

CECIL SCOTT, ET AL]
v.] No. B-84-1103-CA
MONSANTO COMPANY]

WATER_PCB-SD0000012390

APPEARANCES

- For the Plaintiffs:

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For the Defendant:

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Also Present:

Barbara West
Sue Morgan - Video Operator

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Deposition of Dr. George Levinskas, taken on
May 28, 1987, at 1300 Post Oak Boulevard, Houston,
Texas, between the hours of 9:00 a.m. and 2:00 p.m.
before Wanda G. Kuhn, CSR No. 2007 and Notary Public in
and for the State of Texas.

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1 VIDEO OPERATOR: This is the
2 continuing deposition of Dr. George
3 Levinskas. Today's date is May 28th,
4 1987, and the time is approximately 9:15
5 a.m. We are ready to begin the
6 deposition.

7 MR. ANDREWS: Mr. Pohl, before we get
8 started this morning, I'd like to hand you
9 a document that Dr. Levinskas referenced
10 in his deposition yesterday. You asked me
11 if Monsanto would produce it. I've gone
12 back to our files, and I have the document
13 that he made reference to. And our files
14 indicate that this document has already
15 been produced to you probably in March or
16 April of this year. Nevertheless, I'll be
17 happy to hand you another copy, in case
18 you've misplaced yours.

19 MR. POHL: Sure. Thank you very
20 much. I appreciate it.

21 Q. (By Mr. Pohl) Dr. Levinskas, before we
22 commence the balance of the questions that I'm going to
23 ask you, let me remind you that this is a continuation
24 of your deposition from yesterday and that you're still
25 under oath and sworn to tell the truth. Do you

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1 understand that?

2 A. Yes.

3 Q. Okay. Also, can you and I have the same
4 agreements that we made when we started your deposition
5 yesterday?

6 A. Yes.

7 Q. Thank you.

8 Let me hand you now Exhibit 38 to your
9 deposition and ask you to review that document.

10 Have you had an opportunity to review the
11 document?

12 A. Yes.

13 Q. Do you recognize it?

14 A. Yes.

15 Q. Do you also recognize your signature in the
16 lower left-hand corner?

17 A. Yes.

18 Q. And you signed Exhibit 38 to your deposition on
19 or about July 16, 1976?

20 A. Yes.

21 Q. And this is an evaluation of a Monsanto
22 employee named Paul L. Wright, is it not?

23 A. Yes.

24 Q. And his position at the time of the evaluation
25 was toxicology manager?

1 A. Yes.

2 Q. And the date of the last increase, in the upper
3 right-hand corner, says 2/1/76. What does that mean?

4 A. That is the date on which he received his last
5 salary increase.

6 Q. So he had received a salary increase on
7 February 1 of 1976, and then was being re-evaluated by
8 you as of July 16, 1976; is that correct?

9 A. Yes.

10 Q. Approximately six months later?

11 A. Yes.

12 Q. Okay. And as a consequence of the evaluation,
13 an award was authorized, was it not?

14 A. Yes.

15 Q. And it appears to me that the amount was
16 \$1,000; is that correct?

17 A. Yes.

18 Q. Okay. And the reason that Dr. Wright was
19 presented this award of \$1,000 were for the matters
20 which you described in the body of Levinskas Exhibit 38.
21 Is that true?

22 A. Yes.

23 Q. And did you write out or instruct your
24 secretary to type out the substance of Levinskas Exhibit
25 38 on or about July 16, 1976?

1 A. Yes.

2 -Q. And did you understand that that document, once
3 you had prepared it, would find its way to Dr. Wright's
4 personnel file that was maintained by Monsanto?

5 A. It was prepared to make a recommendation for an
6 award to Dr. Wright. Its subsequent disposition and
7 retention, I do not know.

8 Q. And Levinskas Exhibit 37 reflects an award in
9 the amount of \$2,500 to Dr. Wright, does it not?

10 A. Yes.

11 Q. And the date that you prepared that document-is
12 September 16, 1975?

13 A. Yes.

14 Q. So on September 16, 1975, Dr. Wright received a
15 \$2,500 award, merit award; is that correct?

16 A. Yes.

17 Q. And then he received a pay increase on February
18 1, 1976; correct?

19 A. Yes.

20 -Q. And then he received another award, per your
21 recommendation, on or about July of 1976?

22 A. Yes.

23 Q. And that award was in the amount of \$1,000?

24 A. Yes.

25 Q. And the reasons that you wanted Dr. Wright to

1 have these merit awards are the reasons which you set
2 forth in your written recommendations?

3 - A. Yes.

4 Q. Okay. With regard to the 1976 merit award of
5 \$1,000, would you read for me and to the Court and jury
6 the middle portion of Paragraph 2 of your
7 recommendation, the part that I've highlighted in yellow
8 for the purposes of this deposition, that commences "In
9 the"?

10 A. "In the -- biphenyls (Aroclors) and chlorinated
11 isocyanurates (ACL products). In the former instance,
12 his excellent analysis and synthesis of widely scattered
13 observations played a prominent role in forestalling
14 EPA's promulgation of unrealistic regulations to limit
15 discharges of polychlorinated biphenyls. EPA's proposed
16 regulations would have precluded the use of these
17 materials by Monsanto's customers."

18 Q. Thank you, Doctor.

19 Now, you speak in your evaluation of Dr. Wright
20 in your recommendation of him for a merit award, that he
21 forestalled EPA's promulgation of unrealistic
22 regulations. Is that what you just read to the Court
23 and jury?

24 A. Yes.

25 Q. What unrealistic regulations of the EPA was

1 Dr. Wright successful in forestalling?

2 A. There was talk of a zero discharge.

3 Q. What is a zero discharge?

4 A. None could be permitted.

5 Q. To escape into the environment?

6 A. Yes.

7 Q. Okay. And that was unrealistic, in your
8 opinion?

9 A. Yes.

10 Q. And that's how you characterized it in your
11 memorandum marked Levinskas Exhibit 38?

12 A. Yes.

13 Q. And when you say that Dr. Wright was successful
14 in forestalling the EPA's prohibition about the
15 discharge of any PCBs into the environment, do you mean
16 by that that he was ultimately able to prevent such
17 regulation by the EPA, or that he was simply able to
18 delay the implementation of such a regulation?

19 A. It permitted time for review of the situation
20 so EPA could issue realistic regulations.

21 Q. All right. And who was the one that charged
22 Dr. Wright with the responsibility of forestalling EPA's
23 promulgation of regulations preventing any discharge of
24 PCBs into the environment?

25 A. He was not charged with forestalling.

1 Q. Was he reporting to you at the time that he
2 undertook these activities on behalf of Monsanto?

3 A. Yes.

4 Q. All right. And did he undertake these
5 activities strictly on his own volition, or did you give
6 him guidance in what he was to do?

7 A. He presented the information to the agency.
8 With other considerations and that information, the
9 agency took its action. So that Dr. -- the outcome of
10 Dr. Wright's action was a forestalling. It was not his
11 charge to forestall.

12 Q. It was the result that he was able to achieve,
13 as noted by you in your recommendation of him for a
14 merit award; correct?

15 A. That's correct.

16 Q. Okay. And what I was driving at in my
17 question, Dr. Levinskas, was: Is this a task that he
18 undertook on his own volition, or is this an assignment
19 that he got from you or somebody else in the medical
20 department at Monsanto?

21 A. He was asked to summarize the available
22 information on PCBs for presentation to EPA in response,
23 I believe, to a public request by EPA for information on
24 PCBs.

25 Q. Why did you note, in your written

1 recommendations of Dr. Wright for a merit award, that,
2 quote, "EPA's proposed regulations would have precluded
3 the use of these materials by Monsanto's customers,"
4 close quote? Again, referring to Aroclors.

5 A. I have indicated earlier that a zero discharge
6 is impractical for the use of any products.

7 Q. Well, I understand. And you were making the
8 point that if the EPA had implemented the regulation
9 which Dr. Wright was able to forestall, then the
10 customers of Monsanto wouldn't have been able to
11 continue their use of PCBs or the discharge of any of-
12 those PCBs into the environment; is that correct?

13 A. That's correct.

14 Q. Okay. And after you made your recommendation
15 of Dr. Wright for a merit award for forestalling EPA's
16 promulgation of unrealistic regulations, did you submit
17 your recommendation to anyone else in the hierarchy of
18 Monsanto for approval?

19 A. Your question is not clear.

20 Q. Okay. After you made your recommendation that
21 Dr. Wright receive a merit award for forestalling EPA's
22 promulgation of unrealistic regulations, did someone
23 else at Monsanto have to approve such recommendation?

24 A. Yes.

25 Q. Who?

1 A. May I look at the document?

2 -Q. Certainly.

3 -A. It's indicated as being approved by George
4 Roush, Jr., M.D.

5 Q. Was he head of your department at the time of
6 that approval?

7 A. He was.

8 Q. When you recommended that Dr. Wright receive a
9 \$2,500 merit award for forestalling precipitous action
10 against maleic anhydride by the FDA, who, if anyone, had
11 to approve your recommendation at Monsanto? -

12 A. The same individual, Dr. George Roush. >

13 Q. And in both cases, the 1976 merit award and the
14 1975 merit award, did Dr. Roush approve your
15 recommendation as written?

16 A. Yes.

17 Q. Okay. Would he have the authority to do -- to
18 approve your recommendations of a merit award for
19 someone like Dr. Wright on his own, or would he have to
20 consult with someone higher in the company?

21 A. I do not know the subsequent disposition of
22 those awards, once they go to the medical director.

23 Q. Why was Dr. Wright terminated by Monsanto? >

24 A. I do not know.

25 Q. Okay. One of the things that are the areas of

1 inquiry that we wrote in our document that we were going
2 to cover in the deposition was the matters pertinent to
3 the termination of Dr. Wright's employment. Is it your
4 testimony that whatever facts pertaining to the
5 termination of Dr. Wright's employment, you don't know
6 what they are?

7 A. I do not know.

8 Q. Now, there were some documents that were sent
9 by Monsanto to the U. S. Government with regard to
10 Dr. Wright's consideration for probation and for parole. }
11 Who would have been the person in Monsanto who would -
12 have been responsible for completing those documents,
13 reviewing the personnel file, to gather the records and
14 information, and returning them to the government?

15 A. I do not know.

16 Q. Okay.

17 There is a statement made on one of the
18 documents produced by your employer in this case from
19 its business records which indicates that Dr. Wright was
20 terminated for, quote, "engaging in activities }
21 detrimental to Monsanto's interests," close quote.

22 Do you know what those activities are?

23 A. I have no knowledge of those.

24 Q. Okay. None of them occurred while Dr. Wright
25 was reporting to you, at least in your opinion?

1 A. I am not aware of them.

2 Q. Okay. You didn't report them to management of
3 Monsanto, did you?

4 A. I did not.

5 Q. Who is R. -- whose signature is on the lower
6 left of the document I'm handing you now?

7 A. I believe that's Robert E. Shirley. }

8 Q. Who is he?

9 A. His indicated title is manager of personnel.

10 Q. Okay. Is he still employed by Monsanto?

11 A. I believe he is. -

12 Q. Okay. What does he do now?

13 A. I believe a similar position.

14 Q. Okay. So Mr. Shirley was manager of personnel
15 at Monsanto both at the time of Dr. Wright's termination
16 and today?

17 A. Presumably so.

18 Q. Okay. In your opinion, would he have been the
19 one charged with the responsibility of communicating to
20 the government, for example, matters concerning the
21 termination of Dr. Wright's employment by Monsanto?

22 A. In my opinion, he would have knowledge of
23 such -- could have knowledge of such information and
24 could well be the person. >

25 MR. POHL: Let's mark this as an

1 exhibit anyway.

2 (EXHIBIT NO. 39 MARKED)

3 - Q. (By Mr. Pohl) For the record, Dr. Levinskas,
4 I'm just going to show you what I've marked as Levinskas
5 39, and just note that it's Document 058741. You don't
6 have to do anything with it. I'm just making it part of
7 the record for the deposition.

8 I want to follow up briefly on a few of the
9 matters we discussed in your deposition yesterday, and I
10 want to take the opportunity to get some time to read
11 this report that your lawyer just handed me. And maybe
12 I'll do that when we take a morning break or, if you ask
13 very many questions, at lunch, and ask you a few
14 questions after I've read it.

15 MR. ANDREWS: Well, I want to be
16 clear that that document has been produced
17 to you people before. It's apparently
18 been misplaced, and I've given you another
19 copy. We've been here for over a day with
20 this gentleman. I suspect it's
21 understandable it might have been
22 misplaced. I think we've given you
23 something over 60,000 documents. But I'm
24 not sure that it's fair for you to take up
25 this witness's time reading that document

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1 and formulating additional questions, if
2 -- it's been in your possession or should
3 - have been in your possession or it's been
4 misplaced by you.

5 MR. POHL: Well, you may not want to
6 ask him any questions, and I may not ask
7 any redirect questions. If you don't ask
8 any questions, I probably won't ask any.

9 Q. (By Mr. Pohl) Now, you talked to us yesterday
10 about the validation that you did for Monsanto of IBT's
11 Aroclor studies. Do you recall that testimony?

12 A. Yes.

13 Q. One of the statements that my notes reflect you
14 made was that the only reason for the validation is
15 because IBT had gone out of business. Is that correct?

16 A. That is -- that is a reason, yes.

17 Q. Okay. What were the other reasons?

18 A. The other was to summarize the IBT data in a
19 form that could be referenced in the review document
20 which Mr. Andrews gave you this morning.

21 Q. And if the IBT reports were valid, you could
22 just use them as written in writing your 40- or 50-page
23 paper on PCBs, couldn't you?

24 A. Yes.

25 Q. Okay. That's the second of the two reasons you

1 gave, correct?

2 A. Yes.

3 Q. Okay. Now, the first reason, then, was that
4 you needed to validate the IBT studies because IBT had
5 gone out of business; correct?

6 A. Yes.

7 Q. Okay. Now, what did IBT's going out of
8 business have to do with the validity of reports that
9 had been concluded by IBT before they went out of
10 business?

11 A. In the latter Seventies -- and don't hold me to
12 precise time intervals -- questions were raised about
13 the validity of IBT studies. And subsequently, IBT
14 ceased being a laboratory. We were requested by the
15 government to review certain studies; and, therefore, we
16 obtained the records to see if we could validate those
17 studies.

18 MR. POHL: Let's go off the record
19 while the court reporter changes her tape.

20 VIDEO OPERATOR: We're off the
21 record.

22 (BRIEF RECESS)

23 VIDEO OPERATOR: We've been off the
24 record for a brief moment. We're back on
25 the record.

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1 Q. (By Mr. Pohl) Dr. Levinskas, how did you know
2 that the government had questioned IBT's Aroclor study
3 results?

4 A. By a letter from them -- stop a minute. I'm
5 sorry. I answered before I heard the question or
6 reflected on it. We have never heard from the
7 government that they have questioned the IBT Aroclor
8 studies.

9 Q. Who did you get the letter from that you made
10 reference to?

11 A. This was with respect to study -- other
12 products than Aroclors. We have never had a question
13 raised about the validity of the IBT Aroclor studies by
14 any regulatory agency.

15 Q. Okay. Did you receive a copy of a list from
16 the EPA of those Aroclor studies -- I'm sorry -- of
17 those IBT studies which it considered invalid?

18 A. It had not reached the conclusion of validity;
19 it made inquiries about certain studies.

20 Q. Okay. Maybe my question was inartfully worded.
21 Did you receive a list from the government of IBT
22 studies which it questioned?

23 A. Monsanto received such a list which was passed
24 on to me.

25 Q. Okay. And what was it about that list that was

1 an impetus for you to perform a study of or review of
2 the Aroclor tests that had been done by IBT?

3 - A. That letter had no impact with respect to
4 initiating a study of -- review of the Aroclor studies.

5 Q. Okay. Would it be fair to say that the EPA
6 questioned a significant number of the IBT studies that
7 had been conducted for Monsanto?

8 A. No.

9 Q. Okay. And your recollection is and your
10 testimony in the case is that the EPA did not question
11 the validity of the Aroclor studies done by IBT for
12 Monsanto?

13 A. That's correct.

14 Q. Okay.

15 Now, in connection with the validation that you
16 attempted with regard to IBT's Aroclor study, how long a
17 process was that?

18 A. I undertook and completed. It probably took
19 several days, though at this time I cannot precisely
20 recall the time.

21 Q. Would it have been a week or less?

22 A. I said several days. I would think something
23 close to or more than a week.

24 Q. And is that full-time work?

25 A. Yes.

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1 Q. Eight hours a day?

2 A. More than eight.

3 Q. Okay. Weekends?

4 A. Yes.

5 Q. Okay. So you took several days of full-time
6 work, plus possibly some overtime work, to validate
7 IBT's Aroclor studies; is that correct?

8 A. Yes.

9 Q. Okay. Who assisted you in that endeavor?

10 A. I did it myself.

11 Q. Okay. Now, in conducting your review and
12 validation of IBT's Aroclor studies, did you go to the
13 facilities of IBT and visit their offices?

14 A. No.

15 Q. Okay. When was the last time prior to your
16 effort to validate IBT's Aroclor studies that you had
17 been to their offices?

18 A. I cannot recall a specific time, but it could
19 have been '78, '79, '80.

20 Q. And your validation was in 1981?

21 A. Yes.

22 Q. So it had been a period of years since you had
23 last been at IBT, as best you can recall, before you
24 conducted and completed your validation of IBT's Aroclor
25 studies; is that correct?

1 A. Yes.

2 Q. Okay. And, in total, how many times have you
3 ever been to the premises of IBT to review their
4 facilities?

5 A. I can't give a precise number, but over the
6 years I may have visited their facility a dozen or so
7 times.

8 Q. Okay. Did you visit the facilities of IBT at
9 any time during the time that IBT's Aroclor studies were
10 being prepared?

11 A. I may have.

12 Q. Do you recall whether you have -- whether you
13 did or didn't?

14 A. I do not recall.

15 Q. Okay.

16 And correct me if I'm wrong, but I believe your
17 testimony yesterday was that the only present or former
18 employee of IBT that you consulted in connection with
19 your attempted validation was Dr. Donovan Gordon?

20 A. I made a request for -- of Dr. Gordon, yes.

21 Q. And did you personally contact Dr. Gordon? Did
22 you speak to him on the phone or in person?

23 A. I do not recall the means of contact.

24 Q. Okay. You don't recall at this point having
25 any personal contact with Dr. Gordon in connection with

1 your validation of IBT's Aroclor studies?

2 -A. I do not.

3 - Q. Okay. And you indicated to me yesterday, I
4 believe, that you elected not to consult with Paul
5 Wright regarding your attempted validation of IBT's
6 Aroclor studies; is that correct?

7 A. I undertook this as a personal assignment. It
8 never occurred to me to consult with or to employ anyone
9 else.

10 Q. Okay. And so the answer to my question is you
11 did not consult with Paul Wright, even though he was an
12 employee of Monsanto at the time, in connection with
13 your attempted validation of IBT's Aroclor studies; is
14 that correct?

15 A. Yes. I've indicated I have not consulted with
16 anybody.

17 Q. Now, at the time that you attempted your
18 validation of IBT's Aroclor studies in 1981, did you
19 know -- did you have any personal knowledge of the
20 housing conditions of the rodents used in those studies
21 at the time that the studies were occurring?

22 A. No personal knowledge, other than what I had
23 seen on earlier visits to the laboratory.

24 Q. What had you seen on your personal visits to
25 the laboratories?

1 A. It appeared to be an acceptable laboratory run
2 according to standards of other laboratories I knew of.

3 - Q. All right. So your position is that in your
4 dozen or so visits to IBT, it was operated in accordance
5 with industry standards?

6 A. I did not visit the laboratories on each time I
7 went to IBT. On those occasions when I did visit, I
8 would say it complied with acceptable standards. }

9 Q. And did you notify IBT before you arrived on
10 each of your visits?

11 A. Yes.

12 Q. Okay. So you had made an appointment to see
13 IBT, and then you arrived to conduct your visit of their
14 facilities; is that correct?

15 A. Yes.

16 Q. Of the dozen -- approximately dozen times that
17 you went to the offices of IBT, how many times had you
18 actually toured their facilities?

19 A. I've indicated early, I do not recall.

20 - Q. But not the total number of times that you went
21 to the facilities?

22 A. That's correct.

23 Q. So your best recollection today is you went to
24 IBT about a dozen times, and you toured the facilities
25 for less than all the number of times that you arrived

1 at their place of business?

2 A. Yes.

3 Q. Okay. And based upon the number of times that
4 you toured the facilities of IBT, your conclusion was,
5 and your opinion is today, that those facilities were
6 operated in accordance with industry standards?

7 A. Yes.

8 Q. Okay. And I believe you indicated yesterday
9 that, in your opinion, the results of IBT's work on
10 Aroclor products was reliable then; is reliable now?

11 A. Yes.

12 Q. Okay. And I take it in your tour of IBT's
13 facilities, you found nothing unusual or out of the
14 ordinary about the subtleties of the way that IBT
15 handled the rodents used in Monsanto's studies?

16 A. I've indicated that I thought their facilities
17 and operations were according to acceptable standards.

18 Q. Okay. And I take it from that, then, that one
19 of the factors or criterion that you gave us
20 yesterday -- that is, the subtleties of the way the
21 animals were handled -- you didn't notice anything
22 unusual or extraordinary about the way IBT handled the
23 subtleties of animal handling?

24 A. That's correct.

25 Q. Okay. And did you notice anything unusual

1 about the manner in which IBT handled the feeding of its
2 rodents?

3 - A. I did not.

4 Q. Okay. And did you notice anything unusual
5 about the manner in which IBT handled the administration
6 of the dosages of the test chemicals to its rodents?

7 A. I did not.

8 Q. Okay. And you didn't notice anything at all
9 that you can tell us about today that was unusual or
10 extraordinary about the way that IBT conducted its
11 business on the several visits that you made of their
12 facilities; is that correct?

13 A. That's correct.

14 Q. Okay. And these visits that you made to IBT's
15 facilities were within what time period?

16 A. Starting after my employment with Monsanto in
17 1971, up until, as I had indicated earlier, the late
18 Seventies or maybe as recently as 1980.

19 Q. And in touring the facilities at IBT, or in
20 your review of their documents, did you notice anything
21 unusual or extraordinary about the way that IBT kept
22 animals on a particular test?

23 A. I did not.

24 Q. Okay. And so far as you're concerned, the term
25 or duration of the animals on a test was acceptable?

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1 A. Yes.

2 Q. Okay. And if it had not been acceptable, I
3 assume that you would have been concerned that that
4 might possibly jeopardize the validity of a particular
5 study like an Aroclor study?

6 A. I made an effort to determine the facts. If
7 whatever the facts are, they would have been accepted.

8 Q. And your determination of the facts of having
9 reviewed the work that IBT did and having personally
10 gone through their facilities was that their facilities
11 were acceptable and their work was valid?

12 A. Yes.

13 Q. Okay.

14 Now, we talked yesterday for some little while,
15 did we not, Dr. Levinskas, about substituting animals
16 during the course of a study?

17 A. Yes.

18 Q. Okay. We talked generally about the efficacy
19 of that procedure?

20 A. I don't recall the specific details. And the
21 term "efficacy" seems out of place on it, to me.

22 Q. Let me -- there was a summary of your longer
23 report that you prepared in approximately October of
24 1981, wasn't there, Doctor? I believe we marked it as
25 an exhibit yesterday.

1 A. Let me see which one you're looking at. This
2 is the only -- it's the only report I can recall, that I
3 wrote.

4 Q. Can I see that? I think it's --

5 MR. POHL: I can't find it at this
6 minute, but I think we may have a
7 duplicate of this in the record from
8 yesterday. But in any event, I'll mark
9 this copy as well; and if we have a
10 duplicate, that's fine.

11 (EXHIBIT NO. 40 MARKED)

12 THE WITNESS: This is probably --
13 this one here -- this would be the same
14 report that you're looking at.

15 Q. (By Mr. Pohl) Well, we'll look on together,
16 then, because we do have two copies. Let me hand you
17 what's been marked yesterday as Levinskas 36, and I'll
18 look on what has been marked today as Levinskas Exhibit
19 40. Turn, if you would, to Page 4 which is marked as
20 Monsanto No. 058935. Do you find that page?

21 A. Yes.

22 Q. Look at the last sentence on the bottom of the
23 Page 4 which begins with the numbering sequence. Do you
24 see that?

25 A. You mean down -- yes.

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1 Q. Would you read that sentence to the Court and
2 jury, please?

3 A. "The numbering sequence and a designation of
4 some animals as, quote, 'extra,' end of quote, suggest
5 that additional animals were placed on test."

6 Q. Now, this is one of the findings that you made
7 in connection with your review of IBT's Aroclor studies;
8 correct?

9 A. Yes.

10 Q. And what you're telling us on Page 4 and 5 of
11 your report is that you found that extra animals, or
12 additional animals, had been placed on the Aroclor test
13 by IBT; is that correct?

14 A. I said that there were sections designated
15 extra which suggested that additional animals were
16 placed on tests, yes.

17 Q. All right. Even though you found evidence that
18 additional animals had been placed on the Aroclor tests
19 and you made a written report of that in Levinskas
20 Exhibits 36 and 40, you nevertheless concluded that the
21 IBT Aroclor tests were valid; is that true?

22 A. Yes.

23 Q. All right.

24 MR. POHL: If we might -- do we have
25 a large paper clip in here? Well, they

1 will get out of order again. Let's
2 just --

3 - Q. Dr. Levinskas, after you prepared your report
4 dated October 14, 1981, marked Levinskas 36, to whom did
5 you submit that report? Are they the people that are
6 listed on Page 2?

7 A. The people listed on Page 2, yes.

8 Q. And you say "Reports Library," and you list
9 three copies going to a library. What library are you
10 talking about? Actually there's -- and the next two
11 list, apparently, a different library. What libraries
12 are these?

13 A. The first three reports went to the library in
14 the research center. The second two copies went to the
15 department of medicine and environmental health library.

16 Q. And are the other people that are listed, those
17 identified as 6 through 11, employees of Monsanto?

18 A. The five with numbered and letter designations
19 are Monsanto employees. One is indicated as a Dow
20 Chemical employee.

21 Q. And why would someone at Dow Chemical Company
22 be receiving a copy of your purported validation of
23 IBT's Aroclor studies?

24 A. Because they had expressed an interest in
25 knowing about polychlorinated biphenyls.

1 Q. Did you send a copy of your report to the
2 government?

3 A. No.

4 Q. Did anyone at Monsanto send a copy of your
5 report to the government?

6 A. I do not know.

7 Q. Look at Page 5 of your report, Doctor, which is
8 Monsanto No. 058936. Does the paragraph under "Results"
9 talk about the findings of Drs. Gordon and Richter?

10 A. Yes.

11 Q. And that's -- those findings pertain not to the
12 Kimbrough study but to the Monsanto-sponsored IBT
13 Aroclor studies; is that correct?

14 A. That is correct.

15 Q. Okay. And what was found in the IBT studies
16 were benign tumors rather than malignant carcinomas.
17 Was that your -- the result of your evaluation?

18 A. That is the result of the evaluation done by
19 the pathologists.

20 Q. And reported by you in your evaluation?

21 A. Copied from their report in this summary
22 report.

23 Q. You go on to note on Page 5 of your report that
24 there were "other treatment-related lesions," correct?

25 A. Again, that is a quotation from the report made

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1 by the pathologist who reviewed the slides.

2 Q. Okay. And I'm not quarreling with you about
3 that. I mean you're just quoting, as part of your
4 evaluation, from Drs. Gordon and Richter; correct?

5 A. Correct.

6 Q. Okay.

7 And then it goes on to note that these lesions
8 were "degenerative or hyperplastic," correct?

9 A. Yes.

10 Q. Now, what is a degenerative or hyperplastic
11 lesion?

12 A. Degenerative in the ordinary sense one's
13 degenerating or breaking down. Hyperplastic is one that
14 is swelling or beginning to enlarge slightly.

15 Q. So the animals that had been tested with
16 Aroclor products at IBT were having -- had lesions in
17 their liver, some of which were breaking down and some
18 of which were expanding?

19 A. Individual cells, yes.

20 Q. All right. When you have a liver -- when you
21 have evidence in the liver of an animal fed Aroclor that
22 there are degenerative lesions or hyperplastic lesions,
23 are either one of those two a toxic effect in the
24 animal?

25 A. Yes.

1 Q. Okay. You go on to note, in quoting from
2 Drs. Gordon and Richter, that these lesions are
3 "morphologic manifestations of an adaptive response of
4 the liver associated with biotransformation of the test
5 material."

6 What does that mean to you, Doctor?

7 A. It means that a foreign chemical was in the
8 animal's body. The animal's liver was doing what it
9 should do. It was metabolizing, trying to excrete it,
10 get rid of it. As a result of that activity, the liver
11 cells were slightly enlarged, much in the way that
12 people's muscles get enlarged when they go chop wood for
13 the wintertime or when they undertake any regimen of
14 exercise.

15 Q. Okay. So what is being reported here is that
16 the animals' livers were attempting to excrete from
17 their bodies the Aroclor which they had been fed, and
18 the result was degenerative or hyperplastic lesions of
19 the liver. Is that correct?

20 A. Correct.

21 Q. And that was a toxic effect in the rats to whom
22 Aroclor had been administered, correct?

23 A. Correct.

24 Q. Okay. And that is, in a nutshell, the findings
25 of IBT on the rats that had been exposed to these

1 Aroclor products; is that correct?

2 A. Correct. Consistent with findings for the
3 chlorinated hydrocarbons, that they affect the livers of
4 animals when fed in high dosages.

5 Q. Okay. And the results of Dr. Kimbrough were
6 more pronounced than these results which we've briefly
7 summarized, correct?

8 A. Yes.

9 Q. Dr. Kimbrough found not only tumors, but she
10 found that there were cancers being caused in the strain
11 of rats to which she had fed Aroclor products; is that
12 correct?

13 A. She reported carcinomas in her study, yes.

14 Q. And then you had Dr. Pour look at
15 Dr. Kimbrough's findings, correct?

16 A. Yes.

17 Q. And Dr. Pour looked at Dr. Kimbrough's findings
18 of cancer in rats after you had requested Drs. Richter
19 and Ward to look at Dr. Kimbrough's slides, correct?

20 A. I don't recall a specific time sequence, but it
21 probably was after.

22 Q. Okay. Now, on Page 6 of your report, do you
23 summarize what Dr. Pour found?

24 A. No.

25 Q. Well, let me just read you --

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1 A. I'm sorry. I missed it.

2 Q. Sure. It's right here.

3 -A. Yes. It does say -- the statement is made of
4 Pour's conclusions in review of those slides, yes.

5 Q. Now, let me focus, then, with you on Page 6 of
6 your report. You start off under the heading
7 "Discussion" --

8 A. Yes.

9 Q. -- with the first sentence. Would you read to
10 the Court the first sentence of your section under the
11 word -- under the heading "Discussion"?

12 A. "The initial reports of these studies concluded
13 that the target organ was the liver for each Aroclor
14 product."

15 Q. All right. And that was by Drs. Gordon and
16 Richter as well, correct?

17 A. Yes.

18 Q. Okay. And then you go down to the second
19 paragraph under your heading "Discussion," and you talk
20 about what Dr. Pour concluded in 1975, correct?

21 A. Yes.

22 Q. Now, first of all, Dr. Pour did not conclude
23 that the Aroclor products caused cancer in the livers of
24 the rats; is that correct?

25 A. Neither Dr. Pour nor Drs. Gordon or Richter

1 reached a conclusion of carcinomas in these studies.

2 Q. Okay. And in connection with the Kimbrough
3 study, Dr. Pour didn't conclude that those rats showed
4 evidence of carcinoma, did he?

5 A. That's correct.

6 Q. Okay. Now, but Dr. Pour did conclude that
7 there was a, nevertheless, a toxic effect from exposure
8 of the test animals to Aroclor products, even on the IBT
9 tests; correct?

10 A. Yes.

11 Q. All right. And he found, among other things, a
12 dose-dependent hepatotoxic effect, correct?

13 A. Yes.

14 Q. Characterized by degenerative and regenerative
15 process; is that correct?

16 A. Yes.

17 Q. Now, tell the Court and jury, Doctor, in
18 layman's terms, what it means when Dr. Pour finds a
19 hepatotoxic effect in rats that have been fed Monsanto's
20 Aroclor products.

21 A. Except for variations in wording, the quotation
22 taken from Dr. Pour's report is essentially the same or
23 it's in agreement with the earlier comments that you had
24 me read into the record from the reports of Gordon and
25 Richter.

1 Q. So in other words --

2 A. Both sets of individuals are essentially in
3 agreement on their findings.

4 Q. Okay. And I'm sorry that I interrupted. I
5 thought you were through when you paused. I apologize.

6 So what you're telling us then, Doctor, is that
7 even though Dr. Pour did not find evidences of cancer in
8 the IBT test results, he nevertheless found lesions in
9 the livers of the rats to whom Aroclor had been fed;
10 correct?

11 A. That's correct.

12 Q. And he calls those lesions that he found
13 dose-dependent hepatotoxic?

14 A. Yes.

15 Q. He goes on to state in the next sentence, if
16 you would look on, Doctor, he says "Structures similar
17 to cholangiocarcinomas and hepatomas were found in one
18 rat." Do you see that?

19 A. Yes.

20 Q. How do you produce the first word that I
21 couldn't pronounce there?

22 A. Cholangiocarcinoma.

23 Q. Okay. Would you tell the Court and jury what
24 Dr. Pour is referring to and what you are referring to
25 in your report by the use of that terminology?

1 A. A cholangiocarcinoma, as I recall, is a tumor
2 of the bile duct, or the bile structures. And the
3 hepatoma is a benign tumor that we have discussed in
4 these studies previously.

5 Q. So when Dr. Pour notes on his review of the IBT
6 test studies that he found a hepatoma and a
7 cholangiocarcinoma, would it be fair to characterize the
8 use of both of those separate terms as a finding of a
9 toxic effect resulting from the exposure to the Aroclor
10 product?

11 A. Yes.

12 Q. Okay. And one is in connection with the liver,
13 and another is in connection with the bile ducts?

14 A. Yes.

15 Q. Okay. Now, you go on to note, in the same
16 paragraph on Page 6 of your report, the finding of a
17 mammary gland carcinoma. What is that, Doctor?

18 A. I'm sorry. I haven't found that yet.

19 Q. Mammary gland carcinoma. Page 6, Doctor.

20 A. Sorry. I went back to the other page looking.

21 Q. And my question to you is: Would you tell the
22 Court and jury what a mammary gland carcinoma is?

23 A. What Dr. Pour reported, the presence of a
24 carcinoma in the mammary gland of an animal which he
25 believes is a metastatic tumor; namely, a portion -- the

1 origin of that mammary gland carcinoma was from a
2 different organ.

3 -Q. But what is a mammary gland carcinoma, if you
4 would tell the Court and jury?

5 A. It's a carcinoma of the mammary glands, of the
6 breast.

7 Q. Okay. So it is -- was this a female or a male
8 rat, or does it make any difference?

9 A. I could not tell without checking the animal
10 number.

11 Q. Okay. But in any event, it was a cancer of a
12 breast gland in a rat; is that correct?

13 A. Yes.

14 Q. All right. And this was one of the rats on the
15 IBT study that had been fed Monsanto's Aroclor product,
16 correct?

17 A. Fed high level, 100 parts per million of
18 Aroclor 1254, yes.

19 Q. So, in this one paragraph of your report we're
20 looking at lesions of the liver, a carcinoma of the bile
21 duct, and carcinoma of a breast or mammary gland,
22 correct?

23 A. Yes.

24 Q. Okay. All of these effects are toxic effects,
25 are they not?

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1 A. Those are abnormalities. If causation was
2 attributed or connected with the Aroclor, they would be
3 considered toxic effects. If they were spontaneous in
4 origin they would be considered natural occurrences.

5 Q. And maybe you want to use the word abnormal
6 effects, and that's fine with me, too. When you find
7 lesions and cancers in the organs of an animal, that can
8 be accurately characterized as an abnormal effect; is
9 that correct?

10 A. The lesion would be considered abnormal. The
11 attribution -- or attributing it to or finding a cause
12 for it as related to the compound would take more than
13 just the mere presence or discovery of a lesion.

14 Q. Okay.

15 If you would, Doctor, turn to Page 7 of your
16 report. That's captioned "Summary and Conclusions." Do
17 you see that?

18 A. Yes.

19 Q. And in the next to the last sentence you state
20 the following, and correct me if I read this wrong: "At
21 the 24-month sacrifice, livers of animals from all dose
22 levels of the three Aroclor products had an increased
23 incidence of vacuolar change and focal hypertrophy,"
24 correct?

25 A. Yes.

1 Q. "Livers of some animals fed 100 ppm of each
2 Aroclor also had benign liver tumors," correct?

3 -A. Yes.

4 Q. Okay. With regard to the first sentence from
5 the summary of your report that I quoted into the
6 record, what do you mean by "increased incidence of
7 vacuolar change and focal hypertrophy"?

8 A. The vacuol are -- within the cells of the liver
9 there are structures referred to as vacuols. And the
10 pathologists have described changes in those.

11 The focal hypertrophy, the term hypertrophy we
12 talked about earlier would be a swelling or enlargement
13 of the cells. And since it's focal in nature, it occurs
14 scattered throughout the tissue. It does not refer to
15 the tissue in its entirety.

16 Q. And would your summary of an increased
17 incidence in vacuolar changes and of focal hypertrophy
18 be what you've characterized as an abnormal effect in
19 the test animal?

20 -A. Let me reflect a moment.

21 If induced by the chemical, it would be
22 considered abnormal. It could also be a response to a
23 diseased condition or some other factor.

24 Q. You go on to note in your Summary and
25 Conclusions that livers of some of the animals showed

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1 benign tumors; is that correct?

2 A. Yes.

3 - Q. Are those the same tumors that we talked about
4 earlier that you said were a toxic effect?

5 A. Yes.

6 Q. Okay. And those are the tumors in the livers
7 of the IBT rats fed Aroclor products as opposed to an
8 examination of livers of the Renate Kimbrough rats that
9 were fed Aroclor products, correct?

10 A. Since this is a summary of the IBT studies, it
11 refers only to the IBT work. It does not include
12 Kimbrough's work.

13 Q. In preparing this summary which has been marked
14 as Exhibit 36 and Exhibit 40 to your deposition, you did
15 not, then, attempt to reconcile IBT's findings with
16 those of any other researcher; is that correct?

17 A. That is correct.

18 Q. Okay. Have you ever attempted to do so?

19 A. I have attempted to do so in the document which
20 Mr. Andrews handed you just earlier.

21 Q. In preparing for your deposition, Doctor, did
22 you have the opportunity to read anyone else's
23 deposition or a summary or excerpt thereof?

24 A. I have not seen anybody else's deposition.

25 Q. Or any parts thereof?

1 A. Or parts thereof.

2 Q. In reviewing the literature which you said that
3 you made a study of, did you include in your review the
4 European literature?

5 A. Yes.

6 Q. Okay.

7 A. Worldwide, I might add.

8 Q. You made a -- okay. So you made a worldwide
9 review of the literature to determine the environmental
10 or human health hazard effects of PCBs, correct?

11 A. We used all of the -- not all, but we used
12 several of the computerized data bases to assess,
13 insofar as possible, the published literature of the
14 world and other information we could find.

15 Q. And when did you do this?

16 A. Starting early in 1971.

17 Q. All right. So Monsanto had, through you, a
18 source where the worldwide literature on PCBs was being
19 accumulated, digested, and analyzed?

20 A. With respect to the biological effects of PCBs,
21 yes.

22 Q. Okay. Well, did some of the same papers that
23 talked about environmental effects, for example, also
24 talk about human health hazards?

25 A. Generally they do not. They either talk -- one

1 may reference the other, but most of the papers deal
2 either with human health effects or with animal effects.

3 - Q. And you read both groups of papers?

4 A. I attempted to read predominantly animal data.
5 I relied largely on a review of the human epidemiology
6 studies done by our epidemiologists.

7 Q. Who was that?

8 A. Dr. William Gaffey.

9 Q. Okay. And did you review literature regarding
10 the Yuchang incident?

11 A. The information I could get at that time I did
12 review it, yes.

13 Q. Okay. And did you review the literature
14 recording the Yusho incident?

15 A. Yes.

16 Q. And did you review the Swedish works talking
17 about the environmental hazards of PCBs?

18 A. No.

19 Q. Okay.

20 - Have you continued your review of the
21 literature?

22 A. Not as intensively.

23 Q. Okay.

24 A. I still keep some tabs on it.

25 Q. All right. Are you fairly familiar with the

1 recent literature on PCBs?

2 A. I have seen some recent articles.

3 - Q. Okay.

4 You indicated to me yesterday that, in your
5 opinion, PCBs didn't -- something to the effect that
6 PCBs didn't cause any significant health risks?

7 A. That's correct.

8 Q. Now -- and that's your opinion today?

9 A. Yes.

10 Q. How do you reconcile that with all the recent
11 literature that's come out on PCBs, or have you made an
12 effort to?

13 A. I've attempted to do so in the document that
14 Mr. Andrews gave you this morning.

15 Q. Okay. So, in other words, the number of people
16 that have come out with studies that have reported PCBs
17 to be a health risk and an environmental risk, you
18 distinguish their studies in your report?

19 A. Yes.

20 Q. Okay. And you don't find their studies or
21 their criticisms of PCBs to be valid?

22 A. I have attempted to compile and review and
23 evaluate available information from which I reached the
24 conclusion indicated that I do not think PCBs represent
25 a health hazard.

1 Q. Okay.

2 In making your determination that PCBs do not
3 cause a human health hazard, did you review Monsanto's
4 experience with its own workers?

5 A. Insofar as Dr. Gaffey, our epidemiologist,
6 reviewed those; and I relied on his judgment.

7 Q. Okay. Did you review the effects of PCB
8 exposures on workers at Swann Chemical Company in
9 drawing your conclusions?

10 A. That was considered.

11 Q. Okay. And you know that Monsanto found and
12 others found very early on that workers at Swann
13 Chemical had developed skin problems and liver problems
14 as a result of their exposures to PCBs; is that correct?

15 A. In the early days, as I indicated in testimony
16 yesterday, high level exposures to compounds which may
17 or may not have been intermingled with the chlorinated
18 naphthalenes have been reported to produce liver lesions
19 and skin lesions.

20 Q. Okay. And liver lesions is one of the things
21 that the animal studies have reported as well, correct?

22 A. That's correct.

23 Q. Even the IBT studies reported liver lesions,
24 didn't they?

25 A. It's been indicated repeatedly, high dose

1 exposures to PCBs will cause liver injury.

2 Q. Okay. Are you familiar with recent reports
3 that show that the primary mode of absorption of PCBs in
4 the body is through skin contact?

5 A. Which reports are you referring to?

6 Q. Any recent reports.

7 A. Skin contact is always a possibility for
8 absorption. I do not recall specific reports alleging
9 that's a primary or major source of exposure.

10 Q. In your opinion what percentage of the PCBs is
11 absorbed through the skin in a normal eight-hour day?

12 A. It would depend on the circumstances to which
13 the individual is exposed.

14 Q. If a drop of PCB were placed on someone's skin
15 and left on the skin for eight hours, how much of the
16 PCBs in terms of percentage would be absorbed through
17 the skin?

18 A. I do not know.

19 Q. Are you familiar with any studies on that?

20 A. No, I do not.

21 Q. Okay.

22 Is there a file that you maintain in your
23 offices of the information that Dr. Gaffey or others
24 gave you so that you could put together this lengthy
25 report that you prepared in 1981?

1 A. Many of the documents referenced are obtained
2 through the library. Many are returned to the medical
3 library. At this time I could not say that they are all
4 necessarily in one place that could be readily
5 accessible.

6 Q. Well, as to those that weren't returned, did
7 you keep them in a file?

8 A. I may have some or may have passed on to other
9 people for their reading or information.

10 Q. Okay. Well, I'd like to request that Monsanto
11 produce your file on your -- that you used in preparing
12 your report dated October 1981, including anything that
13 Dr. Gaffey may have given you regarding epidemiological
14 studies and so forth. Okay?

15 I understand.

16 Have you done any studies on dibenzofurans?

17 A. No.

18 Q. Are you aware that dibenzofurans are a
19 recognized contaminant of Monsanto's Aroclor products?

20 A. I have heard reports of that.

21 Q. All right. And do you know who Dr. Richard is,
22 for example? Dr. Munch?

23 A. Yes.

24 Q. Okay. If Monsanto's own employees found
25 dibenzofurans in its PCB products, would you have any

1 reason to disagree with Monsanto's own employees?

2 A. No, I would not disagree with them.

3 - Q. What are the health hazards associated with
4 exposures to dibenzofurans?

5 A. Very few studies have been conducted, that I am
6 aware of, on purified dibenzofurans. So that mostly
7 they are speculation about their potential health
8 effects.

9 Q. But you are not going to tell the Court and
10 jury that dibenzofurans are safe to handle, are you,
11 just with your --

12 A. They are considered to be moderately toxic. I
13 shouldn't say moderately. They are more toxic than the
14 PCBs.

15 Q. Exposure to large doses of dibenzofurans will
16 kill you, won't it?

17 A. I do not know.

18 Q. Okay. Is there any doubt in your mind, though,
19 that dibenzofurans are a toxic chemical?

20 -A. I've indicated they are more toxic --
21 considered to be more toxic than the polychlorinated
22 biphenyls.

23 Q. Okay. And that means they can be a human
24 health hazard, is that correct, if not properly handled?

25 A. Any chemical, including dibenzofurans, can be

1 health hazards if handled improperly.

2 Q. Are the results of your research on PCBs,
3 dibenzofurans, used by Monsanto in formulating warnings
4 to be given to customers of Monsanto or to workmen who
5 might be exposed to such chemicals?

6 A. May I ask you to please repeat the question?

7 Q. Sure.

8 MR. POHL: Would you read it back,
9 please.

10 MR. ANDREWS: Before she reads that
11 back, can we take a short break so that I
12 can make this introduction?

13 MR. POHL: Sure.

14 And you can just read it back to him
15 off the record.

16 VIDEO OPERATOR: We're off the
17 record.

18 (DISCUSSION HELD OFF THE RECORD)

19 (EXHIBITS NOS. 41 THROUGH 46 MARKED)

20 VIDEO OPERATOR: We've been off the
21 record for a short break. The time is now
22 10:30 a.m.

23 Q. (By Mr. Pohl) Dr. Levinskas, the results of
24 the research that you did on PCBs or on dibenzofuran,
25 were they used by Monsanto in formulating the nature and

1 extent of the warnings that should be given to customers
2 who purchased Monsanto products as well as workmen who
3 might be exposed to such products?

4 A. I have not done research on dibenzofurans.

5 Q. Okay.

6 A. The information on PCBs was used, as indicated
7 earlier, to provide to customers and others and our own
8 employees as it was needed, yes.

9 Q. And one of the reasons to provide information
10 to customers about Monsanto's PCB products was to try to
11 prevent any harm that might befall the working man?

12 A. We are interested in making products safely and
13 having them used safely, yes.

14 Q. And during all that while -- strike that
15 question.

16 From the time that you commenced to be the
17 person who reviewed the worldwide literature on PCBs,
18 assimilated that information and summarized that
19 information and passed it on to the business group in a
20 form that could be communicated to customers, you were
21 the person who was principally assigned that task?

22 A. At the time I undertook that, Monsanto was no
23 longer manufacturing PCBs.

24 Q. In '71?

25 A. '81. This report that I'm talking about.

1 Q. You gave me a date earlier today that you
2 started this review of the literature of 1971. Did you
3 misspeak?

4 A. If I said 1971, then I misspoke. That report
5 I'm referring to is dated 1981. I apologize.

6 Q. All right. Was there anyone at Monsanto, from
7 1971 to 1981, that was making a review of the worldwide
8 literature and summarizing that data so that the
9 information about any possible harmful effects
10 associated with PCBs could be passed on to Monsanto's
11 customers?

12 A. Yes, others in the medical department were
13 keeping alert to developments on PCBs.

14 Q. And who was that, Doctor?

15 A. It would be my immediate supervisor, Elmer
16 Wheeler, and Dr. Kelly. 7

17 Q. Okay. And on occasion you would actually have
18 contact with people outside of Monsanto to give them
19 advice with regard to the possible adverse health
20 effects of exposure to PCBs, correct?

21 A. Yes.

22 Q. For example, you told us yesterday about the
23 Philadelphia incident, did you not?

24 A. Yes.

25 Q. Where there had been a spill of PCBs in

1 connection with the moving of an electrical transformer,
2 right?

3 - A. Yes.

4 Q. And the bottom line was you told the people not
5 to be concerned because you didn't perceive there to be
6 any adverse health effects that might arise out of their
7 exposure to the PCBs, correct?

8 A. As I recall that was an industrial hygienist,
9 and I indicated to her inquiry that the conditions of
10 exposure were such that no special precautions were
11 required for those who might have been exposed.

12 Q. Okay. And your general belief then and your
13 general belief today is that PCBs don't constitute a
14 human health hazard?

15 A. That's correct.

16 Q. Okay. And you wouldn't have told her anything
17 different than your generalized belief at the time that
18 you made the report to her, correct?

19 A. Yes.

20 -Q. In other words, what I'm getting at is that
21 when the industrial hygienist from the government called
22 you and was concerned about the exposure of people to
23 PCBs in connection with this spill, you would have told
24 her what you really thought at the time, correct?

25 A. Yes.

1 Q. And you what thought at the time was that PCBs
2 don't cause -- don't constitute a hazard to human
3 health, correct?

4 A. Yes.

5 Q. Okay. And the literature that's been published
6 since that time and the recent literature which states
7 that PCBs are a human health hazard, you analyzed that
8 in a rather long report that you prepared and you
9 distinguish or criticize the findings of those who
10 believe that PCBs are a human health hazard, correct?

11 MR. ANDREWS: I object to that
12 question. There has been no evidence that
13 the reports that he distinguishes in that
14 are all adverse or have adverse
15 information concerning PCBs.

16 Q. (By Mr. Pohl) Well, didn't you indicate to me
17 just a little while ago that you have reviewed some of
18 the recent literature that contained adverse -- findings
19 adverse to PCBs, and you distinguished or criticized
20 that literature?

21 A. As I recall I indicated that I had attempted to
22 obtain, read, evaluate, and summarize a discussion of
23 all of the, quote, good and bad reports regarding PCBs
24 to reach an objective conclusion and to spell out or to
25 present the basis for that conclusion, which I did in

1 that report. And the conclusions following that report
2 or the conclusions I developed during that process were
3 consistent with the statements I had made earlier that
4 PCBs are not a significant health risk.

5 Q. Doctor, we talked yesterday about the results
6 of the two-year chronic rat studies by IBT on rats
7 administered Monsanto's Aroclor product, correct?

8 A. Yes.

9 Q. We talked about certain correspondence between
10 you and Dr. Calandra where you asked that certain
11 wording be used in the reporting of the results of those
12 studies, correct?

13 A. Yes.

14 Q. Okay. And we concluded, after some discussion,
15 that what had happened is that IBT had amended its
16 reports and had copied verbatim the language which you
17 suggested, correct?

18 A. I had repeated their language to get
19 consistency. They adopted verbatim my repetition of
20 their wording, yes.

21 Q. And I take it from that that the reports of IBT
22 were ultimately amended and resubmitted to Monsanto in
23 accordance with your communication with Dr. Calandra?

24 A. Yes.

25 Q. Okay. And your letter to Dr. Calandra

1 requesting the change that you've identified was dated
2 July 18, 1975?

3 A. Yes.

4 Q. And you addressed him as "Dear Joe"?

5 A. Yes.

6 Q. Okay. And in your letter you have an
7 attachment that refers to three columns?

8 A. Yes.

9 Q. The second column is dated Supplemental Report
10 Number One, and the third column is dated Supplemental
11 Report Number Two. Do you see that?

12 A. Yes.

13 Q. And on the third column you note that JCC
14 delivered. Is that Joseph Calandra?

15 A. Yes.

16 Q. He hand-delivered to you the revised reports?
17 I'm sorry, the revised report?

18 A. I do not recall, but that is a conclusion that
19 could be drawn from looking at that memo.

20 Q. Okay. And so what happened and what your
21 letter reflects is that there are -- there was an
22 original report; it was changed with Supplemental Report
23 Number One, and then changed again in Supplemental
24 Report Number Two, correct?

25 A. That indicates that there was an original

1 report. They were subsequently asked to amend the
2 report by reviewing additional slides. So what you have
3 referred to as change one is actually the addendum or
4 the addition of the new material based on additional
5 slides. The final column is attempting to point out the
6 inconsistencies between the first earlier revision and
7 that later revision.

8 Q. Okay. And what you characterize it as is a
9 Supplemental Report Number One and then a Supplemental
10 Report Number Two?

11 A. Right.

12 Q. Okay. And so my point was that you had the
13 original IBT report of its findings with regard to
14 Monsanto's Aroclor products, a Supplemental Report
15 Number One to that that has certain findings as
16 reflected in your letter, and then a Supplemental Report
17 Number Two which has certain findings as reflected in
18 your letter; is that correct?

19 A. That's correct.

20 Q. Okay.

21 And Dr. Calandra replied to you in August of
22 1975 that he agreed to make the changes that you
23 requested, correct?

24 A. Yes.

25 Q. Okay. And then revised reports were submitted

1 to Monsanto which contained the language that the
2 Aroclor product does not appear to be carcinogenic,
3 correct?

4 A. Yes.

5 Q. And that was true for all three Aroclor
6 products 1254, 1260, and 1242, correct?

7 A. Yes.

8 Q. Okay. Now, yesterday we talked about these,
9 and the documents did not include the full text of the
10 report. Let me hand to you Levinskas Exhibits 41, 42,
11 43, and ask you if these are the reports that we were
12 referring to yesterday?

13 A. Based on the amount I read, they appear to be
14 the reports.

15 Q. Okay. And these are the ones that Dr. Calandra
16 sent to you after you sent to Dr. Calandra your letter
17 dated July 18, 1975?

18 A. They appear to be the same.

19 Q. And having reviewed all three of the reports on
20 the Aroclor products, is it a fact that each of the
21 three contains a verbatim recitation of the language
22 which you suggested in your letter of July 1975?

23 A. Yes.

24 Q. Wherein you suggested that the reports read
25 "does not appear to be carcinogenic"?

1 A. Yes.

2 Q. All right. And Dr. Calandra, in his letter of
3 August 1975, agreed to make your change, correct?

4 A. Yes.

5 Q. And then you received the revised or
6 supplemental reports, did you not?

7 A. Yes.

8 Q. And those have been identified as Exhibits 41,
9 42, and 43 to your deposition?

10 A. Yes.

11 Q. Would you tell the Court and jury the date of
12 the -- of those reports?

13 A. The cover page on each report is dated March
14 24, 1975.

15 Q. Some five or six months after the reports were
16 purportedly prepared, correct?

17 A. Yes.

18 Q. Okay. And, in fact, the reports that I've
19 shown you just now that purport to have been changed in
20 accordance with your recommendations were originally
21 dated March 24, 1975, weren't they?

22 A. This copy -- excuse me. This copy of the
23 report bears the same date, March 24, 1975.

24 Q. And let me pass to you very briefly the report
25 on Aroclor 1254, Aroclor 1260, and Aroclor 1275 and ask

1 you if each of these three documents bears the same
2 date?

3 - A. Yes, they all do.

4 Q. And that date is March 24, 1975?

5 A. Yes.

6 Q. Okay. Now, if you would, turn with me to the
7 summary portion of each of these reports. And the
8 summary is the place where the -- where the author of
9 the report summarizes his conclusion, is it not?

10 A. Yes.

11 Q. And each of these summaries ends with a
12 separate paragraph just above the signature line that
13 commences with the words "in conclusion;" is that
14 correct?

15 A. Yes.

16 Q. On each of these reports was the conclusion of
17 Industrial Bio-Test Laboratories that the Aroclor
18 products tested appeared to be slightly tumorigenic?

19 A. Yes.

20 Q. And in the report that was prepared as a
21 consequence of the changes requested by you, does the
22 conclusion anywhere state that Monsanto's products were
23 slightly tumorigenic?

24 A. It does not contain that specific wording. It
25 does reflect accurately the findings of the report.

1 Q. That's not my question, Doctor. Let me repeat
2 it. Let me repeat the question.

3 The revised report which you referred to in
4 your letter of July 1975 as Supplemental Report Number
5 Two does not state in its summary or conclusion that the
6 Aroclor products were found to be slightly tumorigenic,
7 does it?

8 A. I stated I believe it does not include that
9 specific wording.

10 Q. Thank you, Doctor.

11 Now, you knew, when you received the revised
12 reports from Dr. Calandra under cover of a letter date
13 August 1975, that the revised reports bore the same date
14 as the prior reports, correct?

15 A. I do not recall.

16 Q. You didn't look at the date?

17 A. I do not recall.

18 Q. Let me see if I can explore that a little bit
19 further with you, Doctor. You don't recall having paid
20 any attention to the date of the report that was revised
21 at your request, or you just don't recall whether you
22 did or not?

23 A. I do not recall whether or not I paid attention
24 to the date or whether or not it made an impact on me.

25 Q. And the fact is, from the correspondence that

1 you authored and from the response that you testified
2 yesterday that you received, you know that the revised
3 report that you got as a consequence of your
4 recommendations was back dated, was it not?

5 A. I know that now.

6 Q. Okay.

7 The prior report, which you list in your letter
8 as Supplemental Report Number One, does not state
9 anywhere in the summary or conclusion that the finding
10 of Industrial Bio-Test Laboratories was that Monsanto's
11 Aroclor product was noncarcinogenic, does it?

12 A. May I ask to have the question repeated?

13 Q. Sure.

14 A. I don't want to --

15 Q. Sure.

16 The reports which are attached to your
17 depositions as Exhibits 44, 45, and 46, and which
18 contain the reference to Monsanto's product being
19 slightly tumorigenic do not contain the phrase "does not
20 appear to be carcinogenic," is that true? >

21 A. They do not contain that phrase.

22 Q. And when the report was revised at your
23 request, the language "slightly tumorigenic" was deleted
24 and the phrase "does not appear to be carcinogenic"
25 inserted, correct?

1 A. The summary of the report was changed as you
2 indicated.

3 - Q. Thank you, Doctor.

4 When Supplemental Report Number One, which you
5 make reference to in your letter of July 1975, was
6 prepared in final form, would you have been the person
7 at Monsanto to whom the report was sent?

8 A. Yes.

9 Q. Okay. And do you recall having received the
10 Supplemental Report Number One?

11 A. I do not.

12 Q. Do you believe that did you receive it?

13 A. I believe it arrived at Monsanto. It may or
14 may not have been directed to me after it got there.

15 Q. Okay. And that would be for all three of the
16 Aroclor products under question?

17 A. That's correct.

18 Q. Okay. But in any event, you knew enough about
19 the reports to know that they had been received by
20 Monsanto and that they did show that Monsanto's product
21 was found to be slightly tumorigenic, correct?

22 A. That phrasing was used, yes.

23 Q. And what I'm getting at is: You knew that the
24 report had been prepared and received; and you knew what
25 the conclusion of the report was because you make

1 reference to it in your letter, don't you?

2 A. That's right. That letter compares the reports
3 side by side.

4 Q. Okay. I'm just trying to establish that you
5 knew of the preparation of the March 24, 1975, reports
6 and you knew that they showed that the product was
7 slightly tumorigenic; is that correct?

8 A. Yes.

9 Q. Thank you.

10 MR. POHL: I pass the witness.

11 MR. ANDREWS: Let's go off the record
12 just for a moment.

13 VIDEO OPERATOR: We're off the
14 record.

15 (DISCUSSION HELD OFF THE RECORD)

16 VIDEO OPERATOR: We've been off the
17 record for a brief moment. We are back on
18 the record. The time is 10:52 a.m.

19

20 EXAMINATION BY MR. ANDREWS:

21 Q. Dr. Levinskas, I have a few questions for you
22 this morning. First of all, how long have you been a
23 toxicologist?

24 A. Almost 34 years.

25 Q. Would that be all of your adult life?

1 A. Essentially, yes.

2 Q. Other than the teaching that you did at the
3 University of Pittsburgh, have you ever done anything
4 other than toxicology to make a living and earn a
5 living?

6 A. Not since I got out of graduate school.

7 Q. Did you have any contact with any outside or
8 contract laboratories when you were at American
9 Cyanamid?

10 A. Yes.

11 Q. What was your purpose in going to that company
12 from the University of Pittsburgh?

13 A. They were mainly personal reasons, including
14 the health of my father.

15 Q. Did you have any specific job duties when you
16 arrived at American Cyanamid?

17 A. After a brief interval, I took the direction of
18 their environmental health laboratory.

19 Q. In that job assignment, did you have contact
20 with outside or contract laboratories?

21 A. Yes.

22 Q. Do other companies besides American Cyanamid
23 and Monsanto contract with laboratories to do
24 experiments for them?

25 A. Yes.

1 Q. What other companies come to mind in that
2 conclusion?

3 A. I would say every major chemical company and
4 probably most of the drug companies, and this would
5 include companies like Dow and Du Pont and Carbide which
6 have had their own toxicology laboratories for many
7 years. It included Shell, Esso, or Exxon, Stauffer
8 Chemical, Rohm & Haas.

9 Q. Did I understand you to say that Dow Chemical
10 had its own inside toxicology lab?

11 A. Yes.

12 Q. Okay. Can you differentiate for us a company
13 that has its own toxicology lab as opposed to companies
14 that deal primarily with outside contract labs, just in
15 the way they do business?

16 A. The -- obviously the company's own laboratory
17 will do some of its testing in-house. But insofar as
18 they have special demands or demands they can't
19 accommodate in-house because of pressures or space or
20 some other condition, the relationship of a laboratory
21 with a in-house -- of a company with in-house laboratory
22 with a contract lab would be quite similar or comparable
23 to that of one without an in-house laboratory.

24 Q. And during the course of your work in the area
25 of toxicology, have you had contacts with outside or

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1 contract laboratories?

2 A. Yes.

3 - Q. And would that be both with American Cyanamid
4 and Monsanto?

5 A. Yes.

6 Q. In the course of contracting out that type of
7 business, do you have contracts -- or do you have
8 contacts with people in contract laboratories?

9 A. I do. Most of the people whom I -- in other
10 companies whom I converse with have similar contacts.
11 And I think one who did not maintain some contact would
12 probably be derelict in responsibility to his company.

13 Q. Now, let's assume that Monsanto or American
14 Cyanamid has decided to enter into a contract with an
15 outside laboratory to do some toxicology work for them.
16 How does that generally come about?

17 A. All of the considerations that would come in
18 would be, first, competence of the people at the
19 laboratory; their scheduling, could they meet whatever
20 schedules the sponsoring company wanted; and then --
21 well, those would be two major things, the competence of
22 the people involved and the scheduling to meet the
23 schedules of the sponsoring company.

24 Q. When you got to the Monsanto in 1971, was
25 Monsanto doing business with IBT as a contract

1 laboratory?

2 A. Yes.

3 - Q. And had Monsanto been doing business with IBT
4 prior to the time you got there?

5 A. Yes.

6 Q. During the time period that we've been
7 discussing, from 1971 to 1975, did you have any
8 questions about the competency of the IBT laboratory?

9 A. I had none, and there was no reason that I
10 could gather from talking to others that they had any
11 concerns.

12 Q. Now, during the course of experiments that are
13 run by contract laboratories, does that require contact
14 between the sponsor, like Monsanto, and the people that
15 are doing the experiment for you?

16 A. I think I had indicated earlier that I believe
17 such contacts should be maintained and that if it was
18 not, one was probably derelict in his responsibility to
19 the company.

20 - Q. Now, what types of contacts or dialogues would
21 you have with contract laboratories that were doing work
22 with Monsanto?

23 A. Well, apart from discussions back and forth as
24 to specifics of a protocol or procedure to be followed,
25 one would be to question the clarity of the phrasing

1 that they use, the statements, to read them back and say
2 is this what you intended to say.

3 - Q. Are you talking about contacts that would be
4 made at the time that you received a report of an
5 experiment?

6 A. Talking about a report.

7 Q. All right. Well, let's focus on that, then,
8 for the purpose of this question. Let's assume that in
9 the normal course of business a contract lab had
10 forwarded a report on an experiment that was being done
11 for Monsanto. What types of contacts or conversations
12 would you normally have at that point in time?

13 A. One of the first things I would do, would read
14 the report for what I recall internal consistency. If
15 you say something up front and you say I did this and
16 there are so many numbers here, then I would expect to
17 the see the presentation of the data consistent with the
18 text. And if there were, as I call this internal
19 consistency lacking, I would go back and ask the
20 laboratory what gives.

21 Q. In other words, at that point you are looking
22 to make sure that what is said in the report jibes with
23 the data that's reported?

24 A. Reported data.

25 Q. What else do you look for?

1 A. If they have made statements which either I or
2 someone else could see that could be ambiguous, or could
3 be read in more than one manner, we go back and ask them
4 for clarification as to just exactly what they mean and
5 is there a possibility of clarifying it, making it more
6 specific and precise to convey what the author had
7 intended. If there are, as there frequently are, based
8 on the results of a toxicity study, conclusions are
9 drawn, judgments are made, is to go back and explore the
10 scientific basis from which those judgments or
11 conclusions are drawn.

12 Q. Now, in your experience at American Cyanamid
13 and also at Monsanto, did you regularly have these types
14 of contacts with outside laboratories?

15 A. I had them with Cyanamid. I had them to a much
16 lesser degree in terms of direct on-site contact with
17 IBT, but I fairly frequently did do them by looking at
18 reports.

19 Q. Now, did you have these types of conversations
20 with contract labs other than IBT?

21 A. This would be a standard operating procedure
22 with any contract laboratory.

23 Q. Now, are you familiar with the toxicology
24 department at, say, for example, Dow Chemical?

25 A. Yes. I know their situation reasonably well.

1 Q. Do you have contacts with the toxicologists at
2 Dow Chemical?

3 A. Yes.

4 Q. Do the toxicologists at Dow Chemical also
5 communicate or have contacts with their outside
6 laboratories, to your knowledge?

7 A. Yes, they do.

8 Q. Is that something that scientists routinely do?

9 A. In my experience, that is a fairly common
10 routine practice to weigh opinions and judgments to
11 reach some understanding. I might add that insofar as
12 Dr. Kimbrough took her slides from the earlier 1260
13 study where the question on the rat liver -- rat bladder
14 cancer and her subsequent liver cancers, she took her
15 sections to others at the National Cancer Institute, at
16 the Armed Forces Institute of Pathology, and she even
17 came to Monsanto to discuss her results to try to search
18 through and sift through with the most scientifically
19 defensible conclusion.

20 Q. Now, Mr. Pohl has asked you a number of
21 questions about scientists talking to one another from
22 time to time. In your opinion, is there anything wrong
23 with scientists from different companies talking with
24 one another about scientific conclusions?

25 A. I think that the way to arrive at a judgment on

1 a given study is to have such scientific discussions
2 between scientific personnel.

3 - Q. Why would scientists want to communicate with
4 other scientists about studies and about conclusions?

5 A. Personally one would want to know that one is
6 assessing or interpreting or judging situations fairly
7 correctly, that there is a consensus of thought, that
8 one is not doing something that is just so at variance
9 or, to put it very bluntly, so stupid. But as I said
10 earlier, if you are talking about judgments and
11 evaluations, one would want to be as sure as one can
12 that all of the facts and all of the elements were
13 available for consideration and that the individual who
14 is making the final judgment would at least be aware of
15 the facts and could consider them in making his
16 evaluation.

17 Q. Let me show you an exhibit that Mr. Pohl asked
18 you some questions about yesterday. It's Exhibit No. 6.

19 I've apparently got the wrong exhibit number
20 here. Let me look through this stack and see if I can
21 locate the one that I wanted to ask you something about.

22 MR. POHL: Could it be 16?

23 MR. ANDREWS: Well, Let me just look
24 for a second here.

25 Let's go off the record a second and

1 see if I can find this.

2 VIDEO OPERATOR: We're off the
3 record.

4 (DISCUSSION HELD OFF THE RECORD)

5 VIDEO OPERATOR: We've been off the
6 record for a brief moment. We are back on
7 the record. The time is now 11:07 a.m.

8 Q. (By Mr. Andrews) Dr. Levinskas, I've found the
9 exhibit that I wanted to show you. It is in fact
10 Exhibit No. 6 to your deposition. It was on the second
11 page, and I overlooked it a moment ago.

12 Let me just show you again the second page of
13 that exhibit. And if you'd just glance at it to refresh
14 your recollection, I'd like to ask you a question about
15 it.

16 First of all, Doctor, if you'd just identify
17 again for the record what Exhibit 6 is.

18 A. This is a memorandum of a telephone
19 conversation I had had with Dr. Kimbrough, an IPA
20 toxicologist, pathologist in Atlanta.

21 Q. Now on second -- on the second page of Exhibit
22 No. 6, you indicate that, as a final note, that there
23 have been a medical supervision of Monsanto's employees.
24 Do you see that?

25 A. Yes.

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1 Q. What was the purpose of that medical
2 supervision?

3 A. To determine whether there were health risks
4 from occupational exposure to the employees of Monsanto. >

5 Q. Now, during the time that you were the head of
6 the toxicology department at Monsanto, did anybody ever
7 call to your attention or suggest that there was any
8 problem with any of Monsanto's employees as a result of
9 that medical supervision?

10 A. No.

11 Q. At the time that you arrived for your
12 employment with Monsanto in 1971, was IBT doing some
13 studies for the company?

14 A. Yes.

15 Q. Were they doing the two-year chronic rat
16 feeding studies at the time of your arrival?

17 A. Yes.

18 Q. Now, I take it, if those were two-year studies
19 and they were doing them in 1971 at the time of your
20 arrival, they must have started prior to the time you
21 got there; is that fair?

22 A. Yes.

23 Q. How long after you arrived at Monsanto did IBT
24 present the company with the final reports relating to
25 the two-year chronic feeding studies?

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1 A. I do not recall the date.

2 Q. Was it in the year 1971?

3 - A. I doubt it.

4 Q. Just briefly describe the products involved in
5 those two-year studies.

6 A. Briefly describe, you mean --

7 Q. What were the products involved in those
8 two-year studies?

9 A. The three products were Aroclor 1242, 1254, and
10 1260.

11 Q. Now, whether or not you can tell us precisely
12 when the final reports related to those three products
13 were received, can you tell us what the results of those
14 reports were as they related to those three products?

15 MR. POHL: I'm going to object to the
16 form of the question, unless it's specific
17 as to which set of results since we've
18 already established there were at least
19 three.

20 MR. ANDREWS: Well, I think you are
21 very much in error on that point. I'm
22 talking about 1971, and you are talking
23 about something that occurred in 1974.
24 But trust me, I'm going to get it
25 straightened out before I'm done.

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1 MR. POHL: All right. That's not my
2 objection. I'm referring to ones in '75,
3 not '74. And he already said he didn't
4 know when they were received; and it
5 probably wasn't in 1971, was his
6 testimony.

7 Q. (By Mr. Andrews) I'll rephrase the question,
8 Doctor, just out of an abundance of caution. I think
9 it's clear, but I don't want there to be any question
10 about it.

11 As to the two-year chronic studies that were-
12 being conducted at the time that you arrived at
13 Monsanto, did Monsanto receive final reports from those
14 studies?

15 A. Yes.

16 Q. Can you tell us when those reports were
17 received?

18 A. I believe the actual feeding of the animals
19 stopped in '71. So the reports themselves would have
20 been received in '72, possibly '73.

21 MR. POHL: I'm going to object to the
22 responsiveness of the answer because you
23 didn't ask him when they stopped feeding
24 the animals.

25 Q. (By Mr. Andrews) When did these two-year

1 chronic studies start?

2 A. My recollection would be -- I don't know.

3 - Q. Do you recall your testimony yesterday, in
4 response to Mr. Pohl's questions, that you thought those
5 studies started in 1969?

6 A. I was about to say my recollection would be
7 about '69. I don't recall a specific starting date.

8 Q. Just to make sure we're absolutely clear. If
9 the study starts in 1969 and it's a two year study, how
10 long does it last?

11 A. The actual feeding of the test animals will go
12 for two years; so the study, the feeding portion, would
13 have stopped in '71.

14 Q. All right. Now, Monsanto received reports of
15 the results of those studies; is that correct?

16 A. Yes.

17 Q. And what was the result of those studies?

18 A. As conducted at that time, the conclusion was
19 that neither Aroclor 1242, nor 1254, nor 1260 was
20 carcinogenic to rats. >

21 Q. Now, did the -- any of the slides that resulted
22 from those two-year studies show evidence of any
23 carcinomas?

24 A. No.

25 Q. How many slides were examined of the study --

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1 on the studies that ended in 1971?

2 MR. POHL: Object to the form of the
3 question.

4 A. If I could look at the reports, I could tell
5 you; but if there was 3, 6, 12 -- I think there were 10
6 animals per group of each sex, so that would be 20
7 animals at each interval of 3, 6, 12, and 24 months. So
8 4 times 20 is 80. There were 10 dose -- 3 dose levels
9 for each compound in the control group, so times 10. So
10 there should have been something on the order of 800
11 sections of liver that were examined. -

12 Q. (By Mr. Andrews) All right. Now, those were
13 not examined on the studies that ended in 1971, were
14 they?

15 A. I'd have to go back. As I say, if I could look
16 at the tables in the report I could tell you more
17 exactly how many we looked at. The conclusion of
18 noncarcinogenicity was based on the animals
19 substantially that were looked at at the end of two
20 years, and there would have been ten animals of each sex
21 for each group.

22 Q. Now, who looked at those slides on the studies
23 that we've been talking about at this point?

24 A. At that time, I don't recall, but it could well
25 have been Dr. Don Gordon who looked at the later slides. >

1 Q. Now, after Monsanto got the results of those
2 feeding studies -- and we're talking about the studies
3 that the feeding stopped in 1971 -- what is the next
4 involvement you had with this issue?

5 A. When Dr. Kimbrough came to Monsanto to indicate
6 that she had found cancers in the livers of rats fed
7 Aroclor 1260.

8 Q. Now, when was that?

9 A. I would guess about '74.

10 Q. There's some indication that Dr. Kimbrough
11 published her paper in that regard in 1975. Is it -
12 possible that you met with her prior to the time she
13 published her paper?

14 A. Decidedly before she published her paper.

15 Q. Now, why would that have occurred?

16 A. I -- you mean why did she come to Monsanto, or
17 why did she publish before --

18 Q. No. Why would scientists be discussing the
19 results of a test prior to the time that a paper was
20 published?

21 A. I would indicate -- go back to what I indicated
22 earlier. I think that the attempt to discuss, to get a
23 understanding of all the elements which one should
24 consider before one made a statement in the literature.

25 Q. Is there anything wrong or unethical with

1 Dr. Kimbrough coming and discussing her results with you
2 prior to the time she published the paper?

3 - A. No. I think that's a commendable thing to do.

4 Q. Now at the time that Dr. Kimbrough came to
5 Monsanto and discussed her results, did you tell her of
6 the earlier studies conducted by IBT that found no
7 carcinogenicity?

8 A. Yes.

9 Q. Was there a discussion of the relative merits
10 of both of those tests?

11 A. The -- as I recall the discussion, it was an-
12 attempt to investigate why two different studies on
13 Aroclor 1260 had drawn different conclusions. And that
14 was the focus.

15 Q. Now, in connection with the attempt to
16 investigate that difference, what were you asked to do?

17 A. I cannot recall.

18 Q. Did there come a time after your meeting with
19 Dr. Kimbrough that you were asked to go back to IBT to
20 do a re-evaluation of the 1971 studies?

21 A. IBT was asked -- and I don't recall who made
22 the specific request -- IBT was asked that in addition
23 to those ten animals of each group of each sex that had
24 been examined at the end of the two-year feeding period
25 to go back to the stored specimens of liver which were

1 stored in formaldehyde and to cut and evaluate sections
2 of every liver that they could find from those animals
3 that had been fed the Aroclor 1242, the 1254, the 1260.

4 Q. All right. Now, let me ask you some questions
5 about that. Do I understand from your testimony that at
6 the end of the experiment in 1971, that the livers from
7 those rats were saved?

8 A. Yes.

9 Q. And how were they saved?

10 A. They would have been preserved in a
11 formaldehyde solution, pickled.

12 Q. So when Dr. Kimbrough visited Monsanto and
13 discussed her contrary findings, Monsanto then contacted
14 IBT and asked them to look at those livers again; is
15 that correct?

16 A. That's correct.

17 Q. Now, in addition to looking at the slides that
18 were created in 1971, was IBT asked to look at
19 additional slides?

20 A. Yes. They were asked not only to look at what
21 the initial request had been to look at, as I say ten
22 livers of each sex from each group at the end of the
23 study, but to go back and any other liver from any other
24 animal in that study, to expand the study of liver
25 sections in an effort to determine whether there might

1 be carcinomas in some of those tissues which had not
2 been examined previously.

3 - Q. Now, was that done?

4 A. Yes.

5 Q. And who did that?

6 A. The IBT pathologists.

7 Q. Would that include Dr. Gordon and Dr. Richter?

8 A. Yes, both of them.

9 Q. Now, when they went back to these livers that
10 had been stored since 1971 --

11 MR. POHL: I'm going to object to the
12 form of the question.

13 Q. (By Mr. Andrews) -- did they take additional
14 sections of those livers?

15 A. I believe they went and cut new or fresh
16 sections. They took different sections out of the
17 formaldehyde jar and they made new slides and they
18 studied all of those.

19 Q. Okay. So, after your discussion with
20 Dr. Kimbrough, IBT was directed to not only re-evaluate
21 what they looked at in 1971, but to go back and get the
22 livers and create even more slides; is that correct?

23 A. That's correct.

24 MR. POHL: Object to the form of the
25 question with reference to the date.

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1 Q. (By Mr. Andrews) Was IBT able to create more
2 slides from those earlier livers?

3 - A. Yes.

4 Q. And at the conclusion of that activity, how
5 many slides were created?

6 A. Approximately 1,000, because there would have
7 been 1,000 animals in the total test population.

8 Q. Do you know how many slides had been examined
9 at the earlier time, approximately? I'm just looking
10 for an approximate number, Doctor.

11 A. I would say probably half of those. -

12 Q. Now, what was the purpose in going back to IBT
13 in 1974 and asking them to do this additional work?

14 A. In an attempt to see if one could resolve the
15 different findings of Dr. Kimbrough and those previously
16 reported by IBT.

17 Q. What was the significance of having the
18 additional slides made in 1974, and how did that impact
19 on what they were trying to accomplish?

20 -A. The original study, like many studies at that
21 time, the gross autopsy of the animal after death, it
22 looked for abnormalities; and if abnormalities were
23 detected, those were preserved for microscopic
24 examination. If no unusual abnormalities were noted, a
25 select number, in this case ten animals of each sex from

1 each group, were at random selected for microscopic
2 examination to see if there were lesions detected which
3 could not be seen with the naked eye.

4 So the balance of those animals, which I
5 frequently referred to as insurance that one need not
6 redo the study, those tissues are preserved in
7 formaldehyde and are available should the need arise to
8 answer other questions which were not raised or which
9 were not apparent at the time the study was completed.

10 Q. All right. If I understand what you are
11 saying, then in 1971, after an examination to check for
12 abnormalities, a random selection of rats were picked
13 from which slides were made?

14 A. Yes.

15 Q. Now, what was the purpose, in 1975, then, of
16 going back and looking at every single liver?

17 A. Two reasons: One is those animals had already
18 been fed Aroclor 1254 for two years. They were
19 available for examination. They provided a quicker
20 means of attempting to explore the issue further than
21 going back and repeating a two-year study and waiting
22 two years for the outcome.

23 In addition to the initial random sampling was
24 to make a more thorough examination, to go back, as I
25 have indicated, and examine every available liver to

1 either determine whether there were carcinomas or to
2 provide some greater degree of assurance that the
3 initial conclusion of no carcinoma was sustainable.

4 Q. Now, did Dr. Gordon or Dr. Richter read all of
5 those slides, the slides from every single liver?

6 A. Yes.

7 Q. And what did they determine?

8 A. They concluded that no carcinomas were in those
9 livers.

10 Q. So at this point in 1974, slides from every
11 single liver of the test rats from 1971 had been
12 reviewed by Dr. Gordon and Dr. Richter; is that correct?

13 A. Yes.

14 MR. POHL: Object to the form of the
15 question as to the date.

16 Q. (By Mr. Andrews) Did anybody besides
17 Dr. Gordon and Dr. Richter read those slides?

18 A. Some of those slides were reviewed by
19 Dr. Kimbrough and Dr. Squire.

20 Q. All right. Now, did Dr. Kimbrough or
21 Dr. Squire see any carcinomas in those slides?

22 A. No, they did not.

23 Q. So we've got a review, now, by Dr. Gordon and
24 Dr. Richter who have looked at every single slide and
25 they don't see any carcinoma; is that correct?

1 A. That's correct.

2 Q. In addition to that, Dr. Kimbrough and
3 Dr. Squire looked at some of the slides and they didn't
4 see any carcinomas?

5 A. That's correct.

6 Q. Now, did anybody else look at these slides?

7 A. Dr. Pour from the Eppley Institute of Cancer
8 looked at all the slides.

9 Q. Who asked Dr. Pour to look at the slides?

10 A. Monsanto.

11 Q. What was your purpose in asking Dr. Pour to -
12 look at all of the slides from the test that was
13 concluded in 1971?

14 A. There's a Dr. Phillip Shubik at the Eppley
15 Institute for Cancer in Omaha, Nebraska, a world
16 recognized authority on cancer carcinogenesis. We went
17 to him with a description of the position and asked him
18 if he had suggestions on how we might attempt to resolve
19 the issue.

20 Q. And what did he suggest?

21 A. He recommended that we have Dr. Pour review the
22 slides as a member of his staff.

23 Q. Did Dr. Pour, in fact, review the slides?

24 A. He reviewed the slides.

25 Q. Which slides did he review?

1 A. The slides of all the Aroclor 1242, 1254, and
2 1260 studies previously reviewed by Drs. Gordon and
3 Richter.

4 Q. And what was Dr. Pour's conclusion after
5 reviewing all the slides?

6 A. He concluded that the PCBs did not induce
7 carcinomas in the livers of those rats.

8 Q. Did he see any carcinomas in any of the slides?

9 A. No.

10 Q. Was Dr. Pour's conclusion reported to
11 Drs. Kimbrough and Squire?

12 A. I do not know.

13 Q. Now, earlier you had indicated that
14 Drs. Kimbrough and Squire also looked at these slides;
15 is that correct?

16 A. That's correct.

17 Q. And Monsanto looked at Dr. Kimbrough's slides?

18 A. Dr. Pour was asked to look at the slides from
19 Dr. Kimbrough's study, yes.

20 Q. Was Monsanto making any attempt to hide any of
21 this information from Dr. Kimbrough?

22 A. No. As a matter of fact, Dr. Pour could not
23 have looked at Dr. Kimbrough's slides without
24 Dr. Kimbrough's permission, since she had the slides.

25 Q. What is Dr. Pour's background?

1 A. He's a pathologist. He had been working with
2 Dr. Shubik, whom I indicated earlier, at the Eppley
3 Institute for Cancer. And it was largely on the basis
4 of Dr. Shubik's recommendation that we worked with
5 Dr. Pour.

6 Q. Did you have confidence in Dr. Pour?

7 A. Yes.

8 Q. Do you know whether Dr. Pour has published or
9 has written in the field of pathology?

10 A. He has co-authored a chapter on liver tumors in
11 one of the monographs issued by the Institute --
12 International Association for Research Against Cancer,
13 in Laon, France.

14 Q. We've talked about your request for IBT to go
15 back and re-evaluate the slides, that occurred in 1974.
16 Did you receive a report from IBT about their
17 re-evaluation?

18 A. Reports addressed to me were mailed to
19 Monsanto. I do not specifically recall receipt of the
20 reports.

21 MR. POHL: Which one are you looking
22 for?

23 MR. ANDREWS: Looking for the --

24 MR. POHL: His letter?

25 MR. ANDREWS: Yes.

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1 MR. POHL: I think it's in '75.

2 MR. ANDREWS: There it is.

3 A. (By Mr. Andrews) Dr. Levinskas, let me show
4 you what's been previously marked as Exhibit No. 21 to
5 your deposition, which purports to be a letter from you
6 to Dr. Calandra dated in 1975. Is that correct?

7 A. Yes.

8 Q. Now, at the time that you wrote that letter to
9 Dr. Calandra, what was the status of the re-evaluation
10 that had been undertaken by IBT at Monsanto's request?

11 A. I was given two sets of reports, each of which
12 was a review of the additional liver sections.

13 Q. Now, let's attempt to reconstruct what you had
14 on your desk in July 1975. There were three products
15 involved; is that correct?

16 A. That's correct.

17 Q. Was there a report for each product?

18 A. There was.

19 Q. Did the reports have a date on them?

20 A. Yes.

21 Q. And what was the date?

22 A. I do not recall from then, but the documents
23 involved are dated March 24, 1975.

24 Q. Would you have any reason to doubt the accuracy
25 of those dates?

1 A. None.

2 Q. So there were three products, and you had on
3 your desk three reports dated March 24, 1975. Are we
4 right so far?

5 A. Yes.

6 Q. Now, did you have any other documents on your
7 desk at the time you wrote this letter in the July of
8 1975?

9 A. I had three other reports which referred to a
10 Supplemental Report Two and was asked to compare the two
11 reports.

12 Q. Who asked you to compare the two reports?

13 A. My immediate supervisor, Dr. Roush.

14 Q. Now, let's talk about these reports as you saw
15 them in July of 1975. Are there different sections?

16 A. Yes.

17 Q. To the reports?

18 A. There is a section marked Introduction, a
19 section marked Summary, and then there are pages of
20 tabular data.

21 Q. Now, what is the purpose of the section marked
22 Introduction?

23 A. It's a simple statement of -- reading it, it
24 says: At the request of Dr. Levinskas of the Monsanto
25 Company, additional sections of liver from a two-year

1 chronic oral toxicity study of Aroclor 1242 in rats were
2 processed into H & E stained sections and evaluated by
3 light microscopy."

4 Q. All right. Now, are those additional sections
5 the ones that we were talking about a few minutes ago?

6 A. This is the additional sections, yes.

7 Q. And those additional sections were made from
8 the livers of every single rat that was on those
9 studies; is that correct?

10 A. That's correct.

11 Q. All right. Now, what is the purpose of the
12 section of the report called Summary?

13 A. It's to present in a concise fashion the -- as
14 any summary, the salient conclusion of the report.

15 Q. Now, where are the facts upon which the summary
16 is based reported in the reports?

17 A. It's the tabular data which is the bulk of the
18 report I referred to earlier which contains the report
19 of the actual observations.

20 Q. Now, at the time you had these reports in front
21 of you in March of 1975 or in July of 1975, had there
22 been any discovery of carcinomas in any of the slides
23 that were prepared from the IBT tests?

24 A. No.

25 Q. What was the purpose in going back for the

1 re-evaluation in 1974?

2 A. I believe I indicated Dr. Kimbrough raised the
3 question with respect to carcinogenicity of 1260. That
4 information was in disagreement with information we had
5 in our possession. The attempt was made to see what
6 could be done in an effort to resolve, if possible, the
7 discrepancy between the two reports.

8 Q. All right. So what was the focus of the
9 disagreement?

10 A. Whether or not the Aroclor products, and
11 specifically Aroclor 1260, produced carcinoma of the
12 liver in rats.

13 Q. Now, as of 1974, Dr. Kimbrough had a report
14 where she observed carcinoma?

15 A. Yes.

16 Q. And IBT had a report where they didn't observe
17 any carcinomas; is that correct?

18 A. Yes.

19 Q. Now, when you had these reports in front of you
20 in July of 1975, what was the status of the summary
21 language in the reports?

22 A. As I've indicated in this report, one version
23 had said, in three instances, the conclusion was that
24 the product was slightly tumorigenic. In the second
25 version, two of the three instances said "does not

1 appear carcinogenic." The third still said "slightly
2 tumorigenic."

3 - Q. All right. Now, let me stop you right there.
4 Did you have any input in the change between Supplement
5 Number One and Supplement Number Two insofar as it was
6 changed from "slightly tumorigenic" to "does not appear
7 carcinogenic" in two out of three cases?

8 A. No.

9 Q. Do you know whether anybody at Monsanto had any
10 input in that change?

11 A. No.

12 Q. Now, given the change from, in the summary
13 section of the report, to slightly -- from "slightly
14 tumorigenic" to "does not appear carcinogenic" in two
15 out of three instances, what was your purpose in
16 corresponding with Dr. Calandra in July of 1975?

17 A. The primary purpose was to indicate that if all
18 three studies had reached a similar conclusion based on
19 similar findings, that as a scientist I felt he ought to
20 express his conclusion in the same words. And that
21 "does not appear carcinogenic" was a more precise and
22 specific conclusion; and since the additional studies
23 were done to determine whether or not the Aroclors were
24 carcinogenic, and since that was a more precise and
25 specific expression, it therefore was preferable.

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1 Q. Now, in July of 1975, when you first saw these
2 reports, two of them had all -- or one of them -- excuse
3 me: Two of them had already been changed so that the
4 language used was "does not appear carcinogenic;" is
5 that correct?

6 A. Yes.

7 Q. Was that your language?

8 A. No.

9 Q. Do you know whose language that was?

10 A. I do not.

11 Q. Is the language "does not appear carcinogenic"
12 an accurate summary of the data that's attached to the
13 reports?

14 A. Yes.

15 Q. We have been discussing a change in the Summary
16 section of the report; is that correct?

17 A. Yes.

18 Q. Was there ever any change made or requested in
19 the underlying facts or data that supported the summary?

20 A. No.

21 Q. Have you ever requested any contract laboratory
22 to change data?

23 A. No.

24 Q. In your judgment and in consistent --
25 consistent with your letter of July 18, 1975, does the

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1 phrase "does not appear carcinogenic" more accurately
2 describe the underlying data?

3 - A. Yes.

4 Q. Than does "slightly tumorigenic"?

5 A. Yes.

6 Q. Did you ever tell anybody at IBT that an
7 experiment had to come out in a certain way?

8 A. Never.

9 Q. Has anybody at Monsanto ever done that, to your
10 knowledge?

11 A. Not to my knowledge.

12 Q. Subsequent to the correspondence that you made
13 to Dr. Calandra asking him to make the language in these
14 three reports consistent with one another, did you
15 receive correspondence from him?

16 A. Yes.

17 Q. And did he make the change so that the summary
18 language was consistent in the three reports?

19 A. Yes.

20 Q. How was that accomplished?

21 A. How was the change implemented?

22 Q. Yes. In other words, what did he send you in
23 order to implement the change in the summary language?
24 Maybe I'm not being clear. The question is not
25 difficult.

1 Did Dr. Calandra send you a whole new report,
2 or did you send you substitute pages?

3 - A. The usual practice would be to send substitute
4 pages.

5 Q. Was that done in this case, to your knowledge?

6 A. I believe it was.

7 Q. Now, from a scientific standpoint, is there
8 anything significant about the fact that when you
9 received the substitute pages you simply inserted them
10 in the report as opposed to going back and changing the
11 top page?

12 A. That's correct.

13 Q. Is there anything scientifically significant
14 about that practice?

15 A. I think it's just a common -- it's not a
16 scientific issue. It's just a common expedient
17 practice.

18 Q. In other words, Mr. Pohl asked you a series of
19 questions about the fact that Dr. Calandra sent you
20 these substitute pages in August 1975. They were
21 substituted in a report that was dated March 24, 1975,
22 and he seemed to be quite interested in that issue. Do
23 you remember those questions?

24 A. Yes, I do.

25 Q. From a scientific standpoint, does that affect

1 the validity of the report?

2 A. No.

3 Q. You know, was there any change in the
4 underlying data in any version of the report?

5 A. No.

6 Q. Was the National Cancer Institute conducting
7 some experiments on Aroclor 1254 at about this same
8 time?

9 A. They conducted a study on Aroclor 1254. The
10 date of their report was 1978. It is, I would assume,
11 about this time they probably started their feeding
12 study.

13 Q. What was the result of the National Cancer
14 Institute's study on Aroclor 1254?

15 A. They concluded that Aroclor 1254 was not
16 carcinogenic to rodents.

17 Q. Was that the same conclusion reached by IBT?

18 A. Consistent, yes.

19 Q. So the National Cancer Institute was in
20 agreement that Aroclor 1254 was not a carcinogen; is
21 that correct?

22 A. Yes.

23 Q. Does the National Cancer Institute utilize
24 outside consultants to evaluate their results prior to
25 the time they publish reports?

1 A. Yes. Their reports are reviewed by outside
2 reviewers, people not affiliated with the Cancer
3 Institute. And the revised reports are then issued as
4 the National Cancer Institute, now the National
5 Toxicology Program reports.

6 Q. Now, this is an incidence where the United
7 States Government is using outside consultants to look
8 at their results prior to the time the results are
9 published; is that correct?

10 A. It's a review, peer review of the presentation
11 and the information and the conclusions prior to their
12 public release, yes.

13 Q. Is there anything unusual about scientists
14 communicating with one another in discussing results
15 prior to the time they're made public?

16 A. It's not unusual. I think it is consistent
17 with and a part of the scientific procedure.

18 Q. Now, after your involvement with this
19 re-evaluation in 1974, when was the next involvement
20 that you had concerning IBT?

21 A. With respect to the Aroclor studies, it was the
22 report -- no, the shorter one, the review, this report.

23 Q. And what is the date of that report?

24 A. October 14, 1981.

25 Q. What was your purpose of getting reinvolved

1 with IBT as of 1981, insofar as the Aroclor studies were
2 concerned?

3 A. I had indicated earlier I had undertook a
4 review of available literature on the PCBs.

5 Q. What was the purpose of you undertaking that
6 review?

7 A. In an effort to see if consideration of all the
8 available information would enable us to reach a
9 conclusion with respect to the potential carcinogenicity
10 of PCBs.

11 Q. All right. Now, was some of the information
12 that was available and that you reviewed the IBT studies
13 that were originally completed in 1971? X

14 A. Yes.

15 Q. And you had additional information from those
16 studies from your re-evaluation in 1974; is that right?

17 A. Yes.

18 Q. And was that also reviewed?

19 A. I'm sorry.

20 Q. Was that also the subject of your review in
21 1981?

22 A. This 1981 report was an attempt to condense the
23 material from the other three studies into a single
24 source that could be cited as a part of that overall
25 review.

1 Q. Now, when you went back and looked at the IBT
2 studies of 1971 and the re-evaluation of 1974, what did
3 you look at? What was the purpose of your looking at
4 those studies?

5 A. I made an effort to determine whether animals,
6 given these unique numbers, were placed on tests
7 consistent with the time frame of the study, that there
8 were body weights or other records to indicate how long
9 these animals had stayed on tests, including their dates
10 of death or sacrifice, that sections of liver with
11 diagnoses for the livers were available that could be
12 tied back to the individual animal numbers, and the
13 intent was that while we had believed the data to be
14 supportable we wanted to reassure ourselves that they
15 were prior to their publication.

16 Q. Now, did you get records from IBT in order to
17 do this?

18 A. The records that we could obtain from IBT on
19 the study, yes.

20 Q. And I take it that you personally handled this
21 task?

22 A. Yes.

23 Q. Now, after you had gone back and compared those
24 four or five items that you just named, what was your
25 conclusion as to the reliability of the IBT studies

1 insofar as they related to Aroclor?

2 A. That their data were -- I satisfied myself that
3 their data were valid.

4 Q. Have you ever made an attempt to validate any
5 study by IBT other than the Aroclor studies?

6 A. Yes.

7 MR. ANDREWS: Mr. Pohl, can you help
8 me identify an exhibit? You asked him
9 some questions about mammary glands from
10 Dr. -- I think it was Dr. Pour's.

11 MR. POHL: It's in that report. It's
12 in the summary page, in the very back,
13 Page 7 -- 6, I'm sorry, look at the
14 bottom.

15 Q. (By Mr. Andrews) Dr. Levinskas, let me show
16 you Page 6 of Exhibit No. 40 which Mr. Pohl asked you
17 some questions about. And there's a reference there to
18 a quotation from Dr. Pour concerning a mammary gland
19 carcinoma. Do you see that?

20 -A. Yes.

21 Q. Now, you had indicated that that, in layman's
22 language, is a cancer of the mammary gland; is that
23 right?

24 A. Yes.

25 Q. Now, I take it from that quotation that that

1 finding was limited to one rat; is that right?

2 A. Yes.

3 Q. What is the relative incidence of mammary gland
4 cancers in rats?

5 A. It depends on the strain of rat, but mammary
6 tumors are relatively common and frequently seen in
7 different animals.

8 MR. POHL: I'm going to object to the
9 responsiveness because you didn't ask
10 about different animals, you asked him
11 just about rats.

12 THE WITNESS: I meant to say
13 different strains of rats.

14 MR. POHL: Okay.

15 Q. (By Mr. Andrews) If you see, as Dr. Pour
16 reported, a mammary gland cancer in one rat from a
17 series of test rats, is that scientifically predictive,
18 in your judgment?

19 A. No, it is not predictive. Statistically,
20 unless it were a very unique kind of tumor, it would be
21 overlooked or would not be attributed as having been
22 caused to the compound under study.

23 Q. In the realm of scientific examination and
24 testing that is done in toxicology, if you observe
25 certain changes in test animals, does that end the

1 inquiry as to whether or not the substance being tested
2 caused the changes?

3 A. Scientifically that should not end the inquiry.
4 The purpose of the study is to detect changes or to
5 observe, if you will, the condition of the animals. If
6 unusual changes are observed, then the attempts to
7 correlate it with the exposure or to somehow tie it back
8 to the exposure to a chemical, unless they are clearly
9 evident from results of that experiment, further studies
10 should be done.

11 Q. Going back to what we were talking about with
12 Dr. Pour here, the evidence of one mammary gland cancer
13 may or may not be predictive or causatively related to
14 the substance?

15 A. I would say it is not predictive and would
16 limit the may or may not only to the fact of causative.
17 And that on a probability basis, since it was a single
18 incident, most people would probably not make an attempt
19 to relate it causally to the treatment.

20 Q. Did Dr. Pour make such an attempt in this case,
21 as far as you can tell?

22 A. Dr. Pour merely made the observation that he
23 saw it. He attributed no significance to it.

24 I might add that the last sentence on that
25 paragraph says: "The contract laboratory pathologist

1 diagnosed the presence of mammary tumor metastases in
2 the liver of this rat."

3 So that the contract lab says they saw portions
4 of a mammary tumor which had broken off from that same
5 animal that lodged in the liver of the rat. So their
6 findings would be consistent in that respect.

7 Q. In 1981 did you undertake a review of the
8 literature insofar as it related to the issue of PCBs
9 and carcinogenicity?

10 A. Yes.

11 MR. ANDREWS: Mr. Pohl, will you hand
12 me that?

13 MR. POHL: Yes.

14 MR. ANDREWS: Would you mark that.

15 (EXHIBIT NO. 47 MARKED)

16 Q. (By Mr. Andrews) Dr. Levinskas, let me show
17 you what the reporter has marked as Levinskas Exhibit
18 No. 47, and I'll ask you if you recognize that?

19 A. Yes.

20 Q. What is it?

21 A. It is the report, the review that we discussed
22 earlier, which I wrote.

23 Q. How long did it take you to prepare this
24 report?

25 A. Retrospectively I would say six to --

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1 approximately six months, essentially full time.

2 Q. Let me direct your attention to Page No. 38 of
3 the report, and beginning on that page are there a
4 number of articles listed?

5 A. Yes.

6 Q. What are those articles?

7 A. These are the articles that I read in the
8 preparation of this review.

9 Q. How many articles are listed in this
10 bibliography?

11 A. Eighty-eight.

12 Q. At the time that you made this review in 1981,
13 did you make an attempt to review every published work
14 on the issue of PCBs and its potential carcinogenicity?

15 A. Yes.

16 Q. Generally, if you would, Doctor, describe how
17 you decided to break down the reports that were in
18 existence at that time.

19 A. What I attempted to do was to define what I was
20 undertaking. And I -- with respect to dealing
21 carcinogenicity, the first thing was to look at the
22 chronic or long-term rodent studies. So that I
23 attempted to group by approximate degree of chlorination
24 all the long-term studies dealing with PCBs in mice and
25 separately all the long-term PCBs studies in rats to

1 present a summary of the finding of the individuals, to
2 discuss them, and then try to sum up in a relatively
3 brief manner a technically valid and, I felt, defensible
4 conclusion about them.

5 Q. Now, I take it, then, that the first section of
6 the information in your report is under the heading
7 Chronic Rodent Studies?

8 A. Right.

9 Q. Now, what's the next group of reports or
10 information that you summarized?

11 A. The second section dealt with metabolism
12 studies.

13 Q. All right. And what else did you look at?

14 A. A section that dealt with co-carcinogenesis
15 studies, a section dealing with mutagenicity studies,
16 and then a briefer discussion of epidemiology studies,
17 which I indicated earlier I was relying on the previous
18 review that Dr. Gaffey, our epidemiologist, had done of
19 the human studies.

20 Q. Is Dr. Gaffey with Monsanto?

21 A. Yes.

22 Q. How long have you known Dr. Gaffey?

23 A. Since he joined Monsanto, which is probably on
24 the order of ten years.

25 Q. Do you have confidence in his work?

1 A. Yes.

2 Q. Now, in the section of your paper dealing with
3 chronic rodent studies, did you analyze the results of
4 Dr. Kimbrough that we have been discussing off and on
5 for the last two days?

6 A. Yes.

7 MR. POHL: Object to the form of the
8 question.

9 MR. ANDREWS: On what basis?

10 MR. POHL: We haven't been discussing
11 Dr. Kimbrough's report off and on for two
12 days.

13 MR. ANDREWS: I must be attending a
14 different deposition.

15 MR. POHL: This is only the morning
16 of the second day.

17 Q. (By Mr. Andrews) Okay. Let me rephrase the
18 question.

19 Did you summarize -- or did you analyze
20 Dr. Kimbrough's studies that we have been discussing off
21 and on for the last day and a half?

22 A. Yes.

23 MR. ANDREWS: Does that cure your
24 problem?

25 MR. POHL: Yes.

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1 Q. (By Mr. Andrews) Did you also analyze the IBT
2 studies that we've been discussing?

3 A. Yes. I make reference in this to the earlier
4 report. That was one of the reasons for putting this
5 report together as a -- this is a Monsanto document, so
6 that if people wanted to know -- most of the material in
7 here is available in the public open literature. And
8 this was an attempt to provide a summary of the
9 information to someone who might want to know the basis
10 of statements made here regarding those studies.

11 Q. All right. I understand what you are saying -- is
12 Levinskas Exhibit No. 40 is a summary of the IBT
13 studies?

14 A. Yes.

15 Q. And exhibit -- Levinskas Exhibit No. 47 is a
16 summary of all the available literature as it existed in
17 1981 regarding PCBs?

18 A. Yes.

19 Q. Now, did you analyze studies by -- on rodent
20 studies by authors other than Kimbrough and the IBT
21 studies?

22 A. Yes. Every available study that I could get
23 from the literature is summarized in two tables titled
24 Table One and Two dealing with mice and rats
25 respectively.

1 Q. And I'm not going to hold you to it, Doctor,
2 but just glance at those tables and tell me
3 approximately how many studies you reviewed for this
4 paper that you wrote in 1981.

5 A. There would be ten studies in mice, thirteen in
6 rats.

7 Q. Now, of the basis of those 23 studies that
8 existed in 1981, and the basis of your analyzing those
9 23 studies, including Dr. Kimbrough and including the
10 IBT 1971 study and the re-evaluation study in 1974, did
11 you reach any conclusions as to the scientific merit of
12 those studies?

13 A. I drew two -- if I might read two lines. After
14 looking at the mouse studies I concluded, quote, "Thus
15 it can reasonably be concluded that PCBs are not
16 carcinogenic to mice."

17 And after discussing the rat studies in some
18 detail, I drew the conclusion again, "The weight of the
19 evidence leads to a reasonable conclusion that the
20 carcinogenicity of biphenyls with an average chlorine
21 content of 60 percent has not been established."

22 Q. Mr. Pohl has asked you some questions over the
23 last day and a half about the epidemiology of PCBs in
24 animals. Do you recall those questions generally?

25 A. I'm sorry, epidemiology in animals?

1 Q. Yes, sir.

2 A. We wouldn't --

3 MR. POHL: I didn't ask any questions
4 like that.

5 A. We would not do an epidemiology study in
6 animals.

7 Q. (By Mr. Andrews) Okay.

8 A. We would do the intended question being
9 explored, carcinogenicity in animals or chronic health
10 effects or some such.

11 Q. I may have misused the term, and if I have I-
12 apologize. But do you address epidemiology studies in
13 your report of 1981?

14 A. Epidemiology studies would be limited to
15 humans. And, yes, as I have indicated I have briefly
16 referred to the earlier review done by Dr. Gaffey of our
17 department. And I do quote some of his conclusions to
18 support -- not support, but in this review.

19 Q. Now, Mr. Pohl asked you some questions about
20 Dr. Gaffey's studies. Did you review his studies for
21 the purposes of these papers -- of this paper?

22 A. I looked at some of those studies earlier, and
23 I was aware of some. I did not take as much care with
24 reviewing and assessing the epidemiology studies as I
25 did the animal studies because the animal toxicology

1 studies are my area of expertise. I relied more on
2 Dr. Gaffey's evaluation of the epidemiology studies
3 because that's his area of expertise.

4 Q. And what was the result of Dr. Gaffey's
5 studies, as you reported in the paper in 1981?

6 A. Again reading Dr. Gaffey's quote, it says:
7 "Taken as a whole, the epidemiologic studies find that
8 high occupational exposures to PCBs may cause dermatitis
9 of various kinds, but that there are no other clinical
10 observable effects, including the occurrence of cancer,"
11 end of quote.

12 Q. Are you familiar with any recent writing by
13 Dr. Kimbrough in this area?

14 A. In the current issue of the Annual Review of
15 Toxicology and Pharmacology, she has written a review
16 article on PCBs and PBBs.

17 MR. ANDREWS: I ask the reporter to
18 mark that as the next exhibit, please.

19 (EXHIBIT NO. 48 MARKED)

20 -Q. (By Mr. Andrews) Dr. Levinskas, let me show
21 you what the reporter has marked as Levinskas Exhibit
22 48, and I'll ask you if you recognize that.

23 A. Yes, I do. This is the article by
24 Dr. Kimbrough that I just referred to.

25 Q. And what is the title of the article, please?

1 A. Human Health Effects of Polychlorinated
2 Biphenyls (PCBs) and Polybrominated Biphenyls (PBBs).

3 - Q. Would you -- have you read that article?

4 A. Yes, I have.

5 Q. Can you just tell us, for the benefit of the
6 jury, in general layman's terms what that article is?

7 A. It is a -- an article which briefly reviews
8 animal toxicity data and then at greater length reviews
9 epidemiological, or human studies, occurrences of human
10 exposure, to both class of compounds, the chlorinated
11 biphenyls and the brominated biphenyls. -

12 Q. What was the conclusion of that review
13 undertaken by Dr. Kimbrough and published in that
14 article?

15 A. If I may quote her last -- next to the last
16 paragraph, last sentence, quote, "So far, no significant
17 chronic health effects have been casually associated
18 with exposure to PCBs or PBBs," end of quote.

19 Q. Now, is that the same Dr. Kimbrough that
20 Mr. Pohl has been questioning you about over the last
21 day and a half?

22 A. It's the same individual, yes.

23 Q. Let me change gears with you now,
24 Dr. Levinskas, and ask you just a couple of brief
25 questions about one other exhibit. I show you Levinskas

1 Exhibit No. 37, which Mr. Pohl asked you some questions
2 about yesterday. And just take a glance at that, if you
3 would, and refamiliarize yourself with it.

4 A. Okay.

5 Q. Would you tell the Court, again, what that
6 document is?

7 A. This is a recommendation for an achievement
8 award for Dr. Paul Wright.

9 Q. Did you author that?

10 A. Yes.

11 Q. What was the purpose in your preparing that -
12 report?

13 A. It was to recommend that Paul be -- Dr. Wright
14 be given an achievement award for his efforts on behalf
15 of Monsanto.

16 Q. Now, is that a personnel matter?

17 A. Yes, it is.

18 Q. That's not a scientific paper, is it?

19 A. No, it is not.

20 Q. Mr. Pohl asked you some questions yesterday
21 about this document and about the involvement that
22 Dr. Wright had which forestalled a precipitous action
23 against a certain product by the FDA. Do you recall
24 those questions?

25 A. You mean the questions asked yesterday or the

1 precipitous actions?

2 - Q. No, I'm just trying to get back into the
3 subject again. Do you recall the questions that
4 Mr. Pohl asked you --

5 A. Yes.

6 Q. -- about that yesterday?

7 Now, when you used the phrase "precipitous
8 action," what were you referring to?

9 A. In the simplest term, I would say a rash,
10 thoughtless action.

11 Q. Do scientists deal in precipitous actions? -

12 A. I would have to say regretablely some do. A true
13 scientist should not.

14 Q. What is the problem in doing something
15 precipitously, if you are a scientist?

16 A. The -- from a strictly scientific standpoint,
17 one would want to be able to have some assurance that
18 what was the issue under matter was real, was not a
19 spurious or some erroneous conclusion or judgment
20 somebody had made. That one would have given it some
21 thought, weighed it and tried to figure out what to do
22 about it. And I think the most important part, which is
23 referred to in this thing, is that if I have a question
24 on a product and it's a question, in layman's term, a
25 hot potatoe, and I don't know what to do with it and I

1 throw it at you and you probably won't know what to do
2 with it either. So that the intent would be that to go
3 to an agency and say "Here is our understanding of what
4 we have discovered, what we are concerned about. And
5 these are the steps that we are proposing to deal with
6 that issue." So that the agency has the opportunity.
7 The other thing which probably precedes that is that Dow
8 said -- they felt they had to report these findings,
9 would be to test that feeling to determine whether they
10 do have an obligation, which again will determine how
11 rapidly they would want to go to the agency. -

12 Q. Now, I understand, from Mr. Pohl's questioning,
13 that this involved a product that was manufactured by
14 Dow Chemical; is that correct?

15 A. The product is manufactured by Monsanto. It is
16 used by Dow Chemical, this particular instance, in a
17 specific product.

18 Q. Okay. I was under the misapprehension that
19 both Monsanto and Dow Chemical manufactured the product.
20 Is that incorrect?

21 A. I do not know if Dow manufactured the product.

22 Q. Insofar as reported on that exhibit, who
23 contacted whom about this issue?

24 A. Elmer Wheeler contacted me.

25 Q. No, I'm talking about as between Monsanto and

1 Dow, who contacted whom?

2 A. Oh, Elmer wheeler contacted me to say Dow had
3 contacted him. And so he handed it to me.

4 Q. All right. But as between the two companies,
5 it was Monsanto that initiated the contact?

6 A. Oh, no, Dow initiated the contact. Dow
7 approached Mr. Wheeler.

8 Q. Okay. Now, is there anything improper about
9 scientists at Dow Chemical talking with scientists with
10 Monsanto about an issue like this?

11 A. I would put this in the same general category
12 we've talked about earlier. Dow had a question on a
13 product that they knew Monsanto made. They wanted to
14 discuss -- as I say, we asked them to get more detail.
15 They wanted to discuss this issue with us. They wanted
16 to get some alternate -- opinions or judgments or the
17 experience of people differs, so you would like to have
18 their input. I think that's consistent with the kind of
19 discussions that one would have with a contract lab or
20 that the NCI people have on their own studies.

21 Q. Is there anything improper about scientists
22 wanting to avoid a precipitous action?

23 A. I don't see anything improper.

24 Q. Dr. Levinskas, has the United States Government
25 ever accused Monsanto of falsifying any data or

1 falsifying any reports?

2 A. No.

3 - Q. Have you ever falsified any data on any report?

4 A. No.

5 Q. Have you asked anybody to do that?

6 A. No.

7 MR. ANDREWS: Those are all the
8 questions I have. Thank you very much.

9 MR. POHL: Why don't we take our
10 lunch break. It's after 12:00.

11 VIDEO OPERATOR: Off the record. -
12 (LUNCH RECESS)

13 VIDEO OPERATOR: We've been off the
14 record for a lunch break. We are back on
15 the record. The time is now 1:31 p.m.

16 FURTHER EXAMINATION BY MR. POHL:

17 Q. Dr. Levinskas, in 1974, 1975, did Dr. Wright
18 make a request of IBT that drafts of all final reports
19 be presubmitted to Dr. Wright at Monsanto?

20 A. I do not know.

21 Q. Okay. Dr. Levinskas, you've told us about a
22 study that you've conducted with regard to the adverse
23 health and environmental effects of PCBs. In conducting
24 that study, did you personally interview or examine any
25 human beings who claimed to have been exposed to high

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1 dosages of PCBs?

2 A. I stated it was a review of available
3 literature, so I did not look at individual human beings
4 nor would I since I am not a clinician.

5 Q. Let me focus with you on the Aroclor studies
6 being conducted at IBT for Monsanto. When a two-year
7 chronic rat study is commenced, are there oftentimes
8 preliminary tasks that need to be accomplished before
9 the actual feeding of the animals with the toxic
10 material begins?

11 A. There usually are tasks to be accomplished -
12 before initiation of any study.

13 Q. Sure. Some of those tasks would be the
14 preparation of the protocol that you and I have already
15 discussed, correct?

16 A. Could be, yes.

17 Q. And wouldn't the protocol tell you how many
18 animals to put on the study?

19 A. It may or may not.

20 Q. And the next step, after you decide how many
21 animals you are going to study, would be to go out and
22 buy the animals, correct?

23 A. Yes, or obtain them.

24 Q. Yes. And in your experience, do you know
25 whether IBT purchased its rodents from outside sources

1 or raised those rodents itself?

2 A. They purchased them from outside sources.

3 Q. Okay. And typically the way that would be
4 handled would be that IBT would place an order for a
5 particular strain of rats from a farm that raised the
6 rats, and those rats would be shipped to IBT?

7 A. Yes.

8 Q. And then IBT would have to set up the tests.
9 It would have to put the rats in the appropriate cages,
10 obtain the product from the sponsor of the study, and
11 commence the process of administering the product to the
12 animals, correct?

13 A. Yes.

14 Q. And in a typical two-year rodent study
15 involving a significant number of rodents, how long does
16 it take to accomplish all those tasks?

17 A. Could vary from days to weeks or longer,
18 depending on the availability of each of the components
19 that go into the preparatory phases.

20 Q. And if one of the people at the research
21 laboratory selected by the sponsor had indicated that
22 there ought to be some preliminary testing done to
23 determine acute levels and certain other preliminary
24 testing before the actual commencement of the long-term
25 tests, could that further delay the onset of the feeding

1 of the sponsor's compound to the animals used in the
2 long-term chronic study?

3 - A. Yes.

4 Q. And bottom line, Doctor, you don't have any
5 personal knowledge one way or the other as to the date
6 when IBT commenced its chronic rat studies on the three
7 Aroclor products that we've been talking about?

8 A. The starting day would be in the records from
9 the study that I audited. I do not recall it.

10 Q. Okay. So what you are telling us today is that
11 you can't tell us the date when the two-year Aroclor -
12 studies commenced at IBT; is that correct?

13 A. I cannot.

14 Q. And if you can't tell us the starting date of
15 the studies, then you can't tell us the concluding date
16 of the studies either, can you?

17 MR. ANDREWS: I object to that
18 question. You asked him yesterday what
19 was his best recollection on when those
20 studies started. He said 1969. You
21 didn't have any problem with it then. Now
22 you are coming back here and trying to
23 impeach the man over what you were
24 satisfied with yesterday.

25 MR. POHL: That's your recollection.

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1 Q. (By Mr. Pohl) My question was different than
2 that, Doctor. My question was: Since you can't tell us
3 precisely the starting date of the studies, you can't,
4 then, tell us the conclusion date of the studies either,
5 can you?

6 A. I have stated that I do not know, do not recall
7 the specific date they started; I do not know or recall
8 the specific date they ended.

9 Q. Thank you.

10 Did any customers of Monsanto ever contact you
11 with regard to potential health risks associated with
12 the use of PCB products?

13 A. I cannot recall.

14 Q. If they had contacted you, would you have made
15 a record of it?

16 A. Yes.

17 Q. Dr. Renate Kimbrough, to whom you've previously
18 referred and who conducted test findings effects on
19 first the bladders and then the livers of rats to whom
20 Aroclor had been administered, do you regard her as a
21 qualified scientist?

22 A. I think Dr. Kimbrough is a good, competent,
23 qualified scientist.

24 Q. Are you aware of any deficiencies in the
25 procedures with which she used to test the Aroclor

1 products, either in the 1971 test that had a liver -- a
2 bladder effect, or in the 1974 tests that had a liver
3 effect?

4 A. Other than the published information in her
5 article, I do not know specific details of her studies.
6 But I do accept her conclusions.

7 Q. All right. Other than the two merit awards
8 that you've told us about for which you recommended
9 Dr. Wright while he was employed at Monsanto, did you
10 recommend him for any other merit awards?

11 A. I cannot recall.

12 Q. Okay.

13 Have you ever received any merit awards at
14 Monsanto?

15 A. Yes.

16 Q. Okay. How many?

17 A. Half a dozen, a few more.

18 Q. Typically what would they have been for?

19 A. For general performance as a toxicologist.

20 Q. Would any of them be for some of the same
21 things that you recommended Dr. Wright for?

22 A. They may have been.

23 Q. Okay. What would those examples have been?

24 A. I do not recall the basis for which the awards
25 were granted to me.

1 MR. ANDREWS: Are you talking about
2 the same type of thing or the exact very
3 same thing?

4 MR. POHL: Same type of thing.

5 A. The specific same kind of award, I would have
6 been eligible for in my first few years with Monsanto.
7 I do -- as indicated, do not recall the specific
8 features for which those were granted.

9 Q. (By Mr. Pohl) Have you ever had any personal
10 success in forestalling precipitous government action as
11 it might affect a product produced by Monsanto? -

12 A. I can't -- I do not know.

13 Q. Okay. Do you believe yourself that you've done
14 a particularly good job in any instance that you can
15 recall of forestalling precipitous government action
16 with respect to a product manufactured or sold by
17 Monsanto?

18 A. I have said I do not know that I have
19 forestalled precipitous government action.

20 Q. Have you tried to?

21 A. I have not tried.

22 Q. Okay.

23 You are aware, are you not, that PCBs or the
24 use and manufacture and sale of PCBs was ultimately
25 banned by the government of this country?

1 A. I believe Monsanto announced they withdraw from
2 manufacture prior to the enactment of a ban.

3 - Q. Okay. Are you in agreement with or in
4 disagreement with the government's ban on the
5 manufacture and sale of PCBs?

6 A. I do not feel it's my position to comment or
7 criticize on a government action that's been completed,
8 nor do I think it would be profitable.

9 Q. Okay. So you have no comment one way or the
10 other on the government's actions in banning the
11 manufacture and sale of PCBs?

12 A. That's correct.

13 Q. Would you characterize the government's actions
14 in attempting to ban the manufacture -- manufacture and
15 sale of PCBs as a witch-hunt?

16 A. No.

17 Q. Okay. Now, you indicated in response to some
18 questions by counsel for Monsanto that the conclusion
19 reached in the IBT Aroclor studies as revised in 1975
20 that the Aroclor products were not carcinogenic was
21 accurate, correct?

22 A. I would like to indicate that the conclusion
23 reached in the IBT studies was that the PCB 1242, 1254,
24 and 1260 were not carcinogenic to rats. That conclusion
25 and the report in which it is written were not changed.

1 And that report is dated, if I recall, in 1971.

2 - - There is another set of reports which is
3 additional work over and above that described in those
4 reports which deals with the additional liver sections.
5 Those reports represent additional work and they also
6 concluded that the three Aroclor products were not
7 carcinogenic to rats.

8 Q. Okay. I'm going to have to object to the
9 responsiveness of your answer, Doctor, because that
10 wasn't the question that I asked you.

11 MR. ANDREWS: First of all, before we
12 go on, Doctor, you are entitled to give
13 any kind of answer that you want to and
14 the Judge will decide whether or not it's
15 responsive. But I think it would help us
16 conclude your deposition if you would
17 attempt to simply answer Mr. Pohl's
18 question.

19 Q. (By Mr. Pohl) And the only thing that I was
20 trying to develop is that in response to your
21 attorney's, Monsanto's attorneys questions, you
22 concluded that the finding that's reflected in the
23 reports dated March of 1975 of the Aroclor products >
24 being noncarcinogenic was accurate?

25 A. Yes, I concluded their statement was an

1 accurate portrayal of the findings and the data
2 contained in the report.

3 - Q. Was the prior finding that the Aroclor products
4 were slightly tumorigenic also an accurate finding?

5 A. I would like to distinguish between finding and
6 wording. The underlying data base, the information in
7 both instances was the same. The wording tumorigenic, I
8 believe to be less specific than the wording
9 carcinogenic.

10 MR. POHL: I'd like to make an
11 objection of the responsiveness on the -
12 record.

13 Q. Let me see if I can phrase my question
14 differently. Maybe you'll understand it better.

15 The reported and written finding of slightly
16 tumorigenic, was it also accurate?

17 A. It was accurate but less precise.

18 Q. In each of the reports dated March 24, 1975, on
19 Aroclor products 1254, 1260, and 1242, marked Exhibits
20 44, -45, and 46 to your deposition respectively, the
21 conclusion portion of the summary of each of those
22 reports states that the product is slightly tumorigenic;
23 is that true?

24 MR. ANDREWS: Mr. Pohl, this witness
25 has testified concerning that precise

1 language about a half a dozen times. Now,
2 all this is at this point is an English
3 test. You are asking him if he can read a
4 piece of paper. First of all, the
5 document speaks for itself, and it's
6 repetitious. He's answered the identical
7 question from you at least a half a dozen
8 times. Now, let's conclude this matter
9 and move on to something else.

10 Q. (By Mr. Pohl) Is that what it says in each of
11 the three exhibits that I'm showing you now?

12 A. Yes.

13 Q. All right. And I believe you indicated to your
14 attorney that when the summary page of each of these
15 three reports was changed to read that the product "does
16 not appear to be carcinogenic," it was the usual
17 practice in your industry just to substitute pages?

18 A. Yes.

19 Q. Okay. And so you're telling the court and jury
20 now that you thought that -- that you think that was a
21 proper way to accomplish the change that was made in
22 these reports?

23 A. These reports, the 1971 reports, to the best of
24 my knowledge have not been changed. That's the point I
25 attempted to make earlier.

1 Q. All right. What is the date of these reports,
2 Doctor? You can look on the front, I believe, and find
3 it.

4 A. I'm sorry, I may be confused. The March 24
5 reports --

6 Q. These are 1975 reports, aren't they, Doctor?

7 A. Okay. I was thinking of the other ones.

8 MR. ANDREWS: Doctor, let me just
9 interject something here. We're off to
10 kind of a rough start this afternoon. The
11 lawyers have been arguing, and you are -
12 having a little trouble following the
13 questions. Let's just relax. Please just
14 answer his question, and we will be able
15 to conclude this matter. So if you will
16 just listen to his question carefully and
17 give him a direct and concise response,
18 we'll be able to conclude this matter.

19 THE WITNESS: Okay.

20 -Q. (By Mr. Pohl) I just wanted to follow up on
21 what you said was the acceptable practice.

22 A. Let's start with -- would you please start the
23 question again?

24 Q. Sure. And so the record is not confused, when
25 you used the date 1971, you meant to say 1975?

1 A. Yes.

2 - Q. Okay. Now, I just want to understand that what
3 you're telling me is that, in your opinion, it's
4 appropriate conduct to simply delete the page that says >
5 "slightly tumorigenic" and insert the page that has the
6 language "does not appear to be carcinogenic;" is that
7 correct?

8 A. As with any error, change, or correction, the
9 replacement of the individual page instead of the entire
10 report is acceptable.

11 Q. And when that change was made, the last of the
12 changes which you referred to in your letter of
13 Supplement Number Two, was the report re-executed?

14 MR. ANDREWS: Doctor, he's asking you
15 whether you know whether these gentlemen
16 resigned it. If you know, tell him. If
17 you don't know, simply say you don't know.
18 It's not a complicated question.

19 THE WITNESS: I was thinking of the
20 word re-executed. If you mean
21 re-executed --

22 MR. ANDREWS: No, Doctor, I don't
23 want you to ask yourself questions. Now,
24 let's just --

25 THE WITNESS: I would ask for a

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1 definition of re-executed.

2 - Q. (By Mr. Pohl) Sure. I just mean was the
3 document resigned by the people whose signature purports
4 to be on the document?

5 A. I do not know.

6 Q. Okay.

7 In the document that's dated March 24, 1975
8 that's in the group of exhibits which we've identified
9 as Exhibits 44, 45, and 46, I'm going to show you some
10 handwritten changes. Do you see that?

11 A. Yes.

12 Q. And that's in the summary portion?

13 A. Yes.

14 Q. And that's the page that was ultimately changed
15 to read "does not appear to be carcinogenic," correct?

16 A. Yes.

17 Q. Whose changes are they?

18 A. I do not know the handwriting.

19 Q. Did Monsanto make these changes?

20 -A. I do not know.

21 Q. Do you recognize it as not being your
22 handwriting?

23 A. It is not my handwriting.

24 Q. Okay. Do you have any understanding of whether
25 the changes were made either by an employee of IBT or by

1 an employee of Monsanto?

2 _ A. I do not.

3 - Q. You've indicated in response to one of the
4 questions that your attorney asked you that there was
5 no -- there was never any change in the underlying data
6 of these Aroclor studies; is that correct?

7 A. Yes.

8 Q. All right.

9 A. I said I had never made a request for a change
10 in the underlying data.

11 Q. Yes, I remember you saying that; but I also -
12 thought you said more generally that there wasn't any
13 change to the underlying data?

14 A. As I recall from looking at them, there was
15 not.

16 Q. Okay.

17 But it's -- in terms of validating the actual
18 raw data itself, in terms of confirming that the actual
19 body weights listed were the true body weights of the
20 animal at the time, that the actual amounts of the
21 Aroclor product was fed to each of the test animals,
22 that the animals were properly watered and housed, you
23 didn't make any validation of those facts, did you,
24 Doctor?

25 A. I did not.

1 Q. Okay. So, at least to that extent you couldn't
2 say one way or another whether the IBT tests were valid,
3 to that extent?

4 A. To that extent, I could not.

5 Q. Now, you indicated that there was a National
6 Cancer Institute study that was commenced in 1978 on
7 Aroclor 1254?

8 A. It was reported in a report dated 1978, yes.

9 Q. Has the final report of that study been issued?

10 A. Yes, it has.

11 Q. Okay.

12 Other than the finding that you reported, you
13 told your counsel about, that the Aroclor 1254 was found
14 not carcinogenic in rodents, were there any findings of
15 liver lesions, tumors, problems with the bladder,
16 problems with the mammary glands, porphyria?

17 A. As I recall the report, the external review
18 committee recommended the addition of a comment which
19 was included in the report that in light of the fact
20 that a few tumors were seen in various tissues, Aroclor
21 1254 might be considered a tumor or they should consider
22 the possibility of Aroclor 1254 being a promoter.

23 Q. Promoter of what?

24 A. A promoter of carcinogenicity.

25 Q. Okay. So the NCI study in 1978, while it

1 concluded that Aroclor 1254 was not carcinogenic to
2 rodents, 'did conclude that it could be a promoter of
3 carcinogenicity?

4 A. It did not draw a conclusion that it was a
5 promoter; it suggested that that be considered a
6 possibility.

7 Q. Okay. And when you say that the reports
8 suggested that the Aroclor 1254 might be a promoter of
9 carcinogenicity --

10 MR. ANDREWS: I object to that
11 question. That's not what he said. -
12 Mischaracterizes his last response badly.
13 He said that the peer group suggested that
14 that be looked into. It was not a
15 conclusion or a suggestion in that report.

16 Q. (By Mr. Pohl) Maybe I misunderstood, because I
17 thought you told me that was their suggestion.

18 A. No, I said the review -- the peer review
19 committee added the comment to consider that it might be
20 a promoter.

21 Q. Okay. What is the peer review or the external
22 review committee?

23 A. At that time it was a group of scientists
24 outside the National Cancer Institute who would review
25 every report, the findings and the conclusions in it,

1 and comment on them, critique them back to the National
2 Cancer Institute for their consideration prior to the
3 public release of the reports on the NCI studies.

4 Q. Was the 1978 NCI study limited to determining
5 only whether or not Aroclor 1254 was a carcinogen in
6 rodents?

7 A. The basic purpose of the NCI studies is to
8 determine potential carcinogenicity.

9 Q. Okay. And the purpose was not to report on
10 possible tumors or lesions or other toxic effects in the
11 rodents?

12 A. It would include a reference to tumors. It
13 would include some references to other lesions. It
14 would -- the report formats are varied, but I'm trying
15 to think of that NCI report. It probably had a word
16 summary of the body weights and possibly food
17 consumption but no tabular data relating to such
18 bodyweight or food consumption.

19 Q. Did the NCI report find benign tumors in the
20 rodents exposed to Aroclor 1254?

21 A. I do not specifically recall that.

22 Q. Okay.

23 You said that at Monsanto you had attempted to
24 validate other IBT studies other than the Aroclor >
25 studies. What were those?

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1 A. Predominantly agricultural products.

2 - Q. Such as what, Lasso, Roundup?

3 - A. Lasso, Roundup, other intermediates as well as
4 final products of the agricultural company.

5 Q. Any other products?

6 A. Some smaller number of industrial chemicals.

7 Q. Did you attempt to validate IBT's TCC study?

8 A. No, I did not.

9 Q. Did anybody at Monsanto?

10 A. I do not know.

11 Q. Okay.

12 Now, the report that you prepared in 1981, the
13 summary of which you and I discussed earlier today, was
14 it prepared in anticipation of litigation against
15 Monsanto as a consequence of its manufacture or sale of
16 PCBs?

17 A. I do not know.

18 Q. At the time that you prepared your review of
19 the literature on PCBs, had Monsanto been sued in
20 connection with PCBs?

21 A. I do not know.

22 Q. Counsel for Monsanto asked you a couple
23 questions about Dr. Pour's finding of a mammary cancer
24 in one of the rats which he had -- the slides of which
25 he had reviewed, correct?

1 A. Yes.

2 - Q. And you said that finding was not important
3 enough, or -- I'm sorry, you said that finding was not
4 predictive statistically; is that correct?

5 A. I believe I said it was not statistically
6 significant, would not be considered predictive of
7 potential carcinogenicity.

8 Q. Okay. But the finding of a cancer in the
9 mammary of a rat in connection with Dr. Pour's study was
10 at least important enough for you to report in the study
11 that you wrote in October of 1981, correct? -

12 A. Since the issue was carcinogenicity, I felt
13 that I should mention every reference to
14 carcinogenicity, even though it was unrelated to the
15 liver.

16 Q. Okay.

17 And then at or about the same time you prepared
18 a lengthier document of your findings regarding PCBs
19 which you've identified as Levinskas Exhibit 47?

20 -A. Yes.

21 Q. Okay. And in preparing that paper marked
22 Exhibit 47, you consulted with Dr. Gaffey of Monsanto?

23 A. Yes.

24 Q. And would it be accurate to say that you
25 collaborated with Dr. Gaffey in preparing that paper?

1 A. I asked Dr. Gaffey for the review on human
2 studies which he had recently completed. I did ask him
3 some questions. His participation would not be
4 sufficiently intense or involved to consider it
5 collaboration.

6 Q. Okay.

7 Did Dr. Gaffey concur in your general
8 conclusion that, in your opinion, PCBs did not
9 constitute a human health hazard?

10 A. That is his conclusion that I have repeated in
11 this review.

12 Q. Okay. So what I'm trying to get to, Doctor, is
13 that then you and Dr. Gaffey agree that PCBs are not a
14 human health hazard; is that correct?

15 A. Yes.

16 Q. Okay.

17 Dr. Levinskis, we referred to a document in
18 your deposition dated August 14, 1975, which pertained
19 to your comments on one of the IBT Aroclor studies. Let
20 me hand you a copy of that exhibit while I look for the
21 one that's been numbered by the court reporter.

22 MR. ANDREWS: Can we go off the
23 record just for a minute while he's
24 looking for that?

25 VIDEO OPERATOR: We're off the

1 record.

2 - - (DISCUSSION HELD OFF THE RECORD)

3 - VIDEO OPERATOR: We've been off the
4 record for a brief moment. We're back on
5 the record. The time is now 2:02 p.m.

6 Q. (By Mr. Pohl) Dr. Levinskas, the letter that
7 you're looking at dated August 14, 1975, is Exhibit 25
8 to your deposition, is it not?

9 A. Yes.

10 Q. And I want to be sure I understand the points
11 which you are trying to make in your letter. You refer
12 to some discrepancies or inconsistencies with regard to
13 the identification of some of the rodents used in
14 Monsanto's Aroclor study at IBT; is that correct?

15 A. Yes.

16 Q. Okay.

17 Let's look first at the first page of the
18 letter where you have one, two, three, four, five
19 columns, beginning at the right-hand side with the
20 column that states Male Rat Numbers, Female Rat Numbers.
21 Do you see that?

22 A. Yes.

23 Q. Okay. And the first column after that
24 identifying language is the control column?

25 A. Yes.

1 Q. That's referring to animals that would have
2 been the control group?

3 A. Yes.

4 Q. Those are the animals that in your business
5 were used in the test but to whom the test chemical was
6 not administered; is that correct?

7 A. Yes.

8 Q. Okay. And then you have a series of three
9 columns that's under the general heading Aroclor 1254.
10 Do you see that?

11 A. Yes.

12 Q. That's the product that was the subject of this
13 particular test; is that correct?

14 A. Yes.

15 Q. All right. And the numbers that are used in
16 these columns are the numbers that were assigned to the
17 particular rats; is that correct?

18 A. Yes.

19 Q. Okay.

20 Now, you pointed out to Dr. Calandra, in your
21 letter, that there was some confusion in this numbering,
22 correct?

23 A. Yes.

24 Q. For example, there was some male rats that were
25 shown to be in the control group and yet they were also

1 shown to be in the 1 ppm group and also at the 10 ppm
2 group at the same time; is that correct?

3 - A. Yes.

4 Q. Okay. And below that, under female rats, you
5 expressed that you were confused because two of the
6 animals appeared -- at least two of the animals appeared
7 in more than one experimental group; is that correct?

8 A. Yes.

9 Q. For example, rat No. 3 was purported by IBT to
10 be in the 1 ppm dose level group, the 10 ppm dose level
11 group, as well as the 100 ppm dose level group. Is that
12 correct?

13 A. Yes.

14 Q. And you found it confusing that one rat could
15 have been in three separate dose groups at the same
16 time, correct?

17 A. I asked him to check the numberings -- the
18 numbers to see whether there -- the basis for the
19 inconsistency, yes.

20 Q. And so that the Court and jury will understand
21 it, when a rat is placed in a toxicological study and
22 administered a particular dose, such as 10 ppm, that rat
23 is supposed to stay confined to that particular group;
24 is that correct?

25 A. Yes.

1 Q. And so that same rat couldn't be at the same
2 time- in the 1 ppm dose group and in the 100 ppm dose
3 group, correct?

4 A. It could not.

5 Q. Okay.

6 And then the female control rats which you
7 identify on Page 1 as Nos. 46 through 48, 50, 52, 59,
8 64, and 69, are some of the same numbers you refer to on
9 the second page, are they not?

10 A. Yes.

11 Q. For example, at the top of the second page you
12 have questions concerning animals 46, 47, 48, 50, 52,
13 59, 64, and 66, is that right?

14 A. Yes.

15 Q. And let me see if I understand the concerns
16 that you're having in your letter to Dr. Calandra. You
17 note that animal No. 52, for example, was listed as a
18 control animal but at the same time was shown as a 10
19 parts per million test animal, correct?

20 -A. Yes.

21 Q. And on Page 1 you reflect that IBT showed that
22 rat No. 52 was a female control animal, correct?

23 A. Yes.

24 Q. And on the second page you note that on Page 11
25 of IBT's report rat No. 52 was shown as a 10 parts per

1 million dose group male, correct?

2 A. Yes.

3 - Q. Okay. And then on Page 83 of IBT's report, it
4 was shown as a control group female; is that correct?

5 A. Yes.

6 Q. Okay. And rat No. 64, just to pick one more
7 example, I won't try belabor this. On Page No. 1 of
8 your letter to Dr. Calandra, you note that rat No. 64
9 was designated by IBT as a control female rat; is that
10 correct?

11 A. Yes.

12 Q. On Page 2, you note that that same rat No. 64
13 was listed as a 100 parts per million male rat, correct?

14 A. Yes.

15 Q. And then you go on to note that on Page 83 of
16 IBT's report that same rat No. 64 was shown as a control
17 female?

18 A. Yes.

19 Q. Okay. And then there are other similar
20 instances on this second page of your letter dated
21 August 14, 1975; is that correct?

22 A. Yes.

23 Q. Okay.

24 And you were pointing out, in August of 1975,
25 these deficiencies to Dr. Calandra, correct?

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1 A. As I indicated when I read the report and I
2 looked for consistency, I said, "You indicate these
3 numbers, please investigate." Yes. I pointed them out
4 to him as inconsistencies in the report.

5 Q. And when you pointed out these inconsistencies
6 to Dr. Calandra in August of 1975, how did you address
7 him?

8 A. "Dear Joe."

9 Q. Okay. Is that the way you frequently addressed
10 Dr. Calandra?

11 A. Virtually every toxicologist I know over the
12 years I call by his first name. And the answer is yes,
13 that is the way I frequently addressed Dr. Calandra.

14 Q. In your opinion, Doctor, is the term
15 "slightly" -- does the term "slightly tumorigenic"
16 convey a clear meaning to you?

17 A. It conveys a meaning.

18 Q. And is that meaning that the product to which
19 the animal had been expressed could cause a tumor?

20 A. It indicates it produced tumors, yes.

21 Q. And when it produces tumors, that's an adverse
22 health effect, correct?

23 A. Yes.

24 MR. POHL: Okay. I'll pass the
25 witness.

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1 FURTHER EXAMINATION BY MR. ANDREWS:

2 - Q. Dr. Levinskas, did you have further contact
3 with Dr. Calandra, after August 14, 1975, concerning the
4 matters that you raised in your letter to him of that
5 date?

6 A. I do not specifically recall, but I assume he
7 responded to that letter.

8 Q. Do you recall whether that response was in
9 writing or orally?

10 A. I do not recall.

11 Q. Did Dr. Calandra resolve these inconsistencies
12 to your satisfaction, whether it was orally or in
13 writing?

14 A. Yes. If they were resolved -- and I assume
15 they were resolved. I do not recall the episode
16 specifically. But it would -- I would have been
17 satisfied. It did not surface again as a matter brought
18 to my attention.

19 Q. If the matter had not been resolved, would it
20 have surfaced again?

21 A. I do not know.

22 MR. ANDREWS: That's all I have.

23 Thank you.

24 MR. POHL: Just one quick point on
25 that.

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1 FURTHER EXAMINATION BY MR. POHL:

2 Q. The inconsistencies that you're pointing out to
3 Dr. Calandra in your letter of August 14, 1975, are some
4 several months after the final revised Aroclor report
5 was issued in March of 1975; is that correct?

6 A. The date on that letter is later than the date
7 on the reports you are referring to, yes.

8 Q. And the date on your letter to Dr. Calandra
9 regarding the inconsistencies that you found in the
10 report is about a month after your letter to
11 Dr. Calandra requesting that certain language be used in
12 connection with the Aroclor 1254 report; is that
13 correct?

14 A. Yes.

15 MR. POHL: Pass the witness.

16 A. But this is subsequent communication.

17 Q. (By Mr. Pohl) The point is, your communication
18 regarding the inconsistencies in the Aroclor study is
19 after your communication with Dr. Calandra about making
20 the final changes to the Aroclor report; is that
21 correct?

22 A. Yes. The -- yes.

23 MR. POHL: Thank you. Pass the
24 witness.

25 MR. ANDREWS: I have nothing further.

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1 Thank you.

2 MR. POHL: Thank you, Doctor.

3 VIDEO OPERATOR: This concludes the
4 deposition of Dr. George Levinskas. The
5 time is now 2:13 p.m., and the date is May
6 28th, 1987.

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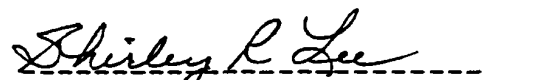
SIGNATURE OF WITNESS

I, GEORGE LEVINSKAS, Ph.D., solemnly swear or affirm, under the pains and penalties of perjury, that the foregoing pages contain a true and correct transcript of the testimony given by me at the time and place stated, with the corrections, if any, and the reasons therefor noted on a separate sheet of paper and attached hereto, and that I am signing this before a Notary Public.


 GEORGE LEVINSKAS, Ph.D.

MISSOURI
 THE STATE OF ~~TEXAS~~
 County of St. Louis

Subscribed and sworn to before me, the undersigned authority, by the said GEORGE LEVINSKAS, Ph.D., on this the 8TH day of JUNE, 1987.


 Notary Public in and for
 the State of ~~Texas~~ Missouri
 SHIRLEY R LEE
 NOTARY PUBLIC STATE OF MISSOURI
 ST. LOUIS CO.
 MY COMMISSION EXP. JUNE 6, 1989
 ISSUED THRU MISSOURI NOTARY ASSOC.

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1 THE STATE OF TEXAS]

2

3

CERTIFICATE

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8

I, Wanda G. Kuhn, a Certified Shorthand Reporter, hereby certify that the foregoing testimony was given before me after the Witness had been first duly sworn.

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I further certify that I prepared this transcript and that the foregoing pages constitute a complete and correct copy of the transcript of the proceedings.

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I further certify that I am neither attorney for, related to, nor employed by any of the parties to the lawsuit in which this deposition was taken; further, I am neither related to nor employed by any attorney of record in this cause, nor do I have a financial interest in the matter.

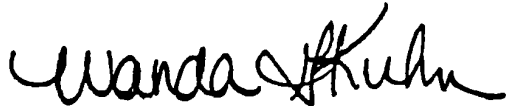
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GIVEN UNDER MY HAND AND SEAL OF OFFICE in Houston, Texas, on this the 30th day of May, 1987.

21

22


Wanda G. Kuhn, CSR, RPR

23

24

25

Certification Number: 2007
Date of Expiration: December 31, 1988
Address: 2900 Smith Street, Suite 104
Houston, Texas 77006
Phone: 713/523-3767

NELL MCCALLUM & ASSOCIATES

CECIL SCOTT, ET AL. VS MONSANTO Co.

UPON READING THE DEPOSITION AND BEFORE SUBSCRIBING THERETO, THE DEPONENT

DR. GEORGE J. LEVIN HAS INDICATED THE FOLLOWING CHANGES SHOULD MADE.

PAGE NO.	LINE NO.	CHANGE TO:	STATEMENT OF REASON FOR CHANGE
39	11	our products, which ----	Properties meaningless in this context
46	19		In checking after the deposition I noted Dr. Himbrough did do mouse feeding studies with Aroclor 1254.
49	24	--- at IBT which had done	Clarification: IBT had done original work. Page 298, line 24 notes no recollection of pathologists who looked at slides in 1971.
64	4	Bladder cancer ----	prior discussion is of bladder cancer
68	24	---- ; one was in Atlanta	transposition — was and one
89	8	---- to these studies	refers to published studies, not those
129	16	--- of Aroclor 1254 does not	of Dr. Gordon
133	4	---- look Drs. Donovan	→ topic is Aroclor 1254 delete and. Donovan Gordon is name.
135	20	the Aroclor test for Aroclor 1254 ----	material is Aroclor 1254
151	4	---- but I did not make them	transposition — did and I
189	3	---- used his scheme for	reference is to scheme of Dr. Squire <u>George J. Levin</u> (Signature of Witness)

6

CECIL SCOTT, ET AL. vs MONSANTO CO.

UPON READING THE DEPOSITION AND BEFORE SUBSCRIBING THERETO, THE DEPONENT
DR. GEORGE J. LEVINSKAS INDICATED THE FOLLOWING CHANGES SHOULD MADE.

PAGE NO.	LINE NO.	CHANGE TO:	STATEMENT OF REASON FOR CHANGE
218	15	were reproducible	reducible meaningless in this context
244	19	I've indicated earlier, ----	grammatical correction
261	8,9	vacuoles	correction of spelling
263	12	data bases to access,	an entry to literature
264	6	by our epidemiologist	refers to one
266	18	naphthalenes ----	correction of spelling
269	7	they are speculations ----	plural
279	25	--- and Aroclor 1242 and ash	topic is Aroclor 1242
283	21	--- slightly tumorigenic, correct	correction of spelling
289	14	the report for what I call ----	call instead of recall
289	17	then see the presentation ---	clarification of phrase
293	19	--- an EPA	correction of spelling
304	5	frequently refer ----	change of tense
308	13	in Lyon ----	correction of spelling
310	11	sets of reports ----	added "sets of" for clarity
318	6	Now, this is an incident ----	believe incident intended
322	22	caused by ----	by instead of to

George J. Levinskas
 (Signature of Witness)

