

SUPERIOR COURT OF CALIFORNIA
CITY AND COUNTY OF SAN FRANCISCO

BIRMINGHAM FIRE INSURANCE)
COMPANY, et al.,)
)
Plaintiffs,)
)
vs.) No. 840161
)
PACIFIC GAS & ELECTRIC)
COMPANY, et al.,)
)
Defendants.)

VOLUME II

Deposition of Witness
GEORGE J. LEVINSKAS
on Behalf of the Plaintiffs.

August 6 and 7, 1987

Continued Direct Examination by Mr. Dicum...Page 4
Cross-Examination by Mr. Combs.....Page 361
Redirect Examination by Mr. Dicum.....Page 393
Recross-Examination by Mr. Combs.....Page 412
Further Redirect Examination by Mr. Dicum...Page 416

Reported by:
Carolyn S. Howser
Certified Court Reporter

HOWSER COURT REPORTING
20 South Central Avenue, Suite 201
Clayton, Missouri 63105
(314) 725-4188

INDEX OF EXHIBITS

	<u>Page Marked</u>	<u>Page Identified</u>
Plaintiff's Exhibit No. 74 Bio-Test raw data	232	270
Plaintiff's Exhibit No. 75	232	
Plaintiff's Exhibit No. 76	232	
Plaintiff's Exhibit No. 77 Interoffice memo from Plank dated 3-17-71	232	299
Plaintiff's Exhibit No. 78 Letter from Fancher to Wheeler dated 5-23-69	232	323
Plaintiff's Exhibit No. 79 Letter from Wheeler to Fancher dated 6-12-69	232	291
Plaintiff's Exhibit No. 80	232	
Plaintiff's Exhibit No. 81 Memo dated 7-21-69	232	
Plaintiff's Exhibit No. 82 Interoffice memo from Fancher dated 7-25-69	232	405
Plaintiff's Exhibit No. 83 Interoffice memo from CM dated 8-1-69	232	406
Plaintiff's Exhibit No. 84	232	
Plaintiff's Exhibit No. 85	232	
Plaintiff's Exhibit No. 86 Letter from Wheeler	232	
Plaintiff's Exhibit No. 87	232	
Plaintiff's Exhibit No. 88	232	

INDEX OF EXHIBITS (Cont'd)

	<u>Page</u> <u>Marked</u>	<u>Page</u> <u>Identified</u>
Plaintiff's Exhibit No. 89 Memo from Fancher dated 5-13-71	232	
Plaintiff's Exhibit No. 90 Letter from Wright to Levinskas dated 9-30-71	232	324
Plaintiff's Exhibit No. 91 Letter from Levinskas to file dated 10-13-71	232	319
Plaintiff's Exhibit No. 92	232	
Plaintiff's Exhibit No. 93 Letter from Levinskas to Keplinger dated 12-6-71	232	322
Plaintiff's Exhibit No. 94 Handwritten note dated 12-9-71	232	275
Plaintiff's Exhibit No. 95	232	
Plaintiff's Exhibit No. 96	232	
Plaintiff's Exhibit No. 97	232	
Plaintiff's Exhibit No. 98	232	
Plaintiff's Exhibit No. 99	232	
Plaintiff's Exhibit No. 100	232	
Plaintiff's Exhibit No. 101 Handwritten letter from Otis to Don dated 1-14-72	232	
Plaintiff's Exhibit No. 102	232	
Plaintiff's Exhibit No. 103	232	

INDEX OF EXHIBITS (Cont'd)

	<u>Page Marked</u>	<u>Page Identified</u>
Plaintiff's Exhibit No. 104 Letter from Calandra to Roush dated 4-18-75 with attachments	232	330
Plaintiff's Exhibit No. 105 Letter from Levinskas to Keplinger dated 10-28-71	318	319
Plaintiff's Exhibit No. 106 Letter from Levinskas to Calandra dated 2-4-75	326	326
Plaintiff's Exhibit No. 107 Interoffice memo from Gordon dated 2-14-75	329	329
Plaintiff's Exhibit No. 108 Letter from Levinskas to Calandra dated 8-14-75 with attachments	333	333
Plaintiff's Exhibit No. 109 Letter from Levinskas to Calandra dated 2-4-75	336	336
Plaintiff's Exhibit No. 110 Bio-Text data	342	342
Plaintiff's Exhibit No. 111 Report to Monsanto dated 7-1-75 from Richter	346	346
Plaintiff's Exhibit No. 112 Report to Monsanto dated 7-1-75 from Richter	351	351
Plaintiff's Exhibit No. 113 Letter from Calandra to Levinskas undated with attachments	351	351
Plaintiff's Exhibit No. 114 Letter from Levinskas to Calandra dated 7-18-79	354	354

INDEX OF EXHIBITS (Cont'd)

	<u>Page Marked</u>	<u>Page Identified</u>
Plaintiff's Exhibit No. 115 Letter from Gordon to Levinskas dated 4-24-75 with attachments	355	356
Plaintiff's Exhibit No. 116 Letter from Wright to Shubik dated 5-30-75 BIR No. 007454 through 007455	357	357
Plaintiff's Exhibit No. 117 Letter from Mahboubi to Johannsen dated 10-7-75 BIR No. 007456 through 007458	358	358
Plaintiff's Exhibit No. 118 Letter from Pour to Wright dated 10-31-75 with report BIR No. 007468 through 007498	358	358
Plaintiff's Exhibit No. 122 Letter from Papageorge to Wilburn dated 7-6-70 BIR No. 005456	370	370
Plaintiff's Exhibit No. 123 Memo from Levinskas to File dated 2-13-76 BIR No. 007726 through 007727	376	376
Plaintiff's Exhibit No. 124 Memo from Levinskas to File dated 3-25-76 BIR No. 007725	381	381
Plaintiff's Exhibit No. 125 Monthly Summary from Levinskas dated 9-16-75 BIR No. 007717 through 007720	382	382

INDEX OF EXHIBITS (Cont'd)

	<u>Page Marked</u>	<u>Page Identified</u>
Plaintiff's Exhibit No. 126 Memo from Levinskas to Craddock dated 8-29-80 BIR No. 007734 through 007735	385	385
Plaintiff's Exhibit No. 127 Meeting with NIOSH dated 11-22-74 BIR No. 007882	390	390
Plaintiff's Exhibit No. 128 Memo from Levinskas dated 9-28-72 with attachment BIR No. 007709 through 007710	393	394
Plaintiff's Exhibit No. 129 Memo from Levinskas dated 10-25-72 BIR No. 007711	393	395
Plaintiff's Exhibit No. 130 Memo from Wheeler dated 12-9-74	395	395
Plaintiff's Exhibit No. 131 Memo from Burtner dated 12-11-75	396	396
Plaintiff's Exhibit No. 132 Memo from Levinskas dated 1-31-75 BIR No. 007713 through 007716	398	398
Plaintiff's Exhibit No. 133 Memo from Papageorge dated 2-10-75 BIR No. 007885 through 007888	399	399
Plaintiff's Exhibit No. 134 Memo from Levinskas dated 10-16-75	402	402
Plaintiff's Exhibit No. 135 Memo from Levinskas dated 2-13-76 BIR No. 007724	403	403

INDEX OF EXHIBITS (Cont'd)

	<u>Page</u> <u>Marked</u>	<u>Page</u> <u>Identified</u>
Plaintiff's Exhibit No. 136 Letter from Levinskas to File dated 6-6-77 BIR No. 007728	408	408
Plaintiff's Exhibit No. 137 Memo from Levinskas dated 11-9-77 BIR No. 007729 007730	409	409
Plaintiff's Exhibit No. 138 Protocol for Monsanto Co. dated 9-5-68	415	416
Plaintiff's Exhibit No. 139 Memo from Richter dated 10-10-71 with attachment	418	418

SUPERIOR COURT OF CALIFORNIA
CITY AND COUNTY OF SAN FRANCISCO

BIRMINGHAM FIRE INSURANCE)
COMPANY, et al.,)
Plaintiffs,)
vs.) No. 840161
PACIFIC GAS & ELECTRIC)
COMPANY, et al.,)
Defendants.)

CONTINUED DEPOSITION OF WITNESS GEORGE J. LEVINSKAS,
produced, sworn and examined on the part of the
Plaintiffs, pursuant to Notice, and pursuant to the
following stipulation between the hours of eight o'clock
in the forenoon and six o'clock in the afternoon of
Thursday and Friday, August 6 and 7, 1987, at the
Holiday Inn, 7730 Bonhomme Avenue, Room 407, in the
County of St. Louis, State of Missouri, before me,

CAROLYN SUE HOWSER
Certified Court Reporter
of
HOWSER COURT REPORTING

a Notary Public in and for the State of Missouri, in a
certain cause now pending in the Superior Court of
California, City and County of San Francisco, wherein
BIRMINGHAM FIRE INSURANCE COMPANY, et al., are the
Plaintiffs and PACIFIC GAS & ELECTRIC COMPANY, et al.,
are the Defendants.

A p p e a r a n c e s

For the Plaintiffs: Hall, Henry, Oliver & McReavy
Attorneys at Law
100 Bush Street - Suite 1200
San Francisco, CA 94104
By: Henry D. Dicum

CERTIFIED COURT REPORTERS

STLCOPCB4027377

A p p e a r a n c e s (Cont'd)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	For the Defendant I.T. Corp.: La Follette, Johnson, Schroeter & De Hass Attorneys at Law 50 California Street - 35th Floor San Francisco, CA 94111 By: Matthew J. Rothschild For the Defendant PG&E: Sedgwick, Detert, Moran & Arnold Attorneys at Law One Embarcadero Center - 17th Floor San Francisco, CA 94111 By: Beth S. Jordan For the Defendants Weaver and Welton Beckett: Lempres & Wulfsberg Attorneys at Law 300 Lakeside Drive - 18th Floor Oakland, CA 94612 By: Roy A. Combs For the Defendant Westinghouse: Thelen, Marrin, Johnson & Bridges Attorneys at Law Two Embarcadero Center San Francisco, CA 94111 By: Gary Fontana For the Defendant Monsanto Company: Bronson, Bronson & McKinnon Attorneys at Law Bank of America Center San Francisco, CA 94104 By: Bernard Kearns Also Present: Mary Oliver
--	---

S t i p u l a t i o n

Before the taking of the within deposition, the parties, by their counsel, stipulate and agree that the same is being taken pursuant to Notice. Counsel further stipulate same may be taken in stenotypy and thereafter typed, signature of the witness not being waived, and regularly filed in the case, subject to objections as to competency, relevancy, and materiality.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

GEORGE J. LEVINSKAS

being produced, sworn and examined on behalf of the
Plaintiffs, deposeth and saith:

CONTINUED DIRECT EXAMINATION

BY MR. DICUM:

Q. Dr. Levinskas, we're continuing the
deposition we began yesterday. You understand you're
still under oath?

A. Yes.

Q. And yesterday we were asking you some
questions about certain monkey tests and I was asking
you about certain changes that appeared between drafts
of the report and the final report. Do you recall
that?

A. Yes.

Q. Would you look at Plaintiff's Exhibit 53
and a copy of the report if that's available? Do you
have the final report as well in front of you which is
Plaintiff's 43?

A. I do not have a report here of this study.

Q. Would you look at Plaintiff's Exhibit 53?

MR. KEARNS: 53?

A. Yes.

Q. Have you seen this document before, do you
know?

1 A. I do not recall specifically, but I
2 probably did.

3 Q. Okay. Do you recall in the course of the
4 report discussions about the statistical significance
5 of the various parameters of the report?

6 A. We did discuss various aspects of the
7 report and that could have included discussions of
8 statistical analysis.

9 Q. Do you recall the specific changes that
10 were suggested by Dr. Peter Berteau of Monsanto to
11 David P. Martin listed in this letter?

12 A. Since this was about ten years ago, I do
13 not recall them, but I am reasonably confident that I
14 had discussed them with Dr. Berteau before he had wrote
15 his memo.

16 Q. Will you look at the second page? Do you
17 see the third line, Dr. Berteau stressed that change
18 be made from "confirmed" to "statistically significant"?
19 Do you see that?

20 A. Yes.

21 Q. Do you recall any discussion about a change
22 that Monsanto wanted in the draft report from
23 "confirmed" to "statistically significant" at Page 4 of
24 the draft report?

25 A. I had earlier indicated I do not recall the

1 specifics, but I'm reasonably confident we discussed
2 this including the statistical evaluation of the data.

3 Q. Would you look at the next paragraph? Do
4 you see that it's stated there following, "In addition
5 I note in all studies the very erratic results with one
6 biochemical parameter (CPK) and the high standard
7 deviations." What is CPK?

8 A. I am not certain. It's probably creatinine
9 phosphokinase or something. I believe it's an enzyme.

10 Q. That's a liver enzyme, is it not?

11 A. It's a serum enzyme. Whether it's from the
12 liver, I don't really know.

13 Q. And you see the next sentence, "Perhaps
14 some explanation of the meaning of this parameter could
15 be provided and why it is so erratic"? Do you see
16 that?

17 A. Yes.

18 Q. Do you recall any discussions with Dr.
19 Berteau concerning the very erratic results or erratic
20 results that he had detected in drafts of the report?

21 A. I have already indicated that I do not
22 recall specifics at this time of the conversations we
23 had.

24 What he is saying is that since there is a
25 very large standard deviation, that is a reflection of

1 the fact that the numbers are exceedingly variable and
2 he is asking for those exceedingly variable or as he
3 termed them erratic numbers, have they got some
4 explanation. This could be a reflection of imperfect
5 laboratory technique.

6 Q. Dr. Levinskas, in the course of your
7 education and training, I take it you've had
8 considerable experience in statistical science?

9 A. I've had some experience in statistical
10 science.

11 Q. Would it be correct to say if there is a
12 high standard deviation that the confidence level of
13 the resulting information must be low?

14 A. That's correct.

15 Q. Now, will you look at the next paragraph?
16 Do you recall the subject matter of this paragraph
17 about certain delays that were occurring in getting
18 biopsies back from Monsanto?

19 A. This relates to comments I made yesterday.
20 I had indicated that the laboratory that we had
21 proposed doing the analyses at, my recollection at
22 least was the Monsanto Research Corporation, because of
23 their scheduling difficulties or other pressures, they
24 had not been doing the analyses as rapidly as we had
25 hoped and this is a further discussion of that same

1 subject.

2 Q. Look at Exhibit 54, next in order. Will
3 you look at the second paragraph where there's a
4 reference again to creatinine phosphokinase? Do you
5 recall this comment by David Martin in reply to Peter
6 Berteau concerning the sensitivity of the test?

7 A. I will reiterate the comment I made earlier
8 that I do not recall the specifics at this time of the
9 topics we discussed, but I would presume that we had
10 discussed these at the time.

11 Q. Do you have any information indicating that
12 the statements made in the second paragraph by David
13 Martin were inaccurate?

14 A. I have no basis for evaluating it. We had
15 made an inquiry of him as to the utility and validity,
16 reliability of that test and he has made a response to
17 us.

18 Q. Do you know of any further steps that were
19 ever taken to correct the erratic variations in the
20 test results noted in that correspondence?

21 A. I don't know what specific steps were
22 taken, but I'm sure the results of those analyses
23 appear in the final report.

24 Q. Would you look at Page 72 -- I beg your
25 pardon, Plaintiff's Exhibit 72?

1 MR. KEARNS: '72?

2 MR. DICUM: Yes.

3 Q. This bears a cc to you, sir, does it not?

4 A. Yes, it does.

5 Q. Do you remember this document?

6 A. I would repeat what I've said before. I do
7 not recall the specifics but undoubtedly we had
8 discussions regarding the content of this.

9 Q. Do you have any reason for believing you
10 did not receive this document?

11 A. I've indicated I believe I have seen it.

12 Q. And that was in the course of normal
13 business over at Monsanto, work?

14 A. Beg your pardon?

15 Q. In the normal course of business at
16 Monsanto, is that correct?

17 A. If the carbon copy were addressed to me, I
18 would have either read it or I would have discussed the
19 contents of it before it was sent to me.

20 Q. Will you look at the first paragraph? Do
21 you know what the changes were to the draft report that
22 were too lengthy to discuss with David Martin?

23 A. I will repeat what I said before. At this
24 time I cannot recall specifics of the changes involved.

25 Q. Do you know if there's any surviving

1 document that would help us establish what was in those
2 two pages before they were changed by Monsanto?

3 A. I do not know which records or what records
4 would have been kept.

5 Q. Do you believe that they would by now have
6 been destroyed because the report is in final form?

7 A. I said I do not know what records would be
8 kept or what the disposition would have been.

9 Q. Do you see the the fourth sentence of that
10 paragraph? "As I explained, we are concerned that some
11 of these statements may be taken out of context and
12 used adversely against Monsanto." Does that refresh
13 your recollection as to what was in those two missing
14 pages?

15 A. It would not refresh my recollection. I
16 think that is a continuous concern of any scientist
17 that things will be taken out of context and
18 interpreted incorrectly.

19 Q. Well, if you're a true scientist, would you
20 be concerned about, let's say, your company being sued
21 because of adverse comments in the test report?

22 A. A true scientist is always concerned as
23 I've indicated that his statements will be taken out of
24 context and misinterpreted.

25 Q. So you don't know what these statements

1 were, do you, as we sit here today?

2 A. No, but I would like to go to the -- I'd
3 like to go on to the next sentence --

4 Q. Go ahead.

5 A. -- which says, "However, it is certainly
6 not our intention to try to undermine the integrity of
7 Litton Bionetics and if you feel that any of our
8 comments are contrary to what was agreed upon with our
9 impartial consultant, Dr. Ray Harbison, please state
10 this fact and let the statements stand."

11 Q. Who is Dr. Ray Harbison?

12 A. He was at that time a professor in the
13 Department of Toxicology at Vanderbilt University in
14 Nashville, Tennessee, as indicated by his address.

15 Q. Had Monsanto used him before as a
16 consultant?

17 A. To the best of my recollection this is the
18 first time we used him as a consultant.

19 Q. Has Monsanto continued to use him?

20 A. I think we have contacted him once or twice
21 with respect to his opinion on teratogenicity of
22 chemicals because this is his area of expertise.

23 Q. By the way, have there been any further
24 studies after the monkey studies dealing with PCBs done
25 by Monsanto since these studies?

1 A. I do not recall any other animal studies
2 that have been conducted since these monkey studies.

3 Q. Have there been any other kind of studies
4 concerning the toxicity of PCBs or otherwise since
5 these monkey studies?

6 A. I'm not aware of any toxicity studies. I'm
7 aware as I've indicated of animal studies Monsanto has
8 done.

9 Q. What about some outside testing lab such as
10 Litton Bionetics on behalf of Monsanto since the monkey
11 studies?

12 A. My comment -- the Monsanto studies would
13 include studies done by Monsanto as well as studies
14 done for Monsanto.

15 Q. Who is Dr. R. H. Cardy at the bottom of
16 this letter?

17 A. He is indicated as being with Litton
18 Bionetics. His function I do not know. I have not met
19 the gentleman.

20 Q. Do you know if Monsanto ever used Litton
21 Bionetics again after this report?

22 A. We have done other studies with Litton
23 Bionetics, yes.

24 Q. Have you ever used David Martin again -- I
25 beg your pardon -- yes, David Martin?

1 A. We use the personnel that the laboratory
2 assigns. Dr. Martin's expertise was in the area of
3 primates. We have not done additional primate studies
4 insofar as I know. Dr. Martin has not been connected
5 with any subsequent Monsanto studies.

6 Q. Will you look at the next exhibit, Number
7 73? Again, this bears a cc to you, does it not, at the
8 end?

9 A. Yes.

10 Q. Do you have any reason to believe you did
11 not receive this document?

12 A. I would indicate that I believe I have seen
13 it, though I at this time do not recall specifics of
14 the memo or the discussion.

15 Q. Well, will you look at the document to see
16 if that helps refresh your recollection as to the
17 subject matter of the document?

18 A. The specifics?

19 Q. Well, first of all, let's take it bit by
20 bit because there's a number of paragraphs. Have you
21 got the final report in front of you?

22 A. Yes, I do.

23 Q. First of all, again I take it that at this
24 time you have no recollection of the drafts upon which
25 this letter is based?

1 A. Not specific details of it, no.

2 Q. Page 3, Section 2a, the last paragraph,
3 will you turn to Page 3, Section 2a?

4 A. Page 3, 2a.

5 Q. Last paragraph?

6 A. Okay.

7 Q. Now, it says there, "Replace the first
8 sentence with" and this is from the letter "'Test
9 animals were dosed for a period of six months before
10 they were mated.'" Do you know what was replaced in
11 that sentence?

12 A. No, I do not as I have indicated.

13 Q. Page 6, Section 5b, you have -- five lines
14 seem to have disappeared. It says here, "The first
15 five lines should be replaced with," and then there's
16 some language that's put in. Do you see that?

17 A. Yes.

18 Q. Again, you see anything either in the final
19 report or the letter that refreshes your recollection
20 as to what disappeared from the draft at this point?

21 MR. KEARNS: I'm sorry, could you read the
22 question back, please?

23 (Whereupon the following question was read back
24 by the court reporter: "Q. Again, you see anything
25 either in the final report or the letter that refreshes

1 your recollection as to what disappeared from the draft
2 at this point?")

3 A. As I read Section 5b in the report on Page
4 6 and compare it to the paragraph in Dr. Berteau's
5 letter that you just referred me to, I find that the
6 report and the letter do not read the same which would
7 lead me to conclude that they did not make the change
8 which we had requested.

9 Q. What's the difference between the Litton
10 Bionetics version and the Monsanto version?

11 A. Looking at the Litton Bionetics version,
12 what they are saying in that first sentence is that
13 because the females did not all become pregnant on the
14 same day, they became pregnant at different times
15 during the study, they said they had a confounding
16 variable, namely, that complicated the interpretation
17 of their data.

18 It seemed to us that it would be obvious
19 and apparent to anyone working with primates that you
20 would not expect all the animals to become pregnant on
21 the first day and so what was an obvious scientific
22 point to us we did not feel needed reiteration in the
23 report.

24 I do not see that there is any conflict and
25 I might add that this is not addressed. It's a matter

1 of expressing how the study was set up. It is not
2 dealing with the factual underlying data base of the
3 study itself.

4 Q. Do you know when the females were actually
5 exposed to PCBs?

6 A. There is a chart apart from tables which
7 give the actual dates and test section which I can't
8 put my hands on readily which would describe this in
9 greater detail. We did develop a chart which we asked
10 Bionetics to include which would graphically illustrate
11 the outline of the study. This is Table 1 in Appendix
12 A-1.

13 Q. Do you recall if the date of exposure was
14 in some way tied to the date of pregnancy?

15 A. The intent was to feed these animals for
16 several months before mating was attempted. The
17 specific durations at this time I do not recall, but
18 looking at this chart that I just indicated of Table 1,
19 it said dosing started in the end of March or April of
20 1977 and breeding began in the end of September or
21 October of 1977 and it continued through May of the
22 following year.

23 Q. Do you know if the time at which the dose
24 was first administered or the exposure first began
25 varied by animal?

1 A. We had a discussion yesterday of one animal
2 replaced early in the study. With that exception, all
3 animals were dosed at the same time.

4 Q. Will you look at the next change, Page 12,
5 Section IVA, 1a? Does that refresh your recollection
6 as to what the previous paragraph read?

7 A. The intent of the recommendations of Dr.
8 Berteau's letter as I recall at this time was to
9 clarify the phraseology used in the expression of how
10 the study was to be conducted. They had projected
11 that they would -- let me back up one step.

12 We had treated males which were being mated
13 with untreated females to see if there was an effect on
14 male reproductive performance. The anticipation was
15 that they would probably have to mate each of those
16 males with sixteen females to see whether two of those
17 females could become pregnant.

18 What they had said was that we were unable
19 to follow the original protocol because we could not
20 schedule sixteen mating periods for each male.
21 However, each of the males got his requisite number of
22 females impregnated in less than sixteen mating periods
23 and so again similar to the earlier comment about the
24 confounding variable, their phraseology, their
25 expression was unclear to us so we requested

1 clarification that we thought would express it more
2 explicitly to a reader less familiar with the
3 experiment.

4 Q. Would you look back to the previous change
5 that you said they did not accept?

6 A. Yes.

7 Q. Would you look at the Monsanto version of
8 the change in the letter? The third sentence reads,
9 "This situation resulted in a potentially confounding
10 variable, since pregnancy could effect many of the
11 measurements. To minimize this effect, we identified
12 hematology and biochemistry test results."

13 Sir, does that not indicate that Monsanto
14 also believed that there was a potentially confounding
15 variable caused by the pregnancies occurring at
16 different times?

17 A. I would make two comments. One is it's one
18 thing to make a reference to a potentially confounding
19 variable in the context of a paragraph after you have
20 outlined where you are stating what you're doing as
21 contrasted to opening the paragraph and creating a mood
22 by saying at the outset we had a potentially
23 confounding variable. That partly is the sequencing
24 and arrangement.

25 The other one is this still represents the

1 results of discussion between us and Litton. My
2 personal view is that if I am doing a study intending
3 to get -- see if animals get pregnant, I have
4 difficulty calling the resulting pregnancy a
5 potentially confounding variable when it is the aim of
6 the study itself, so we're talking semantics instead
7 of underlying data.

8 Q. So, in other words, you didn't agree with
9 Peter Berteau when he wrote this letter when he
10 stressed the change?

11 A. No, I'm saying that this change is a result
12 of discussions between us and Litton where we are
13 trying to agree on what is the most technically valid
14 way of describing what was going on.

15 Q. Okay. Look at Page 13, Section 4a and the
16 corresponding section of the letter. Do you know what
17 the previous version was of the text before it was
18 replaced with the new language if it was so replaced as
19 suggested by Peter Berteau?

20 A. I do not recall the -- I do not recall.

21 Q. Would you agree that reviewing the final
22 version of the report and looking at the letter that it
23 looks as if on this occasion the change suggested was,
24 in fact, accepted by Litton Bionetics?

25 A. I would concur that the report appears to

1 correspond to the recommended changes.

2 Q. And you don't know what exactly was there
3 before, is that correct?

4 A. At this time, I do not recall specifics.

5 Q. Now, look at Page 15 and it says in the
6 second paragraph of the document on Page 15 of the
7 letter "In section (4) replace lines 3, 4, and 5 with:
8 'Although no pattern of change was apparent, the
9 frequency with which significant changes occurred
10 suggests that a causal relationship to compound
11 administration seems likely'" and the next sentence
12 reads, "We prefer the word 'suggests' to the phrase
13 'was such that' in this sentence, but will accept the
14 latter if you feel strongly about it." Do you see a
15 Paragraph 4 at all or Subparagraph 4 on Page 15?

16 A. I don't. I do not see a Section 4 on Page
17 15.

18 Q. Do you see a Subsection 3 on Page 15?

19 A. Yes.

20 Q. And do you see the second sentence of
21 Subsection 3 on Page 15?

22 A. Yes.

23 Q. It reads, does it not, "Although no pattern
24 of change was apparent, the frequency with which
25 significant changes occurred suggests that a causal

1 relationship to compound administration seems likely,"
2 okay?

3 A. Yes.

4 Q. Does that indicate to you that on this
5 occasion Litton rejected the suggestion that was made
6 in the letter and assuming that the suggestion of that
7 actually applied to Subparagraph 3?

8 A. I would have to spend more time looking at
9 the letter and at the report because the letter makes
10 reference to a Section 4 and there is no Section 4.
11 Whether there is a transposition or a typo, I'd have to
12 spend more time to look at this and see if I could come
13 up with a better understanding of it.

14 Q. Okay. Well, would you have any kind of
15 draft to look at that to help you at this time?

16 A. I don't know. I'd have to study both of
17 these and see where these statements may fit. I do not
18 know what records may be available as I've indicated
19 before.

20 MR. DICUM: Again, Counsel, if there's a
21 previous draft which still exists, I would call for
22 such copies as may exist.

23 Q. Next page, last paragraph, "Unless there
24 are still points of contention (in which case, please
25 call me or George Levinskas), I suggest that the report

1 now be issued in 'final form' and twelve (12) copies
2 sent along with the final invoice which we will forward
3 for payment." Do you see that?

4 A. Yes.

5 Q. Do you recall that with the Industrial
6 Bio-Test reports payment was made in advance?

7 A. My involvement with Bio-Test payments was
8 that the invoices were forwarded to the operating
9 company and they were responsible for the product and
10 the payment of the cost of the studies. How they
11 handled the fiscal relationships, I do not know.

12 Q. Do you know who would know?

13 A. For a given study, it would depend on the
14 product and the people involved in the product at that
15 time.

16 Q. By the way, J. R. Craddock at the bottom,
17 who was he at this time?

18 A. John Craddock is with Monsanto Company.
19 He's still with Monsanto Company. I do not recall his
20 specific title at this time.

21 Q. Who was the medical director at this time?

22 A. Dr. George Roush was medical director at
23 this time.

24 Q. Is he still medical director?

25 A. Yes, he is.

1 Q. So between the time Dr. Kelly retired and
2 today, Dr. Roush has been the medical director, is
3 that correct?

4 A. That's correct.

5 Q. Does he have an assistant today?

6 A. Dr. Roush will be retiring next year.
7 His successor has been hired.

8 Q. I believe you said that sometime in the
9 early seventies there was an assistant medical director
10 in addition to the medical director I believe.

11 A. When I joined the Monsanto Company, Dr.
12 Maurice Johnson was the associate medical director.

13 Q. And he wasn't replaced when he left the
14 company?

15 A. As far as I know, he was not.

16 Q. Do you know if there was any further
17 conversation between either you or Peter Berteau and
18 Litton Bionetics after this letter?

19 A. My recollection is they did as Dr. Berteau
20 had requested. They sent us final copies of the
21 report.

22 Q. Sir, did there come a time when you started
23 an investigation sometime around 1981 into certain rat
24 studies that were done in the early seventies by
25 Industrial Bio-Test?

1 A. I decided to review available records to
2 determine the -- to make an assessment of the validity
3 and reliability of the data generated earlier by
4 Industrial Bio-Test.

5 Q. By the way, at the time that you did your
6 review, had the persons that we mentioned yesterday,
7 Dr. Wright, Mr. Plank, Mr. Calandra, Mr. Keplinger, had
8 they already been indicted?

9 A. I don't recall the dates of the indictments
10 and so I mean dates in that sense don't stick with me
11 and I really can't say. I do not believe they had
12 been, but that could be the result of faulty memory.

13 Q. Have you ever seen any documents showing
14 the terms of the indictment?

15 A. Virtually everything I know about the trial
16 I read in the newspapers.

17 Q. Did you read accounts perhaps in the Wall
18 Street Journal?

19 A. That would be one of the newspapers I read,
20 yes.

21 Q. New York Times?

22 A. New York Times, no.

23 Q. Now, did you ever receive a copy of the
24 decision of the 7th Circuit Court of Appeals upholding
25 the convictions?

1 A. No, I have seen none of the legal documents
2 related to this case or to that case.

3 Q. Was Mr. Wright still at Monsanto when he
4 was indicted?

5 A. Yes.

6 Q. Did he leave immediately after that? Did
7 he resign?

8 A. He did not leave immediately after he was
9 indicted. The details of his termination with Monsanto
10 I do not know.

11 Q. Do you recall how long he stayed on?

12 A. I believe he was not continuously in the
13 office, but I believe he was physically around during
14 the time of the trial.

15 Q. Did you consult Dr. Wright at all for the
16 purposes of doing your study into the rat tests that
17 were done by Industrial Bio-Test?

18 A. No.

19 Q. Did you consult anyone else?

20 A. Other than making a request of Industrial
21 Bio-Test for available records, no.

22 Q. By the way, is it correct that Industrial
23 Bio-Test has now gone bankrupt?

24 A. It no longer exists as a physical entity
25 is my understanding.

1 Q. Do you know why not?

2 A. Beg your pardon?

3 Q. It's gone out of business?

4 A. It's no longer a functional -- it's no
5 longer a business unit. Its fate I don't know.

6 Q. Do you know when it went out of business?

7 A. Again, no. It ceased to do operations, but
8 it was maintaining a force or staff that were sorting
9 and working through records for sometime afterwards.
10 When it actually demised, I don't know.

11 Q. At the time that you started your review of
12 the rat studies, did you still have access in the sense
13 of having some scientists at Industrial Bio-Test whom
14 you could talk to about the tests?

15 A. I do not know who was available at
16 Bio-Test. The only contact I had as I said was with
17 them to request for them to provide the records they
18 had from those studies.

19 Q. Who did you direct the request to?

20 A. I am not sure, but it may have been to a
21 Dr. Don Gordon.

22 Q. Don Gordon. Now, do you know if Dr.
23 Keplinger was still with the company at that time?

24 A. I do not know where Dr. Keplinger was at
25 that time.

1 Q. What about Mr. Calandra?

2 A. I do not know his affiliation with the lab.
3 He had been replaced as the president of the
4 laboratory. What, if anything, he had to do with
5 Industrial Bio-Test, I do not know.

6 Q. What about Mr. Plank?

7 A. Again, same answer. I do not know.

8 Q. Do you recall a lab technician called
9 Smith who was working at Industrial Bio-Test?

10 A. I may have met him, but I do not recall his
11 name and I would assume -- well, I do not know him. I
12 would not recognize him.

13 Q. Do you recall reading in the newspaper
14 accounts that some of the lab technicians in exchange
15 for granted immunity from prosecution testified that
16 they had been told to falsify test results in the
17 studies that the --

18 MR. KEARNS: Do you want to know if he's read
19 that?

20 MR. DICUM: Yes, in the newspapers.

21 A. I read what I would call somewhat lurid
22 tales in the newspapers. Again the specifics, I do not
23 recall.

24 Q. Did you actually go to Industrial Bio-Test
25 in addition to asking for information from maybe Dr.

1 Gordon?

2 A. I did not go to Bio-Test to seek the PCB
3 records that I'm talking about, no.

4 Q. Did you send anyone there?

5 A. No.

6 Q. What sort of records did you actually
7 receive from Industrial Bio-Test to help you?

8 A. Again I can't recall specifics, but they
9 would have been photocopies of records dealing with the
10 study, animal rosters, records of diet consumption,
11 body weights, autopsy sheets, microscopic examination
12 results, things of this nature.

13 Q. Do you believe you'd recognize them again
14 if you saw them?

15 A. If I spent a little time looking at them, I
16 would probably recognize some of them.

17 Q. Now, did you make this request by mail or
18 by telephone?

19 A. I can't recall. I may have made a
20 telephone call and may have been asked to commit it to
21 writing as confirmation.

22 Q. Was the decision to do this review, was
23 that a purely spontaneous decision on the part of you
24 as a person at Monsanto or did someone tell you to go
25 out and do a review?

1 A. In talking with my superior, Dr. Roush,
2 we decided that or it was decided that it would be a
3 good idea to see if we could resolve questions
4 regarding the carcinogenicity and other health effects
5 of PCB mixtures. Therefore, I had our library conduct
6 an extensive search of the worldwide literature dealing
7 with carcinogenicity and other effects.

8 As part of the evidence that we were
9 reviewing that we thought should be considered were the
10 Industrial Bio-Test studies which had been done some
11 ten years earlier. Before deciding how much credence
12 to give that information for purposes of this review, I
13 undertook therefore a review of the Industrial Bio-Test
14 studies.

15 Q. Do you recall if the FDA contacted you
16 urging a review of the Bio-Test studies?

17 A. We have never been asked to review the PCB
18 studies by any agency of the government.

19 Q. Were you asked to do reviews of other
20 studies?

21 A. We were asked to review studies on other
22 materials. I think I had indicated in comments
23 yesterday we also undertook to do about the same time
24 reviews of all the studies that we had submitted to a
25 regulatory agency.

1 Q. Now, had the PCB studies not been submitted
2 to a regulatory agency?

3 A. If I could -- when I say it's submitted to
4 a regulatory agency, I'm referring to studies submitted
5 to an agency in which the agency is being asked to take
6 some action such as issue a regulation or act on a
7 petition. We have had no petitions pending before any
8 agency on PCBs. Any submissions that we have made to
9 the agencies on PCBs have been voluntary submissions or
10 at their request to provide them with information for
11 whatever decision making they wished, but not in
12 response to any petition or regulation Monsanto was
13 requesting.

14 Q. Do you recall an occasion in which Mr.
15 Papageorge took the PCB studies to the EPA and did a
16 presentation over there with some other people from
17 Monsanto in the mid seventies?

18 A. I have heard of that event, yes.

19 Q. And the purpose of that meeting was
20 supposed to be to try to persuade the EPA that these
21 reports were accurate, was it not?

22 A. No, not in my judgment.

23 Q. Were you present at that meeting?

24 A. No.

25 Q. You are aware, are you not, that at this

1 time in the early 1970s when the studies were being
2 started or in progress that the EPA was considering the
3 possibility of banning PCBs?

4 A. I do not know when the EPA started to
5 consider banning PCBs.

6 Q. You are aware that ultimately it did ban
7 PCBs?

8 A. Yes, and I believe they were banned -- and
9 the date of the ban is after Monsanto had ceased
10 production.

11 Q. Is it your understanding that Monsanto
12 completely ceased production before 1977?

13 MR. KEARNS: Before 1977?

14 MR. DICUM: Yes.

15 A. I just said I believe Monsanto had ceased
16 production before the date of the ban was to be
17 effective.

18 Q. When you say, "ceased production," you mean
19 ceased production for all purposes?

20 A. Stopped making.

21 Q. Now, did your review of the PCB studies
22 conducted by Bio-Test include any kind of review of the
23 effects of impurities, contaminants such as
24 polychlorinated dibenzofurans which might have been in
25 the samples?

1 A. No.

2 Q. At this stage do you know polychlorinated
3 dibenzofurans were present or not in the samples
4 that were submitted to Bio-Test?

5 A. No.

6 Q. So at about the same time that Bio-Test
7 was doing studies, do you recall that a Dr. Renate
8 Kimbrough was also performing her own research?

9 A. Subsequently when Dr. Kimbrough had
10 completed her research and told us, I became aware of
11 it. I did not realize that she was doing the studies
12 during that time.

13 Q. Do you know from where Dr. Kimbrough got
14 her sample of PCBs?

15 A. Monsanto Company.

16 Q. Are you aware that the sample she used was
17 the same sample that was used by Industrial Bio-Test?

18 A. Yes.

19 Q. And you're aware, are you not, that Dr.
20 Renate Kimbrough claimed following the studies that she
21 had found adenocarcinomas in certain Charles River rats
22 from her readings of her results?

23 A. Yes.

24 Q. And that Industrial Bio-Test labs claimed
25 that that was incorrect?

1 MR. KEARNS: Are you asking that as a question?

2 MR. DICUM: Yes.

3 MR. KEARNS: You should make it sound like a
4 question.

5 Q. And are you aware that Industrial Bio-Test
6 labs claimed based on studies of the same sample that
7 that was incorrect?

8 A. I would --

9 MR. FONTANA: I don't understand the question.

10 A. I was going to ask --

11 MR. FONTANA: I'll object to the question, I
12 guess.

13 MR. KEARNS: Let me ask you this. Are you
14 asking if Industrial Bio-Test's --

15 MR. DICUM: Disputed the results.

16 MR. KEARNS: -- conclusions were different or
17 if they actually criticized Dr. Kimbrough's studies?

18 MR. DICUM: I think it's a two-step question.

19 MR. KEARNS: Ask your question.

20 Q. First of all, were there differences in the
21 results that Industrial Bio-Test produced in their
22 report and those of Dr. Kimbrough?

23 A. The conclusions drawn by Industrial
24 Bio-Test on their study differed from the conclusions
25 Kimbrough drew on her study.

1 Q. Sir, have you met Dr. Kimbrough?

2 A. Yes.

3 Q. Do you consider her competent?

4 A. I think she's a very good competent
5 scientist.

6 Q. Now, at sometime did you receive certain
7 raw data from Industrial Bio-Test following your
8 request on the rat studies?

9 A. Yes, we're talking roughly ten years, not
10 quite that perhaps, after the studies had been
11 completed.

12 Q. Did you -- do you recall requesting
13 materials on any other studies other than the rat
14 studies?

15 A. Which?

16 Q. I'm wondering if you did any review of any
17 other studies other than the rat studies.

18 A. With respect to the PCBs, I looked only at
19 the three lifetime rat feeding studies because the
20 question was the issue of carcinogenicity. Those were
21 the only studies relevant to the carcinogenicity
22 question.

23 Q. Were there not some studies done on white
24 Leghorn chickens by Industrial Bio-Test?

25 A. There were.

1 Q. Certain studies of fish?

2 A. There were.

3 Q. Beagle dogs?

4 A. There were.

5 Q. There was an abortive study on ducks I
6 believe?

7 A. Yes.

8 Q. That was never completed, right?

9 A. Completed or not, I do not know.

10 Q. Now, is any particular reason why you
11 selected the -- strike that question. Is it your
12 understanding that the Leghorn chicken studies had
13 nothing to do with carcinogenicity?

14 A. That's correct.

15 Q. Now, a concern about PCBs is whether they
16 get out into the environment or not?

17 A. Different people have different concerns.
18 I guess that could be one of them.

19 Q. This is the reason for the study because
20 some people were concerned that they would have
21 environmental effects?

22 A. I did not initiate the study and I can't
23 comment on the reasons for them.

24 Q. Did you at any time review any raw data for
25 any other studies other than the rat studies?

1 A. With respect to PCBs, I've indicated that
2 the question we were trying to address was
3 carcinogenicity and therefore the rat studies were
4 relevant and the only ones that I undertook to review.

5 Q. We have already marked as Plaintiff's
6 Exhibit 74 certain documents which appear to be raw
7 data from Industrial Bio-Test and I've got an extra
8 copy. I think we should give the best copy, whichever
9 that is, to the reporter.

10 MR. ROTHSCHILD: This is the Bio-Test raw data?

11 MR. DICUM: Yes.

12 Q. You said a moment ago that you received
13 certain raw data from Industrial Bio-Test?

14 A. Yes.

15 Q. Now, I do not represent to you that this is
16 a complete version of the raw data. I have collected
17 what I could and there may be something out there that
18 I haven't located, but at any rate I've done what I
19 can.

20 First of all, what sort of raw data do you
21 recall? Were there certain categories of information?

22 A. I've indicated the things we tried to get
23 were rosters of the animals, the body weights, the food
24 consumption, the gross autopsy sheets, the microscopic
25 examination, evaluations.

1 Q. Will you look at the very first page?

2 A. Uh-huh.

3 Q. Is that one of the kind of information you
4 got?

5 A. Yes, that would be of the kind that I
6 looked at.

7 Q. I'm talking about a page now that has a
8 stamp '81 and looks like a capital A beside it. Do you
9 see that?

10 A. Yes.

11 Q. With a date of 7-21-81, do you see that?

12 A. Yes.

13 Q. Now, immediately under 7-21-81 you see a
14 notation that appears to read "Final Add Animals"?

15 A. Yes.

16 Q. Do you recall seeing this page during the
17 course of your review of the Industrial Bio-Test
18 studies?

19 A. I can only state that in general, I have a
20 recollection. A specific page such as this I do not
21 recall.

22 Q. Reviewing -- first of all, did you -- do
23 you believe that at the time you actually received
24 everything that there was still available from Dr.
25 Gordon?

1 A. I made a request for such and I believe I
2 received everything that was available.

3 Q. And therefore at some point, at that time
4 do you believe that you would have reviewed, for
5 instance, the first page?

6 A. Yes.

7 MR. FONTANA: May we clarify for the record
8 whose production numbers these are on these documents?

9 MR. DICUM: The stamp at the bottom is just a
10 stamp of convenience that we have to keep our records
11 straight.

12 MR. FONTANA: That's one of your numbers then?
13 These documents were not produced by Monsanto?

14 MR. DICUM: No. It's just an internal stamp
15 for our own use.

16 Q. Now, looking at this document, the
17 expression "Add Animals," does that have any
18 significance to you?

19 A. That would be additional animals.

20 Q. And looking at this page as you sit here at
21 this point, would it be your understanding that the
22 animals on this page were additional animals added
23 during the course of the study?

24 A. No, I would not make that interpretation.

25 Q. And what's the reason for that?

1 A. The study as originally contracted with IBT
2 by Monsanto called for looking at a certain number of
3 animals in terms of microscopic examination of tissues
4 at the end of the study. This was commonly done. At
5 that time only representative samples of tissues from
6 animals were examined.

7 At a subsequent date, '74, '75, after Dr.
8 Kimbrough had raised the question of the potential
9 liver carcinogenicity of PCB materials, we asked
10 Industrial Bio-Test to go back and review all the other
11 livers which they had taken and preserved in
12 formaldehyde but which they had not examined
13 microscopically, to cut additional section of add
14 animals which had been previously treated but no
15 microscopic examination had been done on tissues, to
16 examine those tissues to determine whether there could
17 have been liver cancers which they had missed because
18 of the small sample size, so this was part of our
19 attempt to try to understand if possible or reconcile
20 if possible the different observations between Dr.
21 Kimbrough and those reported to Monsanto by IBT.

22 Q. Do you recall if you received any memoranda
23 along with the figures and numbers in the file?

24 A. At the time that I requested the backup or
25 the raw data, I do not recall how they came.

1 Q. Well, do you remember seeing anything other
2 than simply numbers and perhaps certain number of
3 notations of various tests?

4 A. I did not receive -- if your question is
5 directed did I receive any kind of a score card or
6 guide as to what these records meant as such, the
7 answer is I do not recall having received such a
8 document or guidance.

9 Q. Isn't it a fact that in order to have a
10 statistically significant test you need to have at
11 least a certain minimum number of animals surviving at
12 each sacrifice?

13 A. I would not say that's a fact.

14 Q. Well, how would you set up an experiment if
15 all your animals died off before the time came for
16 sacrifice?

17 A. One could apply a variety of statistics to
18 accommodate a variety of outcomes. Part of the use of
19 statistics or I shouldn't say that. The use of
20 statistics is in part dictated by the kind of data one
21 was to analyze, besides which I do not believe --

22 Q. Do you remember a scientist called Dr.
23 Otis Fancher at Industrial Bio-Test?

24 A. Yes.

25 Q. Was he one of the ones who was indicted?

1 A. I do not -- he was not as far as I know.

2 Q. Did you ever meet him?

3 A. Yes.

4 Q. Do you consider him competent?

5 A. Yes.

6 Q. Do you know where he is now?

7 A. The last I knew he had retired from
8 Industrial Bio-Test and was living somewhere west of
9 here.

10 Q. In Arizona?

11 A. Could be Arizona.

12 Q. Look at a document which has been premarked
13 as Plaintiff's Monsanto Number 94.

14 MR. FONTANA: May I make a request for the
15 record? As I understand it, you have just shown the
16 witness several hundred pages of material and never
17 asked him once what it was.

18 MR. DICUM: We're going to get on with it. It
19 will probably be easier if you don't delay me with
20 comments like that.

21 MR. FONTANA: The questioning is confusing to me
22 at any rate when you talk about documents but aren't
23 making clear in the question documents put before the
24 witness or other documents.

25 MR. DICUM: I'm talking about the document I

1 just put in front of the witness, Plaintiff's Exhibit
2 Number 94. Let's get on with it.

3 MR. FONTANA: For the record, I'll state my
4 objection on the record concerning Plaintiff's Exhibit
5 74 since it was never identified for the record. We
6 have your statements about what it was. We have no
7 statements from the witness.

8 Q. Mr. Levinskas, will you please go back to
9 Plaintiff's Exhibit Number 74, the first page of it?

10 A. Uh-huh.

11 Q. And would you at this point please look
12 through the entire bundle as requested by Mr. Fontana?

13 MR. KEARNS: For what?

14 A. What do you want me to look for?

15 Q. Just to check out to see if this is the
16 kind of document received from Industrial Bio-Test.

17 MR. KEARNS: The kind of document?

18 MR. FONTANA: I wasn't asking for the kind of
19 document. You handed him a hundred pages of
20 material largely illegible and talked about one page
21 and even that one page wasn't identified.

22 Q. Was the quality of the documents received
23 from Industrial Bio-Test any better than this?

24 A. I think in general they probably were.
25 Some of these are legible. Some are virtually

1 illegible.

2 Q. Did you receive originals?

3 A. No, I received copies as I indicated.

4 Q. We'll go back to 74 after while. Sir, look
5 at Plaintiff's Exhibit Number 94.

6 A. Okay.

7 Q. Will you look at the second page? Do you
8 see some initials at the bottom OEF?

9 A. Yes.

10 Q. Those are initials of Dr. Otis Fancher, are
11 they not?

12 A. This would be his initials. I do not know
13 whether that's his signature.

14 Q. Have you seen Dr. Otis Fancher's
15 handwriting in the course of your work with Monsanto?

16 A. I have seen it. Dr. Fancher left IBT,
17 oh, '72, '73, '74, something on that order.

18 Q. First of all -- go ahead.

19 A. So I haven't seen his handwriting in a
20 dozen or more years and I can't say that that is or is
21 not his. The initials correspond to those of his name.
22 Whether he made them, I don't know.

23 Q. Do you know if Dr. Fancher is still alive?

24 A. I have not had contact with him, but I
25 believe he is alive.

1 Q. When was the last time you've had contact
2 with him?

3 A. Probably in the early seventies before he
4 left IBT.

5 Q. That's when he retired?

6 A. (Nodding head.)

7 Q. When you received certain materials from
8 Industrial Bio-Test, did you receive a copy of this
9 memorandum?

10 A. I cannot recall, but I probably did.

11 Q. And if you received it, you would have read
12 it?

13 A. Yes.

14 Q. Look at what it says. First of all, first
15 paragraph, "Survival is so poor beyond eighteen months
16 that it is difficult to reach any conclusion regarding
17 effect of the Aroclors on longevity. One could perhaps
18 argue that 1242 and 1260 at 100 ppm do have an effect.
19 The point is that no conclusion can be supported with
20 this kind of survival.

21 "Unless survival can be improved I'm
22 concerned that all of your rat carcinogenic studies
23 will be judged to be inadequate. You had best make a
24 special point of catching terminal and deceased animals
25 for autopsy and histo." Do you see that?

1 A. Yes.

2 Q. And do you see the date of that at the top?

3 A. It's marked --

4 Q. That's very late in the study, isn't it?

5 A. That's marked -- the date says, "Received
6 IBT, December 9, 1971."

7 Q. Does that indicate to you that this is a
8 memorandum drafted around that date by Dr. Fancher?

9 A. That could be drawn as a conclusion, yes.

10 Q. Now, do you know when the actual final
11 report came out in '71, before or after that date?

12 A. I do not recall the date of the report. It
13 was probably about this time.

14 Q. Have you seen -- do you recall the comments
15 that are made here by Dr. Fancher that survival was
16 extremely poor beyond eighteen months and that all
17 of the rat studies might be judged inadequate?

18 MR. KEARNS: Does he recall that? Is that your
19 question?

20 MR. DICUM: The subject matter of those
21 comments.

22 A. I have indicated I'm not positive. I don't
23 recall whether I've seen this memo. I believe I may
24 have seen it in the material that was submitted to me
25 when I asked for data from IBT.

1 If you will look at the report I prepared
2 subsequent to this, Dr. Fancher's comment as saying
3 survival is poor, if you look at the report I prepared
4 and the tables appended, the footnotes on the tables, I
5 have taken the trouble to indicate where I indicate
6 groups of animals at time intervals and I have put in
7 footnotes includes an animal that died at twenty months
8 or seventeen months or something, that I was attempting
9 to summarize the information from the records obtained
10 from IBT and any of the comments that Dr. Fancher has
11 in his letter that would be addressed, they would have
12 been noted. In other words, that information would
13 have been presented in a summary report that I
14 prepared.

15 Q. Did you mention in the memorandum which is
16 intended to be a review of the rat tests that Dr.
17 Fancher, a respected scientist, had commented adversely
18 on the procedures set up in the tests?

19 A. No.

20 Q. Was there any reason for that?

21 A. I have indicated I presented the
22 information as it existed. I summarized it and
23 presented -- not summarized it, but I presented it so
24 that the information was available for people to draw
25 whatever conclusion they wished.

1 I was not preparing a document for the
2 expression of Dr. Fancher's views or conclusions. I
3 was presenting the factual information so that any
4 scientist could draw the conclusion he felt justified
5 based on the data which had been presented and as I've
6 indicated where the animals had not lived two years, I
7 made an effort from the records to determine how long
8 they had been on test and had so indicated in the
9 information provided.

10 Q. Sir, would this memorandum indicate that
11 Dr. Fancher was looking at the reports or the raw data
12 in 1971?

13 A. I don't know from what he drew this.

14 Q. I'm just looking at the date. It says,
15 "Received December 9, 1971."

16 MR. KEARNS: Doesn't the document speak for
17 itself? He doesn't have any better way of concluding
18 what Dr. Fancher was thinking or doing than you do or
19 I.

20 Q. Did you ever talk to Dr. Fancher about this
21 study back in '71?

22 A. No.

23 Q. Or at any time before Dr. Fancher retired?

24 A. No.

25 Q. Would you look at the next page? It says

1 in the first paragraph, "The tumor incidence in females
2 with 1254 is bothersome, 82 percent at 10 ppm and 100
3 percent at 100 ppm. If one tabulated and reported
4 these data, it would probably raise questions," and
5 then there's a little sentence stuck at the top "even
6 though most of these are benign," and then he gives
7 certain tabulations. Do you see that?

8 A. Yes.

9 Q. Do you remember seeing this sentence?

10 A. I have commented already I do not recall
11 specifics of this memo. It may well have been included
12 in the material I reviewed. The comments that relate
13 to the liver carcinogenicity I've addressed. Female
14 rats tend to have a spontaneous, relatively high
15 incidence of tumors which are mammary tumors.

16 If you will look at the table, the control
17 females have -- 47 percent of them, half of the almost
18 untreated females have tumors. He has not specified
19 the nature of the tumor. In all probability I would
20 surmise these are mammary tumors which are quite common
21 in female rats and the discussion, we're going back to
22 the question of liver carcinogenicity, Dr. Kimbrough
23 did not raise questions about liver tumors in her study
24 and we're looking at the liver carcinogenicity and that
25 was the focus of my review.

1 Q. Would you look at the last sentence
2 underneath the little asterisk being, "Animals with
3 tumors," and it says, does it not, "I don't really
4 think this is anything, but is one justified in saying
5 'These tumors are considered normal for a random
6 population of rats this age'?"

7 Do you remember seeing Dr. Fancher's
8 comment on that line at the time you did your review in
9 '81?

10 A. I can only refer to my earlier comments. I
11 do not recall specific sentences in this memo. I may
12 or may not have seen them. I would add that Dr.
13 Fancher is doing what I think a good scientist is
14 doing. He is asking the question. He is asking people
15 who are doing the study to review, to think, reflect on
16 what they are putting down.

17 I might say that is very analogous to what
18 they were asking Litton Bionetics to do when they wrote
19 down words, to reflect, to review, and think whether
20 they are expressing things as appropriately and as
21 objectively as possible.

22 Q. Do you disagree with Dr. Fancher that there
23 were legitimate questions about the tumor incidence in
24 the original Bio-Test reports -- or studies, rather,
25 not the reports themselves?

1 MR. KEARNS: Could you read the question back?

2 Q. Let me try it again. I think it will help.
3 Do you disagree with Dr. Fancher's concerns as set out
4 in this memorandum?

5 MR. KEARNS: Which concerns?

6 Q. Let's take them in turn. First of all, the
7 first page, the poor survival.

8 MR. FONTANA: I object to the question on the
9 ground there has been no identification of this witness
10 that this is Dr. Fancher's. It's a piece of paper
11 that you pushed in front of him.

12 MR. KEARNS: Why don't you take it sentence by
13 sentence and ask if he agrees or disagrees with it,
14 not with reference to a reported author?

15 Q. That's exactly what I'll do. Looking at
16 the first page, do you agree or disagree that the
17 survival in the rat tests as reflected in the
18 underlying raw data was so poor beyond eighteen months
19 it was difficult to reach any conclusions with respect
20 to the Aroclor on longevity?

21 A. I would agree if survival -- well, let me
22 start again. Obviously if survival is reduced, you do
23 reach a conclusion on longevity; namely, it adversely
24 affects longevity. If you kill the animals off early,
25 it tells you something about their longevity or lack of

1 it and you can draw a conclusion.

2 Q. So you would disagree with Dr. Fancher on
3 that part?

4 A. On that basis.

5 Q. And do you know if you had better raw data
6 in 1981 or did Dr. Fancher have better raw data in
7 1971?

8 A. My definition of raw data would say that he
9 and I were looking at the same material.

10 Q. Did he ever tell you that he was looking at
11 the same material as you were?

12 MR. KEARNS: Did he ever tell the witness?

13 Q. Let me start over again. How do you know
14 that you were looking at the same material?

15 A. I said my definition of raw data is the
16 underlying information, but addressing a study if it's
17 the raw data, we are both looking at the same
18 information. If we're looking at two different things,
19 one of us doesn't have the raw data. That's the point
20 I'm trying to make.

21 Q. Do you know if any materials disappeared
22 between 1971 and 1981 when you were doing your review?

23 A. I have said that we requested IBT to supply
24 us with all of the copies of all the underlying data
25 they had on this study and I have to accept what they

1 provided me with. I have no means or basis or
2 potential to determine the answers to your questions.

3 Q. So you're relying essentially on what they
4 told you?

5 A. I said I'm working with the information
6 they supplied to me.

7 Q. Now, next paragraph on the first page, do
8 you agree that unless the survival could be improved
9 that there should be a concern that all the rat
10 carcinogenic studies should be judged inadequate?

11 A. There are two parts to that, that once he
12 said, "Unless survival can be improved," I don't know
13 whether from that point there was or was not an
14 improvement in survival. They may have overcome the
15 basis of his objection.

16 How poor the survival has to be before you
17 jeopardize a carcinogenic study depends on a variety of
18 other outcomes. I think that -- I would not make an
19 arbitrary statement that shortening of survival would
20 necessarily preclude reaching conclusions about
21 carcinogenicity.

22 Q. Again you would disagree with Dr. Fancher
23 on that point?

24 MR. KEARNS: We're not getting into that. We
25 don't know if Dr. Fancher wrote this and any more

1 statements like that, he's just going to be instructed
2 not to answer.

3 Q. Would you look at the bottom of the page?
4 Do you recall if any tables were ever reversed to your
5 knowledge or appeared to be difficult to understand in
6 the Aroclor 1254 tests?

7 A. You said, "tables reversed." I indicated
8 yesterday in response to other questions that I thought
9 they had transposed the numbers between some studies.
10 To the best of my knowledge, the information, the data
11 provided regarding carcinogenicity has not been changed
12 nor do I have any indication that it has been changed.

13 Q. Look at the next page, Page 2 of the same
14 memorandum.

15 A. That's what I'm looking at.

16 Q. Oh, I beg your pardon. You're on it
17 already. Do you agree that the tumor incidence in
18 females with 1254 was bothersome?

19 A. That is, I think it's correct to direct the
20 attention and say you want to take a look at those and
21 see what you can see or what significance, but I would
22 point out as I did earlier that the control females are
23 running 50 percent incidence and we do know if these
24 are mammary tumors that mammary tumors have a variable
25 and frequently quite high incidence in strains of rats.

1 This says that one wants to take a look at the data and
2 reflect on it. This does not say that it is
3 necessarily causally related to the administration of
4 1254.

5 Q. When you say, "look at the data," you're
6 referring to the raw data or are you referring to the
7 information provided in the report as it came out in
8 its final form?

9 A. One could do -- well, there are lots of
10 things one could do I guess. One could go back to
11 individual animals to verify that these things existed
12 and were accurately tabulated or one could reflect upon
13 possible other causes or understanding of why those
14 numbers were as high as they were. I might add there
15 has been no statistical evaluation of these numbers.
16 They might not even be statistically significant if one
17 were to work them over.

18 Q. Do you agree that the tumor incidence for
19 females at the end of the study was 82 percent at 10
20 ppm for the 1254 Aroclors?

21 MR. KEARNS: Wait a minute. Would you read the
22 question back?

23 (Whereupon the following question was read back
24 by the court reporter: "Q. Do you agree that the
25 tumor incidence for females at the end of the study was

1 82 percent at 10 ppm for the 1254 Aroclors?")

2 MR. KEARNS: I'm going to object to the
3 question. He has no way of knowing that.

4 MR. DICUM: I believe it's a study based on
5 the --

6 MR. FONTANA: Show him the study then.

7 Q. Do you recall if you came to any
8 conclusions on this study?

9 A. I do not recall the comments regarding
10 overall tumor incidence on those studies. My focus as
11 I say has been on the liver tumors and I cannot
12 comment.

13 The other one is this memo starts by
14 referring to a survival of eighteen months and I'm not
15 sure that the tumor incidence, whether it's based on
16 gross observation which on microscopic examination
17 might prove to be a cyst or some other thing besides a
18 tumor, whether it's based on microscopic examination
19 or whether it's even at the end of the two-year study
20 or eighteen month mark, so there are lots of unknowns.

21 MR. FONTANA: I might for the record object to
22 the characterization of this document as a memo. It is
23 not an original from my observation of the document.
24 It appears to be two different documents which have
25 been put together. The signature appears in two

1 different places and it certainly is not clear that the
2 document was prepared at or about the time of that date
3 stamp because there are different writings that appear
4 on it, on the face of it.

5 MR. DICUM: Well, perhaps we'll go out to
6 Arizona and talk to Dr. Fancher about that one day.

7 MR. FONTANA: We certainly will.

8 Q. Sir, do you recall that certain animals
9 were, in fact, added after the beginning of the rat
10 tests after the animals had already been in some degree
11 exposed?

12 MR. KEARNS: Let me ask are we talking now
13 about the IBT rat tests?

14 MR. DICUM: Yes.

15 MR. KEARNS: In 1971?

16 MR. DICUM: Yes.

17 MR. KEARNS: And the question was -- would you
18 repeat the question again?

19 Q. Do you recall certain animals being added
20 to the rat tests after they got under way?

21 MR. KEARNS: Does he recall that or has he read
22 that somewhere?

23 MR. DICUM: Has he read that somewhere?

24 A. I don't recall anything about added animals
25 on the IBT rat studies with Aroclors.

1 Q. Will you look at this document which has
2 been premarked as Plaintiff's Exhibit 79? Plaintiff's
3 Exhibit Monsanto 79 is a one-page letter bearing a
4 number of notations and the signature apparently of
5 Dr. or Mr. Elmer P. Wheeler, Manager, Environmental
6 Health of Monsanto.

7 MR. COMBS: Does it have a BIR number on it?

8 MR. DICUM: There is no BIR number on it. I
9 ought to say it is my understanding that this document
10 was produced for the deposition of Mr. Papageorge in
11 the litigation brought by the City of Bloomington and
12 that's the deposition exhibit marked in the top
13 right-hand corner.

14 Q. Have you seen this document before?

15 A. I do not recall seeing it.

16 Q. In the course of your work at Monsanto, did
17 you have occasion to look at Mr. Wheeler's signature
18 during the ordinary course of business?

19 A. Yes, he was my immediate boss.

20 Q. Is that Mr. Wheeler's signature?

21 A. I believe it is.

22 Q. Prior to today, did you have any knowledge
23 of whether animals were added to the tests as they
24 proceeded?

25 A. Not only prior to today, I still have no

1 knowledge that animals were added to that study as it
2 proceeded.

3 Q. Do you recall how many animals you believed
4 actually were on that test?

5 A. I would like to note that this letter is
6 dated June '69 which is a shade more than two years
7 before I joined the company.

8 Q. I understand that.

9 A. My recollection is that the total study
10 consisted of -- all three studies including controls
11 consisted of approximately one thousand animals.

12 Q. Approximately?

13 A. Well, one thousand animals.

14 Q. Okay. Do you know if they were all started
15 at the same time?

16 A. I believe they were.

17 Q. Sir, will you look back at Plaintiff's
18 Exhibit 74, the thick stack of documents?

19 A. Okay.

20 (At this time a short recess was taken, after
21 which the following proceedings were had:)

22 MR. DICUM: Let me read the sequence of
23 numbers, okay? During the recess, it came to my
24 attention that there seems to be some discrepancy
25 in some of the pages between the various volumes that

1 are on the table, the three volumes, and I'm just going
2 to read the ones I intended which were just the raw
3 data that we received exclusive of any memoranda. By
4 "raw data" meaning figures, histopathological notes and
5 list of sacrifices, okay?

6 MR. KEARNS: You're going to read what?

7 MR. DICUM: There's a number in the right-hand
8 corner top of the Bio-Test reports. We did not place
9 the number there and --

10 MS. OLIVER: Excuse me, are you going to use
11 this exhibit right now?

12 MR. DICUM: Yes.

13 MR. KEARNS: Let me see if I understand. Are
14 you just going to read protracted portions of this into
15 the record, is that it?

16 MR. DICUM: No, no, no. You don't understand
17 what I'm saying. I just intend to read out the numbers
18 I intended to have on the top right-hand corner just to
19 identify which documents which were in the master
20 bundle which is going to be handed to the reporter.

21 For instance, the first page is 81A, the
22 next page is 81B, 82 through 94, 96 through 111, 113 to
23 117.

24 MR. FONTANA: Why don't you simply note the ones
25 you pulled out?

1 MR. DICUM: I haven't got a list of those.
2 118A, 118B, 119 through 184, 187 through 201, 203 to
3 217, 219, 221 to 265.

4 MR. FONTANA: Was 220 among those documents?

5 MR. DICUM: No.

6 MR. FONTANA: So it wasn't 219 to 265?

7 MR. DICUM: It's 219. There should be a 220,
8 but I haven't included it. 221 to 265. I am omitting
9 220. It is either a duplicate or it is a comment, an
10 interpretation as opposed to a list of numbers and
11 facts.

12 MR. KEARNS: As I understand it, this study and
13 report, Number 74, was not supplied to you by Monsanto?

14 MR. DICUM: No. 271 through 313, 331, 333, 335
15 to 337, 340 to 341, 343, 345 to 350, 353 to 382, and
16 385 through 409. The numbers are those stamped on the
17 top right-hand corner in big black bold numbers. They
18 are not our numbers. I cannot tell you who stamped
19 them. I mean I don't know, rather.

20 MR. FONTANA: Would you make available at least
21 one set of the omitted pages?

22 MR. DICUM: I don't intend actually to mark
23 them.

24 MR. FONTANA: Well, I would just make the
25 request in connection with the discovery, they would

1 appear to bear on the document which is Plaintiff's --
2 to the extent it is a document, the Exhibit Number 74
3 in this deposition and as you say, they are documents
4 which appear to be memoranda which interpret the raw
5 data that is here and in that sense, it would appear to
6 be relevant or may be relevant evidence and I'd just
7 like to have a copy of it for the record so we know
8 what it was.

9 MR. DICUM: Let me do this. Since a couple of
10 them are on the table, why don't I allow those to be
11 copied and I'm reluctant to copy the rest.

12 MR. FONTANA: If you make them available, I'll
13 copy them.

14 MR. DICUM: What page do you actually have?

15 MR. FONTANA: The pages I have are 383 and 384.
16 383 is notes or a memo of some kind regarding IBT or B
17 7298 study I believe is the right study.

18 MR. DICUM: I think I'm going to take the
19 position as was taken by the ADR members that materials
20 collected from other sources by counsel is their work
21 product or that's not something that is discoverable
22 and we won a motion on that issue and it was argued
23 that counsel should not be entitled to take advantage
24 of each other's --

25 MR. FONTANA: I'm not asking for your discovery.

1 I'm asking for the remainder of the material which is
2 the subject which was at one point directly related to
3 the document which you proposed to mark or have marked
4 as Plaintiff's Exhibit 74 in this deposition.

5 MR. DICUM: I don't believe all of it was as a
6 matter of fact. Some of it is duplicates.

7 MR. FONTANA: This goes to your rather generous
8 view of marking documents and shoving them in front of
9 witnesses. This is clearly not, never was a single
10 document. You've described it as a set of raw data.

11 MR. DICUM: Right.

12 MR. FONTANA: It was marked in sequence at some
13 time by some unknown person and it's clear to me that
14 at least by reviewing the document marked number 383 in
15 sequence and 384 that they directly bear on the
16 documents which preceded here. It seems to me in light
17 of those documents that the others in this sequence
18 unless you're prepared to tell me that they bear no
19 relationship to the rat study --

20 MR. DICUM: Let me go and look at the materials
21 and think about them because, frankly, I don't have
22 them in an order in which I can simply point to and say
23 what they are at this point.

24 Q. Do you recall, sir, at some point seeing
25 any information indicating that rats were dying in

1 cages and decomposing before they could be reached for
2 analysis?

3 A. I have heard -- I have read newspaper
4 accounts with respect to that, yes.

5 Q. Newspaper accounts?

6 A. Yes.

7 Q. What sort of accounts?

8 A. I have indicated earlier that during the
9 IBT trial, I read stories that I would consider lurid
10 in the local newspaper regarding the trial in Chicago.

11 Q. Do you recall what these newspaper lurid
12 accounts said about the fact or alleged facts that rats
13 were dying in cages and decomposing before anyone could
14 test them?

15 A. The statements were as you have indicated,
16 that animals died and were allowed to decompose which
17 is something that I personally find very difficult to
18 conceive of because like any piece of meat, a dead rat
19 will not only start decomposing but also getting quite
20 odorous and I would think the individuals working in
21 the area from a concern for their own aesthetics would
22 have made it a point to get rid of the animal.

23 Q. Are you familiar with the term autolysis?

24 A. Yes.

25 Q. What does autolysis mean?

1 A. Lysis again is the word for destruction and
2 auto is self, so it's a spontaneous decomposition which
3 living matter undergoes when it dies.

4 MR. ROTHSCHILD: Spell that.

5 THE WITNESS: A-u-t-o-l-y-s-i-s.

6 Q. As applied to a body that is dead, would
7 that term indicate to you that the body has decomposed?

8 A. Autolysis is the general term for a gradual
9 breakdown, if you will, of tissue. It can be slight,
10 moderate. It can also happen in some sensitive tissues
11 in the course of a routine autopsy done immediately
12 upon the death of the animal.

13 Q. Is there amongst animal testing experts, do
14 you know, a gradation between autolysis and severe
15 autolysis?

16 A. I've indicated earlier I'm not a
17 pathologist, but the terms are used. I believe they
18 are subjective. The individual terms slight, moderate,
19 severe, they are subjective terms that are used as a
20 rough gradation.

21 Q. I was wondering if they had some general
22 meaning to pathologists or to testing experts, animal
23 testing experts.

24 A. I have indicated I believe it's a
25 subjective evaluation. I doubt that there are any

1 criteria that one could rely on to grade them into
2 those categories.

3 Q. Would you look at a memorandum entitled
4 "Interoffice Correspondence" dated March 17, 1971,
5 under the Industrial Bio-Test Laboratories, Inc.,
6 letterhead?

7 MR. COMBS: What exhibit is this?

8 MR. DICUM: Plaintiff's Exhibit premarked 77
9 and it's also Plaintiff's Deposition Exhibit 274 to
10 a Bloomington deposition. Off the record.

11 (There was a discussion held off the record.)

12 Q. Sir, have you seen this front page
13 memorandum before?

14 A. I do not recall seeing it before. It's an
15 internal document of IBT's.

16 Q. Would you agree that it is poor practice to
17 take tissue samples when autolysis has occurred in
18 rats?

19 A. I don't see any connection between your
20 statement and this memo. But as a statement, I would
21 not agree with that statement.

22 Q. Well, will you look at the last sentence in
23 the memo or last few sentences?

24 A. Yes, I read it.

25 Q. The paragraph reads, "Special care should

1 be taken during autopsies of postmortem rats from IBT
2 Number B7298 in order to assure gross evaluations and
3 preservation of bladder tissue. This should include
4 bladder tissue even if autolysis has occurred." Do you
5 read that?

6 A. Yes.

7 Q. Sir, looking back at Plaintiff's Exhibit 74
8 and at the first page of Plaintiff's Exhibit 74, do you
9 see certain marks, horizontal lines next to some
10 numbers on the first page?

11 A. I see a lot of lines.

12 Q. Do you see some horizontal marks beside
13 them?

14 A. Yes.

15 Q. Do you know if there is a custom and
16 practice amongst animal testing experimenters to put a
17 horizontal mark beside an animal number when that
18 animal dies?

19 A. I don't know. I don't know what
20 recordkeeping practices or what particular marks or
21 connotations they might have. I suspect there are a
22 variety of procedures that people have developed and,
23 you know, I just can't comment. I'm not aware of any
24 universally accepted code. I really don't have
25 knowledge in great detail of how everybody does things.

1 Q. So you're saying there's no custom and
2 practice at all?

3 A. People develop recordkeeping procedures to
4 suit their needs. You know, I just can't -- specifics
5 of a given recordkeeping practice, I can't comment on.
6 I don't know whether it has significance or not or why
7 it was developed.

8 Q. When you were at school back in the
9 fifties, did anyone ever instruct you in how to keep
10 records of animal tests?

11 A. I have never in school been given
12 instruction on how to keep records in an animal test.

13 Q. How did you learn how to keep records in
14 animal tests if you did learn?

15 A. By discussions with older established
16 investigators in the field, by adaptations of or
17 development on the job as I went along which seemed to
18 suit my purpose when I needed to reconstruct or
19 regather information, a variety of things.

20 Q. Did any of those persons ever tell you how
21 to keep a check on animals as they died?

22 A. The only generalization I could make is
23 that we all agreed that animals should be observed and,
24 if possible, if the judgment was made -- if the animal
25 appeared to be ill or a judgment had to be made as to

1 TBD meant too badly decomposed?

2 A. We asked IBT what the shorthand notations
3 were, they used a code, so that we could understand
4 them when we were reviewing their records.

5 Q. Do you recall any specific persons you
6 asked?

7 A. It would have been the pathologist and in
8 all probability Dr. Gordon.

9 Q. Would you look at and I'm just taking this
10 almost at random, the document that is marked 173 in
11 the top right-hand corner in the series. You have that
12 in front of you?

13 A. Yes.

14 Q. Now, do you see on a column that says,
15 "Date of Necropsy"? Do you know what "necropsy" means?

16 A. That's the day on which the autopsy was
17 done on the animal.

18 Q. And do you see in the next column, "Date
19 (if) Died and Decomp."?

20 A. Yes.

21 Q. Do you see under that "TBD"?

22 A. Yes.

23 Q. Would it be your understanding therefore
24 that all those animals with TBD beside them were too
25 badly decomposed?

1 A. That would be in keeping with their
2 notation, yes.

3 Q. Too badly decomposed for analysis, would
4 that be correct?

5 A. It says too badly decomposed, period.

6 Q. Well, did they go on to explain to you what
7 the purpose was of that test or of that notation?

8 A. I do not recall as I indicated what the --
9 is it TDA?

10 Q. TBD.

11 A. But those are all TBD/TDA it looks like and
12 I don't recall what the TDA designation is.

13 Q. Well, I say TDA, but I don't know. It
14 could also be TOA, could it not?

15 A. I would like to go back to their record
16 notation because that may have a bearing on what I say
17 about TBD and I don't recall what TOA or TDA, I don't
18 recall what that stands for.

19 Q. At the time that you did your study in
20 1981, do you recall how you accounted for animals that
21 had TBD beside them?

22 A. I don't specifically, but I probably -- I
23 would have indicated they had died or they had been
24 discarded. I believe I would have done that. I would
25 have indicated they had been on tests, but for whatever

1 reason they were not examined microscopically.

2 Q. Would you look at the "Remarks" section?
3 See that "Remarks" section on the right?

4 A. Yes.

5 Q. Do you see that at least on this page in
6 every case where TBD appears or TBD/TDA appears on the
7 left-hand column, the same notation appears on the
8 "Remarks" column?

9 A. Yes.

10 Q. Is it your understanding that no analysis
11 was done of any of the animals with that TBD notation
12 and that is the reason why nothing appears under the
13 "Remarks" column?

14 A. The latter part, there's nothing under the
15 "Remarks" column as there are in one or two instances
16 where they are describing what they saw at gross
17 autopsies, so there is nothing in the remarks of the
18 gross autopsies column.

19 The first part of the question, despite
20 the fact of the TBD/TDA notation, we would have to go
21 look at other histopathology records to see whether
22 tissues from that animal had or had not been taken for
23 microscopic examination.

24 Q. Would you look at the next page, 174?

25 A. My copy is virtually illegible, but I will

1 try to struggle through it.

2 Q. Would you like to borrow mine? Mine seems
3 to be better. Would you exchange yours for mine on
4 that page?

5 A. I'm not sure. It is not a marked
6 improvement.

7 Q. Do you see four entries from the body, a
8 TBD entry?

9 A. Yes.

10 Q. With NTT beside it?

11 A. Yes.

12 Q. And do you see under the "Remarks" column
13 again TBD/NTT?

14 A. Yes.

15 Q. And an entry that then follows which
16 appears to read, "Carcas infested with maggots"?

17 A. Yes.

18 Q. And then underneath that four items which
19 are TBD/NTT?

20 A. Yes.

21 Q. And in each case it says, "Bladder taken
22 only"?

23 A. Yes.

24 Q. You agree it says, "Bladder taken only"?

25 A. Yes.

1 Q. Now, was it the custom and practice during
2 analysis of rats only to take the bladder in the case
3 of rats?

4 A. If I may --

5 MR. KEARNS: For the purpose of autopsy?

6 MR. DICUM: Yes.

7 A. The previous reference to Exhibit Number 77
8 said this should include bladder tissue even if
9 autolysis has occurred.

10 Q. Right.

11 A. I take it that is a following of the
12 request made in the previous exhibit.

13 Q. Okay. And as we sit here today, you don't
14 know, do you, the condition of the bladders after they
15 were removed following total -- following
16 decomposition?

17 A. I don't know the status of the bladders in
18 those animals, that's correct.

19 Q. Do you recall at any time seeing notations
20 in the file indicating that in some cases bladders were
21 missing?

22 A. It's quite possible. I don't recall
23 specific instances, but tissues are on occasion
24 misplaced, lost in processing.

25 Q. Now, in order to get at the total number of

1 the animals on the test, would it be fair to say that
2 one procedure would be to add up all the animals in the
3 interim sacrifice and then add up the animals in the
4 final sacrifice and see what total you get?

5 A. One -- there are several ways, but, yes,
6 one would want to try to determine how many were there
7 at the beginning and how many at the end.

8 Q. And if you add up the ones that were killed
9 in the intervals to the final sacrifice, I shouldn't be
10 getting more than the number of rats that were
11 indicated in the final report as being on the test,
12 should I?

13 A. That's correct.

14 Q. Do you recall during the course of analysis
15 in 1981 discovering that there were a number of extra
16 rats that had been marked as Ex on the reports in the
17 raw data?

18 A. I did not discover that there were extra
19 rats. When IBT had been asked to go back and look at
20 additional liver sections following Dr. Kimbrough's
21 indication that she had found cancer in rats fed
22 Aroclor 1260, we asked IBT to go back and section
23 additional livers from animals that had previously
24 been -- not been examined.

25 During the course of that, there were liver

1 sections marked extra. I do not know whether they cut
2 more than one section on some additional animals or
3 what, but --

4 Q. Go ahead.

5 A. -- in my review, I had indicated that there
6 were sections marked extra. Again, I repeat I
7 summarized, presented the information which was
8 available so that people could look at it and draw
9 their own conclusions from that information.

10 Q. Okay. I take it then that your
11 understanding is that from an overview of the documents
12 that there were no notations of extra animals during
13 the course of the original test back in '71 and '69, is
14 that correct?

15 A. I have no indication that I recall of extra
16 animals in these studies.

17 Q. Would you look at Page 178 and would you
18 look at the entry on the first of July, 1971?

19 A. Yes.

20 Q. Do you see a notation under the "Rat-Histo
21 No." column "Ex 1" and "Ex 2"?

22 A. Yes.

23 Q. Do you know what that number is?

24 A. That -- it's not inconsistent with what
25 I've already stated. There is an extra 1, 2, 3. I

1 don't know whether that's another animal or whether
2 that is additional tissues of some other animal. There
3 are extra tissue specimens. I don't know their origin
4 and I have indicated them as Ex in the review that I
5 wrote.

6 Q. Would you look at Page 86?

7 A. Okay.

8 Q. Do you see under the column that is headed
9 "A II" the very first notation there?

10 A. Yes.

11 Q. What does it say?

12 A. It says, "Ex."

13 Q. Does that indicate an animal rather than a
14 tissue at that point?

15 A. I would have to go back and think through
16 the -- the difficulty I have in looking at this and not
17 reflecting on it, the Ex is followed by a symbol for a
18 male. The four animals identified as 3, 4, 6, 7 have a
19 symbol indicating they are females. Why a male is
20 placed -- one male is placed in a group of four
21 females, that's the first question I have.

22 Q. Would you look at the column under
23 "Control" column on the far left-hand corner? Do you
24 see under the last entry under the "Control" column
25 does that not say also "Ex"?

1 A. Yes.

2 Q. And do you see that that has a symbol
3 beside it, that's a female symbol, is it not?

4 A. Yes.

5 Q. And it seems to be one amongst a group of
6 three other females, correct?

7 A. It's four females in that group, yes.

8 Q. And do you see under the C III column on
9 this page and at the far right-hand bottom --

10 A. Yes.

11 Q. -- there's another entry called Ex there?

12 A. Yes.

13 Q. And again there's a female symbol with an
14 arrow pointing down, the fourth animal is a female
15 there?

16 A. Yes.

17 Q. Now, does that help you in any way as to
18 whether these were animals or tissue samples?

19 A. I would have to go back and look at the
20 totality. These are records dealing with animals that
21 were pulled off or had died, whichever, that they are
22 scheduling for either some test or microscope.

23 I would have to go back and look at the
24 total number of animals, the records indicating that
25 these animals had been placed on test, they existed.

1 I believe in the review that I wrote,
2 though I haven't looked at it, I can't recall specific
3 wording, I did make a statement or statements in the
4 early part of that review indicating what I had looked
5 at, a summary of the kind of data I had looked at and
6 that was being presented in the tables which followed.

7 Q. Will you look again at Page 89? Do you see
8 under the left-hand column under what looks like B III
9 the last five notations there?

10 A. Yes.

11 Q. They read Ex 1 through Ex 5, do they not?

12 A. Yes.

13 Q. And there's a little bit of handwriting on
14 the right. Do you see the very last couple of words,
15 "Extra 5?"

16 A. There is some handwriting, not all of it is
17 legible.

18 Q. Do you agree at least that the figures in
19 the column appear to say Ex 1, Ex 2, Ex 3, Ex 4, Ex 5?

20 A. I agree that the notation says Ex 1, 2, 3,
21 4, 5, yes.

22 Q. Do you know if you took these Ex's into
23 account in the course of your review?

24 A. I have indicated I did attempt to determine
25 how many animals had been placed on test and I haven't

1 looked at these data for some years, but I did in the
2 report that I wrote summarize or give an indication of
3 the kind of information I had, the data base from which
4 I was working that I prepared the tables that were
5 presented in the report. I do not recall specifically
6 how this was -- whether this is a terminology
7 sequential numbering. At this time I do not recall.

8 Q. Do you recall a term called normal tissue
9 appearing in any of the IBT raw data materials?

10 A. I assume that term has appeared, yes.

11 Q. What is your understanding of that term in
12 your review?

13 A. Normal tissue would signify just that.
14 There was nothing in it that was of interest to the
15 pathologist.

16 Q. Would you look at Page 105? There is some
17 writing on that page, is there not?

18 A. Yes.

19 Q. It says, "Process all normal tissue plus
20 eye," and I can't read the next couple of words, it
21 looks like, "skin, tongue," and can you read the last
22 word?

23 A. I can't make out the last word. I would
24 like to go back. The context in which we were talking
25 about histopathology is where I made my remark about

1 normal tissue. In this context surmising probably,
2 when they say, "Process all normal tissue," I would
3 take it to mean that they were to process all the
4 tissues normally required by virtue of the protocol and
5 that in addition, they are asking that other tissues
6 such as eye and so forth be taken, so in this context,
7 normal tissue would refer to the tissues that were
8 required or requested to be taken in the protocol.

9 Q. Okay. Therefore your surmise is that the
10 extra items, the eye, optic nerve, skin, tongue
11 whatever --

12 A. For whatever reason.

13 Q. -- were not included among the protocol?

14 A. These were added at a later date to be
15 examined.

16 Q. Do you recall if during the course of your
17 study you saw a formal change in the protocol agreed to
18 between Monsanto and Industrial Bio-Test for those
19 extra items to be added?

20 A. These studies were initiated before I
21 joined the Monsanto Company. They were being
22 terminated about the time I joined the Monsanto
23 Company. I have no knowledge of the protocol or
24 protocol changes with respect to them.

25 Q. By the way, we looked at some reports

1 previously with TBD on them?

2 A. We saw notations on sheets. I do not
3 recall them in the reports.

4 Q. Okay. Notations on sheets, I beg your
5 pardon. Do you recall if you saw sheets in that form
6 or of that layout at the time you did your review?

7 A. That is the general nature of the sheet
8 that I -- among the sheets that I've looked at.

9 Q. Will you look at Page 190? Would you look
10 under the entry for Animal Number 907 under "Tongue"?
11 Do you see a dash there?

12 A. Yes.

13 Q. Do you recall during the course of your
14 review seeing sheets of this general layout received by
15 you from Bio-Test?

16 A. I've indicated this is the general form,
17 the nature of some of the sheets that I looked at, yes.

18 Q. Do you recall seeing sheets where there was
19 a dash beside a certain organ item?

20 A. I may have well seen them. I do not recall
21 specifics on the individual animals or individual
22 notations.

23 Q. Do you recall what your general
24 understanding was of those dashes when they appeared
25 beside an organ?

1 A. I would have to go back and look at the
2 sheet of abbreviations if they invited us to see what
3 the significance is.

4 Q. Did anyone at IBT inform you that the
5 significance of those dashes was that those organs were
6 missing?

7 A. I do not recall being told that. Whether
8 or not it appeared on the sheet that we used, I do not
9 know.

10 Q. Sir, do you remember during the course of
11 1971 to 1975 holding various or meeting on various
12 occasions Dr. Renate Kimbrough?

13 A. Yes, in that interval I spoke with Dr.
14 Kimbrough and I did meet her in different connections.

15 Q. And do you recall the -- on those occasions
16 meeting with her to discuss the results of her tests?

17 A. Dr. Kimbrough came to Monsanto to present
18 her findings to us with respect to the Aroclor 1260
19 study in rats.

20 Q. Do you recall at some point when you
21 proceeded with persons from Bio-Test to attend a
22 meeting at the National Cancer Institute?

23 A. Yes.

24 Q. And Dr. Kimbrough was present?

25 A. Yes.

1 Q. Do you recall a doctor called Bob Squires
2 being present?

3 A. Yes.

4 Q. And was anyone else present from the
5 National Cancer Institute?

6 A. There was a younger pathologist who was on
7 a post-doc. or some studying with Dr. Squire. His
8 name I do not recall.

9 Q. And do you remember during the course of
10 that meeting a discussion occurring about the
11 interpretation of the findings that Dr. Kimbrough was
12 coming up with?

13 A. I do not recall that we discussed an
14 interpretation of her findings.

15 Q. You do not, okay. Do you recall who from
16 Industrial Bio-Test was present?

17 A. Dr. Don Gordon, their pathologist, and Dr.
18 Ward Richter, another pathologist.

19 Q. Do you recall if during the course of that
20 meeting those doctors agreed that there was indeed an
21 adenocarcinoma in samples that Dr. Kimbrough had
22 provided?

23 A. The recollection I have of that meeting is
24 that all the pathologists present agreed that in the
25 study conducted by Dr. Kimbrough the lesions in the

1 liver were adenocarcinomas. In the studies conducted
2 by IBT, they were not adenocarcinomas.

3 Q. And do you recall following that meeting
4 Monsanto decided that it had to do a rechecking of the
5 1971 tests done by Industrial Bio-Test to explain the
6 discrepancy?

7 A. It was prior to that meeting.

8 Q. Prior to that meeting?

9 A. That IBT had been requested to look at the
10 additional liver sections.

11 Q. I'm going to show you a couple of documents
12 and I have a problem because I'm missing my extra
13 copies. I'm going to circulate it this way around so
14 that everyone gets a chance to look at them and then I
15 don't think these have been marked yet, have they?

16 First of all, was there a previous meeting
17 with Dr. Kimbrough about certain bladder tumors that
18 she claimed to have found in Chamblee, Georgia?

19 A. There had been a proposed meeting. Due to
20 adverse weather conditions and such, the meeting was
21 not held.

22 Q. First of all, let me circulate this
23 document around this way and give you-all a chance to
24 look at it.

25 (Plaintiff's Exhibit 105 marked for

1 identification.)

2 Q. Do you recall this letter, sir?

3 A. Yes.

4 Q. And do you see a reference there to a
5 meeting in Chamblee, Georgia?

6 A. Yes.

7 Q. And your testimony is it never took place?

8 A. My recollection is that I flew down to
9 Atlanta from St. Louis. The weather was bad. It took
10 me approximately four hours, five hours to get there.
11 I called Dr. Kimbrough because Atlanta was in the
12 midst of a snowstorm. She said I was welcome to come
13 to the laboratory, but nobody else was there, so I
14 thanked her very much and I proceeded to make
15 arrangements to fly back to St. Louis and I came back
16 here some nine or ten hours after I left and that was
17 the extent of my day that day.

18 Q. Does that letter bear a date for your trip
19 down there?

20 A. No, it does not.

21 Q. What is the date of the letter?

22 A. The date is October 28th, 1971.

23 Q. October 28th. Would you take a look at
24 Plaintiff's Exhibit 91 which has been premarked?

25 MR. COMBS: Can you identify the document?

1 MR. DICUM: The document is a two-page document
2 bearing the name of George J. Levinskas on the second
3 page and it's addressed to apparently R. E. Kelly, M.
4 N. Johnson and E. P. Wheeler.

5 Q. Do you recall this document?

6 A. Yes.

7 Q. Was this a telephone conversation do you
8 know that's referred to between you and Dr. Kimbrough?

9 A. Yes, this would have been a telephone
10 conversation.

11 Q. Were you calling from St. Louis?

12 A. Yes.

13 Q. So it was different from the visit or
14 aborted trip you took?

15 A. As a result of this in part or this ties in
16 with the visit I should say, they are both related.

17 Q. Do you recall if there was any further
18 follow-up on the question of bladder tumors that
19 Dr. Kimbrough claimed to have found?

20 A. There was a meeting at Quail Roost in North
21 Carolina which I did not attend, but as Elmer Wheeler
22 told me, the question of the bladder tumor was
23 discussed by a variety of people including several from
24 regulatory agencies and they concluded that the bladder
25 tumor was not related to the feeding of Aroclor.

1 Q. Do you know what the reason was?

2 A. I was not there, but as I recall, there
3 were people like Dr. North Nelson from New York
4 University and Dr. Herb Blumenthal from the Food and
5 Drug Administration, Dr. David Rahl who was director
6 and still is director of the National Environmental --
7 National Institute for Environmental Health Sciences
8 and also director of the National Toxicology Program,
9 people like Dr. Gordon, Mr. Wheeler of course from
10 Monsanto and others and they all met one evening to
11 look at those slides under a microscope and reached the
12 conclusion it was not related. How they reached that
13 conclusion, I do not know.

14 Q. Do you recall if Industrial Bio-Test ever
15 used any materials from their own studies to counter
16 Dr. Kimbrough's findings or alleged findings about
17 bladder tumors at the time?

18 A. I'm not aware of any conscious effort or
19 any specific episode in which IBT used their data to
20 counteract Kimbrough's question about a bladder tumor.

21 Q. Do you recall Dr. Keplinger going out to
22 that meeting?

23 A. Which meeting?

24 Q. The meeting with Dr. Kimbrough that you
25 referred to with Dr. Wheeler or Mr. Wheeler.

1 A. The meeting that was to be held with Dr.
2 Kimbrough would have included people from Industrial
3 Bio-Test. I expect Dr. Don Gordon would have gone
4 because he was pathologist. Whether Keplinger would
5 have come or not, I don't know.

6 Q. Look at Plaintiff's Exhibit Number 93
7 premarked. It's a one-page letter from George
8 Levinskas to Keplinger.

9 MR. COMBS: What's the date of that?

10 MR. DICUM: December 6, 1971, with the received
11 stamp, an IBT received stamp December 9th, 1971.

12 Q. Do you recall this letter?

13 A. I do now, yes.

14 Q. And does that indicate that, in fact, Dr.
15 Keplinger did go to that meeting?

16 A. This is the meeting that I made reference
17 to that did not take place that was cancelled because
18 of weather.

19 Q. You went down on the plane with Dr.
20 Keplinger?

21 A. No, I went down by myself from St. Louis.
22 The intent was that Dr. Gordon and Dr. Keplinger would
23 fly from Chicago to Atlanta. At this stage I don't
24 recall what happened to them and I told you what
25 happened to me.

1 Q. Sir, I asked you sometime earlier about the
2 question of addition of animals, do you recall, to the
3 rat tests?

4 A. Yes.

5 Q. Will you look at another letter that I have
6 here premarked as Plaintiff's Number 78 and this is a
7 letter from Dr. Fancher to Mr. Wheeler. Have you
8 seen this letter before?

9 A. I do not recall seeing it.

10 Q. Until today had anyone ever told you that
11 three hundred animals were added to the rat study?

12 A. I have indicated earlier that there were a
13 thousand animals in the three rat studies that were
14 conducted. How that number was built up, I do not
15 know.

16 Q. Do you recall hearing about any problems
17 with other studies that Industrial Bio-Test conducted
18 such as the chicken studies that I referred to?

19 MR. KEARNS: Just a minute. Would you read that
20 question back?

21 (Whereupon the following question was read back
22 by the court reporter: "Q. Do you recall hearing
23 about any problems with other studies that Industrial
24 Bio-Test conducted such as the chicken studies that I
25 referred to?")

1 A. If you're talking of the IBT PCB chicken
2 studies, I've indicated that no questions have ever
3 been raised about those studies in terms of outside
4 regulatory agencies.

5 Q. Okay. Do you recall if any questions were
6 raised by Monsanto at some point about those chicken
7 studies?

8 A. I do not recall any questions being raised
9 about those chicken studies.

10 Q. Sir, do you recall at some point Paul
11 Wright raising with you the issue of renal caudal
12 ectopia found with Aroclor 1254 in certain teratologic
13 studies?

14 A. I do not recall the specific episode on
15 that.

16 Q. Will you look at this document that's been
17 marked Plaintiff's Number 90? Do you remember that
18 letter?

19 A. Not specifically, but in general terms I
20 sort of do.

21 Q. Do you remember having any conversations
22 with Dr. Wright about that subject?

23 A. I do not recall the specifics of any
24 conversation, but this is consistent with the sort of
25 thing that I would be doing, should be doing as a

1 toxicologist for Monsanto.

2 Q. Do you know what renal caudal ectopia is?

3 A. Renal of course is kidney. The other two
4 terms I would have to go back and refresh my memory on,
5 but they are dealing with teratogenic studies in this
6 instance and what I believe the comment is based on is
7 that I asked them to take a look at the observation to
8 try to reach a judgment as to whether or not it was
9 related to the administration of the Aroclor instead of
10 merely saying that they had observed it.

11 Q. Do you recall writing up some kind of a
12 report after the meeting that you had with Dr.
13 Kimbrough?

14 A. I have indicated that the meeting was not
15 held.

16 Q. Okay, I beg your pardon. I'm not talking
17 about -- okay. When was the next time you met Dr.
18 Kimbrough if you did?

19 A. I don't recall. Probably some scientific
20 meeting in another connection.

21 Q. Do you remember a meeting at the National
22 Cancer Institute that we referred to a short time ago?

23 A. That was about '74 and we're talking here
24 '71. I presume I met her at scientific meetings or
25 elsewhere in the interim years.

1 before this meeting concerning the proper
2 interpretation of Dr. Kimbrough's findings?

3 A. No.

4 Q. There had not?

5 A. No.

6 Q. Was there not debate about whether they
7 should be considered or identified as carcinomas as
8 opposed to benign tumors?

9 A. She had raised the question of
10 carcinogenicity. Nobody had looked at the tissues
11 other than Kimbrough and Dr. Squire and the meeting
12 was held in an attempt to look at these. No one was in
13 disagreement. They hadn't looked at what she said she
14 had.

15 We were all somewhat caught aback, taken
16 aback by her observation and we were attempting to
17 resolve the issue, if possible, as to what was she
18 reporting, was it similar to what we were reporting,
19 had she overlooked something, had she underlooked
20 something in an attempt to resolve the two different
21 sets of observations, so until we went down and looked
22 at the tissues, there was no disagreement.

23 She raised the question and we were going
24 down to try to check and see if we agreed with her. It
25 turned out our pathologist agreed with Kimbrough. She

1 did have tumors in her rats and they agreed that the
2 IBT material did not have the adenocarcinomas.

3 Q. Do you see the second paragraph, the second
4 sentence reads, "Even though we had to concede the
5 argument, I found it to be a worthwhile and instructive
6 trip"?

7 A. Yes.

8 Q. Do you recall at that NCI meeting some kind
9 of debate where you and Industrial Bio-Test
10 representatives initially disagreed with Dr.
11 Kimbrough?

12 A. No. I would repeat that there was no
13 disagreement. We had not looked at her material. In
14 my optimism, I would have hoped that the pathologist
15 would be able to say those are not tumors in her
16 livers, the livers from her rats, so when I say, you
17 gentlemen, pathologists, agreed that she had detected
18 carcinomas, that's my concession of the argument. It's
19 not a disagreement. She had raised a question. We've
20 checked her material and even though I don't like the
21 outcome, we accept the fact that she has found tumors
22 in her study.

23 MR. DICUM: Now, I'm going to have marked at
24 this point as --

25 MR. COMBS: Off the record for a second.

1 (Plaintiff's Exhibit 107 marked for
2 identification.)

3 Q. At the same time to save time, I'd like you
4 to look at -- strike that. Does the letter have a -- I
5 beg your pardon. Have you ever seen the memorandum
6 itself before?

7 A. I do not recall seeing the cover memo.

8 Q. What about the cover attachment to it?

9 MR. FONTANA: Do you have a copy of that, Mr.
10 Dicum?

11 MR. DICUM: I haven't got a copy myself.

12 MR. FONTANA: This is one you didn't know you
13 were going to question about?

14 MR. DICUM: No. Because of the volume of
15 documents, this is one I've lost track of. There are
16 two other other copies somewhere in this room, but I
17 don't know where.

18 Q. Do you recall that memorandum?

19 A. I said I did not recall seeing that
20 memorandum which is internal IBT correspondence.

21 Q. Sir, you said before that you did not
22 believe that there was any kind of dispute about
23 classifications between Kimbrough and Monsanto and
24 Bio-Test. Is that still your testimony?

25 A. I do not believe I ever said that.

1 Q. Was there some dispute before the NCI
2 meeting about the classification?

3 A. No. What I believe I said was that
4 Kimbrough had raised a question. We had taken
5 pathologists down there to see if we could resolve the
6 question. In the Exhibit 106 which we said it says I
7 conceded the argument, we accepted Kimbrough's
8 conclusion even though I would have preferred another
9 outcome.

10 Q. Would you look at a document that has been
11 premarked as Plaintiff's Exhibit 104 and it has clipped
12 to it a memorandum of four pages? The letter which is
13 the first page is from Calandra to George Roush of
14 Monsanto Company.

15 A. Yes.

16 Q. Do you recall this correspondence?

17 A. Not specifically, but it's like many
18 others. I probably did see it, but I don't recall it
19 specifically.

20 Q. And do you remember the meeting of PCBs
21 that were referred to here?

22 A. No.

23 Q. Will you look at the attachment to it which
24 is entitled "Review of PCB Meeting"?

25 A. Yes.

1 Q. Have you seen this document before?

2 A. I believe I have, but --

3 Q. Would you look at Page 3?

4 A. Yes.

5 Q. And the third paragraph?

6 A. Yes.

7 Q. Do you see there it's stated, "Dr. Squires
8 has stated in a letter to Dr. Kimbrough dated November
9 12, 1974, that 'I define "discrete nodules" and
10 "trabecular (basophilic) hyperplasia" as precancerous
11 lesions and thus indicative of carcinogenic response.'
12 This reflects a viewpoint which is not shared by all
13 pathologists and there is nothing that Bio-Test can do
14 to change this definition except for its pathologists
15 to accept or reject the view. Drs. Richter and Gordon
16 do not accept Dr. Squires' definition." Do you recall
17 that?

18 A. I see it there. I don't particularly
19 recall it.

20 Q. Does it refresh your recollection
21 concerning whether there was a dispute before the NCI
22 meeting in 1975 concerning definitions of what was
23 considered to be precancerous and what was not
24 considered to be precancerous?

25 A. I would say that paragraph reflects the

1 dilemma as it existed then and continues to this day
2 among pathologists.

3 To a large extent pathology is a subjective
4 judgmental study and the criteria that individual
5 pathologists may use in making diagnoses may vary so I
6 reiterate that is a reflection of then and a continuing
7 dilemma that pathologists have and it's not reflective
8 of a dispute on a particular compound.

9 Q. Sir, at some point, did you receive some
10 kind of supplemental report or review of the original
11 1971 studies?

12 A. When we asked them to look at additional
13 liver sections, they sent us the report dealing with
14 those additional liver sections.

15 Q. And did you also at that time do some kind
16 of review of the report, of the revised report?

17 A. Yes.

18 Q. And did you then find some kind of
19 difficulty with animal digit numbers?

20 A. We made reference to this earlier. I did
21 raise a question about their possible inversion of
22 numbers between two studies, yes.

23 Q. Will you take a look at an exhibit which
24 should be marked as the next exhibit, a letter dated
25 August 14, 1975, from you to Dr. Calandra at Bio-Test?

1 (Plaintiff's Exhibit 108 marked for
2 identification.)

3 MR. FONTANA: Is there an attachment to Exhibit
4 106 somewhere?

5 MR. DICUM: I'm sorry, what is Exhibit 106?

6 MR. FONTANA: It's a Levinskas letter dated
7 February 4, '75, which commences, "Attached is a copy
8 of a brief" something, that's what it says and it's a
9 word which is incomplete. There's no signature on this
10 document.

11 MR. DICUM: That was the letter I offered to
12 show him a signed copy of.

13 MR. FONTANA: Now that I've seen the letter for
14 the first time, would you show me the signed copy?

15 MR. DICUM: Give me the number of it.

16 MR. FONTANA: 043. On your numbering system 045.

17 MR. DICUM: 045?

18 MR. COMBS: 106?

19 MR. FONTANA: Yes.

20 MR. DICUM: I'm sorry, what is the stamped
21 number on it on the right-hand corner?

22 MR. FONTANA: 043.

23 Q. Do you recall at some point -- first of
24 all, do you recall that letter with the attachments?

25 A. Yes.

1 Q. And --

2 A. I recall the letter. I don't recall the
3 attachments to it, but that's all right.

4 Q. Does the letter refer to some attachments?

5 A. Yes.

6 Q. Have you had a chance to review those
7 attachments which I think are fairly brief and see if
8 there's anything in the letter that indicates that
9 those are the attachments?

10 A. I think they are probably the correct
11 attachments.

12 Q. And do you recall the subject matter that
13 was discussed in that letter?

14 A. Yes.

15 Q. It concerns some problem about numbering?

16 A. I raised questions about the numbering.
17 I'm not sure it's a problem.

18 Q. Did you ever resolve it after that letter,
19 do you know?

20 A. I don't recall it, but I believe it was
21 resolved.

22 Q. On all the tests?

23 A. I believe it was resolved or the degree of
24 resolution or the resolution was satisfactory, although
25 I don't recall specifically what was done on it.

1 Q. Do you know if there was any further
2 correspondence after that letter?

3 A. I don't recall any.

4 MR. COMBS: What exhibit were we just referring
5 to?

6 MS. JORDAN: This is one we have not seen
7 apparently.

8 MS. OLIVER: 108.

9 MR. FONTANA: You did not know you were going to
10 question him about that letter?

11 MR. DICUM: I did know. The problem with
12 fifteen thousand pages in this room, there is just so
13 much I can do to keep them straight and I think at the
14 lunch break, it wouldn't be a bad idea --

15 MR. FONTANA: You will provide us with a copy of
16 that?

17 MR. DICUM: There are two other copies somewhere
18 in here.

19 MR. COMBS: Can we get the date of that
20 particular letter?

21 MR. KEARNS: August 14th, 1975.

22 MR. COMBS: Thank you.

23 MR. DICUM: And here's a copy of a letter that
24 was, well, previously marked but in a somewhat
25 different form. Could we mark this first?

1 (Plaintiff's Exhibit 109 marked for
2 identification.)

3 Q. This is a letter dated February 4, '75,
4 that's been marked, the letter itself is in a somewhat
5 different form, as Exhibit 106. It's a letter from Dr.
6 Levinskas to various people at Industrial Bio-Test
7 following the NCI meeting that we've been discussing
8 and this time it has attached to it the or a document
9 I'll ask Dr. Levinskas about which is a memorandum
10 which appears to bear his signature. It's headed
11 "Aroclor 1260: Meeting at NCI, January 31, '75."

12 MS. JORDAN: Have you finished questioning the
13 witness about 108?

14 MR. DICUM: Yes.

15 MS. JORDAN: May I see 108?

16 MR. FONTANA: (Indicating.)

17 Q. Sir, do you recall my previously showing
18 you an unsigned version of the letter that's now been
19 marked as 109?

20 A. I think that's -- yes.

21 Q. Does this letter bear your signature in the
22 form it's now been marked in?

23 A. That looks like the remnants of my
24 signature, yes.

25 Q. And attached to it, there is what appears

1 to be a memorandum of some kind?

2 A. Yes.

3 Q. Do you see that?

4 A. Yes.

5 Q. Do you remember this memorandum?

6 A. In general, yes.

7 Q. Did you prepare the memorandum?

8 A. Yes.

9 Q. And did you -- is that your signature at
10 the bottom?

11 A. Those are my initials, yes.

12 Q. Now, do you recall or does this refresh
13 your recollection as to whether you prepared some kind
14 of account about the trip that occurred at the NCI?

15 A. This memo states that it summarizes the
16 conclusions reached at the meeting and it also
17 indicates that Drs. Gordon and Richter are being
18 supplied with a copy so that if they feel that I, as
19 a nonpathologist, have incorrectly summarized the
20 meeting or misrepresented their positions, they should
21 let me know.

22 Q. And that memorandum confirms, does it not,
23 the correctness of your recollection that indeed all
24 parties agree that adenocarcinomas were present in Dr.
25 Kimbrough's analysis?

1 A. I have so stated. The rats in Dr.
2 Kimbrough's study had liver cancers.

3 Q. Sir, do you know what the reason is why
4 there is such emphasis on liver cancer or liver --
5 examination of liver of rats than any other organ
6 particularly speaking now about these studies about
7 PCBs?

8 A. I think all the studies, Dr. Kimbrough's
9 and those done for Monsanto by IBT, were designed to
10 look at all tissues to see if there was the possibility
11 of induction of tumors. When it became evident from
12 Dr. Kimbrough's study that the liver was the most
13 probable site, then the attention focused on the liver.

14 Q. And do you know if that was ever resolved
15 as to a determination as to whether that was the most
16 probable site for accumulation?

17 A. We're switching gears. We're talking about
18 cancers and we're talking about accumulations. They
19 are two different subjects.

20 Q. First of all, accumulation. Do you recall
21 if, in fact, some conclusion was ultimately reached by
22 Monsanto Company concerning where in the body PCBs
23 accumulate?

24 A. It's generally demonstrated and accepted
25 that the PCBs accumulate in fatty tissues.

1 Q. That includes the liver?

2 A. Portions of the liver have lipids or fats
3 and PCBs will accumulate there.

4 Q. Now, in some of the correspondence and
5 other documents you've seen, there's a reference to a
6 term called benign tumors, is that correct?

7 A. Yes.

8 Q. And is it not fair to say that benign
9 tumors can, in fact, turn into malignant tumors?

10 A. Benign tumors by definition are
11 nonmalignant. Some may be transformed to what are
12 called malignant.

13 Q. Can you tell us any particular ones that
14 could be transformed into malignant tumors?

15 A. I am not a sufficiently good cancer expert
16 to enter that discussion.

17 Q. Would it be fair to say also that certain
18 benign tumors because of their position in the body can
19 be lethal?

20 MR. KEARNS: If you're qualified to answer that.
21 It sounds to me like you're getting into the field of
22 medicine, but I'm going to let the witness decide that.
23 Clearly I think it's a medical question.

24 MR. DICUM: It may be that Dr. Kelly is a more
25 appropriate person to ask this question of. Are you

1 instructing him not to answer?

2 MR. KEARNS: I'm going to leave it up to the
3 witness bearing in mind there will be physicians
4 testifying on these matters probably later on.

5 A. From the standpoint of an experimentalist,
6 there are some tumors that are referred to as life-
7 shortening because they may interfere with some other
8 bodily function by virtue of their position. They may
9 be lung tumors that would cause breathing difficulties
10 such that it's referred to as life-shortening, so in
11 that respect, some benign tumors if they are positioned
12 so they interfere with some other bodily function may
13 shorten life.

14 MR. DICUM: Mr. Kearns, we're now at
15 twenty-five past 12. Would you like to take your break
16 now?

17 MR. KEARNS: Surely.

18 MR. DICUM: We can reconvene with Dr.
19 Levinskas. I think I now have probably about another
20 twenty minutes.

21 MR. KEARNS: Another what?

22 MR. DICUM: Another twenty minutes.

23 MR. KEARNS: Added to the one you just got
24 finished with?

25 MR. DICUM: Unfortunately I was delayed in part

1 by the problem I had controlling my documents.

2 MR. KEARNS: Roy, you're still at how long?

3 MR. COMBS: I'm still estimating a half an
4 hour. It's a very rough estimate.

5 MR. DICUM: Is there any way to get in touch
6 with Dr. Kelly to have him arrive perhaps an hour
7 later?

8 MR. KEARNS: I'm having lunch with him. Dr.
9 Levinskas, as a result of what I thought was our
10 program this morning, he went ahead and made
11 arrangements for a meeting this afternoon so he has to
12 be out of here by 2:30. That should be enough for the
13 two of you, 1:30 to 2:30.

14 MR. DICUM: That's fine.

15 MR. COMBS: I don't expect a problem, but in the
16 event that we run into a problem, can we make some
17 arrangements either for later this evening or pick up
18 one of the other days?

19 MR. KEARNS: Why don't we wait and see?

20 MR. COMBS: I'm anticipating the worst at this
21 point.

22 MR. DICUM: I don't anticipate a problem.

23 MR. KEARNS: Let's wait and see where we are at
24 2:30.

25 (At this time a lunch recess was taken, after

1 which the following proceedings were had:)

2 Q. Dr. Levinskas, this morning we talked about
3 certain records which appear to be various raw data
4 from the Bio-Test files. Since the lunch period, I've
5 found another set of records which appear to relate to
6 the same test or the same Bio-Test -- the same Bio-Test
7 test concerning Charles River strain rats.

8 MR. DICUM: Would you mark this?

9 (Plaintiff's Exhibit 110 marked for
10 identification.)

11 Q. Looking, first of all, at Page 386, Dr.
12 Levinskas, and I realize that the photocopying leaves
13 something to be desired, have you seen documents in
14 this sort of form, "Histo-Path. Logistics Sheet"
15 before?

16 A. I've indicated this is the form -- the type
17 of form on which Industrial Bio-Test recorded
18 information, yes, I've seen this form before.

19 MR. FONTANA: I'm sorry, did you say Page 386?

20 MR. DICUM: Yes.

21 MR. FONTANA: The witness is not looking at that
22 page.

23 MR. DICUM: 368, I'm sorry.

24 MR. FONTANA: Which is it?

25 MR. DICUM: 386. It's the very first page.

1 MR. FONTANA: Page 386 on mine is not the one
2 he was looking at.

3 A. My reference was to 386. If it's supposed
4 to be 368, we'll start again.

5 Q. I'm sorry, 386. There is a 386 number on
6 the top right-hand corner. There's a 368 number on the
7 bottom right-hand corner. We were on 386 using the
8 right-hand number as we have been in the past.

9 Do you see a space where it talks about
10 date study ends about halfway down?

11 A. Yes.

12 Q. Does it give a date of May 19, 1971?

13 A. I can't discern some letters or parts of
14 letters and it does look like 19, 1971 on this copy.

15 Q. And to the left of that, there appears to
16 be a date that appears to be May 19, 1969?

17 A. Yes.

18 Q. Does that in any way refresh your
19 recollection about the date of the beginning of the
20 study?

21 A. I've indicated that the study started
22 before I joined Monsanto. I have no knowledge of when
23 it actually did start.

24 Q. Sir, have you ever heard of a technician at
25 Bio-Test called M. Black, B-l-a-c-k?

1 A. I may have heard the name, but I don't
2 think I recognize the person nor can I say that I know
3 him.

4 Q. Do you know if it's custom and practice
5 at Industrial Bio-Test to have one particular
6 technician always in charge of recording the figures
7 and the deaths of animals under the scientists who are
8 above them?

9 A. I would not know what IBT's practices were
10 at this time.

11 MR. FONTANA: May I inquire are we done with
12 that document?

13 MR. DICUM: Pardon?

14 MR. FONTANA: Are we done with that exhibit?

15 MR. DICUM: I personally am.

16 MR. FONTANA: This exhibit has a series of
17 numbers in the upper right-hand corner which appear to
18 be --

19 MR. DICUM: You want me to read them?

20 MR. FONTANA: They seem to duplicate numbers
21 that were in Exhibit 74 and you have generally
22 suggested they are of the same character.

23 MR. DICUM: My understanding of the way that the
24 Bio-Test records are set up is that they are in a
25 series of different envelopes and, in fact, they were

1 on microfilm and it's my understanding that they are
2 maintained by the liquidator of Bio-Test and that each
3 envelope starts again from the beginning. In other
4 words, Envelope 1 runs from Number 1 and then goes to
5 number whatever number it is. Envelope 2 then starts
6 again with Number 2 -- with Number 1 and goes again, so
7 you do have duplicate numbers but from different
8 envelopes.

9 MR. COMBS: Duplicate numbers but not duplicate
10 documents.

11 MS. OLIVER: It's an image number on a roll of
12 film.

13 MR. DICUM: They are on some kind of microfilm
14 somewhere. I can't tell you how exactly the process is
15 done, but it appears from what we received that they
16 are not the same document, okay?

17 MR. FONTANA: May I inquire? You say it's on
18 microfilm. The microfilm is maintained by the
19 liquidator as opposed to --

20 MR. DICUM: All this is from hearsay so I'm the
21 wrong person anyway to ask.

22 Q. Sir, do you recall that we discussed this
23 morning about the reevaluation that was done by
24 Bio-Test of the earlier report, the '71 report? Do you
25 remember that?

1 A. The reevaluation of liver sections, yes.

2 Q. Correct.

3 MR. DICUM: Can we mark, please, Exhibit 111,
4 a document entitled "Report To" and there seems to
5 be a strike through "Monsanto Company," and then
6 "Two-Year Chronic Oral Toxicity Study with Aroclor
7 1242, 1254, 1260," with a circle around "1242."
8 The date is July 1, '75, and it says,
9 "Histopathological Reevaluation of Original Liver
10 Sections From Final Sacrifice."

11 (Plaintiff's Exhibit 111 marked for
12 identification.)

13 Q. Sir, do you recall any kind of problems
14 that were disclosed in the course of that reevaluation
15 with the original procedures for reading of the tissue
16 slides?

17 A. I'm not aware of any problems in that
18 connection.

19 Q. Would you look at the second page?
20 First of all, do you recognize the signature at the
21 bottom as someone called Ward R. Richter?

22 A. I know a Dr. Ward R. Richter. I'm
23 not sufficiently familiar to know whether that's his
24 signature or not.

25 Q. Did he work for Bio-Test at some time?

1 A. It's my understanding he was a consultant
2 pathologist working for Bio-Test, but he was employed
3 by one of the universities in the Chicago area.

4 Q. You are aware, are you not, that the liver
5 sections that were actually read on the second occasion
6 were different from the liver sections on the first
7 occasion?

8 A. Yes.

9 Q. And that's because they were cut in a
10 different way, is that correct?

11 A. There would be a variety of reasons why the
12 different sections were cut or there could be.

13 Q. What is your understanding of the reasons
14 why it was necessary to read different slides from the
15 ones that were used in the instance in 1971?

16 A. Some of these slides had been or the
17 original slides had been requested by various
18 government agencies such as Food and Drug
19 Administration. They had been shipped to government
20 agencies for them to look at.

21 In the process of shipping, some may have
22 gotten broken since they are glass slides or may have
23 otherwise been damaged. Logistically it would be just
24 as easy to go and take fresh sections from all the
25 bottles at once rather than to try to take some and

1 leave some behind and so forth so there could be a
2 variety of reasons.

3 Q. Have you ever seen this document before?

4 A. Yes, I think I have.

5 Q. Do you see in Paragraph 2 it refers to the
6 following: "The original tissues were multiple
7 embedded and only small pieces of liver were present on
8 the slide. The liver sections were approximately one
9 centimeter square and were occasionally as small as .5
10 centimeters square."

11 First of all, in your custom and practice,
12 did you use a liver section as small as that?

13 A. What has been described as consistent with
14 the practices as I understand them at that time and as
15 they are practiced today.

16 Q. And the next sentence, "The quality of the
17 sections was poor." Do you recall reading that
18 statement?

19 A. I don't recall reading it, but I probably
20 did.

21 Q. Have you yourself ever looked at any of the
22 Bio-Test liver sections --

23 A. No.

24 Q. -- from the original study?

25 A. I'm not a pathologist. I do not

1 particularly look through microscopes.

2 Q. Do you have any information yourself
3 contradicting Dr. Richter's statement that quality of
4 the sections was poor?

5 A. I would only comment that that statement is
6 being made in 1975. If the slides had been prepared
7 originally in 1971, their quality such as the intensity
8 of the staining could have faded just with time so that
9 the statement, it's not clear whether the statement is
10 present or past slides and therefore it could be a
11 perfectly acceptable understandable statement.

12 Q. Look at the next sentence. That might
13 help. "There was evidence of overheating during
14 embedding." Does that indicate past or present to you?

15 A. That statement does not necessarily relate
16 to the quality of the sections if he's referring to the
17 ability to read those sections microscopically.

18 Q. Would tissues not be damaged if you
19 overheated them during embedding?

20 A. Depends on -- again I'm not a pathologist.
21 I do not believe that that would necessarily invalidate
22 or preclude their being examined.

23 Q. Next sentence, "Sections were often too
24 thick." Do you recall that?

25 A. Again --

1 MR. KEARNS: What do you mean by recall it?
2 Does he recall reading it now or what do you mean by
3 "recall"?

4 MR. DICUM: Recall talking to Dr. Richter about
5 that.

6 A. I have not talked to Dr. Richter about
7 the details of this memo.

8 Q. Finally, next sentence, "There were cutting
9 defects of shearing, tearing and excessing knife
10 marks."

11 A. I said earlier that pathology is a
12 subjective science. Those are his opinions. They may
13 be valid. There may be other pathologists who would
14 disagree with him.

15 Q. Do you know of any other pathologists other
16 than Dr. Richter who read the 1971 slides for the
17 reevaluation in 1975?

18 A. I believe Dr. Gordon did.

19 Q. Did you talk to Dr. Gordon about the
20 quality of the slides?

21 A. No.

22 Q. Let's mark this one, too and, Doctor, I'm
23 marking these in order which is the same in substance
24 as the one previously marked except this time it has a
25 circle around 1254 rather than 1242.

1 (Plaintiff's Exhibit 112 marked for
2 identification.)

3 Q. At sometime subsequently did you receive a
4 lab report which was sent to you in 1975 from
5 Industrial Bio-Test summing up the histopathological
6 evaluation?

7 A. Of what?

8 Q. Of liver sections or of additional liver
9 sections.

10 A. Yes, we received reports of additional
11 liver sections on the IBT two-year rat studies.

12 Q. You received them on both the 1242s and
13 the 54s and the 60s?

14 A. Yes.

15 Q. Will you look at this document which we'll
16 have marked next in order?

17 MR. DICUM: This bears an IBT number of 156.

18 (Plaintiff's Exhibit 113 marked for
19 identification.)

20 Q. Do you remember receiving the cover letter?

21 A. I do not specifically recall it, but it's
22 addressed to me and I assume I did receive it.

23 Q. Do you know of any revisions to the report
24 before you received it that you saw before you received
25 it?

1 A. Were there revisions to this report before
2 I saw it?

3 Q. Before you saw it.

4 A. I don't recall which version this is or
5 what the final version is.

6 Q. Will you look at the last sentence of the
7 second page?

8 A. Yes.

9 Q. It states, does it not, "In conclusion,
10 Aroclor 1242 appears to be slightly tumorigenic at
11 levels of 100 ppm when fed continuously in the diet for
12 two years"?

13 A. Yes.

14 Q. Did you at some subsequent time write
15 back to Dr. Calandra stating that you didn't like that
16 included?

17 A. My recollection is that we received two
18 versions, slightly different phraseology of each of the
19 three reports. In comparing the two versions of the
20 three reports side by side, I essentially said to Dr.
21 Calandra, since the findings are very similar in all
22 three instances, I think you should express your
23 conclusions in the same terms. Of the two terms that
24 you use, in one version "slightly tumorigenic," in
25 another "is not carcinogenic," I prefer the statement

1 "noncarcinogenic" because it is a more precise specific
2 description of the conclusions of the study.

3 Q. Isn't it a fact that in the original
4 version that contrary to what you've just said the
5 expression was "slightly tumorigenic" in all three
6 reports?

7 A. I said I had two versions of each of the
8 three reports. If memory serves me right, all three
9 initially said, "slightly tumorigenic." One version,
10 the second version, two of three said, "does not appear
11 to be carcinogenic" or words to that effect and I said,
12 "That's the phraseology. If you have changed two of
13 the three, why do you not also change the third
14 report?" That was the intent of the letter that I
15 wrote to Dr. Calandra.

16 Q. Do you recall if they changed the first
17 report in a supplemental report or did you ask them to
18 change the report?

19 A. I do not know what requests were made of
20 them and my recollection is that I had two sets of
21 reports as I have indicated and in reviewing them, I
22 commented that they should be consistent in their
23 phraseology because the conclusions in all three
24 reports were similar or the findings I should say.
25 Since the findings were similar, the conclusions should

1 be expressed in a similar manner.

2 Q. And, in fact, is it not the case that you
3 told Dr. Calandra that stating that it was
4 noncarcinogenic was preferable?

5 A. I have indicated that the phrase "not
6 carcinogenic" was preferably to "slightly tumorigenic"
7 because it was a more precise statement of the findings
8 of the studies, yes.

9 Q. Would you look at the document that's just
10 been marked as Plaintiff's Exhibit 114 which bears an
11 IBT stamp of 9 and a Hall Henry stamp of 20006981
12 with two pages attached?

13 (Plaintiff's Exhibit 114 marked for
14 identification.)

15 A. Uh-huh.

16 Q. Do you recall this document?

17 A. Yes.

18 Q. Does it help refresh your recollection as
19 to whether you changed the first report or was it the
20 other way around?

21 A. I have stated I had two sets of reports.
22 In comparing them, I indicated which of the two sets I
23 preferred and that was the gist of my letter to Dr.
24 Calandra.

25 Q. Do you know if you telephoned at any time

1 between the first set of reports and the second set of
2 reports to Dr. Calandra or to anyone else at Bio-Test
3 asking them to change that result?

4 A. I have stated that I do not know who if
5 anybody asked them to make changes in those reports.
6 My assignment was to compare both sets of reports.

7 MR. FONTANA: Do you have a better quality copy
8 of that document?

9 MR. DICUM: It's a terrible copy. I think when
10 we get home I can give you a better copy of that
11 perhaps.

12 MR. FONTANA: I'd very much appreciate it.

13 Q. Sir, we talked at some length about a trip
14 that was undertaken to the National Cancer Institute
15 along with Bio-Test to visit with Dr. Kimbrough and
16 Dr. Squires.

17 Do you recall receiving any kind of report
18 from Bio-Test after that trip summarizing their views
19 of what had occurred at National Cancer Institute?

20 A. I do not recall specifically, but I believe
21 they responded or replied to my earlier letter
22 indicating that if they had comments or reactions to my
23 summary, they should let me know.

24 (Plaintiff's Exhibit 115 marked for
25 identification.)

1 Q. Will you look again at -- or not again, but
2 would you look at Plaintiff's Exhibit Number 115?
3 It's a letter dated March 24th, 1975, from Gordon to
4 Levinskas with a three-page trip report attached signed
5 by Donovan Gordon and then two other pages by Ward R.
6 Richter. Do you recall seeing these reports?

7 A. I have indicated I think I did see them.
8 The copies I have are very illegible.

9 Q. Will you look at the second to the last
10 page, summary prepared by Dr. Richter, at Paragraph 5?
11 You see the last sentence there?

12 A. Yes.

13 MR. FONTANA: The copy I've been provided
14 appears to be --

15 MR. DICUM: I think there's something wrong
16 with the copying frankly. I think it's been cut off at
17 the bottom.

18 MR. FONTANA: For the record, this document
19 also is barely legible in many respects. Can you give
20 us a better copy in San Francisco?

21 MS. OLIVER: This is it.

22 MR. DICUM: It came off something that was taken
23 off microfilm and it was extremely difficult to get
24 anything out of it.

25 MR. FONTANA: This is a letter that was not

1 produced then by Monsanto?

2 MR. DICUM: No, it came from the source that
3 provided the Bio-Test documents.

4 MR. KEARNS: Dr. Levinskas has to leave in
5 twenty minutes.

6 Q. So during the course of your work, did you
7 come across something called the Eppley Institute for
8 Research in Cancer?

9 A. I've known of the Eppley Institute for many
10 years, yes.

11 MR. DICUM: Start marking these. Next in order
12 I'll have marked a BIR document, 7454, a letter from
13 Paul Wright to Philippe Shubik of the Eppley Institute
14 for Research in Cancer.

15 (Plaintiff's Exhibit 116 marked for
16 identification.)

17 Q. Would you take a look at that document?
18 Have you seen that document before?

19 A. Since it indicates a carbon to me, I
20 believe I have.

21 Q. Do you recall a reevaluation being done by
22 something called the Eppley Institute for Research in
23 Cancer and Dr. Paul Wright apparently initiating that?

24 A. Yes, we contacted the Eppley Institute of
25 Cancer regarding those studies.

1 Q. And was a reevaluation subsequently
2 received?

3 A. Dr. Shubik who is a renowned cancer
4 researcher recommended that we have a Dr. Pour
5 review the slides and this we did.

6 MR. DICUM: And this is BIR 007468 all the way
7 through 7498.

8 (Plaintiff's Exhibits 117 and 118 marked for
9 identification.)

10 Q. Have you seen the document attached to the
11 letter addressed to Mr. Paul Wright?

12 A. Yes.

13 Q. Now, is that the reevaluation that was
14 done?

15 A. This is the report of Dr. Pour when he
16 went down to examine the rats which Dr. Kimbrough had
17 fed.

18 Q. Okay. So that's purely on Aroclor 1260?

19 A. On Aroclor 1260 in Dr. Kimbrough's study.

20 MR. COMBS: Henry, how many more do you have to
21 go?

22 MR. DICUM: Two more.

23 MR. COMBS: At this point I'm wondering if it's
24 going to be practical for me to get my questions in
25 before Dr. Levinskas has to leave and it doesn't

1 appear as if it is going to be realistic.

2 Q. Dr. Levinskas, do you recall any kind of
3 monitoring of workers done by the Eppley Institute for
4 workers at Monsanto?

5 A. No, I do not.

6 MR. DICUM: Do you want to actually start?

7 MR. COMBS: I'm sure I'm going to have more than
8 fifteen minutes.

9 MR. KEARNS: Are you finished, Henry?

10 MR. DICUM: Yes, I'm through.

11 MR. KEARNS: Do you want to start and use
12 fifteen minutes?

13 MR. COMBS: I can do that.

14 MR. FONTANA: Has another document just been
15 marked?

16 MR. DICUM: No.

17 MR. FONTANA: We stopped at 117. Am I correct
18 we have never introduced nor asked him about his report
19 that he did?

20 MR. DICUM: We've asked him about it. We
21 haven't marked it.

22 MR. FONTANA: We've been for a day and a half
23 with this witness and we've not asked him about what to
24 this uninitiated person would appear to be the single
25 most important document that he would have knowledge of

1 that would be relevant to the Birmingham Fire case?

2 Okay.

3 MR. KEARNS: Roy, how long do you think your
4 total examination will be? A half hour?

5 MR. COMBS: I don't know if it's going to be a
6 half an hour. I'm going to have about eight documents,
7 these copies included, that I plan to introduce. At
8 this point it looks like it's going to be at least a
9 half an hour. I mean at least. I really think it's
10 going to be more than that.

11 MR. DICUM: Mr. Fontana is referring to the
12 report attached to the Response 4A. You may want to do
13 that.

14 MR. KEARNS: Let's try and figure out a time
15 when we can complete Dr. Levinskas.

16 MR. ROTHSCHILD: You have to leave?

17 MR. COMBS: I can work around his schedule.

18 MR. KEARNS: We'll start with Dr. Kelly now
19 and tomorrow morning, George, what's your schedule
20 tomorrow morning? Could you give us from 9 to 10
21 o'clock?

22 THE WITNESS: I don't recall. I could probably
23 get here in the morning.

24 MR. COMBS: If you want to pick up later today?

25 MR. KEARNS: I have to be out of here by 5:30

1 today.

2 (At this time, the deposition of George
3 Levinskas was adjourned until 8:30 a.m., August 7,
4 1987, at which time the following proceedings were
5 had:)

6 CROSS-EXAMINATION

7 BY MR. COMBS:

8 Q. Well, good morning, Mr. Levinskas.

9 A. Good morning.

10 Q. We're back on the record and this is a
11 continuation of your deposition, so we don't need to
12 swear you in again. My name is Roy Combs and I
13 represent Welton Beckett and Associates and Weaver
14 Architectural Group. They are two other parties in
15 this action.

16 Before I get to the heart of my questions,
17 I'd like to go back and clear up a couple of areas
18 concerning your job responsibilities when you came to
19 Monsanto. Now, as I understand it, you were manager of
20 product development in approximately 1971, '72, is that
21 correct?

22 A. That's correct.

23 Q. And I think you described basically four
24 responsibilities, new product assessment, new uses for
25 existing products, anticipate questions about safety

1 of products and recommend or do analysis to answer
2 those questions. Is that essentially what you did?

3 A. Yes, except for the last one, to make
4 recommendations for analyses or studies that could be
5 done, all to resolve those questions.

6 Q. Now, you then became or I should say you
7 assumed some new responsibilities and that was as a
8 director of environmental assessment and toxicology and
9 that was in approximately 1975 I believe you said, is
10 that correct?

11 A. The title first was changed to manager of
12 environmental assessment and toxicology and then
13 subsequently essentially the same function was changed
14 to read director.

15 Q. Director of environmental assessment?

16 A. And toxicology.

17 Q. Now, what new responsibilities did you
18 assume when you took on that responsibility, that is,
19 manager or director of environmental assessment and
20 toxicology?

21 A. In becoming manager, I took more
22 responsibility for the toxicology testing program which
23 I had not had up until that time. Over the years,
24 there was a gradual increase in the amount of activity,
25 the amount of testing being done and as we expanded, we

1 added staff and that led to the title changes.

2 Q. Was there a previous director of
3 environmental assessment and toxicology?

4 A. No.

5 Q. So you were the first person to assume that
6 position?

7 A. Yes.

8 Q. You say there had been an increase in
9 testing. Was that just during the four years or so
10 that you had been with Monsanto or had this occurred
11 over a longer period of time?

12 A. During my entire time with Monsanto or in
13 the early years of my time with Monsanto, there was a
14 gradual and progressive increase in testing of all
15 varieties.

16 Q. And when you say, "all varieties," all
17 varieties of product I take it?

18 A. Yes, I'm talking about the types of tests
19 and the number of products.

20 Q. Now, in 1971 when you began with Monsanto,
21 were there any toxicity tests being done on PCBs during
22 the combustion process?

23 A. I am not aware of any.

24 Q. Between 1971 and '74, were there any
25 toxicity tests done on combustions of PCBs?

1 A. I'm not aware of any.

2 Q. When did Monsanto first -- or strike that.
3 Did Monsanto begin to do toxicity tests on combustion
4 of PCBs?

5 A. I do not know if they were done or when
6 they were done.

7 Q. So at this point in time, you don't know if
8 Monsanto has ever done any toxicity tests on combustion
9 of PCBs?

10 A. That's correct.

11 Q. And when I say, "combustion," I'm speaking
12 of fire, heat basically?

13 A. That's correct.

14 Q. Okay. Now, in the early 1970s, was
15 Monsanto developing an incineration program for PCBs
16 that had been sold?

17 A. I do not know.

18 Q. When you were with Monsanto, were there any
19 discussions about developing a PCB incineration
20 program?

21 A. The only recollection I have is somewhere
22 comments were made that Monsanto would combust or
23 destroy PCBs that were returned to it as a service with
24 some charge attached. The details beyond that I have
25 no knowledge.

1 Q. Do you know who would have knowledge about
2 the creation of that program or the development of the
3 program?

4 A. The individual I would inquire of would be
5 Bill Papageorge.

6 MS. JORDAN: I'm sorry, could you repeat that?

7 THE WITNESS: The person to whom I would direct
8 an inquiry would be Bill Papageorge.

9 Q. Going back to toxicity testing done at
10 Monsanto, have you ever heard of something called a
11 manufacturers -- excuse me, Material Safety Data Sheet?

12 A. Yes.

13 Q. And can you tell me what that is?

14 A. A Material Safety Data Sheet is a document
15 which was originally a revision of another government
16 document and its intention was to convey information
17 regarding the proper use and the health hazards of a
18 chemical.

19 The original document from which it came
20 was developed under the old Ship Building, Breaking, and
21 Repair Act and its predominant, basically half the
22 document almost dealt with flammability characteristics
23 and was designed to protect shipyard workers working in
24 confined spaces with flammable materials.

25 Q. You mentioned a government agency. Would

1 that be OSHA or was it federal OSHA or was there
2 another government agency?

3 A. OSHA was the one who adopted it from the
4 other agency. The form was originally whoever had
5 responsibility for the old Ship Building, Breaking, and
6 Repair Act.

7 Q. Now, were Material Safety Data Sheets and
8 I'll call them MSDS sheets, were they prepared for
9 Monsanto's PCB Aroclors?

10 A. The older Form 20 as it was called.

11 Q. That would be under the Ship Building,
12 Breaking, Repair Act?

13 A. Well, the form developed for the Ship
14 Building, Breaking, Repair Act was relabeled OSHA Form
15 20 and used as is and that's the form I indicated had
16 the emphasis on flammability characteristics of
17 materials. That type of form was prepared on most if
18 not all Monsanto products. I was not involved in their
19 preparation.

20 Q. Who would have been involved in the
21 preparation of those MSDS sheets?

22 A. At that time the medical department would
23 have been, Mr. Wheeler, Mr. Garrett, and
24 representatives of the operating units who were
25 familiar with the characteristics of the products under

1 discussion.

2 Q. So were the MSDS sheets prepared by the
3 medical department?

4 A. They contributed to their preparation.

5 Q. Do you know what department had
6 responsibility for preparing the sheets?

7 A. I have indicated that this was a joint
8 effort between the medical department and
9 representatives of the operating units who had
10 knowledge and responsibility for the particular product
11 involved.

12 Q. Now, was there anyone in the toxicity, if I
13 can call it that, section who provided any information
14 that was used for preparing these sheets?

15 A. I did not. I do not know of others.

16 Q. Have you ever had a chance to look at the
17 MSDS sheets for Aroclor 1242?

18 A. I do not recall that I have.

19 Q. Have you had a chance to look at it with
20 respect to Aroclors 1254 or 1260?

21 A. I do not recall looking at MSDSs for those
22 specific products.

23 Q. Do you know if -- strike that. Do you know
24 what flammability characteristics, if any, were
25 indicated for PCB Aroclor 1242?

1 A. I do not know the specific properties of
2 those materials.

3 Q. Do you know who might know the flammability
4 characteristics for Aroclor 1242?

5 A. I think I'd indicated in earlier testimony
6 the two people I would contact regarding properties of
7 the Aroclors would be either Dr. Bill Richards or Dr.
8 John Herber.

9 Q. Do you know if those MSDS sheets are
10 updated periodically?

11 A. Yes.

12 Q. Do you know what the frequency of the
13 updates are?

14 A. There is no set pattern. It depends on the
15 rate or the nature of the information generated or
16 available since the last one was prepared.

17 MR. KEARNS: How do you spell Herber?

18 THE WITNESS: H-e-r-b-e-r.

19 Q. Do you know if the MSDS sheets asked for
20 any information concerning toxic gases?

21 A. I do not know. I do not recall the
22 original Form 20, what kinds of information it asks for
23 in that respect. We do where information is available
24 make a reference to possible decomposition products of
25 materials.

1 Q. Do you know if the MSDS sheets for Aroclor
2 1242 gave any indication about possible decomposition
3 gases for other products?

4 A. I do not recall the comments in that regard
5 on the earlier so-called Form 20s. I do not know what
6 appears -- I do not recall specifically at this point
7 of what appears on the current MSDS.

8 Q. I take it you don't recall what appeared on
9 the previous versions either?

10 A. That's correct.

11 Q. Now, in 1971 when you arrived at Monsanto,
12 was there any concern about the possibility of dibenzo-
13 dioxins or dibenzofurans being produced by the
14 combustion or partial combustion of PCBs?

15 A. I can recall no such concern.

16 Q. Between 1971 and 1975, did there come a
17 time when that concern was expressed?

18 A. I can't recall discussions about the
19 presence or absence of dibenzofurans in different
20 connections. My recollection of those or at least my
21 reaction to those was that this was a matter of some
22 scientific interest, but as I indicated we were testing
23 products as such and any contaminants or any impurities
24 that might be in those products was being tested so
25 from a toxicology standpoint, I did not see that this

1 was a particular concern.

2 Q. Well, was it a part of your concern to
3 anticipate possible questions about a use of a
4 particular Monsanto product after it was sold for a
5 particular use?

6 A. I believe I've indicated earlier that the
7 program I would engage in was to deal with new uses of
8 existing products and new products. Since the PCBs
9 were an established product and uses were well
10 established and we were handling them as they came
11 along, it was not within the purview of our review.

12 Q. I'd like to show you a document and this
13 will be next in order, Number 122.

14 (Plaintiff's Exhibit 122 marked for
15 identification.)

16 Q. Mr. Levinskas, I've shown you a document
17 which is a letter dated July 6, 1970, from W. B.
18 Papageorge to Mr. Garlington Wilburn. It's been marked
19 as Exhibit 122. Have you ever seen this document
20 before?

21 A. I have been shown a copy of this before,
22 yes.

23 Q. Can you tell me when you were shown a copy
24 of this?

25 A. It was in preparation for a deposition. It

1 may have been this one.

2 Q. You've been shown it more than once or just
3 once?

4 A. Just once.

5 Q. Prior to that showing, had you ever seen
6 that document before?

7 A. No, I had not.

8 Q. Will you take a look at the second
9 paragraph and if you like, you can read the whole
10 letter, but I'm concerned about the second paragraph,
11 the fourth sentence in particular.

12 A. Okay.

13 Q. The term "partial oxidation" and "partially
14 oxidize PCBs into materials which can be highly toxic,"
15 what would be your understanding of the term "highly
16 toxic" with reference to dioxins or furans?

17 A. My understanding -- my use of the term
18 "highly toxic" and I do not know how Mr. Papageorge is
19 using it in this context is to substances by statutory
20 definition that are poisons.

21 Q. So if you read that, that would be your
22 understanding?

23 MR. KEARNS: Well, let me object to the
24 question. I think he's saying that's his understanding
25 but not because of the sentence, is that right?

1 THE WITNESS: I indicated I do not know Mr.
2 Papageorge is using it or what context he's using it.
3 My use of the term is limited to things that by
4 statutory definition are classified as poisons.

5 Q. And in 1970, were dibenzodioxins or
6 dibenzofurans statutorily deemed poisonous?

7 A. I'm not sure statutorily deemed. Statutes
8 deem what a poison is or is not. I do not know which
9 dioxins are involved, which furans, or which materials.

10 If you had a specific compound and if I had
11 information on it, on the toxicity information, I could
12 give you my judgment as to whether I thought it would
13 or would not be poisonous in a statutory sense or
14 according to the statutes, but to take a statement
15 which says it's possible to form materials and then
16 talk about generic classes of compounds, I find it just
17 too muddled to make much sense of it.

18 Q. Well, if the reference here is to
19 polychlorinated dibenzodioxins or polychlorinated
20 dibenzofurans, would that assist you in any way?

21 A. It would narrow the discussion to some
22 extent, but again there are a range of polychlorinated
23 dibenzodioxins and polychlorinated dibenzofurans.

24 Q. Well, given that narrowing of the range
25 using those two terms, given your understanding of the

1 statutory definitions of what a poison is, would either
2 of those be considered a poison?

3 A. The pure compounds and some of the pure
4 chlorinated dibenzodioxins and dibenzofurans would be
5 classified as poisonous based on their acute toxicity.
6 Whether such information existed or was available at
7 the time this letter was written I do not know.

8 Q. At the bottom left-hand corner, there
9 appears to be a name which is partially cut off on my
10 copy and probably yours also, G. R. Graham. Do you
11 know a G. R. Graham?

12 A. I do not recall a G. R. Graham.

13 Q. Now, when you came to Monsanto in '71, was
14 Mr. Papageorge still the manager of environmental
15 control?

16 A. I do not know his title when I first met
17 him or his subsequent titles.

18 Q. Did Mr. Papageorge ever assist in any of
19 the toxicity evaluations that you did?

20 A. No.

21 Q. Was there a specific division at Monsanto
22 that was responsible for conducting tests of existing
23 products to make sure that they were meeting new
24 performance criteria that might be developed in a
25 particular industry?

1 A. If you're talking products that meet
2 specifications or the needs and desires of the
3 customers, that I have no knowledge of, but I would
4 assume that Monsanto attempts to sell products that
5 customers want.

6 I have indicated that from my perspective
7 with respect to new products or use of existing
8 products, issues related to the toxicity and
9 environmental health were things that we were concerned
10 about.

11 Q. I believe you testified a few minutes ago
12 that sometime around the mid seventies there were some
13 questions raised or at least discussions about the
14 combustion of PCBs, is that correct?

15 A. I don't think I made any statement with
16 what was happening in terms of questions. I think I
17 said that my recollection was that somewhere along the
18 line, there were discussions about the presence of
19 furans, other contaminants possibly, but I don't think
20 I indicated they come from combustion products nor do I
21 recall specifically the context in which some of the
22 papers that were shown to me in the last two days
23 talked about analysis of PCB mixtures and contaminants
24 in them and I indicated that one gets a reference to
25 the contamination from reading the toxicity literature,

1 so just where this information came and how, I can't be
2 very precise. It just kind of seeped into
3 consciousness over a period of time.

4 Q. So you recall some discussions, but you're
5 not sure of the nature of the discussions or where the
6 information came from?

7 A. I said I don't recall the precise wording,
8 but it was to the extent that there were discussions
9 regarding contaminants. I do not think I made a
10 specific reference to their arising from the combustion
11 process.

12 Q. And has there been any discussion up to the
13 current date about contaminants -- strike that, about
14 furans or dioxins resulting from the combustion of PCB
15 Aroclors?

16 A. There certainly have been several stories
17 in the newspapers.

18 MR. KEARNS: Just say yes or no.

19 A. Yes.

20 Q. And I believe you said that Monsanto has
21 not initiated any toxicity studies on that issue?

22 A. I said I was not aware of any.

23 Q. Maybe I should broaden that. You're not
24 aware of any studies that Monsanto may have requested
25 or commissioned to study the issues?

1 A. When I say that, that includes studies in
2 which I would be involved or which I had involvement in
3 placing it with a contract laboratory.

4 Q. Now, in the early 1970s and specifically,
5 let's say, between '71 and '75, were there any toxicity
6 studies on PCB Aroclors that had to do with electrical
7 arcing?

8 A. I do not know of any.

9 Q. And again would Mr. -- if such studies
10 occurred, would Mr. Herber and I believe it was
11 Richards be the people to speak with about that?

12 A. I would direct my questions to them.

13 Q. I'd like to show you another document which
14 will be marked next in order and this has a BIR Number
15 of 007726 and it appears to be a Monsanto interoffice
16 memo dated February 13, 1976, and I should indicate that
17 in the third paragraph, the underline there is my
18 underlining. The document as it was produced did not
19 have that marking on it.

20 (Plaintiff's Exhibit 123 marked for
21 identification.)

22 Q. Will you take a look at this document?

23 A. Yes.

24 Q. Have you seen this document before?

25 A. Yes.

1 Q. Did you prepare it?

2 A. Yes.

3 Q. Do you recall this event that's described
4 in the first paragraph?

5 A. Not specifically, but it does sound
6 reasonable.

7 Q. Do you know if the transformer that
8 exploded, if there was any smoke or gas involved with
9 that explosion?

10 A. The memo records -- the intent of the memo
11 was to record the information I received and it states
12 that the individual indicated a transformer had
13 exploded and when I asked him the nature, he said it
14 arced over and then as I indicate, he was attempting to
15 set up a conference call with our physicians and he
16 hung up, so that's the extent of my recollection is
17 what I can reconstruct from the memo.

18 Q. When he used the term "arced over," did
19 that have any particular significance to you?

20 A. Not at the time, nor does it now.

21 Q. Now, if you'll take a look at the third
22 paragraph, I don't know if you've had a chance to read
23 it.

24 A. Yes.

25 Q. On the third sentence of that paragraph,

1 you indicate, "As a result of the conditions under
2 which exposure had taken place, I would expect that
3 individuals would be exposed to a smoke, mist or
4 fume and that they would experience respiratory
5 distress."

6 Does that help your recollection as to
7 whether or not any smoke or mist was involved?

8 MR. KEARNS: Actually?

9 MR. COMBS: Actually. Does this help his memory
10 at all?

11 MR. KEARNS: As to whether or not he had been
12 told that?

13 MR. COMBS: Told that, that's right.

14 A. I've indicated that I do not recall beyond
15 what's recorded in the first paragraph the conditions
16 of exposure.

17 Q. Now, you use the term "mist" here. Can you
18 explain for me in a brief fashion what you're referring
19 to there?

20 A. Mist is basically -- the terms mist and
21 fume are somewhat interchangeable. The relative
22 distinction is the size of the particles in the air.
23 Mist particles would be larger than fume particles, but
24 it's a subjective, somewhat arbitrary distinction.

25 Q. Now, did this event create any questions in

1 your mind about potential toxic effects of PCB Aroclors
2 after transformer explosions?

3 A. No.

4 Q. Is there any reason why it didn't?

5 A. Just general knowledge and judgment that
6 there should be no particular concern beyond the
7 immediate ones mentioned there.

8 Q. And you say, "general knowledge." What
9 general knowledge were you relying on to make that
10 decision?

11 A. Over the years, working with similar
12 materials, not chemically similar but physical
13 characteristics similar to this, discussions with
14 others, reading, what one develops a base of knowledge
15 with which to operate.

16 Q. Was it your belief at this time that the
17 exposure to smoke would not be toxic?

18 A. I've indicated that they suffered some
19 respiratory distress. If they were inhaling
20 particulates of an oily material, they could develop a
21 pneumonitis. If they got sprayed with a hot oil, they
22 would have a burn and those were the things of interest
23 or concern.

24 Q. I think we should indicate for the record
25 that Pyranol was the trade name for the dielectric

1 marketed by General Electric. I'm reading that in the
2 first sentence of the third paragraph. Do you know if
3 any Monsanto PCB Aroclors were a part of the Pyranol?

4 A. I do not.

5 Q. Also on this document at the top in the
6 right-hand corner there are two names which I don't
7 recognize. That's J. C. Weber. Who is that?

8 A. That's Cole Weber who for want of a
9 specific term I would refer to as a product manager in
10 that area.

11 Q. In the Askarel area or the PCB Aroclor
12 area?

13 A. I believe it was in the functional fluids
14 area.

15 Q. Is he still with Monsanto?

16 A. I do not think he is. I think he has
17 retired.

18 Q. Do you know where he's located?

19 A. He was originally in the St. Louis area.
20 I do not know if he's still here.

21 Q. Did he have any particular responsibility
22 that you're aware of in the functional fluids area?

23 A. I've indicated I thought he was a product
24 manager. Specific details of that position I'm not
25 familiar with.

1 Q. And the next person is G. Roush or Roush,
2 Junior. Do you know who that is?

3 A. That's Dr. George Roush who was then and is
4 now our medical director.

5 Q. By the way, to the right of each of the
6 names is a number. Does that number have any
7 significance?

8 A. That is merely an internal zip code for
9 sending mail.

10 Q. That's all for that document. Next I'd
11 like to show you a document which appears to be another
12 Monsanto memo dated March 25, 1976.

13 MR. DICUM: BIR number?

14 MR. COMBS: 7725.

15 (Plaintiff's Exhibit 124 marked for
16 identification.)

17 Q. Have you seen this document before?

18 A. Yes.

19 Q. And did you prepare it?

20 A. Yes.

21 Q. Now, at the time that you had this
22 follow-up conversation, did you discuss any further the
23 smoke that was released when the transformer exploded?

24 A. I do not believe we did. I do not recall
25 that we did.

1 Q. Do you recall anything else about this
2 conversation other than what's indicated here?

3 A. I do not recall anything beyond this memo.

4 Q. Did Monsanto make any efforts to examine
5 the individuals who were exposed in this incident?

6 A. I do not know.

7 Q. Do you know if Dr. Roush or Weber discussed
8 examining individuals who were exposed in this
9 incident?

10 A. I do not know.

11 Q. And in the second paragraph, second
12 sentence it indicates that we have complied with the
13 request to supply toxicity data on PCBs and
14 trichlorobenzenes. Is trichlorobenzenes, is that TCB?
15 Is that another abbreviation for that?

16 A. No, trichlorobenzene is a different
17 chemical.

18 Q. What information did you supply?

19 A. I do not recall.

20 Q. I'd like to show you another document which
21 again appears to be a Monsanto memo dated September 16,
22 1975, with a BIR number of 7717. Again I'm noting for
23 the record the marks in Paragraph Numbers 2, 6, and 14
24 which appear on the copies are my marks.

25 (Plaintiff's Exhibit 125 marked for

1 identification.)

2 Q. You can review the document. I will be
3 specifically concerned about Paragraph 6. Before we
4 get to that, did you prepare this document?

5 A. Yes.

6 Q. On Paragraph 6 it discusses pyrolysis
7 product testing. It refers to the Fire Safety Center
8 Audit Committee at Southwest Research Institute which
9 had performed -- excuse me, which was to review the
10 corporate programs for assessment of the toxicity of
11 smoke from Monsanto products. Do you know if
12 Monsanto's PCB Aroclors were included in the products
13 that were to be assessed?

14 A. They were not.

15 Q. What products were to be included?

16 A. Polymers.

17 Q. Were polymers the only products being
18 included?

19 A. At this time polymers were the predominant
20 and may well have been the exclusive items of concern.
21 I would put fibrous fabrics in with polymers.

22 Q. What is the Fire Safety Center Audit
23 Committee?

24 A. My recollection is that it was a group from
25 different parts of Monsanto, individuals from different

1 parts of Monsanto charged to look at what Monsanto was
2 doing in the area of fire safety testing and to make
3 recommendations or suggestions for what Monsanto should
4 be doing in this area.

5 Q. In 1975, how long had this committee
6 existed?

7 A. Probably a few to several months, though I
8 can't be precise.

9 Q. Was the focus of the committee then the
10 polymers and fiber fabrics?

11 A. Yes.

12 Q. Does the committee still exist today?

13 A. No.

14 Q. Do you know if the committee at any point
15 ever looked at the toxicity of smoke from PCB Aroclors
16 at some later point in time than this memo?

17 A. To the best of my knowledge, they did not.

18 Q. Who was on the committee in 1975?

19 A. I was a member. I believe Charlie Farley
20 was. I think we had -- well, we had representatives
21 from other parts of the company, but at this time I
22 can't recall their names it's been too long.

23 Q. Was Mr. Papageorge on the committee?

24 A. I do not believe he was, but I can't be
25 positive.

CERTIFIED COURT REPORTERS

STLCOPCB4027523

1 Q. How about about Mr. Herber?

2 A. I don't think he was.

3 Q. And Mr. Richards?

4 A. No.

5 Q. Now, on the front page of the document
6 there's a cc to P. L. Wright. Is that Paul Wright?

7 A. Yes.

8 Q. And who is F. R. Johannsen?

9 A. Fred Johannsen was a toxicologist in the
10 medical department.

11 Q. I'm going to show you another document
12 which will be marked next in order and this is a
13 Monsanto memo dated August 29, 1980. It has a BIR
14 number of 7734 and you can take a moment to review it.

15 (Plaintiff's Exhibit 126 marked for
16 identification.)

17 Q. Have you had a chance to look at it?

18 A. Yes.

19 Q. Did you prepare this document?

20 A. I wrote it, yes.

21 Q. Now, looking at the heading "Inhalation,"
22 it indicates that, "If electrical equipment arcs over,
23 PCBs or other chlorinated hydrocarbons in the
24 dielectric fluids may decompose to produce hydrochloric
25 acid which is a respiratory irritant."

1 Now, at that time in 1980, were there
2 concerns about any other compounds being produced as a
3 result of the electrical equipment arcing?

4 A. I do not know.

5 Q. And again would Mr. Herber and Richards be
6 the people to talk to if there were those concerns?

7 A. They could be -- that question could be
8 asked of them.

9 Q. Was there anyone at Monsanto responsible
10 for testing the PCB Aroclors that were used in the
11 dielectrics under electrical arcing conditions?

12 A. I do not know if anybody had such a
13 responsibility. I did no such testing.

14 Q. I guess maybe I should ask the foundation
15 question. Do you know if any testing of that nature
16 occurred?

17 A. I know of none.

18 Q. And is that true to the present?

19 A. Yes.

20 Q. I believe yesterday or perhaps it was
21 Tuesday, the day we began, you indicated that you had
22 heard of the Binghamton incident where a transformer
23 failed in New York state, is that correct?

24 A. Yes.

25 Q. Do you know if Monsanto did any

1 investigation into the incident?

2 A. I know of none.

3 Q. Were there any discussions at Monsanto
4 about the incident at all?

5 A. Yes.

6 Q. And were you involved in some of those
7 discussions?

8 A. Yes.

9 Q. And what was the nature of the discussions?

10 MR. KEARNS: Assuming they were not with
11 counsel.

12 A. Well, they would be almost like informal
13 luncheon conversations. I do not recall a specific
14 meeting in the sense of a formal meeting to discuss or
15 to review the situation.

16 Q. Was there any discussion about the creation
17 of TCDFs, dibenzofurans, or TCDDs as a result of the
18 Binghamton incident?

19 A. My general recollection is that there was
20 discussion about whether these things were there or not
21 and what was the availability or the reliability of the
22 analytical methodology, this sort of question in terms
23 of their presence. I do not recall any discussions
24 regarding causation.

25 Q. Now, I believe you testified at some point

1 that you recalled there being some debate not
2 necessarily within Monsanto about the clean-up criteria
3 that was to be used at Monsanto, is that correct? I
4 think that was your testimony the other day.

5 MR. KEARNS: I'm sorry, would you read that
6 back, please?

7 (Whereupon the following question was read back
8 by the court reporter: "Q. Now, I believe you
9 testified at some point that you recalled there being
10 some debate not necessarily within Monsanto about the
11 clean-up criteria that was to be used at Monsanto, is
12 that correct? I think that was your testimony the
13 other day.")

14 Q. At Binghamton.

15 MR. KEARNS: I don't remember anything like
16 that.

17 A. I don't recall that. I can't recall.

18 Q. Do you recall any discussions about the
19 clean-up criteria that was to be used at Binghamton?

20 A. No, I don't recall that.

21 Q. Do you know if anyone at Monsanto became
22 involved in the setting or assisting the setting
23 requirements at the Binghamton incident?

24 A. I do not know.

25 Q. Now, other than what your counsel may have

1 discussed with you, do you have any knowledge about the
2 One Market Plaza incident, the subject of this lawsuit?

3 A. No.

4 Q. Now, is there an environmental policy staff
5 within Monsanto?

6 A. Yes.

7 Q. And what's the function of that staff?

8 A. The environmental policy staff is a unit
9 which consists -- the major element -- not the major,
10 one of the major elements is the medical department.
11 There's another unit concerned with health and safety
12 in terms of the workplace. There are some individuals
13 with environmental expertise and then a group of
14 individuals who are charged with keeping Monsanto
15 informed and abreast of legislative changes that could
16 affect the company in a broad sense. The environmental
17 staff is to set the tenor of environmental issues from
18 Monsanto Company.

19 Q. Are you on that policy staff?

20 A. The environmental policy staff is a
21 functional unit of Monsanto and the medical department
22 to which I belong is part of that functional unit.

23 Q. Now, has that unit ever discussed
24 potential issues concerning the combustion of PCB
25 Aroclors as a policy issue?

1 A. I do not know.

2 Q. Going back to the MSDS sheets we discussed
3 earlier, does Monsanto retain copies of those
4 documents?

5 A. Yes.

6 Q. Do you know how far back they are retained?

7 A. No.

8 Q. Okay. The last document I'm going to show
9 you will be marked next in order. This has a BIR
10 number of 7882. This is a meeting. At the top it
11 says, "Meeting with NIOSH, November 22, 1974 re: PCBs."

12 Now, this document was produced as a single
13 page just as it appears so I don't know if there are
14 any minutes that go with it.

15 (Plaintiff's Exhibit 127 marked for
16 identification.)

17 Q. What I essentially want to do with this
18 document is have you identify a few people at the lower
19 half of the list. Who is G. L. Bratsch? Is that how
20 you pronounce it?

21 A. It's Jerry Bratsch.

22 Q. Bratsch?

23 A. As is indicated, he was director of
24 manufacturing, specialty and process chemicals in
25 Monsanto Industrial Chemicals Company.

1 Q. Did he have any responsibility or
2 involvement with Monsanto's PCB Aroclors?
3 A. Yes.
4 Q. And do you know what the nature of his
5 involvement would be?
6 A. As indicated by his title since these were
7 products of the specialty and process chemicals
8 division, he was director of manufacturing and
9 responsible for the unit making them.
10 Q. Do you know if his responsibility included
11 any testing of the specialty and process chemicals that
12 came out of his division?
13 A. I do not know the details of his
14 responsibilities.
15 Q. And is he still with Monsanto?
16 A. I believe he is.
17 Q. Is he located here in St. Louis?
18 A. I believe he is.
19 Q. Okay. The next person is J. R. Savage
20 who's indicated here to be manager, manufacturing,
21 specialty and process chemicals division, Monsanto
22 Industrial Chemical Company. What's his first name?
23 A. I do not recall.
24 Q. Is he still with Monsanto?
25 A. I believe the only time I met him is at

1 that meeting. I do not know anything beyond that.

2 Q. The next person is W. C. Engman,
3 technical services department, W. G. Krummrich plant.
4 Who is that person?

5 A. His title was technical services
6 department. I have not seen him since that meeting and
7 know nothing further.

8 Q. And how about G. F. Fort, F-o-r-t,
9 manager, environmental affairs. I guess the first
10 question is do you know if he had any involvement with
11 PCB Aroclors?

12 A. Since he was involved in environmental
13 affairs, I assume he did.

14 Q. Do you know if he's still with Monsanto?

15 A. Yes, he is.

16 Q. Is he located here in St. Louis?

17 A. Yes.

18 Q. Do you know if that's his current position?

19 A. That is not his current position.

20 Q. What is his current position?

21 A. I do not know his specific present title.

22 MR. COMBS: I will stop here for now. I may
23 have a few clean-up questions, but that's it.

24 MR. KEARNS: What can I go and tell Dr. Kelly
25 now?

1 (At this time a short recess was taken, after
2 which the following proceedings were had:)

3 REDIRECT EXAMINATION

4 BY MR. DICUM:

5 Q. Mr. Levinskas, do you recall yesterday my
6 asking you about certain data in connection with -- may
7 I please continue? Mr. Levinskas, do you recall my
8 asking you yesterday about the importance of having
9 reliable data in animal tests?

10 A. We were talking about animal data, yes.

11 Q. That subject matter, do you recall saying
12 that while the company Monsanto might certainly discuss
13 or contend on questions of interpretation at least as
14 far as the raw data was concerned, the raw data would
15 be accepted? Do you remember saying that?

16 A. Yes.

17 Q. Do you recall any kind of problems with
18 certain fish studies and the raw data fish studies at
19 any time?

20 A. No, I do not.

21 Q. Would you look at a document which will be
22 marked next in order?

23 (Plaintiff's Exhibits 128 and 129 marked for
24 identification.)

25 MR. DICUM: These are BIR 7711 and the next in

1 order is 7709.

2 Q. Do you recall the two memoranda that I have
3 just placed in front of you? I'm sorry, there's
4 another one.

5 MR. FONTANA: Okay. And the next in order was
6 what number?

7 MR. DICUM: 129. This is 129.

8 MR. FONTANA: May I be shown a copy of 128?

9 MR. DICUM: I think you've seen it.

10 MR. FONTANA: You've changed the numbers twice
11 in the last five minutes.

12 MR. KEARNS: Your half hour is running.

13 Q. Do you recall those two memoranda?

14 MR. FONTANA: I'm sorry, now I haven't seen 129
15 yet.

16 A. Yes.

17 Q. And do you recall the problems in those
18 memoranda?

19 MR. FONTANA: Wait. I object. I want to see
20 document 129. I want to know what you're doing here.

21 MR. DICUM: You've seen it already.

22 MR. FONTANA: Mr. Dicum, you have not
23 identified the documents and the record is bizarrely --

24 MR. DICUM: Plaintiff's Exhibit Number 128 is
25 BIR 007709, is that correct?

1 THE WITNESS: Yes.

2 MR. DICUM: And Plaintiff's Exhibit Number 129 is
3 BIR 007711.

4 MR. FONTANA: Thank you.

5 Q. Now, have you seen those memoranda before?

6 A. Yes.

7 Q. Do you recall the problems in those
8 memoranda?

9 A. I do not believe these are problems in the
10 sense of difficulties that are discussed here.

11 Q. And, sir, could you look next in order,
12 Plaintiff's Exhibit Number 130 which is about to be
13 marked.

14 (Plaintiff's Exhibit 130 marked for
15 identification.)

16 MS. JORDAN: Is there a BIR number on that?

17 MR. DICUM: 7879.

18 Q. Do you remember that document?

19 A. Yes.

20 Q. Now, is that a reference to some kind of
21 meeting at NIOSH concerning the study of Dr. Kimbrough
22 that we discussed yesterday?

23 A. I don't recall while it was mentioned Dr.
24 Kimbrough's study was the major topic discussed at this
25 meeting.

1 Q. And were some health studies or
2 epidemiological studies then prompted by Dr.
3 Kimbrough's studies, do you recall?

4 A. Yes.

5 Q. And they were conducted at Monsanto?

6 A. Yes.

7 Q. Did you yourself have anything to do with
8 the supervision of those studies?

9 A. No.

10 Q. Do you know who did?

11 A. I do not recall who actually undertook
12 those studies at this time.

13 Q. Were they carried out in the medical
14 department?

15 A. I believe they were, yes.

16 MR. DICUM: Start marking next this exhibit.

17 (Plaintiff's Exhibit 131 marked for
18 identification.)

19 Q. Sir, do you recall at any time certain
20 problems with studies with dogs at Industrial Bio-Test?

21 A. I do not.

22 Q. Would you look at the last paragraph --
23 have you seen this document before?

24 A. I have not.

25 Q. Do you know a certain time when Industrial

1 Bio-Test obtained a staff pathologist?

2 A. I do not know when and how they hired their
3 staff.

4 Q. Do you agree that it is scientifically
5 sound to put down all gross findings without judging
6 whether it was related to test material or not?

7 A. The observations should be recorded, yes.

8 Q. And do you agree that at some point a staff
9 pathologist came on board at Industrial Bio-Test who
10 gave instructions that that should no longer be done?

11 MR. KEARNS: Why would he agree with that?
12 Because it says in there?

13 MR. DICUM: If he's been told that.

14 MR. KEARNS: Anybody ever told you that?

15 A. I have not been told that by Bio-Test
16 people.

17 Q. Have you been told that by anyone else
18 other than at Bio-Test?

19 A. I have not been told that by anybody.

20 Q. Have you heard that there were from any
21 other source pronounced gastric gland problems with the
22 dogs being used in the Bio-Test studies?

23 MR. KEARNS: I'm going to object to his
24 answering any questions. I don't see any -- and I
25 haven't read it thoroughly, but I don't see that has

1 anything to do with Monsanto Chemical Company or this
2 lawsuit. I don't know what this is. I don't even know
3 what product it refers to.

4 You're just bringing in records of third
5 parties and questioning Monsanto employees about them.
6 I'll even object to that thing being marked for
7 identification, but there's nothing I can do about it.

8 Q. Do you recall, sir, at any time any further
9 meetings with the National Cancer Institute concerning
10 the Kimbrough study other than the one you've
11 described?

12 A. No.

13 Q. I'm going to show you another document
14 which will be marked Number 132.

15 (Plaintiff's Exhibit 132 marked for
16 identification.)

17 Q. Have you seen this one before? Have you
18 seen that one before? Have you seen that document
19 before?

20 A. Yes.

21 Q. Now, did you prepare this document or did
22 someone else do so for you?

23 A. I prepared it.

24 Q. And is it still your understanding that the
25 control animals in the Kimbrough study had very clean

1 gross livers as stated in Paragraph 5?

2 A. I have -- the comments I made I believe are
3 valid there, yes.

4 MR. DICUM: Mark this next in order.

5 (Plaintiff's Exhibit 133 marked for
6 identification.)

7 Q. Do you recognize this document?

8 A. Yes.

9 Q. And again the information in this document,
10 do you still agree with this today? First of all, did
11 you agree with it at the time that this document was
12 sent to you looking first at the first page and then
13 the attachments?

14 MR. KEARNS: I'm sorry, what is the question?

15 MR. DICUM: Whether he agrees, first of all,
16 with the information on the first page.

17 MR. KEARNS: Every sentence on the first page?

18 Q. Okay. Do you agree that cancerous liver
19 cells were observed in approximately 8 percent of the
20 rats exposed to Aroclor 1260 in Dr. Kimbrough's study?

21 A. Yes.

22 Q. That this effect was not observed in
23 similar studies conducted for Monsanto Company by
24 Industrial Bio-Test?

25 A. Yes.

1 Q. Sir, the purpose of the Industrial Bio-Test
2 labs, was that to detect cancer in rats?

3 A. Its intent was to detect, yes, cancer.

4 Q. And was that then intended to give some
5 kind of impression of the potential for cancer in
6 humans as well?

7 A. It was part of an overall testing program.

8 Q. Was it intended for determination of
9 problems of PCBs in the environment or problems of PCBs
10 for human beings?

11 A. Since those studies were initiated long
12 before I joined the company, I cannot testify to the
13 intention of them.

14 Q. You testified at least of the use that was
15 made of the results of the tests?

16 A. They would be information that would be
17 useful in evaluating specific incidents involving
18 polychlorinated biphenyls.

19 Q. Were they ever used for the purposes of
20 checking out, let's say, causing of cancers in animals
21 as opposed to humans?

22 A. I have difficulty with the question.

23 Q. Okay. Were they ever used to your
24 recollection for the purposes of determining whether
25 cancer was caused in, let's say, agricultural animals?

1 A. I have no knowledge of such use.

2 Q. Were they only used for the purposes of
3 discussion with institutions such as the National
4 Cancer Institute concerning human cancer?

5 A. I do not recall discussions with the
6 National Cancer Institute regarding human cancer.

7 Q. Or the Centers For Disease Control?

8 A. Beg your pardon?

9 Q. Or the Centers For Disease Control?

10 A. We were discussing the test results of the
11 different experiments.

12 Q. Well, was your concern about the appearance
13 of the tumors in Dr. Kimbrough's study because of the
14 fact of a concern about disease in animals or cause
15 potential disease in human beings?

16 A. I believe I indicated in earlier testimony
17 that the concern we had, the issue raised was that we
18 had information which indicated these did not cause
19 cancer in animals. Dr. Kimbrough had evidence with an
20 opposite conclusion. Our efforts were directed
21 attempting to reach as objective an appraisal as we
22 could of what the true state of the situation was.

23 Q. Wasn't the reason for the concern because
24 of the fact that the appearance of cancer in these rats
25 and tumors in these rats would also indicate a

1 potential for cancer being caused in humans?

2 A. I think I've also indicated in earlier
3 testimony that there is a general supposition or
4 presumption that a substance which is carcinogenic in
5 animals may be, not necessarily is, but may be
6 carcinogenic to man and that conversely substances
7 which were shown not to be carcinogenic to animals did
8 not preclude their possible carcinogenicity to man.

9 Q. Would it be fair to say then that the
10 reason for the concern about the Kimbrough studies was
11 because of the fact that it showed that there might be
12 potential for cancer in man as well?

13 A. I have indicated my interest, my concern
14 was the fact that we have two opposing pieces of
15 information and as a scientist, the efforts were being
16 made to see if we could come to resolve or understand
17 the reason for the differences.

18 MR. DICUM: Marking next in order BIR 007721.

19 (Plaintiff's Exhibit 134 marked for
20 identification.)

21 Q. Do you recognize this document? Look at
22 the second page.

23 A. Yes.

24 Q. Did you prepare this document?

25 A. Yes.

1 Q. Now, there's a reference in the document in
2 the first paragraph to a Dr. Allen and also in the
3 title. Do you see that?

4 A. Yes.

5 Q. Is that the Dr. Allen that did the monkey
6 tests that raised certain concerns?

7 A. Yes.

8 Q. And are the tests referred to in this
9 document by Dr. Allen the monkey tests that you
10 referred to earlier?

11 A. I do not see a reference in here to --
12 skimming through it quickly, I do not see anything
13 about Allen's monkey studies in this memo so I'm not
14 sure what I'm agreeing with or being asked to do.

15 Q. Do you know what the tests are that are
16 referred to in Paragraph 4 of Dr. Allen's earlier work?

17 A. At this time, I do not recall.

18 MR. DICUM: Marking next in order BIR 7724 which
19 is a memorandum dated February 13, 1976, by George
20 Levinskas.

21 (Plaintiff's Exhibit 135 marked for
22 identification.)

23 Q. Do you recall this memorandum? Your answer
24 is either yes or no.

25 A. In general, yes.

1 Q. Do you recall the matters raised therein
2 about the difficulty of determining the precise
3 concentrations in the air?

4 A. They were having difficulty and I suggested
5 that he contact others with more experience in this
6 area.

7 Q. By "he," which of the persons were you
8 referring to?

9 A. The individual who called me, Noel Sears.

10 Q. Noel Sears in the first paragraph?

11 A. Yes.

12 Q. Do you know whether any of these air
13 concentration tests concern furans as opposed to the
14 Aroclor itself?

15 A. No.

16 Q. Do you know if the various episodes of
17 transformer arcing and explosion that Mr. Combs showed
18 you a short while back concerned occasions when furans
19 or dioxins were generated as opposed to just PCBs
20 leaking out?

21 A. I do not know what is generated during
22 arcing. I will amend that only to say that furans and
23 hydrochloric acid can be given off.

24 Q. Yes, but you don't know yourself whether
25 they were in these episodes?

1 A. Right.

2 Q. I asked you a little while back about
3 certain fish tests. I'm going to show you a couple of
4 memoranda which do seem to relate to Monsanto
5 specifically. This is premarked already as 82. It's
6 been premarked. During the course of your work at
7 Monsanto -- first of all, would you read the
8 memorandum? It's short.

9 MR. KEARNS: Just to himself?

10 MR. DICUM: No, it isn't but I just want to see
11 whether he recognizes this document.

12 MR. KEARNS: Do you want him to read it to
13 himself?

14 MR. DICUM: Yes.

15 MR. KEARNS: The document is dated a couple
16 years before he went to work for them.

17 MR. DICUM: I understand that, but I was
18 wondering whether he's seen it before in the course of
19 his investigation.

20 Q. Do you ever recall seeing any document
21 concerning problems with fish toxicity studies?

22 MR. KEARNS: Not this document?

23 Q. Do you recall seeing this document
24 concerning fish toxicity studies?

25 A. I have not seen this document before.

1 Q. Has anyone told you about problems
2 concerning those studies?

3 A. The last sentence of this memo says, "The
4 materials being found in water in fish toxicity studies
5 do not correspond to the materials expected from our
6 labeling." That suggests to me that they have had
7 difficulties in terms of specific isomers or analytical
8 problems and, yes, there have been a lot of analytical
9 problems with PCBs with respect to sensitivity of
10 methods, specific isomers under study, and so forth.
11 There may be a considerable discussion of that in the
12 literature and elsewhere.

13 MR. DICUM: The next exhibit has been premarked
14 as Exhibit 83. At this time it's identified as an
15 Industrial Bio-Test Laboratories, Inc., interoffice
16 correspondence, dated August 1, 1969, from CM to
17 OEF.

18 Q. I direct your attention to the objective of
19 the study, do you see that, to determine toxicity of
20 Aroclors to fish?

21 A. Yes.

22 Q. Would you look at the first paragraph and
23 the first sentence? Can you read for us that first
24 sentence?

25 A. "A7204 did not accomplish the objective and

1 was criticized for the following reasons."

2 Q. And the next sentence?

3 A. "The LC 50s reported for trout as greater
4 than 100 ppm represent nominal concentrations that are
5 misleading and intellectually repulsive. The
6 concentration of test material in a bioassay vessel
7 should not exceed the solubility of that material,
8 especially when tissue residue studies are being
9 conducted."

10 Q. Have you ever heard of problems concerning
11 the concentration of test material in the bioassay
12 vessels when the fish were subjected to exposures?

13 MR. KEARNS: Other than what it said in this
14 document?

15 MR. DICUM: Yes.

16 MR. KEARNS: Forget this document. Other than
17 that, have you ever heard of any problems?

18 A. This is a continuous concern whether the
19 nominal concentration is the so-called calculated
20 concentration that you expect in that fish tank and its
21 relationship to the actual analytically determined
22 question, that's a consideration in every fish study.

23 Q. And have you heard about this sort of
24 problem in connection with the Bio-Test studies in
25 particular?

1 A. It has occurred in fish studies with
2 Bio-Test as well as other laboratories, yes, I said
3 it's a regular concern in all these studies.
4 Q. Have you seen this particular document
5 before, Exhibit 83?
6 A. No, it predates my time with Monsanto and I
7 might add that those words of criticism are in an
8 internal interoffice correspondence which means that
9 Bio-Test is criticizing itself.
10 Q. Okay. I'm going to have marked BIR 007728
11 next in order.
12 (Plandtiff's Exhibit 136 marked for
13 identification.)
14 Q. It bears your signature or your initials,
15 does it not?
16 A. Yes.
17 Q. Your initials, is that correct?
18 A. Yes.
19 Q. Now, did you prepare this memorandum?
20 A. Yes.
21 Q. Do you remember it now?
22 A. Yes.
23 Q. Do you recall the conversation from Tony
24 Passalacqua other than what is stated in this
25 memorandum?

1 A. I recall nothing beyond this memorandum.

2 Q. Okay. Do you know if at some other time

3 after June 6th, 1977, Monsanto started special

4 monitoring of PCB workers?

5 A. I do not.

6 Q. Do you know who would if anyone?

7 A. Special monitoring of workers would involve

8 the physicians in the medical department.

9 Q. That would be Dr. George Roush?

10 A. Dr. Roush would be one.

11 MR. DICUM: Mark this next in order, BIR 007729.

12 (Plaintiff's Exhibit 137 marked for

13 identification.)

14 Q. Do you remember this document?

15 A. Yes.

16 Q. Will you look at Paragraph 4 and the second

17 sentence, could you read that for us?

18 A. "The attitude expressed by the EDF that no

19 type of exposure to PCBs can be termed insignificant

20 will be the basis for continuing controversy."

21 Q. And the next sentence?

22 A. "Subsequent to our meeting, Dave Wood told

23 me that Warren Easley had been told by someone in EPA

24 that they were satisfied with the data Monsanto had on

25 PCBs, i.e., they were not challenging IBT's conduct of

1 the studies. They did indicate that they disagreed
2 with us on the interpretation of the data."

3 Q. Who is Warren Easley?

4 A. Warren was with Monsanto in the Washington
5 office.

6 Q. Now, at this point, the prosecution that we
7 discussed yesterday of IBT officials had not yet
8 occurred, had it?

9 A. I don't think it had.

10 Q. Now, do you know if the EPA were given the
11 raw data at this time on the PCB studies such as the
12 ones we saw yesterday?

13 A. I do not know.

14 Q. Did anyone amongst these people, either
15 Dave Wood or Warren Easley, tell you that the EPA had
16 seen mortality or histopathological logs of rats, for
17 instance, at this time already?

18 A. They did not.

19 Q. They did not tell you?

20 A. They did not tell me.

21 Q. Now, you have no independent source of
22 information as to whether they did?

23 A. I have no information.

24 Q. Is the EDF the same as Environmental
25 Defense Fund?

1 A. That is correct.

2 Q. Will you look at the next page, Paragraph

3 2? "Warren Easley attempt to get a written confirmation

4 of the comments made to him by EPA regarding their

5 views of our PCB studies." Did you ever receive

6 anything in writing from the EPA or Warren Easley?

7 A. No.

8 Q. And did you receive anything directly from

9 the EPA concerning their attitude towards the IBT

10 studies?

11 A. No.

12 Q. To this day, do you know directly as

13 opposed to via this indirect route what the EPA

14 attitude was to the IBT studies?

15 A. No.

16 Q. Independently of this document, do you

17 remember Dave Wood saying that Warren Easley had been

18 told by someone in EPA that they disagreed with

19 Monsanto on the interpretation of the data?

20 A. I have never heard that they have

21 disagreed.

22 Q. I'm sorry, I'm sorry, interpretation.

23 A. I think that that line is the basis of what

24 we have been saying. There can be disagreements on

25 interpretation of the data.

1 Q. Now, again have you ever seen anything in
2 writing as opposed to in this conversation with Dave
3 Wood?

4 A. I have nothing in writing from EPA on PCBs.

5 Q. On PCBs altogether or of the IBT studies?

6 A. Of the IBT studies.

7 Q. Have you got any recollection of any other
8 document other than this one whether prepared by you or
9 prepared by Mr. Easley, prepared by Mr. Wood concerning
10 the EPA's attitude toward the IBT studies?

11 A. I have nothing.

12 MR. KEARNS: You're forty minutes into the half
13 hour. Now, how much longer are you going to be?

14 MR. DICUM: (Indicating.)

15 MR. KEARNS: Oh, my goodness, okay.

16 MR. DICUM: Actually that's it. This one has
17 been discussed already so I have nothing else.

18 MR. COMBS: Couple of clean-up questions.

19 RE CROSS-EXAMINATION

20 BY MR. COMBS:

21 Q. First, Dr. Levinskas, I'd like you to take
22 a look at 125 which I introduced earlier. What I'm
23 interested in, at the top it says, "Toxicology Monthly
24 Summary." Was it the practice from 1975 to keep
25 departmental monthly summaries for the toxicology

1 session?

2 A. I wrote a sectional summary which was then
3 used to prepare a departmental summary. How they were
4 kept or how long they were kept I do not know.

5 Q. But did you do that on a monthly basis?

6 A. Yes.

7 Q. And do you know where those records are
8 kept today?

9 A. I do not know if they are kept or where
10 they are kept.

11 Q. I showed you two other documents which you
12 may want to look at, 123 and 124, about a transformer
13 failure regarding Northern Indiana Public Service
14 Company. Were there any other transformer failures in
15 the 1970s that you are aware of that involve PCBs,
16 Askarel?

17 A. I do not remember.

18 Q. Last, do you know if there are any
19 individual in your section, the toxicology assessment
20 section, that was either a member or participated in
21 several trade groups, and I'll give the names to you
22 and you can tell me yes or no if you know; the
23 Institute of Electrical and Electronic Engineers?

24 A. No.

25 Q. The American Society for Testing Materials?

1 A. I was a member of one of their biology
2 subcommittees for a period of time.

3 Q. And did that committee deal with PCB
4 Aroclors at all?

5 A. No, not during my time in the committee.

6 Q. And how about the American National
7 Standards Institute?

8 A. No.

9 Q. The National Electric Manufacturers
10 Association?

11 A. No.

12 Q. The American Public Power Association?

13 A. No.

14 Q. Last couple questions. Was there any
15 criteria for deciding whether existing products should
16 undergo additional toxicity assessment or evaluation?

17 A. No formal procedure.

18 Q. I believe you mentioned earlier that if
19 existing products were to be used, it might undergo
20 that?

21 A. It would, yes.

22 Q. You said there was no formal criteria. Was
23 there some sort of informal criteria?

24 A. I think one continually reflects and thinks
25 and tries to determine whether additional work should

1 be done.

2 Q. And at no time that you're aware of there
3 was sufficient questions to have PCB Aroclors undergo
4 any additional toxicity assessments?

5 A. We did monkey studies much later because we
6 felt that issue should be addressed.

7 Q. I sort of missed the key part of the
8 question, it should have been with -- it was your
9 opinion at least that no additional toxicity studies or
10 assessment need be done with PCB Aroclors with respect
11 to their combustion, is that correct?

12 A. The combustion issue was not of particular
13 concern to me.

14 Q. And because of that, in your opinion it
15 didn't warrant any further toxicity studies?

16 A. It never was broached to me and I never
17 broached it or raised it as a subject.

18 MR. COMBS: That's it, thank you.

19 MR. DICUM: I'd like to mark a document that was
20 mentioned by Dr. Levinskas yesterday.

21 MR. KEARNS: Go ahead and mark it. You don't
22 need the witness for that.

23 MR. DICUM: I want to make sure this is the one
24 he talked about.

25 (Plaintiff's Exhibit 138 marked for

1 identification.)

2 FURTHER REDIRECT EXAMINATION

3 BY MR. DICUM:

4 Q. Doctor, look at this and tell me if this is
5 the protocol on the albino rat study that was discussed
6 at a certain point yesterday with Aroclor 1242s.

7 A. This is labeled "Protocol." It says,
8 "Outline of Investigation." I do not know whether this
9 is the one we talked about yesterday or whether it's
10 the one that was used for the studies or not.

11 MR. DICUM: Okay. It's dated September '68 which
12 would be about a year before the actual study started.

13 Q. Did you ever see the protocol during the
14 course of your investigation that we saw yesterday?

15 A. I do not remember.

16 MR. DICUM: Okay. That's it.

17 MR. FONTANA: I'm not done.

18 MR. KEARNS: What do you mean you're not done?

19 MR. FONTANA: I haven't even started. I'm
20 serious. I want to mark a document for the record
21 before this deposition is concluded. You may recall
22 that during the examination of Dr. Levinskas two
23 days ago, Mr. Dicum asked the doctor at some length
24 about an exhibit which was marked as Monsanto Number
25 74. He omitted from that document various other

1 records which were produced in that sequence which
2 apparently relate to that document including two which
3 I'm about to mark for identification. At that time --

4 MR. DICUM: I'm going to object.

5 MR. FONTANA: You may object. At that time I
6 made a request of Mr. Dicum that he provide us with
7 copies of the remainder of the documents which had been
8 omitted from the sequence and I've yet to have a
9 response to that. I'll ask you now, do you intend to
10 give us copies of those documents?

11 MR. DICUM: I don't believe they were relevant
12 to the questions that I asked and I don't believe these
13 documents that you obtained which were actually
14 inadvertent, they weren't in the copy given the court
15 reporter, was relevant to the questions. I was asking
16 about raw data. I was only asking questions about raw
17 data not determination at that point.

18 MR. FONTANA: What is the response as to whether
19 or not you'll provide us with copies of documents in
20 that sequence?

21 MR. DICUM: No.

22 MR. FONTANA: You're refusing?

23 MR. DICUM: I wasn't asking questions about that
24 and I don't think I've been asked by discovery to do
25 that and if you wish to, you can do so.

1 MR. FONTANA: I'd ask the reporter to mark as the
2 next in order Levinskas deposition documents which are
3 numbered in sequence 383 and 384 which were included
4 within the copy of Plaintiff's Exhibit Number 74 which
5 were provided to counsel at the time.

6 MR. DICUM: And I'd like the reporter to note my
7 objection to the marking of these documents. They were
8 produced inadvertently. They do not seem to me to
9 relate nor is there any logic within those IBT
10 documents from what I've seen indicating that they were
11 in any way part of that sequence.

12 Specifically I would say that those two
13 documents which were provided were in no sense stapled
14 in anything that we have obtained. They were simply
15 there in a loose file. There are many duplicate copies
16 of various things in the file and I don't think -- it
17 doesn't appear to me they are relevant to what I was
18 trying to ask yesterday.

19 MR. KEARNS: Go ahead and mark them.

20 (Plaintiff's Exhibit 139 marked for
21 identification.)

22 THE COURT REPORTER: Same stipulation on
23 signature?

24 MR. KEARNS: Yes.

25 (Whereupon by agreement of all the parties, the

1 signature of the witness is not hereby waived.)
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25

CERTIFIED COURT REPORTERS

1 I, George J. Levinskas, do hereby state that
2 I have read the foregoing questions and answers
3 appearing in this transcript of my deposition Page 4
4 through and including Page 420; that this is a true and
5 accurate (corrected) report of said answers given in
6 response to the questions appearing herein.

7

8

9

George J. Levinskas

10

11

12

13

CERTIFICATE

14

15 STATE OF MISSOURI)
16) SS
COUNTY OF ST. LOUIS)

17 Before me personally appeared George J.
18 Levinskas, to me known to be the person described
19 in and who executed the foregoing instrument and
20 acknowledge to and before me that he executed the said
instrument in the capacity and for the purpose therein
expressed.

20

21 WITNESS my hand and official seal this _____
day of _____, 1987.

22

23

NOTARY PUBLIC

24 My Commission expires:

25

CERTIFIED COURT REPORTERS

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

NOTARIAL CERTIFICATE

STATE OF MISSOURI)
) SS
CITY AND COUNTY OF ST. LOUIS)

I, CAROLYN S. HOWSER, a Certified Court Reporter and Notary Public in and for the State of Missouri do certify that pursuant to the foregoing stipulation, taken at the Holiday Inn, 7730 Bonhomme Avenue, Room 407, in the County of St. Louis, State of Missouri,

GEORGE J. LEVINSKAS

came before me, was by me duly sworn to testify the whole truth of his knowledge of the matters in controversy aforesaid, was examined and his examination then written in stenotypy by me, and afterwards typed, and signed, as hereinbefore set out, on the day in that behalf aforesaid, and said deposition is herewith returned.

I further certify that I am not counsel, attorney, or relative of either party, or clerk or stenographer of either party, or of the attorney of either party, or otherwise interested in the event of this suit.

GIVEN under my hand and notarial seal at my office in the County of St. Louis, State of Missouri, on the _____ day of _____, 1987.

My Commission Expires: January 22, 1988.

Carolyn S. Howser,
Notary Public in and for the
State of Missouri