

IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF INDIANA
INDIANAPOLIS DIVISION

THE CITY OF BLOOMINGTON, INDIANA;)
THE UTILITIES SERVICE BOARD OF)
BLOOMINGTON, INDIANA; and MONROE)
COUNTY, INDIANA,)

Plaintiffs,)

vs.)

Civ No.
IP 83-9-C

WESTINGHOUSE ELECTRIC CORPORATION,)
a Pennsylvania corporation; and)
MONSANTO COMPANY, a Delaware)
corporation,)

-----Defendants.-----)

The continued deposition of W. B. PAPAGEORGE,
called for examination by the Plaintiffs, pursuant
to notice and pursuant to the provisions of the
Federal Rules of Civil Procedure of the United
States District Courts, pertaining to the taking
of depositions for the purpose of discovery, taken
before Arnold N. Goldstine, a Notary Public and
Certified Shorthand Reporter within and for the
County of Cook and State of Illinois, at Three
First National Plaza, Chicago, Illinois, on
October 16, 1986, at the hour of 8:30 o'clock a.m.

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APPEARANCES:

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-and-

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appeared on behalf of the
Plaintiffs;

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appeared on behalf of Defendant
Monsanto Company.

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I N D E X

WITNESS:

W. B. PAPAGEORGE

Direct Examination

By Mr. Mc Connell	601
By Mr. Karaganis	632
By Mr. Mc Connell	701 - 747

E X H I B I T S

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1 MR. MC CONNELL: Back on the record.

2 Let the record show this is once again
3 the continuation of the deposition of Mr.
4 Papageorge.

5 WILLIAM B. PAPAGEORGE,
6 having been previously duly sworn,
7 was examined and testified as follows:

8 DIRECT EXAMINATION (Continued)

9 BY MR. MC CONNELL:

10 Q. Mr. Papageorge, I am going to show you a
11 one-page memo that has been marked as Exhibit 290
12 which is dated September 22, 1971 from K.
13 Mastalski to Moreno Keplinger, subject J 9884,
14 Monsanto Aroclor, 5432 final report, which appears
15 to me to be an animal study involving the product
16 5432, which I guess as we discussed before is not
17 a pcb product; is that correct?

18 (The document above-referred to
19 was marked Bloomington Deposition
20 Exhibit No. 290 for identification.)

21 A. That is correct.

22 Q. Okay.

23 Exhibit 291 is a one-page report dated
24 September 29, 1971, unsigned, subject IBT number B

1 7298, Monsanto.

2 I will ask you if you recall ever having
3 seen that document?

4 (The document above-referred to
5 was marked Bloomington Deposition
6 Exhibit No. 291 for identification.)

7 A. No. This is the first time I have seen
8 this.

9 Q. While you read that, let me see the
10 number on the bottom. It occurs to me that there
11 may be a second page, 8267. While you are reading
12 it, I am going to go look.

13 (Discussion had off the record.)

14 It appears that there may be in fact two
15 more pages, so let's withdraw this for the time
16 being because I can't find 68 or 69. I think they
17 will be page 2 and 3 of this report. So we will
18 put it on hold for the time being.

19 Exhibit 292 is a letter dated September
20 30, 1971 from Paul Wright who was then at
21 Industrial Bio-Test to George Levinskis at
22 Monsanto. And I will ask if you have seen that
23 before?

24

1 (The document above-referred to
2 was marked Bloomington Deposition
3 Exhibit No. 292 for identification.)

4 A. I have not seen this before.

5 Q. Were you ever advised either verbally or
6 by means of the summary reports that you received
7 from time to time either from Industrial Bio-Test
8 or from Mr. Wheeler of the findings of renal
9 caudal ectopia in the rat teratology study?

10 A. No, I was not.

11 Q. In fact, you testified yesterday you
12 didn't have any specific recollection of the rat
13 teratology study?

14 A. That is correct.

15 Q. Okay.

16 In that letter, there is apparently a
17 distinction made between what the author, Mr.
18 Wright, refers to as specific birth defects and
19 what he refers to as manifestation of general
20 toxicity.

21 Do you understand what the difference is
22 between those two things?

23 A. I think I do.

24 Q. Okay.

1 In the animal studies that were done on
2 pcb's, were you interested in both kinds of
3 effects, general toxicity and specific birth
4 defects, if any?

5 A. Yes.

6 Q. Okay.

7 So whether renal caudal ectopia falls
8 into one category or the other, it is a
9 significant finding as far as you are concerned?

10 A. I would have to rely on the experts to
11 determine significance.

12 Q. Let me -- as soon as that passed my lips,
13 I realized I should have phrased it differently.

14 It was a finding of concern, whether it
15 was statistically significant or not would depend
16 on the analysis by the experts?

17 A. Yes.

18 Q. Okay.

19 Do you recall whether that particular
20 finding was ever passed on by you to customers or
21 the government; by you, I mean by Mr. Papageorge?

22 A. No. I was not aware of this finding and,
23 therefore, I did not discuss it with anyone.

24 Q. Okay.

1 Exhibit 293 is a report by a Dr. Ward
2 Richter, R-i-c-h-t-e-r, dated October 10, 1971
3 consisting of one page, subject IBT 7298 Monsanto.

4 I will ask you if you have ever seen that
5 before?

6 (The document above-referred to
7 was marked Bloomington Deposition
8 Exhibit No. 293 for identification.)

9 A. I have not seen this before.

10 Q. Were you aware that the original
11 pathological conclusions in the Industrial
12 Bio-Test studies on the rat tissues were subject
13 to later review by different pathologists?

14 A. Yes.

15 Q. Okay.

16 And that was part of the general
17 controversy that we discussed yesterday about how
18 to interpret the pathological findings that were
19 being seen on the slides?

20 A. Yes.

21 Q. Was Dr. Richter to your knowledge one of
22 those pathologists that participated in reviewing
23 the slides at some point in the course of that
24 review?

1 A. I don't recall Dr. Richter. He could
2 well have been, but I just don't recall.

3 Q. The letter refers, or the report, Exhibit
4 293, refers to lesions in the liver that Dr.
5 Richter says some other pathologist might call,
6 might label them hepatoma.

7 Do you see that reference, another
8 pathologist might label them hepatoma?

9 A. Yes.

10 Q. Is that the subject or was that one of
11 the principal subjects of the controversy we
12 discussed in a general way yesterday?

13 A. Yes.

14 Q. Whether the liver lesions that were there
15 were cancerous or not cancerous?

16 A. Yes.

17 Q. Okay.

18 And I believe your testimony yesterday
19 was that that to this day has never been resolved
20 in the community of pathologists?

21 A. To my knowledge it hasn't, yes.

22 Q. To your knowledge, okay.

23 As I understand your earlier testimony,
24 however, the studies were designed to -- the rat

1 studies, in particular, were designed to find any
2 effects on the animals that were related to the
3 pcb's, whether or not it was a cancer-producing
4 effect?

5 A. Correct.

6 Q. Is that correct?

7 A. Yes.

8 Q. So the significant liver lesions that are
9 described in Exhibit 293 should be reported in the
10 report of the study even though the pathologist
11 concludes that they are not cancerous?

12 A. Yes.

13 Q. Okay.

14 In the reports from Monsanto that you
15 passed along to pcb customers, did those reports
16 disclose the pathological findings of liver
17 lesions related to the feeding of pcb's in the
18 rats?

19 A. I don't recall the exact words. But they
20 did disclose, as best I recall, that at the higher
21 levels of exposure, there was an effect noted on
22 the livers. I recall the words enlarged livers
23 and cell changes. These kinds of words. The
24 exact words I do not recall.

1 Q. Did Monsanto's reports to its customers
2 go on to conclude that the lesions were not
3 cancerous?

4 A. I don't believe that conclusion was
5 expressed. I don't recall it.

6 Q. Did you ever see an Industrial Bio-Test
7 report on the rat studies that concluded that the
8 Aroclors studied were not carcinogenic?

9 A. I believe I recall a summary report in
10 about 1975 that concluded that.

11 Q. Okay.

12 By the way, Exhibit 293 concludes that
13 whatever else Dr. Richter saw in the rats outside
14 the liver was not the result of the pcb exposure;
15 is that a fair paraphrase of the last portion of
16 that report?

17 A. There is no --

18 Q. I think you misunderstood my question.

19 His conclusion is that the other disease
20 processes that he saw outside the liver in the
21 rats were the result of spontaneous disease rather
22 than pcb exposure?

23 A. That is what it says, yes.

24 Q. Okay.

1 Exhibit 294 is a letter dated October 13,
2 1971 from Mr. Wheeler to Dr. Calandra. And I will
3 ask you if you have seen that?

4 (The document above-referred to
5 was marked Bloomington Deposition
6 Exhibit No. 294 for identification.)

7 A. I have not -- yes, I am shown as
8 receiving a copy. I don't recall it.

9 Q. Okay.

10 Do you recall the dominant lethal mouse
11 studies which are referred to in that letter,
12 Exhibit 294?

13 A. Yes.

14 Q. What is the purpose of a dominant lethal
15 mouse study as you understand?

16 A. It's my understanding it has something
17 some do with mutagenicity.

18 Q. Whether the Aroclors studied caused
19 mutations in the mouse chains?

20 A. Yes.

21 Q. Were those dominant lethal mouse studies
22 completed to your knowledge?

23 A. To my knowledge, they were, yes.

24 Q. Do you recall what the results were?

1 A. I believe the results indicated no
2 mutagenic activity.

3 Q. Exhibit 295 is a two-page memo dated
4 October 13, 1971 to the file from Dr. Levinskis,
5 subject of phone conversation with Dr. Renate
6 Kimbrough.

7 I will ask you if you have seen that memo
8 before?

9 (The document above-referred to
10 was marked Bloomington Deposition
11 Exhibit No. 295 for identification.)

12 A. I do not recall seeing this memorandum.

13 Q. Do you recall ever discussing with anyone
14 in the Monsanto medical department the question of
15 bladder tumors in the rats in the Industrial
16 Bio-Test study?

17 A. No.

18 Q. In the course of following what other
19 researchers were finding in their studies of
20 pcb's, did you run across this possible finding of
21 bladder tumors by Dr. Kimbrough?

22 A. No.

23 Q. Do you know how that came to Monsanto's
24 attention?

1 A. Only from inferring from what I read
2 here.

3 Q. This is the first you have heard about
4 the bladder tumor -- I would tend to characterize
5 it as a controversy, but maybe bladder tumor
6 discussions -- is your reading this document?

7 A. That is the first.

8 Q. Okay.

9 You were aware, were you not, during this
10 period of time, 1970 and '71, that Dr. Kimbrough
11 was also studying the effects of pcb's on various
12 animal species?

13 A. I was aware she was conducting studies
14 with rats. I don't know about other species.

15 Q. And you were aware that she reported a
16 finding of cancer in her female rats as a result
17 of exposure to Aroclors?

18 A. Cancer in the liver. Yes.

19 Q. Was that at this time in 1970, 1971, was
20 the liver cancer the only positive finding by Dr.
21 Kimbrough that you were aware of?

22 MR. FRUEHWALD: Let me interpose. You didn't
23 establish a foundation that this liver cancer
24 finding was in '71.

1 My recollection is it is much later than
2 '71. Your question assumes that the liver cancer
3 findings were back in '71.

4 MR. MC CONNELL: Okay. Let me ask a question
5 a different way.

6 Q. Have you ever before you saw this Exhibit
7 295 today been aware of any other positive
8 findings reported by Dr. Kimbrough other than the
9 liver cancer?

10 A. I was aware she was finding cell changes
11 in liver.

12 Q. Were you aware that she was finding any
13 changes in any organs other than the liver?

14 A. No.

15 Q. Okay.

16 Exhibit 296 is a memo dated October 19,
17 1971 from Dr. Keplinger to DHJ. I will ask you to
18 take a look at that.

19 (The document above-referred to
20 was marked Bloomington Deposition
21 Exhibit No. 296 for identification.)

22 The last part of Exhibit 296 refers to
23 demyelination studies to be done by Industrial
24 Bio-Test on pcb's.

1 Do you know whether that was ever done?

2 A. I am aware of demyelination studies. I
3 don't vividly recall them associated with this
4 specific group of materials.

5 Q. Okay.

6 What materials do you recall them being
7 associated with, if any?

8 A. Nothing specific. Aroclors as a broad
9 category. But I don't recall just which Aroclors.

10 Q. Pcb Aroclors?

11 A. Yes.

12 Q. Okay.

13 A. As well as some of the terphenyl-type
14 Aroclors, yes.

15 Q. Demyelination is a phenomenon that
16 involves the nervous system, is it not?

17 A. That is my understanding.

18 Q. Do you know what the results of those
19 demyelination studies were?

20 A. I have the overall understanding that
21 nothing of significance was observed.

22 Q. What sort of animals were those performed
23 on, if you recall?

24 A. Chickens.

1 Q. Okay.

2 Exhibit 297 is a Monsanto memorandum to
3 R. E. Keller from E. S. Tucker dated October 25,
4 1971, consisting of five pages.

5 I will ask you if you have seen that
6 before?

7 (The document above-referred to
8 was marked Bloomington Deposition
9 Exhibit No. 297 for identification.)

10 A. I recall this memo, yes.

11 Q. Is this an example of the missing or
12 unaccounted for sample situation that we talked
13 about in a general way yesterday?

14 A. There is a reference to missing samples
15 in this document. Yes.

16 Q. Okay.

17 Do you know if the situation concerning
18 the missing samples reflected in 297 was ever
19 resolved to Dr. Tucker's satisfaction?

20 A. Yes.

21 Q. Was it resolved?

22 A. The best I can tell, there was -- I don't
23 recall if the samples were found or if alternate
24 samples were obtained. But the need for

1 information was satisfied somehow.

2 Q. Did the question of missing samples
3 raise -- did the fact of missing samples, at least
4 as of the date of that memo, raise questions in
5 your mind as to the competency of the researchers
6 at Industrial Bio-Test?

7 A. No.

8 Q. Did anyone else at Monsanto discuss such
9 questions they had in their minds with you as a
10 result of the missing samples?

11 A. No.

12 Q. Did anyone at Monsanto discuss such
13 questions they had with you as a result of any
14 other thing that occurred in the course of dealing
15 with Industrial Bio-Test over the years?

16 A. No.

17 Q. Okay.

18 Were you part of any meetings that took
19 place with Industrial Bio-Test to discuss the
20 samples that are referred to as missing in Exhibit
21 297?

22 A. I don't recall attending such a meeting.

23 Q. Okay.

24 How were the samples shipped to your

1 knowledge from Industrial Bio-Test to Dr. Tucker?

2 A. I don't know.

3 Q. Exhibit 298 is a letter from Elmer
4 Wheeler to Dr. Keplinger dated October 28, 1971.
5 And I will ask you if you recall ever seeing a
6 copy of that?

7 (The document above-referred to
8 was marked Bloomington Deposition
9 Exhibit No. 298 for identification.)

10 A. No, I do not recall ever seeing this.

11 Q. Do you know whether Exhibit 297 is the
12 memo that is referred to in 298 as being attached?

13 A. No, I do not.

14 Q. Exhibit 299 is a letter dated November
15 12, 1971 from J. C. Calandra to Elmer Wheeler. I
16 will ask you if you have ever seen that document
17 before?

18 (The document above-referred to
19 was marked Bloomington Deposition
20 Exhibit No. 299 for identification.)

21 A. I don't recall seeing this document.

22 Q. Does Exhibit 299 suggest to you that the
23 report of the two-year chronic oral toxicity study
24 in rats was mailed from Industrial Bio-Test to

1 Monsanto?

2 A. I don't know if it is mailed or
3 personally delivered.

4 Q. Okay.

5 Was it customary in Monsanto's dealings
6 with Industrial Bio-Test for them to mail reports
7 to Monsanto?

8 A. That is the more frequent method, yes.

9 Q. Okay.

10 Personal delivery would take place if the
11 report was issued at or near a time when there was
12 a meeting scheduled for some other purpose?

13 A. Yes.

14 Q. Okay.

15 To your knowledge, there was never a
16 meeting scheduled for the sole purpose of handing
17 over a report?

18 A. No.

19 Q. Exhibit 300 is a correction sheet dated
20 January 31, 1972 subject IBT C 9887 for Monsanto.

21 Do you know which study was C 9887?

22 (The document above-referred to
23 was marked Bloomington Deposition
24 Exhibit No. 300 for identification.)

1 A. No, I don't recall.

2 MR. FRUEHWALD: I believe this document
3 indicates that was a 90-day doing study on 10/16,
4 as the previous exhibits assign that number to
5 that study.

6 MR. MC CONNELL: Okay.

7 Q. Do you know whether such correction
8 sheets were transmitted to Monsanto as part of the
9 documentation in connection with the Industrial
10 Bio-Test studies?

11 A. No, I do not.

12 Q. Did Monsanto keep a similar type of
13 correction sheet or record of revisions that were
14 made from one version of its reports on these
15 studies to the next?

16 A. I do not know.

17 Q. Exhibit 301 is a two-page handwritten
18 letter from Otis Fancher to Moreno Keplinger. The
19 handwritten part of the letter bears no date, but
20 there is a date stamp received at the top,
21 December 6, 1971, IBT.

22 I will ask you if you have ever seen that
23 document?

24

1 (The document above-referred to
2 was marked Bloomington Deposition
3 Exhibit No. 301 for identification.)

4 A. I have not seen this document.

5 Q. Dr. Fancher was one of the principals of
6 Industrial Bio-Test, was he not?

7 A. I don't know how the use of the word
8 principal applies. He was a key employee, to my
9 knowledge.

10 Q. Wasn't he also a director of the company?

11 A. That I don't know.

12 Q. Okay.

13 He was one of the researchers who was
14 involved in the performance of the pcb animal
15 studies for Monsanto?

16 A. Yes.

17 Q. And Dr. Keplinger was another?

18 A. Yes.

19 Q. Okay.

20 Do you know whether what Dr. Fancher
21 describes as discrepancies in the summary in the
22 first paragraph of his letter were ever corrected?

23 A. I do not know.

24 Q. 7300 refers to the chicken study, does it

1 not?

2 A. I don't remember.

3 Q. If you recall.

4 MR. FRUEHWALD: It appears to be a chicken
5 reproduction study.

6 MR. MC CONNELL: Okay.

7 Q. On the second page of Exhibit 301 there
8 is a reference to lymphomatasia, which as I
9 understand it is another name for the Marek's
10 disease that we talked about yesterday, do you
11 recall that?

12 A. No, I don't.

13 Q. Okay.

14 Did you ever have occasion to discuss
15 with Dr. Fancher the statement and I will read it
16 into the record from the bottom of the first page
17 and the top of the second page of Exhibit 301 and
18 I quote:

19 "This whole study -
20 mortality, and anorexia organ
21 changes, et cetera, was
22 undoubtedly complicated by the
23 lymphomatasia which was
24 rampant throughout the colony

1 "during this study. This fact
2 is not mentioned in the
3 report. Perhaps it should be
4 mentioned in the paper but I
5 don't know how to do it
6 without stating that the study
7 was conducted using sick
8 animals."

9 Did you ever discuss that with Dr.
10 Fancher?

11 A. No.

12 Q. To your knowledge, was there ever a
13 version of any report on the chicken reproduction
14 study issued either by Industrial Bio-Test or by
15 Monsanto that reflected the fact that the chickens
16 were sick with this lymphmatasia or Marek's
17 disease?

18 A. Not any report that I recall seeing.

19 Q. Okay.

20 A. Or reading.

21 Q. And I believe you testified yesterday
22 that you were not aware of that problem until I
23 showed you the memos on the Marek's disease?

24 A. That is correct.

1 Q. If you had been aware of it in 1971,
2 would you have shared that information with your
3 customers who were receiving these progress
4 reports on these studies?

5 A. Very likely. Yes.

6 Q. I take it that is because you feel it
7 might have affected the weight they gave to the
8 conclusions of the study as it was reported?

9 A. Yes.

10 Q. Exhibit 302 is a letter from Dr.
11 Levinskas to Dr. Keplinger dated December 6, 1971.

12 I will ask if you recall seeing that
13 letter?

14 (The document above-referred to
15 was marked Bloomington Deposition
16 Exhibit No. 302 for identification.)

17 A. I do not recall seeing this letter.

18 Q. Were you aware in 1971 that Dr. Levinskas
19 and others from Monsanto were going to meet with
20 Dr. Kimbrough to discuss her rat research on
21 pcb's?

22 A. Yes.

23 Q. Okay.

24 But you weren't aware that one of the

1 specific subjects was bladder tumors in the rats?

2 A. That is correct.

3 Q. What was your understanding of the
4 subject of this discussion?

5 A. Liver damage was the subject.

6 Q. Did Dr. Levinskas discuss with you or did
7 you become aware in late 1971 or early 1972 that
8 Dr. Kimbrough had concluded in her own mind that
9 pcb's were carcinogenic in the rats?

10 A. I don't know that she concluded. I
11 sensed that she was suspicious.

12 Q. Was it Dr. Levinskas' job on the basis of
13 the Industrial Bio-Test studies to talk her out of
14 that suspicion?

15 A. No. That is not my understanding. No.

16 Q. What was the purpose of those meetings?

17 A. To arrive at a consensus, if possible,
18 regarding the interpretation of the observations.

19 Q. Okay.

20 And to your knowledge, that consensus was
21 never reached up to today?

22 A. That is correct.

23 Q. Exhibit 303 is a two-page handwritten
24 note from Dr. Fancher to Dr. Keplinger, it is date

1 stamped December 9, 1971, subject IBT, B 7298,
2 which I believe is one of the rat studies.

3 I will ask you if you have ever seen that
4 document before?

5 (The document above-referred to
6 was marked Bloomington Deposition
7 Exhibit No. 303 for identification.)

8 A. I had not seen this document before.

9 Q. I believe you testified yesterday that as
10 far as you understood the survival rates of the
11 rats in all of the pcb studies at Industrial
12 Bio-Test were adequate for the purposes of the
13 studies?

14 A. That is my understanding, yes.

15 Q. Dr. Fancher never made you aware of his
16 disagreement with that, with the fact that the
17 survival rate was adequate?

18 A. That is correct.

19 Q. Okay.

20 Did he ever express to you, or did anyone
21 at Industrial Bio-Test ever express to you a
22 concern that all of the rat carcinogenic studies
23 would be judged inadequate because survival rates
24 were so low?

1 A. No.

2 Q. Did anyone at Monsanto ever discuss such
3 a concern with you?

4 A. No.

5 Q. Did Dr. Fancher ever discuss with you his
6 statement on page 2 of Exhibit 303 that the tumor
7 incidence in females with 1254 is bothersome?

8 A. No.

9 Q. He goes on to say in the letter:

10 "If one tabulated and
11 reported these data it would
12 probably raise questions even
13 though most of these are
14 benign."

15 Did you ever discuss that fact with Dr.
16 Fancher?

17 A. No.

18 Q. Do you know whether in fact the tumor
19 incidence in females with 1254 was ever separately
20 tabulated and reported?

21 A. No.

22 Q. You don't know or it wasn't?

23 A. I do not know.

24 Q. Okay.

1 Did Dr. Fancher ever discuss with you any
2 questions he had in his mind about the conclusion
3 reported by Industrial Bio-Test that these tumors
4 are considered normal for a random population of
5 rats this age?

6 A. He did not.

7 Q. Did anyone at Monsanto ever discuss with
8 you any questions they might have had about
9 whether that was a valid conclusion?

10 A. No.

11 Q. Do you know whether copies of these
12 handwritten letters from Dr. Fancher to Dr.
13 Keplinger would have ordinarily been supplied to
14 Monsanto with the back-up materials supporting the
15 Bio-Test reports on these studies?

16 A. I do not know.

17 Q. Do you know whether they would have been
18 available to the Monsanto personnel during their
19 inspections or reviews of the files at Industrial
20 Bio-Test?

21 A. I do not know.

22 Q. Did Dr. Fancher retire at some time
23 during the course of your work as the pcb
24 coordinator at Monsanto?

1 A. Yes.

2 Q. Do you recall about when that was?

3 A. No. Not really. Sometime between '71
4 and '75 is as close as I can recall.

5 Q. Exhibit 304 is a one-page letter dated
6 December 15, 1971 from Dr. Fancher to somebody
7 named Don.

8 Do you know anybody named Don at
9 Industrial Bio-Test?

10 (The document above-referred to
11 was marked Bloomington Deposition
12 Exhibit No. 304 for identification.)

13 A. Yes. I was reminded that Don Gordon is
14 listed on Exhibit 302.

15 Q. That would be Dr. Donovan Gordon?

16 A. I have never heard Donovan Gordon before.

17 Q. Was he an animal pathologist of some
18 sort, do you recall?

19 A. Yes.

20 Q. I will ask you if you have ever seen
21 Exhibit 304 before today?

22 A. I have not seen this document before.

23 Q. Okay.

24 Were you aware of the general practice at

1 Industrial Bio-Test for Dr. Fancher to review the
2 reports of these studies before they were
3 released?

4 A. No. I was not aware.

5 Q. Did Dr. Fancher sign some or all of the
6 Industrial Bio-Test reports that you saw?

7 A. I don't recall.

8 Q. Presumably the senior research scientist
9 at Industrial Bio-Test who signed those reports
10 would review not only the reports but the back-up
11 raw data before signing the reports.

12 Do you know whether that was their
13 practice?

14 A. I do not know.

15 Q. Okay.

16 Would you have expected that they did
17 that before signing the reports?

18 A. Not necessarily.

19 Q. Would you have expected that Mr. Wheeler,
20 before he signed the summaries of the Industrial
21 Bio-Test reports that were sent out on Monsanto
22 letterhead, reviewed not only the Industrial
23 Bio-Test report but at least spot checked the
24 underlying data?

1 A. Yes.

2 Q. Okay.

3 And was that your understanding based on
4 the fact that he told you that?

5 A. I don't recall him specifically telling
6 me this.

7 It is the impression I had from the
8 numerous discussions regarding summaries, status.
9 I was of the impression that he had opportunity to
10 see some of the data as these summaries were
11 prepared.

12 Q. On occasion when he would come to
13 Industrial Bio-Test for meetings, he would at
14 least have the opportunity to go through the raw
15 data that was the subject of those studies under
16 discussion at those meetings?

17 A. Yes.

18 MR. MC CONNELL: All right, I am going to let
19 Mr. Karaganis cover what he wants to do and when I
20 get back from court, we will go back to the
21 Industrial Bio-Test documents.

22 This is a good time to take a five minute
23 break, if you need to do that.

24 (Whereupon a short recess was had.)

1 MR. KARAGANIS: Okay.

2 Let the record show that while Mr.
3 McConnell had to attend a motion before Judge
4 Parsons in the Federal District Court in Chicago,
5 I am going to resume my questioning in the areas
6 that I was examining Mr. Papageorge on, and that
7 Mr. McConnell will restart his examination with
8 respect to the Industrial Bio-Test materials upon
9 his return.

10 As a preliminary matter, Mike, we had
11 asked for several items during the course of Mr.
12 Papageorge's deposition and we haven't received
13 them.

14 We asked for all editions of Monsanto
15 documents entitled, "Proper handling of Aroclors
16 and their mixtures in the electrical industry;"
17 all editions of a document called, "The Aroclors
18 physical properties." I will not go through the
19 entire list, other than to say that the various
20 requests are listed in the deposition as we made
21 those requests.

22 I am wondering when we can expect copies
23 of those materials?

24 MR. FRUEHWALD: Those have arrived at our

1 office. It is about a foot and a-half stack of
2 documents. I have looked through them last week.

3 There appear to be several editions of
4 each of those documents which, from all
5 appearances that I can tell, appear to be a
6 complete set of multiple revisions. Those have
7 now arrived at our offices and will be available
8 for your examination, or we can make a copy, ,
9 whatever you want to do.

10 MR. KARAGANIS: We specifically wanted, so
11 that we can use them for exhibit purposes, the
12 originals.

13 MR. FRUEHWALD: I know you did that. But what
14 we have is copies.

15 MR. KARAGANIS: You have copies. You don't
16 have originals?

17 MR. FRUEHWALD: That's right. I don't know
18 how many originals there are in this day and age,
19 Joe, but we have got have legible, clean copies
20 that have multiple editions, multiple revisions of
21 those documents. They are now available. They
22 arrived in our office last week.

23 MR. KARAGANIS: And you indicated that there
24 are also some additional documents in your office

1 that were not examined under a prior document
2 request; is that right?

3 MR. FRUEHWALD: That is true.

4 MR. KARAGANIS: We will schedule a day next
5 week to go down and see them.

6 MR. FRUEHWALD: Fine.

7 DIRECT EXAMINATION

8 BY MR. KARAGANIS:

9 Q. Mr. Papageorge, during the course of your
10 earlier deposition testimony, we did not have a
11 available to us what has been now marked as
12 Bloomington Deposition Exhibit 174, which is a
13 memorandum dated April 7, 1970. I note that
14 counsel, your counsel, has shown you a copy of the
15 memorandum and the attachments.

16 Are you familiar with that document?

17 A. Yes.

18 I don't see -- oh, the attachment to the
19 cover letter.

20 Q. Yes.

21 A. Yes, I have that.

22 Q. Now, can you tell me who delivered this
23 plan, Exhibit No. 174 is referred to as a plan for
24 managing the pcb problem; who developed it?

1 A. It was developed by a group of Monsanto
2 individuals, and I was the author of the document.

3 Q. Who were the individuals that developed
4 the plan?

5 A. There was, as best I recall, Dr. Richard,
6 Mr. Wheeler, Dr. Keller, Mr. John.

7 Q. Mr. John, what is his first name?

8 A. Ed.

9 Q. J-o-h-n?

10 A. J-o-h-n.

11 Q. All right.

12 A. Mr. Park, attorney.

13 Q. What is Mr. Park's first name?

14 A. P-h-o-c-i-a-n, Phocian.

15 Q. P-h-o?

16 A. P-h-o-c-i-a-n.

17 Q. And his last name is Park?

18 A. Park.

19 Q. Okay.

20 A. Mr. Olson.

21 Q. Mr. Olson.

22 A. Mr. Schalk, S-c-h-a-l-k. I can't recall
23 any others.

24 Q. Now, just for purposes of recollection,

1 Dr. Richard was with what group?

2 A. Research.

3 Q. Research.

4 Mr. Wheeler was with medical?

5 A. Medical.

6 Q. Dr. Keller was with medical?

7 A. Analytical research.

8 Q. Dr. Keller was with analytical research.

9 I am sorry, it was Kelly who was in

10 medical?

11 A. Right.

12 Q. Mr. Ed John?

13 A. Public relations.

14 Q. Mr. Park was the attorney. Mr. Olson?

15 A. Marketing director.

16 Q. And Mr. Schalk?

17 A. Another marketing director.

18 Q. Now, what marketing director or what

19 product did Mr. Schalk market?

20 A. He had the plasticizer application of
21 pcb's.

22 Q. Now, document 174, were there meetings of
23 this group that you have identified in preparation
24 of the plan for managing the pcb problem?

1 A. Yes.

2 Q. Were there either minutes or memoranda
3 reflecting the deliberations that took place or
4 the communications that took place?

5 A. No.

6 Q. None at all?

7 A. No.

8 Q. Was there a policy statement that said
9 don't prepare any memoranda as to what was said?

10 A. No. It is a practice.

11 Q. Just no notes were kept?

12 A. It is the option of the chairman.

13 Q. And who was the chairman of this group?

14 A. I was.

15 Q. You were the chairman of the group.

16 And you directed that no notes be kept?

17 A. No.

18 Q. Did you --

19 A. They all kept notes.

20 Q. They all did keep notes?

21 A. Some of them.

22 Q. Well, as you were discussing items that
23 needed to be addressed, they took notes, didn't
24 they?

1 A. Some of them. Yes.

2 MR. KARAGANIS: I would at this time
3 specifically ask -- although I believe it is
4 included within the prior document request -- all
5 notes, memoranda or other documents relating to
6 the meetings of the working group that Mr.
7 Papageorge has described leading to the
8 preparation of the management plan for the
9 polychlorinated biphenyl environmental problem
10 referenced in or contained in Bloomington Exhibit
11 174.

12 Q. When did the group first meet?

13 A. I don't know.

14 I wasn't assigned the coordinator job
15 when they first started meeting.

16 Q. Well, to your knowledge, when did they
17 first start meeting?

18 A. Sometime in the late sixties. '68, '69.

19 Q. Who was the coordinator prior to you?

20 A. I don't know. They didn't have one.

21 Q. Did they have a chair at all?

22 A. No.

23 Q. In '69, from the period '69 until the
24 time you became a member of this committee, were

1 the members the same?

2 A. Pretty much so. Yes.

3 MR. KARAGANIS: My request for documents would
4 extend to from the inception of this group.

5 Q. Was there a name to the group?

6 A. No.

7 It was an informal discussion group.

8 Q. A discussion group that had as its focus
9 the management of the pcb problem; is that right?

10 A. That is correct.

11 Q. What specific events precipitated your
12 coming up with a management plan for the pcb
13 problem?

14 A. I don't know of any specific event that
15 precipitated the management plan. All I know is
16 that I was requested by my immediate supervisor to
17 develop such a plan.

18 Q. Who was your immediate supervisor?

19 A. Mr. Bergen.

20 Q. And when did he make that request?

21 A. Oh, sometime in February, March of 1970.

22 Q. Was that request made in writing?

23 A. No.

24 Q. Did he provide you with any materials at

1 the time he asked you to develop the plan?

2 A. No.

3 Q. Specifically to the best of your
4 recollection, what did he say to you at the time
5 he made the request?

6 A. Something along the lines that now that
7 you're in your assignment, you ought to prepare a
8 plan that the two business groups involved can
9 agree to and follow in its implementation.

10 Q. Now, the two business groups being the
11 plasticizer division and the organic chemical
12 division?

13 A. No. Plasticizers business group and the
14 functional fluids business group, both in the
15 organic division.

16 Q. Now, with respect to the content of the
17 management plan, were documents, memoranda, any
18 piece of paper given to you to use in your
19 drafting of the management plan?

20 A. Yes. There were contributions from
21 virtually everybody on that panel.

22 Q. Written contributions?

23 A. Written. Some were typed, some were
24 handwritten.

1 Q. All right.

2 A. That I used in putting together, as I
3 recall, several drafts of this document, before we
4 arrived at this final draft.

5 Q. Several drafts of what has been marked as
6 Bloomington Deposition Exhibit 174?

7 A. Yes.

8 MR. KARAGANIS: Again, I would request that
9 all drafts of Exhibit 174 as well as all
10 contributions by members of the working group be
11 produced.

12 Q. Now, this working group that had been
13 meeting since '69 and was obviously meeting in the
14 spring of 1970 to prepare Bloomington Deposition
15 Exhibit 174, how long did that group continue?

16 A. That group was never officially formed or
17 officially discontinued. The members were always
18 available to meet as appropriate, called for by
19 any participant.

20 Through the years, some members were
21 replaced by others. For example, Mr. Olson was
22 replaced by Mr. Gossage.

23 Q. When was that?

24 A. Oh, about 1971, '72.

1 Q. Well, to your recollection, how long did
2 the group meet? In other words, what year did
3 they disband or no longer meet?

4 A. They never did disband. It is just that
5 the need for meetings became less frequent.

6 I can't recall when the group met as a
7 group last. It was somewhere about 1973, '72,
8 '73.

9 Q. Was there any group of Monsanto employees
10 after 1972, 1973 that had a responsibility for
11 addressing the pcb problems and met as a group
12 following 1973?

13 A. There are individuals still involved with
14 the pcb situation in that period '73 and on.

15 Some of those individuals would meet on
16 occasion to address specific matters that would
17 come up. I don't recall that all of them met as a
18 group from that point on.

19 Q. During the period that you are aware of,
20 which is from 1970 on, other than the earlier
21 drafts and contributions to Bloomington Exhibit
22 No. 174, did the group produce either drafts or
23 suggestions or final documents other than 174?

24 A. At what point in time?

1 Q. After 174.

2 A. I am trying to recall. I just can't
3 recall at the moment.

4 Q. Now, 174 indicates that the management
5 plan was submitted to the corporate management
6 committee, is that what it was called?

7 A. Yes.

8 Q. When did the corporate management
9 committee approve the plan?

10 A. They did not approve this plan.

11 Q. They did not.

12 They did not approve the plan that is
13 listed in 174?

14 A. That's correct.

15 Q. What plan did they approve?

16 A. They approved a modification of this plan
17 which was presented at a subsequent meeting.

18 MR. KARAGANIS: Mike, can I get --

19 MR. FRUEHWALD: You got it. That is the next
20 meeting. You have got both the April meeting and
21 the May meeting in your documents.

22 MR. KARAGANIS: The document that I have here
23 references a May 11 --

24 MR. FRUEHWALD: Exhibit 175 is the minutes of

1 April 20, 1970.

2 MR. KARAGANIS: Yes.

3 MR. FRUEHWALD: Which was the meeting relating
4 to Mr. Papageorge's Exhibit 174.

5 MR. KARAGANIS: Right.

6 MR. FRUEHWALD: Exhibit 176 is Mr. Mason's
7 presentation of the modification to the next
8 meeting, and Exhibit 177 is the CMC's approval of
9 that plan.

10 BY MR. KARAGANIS:

11 Q. Maybe we can clarify these here.

12 Exhibit 174 is a textual document
13 indicating a series of program items that would
14 lead to the accomplishment of suggested
15 objectives, isn't that correct?

16 A. Yes.

17 Q. All right.

18 Now, in the documents that have been
19 referred to by Mr. Fruehwald, I don't see any
20 other drafts of a written presentation. I see
21 some charts, which are -- I will just go through
22 the package. I have the entire package that was
23 given to us.

24 MR. FRUEHWALD: They have all been marked as

1 exhibits in the prior deposition.

2 MR. KARAGANIS: The 4/20 minutes, April 20
3 minutes are 175.

4 MR. FRUEHWALD: Right.

5 MR. KARAGANIS: The John Mason memorandum of
6 May 1 is 176. And the minutes of the corporate
7 management committee of May 11 are 177.

8 MR. FRUEHWALD: Correct.

9 BY MR. KARAGANIS:

10 Q. Now what I am asking is, is there a later
11 version of 174, which is a written document?

12 A. No.

13 Q. Did this written document 174 go to the
14 corporate management committee in any form?

15 A. Yes.

16 Q. In what form did it go to the corporate
17 management committee?

18 A. The form you see there in front of you.

19 Q. Okay.

20 Now, I continue to be confused. The
21 written document, 174 --

22 A. Yes.

23 Q. -- was transmitted to the corporate
24 management committee?

1 A. There were copies handed out at the
2 meeting.

3 Q. At which meeting?

4 A. The April 20 meeting.

5 Q. And what occurred at the April 20
6 meeting?

7 A. The members of the CMC accepted parts of
8 that proposed plan and wanted modifications made
9 to other parts. And asked that we go back and
10 review our plan and speed up some -- particularly
11 speeding up some of the target dates that we had
12 established, to accomplish some of those things
13 that we had suggested sooner.

14 Q. Directing your attention to Exhibit 175,
15 which is the minutes of the corporate management
16 committee meeting of April 20, 1970.

17 Can you tell me where they rejected parts
18 of the plan?

19 A. Under conclusions.

20 Q. Yes.

21 A. There is reference to the committee felt
22 the division had taken major steps to resolve the
23 problem, more affirmative action must be taken.

24 Q. So that would it be fair to say that the

1 committee felt what was outlined in Exhibit 174,
2 while being steps towards resolving the problem,
3 that additional action had to be taken?

4 A. That's right. And that is reflected
5 under conclusions of the minutes of that meeting.

6 Q. And what additional affirmative action
7 was required?

8 A. I don't know. The gist of your question,
9 it is just a more proactive stance on Monsanto's
10 part, seeking out audiences, sharing data.

11 Q. Can you tell me in the April 20 meeting,
12 did the corporate management committee approve the
13 actions that had been taken thus far?

14 A. Yes.

15 Q. Is that reflected in the minutes?

16 A. I see that implied in the first sentence
17 under conclusions.

18 Q. The fact that the committee expressed the
19 opinion that the division had taken major steps
20 was a statement of approval?

21 A. Yes.

22 Q. And would it be fair to say that the
23 minutes reflect the opinion and judgment of the
24 management committee?

1 A. Yes.

2 Q. Now, can you tell me, looking at these
3 minutes, it indicates that Mr. Springgate also
4 participated in the report. Did all of the
5 individuals shown under Exhibit 175, organic
6 division report on pcb status, were all those
7 individuals present at the meeting?

8 A. Yes.

9 Q. And who was Mr. Springgate?

10 A. He is the business director of the
11 plasticizers group.

12 Q. Now, was Mr. Putzel present at the
13 meeting?

14 A. He is a member of the committee.

15 Q. And Mr. Putzel was the general counsel?

16 A. Corporate general counsel.

17 Q. Corporate general counsel. And in
18 approving this, he was sitting in a capacity as a
19 member of the management committee, though, was he
20 not?

21 A. Yes. That is correct.

22 Q. So that the decision that was being made
23 was a management decision, was it not?

24 A. Yes.

1 Q. Is Mr. Putzel still with the company?

2 A. No.

3 MR. KARAGANIS: We would make a request for
4 the notes and records and other documents of all
5 members of the management committee as they relate
6 to consideration of pcb's, either at the April 20
7 or May meetings of the corporate management
8 committee, or any prior or subsequent meetings.

9 Q. Who is Mr. Eck?

10 A. At that time Mr. Eck was the president of
11 Monsanto and chief executive officer.

12 Q. And Mr. Eck was also obviously a member
13 of the management committee, was he not?

14 A. Yes.

15 Q. Who was Mr. Gillis?

16 A. At that time Mr. Gillis was a vice
17 president of the corporation.

18 Q. With what responsibility?

19 A. Marketing, administration.

20 Q. Given the structure that you described in
21 your earlier testimony, Mr. Gillis would have been
22 one of the vice presidents responsible for a
23 certain function. You had indicated that the
24 divisions were below corporate management and then

1 at the corporate management level there were vice
2 presidents in charge of given functions, isn't
3 that correct?

4 A. Yes, that's right.

5 Q. And the function of marketing would be
6 Mr. Gillis' responsibility?

7 A. Yes.

8 Q. And he reported directly to Mr. Eck?

9 A. Yes.

10 Q. To your knowledge did Messrs. Eck, Putzel
11 or Gillis recommend actions to demonstrate the
12 affirmative program being taken?

13 I am referring to page 2 of the minutes.

14 A. I am led to believe so. I was never
15 personally told so.

16 Q. Well, who led you to believe that they
17 had made such a recommendation?

18 A. My supervisor, Mr. Bergen, indicated to
19 me.

20 Q. And what specifically did they recommend?

21 A. Specifically, I just don't recall the
22 specifics.

23 Q. Now, how often did the corporate
24 management committee meet?

1 A. Monthly.

2 Q. What criteria, if any, formal or
3 informal, determined whether a given item of
4 business would be on the agenda for the corporate
5 management committee?

6 A. I do not know.

7 Q. Had you or anybody else involved with
8 pcb's to your knowledge reported to the corporate
9 management committee prior to April 20 of 1970 on
10 the pcb problem?

11 A. Yes.

12 Q. Who had done so?

13 A. I don't recall the individual. Someone
14 from the organic division management.

15 Q. And the nature of the reports in any
16 documents submitted would be reflected in the
17 prior minutes of the corporate management
18 committee, is that correct?

19 A. Yes.

20 MR. KARAGANIS: Again, I believe we have
21 already requested it, but to the extent of any
22 additional clarification, we would like all prior
23 minutes of the corporate management committee
24 relating to pcb's and any documents prepared or

1 submitted in relationship to the corporate
2 management committee, either by persons providing
3 information to the committee or by members of the
4 committee themselves.

5 Q. Directing your attention to 176, Exhibit
6 176, why was Mr. Mason the person selected to make
7 the presentation on May 11?

8 A. He was selected by his supervisor, Mr.
9 Minckler. I do not know why Mr. Minckler selected
10 Mr. Mason.

11 Q. Now, neither Mr. Minckler nor Mr. Mason
12 were part of the working group on pcb's, is that
13 correct?

14 A. That is true.

15 Q. Then how is it that Mr. Mason and Mr.
16 Minckler were involved in making the presentation?

17 A. Three of us from the working group had
18 made arrangements to travel to Europe and we were
19 out of the country when this second meeting took
20 place. Mr. Minckler then chose Mr. Mason to make
21 the presentation.

22 Q. Now, just for the record, excuse my
23 confusion on people's roles. Mr. Minckler and Mr.
24 Mason, what were their respective roles?

1 A. Mr. Minckler was the -- I don't know the
2 exact titles, but he was the managing director or
3 general manager of the organic division.
4 Reporting to him were two assistant general
5 managers, one of them was John Mason.

6 And reporting in to John Mason was Mr.
7 Bergen, who headed up the functional fluids
8 business group.

9 Q. Now, who briefed Mr. Mason to enable him
10 to make his presentation?

11 A. Well, I met with him just before we left
12 for Europe, but I do not know who else he talked
13 to following that discussion with me.

14 Q. Who prepared the charts that are attached
15 to Exhibit 176?

16 A. I do not know.

17 Q. Did you have any hand in preparing them?

18 A. Did I. No.

19 Q. Did any member of the working group have
20 any hand in preparing them?

21 A. I do not know.

22 Q. There is a reference in 176, there is a
23 statement, quote:

24 "The CMC gave its a

1 approval for us to implement
2 the plan as outlined on the
3 two sheets marked present
4 plan."

5 Can you tell me which sheets of Exhibit
6 176 are the present plan?

7 A. There are two sheets with the numbers at
8 the lower righthand corner, the last 4 digits
9 appear to be on one of them, 0560, and the second
10 one 0561.

11 Q. Now, 176 references the fact that a
12 progress report was required to be made around the
13 1st of August.

14 To your recollection, were there progress
15 reports made to the corporate management
16 committee?

17 A. I don't recall any reports with
18 specific -- in that area. I just don't recall.

19 Q. Well, was the subject of pcb's ever
20 raised with the corporate management committee
21 again?

22 A. I don't know.

23 Q. To your knowledge, you have no knowledge
24 as to whether the corporate management committee

1 was ever advised as to any further pcb actions?

2 A. That is correct.

3 Q. No one ever told you whether they had
4 been advised or not?

5 A. That is correct.

6 MR. KARAGANIS: To the extent we haven't
7 requested them again -- and we have -- we would
8 like any minutes of board of directors meetings,
9 the board of directors of Monsanto, the parent
10 company; or any meetings. I would assume the
11 parent company would cover that. But, to the
12 extent that pcb's were discussed at either
13 subsidiaries or division level, where boards of
14 directors might meet, we would ask for all
15 minutes.

16 Q. Just as an aside, you had indicated in
17 the post '71 reorganization, that the divisions
18 became named companies?

19 A. Yes.

20 Q. Did those companies have formal boards of
21 directors and officers?

22 A. No.

23 Q. So the boards of directors of the
24 companies would be the boards of directors of the

1 parent?

2 A. I'm not --

3 Q. Were there any boards of directors of any
4 of the units of organization of Monsanto as
5 opposed to Monsanto Company?

6 A. No.

7 Q. Okay.

8 When we speak of board of directors, we
9 are talking about Monsanto Company; is that
10 correct?

11 A. Yes.

12 Q. Now, as of this time, at the time of
13 April 1970, you were in charge of the pcb problem
14 for the company, were you not?

15 A. I don't know that I was in charge of the
16 problem. I was coordinating the information
17 relating to the problem.

18 Q. And coordinating the activities with
19 respect to the company, were you not?

20 A. Yes.

21 Q. You had a title manager of environmental
22 control and your assignment was addressing your
23 total time to the then evolving pcb issue, was it
24 not?

1 A. Correct.

2 Q. Who prepared the charts that are in
3 Exhibit 176?

4 A. I don't know.

5 Q. Who prepared the back-up material for the
6 charts, in terms of what the control program was
7 going to be?

8 A. I don't know.

9 Q. You had no hand in providing Mr. Mason or
10 Mr. Minckler any of the information used in these
11 charts?

12 A. Some of the information, for example,
13 that appears under the present plan documents we
14 just referred to came out of that report that I
15 used to make a presentation to the CMC on April
16 20, 1970.

17 Q. Now, directing your attention to the
18 Exhibit 176, slide 3, which is on page number
19 0543, it indicates that one of the objectives was
20 marketing biphenyls only for closed-system
21 applications where control was possible, isn't
22 that correct?

23 A. Correct.

24 Q. And where by control you meant control of

1 release to the environment, did you not?

2 A. Yes.

3 MR. FRUEHWALD: You are speaking again of
4 using the term you there.

5 MR. KARAGANIS: As the corporation.

6 Q. When you said you didn't write this
7 chart.

8 But I am asking you now the question
9 where the term control is mentioned, you as a
10 representative of Monsanto are saying that
11 Monsanto meant controlling release to the
12 environment?

13 A. You mean controlled by us, the trucking
14 firms, the railroad delivery?

15 Q. Controlled by everybody.

16 A. Everybody involved with the material can
17 control it.

18 Q. Right.

19 To prevent its release into the
20 environment; isn't that right?

21 A. Right.

22 Q. Now, are you familiar with the term
23 closing the loop or closed loop?

24 A. Yes.

1 Q. Was it used in your discussion?

2 A. I didn't use it.

3 Q. Was it used in the discussions of the
4 working group?

5 A. No.

6 Q. Someone other than the working group came
7 up with the term a closed loop?

8 A. It was Mr. Mason's description of the
9 system that he visualized.

10 Q. He visualized a system, did he not, where
11 pcb's would not be released into the environment
12 from manufacture, to transportation, to use in
13 production, to recycled back to Monsanto; isn't
14 that right?

15 A. When you put it that way, you are talking
16 about down to a molecule.

17 At no time in an industrial setting can
18 you say none will escape. You control the escape
19 to a level where the harm is acceptable.

20 Q. All right.

21 Controlling the escape to a minimum
22 number; isn't that right?

23 A. Some acceptable number.

24 Q. To some acceptable minimum. Would that

1 be fair to statement?

2 A. That would be correct.

3 Q. Well, controlling the release through
4 some kind of mechanism that closed the loop. He
5 was talking about a loop, was he not, closing the
6 loop?

7 A. Describing loop as avoiding
8 indiscriminate discharges.

9 Q. But the loop included the elements of
10 production, usage?

11 A. Yes.

12 Q. Discharge?

13 A. Yes.

14 Q. Landfilling and incineration, did it not?

15 A. Yes.

16 Q. And recycle back to Monsanto, did it not?

17 A. Yes.

18 Q. So when we talk about the loop, we are
19 talking about the entire process of manufacture,
20 distribution, use?

21 A. Use.

22 Q. Disposal and recycle, isn't that correct?

23 A. Yes.

24 Q. Now, there is a reference here to a

1 target limit of 10 parts per billion, and I am now
2 referring to page 0553 of this exhibit that you
3 have it in front of you, the bar chart.

4 Who set the 10 parts per billion target
5 limit, how was that established?

6 A. That was established by consensus opinion
7 from the research representative, the
8 manufacturing representative and the analytical
9 chemist.

10 Q. Now, representatives on your committee?

11 A. Yes.

12 Q. So the 10 ppb was a consensus of which
13 individuals?

14 A. Let's see, that would be I didn't mention
15 previously a Mr. Savage would have been on that
16 group. And he would represent the manufacturing
17 function.

18 Q. All right.

19 A. And Dr. Keller would represent the
20 analytical.

21 Q. There was a third?

22 A. The third would be an engineering
23 representative. At that time it was Mr. Kuntz,
24 K-u-n-t-z. Robert Kuntz.

1 Q. And to your recollection, what was the
2 basic technology for achieving a 10 parts per
3 billion discharge limit?

4 A. Basic technology is avoidance of loss or
5 spillage.

6 Q. If you you had a stream, an effluent
7 stream in excess of 10 parts per billion, what
8 technology was suggested to achieve 10 parts per
9 billion as an effluent level?

10 A. I need a clarification of your question.

11 Q. Yes.

12 A. Does this mean that I have already
13 contaminated a waterstream?

14 Q. Yes.

15 A. To exceed that level?

16 Q. Yes.

17 A. What technology do I use to avoid it
18 happening again or do I clean up?

19 Q. To clean up.

20 A. To clean up. Several technologies were
21 tried. Entrapment in sand beds. Adsorption on
22 carbon beds, centrifuging. Each of those helped
23 to some degree.

24 Q. Would you describe what centrifuging is?

1 A. This is the exposure of a liquid to
2 high-speed rotating forces that separate the
3 heavier particles from the lighter particles.

4 Q. And the heavier particles are what,
5 settled, how do you get the heavier particles out
6 of the water stream?

7 A. They, the heavier settle and the lighter
8 float, brought about by this spinning action.

9 Q. How did you get the lighter particles out
10 of the stream?

11 A. You draw off the top of the unit where
12 the lighter particles find themselves and the
13 heavier particles are drawn off from the bottom.

14 Q. How do you dewater the liquid-phase
15 portion of the material that you draw off?

16 A. It is already -- in the case of pcb's,
17 they are heavier and they are obviously distinct
18 and different from the water layer.

19 Q. Were you able to get down to 10 parts per
20 billion with a centrifuge?

21 A. No.

22 Q. What additional equipment did you need to
23 get down to 10 parts per billion?

24 A. You are assuming we got to 10 parts per

1 billion.

2 I don't know of any situation where we
3 actually reached 10 parts per billion. That was
4 the target.

5 Q. At the three plants that are mentioned
6 here, what treatment technology was ultimately
7 used?

8 A. Gravity separation. Sumps to capture
9 material that didn't leak. And that is it.

10 Q. Flow filtration?

11 A. flow filtration.

12 Q. Directing your attention to Exhibit 176,
13 page marked 0554. Can you tell me, are you
14 familiar with that chart?

15 A. I have seen it. Yes.

16 Q. Had you seen any of the charts or any of
17 the materials in Exhibits 174 through 176 at the
18 time of your prior deposition with me?

19 A. Yes.

20 Q. They had been shown to you?

21 A. Yes.

22 Q. Directing your attention to page 0554 of
23 176, talking about the closed-loop strategy,
24 closing the loop as, Mr. Mason had referred to it.

1 This was talking about closing the loop for
2 various customer businesses, was it not?

3 A. Yes.

4 Q. It wasn't talking about closing the loop
5 for Monsanto plants; it was talking about closing
6 the loop for the various markets that you dealt
7 with; isn't that right?

8 A. That's right.

9 Q. Directing your attention to the hydraulic
10 fluids business, which is on 0557.

11 A. I see it.

12 Q. That was a recognition that since you
13 couldn't control the hydraulic fluids loop, that
14 you are going to phase out of the business; isn't
15 that right?

16 A. That is correct.

17 MR. FRUEHWALD: The you there, are you talking
18 about -- you said since you couldn't control it,
19 are you referring to Monsanto or are you referring
20 to the customers?

21 MR. KARAGANIS: No, I am referring to
22 Monsanto.

23 A. We had no control on any uses once it
24 leaves our plant gates.

1 BY MR. KARAGANIS:

2 Q. Excuse me.

3 The recognition here was that you were
4 getting out of -- you, Monsanto, when I use the
5 word you, I am talking about Monsanto -- that you
6 were getting out of the hydraulic fluids business
7 because you could not control its release; isn't
8 that right?

9 A. No.

10 None of us involved with hydraulic fluids
11 believed that that application could be controlled
12 adequately, the user as well as the supplier.

13 Q. Neither the supplier nor the user could
14 control the release, is that correct?

15 A. That's right.

16 Q. And that with respect to NCR, the sales
17 to NCR, what was the decision with respect to the
18 ability of the supplier and/or the user to
19 control?

20 A. There again, it was quite obvious that we
21 could not control the ultimate disposal of the
22 product and keep it out of the environment.

23 Q. So, when you say we there, this is a
24 combination of the supplier and the user; isn't

1 that right?

2 A. There is two types of users. There is
3 the person that makes the paper and then there is
4 the ultimate user like the bank teller.

5 Q. Yes.

6 A. So no one involved with that material.

7 Q. No one in the loop could control the
8 disposal; isn't that right?

9 A. That is correct.

10 Q. And as a matter of fact, as part of the
11 loop, you, being Monsanto, had a program where
12 you, Monsanto, could along with the user control
13 disposal; one of the elements was a recycle back
14 to Monsanto, was it not?

15 A. That is one of the options. But recycle
16 also implies Monsanto's customer has a recycling
17 system.

18 Q. There could be a customer recycle system?

19 A. Or Monsanto.

20 Q. Or Monsanto recycle system?

21 A. Yes.

22 Q. All right.

23 But part of controlling the loop or
24 closing the loop in some instances involved

1 Monsanto controlling the disposal and return to
2 Monsanto; isn't that right?

3 A. For a minor part of it.

4 Q. Now, as to plasticizers, your decision
5 there was that you, along with your customers,
6 could not control the disposal or release of pcb's
7 from the plasticizer market; isn't that right?

8 A. That is correct.

9 Q. Now, as to heat-transfer fluids and
10 transformer and capacitor dielectrics, the
11 decision there was to continue sales on the
12 premise that the loop could be controlled; isn't
13 that right?

14 A. Yes.

15 Q. And when we say the loop could be
16 controlled, it could be controlled by a
17 combination of the seller and the manufacturer and
18 the user; isn't that right?

19 A. Yes.

20 Q. Now, the deadlines that are contained in
21 the program, I am looking at the second page of
22 the two pages called the present plan, that is 560
23 and 561, you established a December 31, 1970
24 deadline on the capacitor industry, did you not?

1 A. Yes. That is shown.

2 Q. That deadline was to close the loop as
3 far as possible by December 31, 1970; isn't that
4 right?

5 A. That is one part of that sentence.

6 Q. As far as closing the loop goes?

7 A. Yes.

8 Q. The deadline was to close it as far as
9 possible by the end of 1970; is that right?

10 A. Yes.

11 Q. And you also had another program to
12 replace 1242 with what ultimately was called 1016;
13 isn't that right?

14 A. Right.

15 Q. So, would it be fair to say, directing
16 your attention back to the diagram that says the
17 closed loop, that for the capacitor industry by
18 the end of 1970, you hoped to -- you being
19 Monsanto -- hoped to close the loop as far as
20 possible from the standpoint of production, usage,
21 disposal and recycle; isn't that right?

22 A. Yes.

23 Q. Now, directing your attention to the
24 period, this is now May of 1970 is when this

1 decision was made; is that right?

2 A. Yes.

3 Q. What specifically did you do to close the
4 loop for the capacitor industry by the end of
5 1970, you being Monsanto?

6 A. Communication was the big activity.
7 Sharing Monsanto experiences with control with
8 customers. Offering an opportunity to our
9 customers to return unusable material to Monsanto,
10 where we would store it until the incinerator was
11 placed in service. That is all I can remember at
12 the moment.

13 Q. I am sorry. Let's go back over those.
14 One was information to customers. Two
15 was what?

16 A. I don't know what order I described them.
17 But another feature was offering our
18 customers the opportunity to ship to Monsanto
19 unusable pcb material, liquid material, for future
20 incineration.

21 Q. Well, as a matter of fact, as we
22 described the last time, sometimes it was
23 incinerated and sometimes you, Monsanto,
24 landfilled it; did you not?

1 A. We never landfilled liquid pcb's.

2 Q. Sometimes you landfilled materials that
3 weren't suitable for incineration; isn't that
4 right?

5 A. Solid material.

6 Q. From your customers?

7 A. Not from customers, no.

8 Q. For a while you had material that you
9 took back for distillation, did you not, before
10 you had it incinerated?

11 A. Yes.

12 Q. And is it your testimony that where that
13 material was not suitable for distillation, it was
14 never landfilled?

15 A. That is correct.

16 Q. It was stored?

17 A. That's right.

18 Q. Because it was your feeling that putting
19 liquid in landfills was not an appropriate
20 disposal mechanism; is that right?

21 A. That's right.

22 MR. KARAGANIS: Off the record.

23 (Discussion had off the record.)

24 Q. Directing your attention to Exhibit 77.

14 1 MR. FRUEHWALD: Those were in the first
2 deposition. I don't think I brought that.

3 (Whereupon a short recess was had.)

4 MR. KARAGANIS: Let's go back on the record.

5 Q. Directing your attention to what has been
6 marked as Bloomington Deposition Exhibit No. 77,
7 which is a sales contract with an acceptance date
8 of June 22, 1970.

9 Are you familiar with that document?

10 A. I have seen it before.

11 Q. Now, as part of the closing the loop
12 program, the contract term that is set forth
13 there, was that part of closing the loop, making
14 sure that there was a minimization of the release
15 of pcb's into the environment?

16 A. Yes.

17 Q. And who developed that strategy?

18 A. Which strategy are you talking about,
19 the --?

20 Q. The strategy of the contract terms that
21 would enable Monsanto to exercise some degree of
22 contract authority over the client's activities.

23 A. I don't know.

24 Q. It was somebody at Monsanto, was it not?

1 A. Yes.

2 Q. Was it ever discussed with you?

3 A. No.

4 Q. Was it ever discussed among this working
5 group, the people addressing the pcb problem?

6 A. Always. Many times, yes.

7 Q. The use of the contract, the use of the
8 contract term?

9 A. No.

10 Q. Directing your attention specifically to
11 the language that says that Monsanto can terminate
12 the contract. I am referring now to the language,
13 quote:

14 "Buyer agrees to use
15 its best efforts to prevent
16 such products from entering
17 into the environment through
18 spills, leakage, use,
19 disposal, vaporization or
20 otherwise. In the event
21 seller determines that, in
22 "order to prevent
23 contamination of the
24 environment, it is necessary

1 to discontinue the sale to
2 buyer of polychlorinated
3 biphenyls for the applications
4 contemplated by buyer, seller
5 may terminate this agreement
6 at any time by giving buyer at
7 least ninety days prior
8 written notice."

9 Now, was that language ever discussed in
10 your presence?

11 A. No.

12 Q. Was that concept ever discussed in your
13 presence, the idea of the seller terminating?

14 A. No.

15 Q. This contract clause just came from
16 somebody at Monsanto, and you don't know from
17 whom?

18 A. That is correct.

19 MR. FRUEHWALD: As was his prior testimony
20 when you asked him those questions a couple months
21 ago.

22 BY MR. KARAGANIS:

23 Q. You are saying that the June '70 contract
24 clause was not part of the program that was

1 reflected and approved by the corporate management
2 committee?

3 A. I am not saying that.

4 Q. Was it part of the program that was
5 approved by the corporate management committee in
6 May of 1970?

7 In May of 1970, you testified that the
8 corporate management committee adopted a program
9 for controlling pcb's. Isn't that correct?

10 A. That is correct.

11 Q. Now, was the contract clause that I have
12 shown you in Exhibit 77 part of that program?

13 A. Yes.

14 Q. Okay.

15 Now, had that contract clause concept
16 ever been presented to the management committee?

17 A. No.

18 Q. So it was a decision by someone below the
19 management, the specific use of a contract clause?

20 A. Yes.

21 Q. All right.

22 Who would that person have been?

23 A. Well, it could be any one of several
24 people. It could be Mr. Minckler, general manager

1 of the division. It could be Mr. Bergen, the
2 director of the business group, or it could be
3 let's see in 1970, it could have been Mr. Olson,
4 the director of marketing.

5 Q. Was there ever any discussion with you
6 regarding procedures for making the determination
7 as to whether the customer was preventing the
8 release of pcb's into the environment?

9 A. No.

10 Q. Directing your attention badge to 174,
11 Mr. Papageorge, in the last sentence of the last
12 full paragraph on page 0531 of that exhibit you,
13 Monsanto, and you as the author of this document
14 state, and I quote:

15 "We are deliberately
16 assuming an aggressive posture
17 and working closely with
18 customers, co-producers and
19 regulatory agencies to prevent
20 precipitous action."

21 What do you mean by "precipitous action"?

22 A. I am referring to action that reflects an
23 overreaction to misunderstandings, emotions and is
24 unwarranted, if compared to the facts that are

1 available.

2 Q. Was the precipitous action you were
3 concerned about a ban on the sale or use of pcb's?

4 A. The precipitous action varies with the
5 groups addressed. If a ban is considered, that,
6 of course, would affect the regulatory agencies
7 and their ability to create bans.

8 Q. Let's take the term ban. In effect, in
9 the plasticizer industry, you banned the use of
10 pcb's by refusing to sell it to the plasticizer
11 industry; isn't that right?

12 A. That is a definition of the word ban,
13 yes.

14 Q. And it is correct that you, by your
15 unilateral action, you being Monsanto, you
16 prevented the use or banned the use of pcb's in
17 the plasticizer industry by cutting off sales;
18 isn't that right?

19 A. Not really. They could still get it
20 imported or another company could start making it.
21 So it is not a true ban in that sense.

22 Q. It was a ban in the sense that nobody was
23 going to get Monsanto pcb's anymore; isn't that
24 right?

1 A. Correct.

2 Q. Now, directing your attention to page 2
3 of the memorandum, you state, and I am
4 paraphrasing the sentence, quote, "In those uses
5 where control of spillage and disposal can be
6 rigidly exercised," the manufacture of pcb's
7 should be continued.

8 I am directing your attention to the
9 third sentence on that page.

10 A. I see it.

11 Q. And directing your attention to the
12 second to the last sentence, quote, "Uses of
13 Aroclors which lead to environmental contamination
14 and cannot be controlled will be discontinued."

15 Do you see that sentence?

16 A. Yes, I do.

17 Q. So again, and you have described this
18 before, basically where the control of the
19 spillage and disposal can be, where it can be
20 controlled, you were going to continue the sale;
21 but where you couldn't control it, it was going to
22 be discontinued; isn't that right?

23 A. If you is a generic, applies to anybody
24 involved. That is your question, you used the

1 word you.

2 Q. How would Monsanto control the disposal
3 of pcb's in the capacitor industry for a customer
4 who was engaged in independent discriminate
5 dumping of pcb's?

6 A. Monsanto can't control it.

7 Q. Would Monsanto continue sale to such a
8 person?

9 A. Yes. Under certain conditions.

10 Q. If they were dumping all their waste pcb
11 down a sewer, without taking care to collect it
12 and send it back, the liquid pcb was going down a
13 sewer, would you continue sale under those
14 circumstances?

15 A. Yes. We would be forced to, I think. I
16 am not a lawyer, so I can't tell you all the
17 ramifications of indiscriminate discontinuation of
18 sales.

19 Q. Now, Mr. Papageorge, I am going to ask
20 you a hypothetical question.

21 If you found that a customer of
22 dielectric pcb's instead of sending liquid pcb's
23 off for storage and/or incineration was depositing
24 those liquid pcb's into a landfill containing sink

1 holes or a gravel pit, would you continue to sell
2 pcb's to that customer under the terms of the
3 contract identified as Exhibit 77?

4 A. Yes.

5 Q. Even though that customer had available
6 to it storage and/or incineration?

7 A. I find it difficult to answer your
8 question because I did not have the authority
9 to --

10 Q. I am asking you now as the official
11 corporate representative of Monsanto, Mr.
12 Papageorge, would Monsanto continue --

13 A. Representing Monsanto in what matter,
14 sir?

15 Q. In this deposition, on all matters
16 covered in this deposition.

17 Would Monsanto continue to sell to a
18 customer pcb's under the terms of Deposition
19 Exhibit 77?

20 A. I don't know. I honestly don't know the
21 answer to that.

22 Q. You don't know the answer to that?

23 A. No. I don't.

24 Q. All right.

1 Mr. Papageorge, I am going to ask you to
2 assume that you have the decision-making
3 authority, whether to continue to sell to a
4 customer that you know is dumping liquid pcb's
5 into a landfill containing sink holes, instead of
6 sending them off for storage and disposal.

7 Would you continue to sell to that
8 customer under the terms of Exhibit 77?

9 MR. FRUEHWALD: This is a hypothetical?

10 MR. KARAGANIS: This is a hypothetical
11 question.

12 MR. FRUEHWALD: It doesn't follow the facts in
13 this case, but it is a hypothetical. Right.

14 A. I would need much more information than
15 you are able to give me in a short sentence.

16 I would need to know the true conditions
17 of that disposal site. Whether there would be any
18 migration of material.

19 BY MR. KARAGANIS:

20 Q. I am going to ask you to assume migration
21 of material.

22 A. Assume migration.

23 Then I would have to know what harm would
24 that migration create. Would it be contaminating

1 fish? Would it be contaminating drinking water?
2 I would have to know the effects of that
3 migration.

4 Q. So, Mr. Papageorge, if you were asked to
5 testify in this case, and again I am asking, let's
6 just take Monsanto, let's forget the customers for
7 a minute; would you as manager of environmental
8 control at Monsanto continue to dispose of liquid
9 pcb's in a landfilling containing sink holes in
10 lieu of the option of storage and incineration?

11 A. Monsanto would store and incinerate.

12 Q. It would not put it in sink holes, would
13 it, or put it in landfills containing sink holes,
14 isn't that right?

15 A. That is correct.

16 Q. It would not do so because that was
17 considered a risk to the environment; isn't that
18 right?

19 A. Yes.

20 Q. Now, as the official representative of
21 Monsanto in this deposition, you have testified
22 you don't know what Monsanto would do if a
23 customer were dumping in a landfill with sink
24 holes; isn't that right?

1 A. That is correct.

2 Q. And you personally, if you had the
3 authority to cut off a contract, cut off sales, do
4 not know whether you would cut off a contract with
5 a customer who was dumping liquid pcb's into a
6 landfill with sink holes?

7 A. It depends on the kinds of information I
8 am able to gather in a broad, very broad context
9 before I would take the action no more sales.

10 Q. All right.

11 Let me put the following hypothetical to
12 you, then.

13 Let's assume that the landfill contains
14 sink holes, is underlain by fractured limestone
15 geology, and that it is known to be leaking pcb's
16 into the groundwater.

17 Under those circumstances, would you
18 require the customer as a condition of sale to use
19 either storage and/or incineration in lieu of
20 dumping liquids?

21 A. I would strongly recommend that. I would
22 also I need to know is this groundwater brackish
23 water or does it have potential for use as potable
24 water.

1 Q. Assume that it has potential for use as
2 potable water. Would you still continue to allow
3 the customer to take pcb's from you and dispose of
4 them in such a landfill?

5 A. Only until I have exhausted all appeals
6 to the higher management of that company.

7 Q. And after you have exhausted all appeals
8 and higher management says we are going to
9 continue dumping there, what would you do?

10 A. Then I would seriously consider
11 terminating. That is a personal opinion.

12 Q. And if again, after all appeals, the
13 customer continued to dump, would you terminate,
14 as a personal opinion?

15 A. I would. Yes.

16 Q. Would you agree as a layman, as someone
17 who is familiar with the sales relationship of
18 Monsanto, I am not asking for a legal opinion, I
19 am asking for as part of your program, if Monsanto
20 found that a customer was failing to prevent
21 contamination of the environment, Monsanto had the
22 right to terminate, did it not?

23 MR. FRUEHWALD: I am going to interpose the
24 objection and instruct the witness not to answer.

1 You are asking him as a layman to give an
2 answer to a legal opinion question. He is not
3 qualified to do that and not to speak on behalf of
4 the company in that respect.

5 So I am going instruct the witness not to
6 answer and object to the question on the grounds
7 that it is asking a layman for legal opinion which
8 is beyond his capability to answer.

9 BY MR. KARAGANIS:

10 Q. Mr. Papageorge, without waiving the
11 question that has been instructed not to answer --
12 and we will deal with that in front of the court;
13 the jurors who will be in this case will not be
14 lawyers -- when you personally sell an item of
15 goods, be it a used car or a garage sale, the role
16 of seller and buyer doesn't necessarily involve a
17 lawyer, does it?

18 A. I involve attorneys personally.

19 Q. Let's put it to you this way. I asked
20 you who would have initiated the provision that
21 says we can terminate the sale of pcb's, we being
22 Monsanto; you indicated that it came from either
23 Mr. Minckler, Mr. Bergen, or who was the third?

24 A. And Mr. Olson.

1 Q. Mr. Olson.

2 A. Those were possibilities. There still
3 may be a party I didn't mention.

4 Q. None of those three gentlemen are layers,
5 is that correct?

6 A. That is correct.

7 Q. Now, from the perspective of the seller
8 of a product, as a seller would it not be correct
9 that the non-lawyers inside Monsanto believed they
10 had the right to terminate the sale of the product
11 if the customer did not control the release into
12 the environment?

13 MR. FRUEHWALD: I interpose an objection to
14 the question and instruct the witness not to
15 answer.

16 Mr. Papageorge has testified he has no
17 personal knowledge of discussions with anybody in
18 Monsanto about this termination clause or what
19 anybody else thought about it.

20 You are asking him for pure speculation
21 about other people's ideas, and that is improper,
22 and I am going to object.

23 MR. KARAGANIS: I will ask you to produce a
24 non-lawyer in the company who had knowledge of the

1 sales termination clause as to what they intended
2 and what they meant.

3 MR. FRUEHWALD: We have already produced Mr.
4 Gossage. He is the best person we have currently
5 employed by Monsanto who dealt with this.

6 You had your opportunity to question him
7 at length and you have done so. He was the person
8 who negotiated this thing after it was initially
9 proposed. You have asked the questions of that
10 person.

11 Mr. Papageorge is not the person for
12 those questions.

13 BY MR. KARAGANIS:

14 Q. Mr. Papageorge, directing your attention
15 to the first paragraph under objectives. Were you
16 the author of the first sentence in that
17 paragraph, this is in Exhibit 174?

18 A. No. I can't recall. But someone
19 contributed that thought and I included it in the
20 write up.

21 Q. The write up then became the official
22 position of the working group, did it not?

23 It was the adopted position of the
24 working group, was it not?

1 A. It was the recommendation of the working
2 group.

3 Q. So would it be fair to say, then, that
4 your approach to the pcb pollution problem, your
5 overall objective to the pcb pollution problem,
6 was to prevent the problem from affecting,
7 adversely affecting your return on investment
8 objectives?

9 A. And other things. Yes.

10 Q. And subsidiary objectives listed on page
11 2 and page 3 included offering assistance to
12 customers on reclamation, substitute products and
13 proper disposal; is that correct?

14 A. Yes.

15 Q. And another subsidiary objective was to
16 determine the effect of pcb's on humans; is that
17 correct?

18 A. Yes.

19 Q. And how was the effect of pcb's on humans
20 determined?

21 A. An assessment of the medical records of
22 our employees who had been exposed to these
23 materials for years and years.

24 Q. Was the effect of pcb's on humans also

1 determined by means of animal studies?

2 A. Yes. Not so much the effect on humans,
3 but the potential effect.

4 Q. The health risk?

5 A. The risk involved, extrapolating animal
6 data which was accumulating and predicting how it
7 might affect humans.

8 Q. That is in part because if you have a
9 suspected toxin or carcinogen, it is normal
10 research practice to inject them into test animals
11 as opposed to humans; isn't that right?

12 A. Yes.

13 Q. Off the record.

14 (Discussion had off the record.)

15 Back on the record.

16 Mr. Papageorge, we talked in the last
17 deposition about plant visits that you had to the
18 Bloomington plant and other Westinghouse
19 facilities after the pollution control program had
20 been established by the corporate management
21 committee.

22 Do you recall those discussions?

23 A. Yes.

24 Q. And I believe we identified in Exhibit

1 125, do you have that, Exhibit 125, that you had
2 visited the Bloomington facility on July 22, 1970.

3 Do you recall that?

4 A. Yes.

5 Q. And I believe at that time you had
6 inspected the Bloomington facilities with regard
7 to how they handled pcb's and made recommendations
8 regarding the clean up; is that right?

9 A. Yes.

10 Q. I believe I have asked you this, but I
11 will ask it again.

12 Do you have any recollection of following
13 up with correspondence to the Bloomington plant
14 regarding the clean up?

15 A. I recall that question and I do not
16 recall whether -- I had intentions of following up
17 with correspondence. I don't recall that I did
18 so.

19 Q. Were you ever shown such correspondence
20 in preparing for this deposition?

21 A. No.

22 Q. Now, again, my recollection is that apart
23 from the July 22 meeting, you didn't have
24 recollection of any subsequent inspection of the

1 plant or discussion of pollution control at the
2 Bloomington plant; is that correct?

3 A. That's correct.

4 Q. Now, I want to direct your attention to
5 the period of November 1970. I am sorry. Let's
6 go back to July.

7 The visit to the Bloomington plant in
8 July was part of a kind of a round-robin tour of
9 other Westinghouse facilities, was it not. You
10 also went to South Boston?

11 A. Yes.

12 Q. You made recommendations there as well;
13 is that correct?

14 A. Yes.

15 Q. Do you recall making a similar
16 round-robin tour in November of 1970?

17 A. I was making plant tours throughout most
18 of 1970. When you say similar, are you talking
19 again back to Westinghouse?

20 Q. Back to Westinghouse, the three plants.

21 A. No. I didn't do that.

22 Q. Directing your attention to 132, Exhibit
23 132, which says Monsanto personnel associated
24 within Inerteen control are visiting Westinghouse

1 on Tuesday, November 10. They wish to tour the
2 F 30 area and see control conditions at
3 Bloomington.

4 Does that refresh your recollection with
5 respect to a visit?

6 A. Yes. There were other Monsanto people
7 that did go back to the Westinghouse plants. I
8 was not included in that.

9 Q. Would you mark the following document as
10 132 A.

11 (The document above-referred to
12 was marked Bloomington Deposition
13 Exhibit No. 132-A for
14 identification.)

15 For the record, Exhibit 132 A is a set of
16 handwritten notes produced by Westinghouse
17 reflecting a visit to the Bloomington facility.
18 It indicates, I apologize for the quality of the
19 text, that Mr. Papageorge and Mr. Graham and Mr.
20 Benignus visited plant on 11/10/70. I would show
21 you 132 A.

22 MR. FRUEHWALD: Where are you reading that
23 description, Joe?

24 MR. KARAGANIS: The visit?

1 MR. FRUEHWALD: Yes.

2 MR. KARAGANIS: The names Papageorge, Graham
3 Benignus are on the front of the cover. There is
4 a card with Randall Graham's business card on the
5 second cover, or on the second page. There are
6 notes with respect to running a carbon filtration
7 system.

8 There is a third page which says Monsanto
9 then it has tower clay system. There is a fourth
10 page with respect to vapors and water effluent
11 indicating facilities at Sauget, Illinois. There
12 is a reference to Randall Graham and Tom Gossage.
13 Reference to 1232 is still a pollution problem.
14 Last page also references Monsanto visit and it
15 talks about a proposed article by Papageorge in
16 Electrical World in September 1970.

17 MR. FRUEHWALD: I see those type of things,
18 but you represented there was something about a
19 visit. Does this document indicate a visit by
20 Papageorge on November 10th? I didn't see the
21 language which indicated that.

22 I see Gossage and Graham being referred
23 to as having been there.

24 MR. KARAGANIS: There is a reference on the

1 top, on the first page to Papageorge, Graham and
2 Benignus.

3 MR. FRUEHWALD: All right. That is what you
4 are referring to. I was unable to determine what
5 the introduction to that was.

6 MR. KARAGANIS: Yes.

7 MR. FRUEHWALD: What is the question?

8 BY MR. KARAGANIS:

9 Q. To the best of your recollection, you
10 were not at Bloomington in November of 1970; is
11 that right?

12 A. That is correct.

13 Q. Do you recall going to the other
14 Westinghouse facilities in November of 1970?

15 A. I did not go to the producing plants at
16 that time of the year. I may have gone in to
17 Pittsburgh at about that time.

18 Q. I am going to close off this area of
19 questioning. I may have asked you this
20 previously.

21 Mr. Papageorge, assuming you were not on
22 the visit, directing your attention to the
23 November 10 visit, 132 A, there is discussion in
24 those notes, is there not, of a carbon filtration

1 system for water effluent?

2 A. I see the word carbon written here. And
3 there is a sample sketch, then the note again
4 carbon or sand.

5 Q. The references to carbon or sand are
6 based on your knowledge referencing carbon or sand
7 filtration, are they not?

8 A. It is more than adsorption, yes.

9 Q. Adsorption to a filter bed made up of
10 either carbon or sand, right?

11 A. Yes.

12 Q. The reference to 10 parts per billion in
13 132 A, that's the same 10 parts per billion that
14 you were talking about in your corporate
15 management report, right?

16 A. That is the target concentration, yes.

17 Q. That was the target concentration
18 established by the corporate management committee
19 at Monsanto; is that correct?

20 A. Accepted by the management committee.
21 Established by Monsanto's technical people.

22 Q. So that is what Monsanto was telling
23 Westinghouse in the visit of 11/10/70; is that
24 right?

1 A. It seems so from these notes.

2 Q. Now, again to avoid confusion and keep
3 with the timeframe, would you mark the next
4 document as 132 B.

5 Let me identify 132 B as a letter dated
6 November 23, 1970 from Papageorge to Kelly.

7 (The document above-referred to
8 was marked Bloomington Deposition
9 Exhibit No. 132-B for
10 identification.)

11 Mr. Papageorge, do you recall writing
12 Exhibit 132 B?

13 A. Yes, I do.

14 MR. KARAGANIS: I would ask, I believe I have
15 requested this before, it may be in the package,
16 is the set of instructions or recommendations
17 referred to in 132 B.

18 MR. FRUEHWALD: Right. We produced those for
19 you after your last deposition by letter. We
20 identified those. I sent them up by letter. I am
21 sure I have done that.

22 I have another copy with me, if you want
23 it.

24 MR. KARAGANIS: Yes, I would like a copy and

1 we can mark it.

2 So there is no confusion, Mike, on our
3 part, do you have a list of the transmittals you
4 have made to us and documents?

5 MR. FRUEHWALD: I don't have a list, I have
6 copies of my transmittal letters back home.

7 MR. KARAGANIS: Would you be kind enough to
8 send us up a set of your transmittal copies.
9 Because I don't want to be arguing that we haven't
10 received documents that we have received.
11 Conversely, I want to make sure if we demand
12 documents that they have been produced.

13 MR. FRUEHWALD: There are many documents that
14 were requested several years ago that were
15 collected and never looked at. This was one of
16 them that we figured was important to Mr.
17 Papageorge's deposition. So we went ahead and
18 sent it to you for that purpose.

19 I said there are other documents that
20 were collected long ago that you have never been
21 down to look at. We did send that one.

22 MR. KARAGANIS: I will be honest with you,
23 other than being handed a copy of the management
24 committee reports at the beginning of Mr.

1 Gossage's deposition, I don't recall being sent
2 any documents relative to the Papageorge
3 deposition.

4 Mark this as 132 C.

5 (The document above-referred to
6 was marked Bloomington Deposition
7 Exhibit No. 132-C for
8 identification.)

9 Q. Directing your attention to Exhibit
10 132 C, is 132 C the attachment to 132 B?

11 A. Yes.

12 Q. And who prepared 132 C?

13 A. I did.

14 Q. And was that prepared with anybody's
15 assistance or was that basically your engineering
16 and technical work-up?

17 A. This represents my thinking on the
18 subject.

19 Q. And it is your thinking as of November
20 23, 1970; is that right?

21 A. Yes.

22 Q. Now, again, just from the standpoint of
23 dates and times, directing your attention to these
24 recommendations, liquid control, the concept of

1 curbing and proper drainage to avoid release into
2 the sewers, calling for collection. That is what
3 you were talking about, were you not, curbing and
4 collection?

5 A. Yes.

6 Q. That is a technology that didn't come
7 forth full-blown in 1970, that could have been
8 done many years previously, could it not?

9 A. Yes.

10 Q. It is a technology, the concept of
11 building curbs and drainage has been around well
12 before the turn of the century; isn't that right?

13 A. It's been available. Yes.

14 Q. Now, the concept on page 2, you mention
15 pcb's are present in wastewater streams, the
16 streams must be treated prior to release. You
17 talk about detergent emulsions must be broken,
18 free pcb must be removed after phase separation,
19 dissolved pcb can be reduced by adsorption.

20 You say "absorption," is it adsorption?

21 A. It is really a "d".

22 Q. A "d".

23 A. It is a surface phenomenon.

24 Q. So that the term "absorption" here is

1 something that I usually do which is mix the two
2 up?

3 A. Right.

4 MR. FRUEHWALD: It is a rough draft.

5 BY MR. KARAGANIS:

6 Q. So it should be adsorption on
7 activated-carbon?

8 A. Yes.

9 Q. Your recommendation for treatment of
10 wastestreams containing soluble pcb's was
11 adsorption on activated-carbon, was it not?

12 A. That is an approach. Right.

13 Q. That was your recommendation, was it not?

14 A. If you will note, those are suggestions
15 and guidelines. They are not hard
16 recommendations.

17 Q. They were suggestions of yours, your
18 personal technical suggestions for control of
19 pcb's, were they not?

20 A. To be considered as each reader of that
21 document considers his local conditions.

22 There may be other circumstances at each
23 site that would not lend themselves to following
24 many of those suggestions. So it is a starting

1 point.

2 Q. Let's go back to the liquids.

3 The idea of curbing and collection as
4 opposed to letting it leak out of a drain could be
5 employed virtually anywhere, could it not?

6 A. Could be. Yes.

7 Q. It is technically feasible to employ
8 curbing and drainage in any location, is it not?

9 A. Sure.

10 Q. So it is a choice whether or not to put
11 it in; isn't that right?

12 A. Yes.

13 Q. Your recommendation was to put it in
14 rather than let it go out into the environment,
15 was it not?

16 A. Right.

17 Q. Just by way of background, under no
18 circumstances were your recommendations that
19 liquids be taken to landfills; is that right?

20 A. That's right.

21 Q. You were strongly recommending against
22 liquids going to landfills; is that right?

23 A. Yes.

24 Q. Your concept was that liquids should be

1 stored or incinerated; isn't that right?

2 A. Or recycled.

3 Q. Or recycled.

4 Which would have meant distillation and
5 use of the product again?

6 A. Or use it in, well, at that point in time
7 it had to be distillation. Yes.

8 Q. But under no circumstances was the waste
9 liquid supposed to go to a landfill; is that
10 right?

11 A. That was my belief. It still is.

12 Q. Again, the concept of avoiding sending
13 liquids to the landfill was not a new technology,
14 you could have done that many years previous to
15 this time; isn't that right?

16 A. Well, that could be said for all of those
17 statements.

18 Q. For all of the recommendations?

19 A. All those recommendations. It is a
20 matter of awareness for the need to apply these
21 actions.

22 Q. So all of corrective actions that are in
23 Exhibit 132 C were not limited to the year 1970
24 and beyond, they could have technically been

1 applied many years previously; isn't that right?

2 A. Certainly.

3 MR. KARAGANIS: I am going to break here and
4 let you go on.

5 MR. MC DONNELL: Okay.

6 (Discussion had off the record.)

7 DIRECT EXAMINATION

8 BY MR. MC CONNELL:

9 Q. Now, before I had marked a document as
10 291 and it appears now that there is a second page
11 to that document, so I put them together.

12 291 is a two-page report dated September
13 29, 1971 and it is signed on the second page by
14 Dr. Ward Richter, reference IBT B 729.

15 And I would ask if you saw that report
16 before?

17 A. I had not seen this before.

18 Q. Okay.

19 Showing you again Exhibit 293, which is
20 another pathology report of one page by Dr.
21 Richter on the same study, I will ask you to
22 compare those and tell me if it appears that those
23 are two reviews of two separate sets of slides
24 from the same study?

1 MR. FRUEHWALD: Do you expect that Mr.
2 Papageorge is going to have some insight into this
3 that the rest of us do not from reading the
4 documents? Is that what you are saying? If they
5 are there, I don't know how Mr. Papageorge would
6 know that.

7 MR. MC CONNELL: I don't either. But if he
8 doesn't know, he can tell me.

9 MR. FRUEHWALD: All right. A lot of these
10 questions seem to be asking a person who has no
11 reasonable basis for knowing and as a result seem
12 to be a useless exercise.

13 A. I have not seen either document. But the
14 one dated October 10 does start off with reference
15 to additional series of tissues from the same
16 study.

17 BY MR. MC CONNELL:

18 Q. Did anyone at either Monsanto or
19 Industrial Bio-Test discuss with you the plan or a
20 plan in the context of the rat studies to have a
21 second set of slides made up for pathology review
22 of the rat livers?

23 A. No.

24 Q. Did the reports that you received on the

1 rat studies, either copies of the Industrial
2 Bio-Test test reports or the Monsanto summary
3 reports that were passed to you, reflect that
4 there had been two sets of slides reviewed by
5 pathologists in the rats study?

6 A. No.

7 Q. Showing you what you has been marked as
8 Exhibit 305, which is an undated -- I guess it is
9 undated. Anyway it is a one-page memo or note
10 handwritten document from Dr. Fancher to Dr.
11 Keplinger, reference IBT C 7299.

12 I will ask if you have ever seen that
13 before?

14 (The document above-referred to
15 was marked Bloomington Deposition
16 Exhibit No. 305 for identification.)

17 A. I have not seen this report before.

18 Q. Did Dr. Fancher ever discuss with you his
19 information that is reflected on Exhibit 305 that
20 weight gain data for UC females do not agree with
21 data for the same animals in other reports?

22 A. No, he did not.

23 Q. Did anyone else at Industrial Bio-Test or
24 Monsanto ever discuss that apparent disagreement

1 with you?

2 A. No.

3 Q. Did Dr. Fancher ever discuss with you the
4 next statement which is on Exhibit 305:

5 "It is difficult not
6 to conclude that there may
7 be an affect on body weights
8 for T-III males and T-II and
9 T-III females with 1254 and
10 T-III males and females with.
11 1260."?

12 A. No.

13 Q. Did anyone else at Monsanto or Industrial
14 Bio-Test ever discuss that with you?

15 A. No.

16 Q. Did Dr. Fancher ever discuss with you the
17 statement on Exhibit 305:

18 "I question whether
19 one has the right to discount
20 animals that show low gains
21 particularly T-II or T-III
22 animals."?

23 A. Was the first part of your question did
24 anyone discuss?

1 Q. Did Dr. Fancher in particular ever
2 discuss that with you?

3 A. No.

4 Q. Did anyone at Bio-Test or Monsanto ever
5 discuss that with you?

6 A. No. These are discussions now?

7 Q. Right.

8 A. As distinguished from a summary report?

9 Q. Right.

10 A. That is handed to me?

11 Q. Right.

12 A. All right.

13 Q. Did anybody in a document ever convey to
14 you the thought that Dr. Fancher disagreed with
15 any of the conclusions or opinions that were
16 stated in the report on C 7299?

17 A. No.

18 Q. Okay.

19 Did anybody in a written report of any
20 kind ever convey to you the thought that Dr.
21 Fancher disagreed with any of the conclusions that
22 were drawn in any of the Industrial Bio-Test
23 studies?

24 A. No.

1 Q. Okay.

2 Did anybody in a discussion ever convey
3 to you the thought that Dr. Fancher disagreed with
4 any of the Bio-Test study conclusions or opinions?

5 A. No.

6 Q. Okay.

7 Is it a fact, as reflected in Exhibit
8 305, that nothing is said anywhere in the report
9 of study C 7229 about recover periods?

10 MR. FRUEHWALD: Why don't we just look at the
11 record to be able to tell that, rather than asking
12 Mr. Papageorge to recall fifteen years ago what a
13 multi-page document said.

14 We do not know whether this handwritten
15 document is before or after the final report
16 submitted. We don't know anything about how this
17 relates to what report in particular.

18 So I think it is ununfair to ask Mr.
19 Papageorge to recall fifteen years ago a
20 multi-page document which you probably have
21 somewhere in your office here to -- that will
22 actually give the answer to that question.

23 MR. MC CONNELL: Okay.

24 Q. Let's look at Exhibit 306 which is a

1 letter dated December 17, 1971, appears to be in
2 Dr. Fancher's handwriting, consisting of one page.
3 Signed Otis, addressed to, "Dear Don."

4 (The document above-referred to
5 was marked Bloomington Deposition
6 Exhibit No. 306 for identification.)

7 Have you ever seen that before?

8 A. I have not seen it before.

9 Q. I don't recall if I asked you.

10 Did you ever have occasion yourself on
11 any of the times that you were at Industrial
12 Bio-Test to review any of the underlying data in
13 any of these study reports?

14 A. Some of that data was used in some of the
15 formal presentations made to Monsanto people and I
16 was present.

17 Q. So you reviewed it in the sense that
18 whatever they selected to use in their
19 presentation was what you saw?

20 A. Yes.

21 Q. You weren't going through their files
22 spot checking the underlying lab work that went
23 into these studies?

24 A. I did not do so, no.

1 Q. Did you know in December of 1971 that
2 there were plans to publish some of these Aroclor
3 animal studies by Industrial Bio-Test in
4 scientific journals?

5 A. Yes.

6 Q. When were you first told about that?

7 A. At about that time, on or about the dates
8 we have mentioned.

9 Q. Okay.

10 Who told you?

11 A. Elmer Wheeler.

12 Q. Did he say what the purpose was for that
13 publication?

14 A. I don't know that a purpose was
15 mentioned. I don't recall.

16 Q. Is that another way of communicating this
17 information or sharing it with other people who
18 might be interested in the findings?

19 A. Yes.

20 Q. Okay.

21 Was it your understanding when you were
22 told that the studies were to be published that
23 they would be published over the names of
24 Industrial Bio-Test scientists who actually worked

1 on the studies, rather than Monsanto scientists?

2 A. My understanding was that Mr. Wheeler's
3 name would also appear and perhaps Dr. Levinskas.
4 It was not very clear at the time exactly. But
5 some Monsanto people would also be listed as
6 authors.

7 Q. Have you ever authored a scientific or
8 professional engineering study for a publication?

9 A. No.

10 Q. Are you familiar with the process of peer
11 review that those manuscripts go through before
12 their being published?

13 A. Yes.

14 Q. If Dr. Levinskas or Mr. Wheeler were to
15 appear as an author, listed as an author in a
16 published study, would it be expected that they
17 would be familiar not only with the report but
18 with the underlying data?

19 A. Yes.

20 Q. Was it ever brought to your attention
21 that weight data for chickens in J 8746 were
22 unable to be located?

23 A. No.

24 Q. Okay.

1 Take a look at Exhibit 307, which is a
2 one-page letter from Dr. Fancher to "Dear Don,"
3 December 21, 1971.

4 Have you ever seen that letter before?

5 (The document above-referred to
6 was marked Bloomington Deposition
7 Exhibit No. 307 for identification.)

8 A. No, I have not seen this before.

9 Q. Under the heading on that page errors
10 found, the first listing is page 74, control
11 figures don't add up.

12 During the course of your involvement
13 with pcb's and Monsanto and your work with
14 Industrial Bio-Test on these studies, did anybody
15 ever call to your attention to the fact that the
16 numbers of animals shown in the reports didn't
17 agree from one part of the report to another?

18 A. No.

19 Q. Do you know whether any of these
20 handwritten documents that we have shown you in
21 the course of this deposition by Dr. Fancher were
22 made available to Booz, Allen and Hamilton in the
23 course of their audit of the Industrial Bio-Test
24 pcb studies?

1 A. I do not know.

2 Q. Were the chicken studies done at
3 Industrial Bio-Test in Northbrook or were they
4 done at another location, if you know?

5 A. They were done at another location.

6 Q. That was called the Wedge's Creek
7 Research Farm?

8 A. Yes. In Wisconsin.

9 Q. In Wisconsin.

10 Q. Take a look at Exhibit 308, which is a
11 one-page letter dated December 22, 1971 to Dr.
12 Fancher from Donald H. Jenkins. Have you ever
13 seen that document?

14 (The document above-referred to
15 was marked Bloomington Deposition
16 Exhibit No. 308 for identification.)

17 A. I have not.

18 Q. Do you have any knowledge of what Mr.
19 Jenkins, the author of the document, is referring
20 to in the statement in the next to the last
21 paragraph, "I had hoped this snake wouldn't be
22 exhumed"?

23 A. No, I do not.

24 MR. FRUEHWALD: Let me also indicate

1 apparently Mr. Jenkin's first name is Don. So we
2 had a previous speculation as to who the Don was
3 in some of these letters and we speculated it was
4 Dr. Richter.

5 MR. MC CONNELL: Dr. Gordon.

6 A. Dr. Gordon, there is another Don.

7 MR. MC CONNELL: There is another Don.

8 Q. It could be Don Jenkins.

9 Did you know Don Jenkins?

10 A. No.

11 Q. Okay.

12 Do you know what Don Jenkins is referring
13 to in Exhibit 308 when he says, "The conduct of
14 this project (J 7300) finally led to the demise of
15 Jim Stevens"?

16 A. I do not.

17 Q. Do you know who Jim Stevens was?

18 A. No.

19 Q. Did anybody ever convey to you the ideas
20 Mr. Jenkins writes in Exhibit 308 that he, that
21 is, Dr. Jenkins, was not happy with the way the J
22 7300 study was done?

23 A. No one conveyed that to me, no.

24 Q. On the occasions when you would visit

1 Industrial Bio-Test in the company of other
2 Monsanto employees who working on these studies,
3 were you ever there at the same time as Mr.
4 Wheeler was?

5 A. Yes. Everytime.

6 Q. Okay.

7 Were you ever there at a time when Dr.
8 Levinskas was also present?

9 A. I don't recall whether Dr. Levinskas
10 joined us on any of those visits.

11 Q. Okay.

12 On any occasion when you were at -- well,
13 let me back up one step.

14 Did you ever visit any Industrial
15 Bio-Test facility other than the one in
16 Northbrook, Illinois?

17 A. No.

18 Q. Okay.

19 On any of the occasions --

20 A. Correction.

21 Q. Okay.

22 A. That answer relates to pcb's studies
23 only.

24 Q. Okay.

1 You had been to their other facilities in
2 connection with some work on other products?

3 A. Yes.

4 Q. Had you ever been to the Wedge's Creek
5 Research Farm?

6 A. No.

7 Q. Okay.

8 What other facility had you visited?

9 A. They had a facility in Decatur, Illinois.

10 Q. Is that also a chicken facility?

11 A. Yes, poultry.

12 Q. Chickens and ducks, other birds of that
13 nature?

14 A. Yes.

15 Q. All right.

16 That was not in connection with pcb's?

17 A. That's correct.

18 Q. On any of the occasions when you visited
19 the Industrial Bio-Test facility in Northbrook and
20 toured through the research facility rather than
21 just sitting in an office, listening to a
22 presentation, did anyone else from Monsanto ever
23 point out anything to you as raising in their mind
24 problems with the way the research was being

1 conducted or things that needed to be corrected in
2 order to get the studies back on track?

3 A. No.

4 Correction. It was pointed out to me
5 that the fish studies were not being conducted
6 quickly enough, adequately.

7 I recall being shown a room which was
8 designated for this study in which equipment had
9 been accumulated, and I was told that this would
10 be the site for the fish studies. And Mr. Wheeler
11 expressed disappointment that nothing had been
12 accomplished yet.

13 Q. He didn't point to any specific thing and
14 say this is the source of the problem why we
15 haven't finished the fish study?

16 A. No.

17 Q. To your knowledge there never was a
18 successfully completed fish study by Industrial
19 Bio-Test?

20 A. No.

21 Q. Exhibit 309 is a letter dated December
22 28, 1971 to Dr. Fancher signed regards, but no
23 name. And there is a handwritten indication on it
24 that it came from file J 8746.

1 I will ask you if you you have ever seen
2 that document?

3 (The documents above-referred to
4 were marked Bloomington Deposition
5 Exhibit Nos. 309 and 310 for
6 identification.)

7 A. I have not seen this document.

8 Q. What was the interest, the reason, if you
9 know, for the interest in measuring the specific
10 gravity of the chicken eggs?

11 A. I don't know.

12 Q. Was that part of the reproduction study?

13 A. I would assume so.

14 Q. Exhibit 310 is a undated -- no, it is
15 not, it is dated 12/29/71, it comes from the file
16 on J 900. And it includes the statement these
17 birds were wormed on December 22, with a feed
18 additive, vaccinated for Marek's.

19 Do you know if there is any reason why
20 birds used in the Industrial Bio-Test studies
21 before that date were not vaccinated for Marek's
22 disease?

23 A. I do not.

24 Q. I believe it was your previous testimony

1 that until this portion of your deposition you
2 hadn't heard any mention of Marek's disease in the
3 chickens that were used in these studies?

4 A. That is correct.

5 Q. Exhibit 311 is a letter dated December
6 29, 1971 from Dr. Raymond Loan to Donald Jenkins.

7 Have you ever seen that?

8 (The document above-referred to
9 was marked Bloomington Deposition
10 Exhibit No. 311 for identification.)

11 A. I have not seen this before.

12 Q. Do you know why it was that industrial
13 Bio-Test had to go outside for information on
14 Marek's disease in their chickens?

15 A. I do not.

16 Q. I am going to show you what has been
17 marked as Exhibit 312, which is a letter,
18 handwritten letter of two pages dated January 14,
19 1972 from Dr. Fancher to "Dear Don" on Industrial
20 Bio-Test letterhead. And it is marked in
21 handwriting J 7300.

22 I will ask you if you have ever seen
23 that?

24

1 (The document above-referred to
2 was marked Bloomington Deposition
3 Exhibit No. 312 for identification.)

4 A. I have not seen this before.

5 Q. Okay.

6 As the person who was passing on reports
7 of these studies or summaries of these Industrial
8 Bio-Test animal studies to Westinghouse customers,
9 would it have been important to you to know in
10 January of 1972 that Dr. Fancher had a notion, as
11 he refers to in the first paragraph of the letter,
12 that much of the data are either fudged or
13 collected with carelessness or incompetence?

14 A. Yes. That would have been significant.

15 Q. Nobody ever told you that, did they?

16 A. No.

17 Q. Dr. Fancher didn't tell you?

18 A. No.

19 Q. Nobody at Monsanto told you?

20 A. No.

21 Q. If they had, would you have passed that
22 information along to the customers to whom you had
23 been supplying these progress reports as the
24 studies went on?

1 A. I would have established the impact on
2 the previous information I had relayed and if that
3 would have changed that information, I would have
4 informed the customers.

5 Q. If you had seen, okay.

6 I am sorry, were you finished?

7 A. If, however, inspite of these defects,
8 the conclusions were still valid, I would suggest
9 that not immediately, but eventually I would say
10 the data was sort of questionable, but the
11 conclusions are still valid.

12 Q. The data was questionable but the
13 conclusions are valid. Okay.

14 If you had seen this letter that has been
15 marked as 312 on or about the date it bears,
16 before you concluded whether or not to share that
17 information with your customers, you would have
18 wanted to talk to Dr. Fancher about it, wouldn't
19 you?

20 A. I would go to Mr. Wheeler.

21 Q. Okay.

22 A. It is Mr. Wheeler's responsibility to
23 talk to Dr. Fancher.

24 Q. Did you ever talk directly to Dr.

1 Fancher?

2 A. Only in group sessions.

3 Q. But you knew him and he knew you, and if
4 you picked up the phone and called Dr. Fancher, he
5 wouldn't have refused to take your call, would he?

6 A. No.

7 Q. Does it bother you as you sit here today
8 that you were handing out information on behalf of
9 Monsanto without knowing that one of the senior
10 scientists involved in the project thought the
11 data were fudged?

12 A. Yes.

13 Q. Did anyone ever share with you the
14 thought in the numbered paragraph 3 in Exhibit 312
15 that it is difficult not to conclude that chick
16 body weights at day one are adversely affected for
17 some treatment groups?

18 A. No one.

19 Q. Okay.

20 Or the thought as it goes on to say that
21 thirty days survival is generally lower for chicks
22 from treated groups?

23 A. No one talked with me.

24 Q. On about the middle of the second page of

1 Exhibit 312 there is a statement by Dr. Fancher in
2 his own handwriting:

3 "I am ashamed to
4 publish the work done in these
5 studies."

6 Did he ever tell you that?

7 A. No.

8 Q. Did anybody ever tell you that Dr.
9 Fancher was ashamed to publish the work done in
10 those studies?

11 A. No.

12 Q. Were they ultimately published?

13 A. No.

14 Q. They were submitted for publication but
15 they never got published, is that a fair synopsis
16 of the sequence of events?

17 A. I'm not aware that they were submitted to
18 any publication.

19 Q. Okay.

20 Did anybody ever share with you the idea
21 that is expressed by Dr. Fancher in the next
22 sentence of his letter?

23 "This is perhaps the
24 most significant of the

1 "Aroclor studies and some of
2 my conclusions are not in
3 agreement with those of the
4 reports (which I signed
5 without detailed analysis)."

6 A. No one discussed that with me, no.

7 Q. Would it have been important to you to
8 know that as you were passing along the
9 conclusions from these reported studies to the
10 customers?

11 A. Yes.

12 Q. He also states with respect to "my
13 conclusions are not in agreement..." "or with
14 statements which have been made by Kep --" I
15 presume that refers to Dr. Keplinger "-- and by
16 Monsanto in discussions with the FDA and
17 environmental groups."

18 Did anybody ever express to you the idea
19 that Dr. Fancher was in disagreement with
20 conclusions that Monsanto was advancing to the FDA
21 and environmental groups?

22 A. No.

23 Q. Would it have been important to you to
24 know that at or about the date of Exhibit 312?

1 A. Yes.

2 Q. What would you have done if you had known
3 that Dr. Fancher's opinions and conclusions about
4 the results of these studies, and in particular
5 the chicken study, were different from the
6 conclusions that Monsanto was using to support its
7 position with the Food and Drug Administration?

8 A. I would immediately go back to Mr.
9 Wheeler and Dr. Kelly and ask for total review.
10 And a rewriting, if necessary, of the summaries
11 that I had been giving to others.

12 Q. A review of the type that Booz, Allen and
13 Hamilton was ultimately called upon to do?

14 A. Since I don't know exactly what Booz,
15 Allen and Hamilton did, I am at a loss as to
16 comparing. But it had to be thorough enough to
17 convince Monsanto that the right information was
18 being shared with others.

19 Q. Okay.

20 That would at least involve going through
21 all of the raw data rather than just spot checking
22 it, would it not?

23 A. I don't know about all. But it would
24 have to be representative to pick up any defects.

1 Q. A thorough audit rather than a spot
2 check, whether that means looking at every entry
3 or not?

4 MR. FRUEHWALD: An audit involves usually spot
5 checking in an account sense. I am not sure those
6 are two different terms.

7 BY MR. MC CONNELL:

8 Q. Well, if you are looking at something
9 less than all the data, how do you decide how much
10 less than all the data to look at; particularly in
11 light of a senior scientist's statement that it
12 looks to him like it was phony?

13 A. I don't know what others would have done,
14 but I would have looked at enough data without
15 leaving any data gaps or date gaps to see what
16 patterns were being followed in the accumulation
17 of the data results reported.

18 Q. Okay.

19 When I see Exhibit 312 and Dr. Fancher
20 says he thinks the data were fudged, I take that
21 to mean he thinks that it was made up rather than
22 on the basis of actual observations. Is that the
23 same as your understanding?

24 A. That is my understanding of the word

1 fudged.

2 Q. Okay.

3 Exhibit 313 is a one-page letter dated
4 January 31, 1972 to Dr. Wheeler from J. C.
5 Calandra.

6 I will ask you if you have seen that
7 letter?

8 (The document above-referred to
9 was marked Bloomington Deposition
10 Exhibit No. 313 for identification.)

11 A. I don't recall seeing it.

12 Q. Do you know whether that report that is
13 referenced in that letter on the 90-day subacute
14 dog study on 10/16 was mailed to Monsanto or
15 whether it was handed to Mr. Wheeler?

16 A. I do not know.

17 Q. Presumably Mr. Wheeler would know that?

18 A. I am sorry?

19 Q. Mr. Wheeler would be the one who would be
20 able to answer that question?

21 A. I would think so. Yes.

22 MR. FRUEHWALD: If he has a 15-year memory of
23 such matters.

24

1 BY MR. MC CONNELL:

2 Q. Or Mr. Wheeler's files might tell us if
3 there is an envelope with the document.

4 Exhibit 314 is a one-page memo dated
5 February 1, 1972 from Keplinger to Dale Fletcher.

6 Do you know who Dale Fletcher was?

7 (The document above-referred to
8 was marked Bloomington Deposition
9 Exhibit No. 314 for identification.)

10 A. I have heard the name.

11 Q. Was he somebody who worked at Industrial
12 Bio-Test?

13 A. Yes.

14 Q. I will ask you if you have ever seen that
15 314 before?

16 A. I have not seen this before.

17 Q. Do you know whether there was ever a
18 problem at Industrial Bio-Test in measuring
19 specific gravity of eggs because of evaporation of
20 the test solutions that were used for the
21 measurements?

22 A. No, I do not.

23 Q. Does that Exhibit 314 suggest to you that
24 that they are trying to correct that sort of a

1 problem?

2 A. It is hard to tell from this document
3 whether a problem existed. I do sense a
4 precautionary statement, don't let it evaporate,
5 which says don't let it evaporate, which implies
6 that problems could have been experienced.

7 Q. Are you familiar with the techniques for
8 measuring specific gravity?

9 A. Yes.

10 Q. If you have a series of solutions of any
11 water solutions, of any particular substance that
12 you are using for that purpose, and you leave them
13 all uncovered, eventually all of those solutions
14 will evaporate to a concentration where they have
15 the same specific gravity; is that correct?

16 A. Well, this assumes you started with the
17 same materials, such as salt in water.

18 Q. I am assuming a series of solutions that
19 are made up to be 1.0, 1.1, 1.2, whatever, all
20 with the same solute.

21 A. Okay. Eventually they would all
22 evaporate to dryness. Some would have more solid
23 in them than others.

24 Q. Exhibit 315 is a letter from Dr.

1 Keplinger to Peggy Calvert of US Borax Research
2 Corporation dated February 22, 1972.

3 I will ask if you you have ever seen
4 that?

5 (The document above-referred to
6 was marked Bloomington Deposition
7 Exhibit No. 315 for identification.)

8 A. I have never seen this.

9 Q. It appears to me that Peggy Calvert was
10 asking for some information about the chicken
11 study or studies. And Dr. Keplinger writes back
12 and says you can't have it, it is proprietary, but
13 we are getting it ready for publication.

14 Do you know whether, since the study was
15 never published, Mrs. Calvert was ever provided
16 with copies of the Industrial Bio-Test reports on
17 that study?

18 A. I do not know.

19 Q. Do you have any knowledge of any kind
20 that would indicate why US Borax Research
21 Corporation would be interested in the effects of
22 pcb's on birds?

23 A. I do not.

24 Q. Did you ever receive any communications

1 from Peggy Calvert of US Borax regarding any of
2 these pcb animal studies?

3 A. I don't recall at this time.

4 Q. Was it your understanding in February,
5 January and February of 1972, that Monsanto
6 considered these studies to be proprietary?

7 A. Not in the sense that we would not share
8 them.

9 Q. In other words, if Peggy Calvert had
10 written to you at the same time, you would have
11 given her whatever you had given your other
12 customers up to that date on those studies?

13 A. As a minimum.

14 Q. As a minimum.

15 A. If she needed more, I would refer her to
16 Mr. Wheeler and then a further dialogue would have
17 taken place.

18 Q. Either Wheeler would have provided her
19 with additional information or perhaps referred
20 her back to IBT?

21 A. It is possible.

22 Q. 316 is a one-page memo dated May 16, 1972
23 from Keplinger to PLW, which I believe to be Paul
24 Wright.

1 I will ask if you have ever seen that?
2 (The document above-referred to
3 was marked Bloomington Deposition
4 Exhibit No. 316 for identification.)

5 A. I have never seen this.

6 Q. Why would Monsanto want to make advance
7 payment or receive advance billing on some of the
8 Industrial Bio-Test studies and not others, if you
9 know?

10 A. I do not know.

11 Q. Was there some effort to get a certain
12 amount of payments within the budget for one year,
13 even though the studies might not have been
14 completed, and then use next year's budget to pay
15 for other work, or would you know about that?

16 A. Some of that, I am aware of some of that
17 happening. I don't know the reasoning behind it.

18 Q. Could be like congress, they have
19 appropriated the money, if you don't spend it this
20 year, you get less next year.

21 Have you ever had that experience at
22 Monsanto?

23 A. I had that personally.

24 Q. That is one possible explanation for that

1 kind of advance billing on some things and not
2 others?

3 A. In my case, not for animal studies, but
4 where I have committed for a service, which is
5 going to cost Monsanto, it is encouraged that we
6 pay for it. Once we have made the commitment, we
7 have to pay for it.

8 Q. You mentioned that in connection with
9 service. Is that also done in connection with the
10 purchase of goods?

11 A. No. There we wait for the invoice.

12 Q. In your experience did the invoice arrive
13 usually before or usually after the goods?

14 A. After.

15 Q. What is the reason for the distinction
16 between goods and service in that regard, if you
17 know?

18 A. I do not.

19 Q. Exhibit 317 is a two-page letter dated
20 June 2, 1970 to Dr. Tucker from James B. Plank.

21 Have you ever seen that letter?

22 (The document above-referred to
23 was marked Bloomington Deposition
24 Exhibit No. 317 for identification.)

1 A. I haven't seen this before.

2 Q. Again this refers to the taking of pooled
3 samples from the chicken study in 1970.

4 Do you know if after the date of this
5 letter, June 2, 1970, there was ever the return to
6 the procedure of individual samples with respect
7 to chickens as to liver, muscle or kidney tissue?

8 A. No. There was no return.

9 Q. Okay.

10 Exhibit 318 is a letter in Elmer Wheeler
11 to Herbert Blumenthal dated June 16, 1972 and it
12 is stamped on the bottom received June 21, 1972.

13 I will ask you if you have ever seen
14 that?

15 (The document above-referred to
16 was marked Bloomington Deposition
17 Exhibit No. 318 for identification.)

18 A. I don't recall it.

19 Q. Do you know whether that letter and the
20 enclosures it refers to were mailed or delivered
21 to Dr. Blumenthal?

22 A. I do not know.

23 Q. Were some of the reports, either
24 Industrial Bio-Test study reports or the Monsanto

1 interim summaries of those reports, mailed by Mr.
2 Wheeler or others at Monsanto to the Food and Drug
3 Administration?

4 A. Both types on occasion have been mailed.
5 Summaries as well as reports.

6 Q. Mailed to the FDA; is that correct?

7 A. Yes.

8 Q. Exhibit 319 is a one-page letter dated
9 November 17, 1972 from Dr. Calandra to Elmer
10 Wheeler with an attached report consisting of 19
11 pages.

12 I will ask you if you have ever seen
13 either the letter or the report that is a attached
14 to it?

15 (The document above-referred to
16 was marked Bloomington Deposition
17 Exhibit No. 319 for identification.)

18 A. No..

19 Q. Exhibit 320 is a -- I didn't ask you
20 about 319.

21 Have you seen that before today?

22 A. I don't recall seeing this document.

23 Q. That Exhibit 319 at least suggests that
24 there was one set of fish studies that were

1 completed to the point where a final report was
2 made, does it not?

3 A. It appears so.

4 Q. At least as of November of 1972?

5 A. Yes.

6 Q. You were still in the pcb coordinator job
7 at that time, right?

8 A. Yes.

9 Q. Did you see anything in Exhibit 319 that
10 differed from the conclusions you are aware of
11 that other researchers were finding with respect
12 to fish?

13 A. No. I don't see anything that is
14 unexpected.

15 Q. Exhibit 320 is a letter dated May 4,
16 1973, one page, with a one-page enclosure to Dr.
17 Keplinger from George Levinskas.

18 Have you ever seen that before,

19 (The document above-referred to
20 was marked Bloomington Deposition
21 Exhibit No. 320 for identification.)

22 A. I have not seen this before.

23 Q. Were you aware in 1973 that there were
24 still some difficulties with reconciliation of

1 what samples had been sent to Dr. Tucker versus
2 the ones he had expected to receive?

3 A. Yes.

4 Q. Did that continue throughout the course
5 of these animal studies?

6 A. Yes.

7 Q. To your knowledge, did the type of
8 problem we see reflected in Exhibit 320 and some
9 of the earlier exhibits we have discussed
10 concerning the shipment of samples from Industrial
11 Bio-Test to Monsanto occur in the case of animal
12 studies on products other than pcb's or was it
13 just limited to the pcb studies?

14 A. This exhibit shows many products that are
15 not pcb's.

16 Q. Okay.

17 I wouldn't know. Which ones on the list
18 are pcb's?

19 A. The last two are pcb's.

20 Q. Aroclor 1221 and MCS 1016?

21 A. Yes, the others on page 2 of that
22 document are non-pcb's, not pcb's.

23 Q. They are chemical products, though,
24 rather than pharmaceuticals?

1 A. That is correct.

2 Q. Okay.

3 Q. Exhibit 321 is a letter dated April 3,
4 1975 from Dr. D. E. Gordon to George Levinskas and
5 I will ask you if you have ever seen that letter?

6 (The document above-referred to
7 was marked Bloomington Deposition
8 Exhibit No. 321 for identification.)

9 A. I have not seen this before.

10 Q. Okay.

11 That is another letter enclosing some
12 substitute pages for insertion in a report?

13 A. It appears to do so. Yes.

14 Q. Okay.

15 When such substitute pages were received
16 by Monsanto, were copies of the substitute pages
17 supplied to you for insertion in the reports that
18 you had in your files?

19 A. If it was revised pages for a final
20 report. Yes.

21 Q. You wouldn't see the report until it had
22 been put out by Bio-Test as a final report?

23 A. That is correct.

24 Q. Okay.

1 So you weren't one of the participants in
2 the exchange of drafts and revisions to reach the
3 so-called final report stage?

4 A. That is true.

5 Q. Exhibit 322 is a letter, a one-page
6 letter dated April 18, 1975 from Dr. Calandra to
7 Dr. Roush, R-o-u-s-h, and it has attached a memo
8 of five pages signed by Dr. Calandra, also dated
9 April 18, 1975.

10 Who is Dr. Roush?

11 (The document above-referred to
12 was marked Bloomington Deposition
13 Exhibit No. 322 for identification.)

14 A. Dr. Roush was Monsanto's medical
15 director, succeeding Dr. Kelly, who had retired.

16 Q. The cover page of Exhibit 322 shows that
17 you received a copy of this document and I will
18 show it to you and ask you if you recall receiving
19 a copy of the letter and the memo that is
20 attached?

21 A. I recall this set of documents.

22 Q. Were you a participant in the meeting
23 that is reflected in Exhibit 322?

24 A. Yes.

1 Q. Where was the meeting held?

2 A. In St. Louis.

3 Q. At Monsanto's offices?

4 A. Yes.

5 Q. Where in particular?

6 A. Dr. Roush's office.

7 Q. Okay.

8 Who was there as best you can recall?

9 A. Elmer Wheeler and Dr. George Levinskas,
10 Dr. Roush, Dr. Calandra and I.

11 Q. How long did the meeting last?

12 A. Oh, a couple, three hours, less than half
13 a day.

14 Q. Was anything discussed at the meeting
15 other than the IBT animal studies on pcb's?

16 A. We discussed what we understood Dr.
17 Kimbrough had reported.

18 Q. With respect to her animal studies?

19 A. Her studies, yes.

20 Q. Okay.

21 Was the meeting devoted to discussion of
22 work regarding any Monsanto product other than
23 pcb's?

24 A. No.

1 Q. So it was a pcb meeting?

2 A. Yes.

3 Q. Okay.

4 The covering letter from Dr. Calandra --

5 When was the meeting, by the way, do you
6 recall?

7 A. I don't recall. It is about that time.

8 Today.

9 Q. Today, it says presumably --

10 A. The date of the memo.

11 Q. The date of the letter, April 18, or
12 within a day or two, one way or the other?

13 A. Yes.

14 Q. To the best of your recollection.

15 In the covering letter Dr. Calandra says
16 and I quote:

17 "I fully appreciate
18 that the meeting on pcb's
19 today was not completely
20 satisfy and that many nagging
21 questions remain."

22 Was this meeting the first time that you
23 became aware that the situation with respect to
24 the IBT animal studies on pcb's was not entirely

1 satisfactory?

2 A. No. Not at this meeting, or any meeting.

3 Q. So are you telling me you don't agree
4 with the characterization in the letter?

5 MR. FRUEHWALD: The characterization in the
6 letter doesn't match your question.

7 The question says a meeting was not
8 satisfactory and you are saying the IBT studies
9 were not satisfactory.

10 BY MR. MC CONNELL:

11 Q. What was it about the meeting that was
12 unsatisfactory?

13 A. As I recall, Dr. Calandra was asked to
14 come to St. Louis and discuss with the Monsanto
15 representatives in the health medical field his
16 understanding of Dr. Kimbrough's findings and the
17 findings out of his own laboratory. And to try to
18 tutor the Monsanto people regarding the
19 differences in the interpretations that
20 pathologists were giving to what they are seeing
21 under the microscope.

22 So the nagging questions, at least as far
23 as I was concerned, was the one we had talked
24 about earlier, the interpretation of the

1 observations by different scientists of the same
2 slides.

3 Q. Or, in shorthand, whether what they were
4 seeing in the rat livers was cancer or not cancer?

5 A. That is it. Yes.

6 Q. That was the primary concern?

7 A. Yes.

8 Q. Because, of course, if pcb's were labeled
9 as a cancer-causing chemical, that was the end of
10 the road as far as Monsanto was concerned with
11 continued production of that product?

12 A. Probably.

13 Q. And at least as of the date of this
14 Exhibit, 322, as of that date at least Dr.
15 Kimbrough had reported her findings that there
16 were cancerous lesions in the rats that she was
17 working with and feeding pcb's?

18 A. Yes.

19 Q. Is that correct?

20 A. Yes.

21 Q. The covering letter on 322 says the
22 enclosed is a brief summary of my personal views
23 and I would appreciate any open and frank comments
24 that you all may have.

1 Did you make any comments at all back to
2 Calandra in response to the letter and enclosed
3 memorandum?

4 A. No.

5 Q. Do you know whether anyone else at
6 Monsanto did?

7 A. No.

8 Q. No, you don't know, or, no, they didn't?

9 A. I do not know.

10 Q. Okay.

11 The flaw is in my question, not your
12 answer.

13 Was there, as the letter suggests there
14 might be, any additional pathologists brought into
15 look at the either the Industrial Bio-Test slides
16 or Dr. Kimbrough's slides in an effort to resolve
17 the impasse?

18 A. Yes, that was discussed thoroughly.

19 Q. Was somebody else brought in?

20 A. I don't know.

21 Q. The letter closes with the statement it
22 is my feeling that we need to get together again
23 within the next few weeks to continue our
24 discussions.

1 Was there a meeting within a few weeks
2 after April 18, 1975?

3 A. There was another meeting. I have
4 forgotten the time span between meetings.

5 Q. That you attended?

6 A. Yes.

7 Q. Where was that second meeting?

8 A. St. Louis.

9 Q. Also in Dr. Roush's office?

10 A. The area near Dr. Roush's office.

11 Q. And were the same people in attendance?

12 A. Yes.

13 Q. How long did the second meeting last?

14 A. A little over half a day.

15 Q. To your knowledge, was there ever a memo
16 committed to writing by anyone about the second
17 meeting in the same sense that there is a memo
18 attached to Exhibit 322?

19 A. No. I don't recall any.

20 Q. You didn't make any written notes of that
21 second meeting?

22 A. No.

23 Q. As best you can recall, what was
24 discussed at the second meeting that was different

1 from what is summarized in the memo attached to
2 Exhibit 322?

3 A. The principal topic of discussion was
4 contacting of the appropriate federal agencies and
5 sharing with them Calandra's opinions and our
6 understanding of Dr. Kimbrough's work and how it
7 all appeared to Monsanto.

8 Q. Monsanto wanted to make sure that the
9 government had both sides of the story, not just
10 Dr. Kimbrough's side. Is that a fair statement?

11 A. That is fair.

12 Q. There had already been an attempt through
13 meetings or among Monsanto scientists, Dr.
14 Kimbrough and Industrial Bio-Test scientists, to
15 resolve it among themselves and they had not
16 succeeded?

17 A. Yes.

18 Q. Is that correct?

19 A. Yes.

20 Q. Let's break for lunch now that it is
21 here.

22 (Whereupon a short recess was
23 had.)

24

1 IN THE UNITED STATES DISTRICT COURT
2 SOUTHERN DISTRICT OF INDIANA
 INDIANAPOLIS DIVISION

3 THE CITY OF BLOOMINGTON, INDIANA;)
4 THE UTILITIES SERVICE BOARD OF)
5 BLOOMINGTON, INDIANA; and MONROE)
6 COUNTY, INDIANA,)

 Plaintiffs,)

 vs.)

Civ No.
IP 83-9-C

8 WESTINGHOUSE ELECTRIC CORPORATION,))
9 a Pennsylvania corporation; and)
10 MONSANTO COMPANY, a Delaware)
11 corporation,)

-----Defendants.-----)

12
13 The continued deposition of W. B. PAPAGEORGE,
14 called for examination by the Plaintiffs, pursuant
15 to notice and pursuant to the provisions of the
16 Federal Rules of Civil Procedure of the United
17 States District Courts, pertaining to the taking
18 of depositions for the purpose of discovery, taken
19 before Arnold N. Goldstine, a Notary Public and
20 Certified Shorthand Reporter within and for the
21 County of Cook and State of Illinois, at Three
22 First National Plaza, Chicago, Illinois, on
23 October 16, 1986, at the hour of 1:30 o'clock p.m.

1

2

APPEARANCES:

3

4

Mr. James G. McConnell
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-and-

8

9

Mr. Geoffrey M. Grodner
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10

11

12

appeared on behalf of the
Plaintiffs;

13

14

15

Mr. Michael R. Fruehwald
Barnes & Thornburg
1313 Merchants Bank Building
Indianapolis, Indiana 46204

16

17

appeared on behalf of Defendant
Monsanto Company.

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24

1 WILLIAM B. PAPAGEORGE,
2 having been previously duly sworn,
3 was examined and testified as follows:

4 DIRECT EXAMINATION (Continued)

5 BY MR. MC CONNELL:

6 Q. Returning to Exhibit 322, the second
7 page, which is the first page of the enclosed
8 memorandum, it leads off with a sentence:

9 "The central issue in
10 question is whether pcb's are
11 carcinogens or not."

12 Was that the central issue of the
13 meeting, or did you understand that to be the
14 central issue of the entire Industrial Bio-Test
15 research effort?

16 MR. FRUEHWALD: Back in '75?

17 MR. MC CONNELL: As of the date of that
18 meeting.

19 A. I can't apply this thought to the total
20 Industrial Bio-Test research effort. Because some
21 of the tests were not designed to address
22 carcinogenicity. But it does apply to parts of it.

23 Q. Okay.

24 So Monsanto as a company and the research

1 program they commissioned, they had Industrial
2 Bio-Test undertake with respect to pcb's, were
3 both concerned not only with carcinogens but also
4 possible adverse health effects from exposure to
5 pcb's?

6 A. Yes.

7 Q. And it was your understanding that
8 Industrial Bio-Test was to include in its reports
9 any findings of any kind of potential adverse
10 health effect, not just findings concerning
11 cancer?

12 A. That is correct.

13 Q. And that was true with respect to the
14 two-year rat oral toxicity study in particular?

15 A. Yes.

16 Q. That study was not limited solely to the
17 question of cancer?

18 A. That's right.

19 Q. Okay.

20 The memo goes on to say:

21 "The long-term
22 studies conducted at Bio-Test
23 indicate that the answer is
24 "no. Drs. Ward Richter and

1 Donovan Gordon are of this
2 opinion which is shared by M.
3 L. Keplinger and J. C.
4 Calandra."

5 All of the people mentioned in that first
6 paragraph are Industrial Bio-Test people; is that
7 correct?

8 A. That's correct.

9 Q. The memo goes on to discuss Dr.
10 Kimbrough's work, in the second paragraph. In the
11 third paragraph it refers to some studies of pcb
12 products manufactured by people other than
13 Monsanto, Kanechlor-300, -400 and -500. Those
14 were not Monsanto products?

15 A. That's right.

16 Q. Okay.

17 Is there some comparability, if you know,
18 between the Kanechlor series of products and the
19 Aroclor series of products in the sense, I mean we
20 know they are all pcb's.

21 My question is can you say that
22 Kanechlor-300 is equivalent to Aroclor something
23 or other, in the sense that they are essentially
24 the same mixture of the various components or do

1 you know the answer to that?

2 A. I wouldn't quite describe them as
3 equivalent in having the same components. But
4 they were equivalent in attempting to have the
5 same percentage chlorine.

6 Q. By weight?

7 A. By weight.

8 Q. Okay.

9 Differences in the manufacturing process
10 would lead to a different gas chromatograph
11 pattern even though the two mixtures had the same
12 percentage of chlorine by weight?

13 A. That is correct.

14 Q. Okay.

15 So research findings on the Kanechlor
16 products might not reach the same conclusions as
17 the same experiment done with the Aroclor product
18 with the same weight, percent chlorine by weight?

19 A. That is possible.

20 Q. That is possible.

21 Q. On page 2 of the memo, which is the third
22 page of Exhibit 322, in the second paragraph Dr.
23 Calandra goes on to say:

24 "The evidence to date

1 indicate that male rats are
2 more resistant than females to
3 the formation of nodular
4 hyperplasia as as well as
5 hepatocellular carcinoma.
6 Rats are also more resistant
7 to the induction of these
8 lesions than mice."

9 To your knowledge, did either Monsanto or
10 Industrial Bio-Test at any time go back to the raw
11 data that already existed with respect to the
12 Industrial Bio-Test rat studies and try to
13 segregate out the numbers of liver lesions and the
14 types of lesions by sex of the animals?

15 A. There was a study to distinguish between
16 sex. I don't know about whether it was centered
17 on numbers. I know that they tried to separate
18 the combinations.

19 Q. The males from the females?

20 A. The males from the females.

21 Q. Had that been done by Industrial Bio-Test
22 prior to Exhibit 322?

23 A. Yes.

24 Q. Did Industrial Bio-Test or anyone else on

1 behalf of Monsanto ever study carcinogenesis of
2 pcb's in mice?

3 A. Did Monsanto conduct carcinogenesis
4 studies, no.

5 Q. Or did IBT on its behalf?

6 A. No.

7 Q. Okay.

8 Why was that?

9 A. It is my understanding that mice were not
10 perceived by Monsanto and its consulting
11 laboratories, including Industrial Bio-Test, as
12 being a reliable test animal for carcinogenesis.

13 Q. Were you ever advised of the basis
14 for that conclusion?

15 A. Not in a scientific way.

16 The comment that I recall is that mice
17 very easily will show cancer effects on many
18 chemicals.

19 Q. Whatever you give to the mice causes
20 cancer?

21 A. Not whatever, but many chemicals that do
22 not have the same effect on other animals seem to
23 affect the mice.

24 Q. Did anybody discuss with you the

1 comparability of cancer data for mice and people,
2 as to whether -- in your last answer you indicated
3 that mice wouldn't be a good model for other
4 species of animals.

5 My question is did anybody look at the
6 question of whether the mouse experience and the
7 human experience was reasonably related?

8 A. It is my understanding that is even more
9 controversial and less reliable.

10 Q. You can go ahead and take your time and
11 review it if you haven't had a chance to read the
12 whole memorandum.

13 The third paragraph on page numbered 2 of
14 the memo of Exhibit 322 says:

15 It should be noted
16 that the liver sections which
17 were read by the pathologist
18 and reported in IBT number
19 641-06672 and dated March 24,
20 1975 were not the same slides
21 or sections as those reported
22 on originally."

23 Was there any explanation given to you at
24 that meeting or at any other time, for that

1 matter, as to why new sections had to be taken for
2 this later review by the various pathologists?

3 A. Yes.

4 I was told by Mr. Wheeler that sometimes
5 when they slice an organ, there may be parts of
6 that organ that are affected that your sampling
7 didn't pick up. So the intent here is to see more
8 of that liver, see if other slices of the organ
9 show these effects.

10 Q. If that were the case, wouldn't you want
11 the reviewing pathologist to look at both the old
12 slides and the new slides to get a total picture
13 of what was going on?

14 A. It seems so.

15 MR. FRUEHWALD: Page 3 of the memo says there
16 are no slides in the possession of FDA since June
17 of '73. Could be that they just were not
18 available. That is just what the memo says.

19 MR. MC CONNELL: I would come to that in due
20 course.

21 Q. But let me just ask you. Do you know
22 whether any effort was made before this meeting or
23 after it to get those slides back from FDA, so
24 that they could be included in a review as well

1 as the new slides?

2 A. All I can recall is that we continued our
3 effort to get the slides back. I do not know if
4 they were viewed by others after the return.

5 Q. After this, was there ever a third
6 meeting?

7 We have mentioned the first meeting that
8 is reflected in the date of 322. Then there was a
9 second meeting some days or weeks after that.

10 Was there ever a third meeting that you
11 attended on this subject of rat carcinogenesis by
12 pcb's?

13 A. No.

14 Q. Okay.

15 Some of the partial sentence on the
16 bottom of page 2, carrying over to page 3 says:

17 "Serial sections of
18 the liver would eliminate some
19 of the covariants."

20 Referring to the reason why you don't get
21 the same answer when you look at a different set
22 of slides.

23 In either of those two meetings, was
24 there any discussion about going back and doing

1 serial sections of the remaining liver samples to
2 see if the covariants could be eliminated?

3 A. I don't recall that detail.

4 Q. Page 3 of the memo goes on to describe
5 the differences in the terminology among the
6 various pathologists that are looking at these
7 slides, as Dr. Squires' view as opposed to the
8 view of Monsanto and Industrial Bio-Test with
9 respect to what is or isn't a "carcinogenic
10 response."

11 Does that summary comport with what your
12 understanding was before this meeting of the areas
13 of dispute amongst the various pathologists?

14 A. Yes.

15 Q. That portion of the discussion at the
16 meeting wasn't new information to you?

17 A. That is correct.

18 Q. Okay.

19 Beginning near the bottom of page 4 there
20 is a list of several additional things that need
21 to be done by Bio-Test.

22 Can you tell me which of the things on
23 that list were done after this meeting?

24 A. I really don't know.

1 Q. In particular was there ever an
2 experiment designed to develop information on the
3 reversibility of the liver changes that were
4 observed?

5 A. Not to my knowledge.

6 Q. Okay.

7 Was there any discussion at the follow-up
8 meeting after April 18, 1975 about other health
9 effects other than cancer that were seen or not
10 seen in the rat studies?

11 A. No.

12 Q. Those two meetings focused strictly on
13 the cancer question?

14 A. Yes.

15 (The documents above-referred to
16 were marked Bloomington Deposition
17 Exhibit Nos. 323 through 328, both
18 inclusive, for identification.)

19 Q. Exhibit 328 is a two-page letter from Dr.
20 Levinskas of Monsanto to Dr. Calandra at Bio-Test
21 dated July 18, 1975 stamped received July 21, 1975
22 and a single page chart attached to the letter
23 referred to as the attached table.

24 I will ask you if you have seen that

1 Exhibit before today?

2 A. I do not recall seeing this document.

3 Q. Did you discuss with Dr. Levinskas at
4 either of those two meetings we just talked about
5 or any other time the fact that he was going to
6 make a request of Industrial Bio-Test to change
7 the conclusions on the three 2-year oral rat
8 toxicity study reports?

9 A. No.

10 Q. Had you sign any draft versions of those
11 reports before the two meetings that we just
12 talked about?

13 A. No.

14 Q. Did you know before -- well, take your
15 time and finish reading that before I ask you.

16 A. That is all right.

17 Q. At either of those two meetings or at any
18 other time, did Dr. Levinskas say that he was
19 going to ask Industrial Bio-Test to change the
20 wording of his conclusions?

21 A. No.

22 Q. Did you receive copies of the three
23 reports on the three 2-year rat studies that
24 contained the conclusion phrase "does not appear

1 to be carcinogenic"?

2 A. Yes.

3 Q. Before today, were you aware that there
4 were earlier versions of those reports which said
5 that the conclusion was that each of the
6 substances was slightly tumorigenic?

7 A. Yes.

8 Q. When did you first become aware of that?

9 A. I think in preparing for this deposition.

10 Q. And in preparing for the deposition, did
11 you review the final reports of some of the
12 Industrial Bio-Test study?

13 A. No.

14 Q. Did you review any of the Industrial
15 Bio-Test documents before coming here to testify?

16 A. No.

17 Q. Did you talk to somebody at Monsanto in
18 preparation for your deposition who told you that
19 the wording of those three reports had been
20 changed?

21 A. I don't recall if it was a Monsanto
22 person or outside counsel.

23 Q. Well, I am not permitted to ask you about
24 your conversations with outside counsel. So I

1 won't do that.

2 But it wasn't until you were preparing
3 for the deposition that you learned of the changes
4 in the wording of the three 2-year rat study
5 reports; is that correct?

6 A. That is correct.

7 Q. Did it surprise you to learn of those
8 particular changes?

9 A. No.

10 Q. In your view, does the change from
11 slightly tumorigenic to does not appear to be
12 carcinogenic reflect a substantive difference in
13 the conclusions?

14 MR. FRUEHWALD: Let me interpose an objection
15 here.

16 Without the context of the entire report,
17 it is hard to say whether one word in a particular
18 sentence is a substantive change.

19 I think the question can't be answered
20 without showing the report.

21 As I recall the report, the entire page
22 was on tumors. We are talking about one sentence
23 on a full page discussion and, therefore, I think
24 it is impossible to answer the question as phrased

1 as to whether in the context of the report this is
2 a substantive change.

3 MR. MC CONNELL: Well, my question wasn't
4 whether in the context of the report it is a
5 substantive change. My question was in the
6 context of the conclusion is that a substantive
7 change.

8 MR. FRUEHWALD: You have a whole page of
9 conclusions that I am talking about.

10 Can you show the witness the report or is
11 there some reason you won't do that to let him
12 answer the question?

13 MR. MC CONNELL: I could do that, but I would
14 like him to tell me rather than you telling me
15 whether he can answer the question without seeing
16 the report before I do that, now that you have
17 thoroughly coached him.

18 MR. FRUEHWALD: I raised an objection which I
19 think it is an unfair question, Jim, to ask if
20 this is a significant change out of context, when
21 you can provide the context very easily. I think
22 it is a trick question.

23 MR. MC CONNELL: I didn't ask him if it was a
24 significant change. I asked him if it was a

1 change in the meaning.

2 Now, he told me before that there was no
3 difference between significant findings and no
4 significant findings and effects and no effects,
5 which were the two terms in a letter. He was able
6 to do that without looking at the back-up report
7 that was attached to that letter. And I want to
8 find out if he can do it in this instance without
9 looking at the report. If not, he can tell me
10 that.

11 You don't need to prompt him.

12 MR. FRUEHWALD: I don't think that the analogy
13 you have drawn to the prior exhibit is a correct
14 one.

15 The question that is pending I have
16 raised my objection to it. And if the witness
17 feels he can answer it, he can go ahead.

18 A. I have forgotten the question.

19 BY MR. MC CONNELL:

20 Q. The question was in your view, is the
21 change from the phrase slightly tumorigenic to the
22 phrase does not appear to be carcinogenic change
23 the meaning of the conclusion?

24 A. Yes, it does.

1 Q. In fact, if it didn't change the meaning
2 of the conclusion, there wouldn't be any reason
3 for Monsanto to press for that change in the
4 wording of the final report by Industrial
5 Bio-Test, would there?

6 MR. FRUEHWALD: I object to the question,
7 pressing for changes, things of that nature. It
8 is a very argumentative question, Jim, as to what
9 was going on here. It is not supported by this
10 exhibit.

11 MR. MC CONNELL: I will withdraw that
12 question. Let me ask a different series of
13 questions.

14 Q. The report as it was originally sent and
15 called a final report from Industrial Bio-Test to
16 Monsanto contained the conclusion that was phrased
17 for all three substances that were the subject of
18 that study that they were slightly tumorigenic.

19 Monsanto had two meetings with people
20 from Industrial Bio-Test and then wrote a letter
21 that says we want you to change that, so that it
22 says does not appear to be carcinogenic.

23 MR. FRUEHWALD: Can you show me the letter
24 that says change all three reports?

1 This letter says you have already changed
2 two of the reports, why don't you make the third
3 one coincide with what you have done on the other
4 two.

5 There is no letter that I know of telling
6 them to change all three reports.

7 MR. MC CONNELL: There were two meetings that
8 led up to that.

9 MR. FRUEHWALD: Your making a lot of
10 argumentative assumptions here, there is no
11 factual basis for. That is why I object to your
12 questions.

13 MR. MC CONNELL: There is a factual basis in
14 the letter, I believe.

15 MR. FRUEHWALD: You are talking about this
16 letter, you are talking about a request of a
17 change in one report to coincide with two other
18 reports already change by Industrial Bio-Test.
19 There is no evidence that the change on the other
20 two reports was requested or otherwise caused by
21 Monsanto.

22 BY MR. MC CONNELL:

23 Q. To your knowledge was that change
24 requested by Monsanto on the two reports that were

1 changed when that letter was written?

2 A. At this moment I am confused as to which
3 change was being recommended here. I see a
4 reference to two reports, a number 1 and a number
5 2, with the wording that we have expressed here.
6 I don't know what Monsanto's position, other than
7 in the write-up up front.

8 Q. According to the attachment, there was a
9 supplemental report number 1 mailed, it says here,
10 and under each substance the conclusion is listed
11 as slightly tumorigenic.

12 Supplemental report number 1, the column
13 headed supplemental report number 2, which is
14 noted JCC delivered. Two of the three substances,
15 the conclusion is does not appear to be
16 carcinogenic. The third one remains slightly
17 tumorigenic as a conclusion.

18 I take the letter to be a request by Dr.
19 Levinskas to change the 1255 conclusion, so that
20 it matches the conclusions for the other two
21 products; that is to say, that all three of them
22 will say does not appear to be carcinogenic.

23 Does that agree with your understanding
24 of what is going on in that set of exhibits?

1 A. Yes. By reading the letter and looking
2 at these charts, yes.

3 Q. All right.

4 At whose instance, if you know, was the
5 change that occurred with respect to 1260 and 1242
6 between supplemental report number 1 and
7 supplemental report number 2 made?

8 A. That I don't know.

9 Q. Was that change discussed at either of
10 those two meetings you attended?

11 A. No. The reports were not discussed at
12 the meetings.

13 Q. At meetings that you attended?

14 A. Correct.

15 Q. Okay.

16 May I see that.

17 Dr. Levinskas says in his letter, that it
18 does not appear to be carcinogenic is preferable.

19 Do you know why he preferred that phrase?

20 A. Since the issue of carcinogenicity became
21 quite important, it was considered that a
22 reference to whether or not it causes cancer was
23 more important than the fact that tumors were
24 observed in some instances.

1 Tumors and cancer are not the same
2 subject.

3 So the reports as revised emphasized no
4 cancer rather than say slightly tumor forming.

5 There is a different thrust in the
6 conclusions.

7 Q. And it was Monsanto's preference that the
8 emphasis be on what didn't happen rather than on
9 what did happen in those studies?

10 A. Yes. To answer a very important
11 question. Yes.

12 Q. In other words, without an Industrial
13 Bio-Test study report that said the substances did
14 not appear to be carcinogenic, there was nothing
15 that could be put head to head with Dr.
16 Kimbrough's study as reaching an opposite
17 conclusion?

18 A. At that time. Yes.

19 Q. The letter in 328 goes on to comment
20 about lack of agreement in animal numbers between
21 the various versions of the report, does it not?

22 A. Yes, it does.

23 Q. Was there any discussion at the two
24 meetings you attended about the lack of agreement

1 in the animal numbering?

2 A. No.

3 Q. Before I showed you Exhibit 328, had you
4 been aware of that problem at all?

5 A. No.

6 Q. From what you know about the other
7 Monsanto products that led up to the indictment of
8 Paul Wright and Moreno Keplinger and Dr. Calandra,
9 that is one of the same problems that existed in
10 those other studies, wasn't it, that they couldn't
11 track the animal from start to finish?

12 A. I don't know.

13 Q. Do you know if the issues about animal
14 numbering that are raised in Exhibit 328 were ever
15 resolved to Monsanto's satisfaction?

16 A. I understand they were eventually
17 resolved.

18 Q. Did anybody after the time of this July
19 18, 1975 letter that we have marked as Exhibit
20 328 -- did anybody from Monsanto go back to
21 Industrial Bio-Test and go through the raw data,
22 that is, the lab notebooks, the body weight books
23 and other original laboratory records, to
24 determine whether in fact there was or was not

1 substitution of animals in mid-study in those
2 three studies?

3 A. I don't know that.

4 Q. You don't know, in fact, whether that was
5 done in connection with the Booz, Allen and
6 Hamilton review either?

7 A. That is correct.

8 Q. Did you ever hear of or perceive any
9 resistance on the part of Industrial Bio-Test to
10 making the change that is requested in Exhibit
11 328?

12 A. I heard nothing.

13 Q. I show you what has been marked as
14 Exhibit 323, which is a one-page letter originally
15 typed with a date of July 25, and scratched out
16 and redated August 4, from Dr. Calandra to Dr.
17 Levinskas. And on the front of it there is a
18 handwritten note signed by somebody named Adele.

19 I will ask if you ever saw either of
20 those documents before?

21 A. I have not seen either document.

22 Q. Exhibit 324 is a handwritten document
23 which appears to me to be a rough draft of the
24 typed version of 323.

1 Would you recognize the handwriting of
2 Dr. Calandra?

3 A. No.

4 Q. Okay. Never mind about that exhibit,
5 then.

6 Exhibit 325 is a one-page letter typed
7 with a date of August 4, 1975 from Dr. Calandra to
8 Dr. Levinskas.

9 I will ask you if you ever saw that
10 version of the other preceding two exhibits?

11 A. No, I had not.

12 Q. 325 reflects an acquiescence in the
13 request to Industrial Bio-Test that they change
14 the conclusion of the one report that was
15 requested by Monsanto?

16 A. It does that, yes.

17 Q. It also responds to the questions about
18 discrepancies in animal numbering?

19 A. Yes.

20 Q. Do you know whether there was any further
21 dialogue either by way of correspondence or phone
22 conversations, or face-to-face meetings between
23 Monsanto and Industrial Bio-Test on the subject of
24 the disagreement in animal numbering?

1 A. I have no knowledge at all on that.

2 Q. Exhibit 326 is a letter dated August 5,
3 1975 in Dr. Calandra to Dr. Levinskas.

4 Have you ever seen that letter?

5 A. No. I have not.

6 Q. Do you know whether that was mailed or
7 hand delivered?

8 A. I do not know.

9 Q. This letter refers to a revised page 2.

10 Is that the changed conclusion that is
11 referred to in the previous Exhibit, dated August
12 4?

13 A. It appears to be.

14 Q. Okay.

15 So they didn't send a new report. They
16 just sent the page with the revision on it?

17 A. That is what is implied here.

18 Q. To your knowledge, that was the same
19 procedure that had been followed on other
20 occasions?

21 A. That is very typical. Yes.

22 Q. Okay.

23 Did you at some time after August 5,
24 1975, receive copies of these three rat study

1 reports?

2 A. Eventually I did. I don't recall just
3 when, though.

4 Q. Okay.

5 But the only copies you received had the
6 dose not appear to be carcinogenic conclusion?

7 A. Yes.

8 Q. So it would have had to have been after
9 August 5, 1975?

10 A. Yes.

11 Q. Exhibit 327 is a letter dated August 14,
12 1975 stamped received August 18, 1975 to Dr.
13 Calandra from Dr. Levinskas and I will ask you if
14 you have ever seen that document?

15 A. I don't recall ever seeing this document.

16 Q. Apparently as of the date of Exhibit 327,
17 the matter of discrepancies in animal numbering
18 among the various versions of the two-year oral
19 rat study reports had not been resolved to Dr.
20 Levenskas' satisfaction. Is that a fair
21 statement?

22 A. That appears to be correct.

23 Q. As I understand your earlier testimony,
24 this whole question of problems with the animal

1 numbering in these studies was never brought to
2 your attention?

3 A. True.

4 Q. Based on what you have seen here in these
5 exhibits today, does that continuing inability to
6 resolve the discrepancies in animal numbering
7 raise a question in your mind about the validity
8 of the results in that study?

9 A. Not truly. Because of what Booz, Allen
10 Hamilton reported. At least what I was told they
11 reported.

12 So from that information, I am led to
13 believe that the study and conclusions are still
14 valid.

15 Q. To your knowledge, did Booz, Allen and
16 Hamilton people actually go to Industrial Bio-Test
17 and review the complete Industrial Bio-Test file
18 on all these studies?

19 A. That is my understanding, yes.

20 Q. So, presumably, they would have seen this
21 correspondence that we have before us here today?

22 A. I don't know what they looked for.

23 Q. You don't know what kind of people they
24 used to do the looking either, do you?

1 A. No.

2 Q. What their training was?

3 A. I do not know.

4 Q. Okay.

5 Booz, Allen and Hamilton as I understand
6 it is a management consulting company.

7 Is that correct?

8 A. Well, I don't claim to know all about
9 Booz, Allen and Hamilton. They also have the
10 Arthur D. Little group which is a subsidiary which
11 is technically oriented, so they do have access to
12 technical skills of various types. I don't know
13 exactly what they have.

14 Q. Was Arthur Little group involved in this
15 review, if you know?

16 A. I don't know.

17 Q. All you know is that somebody at Monsanto
18 told you that you they got a clean bill on the pcb
19 studies done by Industrial Bio-Test?

20 A. That is correct.

21 Q. I may have asked you this before, but do
22 you know even though you haven't seen it whether
23 there was, in fact, a written report on that
24 review from Booz, Allen and Hamilton?

1 A. No, I don't know.

2 Q. Before the Industrial Bio-Test
3 indictments were returned, had Booz, Allen done
4 other work for Monsanto?

5 A. I understand they have, yes.

6 Q. Have you ever worked with them before?

7 A. No.

8 Q. Do you know in the course of the earlier
9 work that Booz, Allen did for Monsanto, whether
10 they customarily submitted their reports in
11 writing?

12 A. That is the custom, yes.

13 Q. So you would expect that there should be
14 a written report of this pcb study review that
15 they did?

16 A. I would expect one, yes.

17 Q. I don't think we have asked you, Mike,
18 but if you have got such a report I would sure
19 like to see it.

20 MR. FRUEHWALD: I will note the request. I
21 have not seen the document so I don't know whether
22 one exists.

23 MR. MC CONNELL: All right.

24 Let's see if we can turn to a different

1 subject. Let's take five minutes.

2 (A short recess was taken.)

3 MR. MC CONNELL: Back on the record.

4 Do you want to mark this whatever our
5 next number is.

6 (The document above-referred to
7 was marked Bloomington Deposition
8 Exhibit No. 329 for identification.)

9 Q. Exhibit 329 is a letter you wrote on
10 October 17, 1975 to Larry it looks like Wapensky
11 of the you USEPA.

12 Do you recall what that refers to?

13 A. Yes, I do.

14 Q. What was the samples that were sent?

15 A. Mr. Wapensky asked for a sample of
16 Aroclor 1016. And by that time we had a
17 preprinted form that we asked the requestors to
18 fill out.

19 Q. So that you would know what it was they
20 proposed to do with the stuff?

21 A. It was primarily one of their
22 understanding that they were to handle it
23 properly. Don't dispose to the environment.
24 Precautionary kinds of statements. That was

1 returned, and this acknowledges the return of that
2 form.

3 In the meantime, I offered to enclose
4 with this letter some information I had on the
5 Aroclor 1016, which was the specifications, how it
6 compared with Aroclor 1242.

7 Q. With respect to physical and chemical
8 characteristics?

9 A. Right.

10 Q. Was this in connection with some EPA
11 research or do you recall what it was he wanted to
12 use it for?

13 A. This was involved with EPA studies. I
14 don't know specifically what for.

15 Q. At this time the EPA wasn't very old, was
16 it, a couple years?

17 A. This is about five years old now.

18 Q. Had you dealt with people at the EPA
19 before this with respect to pcb's?

20 A. Oh, yes. But this is the first contact
21 with the field office.

22 Q. You had been dealing with Washington
23 before that?

24 A. Correct.

1 Q. Do you want to mark that 330.

2 (The document above-referred to
3 was marked Bloomington Deposition
4 Exhibit No. 330 for identification.)

5 Exhibit 330 is a letter dated also
6 October 17, 1975 from you to Dr. Raymond Shapiro
7 of the Food and Drug Administration.

8 I take it you were forwarding that paper
9 to him in the spirit of information sharing which
10 existed throughout the course of your role as pcb
11 coordinator; is that correct?

12 A. Yes, that's correct.

13 Q. That wasn't something that he had
14 specifically requested from you?

15 A. No.

16 Q. By October 17, 1975 had the FDA set
17 specific guidelines for pcb levels in a various
18 foodstuffs?

19 A. Yes, it had.

20 Q. Mark this.

21 (The document above-referred to
22 was marked Bloomington Deposition
23 Exhibit No. 331 for identification.)

24 Was there ever an effort by Monsanto to

1 get the if FDA to make a distinction between 1016
2 and its other products with respect to those
3 examination guidelines?

4 A. No.

5 Q. Exhibit 331 is a letter dated October 31,
6 1975 from you to you Dr. David Brown of the
7 National Institute for Occupational Health and
8 Safety.

9 Do you recall writing that letter?

10 A. Yes. I wrote this letter.

11 Q. What was the nature of the customer
12 information that he requested?

13 A. He wanted to know who our customers were
14 and the types of pcb's that we sold them and how
15 much.

16 Q. Was that the kind of information that
17 prompted -- strike that.

18 Was that the same kind of information
19 that had initially been requested of Monsanto by
20 Congressman Ryan that John Mason initially refused
21 to provide to Congressman Ryan without some
22 assurance of confidentiality.

23 Do you recall that exchange of
24 correspondence?

1 A. Yes.

2 No, that earlier request was in broader
3 terms and not related to specific customers and
4 their locations. This request, the customer by
5 name and address and the amount.

6 Q. So the National Institute of Occupational
7 Health and Safety wanted more detail than what
8 Congressman Ryan had asked for?

9 Q. That's right.

10 Q. When did the policy change at Monsanto
11 from not providing the information without
12 assurances of confidentiality as reflected in
13 Mason's correspondence with Ryan to your
14 indication in Exhibit 331 that NIOSH already had
15 that detailed information?

16 A. This information was given to the
17 agencies with the stipulation that it be treated
18 confidentially.

19 Q. Okay.

20 Not shared with your competitors, in
21 other words?

22 A. That's right.

23 Q. All right.

24 A. The previous information was eventually

1 given to the inter-agency taskforce that put out
2 the March 1972 report, and at that point we did
3 not ask for confidential treatment.

4 Q. But the information which was given to
5 the task force didn't identify specific locations?

6 A. No. But it identified Monsanto's share
7 of the market amounts, types of applications,
8 other types of confidential information.

9 Q. But there was a distinction still being
10 made by Monsanto between protecting information
11 that was proprietary only to Monsanto and
12 information that was proprietary to Monsanto and
13 its customers?

14 A. Correct.

15 Q. The company felt it had to be a little
16 more careful with its customers' proprietary
17 information than it did with its own?

18 A. Yes.

19 Q. That is not an unreasonable position to
20 take, I guess.

21 Do you want to mark this.

22 (The document above-referred to
23 was marked Bloomington Deposition
24 Exhibit No. 332 for identification.)

1 332 is a letter to you from Harvey Stein
2 of the Department of Health, Education and Welfare
3 dated November 4, 1975.

4 I will ask if you recall receiving that
5 letter?

6 A. I recall this, yes.

7 Q. What was the information that is referred
8 to in the letter that you supplied to the
9 Department of Health, Education and Welfare?

10 A. It is primarily the last three pages,
11 three sheets.

12 Q. Which he had incorporated into the larger
13 document that is attached to the letter; is that
14 correct?

15 A. Yes.

16 Q. So in essence he is writing back to you
17 to let you know what it was he did with the
18 information you gave him?

19 A. Yes.

20 Q. And to share the rest of that compilation
21 with you; is that correct?

22 A. Right.

23 Q. What at the time of November 1975 was the
24 role of the office of Occupational Health,

1 Surveillance and Biometrics with respect to pcb's,
2 was that part of NIOSH?

3 A. Yes.

4 Q. Okay.

5 So their concern was with worker
6 exposure, principally?

7 A. Yes.

8 Q. And the FDA's concern was with exposure
9 through food contamination?

10 A. Yes.

11 Q. And the EPA's concern was with exposure
12 through other environmental contact?

13 A. Yes.

14 Q. Does the summary of the various studies
15 that is contained on pages numbered pages 6, 7,
16 and 8 of the report that is attached as part of
17 Exhibit 332, to your knowledge as of the date of
18 the letter include all of the reported Industrial
19 Bio-Test studies?

20 A. I don't see the Bio-Test studies listed.

21 Q. Do you know why they were not?

22 A. No, I don't.

23 Q. Presumably they had been made
24 available -- well, let me ask that as a question.

1 Had the Industrial Bio-Test report been
2 made available to the National Institute of
3 Occupational Safety and Health?

4 A. I don't think so. I really don't
5 remember clearly, but I don't think this
6 particular agency got a copy of their own.

7 Q. Okay.

8 They went to the Food and Drug
9 Administration?

10 A. Yes.

11 Q. And they went to the Environmental
12 Protection Agency?

13 A. EPA. Yes.

14 Q. Okay.

15 A. And USDA.

16 Q. Department of Agriculture?

17 A. Yes.

18 Q. That was as a result of the prior use in
19 pesticides, as a medium for pesticides, or why was
20 it supplied to the USDA?

21 A. They were involved with pesticides, as
22 well as their interest in meat and grain.

23 Q. They are at the other end of the food
24 chain from the Food and Drug Administration?

1 A. That is correct.

2 MR. FRUEHWALD: Let me note that the document
3 hasn't been studied by the witness, but there does
4 appear to be a footnote to a Keplinger/Fancher
5 report cited as the chicken study, as one of the
6 things that is included here.

7 MR. MC CONNELL: Does this indicate that it
8 was published or not?

9 MR. FRUEHWALD: Yes, toxicol-something
10 pharmacology, in 1971. So it is a very --

11 MR. MC CONNELL: The chicken study did get
12 published.

13 MR. FRUEHWALD: It appears to be a chicken
14 study by Keplinger at that period in '71, as
15 indicate by a footnote in this report.

16 MR. MC CONNELL: In that document.

17 Q. So if that were published, it would have
18 been available to them other than having been
19 supplied by Monsanto?

20 A. That is true.

21 Q. To your knowledge, did the National
22 Institute of Occupational Health and Safety ever
23 request from you, Mr. Papageorge, copies of the
24 Industrial Bio-Test study reports that were not

1 published?

2 A. Yes. Through me to Dr. Levinskas. In
3 about 1975 or thereabouts, NIOSH was putting
4 together a criteria document and they were talking
5 with Dr. Levinskas regarding toxicology effects.

6 I do not know what Dr. Levinskas shared
7 with them.

8 Q. Presumably since all of those reports had
9 already been supplied to two other federal
10 agencies, there wasn't any particular reason not
11 to share them with NIOSH?

12 A. There wouldn't appear to be any reason.

13 Q. Do you want to mark that.

14 (The document above-referred to
15 was marked Bloomington Deposition
16 Exhibit No. 333 for identification.)

17 Is it possible that, I know this happens
18 with legal journals, maybe it also happens with
19 scientific journals, that the 1971 issue of the
20 journal would actually not be out as of February
21 1972?

22 A. What I don't know is what this 19 means.

23 MR. FRUEHWALD: Probably a volume number.

24 MR. MC CONNELL: Volume number I would assume.

1 A. I just don't know about that publication,
2 whether it is published quarterly or when ready.

3 Q. In any event, it does appear that some
4 Bio-Test chicken study was ultimately published.

5 Exhibit 333 is a memo consisting of five
6 pages, dated November 17, 1975 from J. Coleman
7 Webber to a list including yourself.

8 I will ask you if you recall receiving
9 that document?

10 A. Yes, I recall this document.

11 Q. Were you a participant in the discussions
12 that are reflected in the later pages of that
13 document?

14 A. Yes, I was.

15 Q. Over how long a period of time did they
16 take place?

17 A. Two days.

18 Q. Two days. Okay.

19 And that it was November 13 and 14, 1975?

20 A. Yes.

21 Q. And the memo was circulated on November
22 17, so it was shortly after the conclusion of the
23 discussions?

24 A. Right.

1 Q. Where did those discussions take place?

2 A. In Washington, D.C. and the surrounding
3 area in the offices of the agencies that are
4 listed here.

5 Q. In other words, you and Dr. Roush and Mr.
6 Webber -- was he a Monsanto employee?

7 A. Yes.

8 Q. And Mr. Easley, he has also a Monsanto
9 employee?

10 A. Yes.

11 Q. And Dr. Calandra from Industrial Bio-Test
12 made a tour during that two-day period of various
13 agency offices in Washington, D.C. to take the
14 story of the Bio-Test animal studies to the
15 government, so to speak?

16 A. Yes.

17 Q. Who made the arrangements for those
18 various visits to the government agencies?

19 A. Mr. Easley.

20 Q. Did he work for you at that time?

21 A. No. He was Monsanto's representative
22 located in Washington, D.C.

23 Q. Would it be fair to describe him as a
24 lobbyist?

1 A. I don't know if he meets the total
2 definition of lobbyist, but he did represent
3 Monsanto and arrange for meetings for those of us
4 out of St. Louis.

5 I don't know that he participated in
6 legislative issues.

7 Q. You don't know whether he was actually
8 registered as a lobbyist or not?

9 A. I do not know that.

10 Q. All right.

11 A. He was more related to regulatory
12 agencies.

13 Q. But he was a full-time Monsanto employee?

14 A. Yes.

15 Q. He didn't represent any other companies?

16 A. That is correct.

17 Q. Okay.

18 According to the memorandum in the
19 paragraph on the second page, the numbered
20 paragraph number 1, the purpose of the discussions
21 was to show that positive action was taken by
22 Monsanto in response to Dr. Kimbrough's report
23 that Aroclor 1260 caused malignant tumors in the
24 liver of the rat and, number 2, to report the

1 recent review by Industrial Bio-Test and Eppley
2 Institute Consultants.

3 Who is Eppley Institute Consultants?

4 A. That is a medical institute in Omaha,
5 Nebraska that Monsanto approached, retained to
6 help in the impartial analysis of the pcb livers
7 and damaged cells.

8 Q. They looked at the slides?

9 A. Yes.

10 Q. Did they look at both sets or just the
11 second set, to your knowledge?

12 A. I don't know.

13 Q. In any event, the object of the trip was
14 to try and convince the government agencies that
15 in fact that pcb's, in particular the three
16 Aroclors that were studied by Industrial Bio-Test
17 were not carcinogens, is that a fair summary?

18 A. Yes.

19 Q. And you met with the various government
20 employees that are listed?

21 A. Yes.

22 Q. Did all of the Monsanto people and Dr.
23 Calandra meet with each of those government
24 employees or did you break up into groups and go

1 around?

2 A. We went as a team and met with these
3 individuals.

4 Q. Okay.

5 Did you feel, you personally as a result
6 of these two days of meetings, that you made any
7 progress in addressing the problem that is stated
8 in the last paragraph on the second page of the
9 Exhibit; that is, that people concerned with pcb's
10 treat them as one chemical and do not recognize
11 the difference between the different mixture
12 numbers?

13 A. Yes. I personally felt that we made
14 considerable progress, at least in getting
15 receptivity to further discussions, and better
16 understandings.

17 Q. Okay.

18 Was part of the purpose of this trip to
19 keep the 1016 product and other electrical grade
20 products alive as long as you could you?

21 A. Yes.

22 Q. Who initiated the idea of a mortality
23 study at Westinghouse's Bloomington, Indiana
24 capacitor plant?

1 A. I don't know.

2 Q. It wasn't Monsanto?

3 A. No.

4 Q. Okay.

5 The document refers to our, Monsanto's,
6 review of causes of death of employees associated
7 with the production of pcb's over the past 25
8 years.

9 Are you familiar with that study?

10 A. Yes.

11 Q. Was it completed?

12 A. Yes. And there was a report published or
13 completed also.

14 Q. The memo goes on to say that NIOSH is
15 concerned that there is poor control and
16 containment in plant practices once the pcb leaves
17 our plant, meaning Monsanto's plant.

18 Did you discuss with the NIOSH
19 representatives you met with engineering practices
20 that could be used to control pcb release by your
21 customers?

22 A. Yes, in a general way. Yes.

23 Q. Would it be fair to say that the NIOSH
24 concern reflected the same concern that Monsanto

1 had about sloppy customer practices based on your
2 visit and other Monsanto employees' visits to
3 various customer facilities?

4 A. Yes.

5 Q. So they weren't telling you anything you
6 didn't already know?

7 A. Correct.

8 Q. Did the NIOSH people that you talked to
9 at these meetings indicate that they had, any of
10 them had visited the Bloomington Westinghouse
11 plant?

12 A. No. In fact as I remember none had
13 visited an industrial site, the NIOSH people.

14 Q. So, whatever they were talking about
15 doing was still in the raw idea stage?

16 A. Correct.

17 Q. None of them really had any field
18 experience with pcb use?

19 A. Right.

20 And earlier you talked about their
21 concern being equivalent to Monsanto's. I said
22 yes. What I meant is the concern was equivalent
23 but timewise our concern in 1970 equaled their
24 concern in 1975.

1 Q. Did NIOSH tell you that they were not
2 recommending the banning of pcb's but, rather,
3 restricted practices, or is that a conclusion that
4 the Monsanto team drew on the basis of the
5 discussions?

6 A. No, this came up in the discussion and
7 they came out with that thought.

8 Q. They were recognizing, in other words,
9 that no effective substitute had been successfully
10 developed as of the time of these meetings?

11 A. That is correct.

12 Q. On the third page of Exhibit 333 there is
13 a reference to the McAllister bill in the House on
14 toxic substances, is that reference to the bill
15 that ultimately became the Toxic Substances
16 Control Act?

17 A. Yes.

18 Q. You also visited with some congressional
19 committee representative?

20 A. Yes.

21 Q. Was it your conclusion or was it their
22 statement to you, that is, Representative Daniels
23 and his staff, that they can use pcb's as a
24 political tool?

1 A. It was our conclusion.

2 Q. Unlike NIOSH, they didn't come right out
3 and tell you that is what they were planning to
4 do, I take it?

5 A. That is correct.

6 Q. Did the subcommittee on manpower
7 compensation, health and safety ultimately conduct
8 hearings on pcb problems?

9 A. Not to my knowledge.

10 Q. Is that because you all talked them out
11 of it?

12 A. I don't know.

13 Q. You also visited the National Cancer
14 Institute?

15 A. Yes.

16 Q. That is NCI?

17 A. Correct.

18 Q. And NCI was already in tune with the
19 ongoing dispute in the pathological community
20 about how to interpret these findings?

21 A. Yes.

22 Q. That was Dr. Kimbrough's agency, was it
23 not?

24 A. No. She used pathologists from that

8 1 agency. She was down in Georgia with the --

2 Q. Center for Disease Control?

3 A. She transferred to the Center for Disease
4 Control.

5 Q. In any event, the National Cancer
6 Institute would have been familiar with her work,
7 at least to the extent that it related to cancer?

8 A. Yes. Because their pathologists were
9 involved with Dr. Kimbrough's work.

10 Q. Who is Dr. David Rall?

11 A. He was -- he was and I believe still is
12 the director of the National Institute of
13 Environmental Health Sciences.

14 Q. That's the same outfit you mentioned
15 yesterday?

16 A. Located in North Carolina.

17 Q. Is he a medical doctor?

18 A. Yes.

19 Q. Where does he come out, if you know, on
20 the question of interpretation of liver lesions?

21 A. I don't know.

22 Q. Was the fact that the committee, Health
23 Education and Welfare's toxicology coordinating
24 committee was chaired by Dr. Rall of some

1 significance in the context of how that dispute
2 might be resolved by that committee?

3 A. I am not able to evaluate the
4 significance. He is a respected medical man and
5 knows his way within government and is well known.

6 So he makes a good chairman for such a
7 group.

8 Q. If the group were able to reach a
9 consensus, the fact that he was chairman of it
10 would give that consensus some significant weight
11 in the general scientific community, is that a
12 fair statement?

13 A. Not necessarily. He is in some regards
14 controversial.

15 Q. Okay.

16 The principal concern of the FDA as you
17 discussed it with them at these two days of
18 meetings was food levels of pcb's and in
19 particular levels in fish; is that correct?

20 A. Fish was certainly high on their priority
21 list and they were also concerned about dairy
22 products and about animal feed.

23 Q. Okay.

24 There is a statement contained in page 3

1 of the memo, of the exhibit here that says Kolbye,
2 I take it that is referring to Dr. Al Kolbye?

3 A. Yes.

4 Q. Kolbye's concern is body burden. Is that
5 a reference to animal body burden or human body
6 burden?

7 A. Human.

8 Q. And body burden is a way of measuring the
9 total amount of pcb's that is accumulated in the
10 body; is that correct?

11 A. That is correct.

12 Q. That is one of the things in the context
13 of animals that Dr. Tucker's analysis was aimed at
14 learning or is it?

15 A. No.

16 Dr. Tucker's analyses were aimed at
17 determining whether there is a chemical change,
18 whether there is any retained or any metabolized,
19 discarded. His data would not lead to body burden
20 because he would be lacking distribution of pcb's
21 throughout the body and the total weight of that
22 body.

23 He was looking at specific organs, points
24 of concentration.

1 Q. Okay.

2 Rather than?

3 A. Whole animal, fish or whatever.

4 Q. According to the last page of Exhibit
5 333, it says and I will read it, quote:

6 "In general this
7 group of EPA --" referring to
8 the listed names I take it "--
9 was not receptive to our
10 concept that pcb's are not
11 cancer-causing agents."

12 Do you recall any reasons they gave for
13 differing with the conclusions you were presenting
14 that pcb's do not cause cancer?

15 A. No. I don't recall them giving any
16 reasons. They just disagreed with the
17 interpretation that --

18 Q. They came out on the Kimbrough side
19 rather than the Bio-Test side?

20 A. Yes.

21 Q. It says here EPA most probably will treat
22 pcb's as such.

23 I take that to be as a cancer-causing
24 agent, which appears to be consistent with their

1 desire to have a toxic substances act.

2 Does that reflect the view of the
3 Monsanto team that the EPA was also using pcb's as
4 a political tool?

5 A. Yes.

6 Q. Is that still your view?

7 A. Yes.

8 Q. Do you want to mark this.

9 (The document above-referred to
10 was marked Bloomington Deposition
11 Exhibit No. 334 for identification.)

12 Are you familiar with an organization the
13 initials of which are CIGRE? I can't pronounce
14 it, it is in French.

15 A. CIGRE. Yes. I am familiar with the
16 acronym.

17 International conference on large
18 high-voltage electric systems, that is how they
19 translate it on their letterhead.

20 A. It is and electrical association.

21 Q. Something equivalent to the National
22 Electrical Manufacturers Association in the United
23 States?

24 A. Yes. Except that it is an international.

1 Yes.

2 Q. Okay.

3 Is it a standard-setting body?

4 A. I don't associate it as a
5 standard-setting. But that doesn't mean --

6 Q. That doesn't mean that it is not?

7 A. That's right.

8 Q. All right.

9 Let me show you this document, Exhibit
10 334, which consists of a total of five pages.

11 The first page is a handwritten note
12 which has been cut off in the copying here and I
13 can't tell you what you it says. Second page is a
14 letter from E. H. Reynolds to Dr. T. W. Dakin of
15 Westinghouse, dated December 11, 1975.

16 Take a look at that and tell me if you
17 have ever seen that before?

18 A. I have reviewed it.

19 Q. You are referred to in that letter as
20 being Dr. Munch's assistant. Was that an accurate
21 description?

22 A. No.

23 Q. Who was Dr. Munch?

24 A. Dr. Munch was a research chemist working

1 on applications of dielectric fluids reporting to
2 Dr. Richard, who was the director of research.

3 Q. Did Dr. Munch have something to do with
4 CIGRE as part of the his job responsibilities?

5 A. I don't know.

6 Q.. In any event, he had some acquaintance
7 with these European people?

8 A. It appears to be so, yes.

9 Q. They made a request of him and he passed
10 it on to you, because you were the guy who was
11 supposed to respond for requests for information
12 on pcb's; is that correct?

13 A. That is what happened, yes.

14 Q. So that led the author of this letter
15 apparently to conclude that you were his
16 assistant?

17 A. I was assisting him.

18 Q. Not an unreasonable interpretation. It
19 didn't happen to be the correct one, I guess.

20 Do you know what the SC 16 and W G 1502
21 meetings in Budapest had anything to do with?

22 A. I do not know.

23 Q. Do you know without particular reference
24 to CIGRE whether there was a European

1 standard-setting body that was working on a set of
2 standards for pcb use in electrical equipment
3 similar to what the ANSI C 107 committee did in
4 the United States?

5 A. I was not aware and am not aware of any
6 such group.

7 Q. Do you agree with the statement in the
8 second paragraph on the third page of the exhibit
9 which is a letter from E. H. Reynolds to Dr.
10 Kimbrough, that the use of pcb's in electrical
11 equipment could be easily and completely
12 controlled to avoid contamination even at the
13 lowest detectable levels?

14 A. At that time we believed that. Since
15 then we found out it is not as easy as we thought
16 it would be.

17 Q. Theoretically possible, but it doesn't
18 seem to be practically possible, is that a fair
19 summary of the 1986 state of the knowledge?

20 A. That is what our experience has taught
21 us.

22 Q. Do you know whether there was ever any
23 action taken by any European country to ban pcb's
24 in electrical equipment?

1 A. Yes. Scandinavian countries banned it.
2 I don't recall, the Netherlands were considering,
3 but I don't recall whether they actually banned
4 it. That is it.

5 Q. As far as you know it is still at least
6 legal, whether or not they are still in use in
7 other European countries?

8 A. To the best of my knowledge, yes.

9 Q. Would you mark this, please.

10 (The document above-referred to
11 was marked Bloomington Deposition
12 Exhibit No. 335 for identification.)

13 Exhibit 335 is a memo from you to D.
14 Wood, dated December 19, 1975. Do you recall
15 sending that memo?

16 A. Yes. I do.

17 Q. Were the samples that Mr. Wills was
18 requesting Monsanto to analyze sewer effluent
19 samples?

20 A. I don't know. They might have been
21 effluents from individual units within a plant
22 instead of the final effluent.

23 Q. Depending on where the sample was taken
24 within the plant sewage system?

1 A. Yes.

2 Q. Monsanto had done this on isolated
3 occasions for Westinghouse in the past, had it
4 not?

5 A. Yes.

6 Q. Would you mark that.

7 (The document above-referred to
8 was marked Bloomington Deposition
9 Exhibit No. 336 for identification.)

10 336 is a two-page letter from Roger
11 Hatton to Roger Wills dated January 19, 1976. A
12 copy to you.

13 Is that the ultimate response of Monsanto
14 to the request as reflected in Exhibit 335?

15 A. Yes.

16 Q. You turned him down on that occasion?

17 A. That's what they did.

18 Q. To your knowledge, did Westinghouse ever
19 share with Monsanto what the EPA findings were on
20 the sewer or effluent samples that were taken
21 where they had asked you to analyze the split
22 samples for them?

23 A. Not to my knowledge.

24 Q. So as far as you know, one result of the

1 refusal was that Monsanto wasn't able to find out
2 what the effluent levels were as of that time in
3 the Bloomington plant?

4 A. No. I don't know that. I left this job a
5 month later.

6 Q. So there may have been some information
7 that came in after you had gone?

8 A. That I didn't know about.

9 Q. Okay.

10 As of the time you left the pcb
11 coordinator job, you knew, did you not, that the
12 Westinghouse plant in Bloomington was still -- to
13 use a phrase that showed up in earlier
14 documents -- not, "bone dry," is that correct?

15 A. True.

16 Q. And you had been in that position a total
17 of about six years?

18 A. Yes.

19 Q. A little over six years?

20 A. Yes.

21 Q. Had there been steady progress at the
22 Westinghouse-Bloomington plant over that period of
23 six years or was it kind of sporadic?

24 A. It was reported to me as steady progress.

1 Q. I am going to show you a document that
2 was previously marked as Exhibit 207 and ask if
3 you recall receiving that, a copy of that memo, on
4 or about the date it bears?

5 A. I recall this memo, yes.

6 Q. Up to the time you left the job of pcb
7 coordinator at Monsanto, was there ever a
8 satisfactory explanation uncovered for the
9 difference in the ability to recover pcb's from
10 distilled water as opposed to river water?

11 A. I don't know about the adjective
12 satisfactory explanation. There were explanations
13 offered. The difficulty in extracting from river
14 water was attributed to the presence of other
15 materials in the water, which interfered with the
16 extraction process and also with the presence of
17 particulate matter, invisible to the naked eye but
18 still present, to which the pcb's would adhere.

19 Q. Adsorption as you and Mr. Karaganis were
20 discussing earlier today?

21 A. Yes.

22 Then when the sample was processed by
23 filtration or passage through the capillary tubes
24 used in the analytical procedure, the pcb's would

1 go with the particulate matter and would not be
2 detected in the water itself.

3 Q. So that is the same phenomenon that was
4 relied on or one of the phenomena that was relied
5 on in the technology of removing the pcb's from
6 the water?

7 A. Yes.

8 Q. That is, you put it on a particle and you
9 filter the particle out?

10 A. Correct.

11 Q. Would you mark this, please.

12 (The document above-referred to
13 was marked Bloomington Deposition
14 Exhibit No. 337 for identification.)

15 Exhibit 337 is a memo dated February 10,
16 1976 consisting of three pages. That is all I can
17 say about it because that is all I know.

18 Referring to a membership list of
19 something called the pcb ad hoc committee
20 membership.

21 What was the pcb ad hoc committee?

22 A. This is a committee within the -- I
23 believe it is the EEI.

24 Q. Edison Electric Institute?

1 A. Let me be sure here that I am not
2 confusing my groups. There is Edison Electric
3 Institute. Then there is another group Electronic
4 Industries Association, EIA. I believe it was the
5 EIA. This is a committee of that organization,
6 Electronic Industries Association.

7 Q. Okay.

8 Is that a standard-setting body?

9 A. Not to my knowledge.

10 Q. What was it that the ad hoc pcb committee
11 was doing within the context of the EIA?

12 A. They were preparing a statement that they
13 were going to share with legislative bodies, state
14 and federal, supporting the continued use of pcb's
15 because of their safety features.

16 Q. Is EIA an organization that sends
17 delegates to NEMA or to ANSI?

18 A. No, there are companies that belong to
19 both, NEMA and EIA. And it is the companies that
20 send the delegates.

21 Q. Was Arrow Box industries a pcb customer
22 of Monsanto?

23 A. Yes.

24 Q. Was Cornell Dubilier Electronics a pcb

1 customer of Monsanto?

2 A. Yes.

3 Q. Everybody on this list other than

4 Monsanto was a pcb customer of Monsanto?

5 A. I would have to see it again.

6 Q. All right.

7 See if there is anybody on there who is
8 not.

9 A. There is a representative of EIA listed.

10 Q. A staff of the association?

11 A. A staff vice president.

12 A. Other than the staff vice president of
13 EIA, and the Monsanto representatives, all other
14 members do represent Monsanto customers of pcb's.

15 Q. Who was Cole Weber?

16 A. He replaced me in my pcb coordinator
17 assignment.

18 Q. Is he still with Monsanto?

19 A. No.

20 Q. Do you know where he is now?

21 A. He is retired and the last I heard he is
22 residing in the St. Louis area.

23 Q. What part of the Monsanto organization
24 did he come from when he replaced you as pcb

1 coordinator?

2 A. He was my counterpart within the same
3 operating unit, Industrial Chemicals Company,
4 responsible for a different set of products than
5 the set I had.

6 Q. His set didn't include pcb's?

7 A. Pcb's were kept out of his set and I
8 retained those. But then they rejoined the
9 appropriate set when they were given to him.

10 Q. When he took over for you?

11 A. Yes.

12 Q. When you say the appropriate set, you are
13 describing the chemical relationship to each
14 other?

15 A. I was thinking of the functional fluids
16 group of products.

17 Q. Would you mark that, please, 338.

18 (The document above-referred to
19 was marked Bloomington Deposition
20 Exhibit No. 338 for identification.)

21 Exhibit 338 is a three-page document
22 which consists of a one-page memo from you to J.
23 C. Weber and attached letter of one page dated
24 October 12, memo is dated October 18, 1978, the

1 attached letter is dated October 12, 1978 to you
2 from William A. Wallace of the EPA and attached to
3 the letter, although I can't say why, another one
4 of these phantom attachments here. Now, it is a
5 two-page exhibit. I took off a page of
6 Westinghouse analytical results October 20, 1978
7 from Analytical Biochemistry Laboratories, Inc.,
8 which bears no apparent relationship to the other
9 two pages that I can determine.

10 Let's do this. Let's mark this as 339.

11 I think maybe we can get rid of this quickly.

12 (The document above-referred to
13 was marked Bloomington Deposition
14 Exhibit No. 339 for identification.)

15 At the time that Monsanto declined to do
16 those water sample analysis for Westinghouse, did
17 you recommend some commercial laboratories to
18 them?

19 A. Yes.

20 Q. Was Analytical Biochemistry Processes,
21 Inc. one of those labs if you recall?

22 A. Yes.

23 Q. Okay.

24 339 is a one-page analysis, results of

1 Westinghouse Electric Corporation water analysis
2 for pcb's dated October 20, 1978. Which, of
3 course, is after you left the pcb coordinator
4 role.

5 Do you know whether this report was ever
6 shared with Monsanto?

7 A. I do not.

8 Q. Now, back to 338, which is now a two-page
9 exhibit, do you recall receiving the letter and
10 writing the memo?

11 A. I recall receiving the letter from Mr.
12 Wallace of EPA and recall forwarding it to Mr.
13 Cole Weber for a response.

14 Q. Do you know if he ever responded?

15 A. I do not know.

16 Q. Okay.

17 The second paragraph of Mr. Wallace's
18 letter says:

19 "Our principal
20 concern is to identify
21 feasible commercial routes for
22 the disposition of pcb's that
23 are available to persons who
24 are disinclined to pay the

1 cost of proper storage and
2 disposal."

3 Do you understand what that means?

4 A. I think I do.

5 Q. What does it mean to you?

6 A. The way I interpret it is there ways of
7 proper disposal other than just storing it. That
8 word disposal is all-encompassing. The way I
9 interpret it was is there a commercial service
10 that is less costly than the storage and on-site
11 incineration, other means of disposal.

12 Q. Okay.

13 As of the date on exhibit -- what is the
14 number of that, 338?

15 A. 338.

16 Q. Chemical hazardous waste disposal
17 facilities or incineration were the only two
18 acceptable ways to get rid of pcb or
19 pcb-contaminated waste; is that correct?

20 A. That is correct.

21 Q. And this gentleman's inquiry to you, both
22 of those are comparatively expensive as ways of
23 getting rid of garbage go. He is asking is there
24 some other way to do it?

1 A. Is there a cheaper way to do it is the
2 way I read that.

3 Q. Okay.

4 As far as you knew at that time the
5 answer was no?

6 A. That's correct.

7 Q. At least not to do it safely, correct?

8 A. Correct.

9 Q. I mean, obviously, there are cheaper ways
10 to do it, but Monsanto wasn't advocating them at
11 that time, I take it.

12 Had you stopped selling pcb's in October
13 of 1978?

14 A. Oh, yes.

15 Q. Long since?

16 A. Yes.

17 Q. Wou were a member of a subcommittee of
18 the American National Standards Institute called
19 C 107?

20 A. Yes.

21 Q. Okay.

22 As I understand it, the American National
23 Standards Institute is a organization that is in
24 the business of establishing minimum standards for

1 various industrial processes, product performance
2 and the like, is that a fair description of what
3 it does?

4 A. Yes.

5 Q. To your knowledge, is that a
6 government-sponsored organization?

7 A. No.

8 Q. Okay.

9 Mr. Benignus seemed to be of the opinion
10 that it was. He and I argued a lot about that.

11 It is an industry-sponsored organization;
12 is that correct?

13 A. Yes.

14 Q. And its membership consists of companies
15 in the various industries that are covered by the
16 standards it promulgates?

17 A. Yes.

18 Q. Okay.

19 And the subject, the work of the C 107
20 subcommittee of ANSI as I understand it was use
21 and controls of pcb's, is that a fair statement?

22 A. And dielectric applications..

23 Q. Transformers and capacitors?

24 A. Yes.

1 Q. Which at the time that C 107 began was
2 about all that was left in the United States?

3 A. Yes.

4 Q. By Monsanto's action in refusing to sell
5 pcb's for other purposes?

6 A. Yes.

7 Q. When was the C 107 committee formed, if
8 you recall?

9 A. The committee was originally formed under
10 the auspices of the National Electrical
11 Manufacturers Association, so as a group they
12 existed starting in 1970.

13 Q. Under the auspices of NEMA?

14 A. NEMA. I am trying to recall, sometime
15 either late '70, early '71, it requested and got
16 sponsorship under ANSI and at that time it became
17 known as ANSI C 107.

18 Q. Okay.

19 C 107 is a form of numbering that is
20 employed by ANSI to designate various standards
21 that it promulgates?

22 A. I thought that C 107 was assigned to this
23 group for this subject.

24 Q. Okay.

1 A. Other numbers were assigned to other
2 groups.

3 Q. Right.

4 Did this group ultimately come up with a
5 standard that was approved by ANSI?

6 A. Yes.

7 Q. Was that standard also number C 107?

8 A. Yes.

9 Q. NEMA is also a standard-setting
10 organization, is it not?

11 A. Yes.

12 Q. Within the electrical industry?

13 A. Yes.

14 Q: And primarily sets standards with respect
15 to fire protection and performance of electrical
16 machinery and equipment?

17 A. Yes.

18 Q. National Electrical Code is one of the
19 big things that comes out of NEMA, isn't it?

20 A. I don't know if NEMA is on that. I can't
21 speak for that.

22 Q. Okay.

23 A. By they do have standards for electrical
24 equipment of all kinds, both safety, fire and

1 performance.

2 Q. Why was it that NEMA sought ANSI
3 sponsorship for the pcb standard-setting effort?

4 A. Well, it was perceived very early on that
5 the pcb's in transformers and capacitors involved
6 more than the manufacture of electrical equipment,
7 it involved the users, the utility companies, that
8 generated power. It involved government agencies.

9 So it was perceived to require a broader
10 umbrella, if you will. And ANSI seemed to be the
11 logical unit.

12 Q. Was it perceived that a NEMA standard
13 regulating pcb's would have less persuasive force
14 with government agencies than an ANSI standard?

15 A. Oh, I don't know how to measure the
16 persuasive ability. I don't know that that was
17 really the intent.

18 The intent was to interest the users of
19 the equipment in addition to the manufacturers of
20 the equipment.

21 Q. Building owners, substation operators,
22 and large industrial facilities, people like that?

23 A. Yes.

24 Q. Did that effort succeed?

1 A. We think it did. Yes.

2 Q. You got some people from companies of
3 that nature involved in the C 107 committee
4 process?

5 A. I remember some utility representative
6 and a service company that went around and
7 repaired and overhauled or refilled transformers.

8 We did get some federal government
9 representation.

10 Q. Was the government participation in this
11 C 107 process as much as had been hoped for by the
12 industry members?

13 A. Not really, no. It was a disappointment.

14 Q. Do you want to mark this.

15 (The document above-referred to
16 was marked Bloomington Deposition
17 Exhibit No. 340 for identification.)

18 Had you been active in NEMA or ANSI or
19 both before the C 107 effort commenced?

20 A. No.

21 Q. Were you familiar with the ANSI standards
22 that applied to chemical industry before you
23 became the pcb coordinator?

24 A. Some of them.

1 Q. Those are related to the plant that was
2 under your supervision?

3 A. Some of them. Primarily the labeling
4 standard.

5 Q. Okay.

6 In that context, were you familiar with
7 the phenomenon that government regulatory agencies
8 often adopt or adopt in some modified form the
9 ANSI standards as their own regulatory standards?

10 A. I was aware of that. Yes.

11 Q. Was it the intent of those electrical
12 industry people who participated in ANSI C 107
13 that ANSI would come up with a pcb standard that
14 would be adopted by the EPA and NIOSH?

15 A. I don't perceive it as an intent. It was
16 a desired objective that if the standard was a
17 good one, it could be adopted.

18 Q. The best way for individual companies to
19 have an impact on the government standard setting
20 process was through something like ANSI C 107
21 rather than individual lobbying of the regulators?

22 A. That is what we thought. Yes.

23 Q. Okay.

24 It turned out it didn't work?

1 A. That's right.

2 Q. Is that correct, in terms of adoption?

3 A. Yes.

4 Q. Ultimately the EPA banned pcb's?

5 A. That's right.

6 Q. Rather than taking the C 107 approach to
7 attempt at control?

8 A. That is correct.

9 Q. I am handing you a document we have
10 marked as Deposition Exhibit 340, which is
11 entitled Monsanto pcb program dated September 14,
12 1971.

13 I will ask you if you recognize that?

14 A. I recognize it.

15 Q. Is that a written presentation that you
16 made to one of the early meetings of the ANSI
17 C 107 group?

18 A. Yes.

19 Q. Did you actually draft that document
20 either alone or in conjunction with some other
21 people at Monsanto?

22 A. Oh, I ended up doing the drafting, yes,
23 with reviews and inputs from others.

24 Q. Who reviewed it before you presented it

1 to the C 107 group?

2 A. Oh, the group of Monsanto's people we
3 discussed earlier, research representative,
4 manufacturer representative, business
5 representative. PR man, lawyer.

6 Q. So as this document 340 was presented to
7 ANSI C 107, it was a statement of the company's
8 position and not just Bill Papageorge's
9 interpretation of what Monsanto was doing; is that
10 correct?

11 A. That is correct, yes.

12 Q. On the page numbered 4 of this document
13 there is a statement:

14 "There is growing
15 concern that we should be
16 considering to a greater
17 degree chronic effects of all
18 these materials rather than
19 relying on the old acute
20 studies that used to serve as
21 a screening for many, many
22 chemicals."

23 Do you see that statement?

24 A. Yes.

1 Q. Is that a reference to the type of skin
2 patch testing that we saw in the late forties and
3 early fifties, way back in the beginning of your
4 deposition?

5 A. Which part of the sentence?

6 Q. The reference to the old acute test
7 screening methods?

8 A. Yes.

9 Q. That was one of the old acute screening
10 methods?

11 A. Yes.

12 Q. As of the date on the exhibit, what is
13 it, 339?

14 A. 340.

15 Q. 340.

16 Had Monsanto itself undertaken any such
17 chronic studies in the human populations that had
18 been exposed to pcb's as opposed to animals?

19 A. No. No human studies were made.

20 Q. Okay.

21 Such a human epidemiological study could
22 have been done on Monsanto's own workforce of
23 those employees who worked with pcb's, could it
24 not?

1 A. Yes.

2 Q. Okay.

3 Is there some particular reason why that
4 wasn't undertaken?

5 A. That was undertaken eventually. I
6 believe if memory serves me right it was underway
7 in '71.

8 Q. But not completed?

9 A. Not completed.

10 Q. Was it eventually completed to your
11 knowledge?

12 A. Yes.

13 Q. And in fact some other studies were done
14 by others on worker populations of your customers,
15 who were exposed to pcb in the occupational
16 setting; is that correct?

17 A. I have heard of at least one more.

18 Q. On page 6 of the memo you refer to the
19 only widespread use that I could find was a
20 limited trial to help prevent or curtail the dutch
21 elm disease and that proved to be a failure. That
22 is a reference to a use of pcb's as a pesticide
23 extender?

24 A. Yes.

1 Q. You describe it in the same phrase as
2 extensive and limited.

3 What specific information can you give me
4 about the nature of that dutch elm disease trial?

5 A. I don't recall the specifics but it was
6 limited in area and limited in time of
7 application.

8 Q. It was an experiment to see if adding
9 pcb's to the mixture would enhance its
10 effectiveness?

11 A. Correct.

12 Q. And it didn't?

13 A. It didn't.

14 Q. Okay.

15 On page 11 you refer to the Toxic
16 Substances Act and the legislative proceedings
17 pending with respect to that bill.

18 Did Monsanto ultimately present testimony
19 to the congressional committee on the Toxic
20 Substances Act?

21 A. Not to the committee that considered the
22 Toxic Substances Act, but to another committee in
23 Congress.

24 Q. Which committee did Monsanto present to,

1 do you recall who?

2 A. I don't recall the title, but I recall
3 the reference to maritime in the title. It is a
4 subcommittee on several things including maritime.

5 Q. How did that committee get interested in
6 pcb's?

7 A. The chairman of the subcommittee
8 represented a part of Massachusetts, where several
9 of Monsanto's pcb customers were located and he
10 agreed to conduct hearings.

11 Q. Did this committee ever take any action
12 on the subject of pcb's?

13 A. Not as a committee. I am not aware of
14 any.

15 Q. Do you still agree with the statement on
16 page 14 of your paper on Monsanto's pcb program
17 and I will read it to you?

18 "We have got to live
19 with the pcb's we have
20 introduced into the
21 environment for the past forty
22 years. They have not
23 disappeared overnight. They
24 will not disappear overnight.

1 We do not have any test to
2 tell us how long it will take.
3 We can only make an educated
4 guess and we might say they
5 will be out there for another
6 generation, 25 to 30 years
7 yet. Hopefully it will be a
8 decreasing amount as time goes
9 on."

10 A. Yes, I still believe that.

11 Q. Do you think they will really be gone in
12 30 years if we don't do anything?

13 A. I have no information to indicate
14 otherwise. So that is as good a guess as I come
15 up with.

16 Q. What is the basis for that 30 year
17 figure?

18 A. It is subjective. There is no scientific
19 basis.

20 Q. Do you think they will all be gone from
21 Bloomington, Indiana in 30 years?

22 MR. FRUEHWALD: If the consent decree is
23 implemented?

24 BY MR. MC CONNELL:

1 Q. If nobody does anything?

2 A. I don't know. I don't know the
3 conditions there. I don't know if any bacteria
4 are present. I don't know anything about it.

5 Q. When you say in this exhibit on page 14
6 of Exhibit 340, you don't really say they will be
7 gone. You say they will be out there for 25 to 30
8 years.

9 Do you mean to say at that end of that
10 period, whatever it is, that they will through
11 some chemical process have been changed into some
12 other material, or are you saying that they will
13 have moved to some other location?

14 A. I don't know that I could be that
15 specific. It reflected a hope that science
16 eventually would be able to help within a
17 generation.

18 Q. One way of getting them gone within
19 twenty years is to dig up all of the contaminated
20 material and incinerate it over the next twenty
21 years?

22 A. That is an economic problem, not a
23 technical problem.

24 Q. Right.

1 It is possible to do that?

2 A. If society can afford the cost.

3 Q. The question is who is going to pay for
4 it. That is what this lawsuit is all about, I
5 guess.

6 On page 15 of this Exhibit 340 you wrote
7 as of the date September 14, 1971:

8 "Studies today would
9 indicate that these pcb's are
10 not and cannot be classified
11 as highly toxic."

12 Do you still agree with that conclusion?

13 A. Yes.

14 Q. But they are toxic in some degree?

15 A. Yes.

16 Q. To human beings?

17 A. Yes.

18 Q. You go on to say:

19 "There is still a lot
20 of information that is needed
21 to help us determine the
22 long-term effect on human
23 beings."

24 Do you still agree with that statement?

1 A. That's right.

2 Q. We don't have enough information now to
3 make a definitive determination one way or the
4 other?

5 A. Definitive, you are right.

6 Q. Can we make a preliminary determination?

7 A. We can make a preliminary or a practical
8 one.

9 Q. What is your view of the preliminary
10 determination concerning the long-term effect of
11 pcb exposure on humans?

12 A. That at the normally low levels of
13 potential exposure, no problem would be
14 anticipated with human beings.

15 Q. What level do you define as normally low
16 levels of potential exposure?

17 A. It is the kind of levels one would find
18 in changing a ballast unit out of a light fixture,
19 or --

20 Q. Can you put a number on it in terms of
21 parts per million body burden or parts per billion
22 body burden?

23 A. That would take more scientific data.

24 Q. What about, let's work down the scale.

1 I suppose the most exposed group of
2 people would be those who in the past worked with
3 pcb's, either at Monsanto or at a Monsanto
4 customer facility, where they came in contact with
5 it on a daily basis?

6 A. The potential for great exposure existed
7 under those conditions, yes.

8 Q. What is the preliminary determination of
9 the long-term effect on those people, if you know?

10 A. I haven't heard of any adverse health
11 symptom associated with that exposure.

12 Q. You haven't heard of chloracne in people
13 working with pcb's?

14 A. Yes, I have, but I was thinking of a long
15 term. I am aware of the total situation of
16 chloracne due to a high exposure. Then it clears
17 up.

18 I don't know of any continuing chloracne
19 problem to human beings that at one time worked
20 with pcb's.

21 Q. Do you know of any continuing liver
22 disease problem?

23 A. I don't know of any.

24 Q. What about, do you know of any continuing

1 problem of birth defects in the pcb worker
2 population?

3 A. I don't know of any.

4 Q. What about the population of people who
5 live at or near a dump where pcb's wastes were
6 buried, do we have enough information to determine
7 the long-term health effects on those people?

8 A. No. We don't.

9 Q. What about the population of people in
10 Bloomington, Indiana who spread pcb contaminated
11 sewage sludge on their gardens, do we have enough
12 information to determine whether they are at risk
13 in your view?

14 A. No.

15 Q. Do you still agree with the statement
16 that begins on page 15 of this Exhibit 340:

17 "We also believe that
18 under the proper conditions we
19 can control the amount of
20 these that do enter the
21 environment to the point where
22 the adverse effects are not
23 great and that the benefits we
24 derive far outweigh the minor

1 adverse effects that we might
2 notice."?

3 A. Yes. I believe that's possible.

4 Q. Was it ever achieved at any time before
5 Monsanto finally went out of the pcb business at
6 any particular facility that you are aware of?

7 A. Yes.

8 Q. Where was that?

9 A. Certainly at the manufacturing site that
10 I am aware of.

11 Q. In Anniston?

12 A. No. Anniston was shut down by then.

13 Q. Okay.

14 A. In Illinois.

15 Q. Sauget?

16 A. Sauget.

17 And I don't know of any of Monsanto's
18 customer sites where the adverse effects have been
19 demonstrated without question.

20 Those are differences of opinion, there
21 are allegations.

22 Q. My question concerns control, controlling
23 the amount that would enter the environment.

24 A. But it also had the adverse effects.

1 Q. You are measuring the degree of control
2 by the existence or nonexistence of adverse
3 effects?

4 A. All control is based on effects.

5 Q. Not if it goes away, that is complete
6 control, whether there is an effect or not.

7 A. That is ideal. Certainly.

8 Q. The idea was never achieved?

9 A. It never will be.

10 Q. Do you want to mark that.

11 MR. FRUEHWALD: Wait a minute.

12 Off the record.

13 (Discussion had off the record.)

14 MR. MC CONNELL: Let's go back on the record,
15 please.

16 Q. I will show you a document that has
17 previously been marked as November 18, 1971, it is
18 a multiple page document.

19 MR. FRUEHWALD: Start over again, Jim.

20 BY MR. MC CONNELL:

21 Q. I am going to show you a document that
22 has previously been been marked as Exhibit 197,
23 dated November 18, 1971, on the letterhead of the
24 American National Standards Institute and I will

1 ask you if you recognize that document?

2 A. Yes. I recognize the document.

3 Q. Is that the first ANSI document that was
4 generated after the group moved from the auspices
5 of NEMA to the auspices of ANSI, if you can
6 recall?

7 MR. FRUEHWALD: The previous Exhibit 340 is
8 calling it ANSI committee C 107 in September.

9 MR. MC CONNELL: Right. I am not suggesting
10 that that fixes the date of the change. I am
11 asking if that is the first document to come out
12 of ANSI after that, after the change took place.
13 If there was something before that.

14 A. I don't know.

15 There were documents representing
16 correspondence between NEMA and ANSI before I
17 first became involved. I don't know what
18 happened.

19 So I don't know if this represents the
20 first document.

21 Q. To your knowledge was Exhibit 340 the
22 first Monsanto presentation to the group, whether
23 under NEMA or under ANSI?

24 A. As best I recall, I made an informal

1 presentation before a NEMA group covering many of
2 the areas which I later covered in a more formal
3 fashion in this document, Exhibit 340.

4 Q. Okay.

5 Now, according to Exhibit 197, the
6 membership list on the front, you and Mr. Benignus
7 were members of both the transformer subcommittee
8 and the capacitor subcommittee; is that correct?

9 A. Yes.

10 Q. Why was that?

11 A. Well, I don't know that I have a reason,
12 other than that neither Benignus nor I nor
13 Monsanto were members of NEMA or of this ANSI
14 group.

15 We were invited initially as guests and
16 shortly thereafter I was asked to be chairman of
17 the committee.

18 So in accepting the chairmanship, I found
19 myself as ex officio member of the full committee
20 and a participant in each of the subcommittees, as
21 ex officio.

22 Q. So you went from being a nonmember of
23 ANSI to chairman of an ANSI committee skipping
24 over the phase of being a member of ANSI?

1 A. That's right.

2 Q. Is it fair to say you were drafted into
3 that capacity by the Monsanto customers who were
4 members of the group?

5 A. I guess one could use that expression,
6 yes.

7 I was asked, and as part of the customer
8 relations I accepted.

9 Q. How come it was you rather than Mr.
10 Benignus that was asked, if you know?

11 A. I don't know.

12 Q. One of the interesting things that --
13 this is totally off the subject of that document
14 now, but I want to ask you before I forget, that
15 if I recall correctly it was Mr. Gossage who said
16 at his deposition that your job was to protect the
17 environment from the pcb's, and his job was to
18 protect the pcb's from the environment.

19 MR. FRUEHWALD: Mr. Benignus.

20 MR. MC CONNELL: Was it Benignus who said
21 that?

22 Q. Would you agree with that statement?

23 A. Well, I will accept the part where I was
24 supposed to protect the environment. I cannot

1 speak for Benignus' perceived role.

2 Q. The whole object of setting the C 107
3 standard was to protect the environment from the
4 pcb's, was it not?

5 A. It was to serve both purposes. Protect
6 the environment and continue the use of these
7 materials which we were led to believe were
8 required because of their safety features and we
9 wanted to have both.

10 Q. Okay.

11 But C 107 as I understand it is not a
12 standard that is desired to protect the pcb's from
13 contamination with water or dust or anything like
14 that?

15 A. Oh, that, I see what you mean. No. No.

16 Q. That's what I took Mr. Benignus to mean
17 when he said to protect pcb's from the environment
18 was if a tankcar dome was loose, your concern was
19 that the pcb's would spill out; his concern was
20 that junk from the air would get in.

21 Okay. I think we would agree on what
22 this process was about.

23 Is it fair to say that other than the --
24 well, I see a gentleman from the Department of the

1 Army listed on the transformer working group, but
2 according to this November 18, 1971 list, he is
3 the only person with a government connection on
4 either one of those groups. Is that correct?

5 A. He is the only one listed in '71.

6 Q. Others were added later, as I understand?

7 A. Yes. Invitations were sent by the NEMA
8 executives to many government agencies.

9 Q. The Army uses pcb transformers, does it
10 not?

11 A. Yes.

12 Q. Did they at this time buy pcb's directly
13 from Monsanto?

14 A. I don't recall seeing a Department of
15 Defense listed on the customer list. This does
16 not mean -- I take it back. I am confusing the
17 Corps of Engineers, which is sort of between the
18 Army, and I am not too sure of its standing.

19 But, anyway, the Corps of Engineers were
20 listed as customers.

21 MR. FRUEHWALD: Let me interpose that you have
22 been referring to the first page which is the
23 working groups. The subcommittees are actually
24 listed later on in the documents and they did

1 include other governmental officials on
2 subcommittees. The working groups is what you are
3 referring to.

4 MR. MC CONNELL: I stand corrected.

5 Q. The two working groups that are listed on
6 the first sheet of Exhibit 197 then all consisted
7 of either Monsanto employees or customer
8 employees; is that correct?

9 A. Yes.

10 Q. Okay.

11 That is what it looks like. Except for
12 the Department of Army representative.

13 Well, if that covers the Corps of
14 Engineers, then they are also if not a customer,
15 certainly a user of pcb's, rather than having only
16 a regulatory interest in the matter, right?

17 A. Yes.

18 Q. Turn back to the page that lists the
19 subcommittees which are listed on attachment 1,
20 are they not?

21 A. Yes.

22 Q. Okay.

23 And those are broken down by the
24 organization supplying the individual

1 representative?

2 A. Yes.

3 Q. Okay.

4 Who are the government employees that are
5 on the subcommittees?

6 A. I see a member of the Department of the
7 Army, a member of the Environmental Protection
8 Agency, the Rural Electrification Administration,
9 which is part of the Department of Agriculture.
10 Tennessee Valley Authority. A second member of
11 the Department of the Army.

12 Q. Okay.

13 The TVA is in as a utility?

14 A. Yes.

15 Q. That was is its interest in the issue, is
16 it not?

17 A. Yes.

18 Q. The Department of Agriculture was
19 interested I take it both as a utility in the form
20 of the Rural Electrification Administration and as
21 a regulator in its interest in keeping pcb's out
22 of the food chain?

23 A. Yes.

24 Q. Okay.

1 The Environmental Protection Agency
2 obviously is in it in its interest as a regulator
3 in connection with environmental release; is that
4 correct?

5 A. Yes.

6 Q. And the Department of the Army, do we
7 have any information about what capacity either of
8 those two particular individuals had?

9 A. Not specific. But they were interested
10 in power distribution and the equipment associated
11 with it.

12 Q. In the same sense as the TVA would be?

13 A. Yes.

14 Q. Okay.

15 Nobody from the FDA is listed as
16 participating as of the date of this Exhibit; is
17 that correct?

18 A. That is correct.

19 Q. Was there ever a Food and Drug
20 Administration representative to the C 107
21 committee that you recall?

22 A. I don't recall any.

23 Q. Did the EPA representative or
24 representatives participate actively in the work

1 of the committee or subcommittees?

2 A. To the extent of their ability to. In
3 terms of committee actions, they are part of the
4 groups.

5 Q. They showed up for meetings?

6 A. Yes.

7 Q. Participated by contributing their
8 thoughts, always with the disclaimer that this is
9 what I think and not what the government thinks?

10 A. In most cases they took the position of
11 the inter-agency taskforce. Which was reflected
12 later on in the March 1972 or May 1972
13 publication.

14 Q. Okay.

15 A. That is their posture.

16 Q. So without regard to what agency they
17 came from, they were in essentially the same
18 position?

19 A. Correct.

20 Q. And they were sharing with the other
21 members of the committee the thinking of the
22 agencies in terms of impending regulatory actions;
23 is that correct?

24 A. Yes.

1 Q. So there was an ongoing dialogue within
2 the context of C 107 between industry and the
3 regulatory authorities as to what ought to be done
4 about this problem of pcb's in the environment?

5 A. Right.

6 Q. The same dialogue was also continuing
7 through different avenues outside C 107 such as
8 the round of meetings that we discussed earlier in
9 Washington, D.C., direct 101 contact by Monsanto
10 with individual agency employees?

11 A. By Monsanto and some of our customers did
12 this also.

13 Q. GE in particular?

14 A. Yes. And Westinghouse.

15 Q. Westinghouse.

16 And you talked to them and they talked to
17 you about what each of you was doing with respect
18 to contacting the government; is that correct?

19 A. As often as we could, yes.

20 Q. Exhibit 341 is a three-page memo from R.
21 D. McClain of Westinghouse to T. Dakin and L.
22 Mandelcorn, dated December 29, 1971, subject ANSI
23 C 107 working group meeting Chicago, December 15,
24 1971.

1 (The document above-referred to
2 was marked Bloomington Deposition
3 Exhibit No. 341 for identification.)

4 I will ask you to take a look at that and
5 I recognize that that being a -- well, let me ask
6 you.

7 I recognize that this is a Westinghouse
8 internal document. Have you ever seen it before?

9 A. I do not recognize it. I don't recall
10 seeing it.

11 Q. Look it over and just tell me briefly
12 whether there is anything in there relating to
13 that meeting which doesn't agree with your
14 recollection of what transpired at the meeting?

15 A. It appears to be a fairly accurate
16 summary of my comments.

17 Q. The exhibit that has previously been
18 marked as 199 consisting of three pages and dated
19 December 15, 1971, meeting ANSI C 107, use and
20 disposal of askarel and askarel-soaked materials,
21 consisting of three pages, signed by T. K. Sloat,
22 I will show you that document and ask if these are
23 the ANSI official minutes of that meeting?

24 A. I don't believe these are the official

1 minutes, primarily because they are not signed by
2 the secretary, Mr. Salazar, who would be the one
3 who issued the official set.

4 Q. Mr. Sloat was a Westinghouse employee,
5 was he not?

6 A. Yes.

7 Q. Document 341 and Exhibit 199 are
8 referring to the same meeting, are they not?

9 A. Yes.

10 Q. Two different people's summaries of what
11 took place?

12 A. Yes.

13 Q. Is there anything in 199 that you don't
14 agree with?

15 Is there anything in 199 that you find to
16 be an inaccurate summary of what took place at the
17 meeting?

18 A. I don't see anything in here that does
19 not appear to be fairly accurate.

20 Q. Okay.

21 In the course of the work of the C 107
22 committee and its subcommittees and working
23 groups, different individuals as I understand it
24 were assigned to prepare first drafts of different

1 portions of what ultimately would become ANSI's
2 proposed standard for action by the organization
3 as a whole; is that correct?

4 A. Well, they were asked to undertake
5 assignment. Some of them put it in writing,
6 others just came back with oral reports.

7 Q. Okay.

8 And the ANSI staff took all those pieces
9 and put them together into a rough draft of the
10 standard?

11 A. Yes.

12 Q. Then that was circulated among all the
13 members of the committee for their comments and
14 criticism?

15 A. Well, in turn, all the members of the
16 subcommittee and finally a composite document was
17 sent to all members of the total committee.

18 Q. Okay.

19 The transformer people worked on the
20 transformer standard, part of the standard, until
21 they were satisfied with it?

22 A. Yes.

23 Q. And the capacitor people worked on the
24 capacitor part of the standard until they were

1 satisfied with it?

2 A. Yes.

3 Q. And then they were exchanged to see what
4 the people who didn't know anything about it
5 thought about it?

6 A. Correct.

7 Q. Okay.

8 A. So that they were consistent in terms of
9 referring to certain services, incinerator
10 services, analytical services and the like.

11 Q. And organizationally consistent with each
12 other?

13 A. That's right.

14 Q. That's kind of a function that the ANSI
15 staff provides, do they not, when they put these
16 things together?

17 A. The ANSI staff did not participant to
18 that extent. They just supplied the letterhead
19 and the umbrella.

20 Q. Okay.

21 So all the hard work was done by the
22 committee members?

23 A. And the NEMA staff did the typing, the
24 mailing, the arrangements for meetings and the

1 like were done by NEMA.

2 Q. ANSI was lending its seal of approval?

3 A. Yes.

4 Q. And, of course, once the C 107 committee
5 was satisfied with its work product, then it was
6 up to the ANSI to decide whether they were going
7 to promulgate that as an ANSI standard or not?

8 A. Yes.

9 Q. There is a formal procedure for that?

10 A. Review panel, yes.

11 Q. At that point the process is out of the
12 hands of the people on the committee?

13 A. Correct.

14 Q. But it was ultimately adopted?

15 A. Yes.

16 Q. Was there any effort to your knowledge in
17 the course of the drafting process of the C 107
18 standard to put it together in such a way that it
19 would not call for drastic engineering changes in
20 the existing plants of those people who were
21 participating in the process?

22 A. I didn't sense that that was the
23 direction the committees took.

24 They looked at what was the desired end

1 result and then worked back, what would it take to
2 achieve it.

3 Q. But they weren't starting with a clean
4 slate, so to speak?

5 A. True.

6 Q. The process wasn't in an ideal world
7 where pcb has never been used before, how can we
8 build a plant that will achieve maximum control,
9 or was that the starting point?

10 A. There were elements of that in the
11 process.

12 The best technology available was
13 considered, and that is the very technology you
14 would use to build a new plant.

15 The introduction of this curbing we
16 talked about and the sumps underneath an operating
17 unit, all the other devices used to contain and
18 control and direct. They could just as well be
19 used in a totally new installation as well as
20 added onto an existing.

21 Q. What my question I guess is, in
22 considering two alternative ways of achieving the
23 same result, that is, containment of the pcb's,
24 was there consideration given to which is more

1 readily put into place in an already existing
2 facility, as opposed to if you are building a new
3 plant you can choose on economic reasons or
4 feasibility reasons or completeness of
5 containment, the economics are going to be
6 different in an existing plant?

7 A. Certainly.

8 Q. Was that taken into consideration in the
9 deliberative process?

10 A. I don't recall that the intent of the
11 ANSI standard setting groups was to supply
12 engineering standards, so much as to point out the
13 objective and, where known, to point out alternate
14 ways of achieving the objective. Allowing the
15 individual company to choose whichever fit his
16 situation.

17 As our example, it says something like
18 avoid getting it on your skin, it talks about
19 gloves and it talks about barrier creams and it is
20 up to the individual company then to decide do I
21 want to use barrier creams, do I want to use
22 creams and gloves, or cream is something I don't
23 want because it will affect my product and I can't
24 paint it later.

1 So the objective overall was to point out
2 the things we wanted to achieve and the how to
3 part where known was described and in some cases
4 it wasn't known. It was left up to each company
5 then to come up with their solutions.

6 Q. Which might be application specific?

7 A. Yes.

8 Q. I might be able to do something you
9 couldn't do because of differences in our
10 processes?

11 A. Yes.

12 Q. It was the hope of those who were
13 participating in the C 107 process that if they
14 could come up with a standard, and if by following
15 the standard the people in the electrical industry
16 could reduce or eliminate environmental release of
17 pcb's, that then pcb's would continue to be
18 available for their use in manufacturing
19 capacitors and transformers?

20 A. Yes.

21 Q. And there was a strong feeling I take it
22 in 1971 and '72 as this process was going on that
23 if they couldn't achieve that result, either
24 through an ANSI standard or otherwise, eventually

1 regulators were going to take their product away?

2 A. Yes.

3 Q. And as of '71 and '72 there was yet no
4 substitute that had been developed?

5 A. That is correct.

6 Q. So it would have meant going back to
7 mineral oil and taking the risk of the fires that
8 pcb's were designed to prevent?

9 A. Yes.

10 Q. Let's look at 342, Exhibit 342, which is
11 a letter dated January 12, 1972 with attachments
12 including a note stapled to the front in A.
13 Pozefsky's handwriting and then the typed letter
14 and then a draft of the guidelines for transformer
15 manufacturing and repair.

16 Do you recognize that early draft?

17 (The document above-referred to
18 was marked Bloomington Deposition
19 Exhibit No. 342 for identification.)

20 A. Yes. I recognize this.

21 Q. Do you agree with the assessment on the
22 third page of the exhibit, which is the first page
23 of the standard, that care must be taken to avoid
24 unnecessary contact with pcb liquid or vapors?

1 A. Yes.

2 Q. Other than the four methods or I am
3 searching for the word, the four routes of contact
4 that are listed immediately under that statement,
5 that is, breathing, swallowing, skin contact and
6 what it says is eye protection, I presume that is
7 a reference to eye contact. Is there any other
8 way that pcb's can get into the human body that
9 you know of?

10 A. No, I don't.

11 Q. Okay.

12 Was there a similar statement in the
13 capacitor draft about routes of human contact?

14 A. I don't recall.

15 Q. Take a look at 343, which is dated
16 January 17, 1972, the first page is a cover letter
17 by A. Pozefsky of General Electric to the members
18 of the capacitor working group. And with this
19 draft attached.

20 (The document above-referred to
21 was marked Bloomington Deposition
22 Exhibit No. 343 for identification.)

23 A. I have reviewed it.

24 Q. Although the language about human

1 exposure in the capacitor draft isn't the same as
2 in the transformer draft, I take it that whatever
3 human health risks might exist would be the same
4 without regard to whether the material was being
5 used in capacitors or transformers; is that
6 correct?

7 A. Yes.

8 (The document above-referred to
9 was marked Bloomington Deposition
10 Exhibit No. 344 for identification.)

11 Q. Exhibit 344 is a document dated April 28,
12 1972 entitled pcb's - allowable discharge from
13 producing/using plants, minutes of meeting 4/13/72
14 in EPA Offices Washington, D. C.

15 Do you recall attending that meeting in
16 April of '72?

17 A. Yes.

18 Q. That was something different from the
19 C 107 committee, was it not?

20 A. That's right.

21 Q. Who called that meeting?

22 A. As I recall, this meeting was requested
23 by me through Mr. Easley to discuss with Dr.
24 Buckley the status of EPA's 'activities regarding

1 preparing a standard, control standard for pcb
2 effluents.

3 Q. Sewer effluents?

4 A. Yes. Water effluents.

5 Q. That was under the statutory authority of
6 the Water Pollution Control Act?

7 A. Yes.

8 Q. Was that the first regulatory effort on
9 pcb's that came out of the EPA?

10 A. Yes.

11 Q. As of the date of that meeting in April
12 of '72, the Toxic Substances Control Act hadn't
13 yet been passed; is that correct?

14 A. That is correct.

15 Q. So that the only authority at this time
16 the EPA had with respect to regulating pcb's was
17 under the Water Pollution Control Act?

18 A. Yes.

19 Q. And that was the direction they were
20 headed in as of that meeting?

21 A. Yes.

22 Q. Now, the meeting that is reflected in 344
23 was limited to EPA people and Monsanto people; is
24 that correct?

1 A. That is correct.

2 Q. And it was at Monsanto's request that the
3 meeting took place?

4 A. Yes.

5 Q. What was the purpose of that meeting from
6 Monsanto's point of view?

7 A. To avoid getting a standard that was
8 unrealistic and unachievable.

9 Q. In other words, if the EPA water effluent
10 standard were low enough, it would effectively
11 amount to a ban on pcb's?

12 A. Yes.

13 Q. Because your customers couldn't possibly
14 achieve it with the available technology?

15 A. Our customers as well as Monsanto.

16 Q. As well as you at your production
17 facility?

18 A. Yes.

19 Q. Although at that point in 1972 I gather
20 you were generally doing better at your plant than
21 your customers were doing at their plant in terms
22 of water quality?

23 A. We were doing better than some of our
24 customers and as well as others.

1 So I don't know that I could use the word
2 generally doing better.

3 Q. Okay.

4 Nobody was doing better than you, in any
5 event?

6 A. There might have been a couple.

7 Q. Who do you have in mind?

8 A. There was an operation in near here, near
9 Chicago, I am trying to remember the city.

10 Q. It wasn't Waukegan, was it?

11 A. I am sorry?

12 Q. Waukegan.

13 A. No. This was a capacitor manufacturer.

14 There was a company in the northeast, I
15 forgot their name. JARD, I believe, or some such
16 acronym.

17 Q. Does that Exhibit 344 accurately reflect
18 what you recall as having taken place at that
19 meeting?

20 A. Yes. Very accurately.

21 Q. Who prepared the memo?

22 A. Mr. Paul Hodges.

23 Q. Is he a Monsanto person?

24 A. He was a Monsanto employee.

1 Q. GO refers to what?

2 A. General offices.

3 Q. St. Louis location, in other words?

4 A. Yes.

5 Q. The EPA was recommending before this
6 meeting standards at .01 parts per billion for
7 rivers and lakes and zero detectable discharges
8 from the plants?

9 A. That was the --

10 Q. That was what they came in with?

11 A. Yes.

12 I don't know that they were convinced
13 that that was it. But at least --

14 Q. That was their starting point coming into
15 the meeting?

16 A. Yes.

17 Q. And your starting point was that neither
18 one of those could be feasibly achieved?

19 A. Right.

20 Q. According to this, your objectives were
21 to induce EPA to recommend .1 parts per billion or
22 10 times what their initial thinking was for the
23 river and lake water and 5 pounds per day
24 discharge from manufacturing facilities, with a

1 reasonable time to achieve those levels?

2 A. Yes.

3 Q. Did you tell them up front that is what
4 your goal was?

5 A. Yes.

6 Q. Okay.

7 So the negotiating that took place was
8 between those positions, your goal and their
9 coming-in position?

10 A. Yes.

11 I don't know that I would describe it as
12 negotiating. It is a statement of our positions.

13 Q. They backed up, they told you what
14 information they had that backed up their position
15 and you told them what information you had that
16 you thought backed up your position?

17 A. Yes.

18 Q. And you parted company at that point?

19 A. Yes.

20 Q. Was there a further dialogue with the EPA
21 as time went on?

22 A. Yes.

23 Q. Were there any further minutes that
24 reflect that, if you know?

1 A. No. It was not that type of meeting.
2 The dialogue took place in a more public-type
3 forum.

4 Q. They published a proposed regulation
5 ultimately in the Federal Register?

6 A. Yes.

7 Q. And you submitted some comments on it,
8 you being Monsanto?

9 A. Yes.

10 Q. Okay.

11 Did those go out over your signature,
12 didn't we talk about those already?

13 MR. FRUEHWALD: Some of those were shown up in
14 Mr. Gossage's deposition and they may have been in
15 Bill's other deposition.

16 MR. MC CONNELL: We didn't discuss those in
17 your testimony. I can't remember that.

18 A. I don't recall.

19 BY MR. MC CONNELL:

20 Q. Just without getting into those documents
21 right now, there were some comments to the
22 proposed regulation by Monsanto and by some of its
23 customers?

24 A. Yes the regulation, the proposal was

1 withdrawn and held in abeyance. There were many,
2 many delays, it was never promulgated.

3 Q. There never was a water quality standard
4 because the ban under the Toxic Substances Control
5 Act intervened, is that a fair statement?

6 A. Yes.

7 Q. So the regulatory process as it proceeded
8 informally in the context of this April '72
9 meeting, informally once an initial proposed
10 regulation was published in the Federal Register
11 dragged on until it became moot, because action
12 was taken under a different statute?

13 A. Yes.

14 Q. The thought being that once the
15 production and use of pcb's was eliminated, the
16 problem of water effluents would eventually take
17 care of itself?

18 MR. FRUEHWALD: Let me object here.

19 We are going down a road that is
20 obviously contrary to the public record. And
21 these are events that occurred after Mr.
22 Papageorge left his position as pcb coordinator.

23 I think you know that there was an
24 effluent standard promulgated in '76 and '77. But

1 that is after Mr. Papageorge left his
2 responsibilities.

3 So his testimony about what the EPA did
4 is probably based on his experience during his
5 role. But the leading questions that this was
6 never done is contrary to the fact. There was an
7 effluent standard promulgated in '76.

8 MR. MC CONNELL: That was after he was out of
9 the job. I am only asking him about the period of
10 time --

11 MR. FRUEHWALD: I want to make sure that's
12 clear.

13 BY MR. MC CONNELL:

14 Q. Up until you left, there was no water
15 quality standard?

16 A. That's right.

17 Q. After you changed jobs, you didn't
18 particularly care what happened, you had other
19 things on your mind?

20 A. Correct.

21 Q. You weren't following what the EPA was
22 doing with pcb's with any interest in the details
23 of it?

24 A. Not closely, no.

1 Q. Okay.

2 It came to your attention at some point
3 that they were ultimately banned, I take it?

4 A. Yes.

5 Q. During the time now up until you left,
6 which was in '75, '76?

7 A. '76.

8 Q. Beginning of '76?

9 A. February of '76.

10 Q. Okay.

11 During that period of time from April of
12 '72 to '76, there was a proposal, a proposed water
13 quality, water effluent standard promulgated,
14 comments were received and it was withdrawn, to
15 the best of your recollection?

16 A. As best I recall. Yes.

17 Q. Okay.

18 And Monsanto did submit comments in
19 response to that proposed standard?

20 A. Yes.

21 Q. And you shared those comments with your
22 customers?

23 A. Yes.

24 Q. So they new what you were saying and they

1 also put in their comments to the EPA?

2 A. Yes.

3 Q. And they told you what their comments
4 were?

5 A. Yes.

6 Q. And the gist of all the comments I gather
7 was that the initial proposal wasn't feasible?

8 A. Yes.

9 Q. Couldn't be achieved?

10 A. Yes.

11 Q. And that it would effectively amount to a
12 ban on the use of pcb's?

13 A. I don't know that those words were used.

14 Q. I mean that wasn't a mystery to the pcb
15 people and it wasn't a mystery to the EPA?

16 A. Yes.

17 Q. Once it became apparent that it couldn't
18 be achieved, they said don't put out .01 parts per
19 billion and you couldn't use pcb's without
20 releasing more than that, you can't use pcb's?

21 A. Then you are in violation, all the
22 problems.

23 Q. Or you had to pay all the fines and you
24 get dragged into court?

1 It is probably not worth the headache.

2 You get bad publicity for your company and all the
3 attendant things that go with violating EPA
4 standards, right?

5 A. Yes.

6 Q. The objective of Monsanto and its
7 customers during this period of four years, a
8 little less than four years, from April of '72
9 through February of '76, when you stepped out of
10 that role, was to do whatever could be done to
11 control environmental release, while still keeping
12 the product available for capacitor transformer
13 use.

14 Is that a fair summary of what all of
15 this activity was about?

16 A. Yes.

17 Q. Did there come a time before you left the
18 pcb coordinator role where somebody developed a
19 substitute dielectric fluid?

20 A. I was not made aware before I left that
21 someone had. But it appeared to be an alternate
22 with some shortcomings.

23 Q. It was always Monsanto's position during
24 this period that should a safe and effective

1 alternate become available, pcb production would
2 be stopped?

3 A. That was a stated policy, yes.

4 Q. So that was the hang up so to speak,
5 finding an alternative?

6 A. Yes.

7 Q. Monsanto was not the company that
8 ultimately ended up doing that?

9 A. That is correct.

10 Q. Take a look at the document that has
11 previously been marked as Exhibit 204, which is a
12 memo from you to Benignus and others dated May 2,
13 1972, with two letters attached. And I will ask
14 you if you recognize that?

15 A. I recall these documents.

16 Q. The pcb taskforce was an internal
17 Monsanto group or was that something that that
18 involved others?

19 A. No, this was the inter-agency taskforce.

20 Q. Okay.

21 There was going to be a meeting of
22 Monsanto people with the taskforce to review the
23 topics that are included in the two letters
24 attached to the memo, is that correct?

1 A. Yes.

2 Q. And that meeting was to be scheduled on
3 May 15, 1972?

4 A. Yes.

5 Q. Did you attend the meeting?

6 A. Yes.

7 Q. Did you attend the full dress rehearsal
8 on May 8?

9 A. Yes.

10 Q. That was at Monsanto in St. Louis?

11 A. Yes.

12 Q. And you had a number of overhead slides
13 and script that was used in your presentation to
14 the inter-agency taskforce?

15 A. Yes.

16 Q. Did that presentation -- we marked that
17 as an exhibit before.

18 Did that presentation include some
19 information that was excerpted or summarized from
20 the Industrial Bio-Test animal studies as they
21 stood in May of 1972, do you recall?

22 A. I don't believe that we covered that.

23 MR. MC CONNELL: Well, I am not done but we
24 have to stop.

1 MR. FRUEHWALD: All right. So be it.

2 MR. MC CONNELL: I am physically incapable of
3 continuing, I think.

4 (Whereupon the taking of the
5 deposition was continued sine
6 die.)

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