

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

PENNSYLVANIA DEPARTMENT OF GENERAL: NO. 284 M.D. 1990

SERVICES, PENNSYLVANIA :

DEPARTMENT OF TRANSPORTATION, :

PENNSYLVANIA PUBLIC UTILITY :

COMMISSION, PENNSYLVANIA EMERGENCY:

MANAGEMENT AGENCY, PENNSYLVANIA :

DEPARTMENT OF STATE :

Plaintiffs :

Vs. :

UNITED STATES MINERAL PRODUCTS :

COMPANY, CERTAINTIED CORPORATION, :

COURTAULDS AEROSPACE, INC; :

CHEMREX, INC; PHILIPS ELECTRONICS :

NORTH AMERICA CORPORATION, :

ADVANCE TRANSFORMER COMPANY and :

MONSANTO :

COPY

18 Defendants :

19 ESQUIRE DEPOSITION SERVICES

20 1880 JFK BOULEVARD - 15TH FLOOR

21 PHILADELPHIA, PENNSYLVANIA 19103

22 215 - 988-9191

ESQUIRE DEPOSITION SERVICES

COPY

1                                    Oral Deposition of  
2       Michael A. Pierle, taken pursuant to Notice, held at  
3       the Ritz Carlton Hotel, 100 Carondelet Plaza, St.  
4       Louis, Missouri, on Monday, June 8, 1998, at  
5       10:00 a.m., before John W. Begley, a Registered  
6       Professional Reporter - Notary Public there being  
7       present.

8  
9       APPEARANCES:    HUMPHREY, FARRINGTON & MC CLAIN, P.C.

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WITNESS

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from E.S. Tucker dated 12/11/69

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Memorandum to W. B. Papageorge

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| 4  | Pierle 6 | Document entitled, "Keeping     | 64 |
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1 THE COURT REPORTER: Usual  
2 stipulations?

3 MR. ZIEGLER: That's fine.

4 MR. JUETTNER: That's fine.

5 MR. ROUX: That's fine.

6 MR. GOUTMAN: That's fine, but I  
7 would like the witness to read and sign the  
8 transcript.

9 - - -

10 (It is hereby stipulated by and among  
11 counsel for the respective parties that the  
12 sealing, filing and certification are waived,  
13 and that all objections, except as to the form  
14 of the questions, be reserved until the time of  
15 trial.)

16 - - -

17 Michael A. Pierle, after having first  
18 been duly sworn, was examined and testified as  
19 follows:

20 - - -

21 EXAMINATION

22 - - -

23 BY MR. ZIEGLER:

24 Q. Please state your name and address for the

ESQUIRE DEPOSITION SERVICES

1 record.

2 A. Michael A. Pierle, P I E R L E. My business  
3 address is Solutia, S O L U T I A, Inc., I N C, 10300  
4 Olive Boulevard, 63141, I believe.

5 Q. Is that St. Louis, a St. Louis address?

6 A. Yes.

7 Q. Have you ever had your deposition taken  
8 before?

9 A. Yes.

10 Q. How many times?

11 A. I believe about five.

12 Q. Can you tell me about when the last deposition  
13 was?

14 A. It was about a week ago.

15 Q. The deposition that you had a week ago, was  
16 that done in connection with a Monsanto case or a  
17 case involving Monsanto?

18 A. Yes.

19 Q. All of your prior depositions, were all of  
20 those depositions taken in cases in which Monsanto  
21 Corporation was a party?

22 MR. GOUTMAN: I think it is Monsanto  
23 Company.

24 BY MR. ZIEGLER:

1 Q. Monsanto Company. With that correction --

2 A. I believe that's correct, yes.

3 Q. By the way, my name is Jim Ziegler. I'm with  
4 a law office in Independence, Missouri. We represent  
5 the Commonwealth of Pennsylvania, the plaintiff in  
6 this action.

7 Do you recall the name of the attorney  
8 that took your deposition last week?

9 A. I believe his last name was Barrett.

10 Q. Do you remember what the case name was?

11 A. No, I really don't.

12 Q. And you had counsel for Monsanto with you at  
13 the deposition?

14 A. Yes.

15 Q. Do you remember their names?

16 A. Mike Kelly, Adam Best.

17 Q. How long have you been with Solutia, Inc.?

18 A. Since its start-up in September.

19 Q. September of what year?

20 A. 1997.

21 Q. What does Solutia do?

22 A. It is basically a manufacturer of chemicals  
23 and fibers.

24 Q. What is your position with the company?

1 A. Vice President, Environmental Safety and  
2 Health.

3 Q. How would you describe your responsibilities  
4 as a Vice President of Environmental Safety and  
5 Health?

6 A. To provide technical and professional services  
7 to the business, to allow them to meet both internal  
8 and external requirements, and to provide policy  
9 direction in these related fields.

10 Q. What sort of chemicals are either used or  
11 manufactured by Solutia, Inc., which would require  
12 your expertise?

13 MR. GOUTMAN: Objection to the form of  
14 the question.

15 You may answer.

16 THE WITNESS: We manufacture a large  
17 number of products that range from nylon and  
18 acrylic fibers to a polyvinyl butyral product,  
19 which is a safety inner liner on automobile  
20 windcreens, and we make other chemicals that  
21 go into paint, coatings, agricultural  
22 chemicals. A variety of materials.

23 BY MR. ZIEGLER:

24 Q. Is Solutia a publicly held company?

1 A. Yes.

2 Q. Before you were with Solutia who did you work  
3 for?

4 A. Monsanto.

5 Q. And when did you first start with Monsanto?

6 A. In February of 1966.

7 Q. Were you just getting out of school at that  
8 point in time?

9 A. Yes, I had just graduated from Purdue  
10 University.

11 Q. What was your degree in?

12 A. Civil engineering. Bachelor's degree.

13 Q. Why did you decide to come work for Monsanto  
14 in 1966?

15 A. It was all around the best offer that I had.

16 Q. Are you from St. Louis originally?

17 A. No.

18 Q. Where are you from originally?

19 A. I was raised in Indianapolis.

20 Q. What department of Monsanto did you begin  
21 with?

22 A. I began working with the technical service  
23 department at the William G. Krummrich facility in  
24 Sauget, Illinois.

1 Q. Who was your immediate superior at that  
2 facility?

3 A. At that time I believe when I started it was  
4 Paul Hodges.

5 Q. Did Monsanto manufacture PCBs at the Krummrich  
6 facility?

7 A. They did.

8 Q. Can you tell me what types of PCBs were  
9 manufactured there?

10 A. I don't recall the numbers and types.

11 Q. Can you tell me what your responsibilities  
12 were when you first started with the technical  
13 service department?

14 A. They were basically to do sampling for ambient  
15 sulfur dioxide and then some waste water sampling  
16 throughout the facility in conjunction with limits  
17 that the facility had at that time for discharge into  
18 the Mississippi River.

19 Q. For what compounds are you talking about in  
20 terms of the waste water?

21 A. I believe the work we did there were two; one  
22 was phenol and a chemical oxygen demand was the  
23 second. COD.

24 Q. What processes at the Krummrich facility

1 produced SO 2?

2 A. We were sampling the ambient atmosphere. The  
3 processes there were probably the sulfuric acid plant  
4 and the coal burning power house facility at the  
5 time.

6 Q. Do you remember, in terms of company safety,  
7 what the company, what the company's tolerances were  
8 for sulfur dioxide emissions in the ambient air?

9 MR. GOUTMAN: Are you talking about  
10 within the plant or outside the plant?

11 MR. ZIEGLER: Within the plant.

12 MR. GOUTMAN: Within the work space.

13 MR. ZIEGLER: Yes.

14 THE WITNESS: I was not associated with  
15 the work place monitoring at that time. It  
16 would have been probably covered by OSHA or its  
17 predecessor, so I don't know within the fence  
18 line what the standards were.

19 BY MR. ZIEGLER:

20 Q. You were monitoring outside the facility; is  
21 that correct?

22 A. Yes.

23 Q. Do you know what the odor threshold is for  
24 sulfur dioxide?

1 MR. GOUTMAN: When; now?

2 MR. ZIEGLER: No, just at any time.

3 MR. GOUTMAN: Now or at any time.

4 THE WITNESS: I don't recall.

5 BY MR. ZIEGLER:

6 Q. Three to five ppm, does that ring a bell to  
7 you?

8 A. - I would just be guessing. I don't know what  
9 the limit is now.

10 Q. Were there times when you could smell sulfur  
11 dioxide outside the plant?

12 MR. GOUTMAN: Can you tell me what this  
13 has to do with this litigation? This is not a  
14 sulfur dioxide case.

15 MR. ZIEGLER: I understand that.

16 MR. GOUTMAN: Can you tell me what it  
17 has to do with the litigation?

18 MR. ZIEGLER: It has to do with this  
19 witness and what he was doing at the plant.

20 MR. GOUTMAN: I understand that. This  
21 witness may have been doing all kinds of things  
22 that have no relevance to this litigation,  
23 including sulfur dioxide.

24 MR. ZIEGLER: And it is possible that

1           that's the case, but I have a right to inquire  
2           into that to find out what the relevance might  
3           be.

4                   MR. GOUTMAN: I don't think you have a  
5           right to pursue questions that you can't  
6           articulate the relevance of.

7                   MR. ZIEGLER: As I'm telling you, I'm  
8           asking him questions to discover what he did at  
9           the plant, and this is a discovery deposition  
10          and I have the right to do that.

11                   MR. GOUTMAN: I disagree that you have  
12          such a right.

13                   What was the question? Note my  
14          objection.

15                   (The last question was read back by the  
16          Court Reporter).

17          BY MR. ZIEGLER:

18          Q.       Do you ever recall such a time?

19          A.       There were periods or times when that was  
20          possible.

21          Q.       And do you recall conducting sampling at the  
22          times during which odors could be detected outside  
23          the plant?

24                   MR. GOUTMAN: Objection.

1                   Go ahead.

2                   THE WITNESS: Our system, as I recall,  
3                   was a continuous monitoring system around the  
4                   plant, so it would have been sampling 24 hours  
5                   a day.

6                   BY MR. ZIEGLER:

7                   Q.       During the times when odors could be detected  
8                   outside the plant, do you ever recall sampling for  
9                   any levels that exceeded one ppm in the ambient air  
10                  of SO 2?

11                  A.       I don't recall what the levels were. I mean,  
12                  they were -- part of that sampling mechanism was that  
13                  there were also other sources that impacted the area,  
14                  but I don't recall the -- I don't recall the level.

15                  Q.       You are talking about sources from outside the  
16                  plant?

17                  A.       Yes, other sources. Other coal burning  
18                  utility boilers. Things of that nature.

19                  Q.       And I take it at some point in your employment  
20                  with Monsanto that your responsibilities changed.  
21                  You went on to doing something other than monitoring  
22                  SO 2 levels in the ambient air.

23                  A.       I had -- well, I think I mentioned the water  
24                  sampling and other, general environmental duties at

1 the plant site.

2 Q. And that was in addition to the monitoring for  
3 the SO 2 and the monitoring at the waste water  
4 facility?

5 A. Yes.

6 Q. And you had responsibilities apart from those  
7 items that I just listed; is that correct?

8 A. Well, they were all in the same group. They  
9 were just different types of work, yes.

10 Q. When you first started with Monsanto and  
11 started working at the Krummrich plant, you were  
12 aware that Monsanto manufactured PCBs at that site?

13 A. Probably not.

14 Q. Can you tell me about when you first became  
15 aware of that?

16 A. Well, it would have been some time after I was  
17 in employment, but I don't recall when that would  
18 have been. That was a pretty large facility.

19 Q. Now, at some point you started, included in  
20 your monitoring in the waste water effluent, you  
21 started monitoring for PCBs. Do you recall that?

22 A. We did some work within the department on  
23 measuring and control. I do recall that.

24 Q. You said you did some work on measuring. Can

1       you tell me about that?

2       A.       Well, I don't recall too much. I know we were  
3       doing work on some of the water, the pretty low  
4       volume water streams where we were trying to trap and  
5       remove PCBs. They were basically heavier than water.  
6       We were removing those, and I seem to recall some  
7       sampling of some of the process off gas streams. I  
8       don't remember much of that.

9       Q.       I'm just trying to get a handle on what you  
10      were doing in terms of measuring. Were you part of  
11      the development of methods to measure the PCB levels  
12      in the effluent?

13     A.       No. I mean, I recall sort of hazily some of  
14      that going on, but I don't believe we were doing any  
15      of that at the plant site.

16     Q.       Do you know who was working on those methods  
17      to measure PCB levels in water?

18     A.       I don't recall their names. We had a, you  
19      know, a pretty big research capability sort of in St.  
20      Louis, but I don't recall who the individuals were.

21     Q.       And the work that you are describing now, did  
22      that occur before 1970?

23     A.       It would have. I left the plant somewhere  
24      around August of 1970, so it would have been before

1       that time frame. At least when I was involved.

2       Q.       About a year or two years before? Can you  
3       give me some idea?

4               MR. GOUTMAN: Objection.

5               You may answer.

6               THE WITNESS: Yes. I'm guessing it was  
7       in the 1969 time frame, but I don't recall  
8       specifically.

9               MR. GOUTMAN: Mr. Pierle, I would ask  
10       you not to guess. If you don't know the answer  
11       to the question just say so.

12       BY MR. ZIEGLER:

13       Q.       And so the work that you were doing, were you  
14       developing methods to extract PCBs out of the waste  
15       water? Am I correct in understanding your testimony?

16               MR. GOUTMAN: Objection. Misstates  
17       prior testimony.

18               You may answer.

19               THE WITNESS: What we were doing, as I  
20       remember, was physically, more physically  
21       separating PCBs from the water streams out of  
22       the department; not running an extraction  
23       process.

24       BY MR. ZIEGLER:

1 Q. Wasn't the separation process part of an  
2 extraction process?

3 MR. GOUTMAN: Objection. You are  
4 arguing with the witness.

5 You may answer.

6 THE WITNESS: We may just be talking  
7 about extraction. I tend to think what we were  
8 doing is helping the physical separation of the  
9 materials, so that's the best I can describe  
10 it.

11 BY MR. ZIEGLER:

12 Q. Did you have an awareness of the purpose for  
13 which you were working on this separation process?

14 A. What I recall is there was an effort to try  
15 and reduce losses from the production department, and  
16 I recall some general questions about PCBs in the  
17 environment during that time frame, but what I  
18 remember mainly was just working with a few other  
19 people at the department level on efforts to reduce  
20 PCB waste or PCB losses from the unit.

21 Q. Do you remember who those people were?

22 MR. GOUTMAN: That he worked with?

23 MR. ZIEGLER: At the department level.

24 MR. GOUTMAN: He worked with in this

1 effort to reduce the losses?

2 MR. ZIEGLER: Yes.

3 THE WITNESS: I really don't. I mean, I  
4 know there was a guy in engineering that was  
5 doing some project work, but I do not remember  
6 his name. I don't recall the people in the  
7 department that we were working with either.

8 BY MR. ZIEGLER:

9 Q. When you were doing this work what was your  
10 title with Monsanto, your job title?

11 A. Whatever the title for sort of beginning  
12 engineer was at the plant site. I think it was  
13 Engineer 1.

14 Q. How long did you remain an Engineer 1 with  
15 Monsanto? If you recall.

16 A. I believe that title did not change until I  
17 left the plant site.

18 Q. Okay. When did you leave the plant site?

19 A. It was around August of 1970.

20 Q. And where did you go from there?

21 A. I went to a production facility in Bridgeport,  
22 New Jersey.

23 Q. What did Monsanto make at this facility  
24 generally?

1 MR. GOUTMAN: Objection to the form of  
2 the question.

3 You may answer.

4 THE WITNESS: We made phthalic anhydride  
5 and thalate esters.

6 BY MR. ZIEGLER:

7 Q. Do you know what kind of products those were  
8 used in?

9 A. Well, the phthalic anhydride, as I  
10 recall, pretty much used as an intermediate on site,  
11 and the thalate esters, my recollection is that they  
12 were primarily in the flooring materials or other  
13 plastics.

14 Q. What was your job title at Bridgeport when you  
15 first started in August of 1970?

16 A. I don't recall whether it was Engineer I or II  
17 or Senior Engineer, but I remember that it was -- I  
18 think I got the senior engineer some time shortly  
19 after I moved there.

20 Q. Were there any PCBs used or manufactured at  
21 the Bridgeport facility?

22 A. There were none manufactured. There had been  
23 heat transfer units at the site and they may have  
24 still been in operation in 1970. I'm not certain.

1 Q. How would PCBs or how were PCBs used in the  
2 heat transfer units that you are talking about?

3 A. I'm not an expert on that. They were the heat  
4 transfer fluid. I believe it was heated and then  
5 circulated into various parts of the process and then  
6 returned back to the heater, principally in kind of a  
7 closed loop type of system.

8 Q. Do you remember any measures that were  
9 employed by Monsanto at the Bridgeport facility to  
10 control the release of PCBs into the environment?

11 MR. GOUTMAN: Objection. No  
12 foundation.

13 You may answer if you can.

14 THE WITNESS: What I recall were drip  
15 pans that were sort of preventive collection  
16 devices that were around, say, pump  
17 connections.

18 BY MR. ZIEGLER:

19 Q. Anything else at that facility?

20 A. Not that I recall.

21 Q. How long did you work at the Bridgeport  
22 facility?

23 A. Until July 1974.

24 Q. And where did you go from Bridgeport?

1 A. I actually left Monsanto for one year and went  
2 to work at the Department of Commerce in Washington,  
3 DC.

4 Q. What did you do with the Department of  
5 Commerce?

6 A. I worked in a group that was called, I  
7 believe, the Office of Environmental Affairs, and  
8 we -- it was a small group of about ten people. We  
9 basically participated in the, what was then called,  
10 I think, the government's Quality of Life Review on  
11 new regulations, new federal regulations.

12 Q. Tell me about that job. What did you do while  
13 you were with the Department of Commerce?

14 A. It was primarily technical review of proposed  
15 regulations that agencies were developing, and it was  
16 to comment both on the technical side of that, sort  
17 of the do ability, what was generally known about  
18 certain technologies, and from time to time -- well,  
19 collectively then in that process with other parts of  
20 the Commerce Department to represent the entire  
21 department's viewpoint on a set of regulations.

22 Q. Did PCBs come up during your employment with  
23 the Department of Commerce?

24 A. No, I had a very specific exclusion

1 requirement, as I remember, on the types of things  
2 that I would work on that would not involve any  
3 Monsanto matters or any chemical industry matters.

4 Q. And why was that?

5 A. My view, it was simply a precaution. This  
6 position I had was filled about every year by another  
7 individual from business or industry. It was a  
8 general practice. And I guess I just assumed that  
9 was part of the practice of that contractual  
10 arrangement.

11 Q. So you had, after your employment with the  
12 Department of Commerce, you intended to come back and  
13 work for Monsanto; is that correct?

14 A. That was my desire, but I did not leave with  
15 any contractual obligation on my part or their part  
16 that I would come back to work.

17 Q. Did you receive any compensation from Monsanto  
18 while you were employed with the Department of  
19 Commerce?

20 A. There was, as I recall, I was on a dollar a  
21 year contract, and the purpose of that was basically  
22 to retain my benefits programs, so there was no  
23 compensation or salary but there was retention of  
24 benefits, and I believe I also received a, what was a

1 differential, almost sort of like housing adjustment,  
2 because it was a pretty significant cost of housing  
3 difference between New Jersey and Washington, DC.

4 Q. DC was higher than New Jersey?

5 A. Yes. You bet.

6 Q. And what part of New Jersey were you in again?

7 A. Southern New Jersey.

8 Q. You stayed away, when you were at the  
9 Department of Commerce, you stayed away from issues  
10 dealing with the chemical industry; is that correct?

11 A. That's correct.

12 Q. And then you went back to work for Monsanto  
13 the next year; is that right?

14 A. Yes. I believe I started work again, it was  
15 like August of 1975, in St. Louis.

16 Q. And what offices did you come back to in St.  
17 Louis?

18 A. It was in an environmental group that I don't  
19 recall the specific unit organizational structure,  
20 but it was primarily associated with the organic  
21 chemical businesses.

22 Q. Part of your new job assignment, was part of  
23 that interfacing with departments from the United  
24 States government concerning environmental matters?

1       A.       There was -- some of that was sort of  
2       indirect, but that wasn't the prime focus, the prime  
3       focus of it. To the extent that we interfaced with,  
4       at that time it would have been EPA, it would have  
5       been on, again, just -- it was some general  
6       regulatory development, and other than that it would  
7       have been in the context of specific items at some of  
8       our manufacturing facilities.

9       Q.       Do you recall ever having any communications  
10      with the EPA in the mid '70's regarding PCBs?

11      A.       To the extent that I recall, they would have  
12      been some -- I believe they were permit discussions  
13      associated again with the Krummrich facility, but  
14      this time, as I recall, primarily around the  
15      discharge permit level limits with the federal EPA  
16      from the village waste water treatment system.

17      Q.       Is that the facility's NPDES permit?

18      A.       The facility discharged to a municipal system,  
19      so it did not have an NPDES permit.

20      Q.       I see. Can you tell me how long you were with  
21      this environmental group.

22      A.       Well, I have been basically with the  
23      environment my entire career, so that group -- the group  
24      tended to change as the internal organizational

1 structure changed, so I don't know how to  
2 specifically try to answer your question.

3 Q. I understand. From August of 1975 up until  
4 what; until August or September of last year was your  
5 work in Monsanto focused on environmental matters?

6 A. Yes, I spent my entire career in environmental  
7 and then health and safety matters, you know, up to  
8 the present.

9 Q. And you were talking -- strike that.

10 Part of your responsibilities, when you  
11 went back to work for Monsanto in 1975, had to do  
12 with the effluent -- was it the waste water effluent  
13 from the Krummrich facility; is that correct?

14 A. That was, you know, one of the issues I was  
15 aware of and consulted on.

16 Q. And one of the things that you were trying to  
17 do is reduce the PCBs in the waste water emissions;  
18 is that correct?

19 MR. GOUTMAN: Objection to the form of  
20 the question.

21 You may answer.

22 THE WITNESS: I don't recall  
23 specifically. Most of those discussions were  
24 about, as I recall, and I mean they weren't a

1 large part of what I was dealing with; we were  
2 just dealing with the Sauget Village municipal  
3 plant's discharge permit and at that time  
4 Monsanto's interaction with the regulators and  
5 with the village on that

6 BY MR. ZIEGLER:

7 Q. Did PCBs come up in the context of the  
8 village's discharges?

9 MR. GOUTMAN: Can we get a time frame?

10 MR. ZIEGLER: In or about August of  
11 1975.

12 THE WITNESS: I don't recall the  
13 specific dates; I just recall that there were  
14 discussions, conversations, around PCB limits  
15 with respect to permits and sort of part of the  
16 confusion there, the state was involved, the  
17 federal folks were involved, but there was some  
18 discussion about PCB limits and permits, and I  
19 don't really recall the details.

20 BY MR. ZIEGLER:

21 Q. Was that the first instance since you returned  
22 to Monsanto in August of 1975 in which you recall  
23 PCBs -- strike that.

24 Was that the first instance that you

1 can recall that you had to deal with PCBs since your  
2 return to Monsanto in August of 1975?

3 A. Well, I don't know when it first, again, sort  
4 of came up; I just recall that one of the issues, as  
5 I was getting sort of reassociated with a set of  
6 plants that I had some responsibility over, that was  
7 one of the issues, and it was somewhere back in the  
8 late, mid to late '70's, so I really don't recall  
9 anything much more than that.

10 Q. In terms of your responsibilities after your  
11 return, were you concerned primarily with regulatory  
12 compliance for the Monsanto facilities?

13 A. That was one of the areas, and it was for some  
14 of the facilities and it was primarily in the  
15 environmental side, so I would say that basically it  
16 was air, water, and solid waste areas.

17 Q. Can you tell me on what other occasions you  
18 recall dealing with PCBs after your return to  
19 Monsanto in August of 1975?

20 MR. GOUTMAN: Objection. Vague. What  
21 do you mean by "dealing with PCBs"?

22 MR. ZIEGLER: Just any times when PCBs  
23 came up in the course of your employment.

24 MR. GOUTMAN: Note my objection to form.

1                   You may answer.

2                   THE WITNESS: I don't recall much. I  
3                   mean, there was one additional, sort of  
4                   operational thing we were dealing with  
5                   somewhere in that time frame, and that was the  
6                   shut down of the incinerator that had been  
7                   constructed at that plant site.

8           BY MR. ZIEGLER:

9           Q.       The purpose of the incinerator was to dispose  
10           of PCBs?

11                   MR. GOUTMAN: Objection. Overly broad.

12                   You may answer.

13                   THE WITNESS: As I recall, it was for  
14                   the return, sort of receipt and disposal of  
15                   liquid PCBs.

16           BY MR. ZIEGLER:

17           Q.       And this was in about what year? Was it 1975?  
18           1976?

19           A.       Some time in the mid to late '70's.

20                   MR. GOUTMAN: Are you talking about the  
21                   shutdown of the incinerator? Is that what you  
22                   are talking about?

23                   MR. ZIEGLER: Yes. Specifically.

24                   THE WITNESS: I don't recall the date

1                   that it was specifically shut down.

2           BY MR. ZIEGLER:

3           Q.       Do you remember what the sources of the PCBs  
4           were at that late date?

5                   MR. GOUTMAN:  Objection to the form of  
6           the question.

7                   You may answer.

8                   THE WITNESS:  Well, again, I don't  
9           recall the dates, so I don't know whether it  
10          was a late date or not or what your reference  
11          point is.  My understanding was that those were  
12          primarily customer returns.

13       BY MR. ZIEGLER:

14       Q.       Do you recall what types of PCBs were being  
15       returned?

16       A.       I don't other than they were, as I recall,  
17       primarily liquid materials, if not exclusively liquid  
18       materials, but the form or the source, I wasn't  
19       paying any particular attention to that.

20       Q.       Were they PCBs -- do you recall who some of  
21       the customers were that were returning PCBs?

22       A.       No, I don't.

23       Q.       And you don't recall what the uses of the PCBs  
24       for those customers were?

1 A. No, I don't.

2 Q. Are there any other times after August of 1975  
3 when you can recall that you had to deal with PCBs in  
4 your employment at Monsanto?

5 MR. GOUTMAN: Note my objection to the  
6 vague form of the question.

7 You may answer.

8 THE WITNESS: The issue that I described  
9 with respect to the discharge permit, I don't  
10 know when that ended or stopped or whatever,  
11 but that went on for, it seems to me, a period  
12 of time. I don't recall whether there was  
13 anything else specifically over there or not.  
14 The incinerator, I know, was shut down. That  
15 seemed to constitute most of what we were  
16 dealing with at this site.

17 BY MR. ZIEGLER:

18 Q. With respect to the shut down of the  
19 incinerator, what regulatory authority was overseeing  
20 that?

21 A. You know, I don't really recall who was at the  
22 plant site. Typically on those things the folks at  
23 the plant site would hold the permits, know the  
24 details, and I don't recall us having any particular

1 issues around that operation.

2 Q. Do you recall whether there was any soil  
3 testing done at the incineration site? Specifically  
4 for PCBs.

5 A. I don't recall whether we did or not. I mean,  
6 I recall that was all pretty well constructed on  
7 concrete. I remember being there seeing material,  
8 drums, within concrete areas, but I don't recall  
9 whether there was any sampling associated with that  
10 or not.

11 Q. Was the incinerator dismantled? Do you  
12 recall?

13 A. Yes. Well, it was because I know it's not  
14 there, but I don't --

15 Q. Do you remember where they took it?

16 A. I do not.

17 Q. About what year did this occur in? Can you  
18 tell me?

19 MR. GOUTMAN: Can you read the question  
20 back.

21 (The last question was read back by the  
22 Court Reporter)

23 MR. GOUTMAN: I think the witness has  
24 already said he doesn't recall the date the

1 incinerator was shut down.

2 THE WITNESS: I really don't, you know,  
3 remember when it was. I mean, it was after  
4 1975, but I don't know exactly when that was  
5 accomplished or when it was complete.

6 BY MR. ZIEGLER:

7 Q. Do you know if it was before or after 1980?

8 A. I really don't know the precise date.

9 Q. It wasn't in the 1990's, was it?

10 A. I'm sure it was done by then.

11 Q. Do you remember if you were dealing with a  
12 state or federal regulatory authority in that  
13 connection?

14 A. I don't recall.

15 MR. ZIEGLER: This will be marked as  
16 Pierle 1. (Indicating).

17 (Whereupon the above-referred to  
18 document was marked as Pierle Exhibit 1 for  
19 identification)

20 BY MR. ZIEGLER:

21 Q. Subject change.

22 MR. GOUTMAN: Take your time and read  
23 that.

24 MR. ZIEGLER: Read it.

1 MR. GOUTMAN: And let us know when you  
2 are done.

3 THE WITNESS: I have read it.

4 MR. GOUTMAN: This is Pierle 1.

5 BY MR. ZIEGLER:

6 Q. With respect to Exhibit Pierle 1, apparently  
7 you had instructed Dr. E.S. Tucker to perform some  
8 sort of analysis on W.G.K. sediment samples; is that  
9 correct?

10 MR. GOUTMAN: Objection to the form of  
11 the question.

12 You may answer.

13 THE WITNESS: It looks like that per  
14 this note.

15 BY MR. ZIEGLER:

16 Q. And we are talking about the Krummrich plant.

17 A. Yes.

18 Q. And you were asking him to analyze the  
19 sediment samples for PCBs; is that correct?

20 A. Yes.

21 Q. Can you tell me why Monsanto was interested in  
22 the contaminant levels of sediment samples taken from  
23 the Mississippi River?

24 MR. GOUTMAN: Objection to the form of

1           the question. Do you want to know why this  
2           witness was interested or every employee of  
3           Monsanto?

4                       MR. ZIEGLER: Yes.

5           BY MR. ZIEGLER:

6           Q.       Why were you interested?

7           A.       Well, this was the time frame that we were  
8           doing the sampling in the department that we had  
9           referred to as part of that team activity, and I'm  
10          trying to recall the purpose for the river sediment.  
11          I'm really not clear on it. I mean, obviously we did  
12          it. I don't know what the purpose of it was, or if  
13          it did or did not fit into an overall program.

14          Q.       Do you recall that one of your superiors  
15          instructed you to have those samples taken and  
16          analyzed?

17          A.       I just flat don't recall.

18          Q.       Can you tell me whether the sampling  
19          activities were taken with respect to a study  
20          regarding Aroclors and wildlife?

21                       MR. GOUTMAN: Whether this document was  
22                       part of a study of Aroclors and wildlife?

23                       MR. ZIEGLER: Yes.

24                       THE WITNESS: That is the title of the

1 subject. I mean, I don't recall any wildlife  
2 related activity at the Krummrich plant. In  
3 general, there was a question about Aroclors  
4 and wildlife that, as I had previously  
5 mentioned, I was aware of at that time, which  
6 had been -- part of the reason why we were  
7 proceeding on the determination of PCB  
8 materials in the plant discharge.

9 BY MR. ZIEGLER:

10 Q. So as I understand your testimony, Monsanto  
11 was concerned about PCB contamination of the  
12 Mississippi River from the W.G. Krummrich plant; is  
13 that correct?

14 MR. GOUTMAN: Objection to the form of  
15 the question.

16 THE WITNESS: I think what this  
17 indicates is that we were looking for whether  
18 or not there was presence in some of the  
19 sediments, it looks like both upstream and  
20 downstream of the point where the waste water  
21 from the village would have entered the  
22 Mississippi River.

23 BY MR. ZIEGLER:

24 Q. And do you recall -- where did you direct this

1 information after you obtained it from Dr. Tucker?

2 A. I don't recall. I know, as I said, we were  
3 working within a group of people there at the plant  
4 site and I'm sure it would have gone back into that  
5 group of individuals.

6 Q. You were trying to -- you brought up an  
7 interesting point. Part of the purpose of this  
8 sampling was to compare the Aroclor levels upstream  
9 and downstream from -- was it from the plant that you  
10 were trying to compare those?

11 MR. GOUTMAN: Objection to the form of  
12 the question. He said the samples were taken  
13 both upstream and downstream.

14 THE WITNESS: Of the --

15 BY MR. ZIEGLER:

16 Q. Do you understand my question?

17 A. Not really.

18 Q. The samples were taken upstream and downstream  
19 from the plant; is that correct?

20 A. I think what I said was they were upstream and  
21 downstream of the point where the effluent from the  
22 Village of Sauget entered the Mississippi River,  
23 which would have included the plant's effluent.

24 Q. Your purpose for taking samples upstream and

1 downstream from that point was to compare the PCB  
2 levels; is that correct?

3 MR. GOUTMAN: Objection to the form of  
4 the question.

5 THE WITNESS: I don't recall the  
6 specific purpose. Certainly it was to, at that  
7 point in time, just get some data, background  
8 data.

9 BY MR. ZIEGLER:

10 Q. You wanted to find out what the contribution  
11 to the PCB levels in the Mississippi River from the  
12 village effluent were; is that correct?

13 MR. GOUTMAN: Objection to the form of  
14 the question.

15 You may answer.

16 THE WITNESS: I believe we were just  
17 trying to see if there was any difference or  
18 not.

19 BY MR. ZIEGLER:

20 Q. Do you remember if your group came up with any  
21 conclusions with respect to why the PCB levels were,  
22 in some instances, in order of magnitude higher  
23 downstream than they were upstream?

24 A. I don't recall, you know, how much of this we

1 did or whether we got the conclusions or not or over  
2 what time frame.

3 Q. Who did you relay this information on to?

4 A. I think I said I specifically don't recall who  
5 else at the plant site I would have passed this on  
6 to. My presumption --

7 MR. GOUTMAN: Don't presume. Don't  
8 speculate.

9 BY MR. ZIEGLER:

10 Q. What department would you have sent these on  
11 to?

12 MR. GOUTMAN: He said he didn't know.

13 BY MR. ZIEGLER:

14 Q. This is a different question.

15 I had asked you who you sent them to.  
16 Now my question is what department did you send these  
17 on to.

18 A. I don't know that I sent them to any  
19 department. I think I indicated that they would have  
20 gone into the team or group of people that were  
21 working on this. I don't recall anything beyond  
22 that.

23 Q. And you don't recall what the team's purpose  
24 was for taking these samples.

1 MR. GOUTMAN: Listen, he said that about  
2 five times. That's enough.

3 MR. ZIEGLER: Let's go on to the next  
4 document. This will be marked as Pierle 2.  
5 (Indicating).

6 (Whereupon the above-referred to  
7 document was marked as Pierle Exhibit 2 for  
8 identification).

9 THE WITNESS: I have read the document.

10 BY MR. ZIEGLER:

11 Q. Can you tell me when Mr. Papageorge first  
12 began discussing with you the topic of PCBs and air  
13 pollution?

14 A. I don't recall specifically.

15 Q. Can you tell me why, in preparing this  
16 document -- strike that.

17 Can you tell me what your purpose, what  
18 your specific purpose was in preparing Exhibit Number  
19 2?

20 A. I believe we were trying to understand across  
21 the plant site whether there were losses, and in this  
22 particular note losses to the atmosphere.

23 Q. You are talking about losses of PCBs.

24 A. Yes.

1 Q. Tell me why you characterize PCB losses as  
2 Aroclor air pollution, if you can.

3 A. I -- are you referring to the subject heading  
4 that is circled?

5 Q. Yes.

6 A. I don't recall why we used that title. We  
7 were looking at Aroclor or PCB and we were looking  
8 for potential losses to the air which one would  
9 generally define as air pollution.

10 Q. Is this a specific assignment that Mr.  
11 Papageorge gave to you?

12 A. I don't recall that.

13 Q. Do you recall who gave this assignment to you?

14 A. I do not.

15 Q. Did you physically go around the plant to  
16 attempt to identify all points of potential Aroclor  
17 air emissions?

18 A. I don't recall walking around the plant site  
19 following piping and looking at other systems.

20 Q. Did you conduct sampling during this walk  
21 through inspection?

22 A. I don't believe so.

23 Q. Looking at the second page, how are you able  
24 to identify the points of Aroclor vapor losses

1 without conducting any sort of air sampling?

2 A. Those would have been done from observations  
3 of equipment and/or drawing, and to look at where  
4 things might be possible.

5 Q. Did you have somebody with you that provided  
6 you information during your walk through of the plant  
7 to help come up with this list?

8 And I'm talking about the list on the  
9 second page of the exhibit.

10 A. I don't recall if I did this walk around in  
11 conjunction with anyone else or not.

12 Q. Who from --

13 A. I don't believe any of these estimates were  
14 based on sort of a walk around information.

15 Q. How would you have calculated them?

16 A. They are described as estimated losses and I  
17 believe those probably came from just calculations,  
18 more engineering calculations.

19 Q. Can you tell me what the, for example, under  
20 source number one you have 0.1, and then you have a  
21 number sign and then / day. Can you tell me what  
22 that means, what amount that you have calculated  
23 there as an estimate?

24 A. I think we were using that as a pound sign,

1 0.1 pounds per day.

2 Q. Can you tell me how that calculation would  
3 have occurred?

4 MR. GOUTMAN: Can you tell me what this  
5 has to do with this case, the amount of PCB  
6 loss in the Krummrich plant in 1970?

7 MR. ZIEGLER: Yes.

8 MR. GOUTMAN: What is the relevance to  
9 this case?

10 MR. ZIEGLER: The relevance is how  
11 Monsanto deals with PCBs in its own facilities,  
12 which is highly relevant to the issues in this  
13 case, so if you want to take it up with the  
14 Court I'm happy to talk to the Court about it.

15 MR. GOUTMAN: No, I just wanted to know  
16 where you thought you were going with this.  
17 Thank you.

18 THE WITNESS: What was the question  
19 again?

20 MR. GOUTMAN: How were the calculations  
21 made.

22 BY MR. ZIEGLER:

23 Q. Yes.

24 A. I don't recall on these specifically.

1 Q. You don't recall who provided you the  
2 information that allowed you to make those  
3 calculations; correct?

4 A. I do not. I'm not sure I made the  
5 calculations. Your question sort of implies that.

6 Q. Do you recall, if you could turn over to the  
7 next page, you identified some potential sources of  
8 Aroclor emissions. Can you tell me how you  
9 distinguished the known point sources of emissions  
10 from potential sources of Aroclor emissions?

11 MR. GOUTMAN: Objection to the form of  
12 the question.

13 THE WITNESS: I guess I'm not following  
14 the nuance of your question, between known and  
15 potential. This describes the potential  
16 sources.

17 BY MR. ZIEGLER:

18 Q. Which page?

19 A. The third page.

20 Q. Yes. I'm distinguishing that from the second  
21 page, which I understand that to be known sources of  
22 Aroclor losses.

23 MR. GOUTMAN: That's your  
24 interpretation. You certainly haven't laid a

1 foundation.

2 THE WITNESS: The way I would read this  
3 is that, again, page two is estimates based on  
4 engineering, based on information around the  
5 department, and the following is more referring  
6 back to the walk around that said, you know, if  
7 we are wanting to be sure we have thought about  
8 this, where else are other potential sources,  
9 and that just lists observations from a  
10 potential walk around, from a walk around.

11 BY MR. ZIEGLER:

12 Q. This inspection was done because you were  
13 attempting to lay out a PCB reduction program for  
14 this plant; is that correct?

15 MR. GOUTMAN: Objection to the form of  
16 the question.

17 THE WITNESS: I recall the overall focus  
18 of the work of the team was on Aroclor  
19 reductions, and I think what this document lays  
20 out is the activities or the -- information  
21 probably relatively early on or air pollution,  
22 what we think we might estimate or know about  
23 what is going on in the department, and then  
24 the third page is are there other potential

1 sources from other departments, and if so some  
2 observations about that.

3 BY MR. ZIEGLER:

4 Q. Had Mr. Papageorge determined that air losses  
5 of PCBs were too high at this plant?

6 MR. GOUTMAN: Objection. Do you want  
7 him to read Mr. Papageorge's mind? Objection  
8 to the form of the question. Is that what you  
9 want him to do; read his mind?

10 MR. ZIEGLER: No.

11 MR. GOUTMAN: How would he know what is  
12 in Mr. Papageorge's mind?

13 BY MR. ZIEGLER:

14 Q. You can just answer the question, please.

15 A. I recall the effort was around the  
16 identification, quantification, and the control of  
17 PCB or Aroclor at the plant site.

18 Q. Did he ever express to you that the PCB  
19 levels, the PCB emissions from the plant were too  
20 high?

21 A. I don't recall that terminology being used.

22 Q. Did he ever express to you that there were  
23 obvious problem areas of the plant that needed  
24 immediate attention?

1 MR. GOUTMAN: Objection to the form of  
2 the question.

3 You may answer. If you can.

4 THE WITNESS: I don't recall any  
5 characterization of it other than the  
6 identification and looking for ways to reduce  
7 losses, but I don't recall any characterization  
8 of that.

9 BY MR. ZIEGLER:

10 Q. So I take it that that characterization is  
11 contained in the last sentence of the first page of  
12 the exhibit is your characterization; is that  
13 correct?

14 MR. GOUTMAN: Objection to the form of  
15 the question.

16 You may answer.

17 THE WITNESS: Well, I don't know whether  
18 this is mine or Mr. Krull's or both of ours,  
19 but I think as we were looking for potential  
20 areas, the sort of problem areas or where there  
21 might be potential is what is described in that  
22 last sentence.

23 BY MR. ZIEGLER:

24 Q. What types of PCB emissions were you looking

1 at that you thought needed immediate attention or  
2 what levels? How high were the PCB emissions from  
3 the furnaces in departments 239, 245, 248, and 255  
4 that you thought they needed immediate attention?

5 MR. GOUTMAN: Objection to the form of  
6 the question.

7 You may answer.

8 THE WITNESS: The way I read this and  
9 what I recall is this is more a theoretical  
10 kind of discussion. Are there any? Where  
11 might they be? Let's go out and sort of do the  
12 inventory, so the natural place one would have  
13 looked at the outset were, and I think it  
14 refers to these furnaces or heat transfer  
15 systems that were in place in these  
16 departments.

17 BY MR. ZIEGLER:

18 Q. What kind of attention did you give to the  
19 heat transfer systems?

20 MR. GOUTMAN: Objection to the form of  
21 the question.

22 You may answer.

23 THE WITNESS: I mean, I don't know other  
24 than what's described here. I think I have

1 indicated to you that this was about the time  
2 that I was leaving the plant site, almost  
3 within the week of leaving the plant site. I  
4 do recall doing the walk through and not much  
5 more than that.

6 MR. ZIEGLER: This will be Exhibit 3.  
7 (Indicating).

8 (Whereupon the above-referred to  
9 document was marked as Pierle Exhibit 3 for  
10 identification)

11 BY MR. ZIEGLER:

12 Q. I have handed to you Exhibit Number 3. If you  
13 could take a look at it, please, and then identify it  
14 for me.

15 A. I have read it.

16 MR. GOUTMAN: He wants you to identify  
17 it.

18 BY MR. ZIEGLER:

19 Q. Yes. And this is a document that you wrote.

20 A. It is entitled, "Sampling Program for Aroclor  
21 Losses" dated April 5, 1970 from myself to a  
22 Mr. Engman.

23 Q. Who is Mr. Engman?

24 A. Mr. Engman is, as I recall, was an individual

1       that -- I forget exactly what department he was in  
2       that may have been given sort of this team  
3       assignment. I don't recall. I know him well. I do  
4       not know him in the context of this particular memo,  
5       other than I remember him being involved.

6       Q.       He was part of the same team you were; is that  
7       right?

8       A.       I believe so.

9       Q.       How long did Mr. Engman work for Monsanto at  
10      Krummrich?

11      A.       I don't know specifically. Quite a while.

12      Q.       Did he work there as of the time that you --  
13      strike that.

14                    Tell me, this is part of the same  
15      program of sampling for Aroclor losses that we saw in  
16      Exhibit Number 2; is that correct?

17      A.       It appears to be.

18      Q.       Can you tell me who developed this sampling  
19      program? Did you?

20      A.       Well, obviously I wrote it down, and I  
21      remember being a party to it. I don't know that I  
22      was the only one involved in the development of the  
23      program.

24      Q.       One of your interests was PCB levels in fish;

1 is that correct?

2 A. It looks like it from this note.

3 Q. Can you tell me how that sampling would have  
4 been done.

5 A. I don't recall doing any fishing. I don't  
6 recall.

7 Q. If you could look at the second page for me,  
8 you make a statement, and I'm just not sure what that  
9 statement means. You state, "If a balance is not  
10 obtained between 246 and the treatment plant within  
11 two weeks of daily sampling, the program will be  
12 expanded to determine other sources."

13 Could you tell me what that statement  
14 means?

15 A. I believe what we were attempting to do, by  
16 sampling at the production department, to see if we  
17 could reproduce the levels, that level of discharge  
18 by measuring it again at the treatment plant and to  
19 see if basically they were the same number or in  
20 balance. What this describes, if they were not, and  
21 that would have presumed, then, that they would have  
22 been higher at the treatment plant, that we would  
23 have looked for other potential sources.

24 Q. Was one of your purposes for taking samples

1 from the waste water, the river sediment, and the  
2 fish, to determine how much of the PCBs that were  
3 contained with the effluent that went into the river  
4 actually made it into the food chain?

5 MR. GOUTMAN: Objection to the form of  
6 the question.

7 You may answer.

8 THE WITNESS: I think the design of this  
9 was simply to find out if we were losing it  
10 from the plant site, at what level and then  
11 where was it if it left the waste treatment  
12 plant or actually before were there levels in  
13 the river, and I think the additional  
14 discussion was, Well, what about fish? Because  
15 fish had been raised as an issue in the general  
16 literature, so I think this was around, just in  
17 general environmental sampling, in the sediment  
18 and fish, and in the waste water it was more  
19 particular to attempts to do quantification.

20 BY MR. ZIEGLER:

21 Q. Do you recall whether there were any  
22 discussions within your environmental group regarding  
23 human exposures from eating fish in the Mississippi  
24 River?

1 A. I don't recall any.

2 MR. ZIEGLER: This will be Exhibit 4.

3 (Indicating).

4 (Whereupon the above-referred to  
5 document was marked as Pierle Exhibit 4 for  
6 identification)

7 BY MR. ZIEGLER:

8 Q. I'm handing you what has been marked as  
9 Exhibit Number 4. Could you read it, please, and  
10 tell me if you have ever seen this document.

11 A. What part do you want me to read? The  
12 heading --

13 Q. Actually, if I have any questions for you at  
14 all, they will be from the first three paragraphs.

15 A. You didn't mean read it out loud; you just  
16 meant to read the document.

17 Q. Yes, read it to yourself.

18 MR. GOUTMAN: Read the entire document.

19 THE WITNESS: I have read the document.

20 I don't recall ever seeing this before.

21 BY MR. ZIEGLER:

22 Q. Do you recall whether, in your group, whether  
23 there was any discussion regarding the chronic  
24 toxicity of PCBs to fish?

1 A. No, I think what I indicated I recall was the  
2 general literature and discussion about wildlife and  
3 the eggs and the reproduction issue, but I don't  
4 recall any specific conversations that were anymore  
5 particular than that.

6 Q. The issue regarding the eggs and reproduction,  
7 this was something that you knew about in August of  
8 1970; is that correct?

9 A. Yes, I believe there was a fair amount of  
10 general information available at that point in time.

11 Q. Do you know if there was any discussion within  
12 Monsanto or did you participate in any discussions  
13 within Monsanto regarding the withdrawal of PCBs from  
14 the market?

15 A. No, I really wasn't involved in anything  
16 beyond the plant work that we have described.

17 Q. Do you recall any discussion to the effect  
18 that PCBs contributed to environmental pollution?

19 MR. GOUTMAN: At what time are we  
20 talking about?

21 MR. ZIEGLER: Up until August of 1970.

22 THE WITNESS: Again, in the context of  
23 what I have described here about the general  
24 discussion about soft egg shells and what is

1 causing that. That was what, to me, that was  
2 the discussion around PCBs or DDT or other  
3 things were about at the time.

4 BY MR. ZIEGLER:

5 Q. Do you recall any discussion within Monsanto  
6 in which you participated in which the view was  
7 expressed that any benefits derived from PCB use are  
8 out-weighed by the resulting environmental  
9 contamination?

10 A. No, I don't.

11 Q. Do you know whether that was the basis for  
12 Monsanto's decision to withdrawal from the PCB  
13 market?

14 A. I don't know. I wasn't involved in that  
15 decision.

16 MR. ZIEGLER: This will be Exhibit 5.  
17 (Indicating).

18 (Whereupon the above-referred to  
19 document was marked as Pierle Exhibit 5 for  
20 identification).

21 THE WITNESS: I have read the document.

22 BY MR. ZIEGLER:

23 Q. We are up to Exhibit 5 now. Could you  
24 identify Exhibit 5. You are the author; correct?

1 A. Yes.

2 Q. And the subject of this particular document is  
3 what?

4 A. "PCB System ChangeOvers.

5 Q. And you were writing to Mr. Papageorge; is  
6 that correct?

7 A. That's correct.

8 Q. Tell me what your involvement was in the PCB  
9 system changeovers, if you could, please, at or about  
10 July of 1972.

11 A. I believe it was more one of observation and  
12 seeing that the changeovers were accomplished. I was  
13 not involved in the physical work, itself.

14 Q. You were observing in a supervisory role; is  
15 that correct?

16 A. I don't believe so. I was the plant  
17 environmental engineer, senior engineer, at that  
18 time, as I mentioned earlier, and as such would not  
19 have been involved in the overseeing of this work, in  
20 terms of directing it or getting it done, but simply  
21 observing and watching what was going on.

22 Q. Tell me what the company's policy change  
23 regarding the use of PCBs and heat transfer system  
24 was before the PCB system change over occurred.

1 MR. GOUTMAN: Can you read back the  
2 question.

3 (The last question was read back by the  
4 Court Reporter)

5 MR. GOUTMAN: Are you talking about at  
6 the Delaware River plant?

7 MR. ZIEGLER: Yes.

8 MR. GOUTMAN: Do you understand that  
9 question?

10 THE WITNESS: Yes.

11 There was, in general, a change with  
12 respect to open systems use, which this memo  
13 seems to imply has happened before this time,  
14 and we were simply at a plant site that was  
15 using heat transfer systems, conducting a  
16 changeover of those systems. I don't recall  
17 seeing a specific written policy or document.

18 BY MR. ZIEGLER:

19 Q. Tell me, if you don't recall seeing a written  
20 document, who created the policy regarding PCB use in  
21 open heat transfer systems.

22 A. I don't know.

23 Q. Can you tell me what the system changeovers  
24 were that were being contemplated in this document?

1 A. What this describes is a replacement of the  
2 fluid.

3 Q. Do you know if HB40 has any PCBs in it?

4 A. I don't know that. I don't believe so.

5 Q. So essentially in your open heat transfer  
6 systems Monsanto was contemplating a change from PCB  
7 fluids to non PCB containing fluids?

8 A. I believe so.

9 Q. And that was for the purpose of reducing or  
10 eliminating PCB emissions from those systems?

11 MR. GOUTMAN: Objection to the form of  
12 the question. No foundation. He said he  
13 didn't make the policy.

14 Go ahead. You can answer if you can.

15 THE WITNESS: I don't know what the  
16 purpose was. The effect at the plant site here  
17 was that you were basically taking the PCB  
18 liquids out and putting a non PCB liquid in.

19 BY MR. ZIEGLER:

20 Q. And as I understand your testimony, you don't  
21 know whether that was for the purpose of eliminating  
22 PCB emissions or not; is that right?

23 A. Well, I don't know that there were any  
24 emissions and I don't know what drove that reference

1 to company policy. That's what I interpreted your  
2 question to be.

3 Q. Do you know whether this 30 to 40 ppb range of  
4 PCBs was what prompted the changeover of the use of  
5 fluids in the open heat transfer systems?

6 A. I don't believe so.

7 Q. You don't believe that that's what prompted  
8 it? -

9 MR. GOUTMAN: He just said that. You  
10 are not going to ask questions five times in  
11 hopes of getting a different answer at some  
12 point. He said he did not think so. If you  
13 didn't hear it we can read it back.

14 Don't answer the question.

15 MR. ZIEGLER: Thank you for the  
16 clarification.

17 BY MR. ZIEGLER:

18 Q. Why did you put this sentence in this memo  
19 regarding the effluent levels being in the 30 to 40  
20 ppb range for PCBs?

21 A. I don't specifically remember.

22 Q. Sitting here today and reading this  
23 memorandum, can you tell me what purpose this  
24 particular sentence has within the context of this

1 memorandum?

2 MR. GOUTMAN: He just said he doesn't  
3 know. He just said it.

4 MR. ZIEGLER: No, wait. He didn't. He  
5 said he didn't remember why he didn't put it in  
6 there.

7 MR. GOUTMAN: Right. Isn't that the  
8 same question?

9 MR. ZIEGLER: No, it's not.

10 MR. GOUTMAN: Why he put it in there  
11 versus the purpose of being in there? What's  
12 the distinction? You just asked the same  
13 question twice.

14 MR. ZIEGLER: No, I didn't.

15 THE WITNESS: I'm confused, I guess. Go  
16 ahead and ask me again.

17 BY MR. ZIEGLER:

18 Q. You don't understand.

19 A. I'm confused by the conversation and the  
20 question, so ask me the question again.

21 Q. I'm just trying to figure out what this  
22 sentence means in the context of the memorandum.  
23 That's all.

24 A. I don't know.

1 MR. GOUTMAN: Let's take a five minute  
2 break.

3 MR. ZIEGLER: Let me show you what we  
4 will have marked as Exhibit 6. (Indicating).

5 (Whereupon the above-referred to  
6 document was marked as Pierle Exhibit 6 for  
7 identification)

8 BY MR. ZIEGLER:

9 Q. If you could take a look at Exhibit Number 6,  
10 please. Look at it.

11 A. I will just peruse this document, if that's  
12 okay.

13 Q. That's okay for right now.

14 A. I have looked at the document generally.

15 Q. Is this a document that your group helped  
16 prepare regarding keeping PCBs out of the  
17 environment?

18 A. I have not seen this document before.

19 Q. Do you know who put together this document?

20 A. I do not. It was prepared at a time that I  
21 wasn't at the plant site, more than two years after I  
22 had left.

23 Q. Can you tell me, do you know if Monsanto ever  
24 implemented a policy in which it began to manufacture

1 more biodegradable polychlorinated biphenyls?

2 A. You know, my recollection is that there was an  
3 effort to develop lower chlorinated products. I  
4 don't recall the timing, nor the specific products.

5 Q. Do you recall that the purpose of that was to  
6 try to manufacture PCBs that were more biodegradable  
7 than the higher chlorinated types of PCBs?

8 A. That was one of the attributes. I don't know  
9 if that was the purpose of what they were trying to  
10 do.

11 Q. Did you have any responsibility with respect  
12 to the development of sophisticated systems of  
13 effluent monitoring at Monsanto?

14 A. I think we have described my involvement back  
15 at the plant site. That's my only recollection of  
16 being involved in sampling methods.

17 Q. If you could take a look at page 47695, these  
18 questions are directed toward your activities at this  
19 plant before August of 1970.

20 Are you on page 47695?

21 A. Yes.

22 Q. Under, "Steps to Eliminate Losses of PCBs"?

23 A. Yes.

24 Q. Under the first bullet regarding, "Installing

1 settling basins and directing all flow to these  
2 basins by improved paving, curbing and sloping", did  
3 you have any activity in this involvement at the  
4 plant?

5 A. I recall some of that being designed. I don't  
6 recall when it was complete.

7 Q. What about under the next bullet point  
8 regarding the, "Re-routing of the rupture disc lines  
9 and atmospheric vents through catch tanks"? Can you  
10 tell me what catch tanks are in this context?

11 A. In this context they are describing routing  
12 vents into larger tanks that would actually catch any  
13 materials if it came out of those lines. That's sort  
14 of the connotation of it.

15 Q. Was the purpose of these catch tanks to  
16 eliminate any escape of PCBs from the disk lines or  
17 the vents?

18 MR. GOUTMAN: Objection. You haven't  
19 established that this witness had any personal  
20 involvement with this.

21 BY MR. ZIEGLER:

22 Q. Did you have any personal involvement with  
23 this project?

24 A. None that I recall.

1 Q. All right. What about putting the nitrogen  
2 blankets on top of the tanks?

3 A. No, I don't recall anything on that.

4 Q. The installation of the mist eliminators, did  
5 you have any --

6 A. No, I don't recall any.

7 Q. Do you recall when Monsanto began to move the  
8 sewers above grade at this plant?

9 A. No, I do not.

10 Q. Very quickly, if you could turn over to page  
11 47698, toward the top of the page there's four bullet  
12 points. Do you see those?

13 A. Yes.

14 Q. And would you agree that PCB measurements can  
15 be changed dramatically, depending on any one of  
16 these four topics listed beside the bullet point?

17 MR. GOUTMAN: For monitoring effluent  
18 streams for PCBs? Is that what you are  
19 referring to?

20 MR. ZIEGLER: Yes.

21 BY MR. ZIEGLER:

22 Q. I'm not trying to change the context.

23 A. Yes, I think these were all factors in the  
24 sampling effectiveness.

1 Q. Were these issues that you had to deal with  
2 before or up to August of 1970 in monitoring the  
3 effluent?

4 A. Yes, I believe so.

5 Q. Let's move on to the next exhibit. This will  
6 be Exhibit 7. (Indicating).

7 (Whereupon the above-referred to  
8 document was marked as Pierle Exhibit 7 for  
9 identification)

10 BY MR. ZIEGLER:

11 Q. Ready?

12 A. I have read Exhibit 7.

13 Q. You authored Exhibit 7 on or about September  
14 2, 1976; is that correct?

15 A. That's correct.

16 Q. And this is a letter to Howard Zar of the EPA;  
17 is that correct?

18 A. That's correct.

19 Q. And tell me what your purpose was in writing  
20 to Mr. Zar.

21 A. I sort of recall that the federal EPA at this  
22 time had sent us a request for information and what  
23 this was was an attempt to respond to that letter.

24 Q. Is it true that Monsanto made certain

1 commitments to the EPA regarding its PCB air  
2 emissions?

3 MR. GOUTMAN: Objection to the form of  
4 the question.

5 BY MR. ZIEGLER:

6 Q. I'm looking at the second page, last line.

7 A. The, "I trust" line?

8 Q. - Yes. Can you tell me what Monsanto's  
9 commitments to the EPA were that prompted the making  
10 of this letter?

11 A. I think the way I read this is that the  
12 information we provided fulfills the commitments made  
13 by Monsanto with respect to past PCB discussions. I  
14 don't recall whether that was just a commitment to  
15 respond or what. I don't know what the specific  
16 commitment is; it just says past discussions.

17 Q. All right. Let's move on.

18 Do you recall in 1976 representing to  
19 the EPA that Monsanto's PCB operation in -- how do  
20 you pronounce it; Sauget?

21 A. Sauget.

22 Q. Illinois had PCB emissions of less than one  
23 pound per day?

24 A. Did I just read that in that prior?

1 (Indicating) .

2 MR. GOUTMAN: He's asking you whether  
3 you recall that now.

4 BY MR. ZIEGLER:

5 Q. Yes.

6 A. My reference is that it seems to me there was  
7 a reference to that note to that or one of the other  
8 documents. I don't recall it independent of the  
9 conversations that we are now having.

10 MR. ZIEGLER: This will be Pierle  
11 Exhibit 8. (Indicating)

12 (Whereupon the above-referred to  
13 document was marked as Pierle Exhibit 8 for  
14 identification)

15 BY MR. ZIEGLER:

16 Q. Have you had a chance to look at Exhibit  
17 Number 8?

18 A. Yes.

19 Q. This Exhibit Number 8 is a letter from you to  
20 Mr. Roy Harsch dated December 6, 1976; is that  
21 correct?

22 A. Yes, it is.

23 Q. And you are attaching certain PCB effluent  
24 data; is that correct? Relating to the Krummrich

1 plant.

2 A. And the Village of Sauget waste water  
3 treatment plant.

4 Q. If you could turn over to the pages that  
5 follow this, can you tell me, from this information,  
6 is it possible to calculate the total daily emissions  
7 from either the Krummrich plant or the Sauget waste  
8 treatment plant?

9 When I say "the amount", I'm thinking  
10 can we calculate pounds per day from this data?

11 A. You should be able to.

12 Q. How would I go about doing that?

13 A. Well, in each case the pounds per day is a  
14 product of the concentration, times the flow, times  
15 some factor that adjusts for units. Conversion  
16 units.

17 Q. You would have to convert from gallons to  
18 liters so that you could --

19 A. You would have to get them all on either  
20 metric units or all on English units, and then there  
21 has to be conversion to then get to pounds and then  
22 pounds per day.

23 Q. I see. So essentially, if I wanted to figure  
24 out the pounds per day, I can convert gallons per

1 minute to liters per minute, and then calculate how  
2 many milligrams per minute would be released, and  
3 then from that calculate an average for the entire  
4 day, and then convert it back to pounds if I wanted  
5 to; right?

6 A. As long as those samples were taken over a  
7 daily period of time or something, yes. And I don't  
8 know what the description of the samples, themselves,  
9 are.

10 MR. ZIEGLER: This will be Exhibit 9.

11 (Indicating)

12 (Whereupon the above-referred to  
13 document was marked as Pierle Exhibit 9 for  
14 identification)

15 BY MR. ZIEGLER:

16 Q. I'm showing you what has been marked as  
17 Exhibit Number 9. My question is simply did you  
18 submit Exhibit Number 8 in response to Mr. Zar's  
19 letter, which has been marked as Exhibit Number 9?

20 A. Could you repeat the question or read it back?

21 Q. The question is simply your transmittal, which  
22 is contained in Exhibit Number 8, is that in response  
23 to Mr. Zar's letter, which is Exhibit Number 9?

24 A. These appear to be a sequence of

1       communications:  The September second letter  
2       transmitting data, the November letter from EPA  
3       requesting additional information, and then the  
4       submission of the supplemental data in the December  
5       six memorandum.

6                       MR. GOUTMAN:  Are you done with that  
7                       one?

8       BY MR. ZIEGLER:

9       Q.       Is that your answer?

10      A.       Yes.

11      Q.       Just some final questions.

12                    Do you recall any discussions that you  
13      had with anybody at Monsanto at any time before 1975  
14      regarding the policing of uses of PCB containing  
15      products for the purpose of preventing environmental  
16      contamination?

17      A.       I don't recall.

18      Q.       Do you recall any conversations within  
19      Monsanto regarding the prolongation of the  
20      manufacture, sale, and use of Aroclors?

21      A.       No.

22      Q.       We talked about egg shells earlier.  Do you  
23      recall any discussions concerning the toxicity of  
24      PCBs towards certain species to be high?

1 A. I don't recall specific concentrations about  
2 levels and outcomes and that, no.

3 Q. Did you have any involvement with the animal  
4 studies that Monsanto was conducting?

5 A. No.

6 Q. Were you aware that they were occurring?

7 A. No.

8 Q. Did you ever learn of any of the results of  
9 the animal studies?

10 MR. GOUTMAN: Other than in  
11 communications with counsel?

12 MR. ZIEGLER: Well, I don't want you to  
13 tell me about your communications with  
14 Mr. Goutman.

15 MR. GOUTMAN: Or other Monsanto counsel.

16 MR. ZIEGLER: Or other Monsanto counsel.

17 THE WITNESS: No.

18 BY MR. ZIEGLER:

19 Q. Did you ever look into the question of whether  
20 the prevalence of PCBs in the environment was of  
21 natural origin?

22 A. I don't recall doing that.

23 Q. Do you recall that subject ever being  
24 discussed within your environmental groups?

1 A. I do not.

2 Q. Do you ever recall any discussion within your  
3 environmental group that Monsanto was, in view of the  
4 moral considerations, should notify all Aroclor  
5 customers of the environmental contamination problem?

6 A. No.

7 Q. Do you recall any discussion within your  
8 environmental group that Monsanto should consult with  
9 appropriate federal agencies to inform them of  
10 Monsanto's research and PCB control efforts?

11 A. Could you restate the front part of your  
12 question?

13 Q. My question is really not regarding the  
14 consultations or the communications, themselves, but  
15 whether you were involved in any sort of decision  
16 within Monsanto that Monsanto should be consulting  
17 the appropriate federal agencies in Washington to  
18 inform them of Monsanto's research and control  
19 efforts.

20 A. No.

21 Q. Was part of your job from 1975 onward to, in  
22 whole or in part, to contact universities and  
23 laboratories in connection with PCB environmental  
24 contamination?

1 A. No.

2 Q. Do you have any recollection of, in terms of  
3 effluent standards, what PCB levels you were trying  
4 to achieve?

5 MR. GOUTMAN: When?

6 MR. ZIEGLER: After 1975.

7 MR. GOUTMAN: In what medium?

8 MR. ZIEGLER: Meaning --

9 MR. GOUTMAN: Water run off? Is that  
10 what you are talking about?

11 MR. ZIEGLER: Actually, I'm thinking  
12 about the Sauget plant.

13 THE WITNESS: I don't recall the level.

14 BY MR. ZIEGLER:

15 Q. Was part of your job determining the release  
16 of Aroclors from burning or partial incineration of  
17 waste containing Aroclors?

18 A. No.

19 Q. Did you ever deal with Aroclor vapor losses in  
20 connection with plasticizer applications?

21 MR. GOUTMAN: Objection. Overly broad.  
22 What does that mean? You mean the  
23 manufacturing process?

24 MR. ZIEGLER: Really, in any connection

1 in terms of plasticizer applications.

2 BY MR. ZIEGLER:

3 Q. Did you ever study or look into or provide  
4 anybody information regarding PCB vapor losses from  
5 those types of products?

6 MR. GOUTMAN: You mean the finished  
7 product?

8 MR. ZIEGLER: Yes.

9 THE WITNESS: I don't recall ever having  
10 done that.

11 BY MR. ZIEGLER:

12 Q. Do you recall ever discussing the issue of PCB  
13 pollution and caulking compounds and sealants while  
14 you worked at Monsanto?

15 MR. JUETTNER: Objection to the form of  
16 the question.

17 THE WITNESS: No.

18 MR. ZIEGLER: No further questions.

19 Thank you for your time, sir.

20 MR. ROUX: I have no questions.

21 - - -

22 BY MR. JUETTNER:

23 Q. Mr. Pierle, my name is John Juettner and my  
24 law firm respects a co-defendant, ChemRex, in this

1 case. I have just a few follow-up questions.

2 Mr. Pierle, you testified that you were  
3 involved with an environmental group when you were  
4 working in St. Louis starting in approximately 1975.

5 A. Within Monsanto Company?

6 Q. That's correct.

7 A. Yes.

8 Q. - Do you recall who the members of that group  
9 were at that time?

10 A. I believe it was Des Hosmer, Paul Hodges, Mort  
11 Mullins, and Garth Fort.

12 Q. And with regard to the group's involvement in  
13 examining PCB emissions, are those the individuals  
14 that have, that took part in the evaluation of PCB  
15 emissions?

16 A. We each had different areas of assignments and  
17 we tend to not get into one another's different  
18 issues, so it would be wrong to characterize that  
19 that group was all involved in the PCBs issues. That  
20 was not the practice of that group.

21 Q. Whatever the practice of that group was, was  
22 it focused on the emissions of PCBs from that  
23 particular manufacturing plant or manufacturing  
24 plants of Monsanto?

1       A.       No, the focus of that group was basically any  
2       matters and issues with respect to the environment at  
3       all of the plant sites within those divisions.

4       Q.       With regard to your job responsibilities  
5       through the course of your career at Monsanto, were  
6       you involved at all in the marketing of PCBs to  
7       Monsanto customers?

8       A.       No.

9       Q.       Were you involved at all in recommending or  
10      evaluating uses of PCBs in products manufactured by  
11      Monsanto customers?

12      A.       No.

13      Q.       Have you ever heard of Sonneborn Building  
14      Products?

15      A.       No, I have not.

16      Q.       Do you know anything about PCBs being used as  
17      an ingredient in any type of caulk or sealant?

18      A.       No, I do not.

19      Q.       Do you know anything about PCBs migrating from  
20      a PCB containing product to a non PCB containing  
21      product?

22                   MR. GOUTMAN:  Objection.  Overly broad.

23                   You can answer if you can.

24                   THE WITNESS:  No, I don't.

1 MR. JUETTNER: That's all I have.

2 MR. GOUTMAN: Let's take a 60 second  
3 break here.

4 (Deposition recessed) .

5 MR. GOUTMAN: No questions.

6 (Witness excused.)

7 (Deposition concluded at 12:45 p.m.)

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C E R T I F I C A T E

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I, JOHN W. BEGLEY, a Registered

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Professional Reporter and Notary of the State of

7

Pennsylvania, do hereby certify that I reported the

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deposition of Michael A. Pierle in the foregoing

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matter; that the foregoing is a true and correct

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transcript of the stenographic notes of testimony

11

taken by me.

12

I FURTHER CERTIFY that I am not an

13

attorney or counsel of any of the parties; nor a

14

relative or employee to any attorney or counsel

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connected with the action, nor am I in any way

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interested in the result of said case.

17

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JOHN W. BEGLEY

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20

DATE:

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\*NOTE: The certification appended hereto does not

22

apply to any reproduction of same unless under the

23

direct control and/or supervision of the certifying

24

court reporter.

ESQUIRE DEPOSITION SERVICES

## 1 INSTRUCTIONS TO THE WITNESS

2 Read your deposition over carefully. It is  
3 your right to read your deposition and make any  
4 changes in form or substance. You should assign a  
5 reason in the appropriate column on the errata  
6 sheet for any change made.

7 After making any change in form or  
8 substance which has been noted on the following  
9 errata sheet along with the reason for any  
10 change, sign your name on the errata sheet and  
11 date it.

12 Then sign your deposition at the end of  
13 your testimony in the space provided. You are  
14 signing it subject to the changes you have made in  
15 the errata sheet, which will be attached to the  
16 deposition before filing. You must sign it in  
17 front of a witness. Have the witness sign in the  
18 space provided. The witness need not be a notary  
19 public. Any competent adult may witness your  
20 signature.

21 Return the original errata sheet & transcript  
22 to the deposing attorney, (attorney asking questions)  
23 promptly! Court rules require filing within 30 days  
24 after you receive the deposition. Thank you.

## ERRATA SHEET

|    | PAGE | LINE # | CHANGE                        | REASON THEREFOR |
|----|------|--------|-------------------------------|-----------------|
| 1  |      |        |                               |                 |
| 2  |      |        |                               |                 |
| 3  | 23   | 5      | "thalate" to "phthalate"      | Spelling        |
| 4  | 23   | 11     | "thalate" to "phthalate"      | Spelling        |
| 5  | 44   | 18     | "don't" recall to "do" recall | Transcription   |
| 6  |      |        |                               |                 |
| 7  |      |        |                               |                 |
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## SIGNATURE PAGE

OF

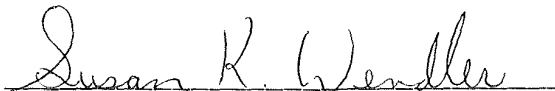
MICHAEL A. PIERLE

I hereby acknowledge that I have  
read the foregoing deposition and that the same is  
a true and correct transcription of the answers  
given by me to the questions propounded, except for  
the changes, if any, noted on the attached errata  
sheet.

SIGNATURE:



WITNESSED BY:



DATE:



|    |                |       |
|----|----------------|-------|
| 1  | LAWYER'S NOTES |       |
| 2  | PAGE           | LINE  |
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