is the amount in ounces or 11 pounds that a level of 6 parts per billion would 12 reflect? 13 MR. NASSIF: If you can figure it out. 14 Q. (By Mr. Greenberg) If you can. 15 A. I really can't, because I don't have enough 16 information. I don't have the total volume. All I 17 have is results found in a little sample. 18 Q. These samples, though, were being reported in 19 your 1971 report. Do you see that? 20 A. Yes. 21 Q. Do you know if the American Zinc facility was 22 in operation at the time that sample was purportedly 23 drawn from American Zinc? 24 A. I do not. 25 Q. Do you know if American Zinc authorized

Page 98 1 obtaining that sample from its facility? 2 A. I do not. 3 Q. You don't know what the detection level was 4 for analyzing that sample, do you? 5 A. The detection level? Do you mean the ability 6 to -- 7 Q. Correct. 8 A. Well, at this point in time, Monsanto 9 individuals very active in analysis and evaluating the 10 answers believed that anything less than 10 parts per 11 billion would pose some problems because they were 12 never repeatable. It was difficult to do. And the 13 Monsanto position was that 10 parts per billion is a 14 more reliable level. You could duplicate it. 15 Q. Essentially, that was a reliable cutoff level 16 for purposes of analyzing samples; correct? 17 A. Correct. 18 Q. And then 6 parts per billion, obviously, as 19 shown here would not have been -- satisfied that 20 standard that you just identified? 21 A. That's true. 22 Q. By the way, it's correct, is it not, that the 23 meeting with the EPC that's described in Exhibit 13, 24 particularly the narrative by Mr. Engman, occurred 25 after this report, Exhibit 14, was generated; correct?	Page 100 1 A. Yes. 2 Q. Do you remember who Edward Stewart was? 3 A. Yeah. 4 Q. What was his job in 1972? 5 A. I don't remember the formal title, but he was 6 involved with PCB and environmental issues and reported 7 to a Mr. Leisy who was a superintendent of one of the 8 parts of the Krummrich plant. 9 Q. You're shown as a cc for Exhibit 15; correct? 10 A. Yes. 11 Q. Do you remember receiving this document? 12 A. I don't remember it specifically, no. 13 Q. But did you receive documents of this type as 14 part of the PCB loss control program? 15 A. That is correct. 16 Q. Do you have any reason to believe you did not 17 get this document at some point in time? 18 A. I do not. 19 Q. I want to turn to page 3 of the document -- 20 page 3 noted on the document, which is Cerro 014765. 21 Do you see that, sir? 22 A. I do. 23 Q. Again, there is a discussion of the PCB 24 levels being reported at the treatment plant and 25 comparing the influent and effluent from the treatment
Page 99 1 A. Yes. 2 Q. So at the time Mr. Engman made his statements 3 regarding the differences in levels between the 4 treatment plant and the Krummrich plant as far as PCBs, 5 the information as far as the levels tested for various 6 industries was already in the possession of Monsanto? 7 A. Yes. 8 MR. MURRAY: For the record, Dan Murray for 9 Paul Sauget has rejoined the deposition. Thank you. 10 (Papageorge Exhibit Number 15 was marked for 11 identification.) 12 Q. (By Mr. Greenberg) Let me hand you what's 13 been marked as Exhibit 26. Why don't you go ahead and 14 take a look at it, but I'm only going to be asking you 15 regarding page 3 of the exhibit. 16 MR. NASSIF: It's 15? 17 MR. GREENBERG: 15. 18 A. I have scanned the exhibit. 19 Q. (By Mr. Greenberg) Okay. Let me have it 20 back for a second. Mr. Papageorge, Exhibit 15 for your 21 deposition is a memorandum dated April 6, 1972 bearing 22 Cerro 014761. Did I accurately identify the document? 23 A. You did. 24 Q. Is it your understanding that the author of 25 the document is Edward Stewart?	Page 101 1 plant. Do you see that? 2 A. I do. 3 Q. And there is a statement after the numbers 4 are analyzed, it says it is believed the waste 5 treatment influent represents losses from the plant. 6 Do you understand that refers to the Krummrich 7 plant? 8 A. I believe it does. 9 Q. And the second sentence sort of gives you a 10 better clue where it says, in turn, it is believed that 11 the major source of plant losses is the Aroclor 12 department. Do you see that? 13 A. I do. 14 Q. Again, there's no reference to any other 15 industries in Sauget being the source of PCBs that were 16 reaching the treatment plant in that report; correct? 17 A. That's correct. 18 (Papageorge Exhibit Number 16 was marked for 19 identification.) 20 Q. (By Mr. Greenberg) Let me hand you what's 21 been marked as Exhibit 16. 22 A. I have read the exhibit. 23 Q. And Exhibit 16 is a memorandum from Mr. Smull 24 to J.H. Craddock and it's dated November 28 -- I'm 25 sorry -- November 22, 1985 bearing Cerro 053223. Did I

Page 102 1 identify the document correctly? 2 A. You did. 3 Q. And you're shown as a cc on the document? 4 A. Yes. 5 Q. The document refers to that in 1985, there 6 has been a phase-out of PCB equipment. Do you see 7 that? 8 A. I do. 9 Q. At that time, the Krummrich plant was no 10 longer producing PCBs for sale; is that right? 11 A. That is true. 12 Q. There is a reference here to, quote, the only 13 PCBs on site are those generated incidental to the 14 production of chlorobenzenes. Do you see that? 15 A. I do. 16 Q. Do you understand that PCBs were produced 17 incidental to the production of chlorobenzenes? 18 A. I have difficulty understanding that 19 conclusion. 20 Q. Did you participate in any discussions 21 regarding this memorandum in the 1980s? 22 A. I wasn't involved in any. 23 Q. As you sit here today, do you know one way or 24 the other whether PCBs were produced as part of the 25 chlorobenzene production process?	Page 104 1 Q. Do you know if as part of the loss control 2 program Monsanto attempted to monitor the discharges 3 from the incinerator? 4 A. I do not know. 5 Q. Earlier you mentioned a little bit about 6 hauling of PCBs and the possibility of PCB discharges 7 due to hauling. Did Monsanto use its own trailers to 8 haul PCB product from Krummrich? 9 A. No. I'm not aware of that, no. 10 Q. Do you know what haulers were utilized by 11 Monsanto to haul PCB product? 12 A. I don't remember them today, no. 13 Q. Okay. Do you recall there being an issue as 14 to washing out trailers by one or more of haulers 15 resulting in Monsanto requiring that trailers be washed 16 at its premises as opposed to a third party's premises? 17 A. I recall one incident. 18 Q. Can you tell me what you recall? 19 A. There was a trucking firm that was used to 20 haul PCBs to customers and on occasion this trucking 21 firm had to wash out the tank trailer because a 22 different product was going to be used or was going to 23 be introduced into that tank to be delivered to another 24 customer. And one of the sampling programs found an 25 unusually high PCB concentration in one of the streams
Page 103 1 A. I do not know. 2 Q. Do you know who would? 3 A. No, I don't. 4 Q. We talked a little bit about the incinerator 5 that was up and running in the 1970s to incinerate PCB 6 waste. Was a residue produced by the incinerator? 7 A. Was there a -- I'm sorry? 8 Q. A residue produced by the incinerator? 9 A. No. 10 Q. The incinerator was able to incinerate 11 100 percent of the materials that it was provided? 12 A. Yes. 13 Q. How about air emissions? Were there any air 14 emissions from the incinerator? 15 A. When you say air emissions, any burning 16 process will create gasses, so there had to be the 17 typical carbon dioxides. 18 Q. Do you know if PCBs were released from the 19 incinerator as part of the process for destroying the 20 PCB waste that was burned in the incinerator? 21 A. I have no information that demonstrates that, 22 no. 23 Q. Do you know if the air emissions were ever 24 tested coming from the incinerator? 25 A. I do not know.	Page 105 1 they analyzed which eventually was traced back to this 2 trucking company's facilities and the decision was 3 then -- not decision, but the idea was then proposed 4 that Monsanto take on the washing operation at its 5 sites in the plant which were really designed for 6 railroad tank car washing. And I remember that because 7 I was one that supported that and convinced the 8 management in Monsanto that it was worth the effort and 9 to authorize spending some money for a catch basin, I'm 10 going to call it, that would catch anything that 11 spilled over and not allow it to flow freely. 12 Q. Did this service of washing out -- I take it 13 from your answer, then, that Monsanto began to wash out 14 third party trailers on its premises as a means of 15 controlling PCB discharges? 16 A. Yes. 17 Q. Was that done for one hauler, or was that 18 done for any hauler who was hauling PCBs? 19 A. I'm only aware of one. 20 Q. Was that -- was the washing done at the rift 21 track? Is that what it was referred to? 22 A. Yes. That's what the terminology was. 23 Q. And were there releases to the sewers 24 resulting from the washing of the trailers at the rift 25 track?

Page 106 1 A. Not after the catch basin was put in. 2 Q. But before the catch basin was installed, 3 there was washing of trailers with releases to the 4 sewers; is that right? 5 A. Not at that site. 6 Q. What site was it? 7 A. It was at the trucking firm site. 8 Q. In other words, to your knowledge, the catch 9 basin was installed prior to Monsanto beginning to wash 10 trailers at the rift track? 11 A. That's my understanding, yes. 12 Q. Do you recall as part of the PCB control 13 program that there continued to be some concern of 14 releases of PCB product from washing of trailers 15 reaching the sewers, notwithstanding the catch basin? 16 A. I don't recall any specific discussion on 17 that subject. 18 Q. If there was, it would be in the memorandums 19 that we've looked at regarding the status of the 20 program? 21 A. Yes. We would see a reference to it. 22 Q. Were you participating -- did you participate 23 in the discussion to open a landfill at the Mississippi 24 River to handle wastes generated by either the Queeny 25 or the Krummrich plant?	Page 108 1 Mr. Papageorge, that Exhibit 17 to your deposition is a 2 document dated March 13, 1970 titled W.G. Krummrich 3 Plant Waste Audit and it appears to have been prepared 4 by M. Pierle, P-I-E-R-L-E, with a Cerro Bates number 5 011416? 6 A. That's correct. 7 Q. Do you recognize the names of any people who 8 are identified on the first page of this document? 9 A. I recognize several of them. 10 Q. And the names you recognize, those are all 11 employees of Monsanto; correct? 12 A. Yes. 13 Q. And Mr. Pierle -- am I pronouncing his name 14 right, Pierle? 15 A. Pierle. 16 Q. Mr. Pierle. Was he an employee of Monsanto 17 in 1971? 18 A. Yes. Yes. 19 Q. Does this appear to be a document generated 20 by Monsanto on or about March 1970? 21 A. Yes. 22 Q. It appears to be a record pertaining to sewer 23 discharges; is that right? 24 A. I don't see any reference specifically to 25 sewage, but the reference to water pollution implies
Page 107 1 A. I was not. 2 Q. Do you know if such a landfill was even 3 opened by the Mississippi River? 4 A. I do not. 5 Q. I take it if you didn't participate in that 6 discussion, you were not involved in the calculation of 7 the volume of wastes that were being generated in the 8 1970s at either Queeny or the Krummrich plant? 9 A. Very likely. I don't know what -- what would 10 have been discussed. 11 Q. The volume of wastes that were being 12 generated -- 13 A. The volume and type and frequency and -- 14 Q. Right. Did you participate in any 15 discussions regarding that? 16 A. No. 17 Q. Do you have any information as you sit here 18 today regarding the volumes, frequency, and types of 19 waste that were disposed of at the landfill that was 20 opened by the Mississippi River? 21 A. I don't have any. 22 (Papageorge Exhibit Number 17 was marked for 23 identification.) 24 A. I have scanned the exhibit. 25 Q. (By Mr. Greenberg) Okay. Is it correct,	Page 109 1 that these materials are associated with water. 2 Q. Do you see in the table there's a reference 3 to COD losses? Do you see that? 4 A. Yes. 5 Q. Are you familiar with the term COD losses? 6 A. Yes. 7 Q. What do you understand the term COD losses to 8 mean? 9 A. Chemical oxygen demand. 10 Q. Is that a term that's normally associated 11 with water and wastewater? 12 A. Yes. 13 Q. Does that help inform you that this table 14 refers to quantities or amounts of contaminants 15 discharged to the wastewater at the Krummrich plant? 16 A. Yes. 17 Q. And does this appear to be correct, that this 18 memorandum attempts to categorize and quantify the 19 discharges at the time to the sewer from the Krummrich 20 plant? 21 A. Yes. 22 Q. During the time that you were employed by 23 Monsanto, did you have any contact with the American 24 Zinc Company representatives or its plant site? 25 A. No.

Page 110 1 Q. Do you have any information as to how 2 American Zinc disposed of its wastes during the time 3 that you were an employee at Monsanto? 4 A. I do not. 5 Q. Earlier in your deposition, I asked you 6 during the time that you were at Queeny if you were 7 familiar with the production process of 8 nitrochlorobenzenes, and I think you said yes. 9 A. Yes. That's true. 10 Q. And I asked you regarding still bottoms 11 generated by the nitrobenzene process. Do you recall 12 that? 13 A. I do. 14 Q. And I think you indicated to me that you 15 were -- you were aware that still bottoms were 16 generated, but you had no idea where the still bottoms 17 that were drummed at Queeny were disposed of? 18 A. Correct. 19 Q. And that's your testimony here today? 20 A. Yes. 21 Q. Do you recall being asked about that in your 22 deposition that was taken in 1994 in the Cerro versus 23 Monsanto case? 24 A. No, I don't. 25 Q. Let's read -- I'm representing to you, sir,	Page 112 1 Queeny through the production process for 2 nitrochlorobenzene? 3 A. I don't know that it refreshes it any, it's 4 just that 10 years ago, it was probably still on my 5 mind and today it's not there. 6 Q. I understand. So you think this is probably 7 accurate, your testimony in 1994 -- 8 A. Uh-huh. 9 Q. -- as to what happened to the 10 nitrochlorobenzene still bottoms; right? 11 A. Yes. Yes. 12 Q. Further on you're asked whereabouts in 13 Illinois? 14 ANSWER: Near the Sauget Krummrich plant. 15 Do you see that? 16 A. Let me see this. 17 Q. Sure. 18 A. Yeah. 19 Q. Did I accurately read your testimony? 20 A. Yes, you did. 21 Q. As you sit here today, you believe that that 22 testimony as to where the still bottoms were disposed 23 of was accurate at the time you testified in 1994? 24 A. Yes. 25 Q. So as far as you know sitting here today, the
Page 111 1 that this is page 32 from your deposition. And I would 2 like to go over some of that transcript with you to see 3 if that either is accurate or refreshes your 4 recollection. 5 At the bottom of page 31, the question was 6 asked, were there any waste products or by-product in 7 the manufacture of nitrobenzene that were discharged to 8 the sewers? 9 ANSWER: Not directly. 10 Indirectly? 11 ANSWER: Indirectly through washing the floors 12 down and so on. 13 And we can skip over a little bit and there's 14 then a question regarding still bottoms. 15 QUESTION: How were the still bottoms disposed 16 of? 17 ANSWER: They were drained into steel drums 18 and hauled over to Monsanto's landfill in Illinois. 19 Do you see that testimony, sir? 20 A. I do. 21 Q. Did you provide that answer previously in 22 this deposition -- strike that -- in 1994? 23 A. Yes. 24 Q. Does that refresh your recollection as to 25 what happened to the wastes that were generated at	Page 113 1 still bottoms were disposed of in Sauget near the 2 Krummrich plant? 3 A. No, I would suggest that what I really meant 4 to say there, instead of saying Anniston, I said Sauget 5 and then, wait, Krummrich plant was a better 6 description. It did not refer to the Village or to any 7 system. My answer could be misleading the way I worded 8 it. 9 Q. Well, I mean, I guess maybe you can help me 10 then. The reference to near the Sauget Krummrich 11 plant, were you testifying that the wastes were 12 disposed of near the Krummrich plant in 1994 that were 13 generated at the Queeny plant for the 14 nitrochlorobenzene process? 15 A. I was testifying that it was sent to the 16 Krummrich plant for disposal. I was not aware of the 17 specifics of that disposal. 18 MR. GREENBERG: I have no further questions. 19 MR. NASSIF: One of you guys want to go next? 20 Do you want to go, Rogers? 21 MS. LITTLE: I'll go. 22 MR. NASSIF: Is there anyone on the phone that 23 has a significant amount of questions? Jeff Spector, do 24 you have any questions? 25 MR. SPECTOR: I'm only going to have like 15

Page 114 1 minutes of questions, but I do have to leave at 4 p.m. 2 your time, so if I could fit in sometime before then, 3 then that would be great. 4 MS. LITTLE: I'm not going to take long. 5 MR. NASSIF: Okay. I think you'll go next, 6 then. Why don't we do that, Jeff. And then Dan, do you 7 have any questions? 8 MR. MURRAY: I have some very rudimentary 9 questions I could probably ask you, Joe, but since the 10 deponent is here, I'll ask Mr. Papageorge. 11 MR. NASSIF: Okay. Jeff Sepesi, are you on 12 the line? 13 MR. SEPESI: Yes, I am. 14 MR. NASSIF: Do you have any questions? 15 MR. SEPESI: I don't think so. 16 MR. NASSIF: And there's somebody on the line, 17 I know, sitting in for Chris for Cerro. Do you have any 18 questions? 19 MR. HOPKINS: This is Chris. I'm back now. 20 MR. NASSIF: Okay. Do you have any questions, 21 Chris? 22 MR. HOPKINS: I don't have any questions. 23 MR. NASSIF: What we'll do is we'll do you and 24 then we'll go to the government and then Jon, over to 25 you.	Page 116 1 Q. Okay. Do you know who took the samples? 2 A. No. 3 Q. Did you ever talk to that person? 4 A. No. I just got their written reports or 5 telephone calls. 6 Q. They gave you the information they gathered? 7 A. Yes, what they found in those samples, but 8 not how they took the sample and where and so on. 9 Q. You don't know the sampling points where the 10 samples were taken from? 11 A. That is true. 12 Q. Okay. I want to direct your attention to the 13 very last sentence under paragraph 3 that we've been 14 looking at where it says probable sources, Aroclor 15 trailers washes at the Rogers terminal. Do you see 16 that? 17 A. I do. 18 Q. Can you tell me the basis of that sentence? 19 A. Well, the basis really, it's information that 20 came from the Krummrich plant. Which individual at 21 this point in time, I don't remember. And I don't 22 remember whether it's a telephone call or at some eye 23 to eye contact meeting or a report. But I was made 24 aware of that. 25 Q. It was information provided to you by another
Page 115 1 MR. SANTANGELO: I have very little. 2 MR. NASSIF: Okay. All right. Go ahead. 3 EXAMINATION BY MS. LITTLE: 4 Q. Mr. Papageorge, my name is Vicki Little. I 5 represent Rogers Cartage Company. I've got just a few 6 questions for you today, mostly follow-up on what 7 Mr. Greenberg has already asked you. 8 Let's look again at what's been marked as 9 Exhibit 14 for your deposition. And turn back to page 10 8, if you don't mind. 11 A. I have it. 12 Q. Okay. And look specifically at paragraph 3 13 on that page where you're talking about the sewer 14 samples. 15 A. I see it. 16 Q. Okay. I understood from your previous 17 testimony that you didn't actually participate in 18 taking those samples; is that correct? 19 A. That is correct. 20 Q. Okay. Did you direct the taking of the 21 samples? 22 A. No. 23 Q. Okay. Who did that? 24 A. The plant management, but I don't know which 25 specific individual.	Page 117 1 Monsanto employee; is that correct? 2 A. Correct. 3 Q. Okay. Did you have firsthand knowledge 4 regarding any of the information that had been 5 gathered? 6 A. I don't know what you mean by firsthand. 7 Q. Did you personally observe any of the 8 information gathering or do any investigation on your 9 own? 10 A. No. 11 Q. Okay. I believe that you testified earlier 12 that when some sampling had been done, it was been, 13 quote, traced back to one of the trucking companies. 14 A. Yes. 15 Q. Okay. Is that what you're referring to, the 16 Rogers Cartage information? 17 A. Yes. This fits that description I made. 18 Q. All right. When you said traced back, what 19 exactly did you mean? 20 A. Well, the individual that reported finding 21 this high PCB level -- and I'm trying to think how it 22 was reported to me. But he indicated that the Rogers 23 Cartage people operated in this area. And to them -- 24 to the person, it was obvious that that was the source 25 of the PCBs, where it was located and the amount

Page 118 1 discovered. 2 Q. Okay. Was it a Mr. Savage who reported to 3 you? Do you remember Mr. Savage? 4 A. I remember Mr. Savage, but I just -- today, I 5 just don't recall the individual. That's 20, 30 years 6 ago. 7 Q. I understand that. Do you know what measures 8 that individual took to determine where they believed 9 the source of those PCBs was? 10 A. I do not. 11 Q. Did you ever talk to any Rogers Cartage 12 employees? 13 A. No. 14 Q. Did you ever visit the Rogers Cartage 15 terminal in Sauget? 16 A. No. 17 Q. At any time? 18 A. No. 19 Q. Did you ever observe any of the trailer 20 cleaning processes at Rogers Cartage? 21 A. No. 22 Q. Did you ever talk to anybody at Rogers 23 Cartage about how they cleaned their trailers? 24 A. No. 25 Q. Okay. Did you ever personally observe	Page 120 1 A. No. 2 Q. Do you have any knowledge or information of 3 any other disposal of any materials by Rogers Cartage 4 into Dead Creek? 5 A. No. 6 Q. Do you have any knowledge or information 7 regarding any disposal of any materials whatsoever by 8 Rogers Cartage in the Sauget, Illinois area? 9 A. No. 10 MS. LITTLE: I don't have any other questions. 11 MR. NASSIF: Okay, Vicki. Jeff? 12 (Discussion off the record.) 13 MR. SPECTOR: If you could take out the 14 document with the March 8, 1971 date and the one with 15 the November 5, 1971 date and mark those as exhibits. 16 MR. NASSIF: You just tell me what you want me 17 to go through, Jeff. I'll hand them to her. 18 MR. SPECTOR: Okay. 19 MR. NASSIF: And I'll hand them to the 20 witness. Which one do you want to do first, the March 21 9th document? 22 MR. SPECTOR: Yes. 23 (Papageorge Exhibit Number 18 was marked for 24 identification.) 25 MR. NASSIF: Okay. That's Exhibit 18 and it's
Page 119 1 anybody from Rogers Cartage disposing of any materials 2 into the sewer? 3 A. No. 4 Q. Do you know anyone who did visit the Rogers 5 Cartage terminal? 6 A. I do not. 7 Q. Okay. Do you know anyone who talked to any 8 Rogers Cartage employees about that? 9 A. I can't recall any specific individual, no. 10 Q. Can you generally remember? 11 A. It's an employee at the Krummrich plant who 12 was giving me this kind of information, was 13 communicating with somebody at Rogers. 14 Q. Do you know who that person was communicating 15 with? 16 A. No, I don't. 17 Q. Okay. Do you know when that would have been? 18 A. '70s. 1970s, early. 19 Q. '70 or '71? 20 A. Yeah, early '70s. 21 Q. Was there any written communication between 22 that person and any of the Rogers employees? 23 A. I don't recall seeing any. 24 Q. Okay. Did you ever communicate in writing 25 with anybody from Rogers Cartage?	Page 121 1 Cerro number 011681. It's a memo from Mr. Papageorge to 2 a group of individuals at Monsanto and it's titled PCB 3 Environmental Problem February Status Report. 4 EXAMINATION BY MR. SPECTOR: 5 Q. Mr. Papageorge, my name is Jeff Spector, and 6 I represent the United States in this matter. I just 7 have a few very brief additional questions for you. If 8 you'd look at the documents that's just been marked as 9 Exhibit Number 18 to your deposition. 10 A. I have it. 11 Q. Do you see your name at the top there, sir? 12 A. I do. 13 Q. And is this a document that you authored? 14 A. Yes. 15 Q. And is it a document that you authored in the 16 regular course of your business activities? 17 A. Yes. 18 Q. Okay. If you could turn to page 11, please. 19 A. I have it. 20 Q. Okay. If you'll read the information under 21 letter B or review the information. 22 A. The top B or the bottom B? 23 Q. Thank you. The top B, please. 24 A. All right. I'll read it. I have finished 25 reading it.

1 Q. Okay. Does this appear to be another
2 reference to disposals by Rogers Cartage of PCBs?
3 A. Yes.
4 Q. Okay. Is this the item you were referencing
5 in your testimony earlier when there was an incident of
6 particular high leaks?
7 A. Yes.
8 Q. And based on your earlier testimony, you
9 received this information from another Monsanto
10 employee?
11 A. That is correct.
12 Q. Sitting here today, you don't recall the name
13 of that employee?
14 A. I do not.
15 Q. At the time when you were generating these
16 reports, did you have any concerns about the veracity
17 of the information provided to you by your employees?
18 A. No.
19 Q. So you thought it was trustworthy?
20 A. Yes.
21 Q. And sitting here today, do you have any
22 doubts about the truth of this information as item B on
23 page 11?
24 A. I have no doubts.
25 Q. I'd like you now to look at a document which

1 A. Mr. Savage represented a team of Monsanto
2 employees that followed the manufacturing activities of
3 the group of plants that reported at that time to the
4 Organic Chemicals Division of Monsanto.
5 Q. And what was your business relationship with
6 Mr. Savage?
7 A. I'm sorry?
8 Q. Did he provide you with reports on a regular
9 basis?
10 A. Yes. He started on a monthly basis, that's
11 correct.
12 Q. And he would discuss PCB issues at the
13 Krummrich plant with you?
14 A. Yes.
15 Q. I'd like to -- do you see your name on this
16 document?
17 A. I'm sorry?
18 Q. Do you see your name on this document --
19 A. I do.
20 Q. -- at the top?
21 A. I am the recipient.
22 Q. Okay. And do you recall receiving this
23 document?
24 A. I don't recall this specific document.
25 Q. But you recall receiving monthly reports from

1 will be marked as Exhibit Number 19.
2 MR. SPECTOR: Joe, if you could mark that and
3 give it to the witness.
4 MR. NASSIF: Okay. I'm doing it now.
5 MR. SPECTOR: Thank you.
6 (Papageorge Exhibit Number 19 was marked for
7 identification.)
8 MR. NASSIF: Exhibit Number 19 is a
9 November 5th, 1971 document written by J.K. Savage to
10 W.B. Papageorge having Cerro number 011843. He has it
11 now.
12 Q. (By Mr. Spector) Okay. Mr. Papageorge, if
13 you could just, I guess, briefly skim through the
14 document and I'll ask you just a few questions about
15 it.
16 A. I'll do that. I have finished scanning the
17 document.
18 Q. Okay. I believe you testified a moment ago
19 that you know who J.R. Savage is; is that correct?
20 A. Yes.
21 Q. And did he work for you on the PCB project in
22 the early 1970s?
23 A. No.
24 Q. What was his role on the PCB project during
25 that time, if he had one?

1 Mr. Savage?
2 A. Yes.
3 Q. If you'll look on the first page, I guess
4 it's A-1-A, Aroclor department.
5 A. I see it.
6 Q. Okay. The second paragraph states it was
7 discovered that the underground sewer system and sewer
8 boxes in the area are leaking very badly. Cross flow
9 between the sewer system and the underground water is
10 possible.
11 Do you see that, sir?
12 A. I do.
13 Q. Do you recall investigating whether or not
14 the sewer system was leaking in the early 1970s?
15 A. I don't recall the specifics of
16 investigation. I do recall efforts made to repair
17 those sewers that were found to be faulty.
18 Q. Do you recall whether contents of the sewers
19 were escaping into the ground water during the 1970s?
20 A. No. I don't recall that.
21 Q. Could you look at the next sentence? It says
22 this may contribute to erratic results when trying to
23 find the source of PCBs into the sewer system.
24 A. I haven't found that sentence.
25 MR. NASSIF: Right down there, somewhere in

1 there.

2 Q. (By Mr. Spector) It's in that same paragraph
3 I was directing you to before.

4 A. Oh. I see that sentence, yes.

5 Q. Okay. Sitting here today, can you explain to
6 me what that means?

7 A. You mean the erratic results?

8 Q. Yes. How the leaking sewers would have
9 resulted in erratic results.

10 A. Well, what that meant is that leaks into the
11 sewers were not controlled by any known activity at the
12 plant. They were a function primarily of weather
13 conditions, rainfall and the like, and they would vary.
14 And depending on the amount of water and the pressure
15 it was under would determine the amount that would
16 enter a sewer or the sewer itself would flow in the
17 opposite direction at times. It was a very unstable
18 condition.

19 Q. What do you mean by the statement that the
20 sewer would flow in the opposite direction?

21 A. Water -- ground water could seep into the
22 sewer instead of the sewer leaking into the ground.

23 Q. So the water could go in either direction
24 based on various climate conditions?

25 A. True. That's one condition, yes.

1 Q. You mentioned earlier that you recall there
2 being some sewer repairs.

3 A. Yes.

4 Q. Do you recall whether or not there was any
5 contaminated soil discovered during those repairs?

6 A. I do not know that.

7 Q. During what period do you recall there being
8 sewer repairs? Was that a continuous process?

9 A. I don't know that I'd call it a continuous
10 process, but it was a -- I call it lengthy because we
11 were so anxious to get it done and it seemed to take
12 longer than we expected. In the '70, '71, '72 period.

13 MR. SPECTOR: That's all the questions I have
14 for you, today, Mr. Papageorge. Thank you.

15 THE WITNESS: Thank you.

16 MR. NASSIF: Anybody else on the phone have
17 any questions?

18 MR. MURRAY: Joe, I have a couple of
19 questions. This is Dan Murray. A couple of basic
20 questions.

21 EXAMINATION BY MR. MURRAY:

22 Q. Mr. Papageorge, my name is Daniel Murray. I
23 represent Paul Sauget. And I heard you refer to the
24 plant as the Krummrich plan instead of the Krummrich
25 plant, so I know you're a reliable witness. I'm told

1 it's pronounced with a hard C-H, Krummrich; is that
2 correct.

3 A. That's the way I pronounce it and that's the
4 way I've always heard is pronounced.

5 Q. All right. Let me ask you a couple of other
6 questions. I know there's a road called Monsanto
7 Avenue and there's a -- or at the time you were there,
8 there was a Monsanto facility north of that road and a
9 Monsanto facility south of that road; is that right?

10 A. Yes.

11 Q. Am I right that the Krummrich facility was
12 south of Monsanto Avenue?

13 A. Yes.

14 Q. And was that sometimes called the main plant?

15 A. Yeah. The term main plant was used to
16 describe the older unit.

17 Q. South of Monsanto Avenue?

18 A. Geographically, I am disoriented. I don't
19 know if it was south or --

20 Q. All right. Was there a facility called the
21 north plant?

22 A. The reference to parts of the plant was north
23 plant, yes.

24 Q. That facility known as the north plant was so
25 described because it was north of Monsanto Avenue?

1 A. I never asked that question, so I never did
2 learn. It was just a common expression.

3 Q. In the questioning today, I think the
4 descriptions for the facilities were Krummrich and
5 Queeny.

6 A. Yes.

7 Q. I'm a little behind the curve, and I don't
8 know what the Queeny facility is. Can you tell me
9 where that is geographically in relation to the
10 Krummrich facility?

11 A. The Queeny plant is located on the St. Louis
12 side of the river.

13 Q. All right. So that's over in Missouri?

14 A. Yes.

15 Q. Did I also hear a reference to something
16 called the new Queeny plant?

17 A. Well, I've never heard that expression.

18 Q. Okay. All right. So the Queeny facility is
19 in Missouri, Krummrich is south of Monsanto Avenue in
20 Sauget, so far as you know?

21 A. As far as I know, yes.

22 MR. MURRAY: Nothing further. Thank you.

23 THE WITNESS: Thank you.

24 EXAMINATION BY MR. SANTANGELO:

25 Q. Good afternoon, Mr. Papageorge. My name is

1 Jon Santangelo, and I represent Kerr-McGee Chemical. I
 2 just have a few questions to clarify some things.
 3 Earlier on you were testifying to a tar being
 4 produced in the A-9 department at the Queeny plant. Do
 5 you recall that testimony?
 6 A. Yes.
 7 Q. And I think that plant produced a substance
 8 called phthalic anhydride; is that right?
 9 A. That is right.
 10 Q. Okay. Did you at some point have some sort
 11 of supervisory role over that department in your time
 12 at Queeny?
 13 A. Supervisory?
 14 Q. Or some sort of position that would allow you
 15 some information on the operations of that department.
 16 A. Well, I hesitate because I was one of several
 17 engineers that helped design that unit.
 18 Q. Okay. So in that capacity, then, you were
 19 very familiar with the production process for the
 20 manufacture of phthalic anhydride?
 21 A. The distillation part.
 22 Q. Now, you mentioned that there was a tar that
 23 came off of the -- would that have been through the
 24 distillation column?
 25 A. That is right.

1 Q. What would be contained in that tar?
 2 A. Oh, God. Nobody ever analyzed it. It was
 3 just unsaleable nuisance.
 4 Q. Do you recall what chemical constituents
 5 would be found in that tar?
 6 A. No. It never was analyzed.
 7 Q. Would there have been an SMP for the phthalic
 8 anhydride manufacturing process?
 9 A. Yes.
 10 Q. Would that SMP show what would be coming off
 11 of that distillation column?
 12 A. It would, and it would refer to it not
 13 chemically, but as a descriptive tar or pitch or some
 14 such terminology.
 15 Q. Could you tell me what phthalic anhydride is
 16 chemically? What does it consist of?
 17 A. I don't know how to describe it chemically.
 18 It's a benzene ring with an attachment. It's two
 19 carbons attached to a benzene ring.
 20 Q. What are the raw materials that go into the
 21 production of phthalic anhydride?
 22 A. I don't remember anymore, since I was never
 23 involved with the initial step of the process.
 24 Q. That's fine, sir. Are you being compensated
 25 in any way by Monsanto currently?

1 A. No, no.
 2 Q. I recall from your prior testimony in the
 3 Cerro case that you were on some sort of a retainer
 4 with the law firm. Do you recall that at that time?
 5 A. Yes.
 6 Q. Are you still on that retainer with the law
 7 firm?
 8 A. Yes.
 9 Q. What are you currently being compensated by
 10 that law firm as a retainer?
 11 A. \$1,000 a month.
 12 Q. And is that law firm engaged by Monsanto to
 13 defend it in various cases?
 14 A. I believe so. I don't know the details of
 15 the arrangement.
 16 Q. And so you understand, when I say Monsanto,
 17 I'm referring to Monsanto and Solutia and Pharmacia,
 18 the company that broke up into those parts.
 19 A. Yeah, I understand that. Yes.
 20 Q. Okay. I'm sorry. Your answer was that they
 21 do do work for Monsanto; is that correct?
 22 A. They do.
 23 Q. That law firm?
 24 A. They do work for -- they're involved with
 25 Monsanto and the associated companies.

1 Q. Have you testified to any of the cases that
 2 are ongoing with respect to the Anniston facility?
 3 A. I've had depositions taken.
 4 Q. All right. How many times?
 5 A. Two or three times.
 6 Q. When was the last time you were deposed in
 7 that case -- in those cases?
 8 A. A couple of years ago.
 9 Q. And was the law firm that has you on retainer
 10 defending Monsanto in that case?
 11 A. No. I don't know the legal business as well,
 12 but there's a law firm that sort of orchestrates the
 13 activities and then they hire -- in the Monsanto cases,
 14 a law firm out of the state of Alabama which in this
 15 case is out of Birmingham.
 16 Q. When you last testified, who was the law firm
 17 defending Monsanto?
 18 A. This law firm in Alabama.
 19 Q. What is their name, do you recall?
 20 A. Charles Lightfoot and something.
 21 Q. Did that case involve property damage claims
 22 down in Anniston?
 23 A. Property damage? Those words weren't really
 24 used. They were describing the effect on the value of
 25 their property due to the presence of PCBs in their

Page 134 1 area. 2 Q. Thank you, sir. When you were asked by 3 Mr. Greenberg about the PCB control program and that 4 you began in that program in 1970, was this a new job 5 function to Monsanto Company? 6 A. Yes. 7 Q. There was no one in that role prior to your 8 undertaking that role; is that correct? 9 A. That is correct. 10 MR. SANTANGELO: Let's mark this. 11 (Papageorge Exhibit Number 20 was marked for 12 identification.) 13 MR. NASSIF: Do you have an extra copy for me? 14 Q. (By Mr. Santangelo) Sir, I'll hand you what 15 we've marked as Exhibit 20. To get through this 16 quickly, I'll ask you some questions as we go along. 17 Is that all right? 18 A. Sure. 19 Q. This is a memo that was prepared by you dated 20 October 6th, 1970; is that correct? 21 A. That is correct. 22 Q. And at the bottom, it has a Bates number of 23 CER 011596. Do you see that? 24 A. That is correct. 25 Q. And the document is titled PCB Environmental	Page 136 1 uses these fluids to operate or a heat exchange system 2 that might leak on you. Those kinds of things were 3 kept under observation. 4 Q. And to your understanding, the Krummrich 5 plant used PCBs for heat transfer; is that correct? 6 A. Yes. 7 Q. And for electrical transformers? 8 A. Yes. 9 Q. And in compressor operation as well? 10 A. Yes. 11 Q. And if you would, turn to page number 10, 12 please. I would direct your attention to the middle of 13 the page to where it says Program to Eliminate Sewer 14 PCBs from Using Departments. Do you see that heading? 15 A. Yes. I found it. 16 Q. So at that time, then, you were looking at 17 the issue of leaks of PCBs from other than the Aroclor 18 and PCB production departments; is that right? 19 A. That is correct. 20 Q. And can you tell me where you obtained the 21 information that went into the information on page 10 22 and 11 and the top of page 12? 23 A. What did you ask, where I got it? 24 Q. Where did you gather that information from? 25 A. At this point in time, I don't remember the
Page 135 1 Problem September Status Report. Is that accurate? 2 A. That's accurate. 3 Q. This would have been a document that you 4 would have prepared in conjunction with your position 5 at Monsanto. Is that accurate? 6 A. That is true. 7 Q. Now, with respect to your position, were you 8 also -- you discussed how you were attempting to 9 control PCBs in the sewers, is that accurate, during 10 that time period of 1970? 11 A. Yes. 12 Q. All right. In conjunction with your duties, 13 were you also attempting to control PCB losses from 14 other portions of the facility other than the Aroclor 15 and PCB production processes? 16 A. I hesitate, because I wonder, are you talking 17 about PCB from other processes -- 18 Q. Correct. 19 A. -- or any kind of waste? 20 Q. Well, in particular, PCB waste from other 21 processes. 22 A. PCB waste. In those instances where PCBs 23 were used in a facility like a transformer, you would 24 observe how that transformer is performing and whether 25 it's leaking and so on or it could be a compressor that	Page 137 1 specifics, but it's either from a monthly report 2 authored by a representative out of the Krummrich plant 3 or it's a telephone call or it's something I may have 4 picked up at a meeting which I attended and somebody 5 made a presentation. 6 Q. And there's no reason for you to question the 7 accuracy of the information that you put in your 8 report, is there? 9 A. No. There's no reason that I should question 10 it. 11 Q. If you would, just turn to page 11. I had a 12 question about Department 270, if you see that heading. 13 A. I see it. 14 Q. All right. The second sentence there -- 15 well, the first sentence says a 55-gallon drum has been 16 placed under the vent. 17 Do you know what that would be referring to? 18 A. My memory fails me here. I don't remember 19 the details at all. 20 Q. Is it your understanding, though, that they 21 were experiencing some leaks of fluid containing PCBs 22 in these other departments? 23 A. That's what the statement tells me. 24 Q. Then it also says chat soaked with Aroclor 25 around the furnace must still be replaced. Do you see

1 that?

2 A. Yes.

3 Q. What is chat?

4 A. I don't know what it is physically, but it's
5 a bit like tossing sawdust into an oil spill and
6 apparently somebody had yet to scoop it up and dispose
7 of it properly. It was still in the area of the spill.

8 Q. Was it your understanding, then, that some of
9 this chat would be placed around furnaces and then
10 occasionally scooped up and disposed of?

11 A. Maybe put around a furnace that leaked.

12 Q. Right. And occasionally, then, that would be
13 removed and replaced with new chat?

14 A. Only if another leak occurred.

15 Q. Sure. If you would, turn to page 12 also,
16 please.

17 A. I have it.

18 Q. Okay. There's a heading referring to PCB
19 Levels In Atmosphere. Do you see that?

20 A. I see that.

21 Q. Okay. And underneath that, then, are
22 identified four streams, it looks like, from four
23 losses of PCBs to the atmosphere. Is that accurate?

24 A. Yes.

25 Q. All right. Now, when it says losses to the

1 Q. And that would then mean, then, to your
2 understanding that's an accurate number reflected in
3 that document?

4 A. It's as accurate as a human being can make
5 it, depending on the ability to get an accurate sample
6 and ability to accurately measure.

7 Q. You have no reason to believe that that
8 number of .9 pounds per day is inaccurate in any way,
9 do you?

10 A. No.

11 MR. SANTANGELO: That's all I have. Thank
12 you, sir.

13 THE WITNESS: Thank you.

14 FURTHER EXAMINATION BY MS. LITTLE:

15 Q. I have a couple follow-up.

16 MR. NASSIF: Okay. Vicki has a couple of
17 follow-up, so don't hang up yet unless you don't want to
18 hear Vicki.

19 Q. (By Ms. Little) All right, Mr. Papageorge,
20 I'm going to refer you back to Exhibit 18. If you
21 could look at page 11, please.

22 First of all, let me backtrack just a little
23 bit. You know the sewer samples that we discussed
24 earlier.

25 A. Yes.

1 atmosphere, would those be then vented outside the
2 plant?

3 A. Not necessarily. It could be when you open a
4 manhole and the fumes come out while the employee is
5 taking a sample, that kind of escape from the system.

6 Q. Okay. But there would be some sort of escape
7 into the general atmosphere as identified in these four
8 areas?

9 A. Eventually, yes.

10 Q. The first one talks about a scrubber stack.
11 Do you see that?

12 A. I do.

13 Q. And then it says .9 pounds per day. Do you
14 see that also?

15 A. I do.

16 Q. It also says in the paragraph this is a
17 measured quantity. Do you see that?

18 A. Yes.

19 Q. What does that mean, a measured quantity?

20 A. I can tell you what it means to me. It means
21 that they took a sample, determined how much PCB was in
22 it, and then had a measure of the flow of gas, so many
23 cubic feet a minute and so on, and made a calculation.
24 So this is a calculated nine-tenths of a pound, it's
25 not a weight.

1 Q. Do you know how many samples were taken at
2 each sample point?

3 A. No, I don't.

4 Q. Do you know whether there's documentation
5 that reflects the results of that sampling?

6 A. I haven't seen any personally.

7 Q. You didn't see any as of the time that you
8 wrote the memo, the memo that's Exhibit 17?

9 A. I don't see the documents that list where the
10 sample was taken, when it was taken, how much was
11 taken, and who took it. I don't see that.

12 Q. You have never seen those?

13 A. That is correct.

14 Q. Okay. Do you know whether the person taking
15 the samples documented the results?

16 A. No, I don't know for sure.

17 Q. Would that be in the ordinary course of
18 things?

19 A. Yes.

20 Q. Do you know where documents of that type
21 would have been kept?

22 A. No, I don't.

23 Q. All right. Let's look at page 11 of Exhibit
24 18, paragraph B, the first one --

25 A. I see it.

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1 Q. -- where it says apparently Rogers had dumped
2 a wash the day the sample was taken, 1/26/71.
3 Do you know what the basis of that statement
4 is?
5 A. No, I don't, really.
6 Q. When you say really, do you remember
7 generally what the basis of that statement is?
8 A. No. I only infer by reading an emphasis on
9 the word apparently.
10 Q. You personally never talked to anybody at
11 Rogers about that?
12 A. I did not.
13 Q. Okay. Do you know whether the person who
14 took the samples talked to anybody at Rogers?
15 A. I do not.
16 Q. I'm sorry. You're going to have to wait
17 until I finish so that the court reporter can take down
18 what I say.
19 A. All right.
20 Q. You don't know whether that person talked to
21 anyone at Rogers; is that correct?
22 A. That is correct.
23 Q. And then the last sentence is this probably
24 explains the difference between the plant loss and the
25 treatment plant influent.

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1 And I want you to tell me if -- my
2 understanding of this is that that relates to the sample
3 referred to immediately above; is that correct?
4 A. Yes.
5 Q. Okay. So your -- the determination expressed
6 in this sentence that the difference is explained by
7 that occurrence -- strike that. Let me start all over.
8 Your statement, then, is based on that single
9 sample taken on that single day; is that correct?
10 A. Yes.
11 Q. Okay. And then one more. The last sentence
12 underneath subparagraph B, sediment samples from four
13 of the plant sewers were high.
14 When it says plant sewers there, I assume it
15 means the Krummrich plant; is that correct?
16 A. I don't know.
17 Q. Okay. This is a document you authored;
18 correct?
19 A. Yes.
20 Q. Okay. You don't know what you were referring
21 to when you said plant source?
22 A. Not today.
23 Q. Okay.
24 A. I may have known it 20 years ago.
25 MS. LITTLE: Okay. I don't have any other

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1 questions.
2 MR. NASSIF: We're done. I'm just going to
3 say that we're trying to schedule Art Leisy's
4 deposition. Some of these documents have Mr. Leisy's
5 name on them. Richard Greenberg has asked to depose
6 him. We're trying to decide whether we're going to do
7 that here or do it in Florida. And as soon as Richard
8 and I do make a decision, which should be probably by
9 tomorrow morning, we will broadcast it to the group.
10 Okay?
11 (Deposition concluded at 2:23 p.m.)
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1 CERTIFICATION
2
3 I, Julie Ann Whiting, Certified Shorthand Reporter
4 within and for the State of Missouri, DO HEREBY CERTIFY
5 that pursuant to notice/agreement between the parties,
6 the aforementioned witness came before me at the time
7 and place hereinbefore mentioned, and having been duly
8 sworn to tell the whole truth of his knowledge touching
9 upon the matter in controversy aforesaid; that he was
10 examined on the day, and his examination was taken in
11 shorthand and later reduced to printing; that signature
12 by the witness is not waived and said deposition is
13 herewith forwarded to the taking attorney for filing
14 with the Court.
15 IN WITNESS WHEREOF, I have hereunto subscribed my name
16 this 6th day of August, 2003.
17
18
19
20
21
22
23
24
25

Julie Ann Whiting
Certified Shorthand Reporter

1 STATE OF)

2 CITY OF)

3
4 I, WILLIAM B. PAPAGEORGE, do hereby state that the
5 foregoing statements are true and correct, to the best
6 of my knowledge and belief.

7
8
9
10
11
12
13 Subscribed and sworn to before me this _____ day of
14 _____, 2003.

15
16
17
18
19
20

Notary Public

21
22
23 My Commission expires:
24 (JAW)
25

1
2 August 6, 2003
3 Husch & Eppenger, LLC
4 Mr. Joseph Nassif, Esq.
5 190 Carondelet Plaza, Suite 600
6 St. Louis, Missouri 63105

7 RE: USA vs. PHARMACIA, ET AL.

8 Dear Mr. Nassif:

9 Enclosed please find your copy of the transcript of the
10 deposition testimony of William B. Papageorge taken on
11 July 22, 2003, in the above-captioned matter. I
12 understand you will obtain signature from
13 Mr. Papageorge.

14 After he has reviewed the transcript and made any
15 necessary corrections on the deposition correction sheet
16 incorporated at the end of the transcript, please have
17 Mr. Papageorge sign the original signature page in the
18 presence of a notary public and return the signature
19 page, along with the correction sheets, directly to
20 Mr. Greenberg.

21 If you have any questions regarding this matter, please
22 do not hesitate to contact me at (314) 231-2202.

23 Sincerely,

24 Julie Ann Whiting, CSR, CRR

25 Enclosures

cc: All counsel of record

1 WILLIAM B. PAPAGEORGE
2 DEPOSITION CORRECTION SHEET

3 In Re: USA vs. PHARMACIA, ET AL

4 Reported By: JAW

5 Upon reading the deposition and before subscribing
6 thereto, the deponent indicated the following changes
7 should be made:

8 Page Line Should Read:
Reason assigned for Change:

9
10 Page Line Should Read:
Reason assigned for Change:

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12 Page Line Should Read:
Reason assigned for Change:

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Reason assigned for Change:

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SIGNATURE OF DEPONENT