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IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF TEXAS

BEAUMONT DIVISION

CECIL SCOTT, ET AL]

v.] No. B-84-1103-CA

MONSANTO COMPANY]

VIDEOTAPE DEPOSITION OF

DR. GEORGE LEVINSKAS

VOLUME 1 of 2

May 27, 1987

1300 Post Oak Boulevard

Houston, Texas

Wanda G. Kuhn, Court Reporter

Nell McCallum & Associates Inc.

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HARTOLDMON0022432

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 27, 1987, at 1300 Post Oak Boulevard, Houston, Texas, between the hours of 9:30 a.m. and 5:00 p.m. before Wanda G. Kuhn, CSR No. 2007 and Notary Public in and for the State of Texas.

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COURT REPORTER: For the record, what are your stipulations?

MR. POHL: We've got a stipulation that applies to all the ones I was taking which is basically we'll just do it by the Rules and we allow the witness to read and sign if he wants to and we can use a copy if the original is not filed by the time of trial and that he can sign before any notary if you would like to.

MR. ANDREWS: George, what we're talking about, at the end the deposition the court reporter will type up the questions and answers in a little booklet form. And if you want to, she'll send it to you and you can read it, making whatever corrections you feel are necessary and then sign it before a notary public. I think that will probably be a pretty good idea, so why don't we do that. If you will send the original transcript to me, I will see that he gets it by the most direct way possible, with the further stipulation that if the signed copy is not on file by the time of trial, then they can use a copy of the deposition.

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VIDEO OPERATOR: This video deposition is being taken in Cause No. B-84-1103-CA, and is filed in the United States District Court for the Eastern District of Texas, Beaumont Division. The style of the case is Cecil Scott, et al. versus Monsanto Company.

For identification purposes, the video technician is Sue Morgan of the firm Executive Service Group, and the certified court reporter present today is Wanda Kuhn of the firm Nell McCallum and Associates. Today's date is May 27th, 1987 and the time is approximately 9:31 a.m.

We are here today to take the oral and video deposition of the witness, Dr. George Levinskas; and we are located at 1300 Post Oak Boulevard, Houston, Texas.

We are now ready to begin the deposition. Will counsel please state their appearances for the record.

MR. POHL: My name is Mike Pohl, and I'm one of the attorneys for plaintiffs.

MR. ANDREWS: I'm Steve Andrews. I represent Monsanto.

VIDEO OPERATOR: Will the court reporter please swear in the witness.

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GEORGE J. LEVINSKAS,

being duly sworn, testified as follows:

EXAMINATION BY MR. POHL:

Q. Would you state your full name, please.

A. My name is George J. Levinskas.

Q. Dr. Levinskas, my name is Mike Pohl. And as I indicated a moment ago, I'm one of the attorneys for the plaintiffs in this lawsuit. Before we start the deposition, I'd like to reach a couple of agreements with you. First of all, I will wait until you finish your answers before I commence my next question. And by the same token I'd like you to wait until I finish the question before you start your answer. Can we have that agreement?

A. Yes, sir.

Q. Likewise, I'd like you to agree to answer orally or verbally to each and every question. That is, do not answer by a shrug of the shoulders or a nod of the head. Can we have that agreement?

A. Yes.

Q. Good.

Your deposition is being recorded today and will be typed up in a booklet form, as Mr. Andrews has explained to you before we started. Do you realize that

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the questions and answers that are made a part of your deposition can be read into evidence at the time of trial in this case?

A. Yes.

Q. Even though we are in rather informal surroundings today -- that is, a conference room in my offices -- your testimony is under oath and will have the same force and effect as if you were testifying live before a court and jury today. Do you understand that?

A. Yes, I do.

Q. Okay. I'd like for you to give me full and complete answers to each question that I ask. If there's any question that you feel that you cannot answer because you don't know, simply tell me that you don't know. If there's any question that you do not understand because I speak too fast or because the question is inartfully worded or because there's a distraction in the room or for any other reason, I would appreciate your stopping me at that point and asking me to clarify the matter so that we can be sure that you only respond to those matters that you do understand. Can we have that agreement?

A. Yes.

Q. Good.

Where did you receive your Ph.D.?

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A. University of Rochester.

Q. And what was the subject matter of the degree?

A. Pharmacology.

Q. When did you receive the degree?

A. 1953.

Q. And where did you receive your master's degree?

A. I do not have a master's degree.

Q. Okay. Where did you receive your undergraduate degree?

A. Wesleyan University.

Q. And in what year?

A. 1949.

Q. And what was the subject matter?

A. Chemistry.

Q. After you finished your education, what was your first full-time employment?

A. I was in the Department of Occupational Health at a graduate school of public health at the University of Pittsburgh.

Q. And how long did you work there?

A. Five years.

Q. What did you do in that position?

A. I taught courses in toxicology and did some research in the general field of toxicology.

Q. Okay. What was your next employment?

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A. The American Cyanamid Company.

Q. What was your job with American Cyanamid?

A. I was director of their toxicology laboratory.

Q. And would you give me the inclusive dates of your employment by American Cyanamid?

A. 1953 to 1971. I'm sorry, 1958 to 1971.

Q. Tell me briefly what your specific job responsibilities were at American Cyanamid as director of toxicology.

A. With the exception of the drug division, we're responsible for toxicity testing of all the other products of the company.

Q. At American Cyanamid did you conduct experiments on animals?

A. Yes.

Q. Did it have its own in-house toxicology department where studies were done, for example, on rats, mice, beagle dogs, Leghorn hens?

A. Yes.

Q. Okay. How large a department was that?

A. When I joined the laboratory, there were probably 13, 15 people in it. At its peak height it was probably close to 30 people, and then it was dissolved and gradually went down to zero.

Q. Okay. And is that when you left the employment

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of American Cyanamid?

A. Yes.

Q. Okay. Why was the toxicology laboratory at American Cyanamid dissolved?

A. That was a management decision. I did not participate in it.

Q. In addition to in-house toxicology studies, did American Cyanamid contract with independent laboratories for outside studies?

A. To a limited degree, yes.

Q. Okay. After leaving American Cyanamid in 1971, how were you employed?

A. I went to the Monsanto Company.

Q. Do you remember the month?

A. July, 1971.

Q. What was your position when you were first hired?

A. The formal title was Manager of Product Evaluation.

Q. Who interviewed you?

A. Dr. Emmet Kelly, and Elmer Wheeler, and Dr. John Speziale, and Bill Williams.

Q. What was your job assignment, and what were your duties and responsibilities as manager of product evaluation?

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A. It was to start a program in product evaluation, a review of the status of most of the company's products.

Q. And what would that entail? Would that entail, for example, the toxicological studies?

A. At the time, no.

Q. Okay. Did it eventually?

A. Subsequently I did take over toxicology.

Q. Okay. How did your job as manager of product evaluation relate to the toxicology department at Monsanto or the group doing toxicological studies?

A. We were both members of the same department.

Q. And what is the name of that department?

A. It was the, at that time, the medical department.

Q. All right. So under the medical department, you would have one group for toxicology and another group for product evaluation?

A. Yes.

Q. What other subgroups were there in the medical department?

A. There would have been medicine, industrial hygiene, and I guess you could call nursing a separate group.

Q. And what was the responsibility of the medicine

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subdepartment of the medical department?

A. Physicians concerned with the occupational health of employees.

Q. Did they participate or play any role in the work that you did in evaluating Monsanto products?

A. No direct role.

Q. All right. What about the industrial hygiene subgroup of the medical department? What did they do?

A. They are responsible for assuring the safety of the plant atmospheres -- I say atmosphere, the workplace of Monsanto.

Q. Would that include the contact by workmen with toxic chemicals, whether it be by inhalation, skin contact, or other routes of exposure?

A. It could.

Q. Okay. What involvement did the industrial hygiene subgroup of the medical department have with your product evaluation group?

A. Practically none.

Q. Okay. And the other group was toxicology, correct?

A. There was another toxicologist.

Q. Okay. How many people, in July of 1971, were involved with toxicology in-house for Monsanto?

A. Just one.

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Q. Who?

A. Dr. William Hunt.

Q. At that time were any experiments being run in-house by Monsanto?

A. No.

Q. Were there toxicological experiments being conducted for Monsanto by independent laboratories in the summer of 1971?

A. Yes.

Q. Okay. Who would have been in charge of those?

A. Dr. Hunt.

Q. And with regard to monitoring the studies that were being conducted by Monsanto in the summer of 1971 by independent testing laboratories, who would Dr. Hunt have reported to as to the status or progress of these independent studies?

A. Either Dr. Wheeler -- Dr. Kelly or Elmer Wheeler.

Q. In 1971 who was the head person of the medical department?

A. Dr. Kelly.

Q. Emmet Kelly?

A. Emmet Kelly.

Q. Okay. When did you retire from Monsanto?

A. I am not retired. I'm currently employed by

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Monsanto.

Q. Okay. What is your current title?

A. Senior toxicology consultant.

Q. And what is your job description?

A. Currently I take special assignments. I attempt to provide an overview for consistency in Monsanto operations, and I participate to some degree in training of younger toxicologists.

Q. Now, between 1971 and today, tell me the different positions you've held at Monsanto and the date that you acquired each new position.

A. For practical purposes, while they're changes in title, the functions did not markedly change. I went from manager of product evaluation to manager of environmental assessment and toxicology, to director of environmental assessment and toxicology, and then to the current title, senior toxicology consultant.

Q. When did you first become manager of environmental assessment and toxicology?

A. I don't recall the precise date, but it was probably '72 to '74.

Q. At that point did you assume direct toxicological responsibilities for Monsanto?

A. Yes.

Q. And prior to that time, from 1971 until you

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became manager of environmental assessment and toxicology, you had devoted your attention to product evaluation?

A. Predominantly.

Q. Okay. In product evaluation tell me more specifically what it is that you did.

A. It was a program to look at new products or new uses of existing products to attempt to anticipate potential issues so that toxicity testing could be initiated to investigate those issues.

Q. Did you investigate old products as well as the new ones?

A. No.

Q. Who would have been responsible for testing old or existing Monsanto products, during this same time period?

A. The operating unit which was responsible for the product, I would assume.

Q. What would have been the operating unit for PCBs?

A. It was part of our industrial chemicals company at that time.

Q. Okay. And they would have done their own tests or sponsored their own tests?

A. They would have discussed with the medical

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department the need for or the conduct of tests.

Q. Were there any tests ongoing for PCBs during the time that you were manager of product evaluation, that you knew of?

A. There were some studies on PCBs that were being completed at contract laboratories that I heard of.

Q. What was your involvement with that, if any?

A. Virtually nothing.

Q. Okay. Well, this may be a part of the deposition that we focus on more than other products that you might have dealt with. You say virtually nothing. To the limited extent that you had involvement with ongoing PCB studies, what was that involvement?

A. Direct involvement was zero. In response to questions that might have been put to me, I might have expressed an opinion or something of that nature.

Q. By "express an opinion" did you review slides or read reports that were submitted by independent laboratories to Monsanto?

A. I do not read slides. I have reviewed reports.

Q. Okay. And is the reason that you don't read slides is that you are not a pathologist?

A. That's correct.

Q. Okay. As a toxicologist are you skilled at establishing the protocol for toxicological studies?

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A. Yes.

Q. Okay. And are you skilled at preparing the report of the conclusions of a toxicological study?

A. Yes.

Q. Okay. Very briefly, in layman's terms can you tell the Court and jury that will hear this deposition why a company like Monsanto sponsors toxicological studies of a product like PCBs?

A. It's a desire to be informed of potential health or environmental risks which may be associated with use of a product.

Q. And after Monsanto would receive the results of a toxicology study of one of its products like PCBs, what use would Monsanto make of that information?

A. The information would be summarized and made available to those who inquired about the product.

Q. So that if the government had a question or if one of your users had a question about a particular product, you could then use the information to tell the user what effects that product might have on human beings or the environment?

A. We would tell them what we knew about the product based on the testing which had been done. That's fact.

Q. Okay.

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Was there ever a point in time when you became the person responsible for supervising the work of independent testing laboratories who had contracted with Monsanto to do toxicological tests of Monsanto's products?

A. This began after the death of Dr. Hunt.

Q. Okay. And when was that, sir?

A. The end of '72.

Q. And was Dr. Hunt the person primarily responsible for supervising the work of Industrial Bio-Test Laboratories, Inc. prior to his death?

A. Yes.

Q. Okay. And you assumed that position after Dr. Hunt died?

A. Gradually, yes.

Q. Okay. Well, in the interim between the time that you fully assumed those responsibilities and the time that Dr. Hunt died, who performed that task besides yourself?

A. Elmer Wheeler.

Q. Okay. When was it again that you fully undertook the task of supervising independent laboratories such as Industrial Bio-Test?

A. Probably between the death of Dr. Hunt in '73, '74.

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Q. Okay.

During the deposition when I refer to Industrial Bio-Test Laboratories, Inc., I'll probably use the shorthand rendition of IBT. Just so that we can understand what we're talking about.

A. That's okay.

Q. Fine.

Tell the Court and jury in layman's terms why it is important to have a protocol for a toxicological study.

A. The major reason right now is that it is required by regulations. A protocol is merely an outline of what is proposed to do during a study. While it is important to have a concept and an idea of what is being done, it by no means is the overriding concern.

Q. Is the establishment of the protocol for a toxicological study an important task in connection with the overall completion of a successful toxicological study?

A. I indicated that it's important to have a concept of what one is attempting to accomplish, and this is what the protocol sets out.

Q. And the protocol defines the way that the test is to be conducted, does it not?

A. It depends on the depth of the protocol. It

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may define features in detail or it may be a general outline if it's a relatively routine test performed regularly.

Q. Okay. You're familiar with the PCB tests that were done at IBT, aren't you?

A. Yes, sir.

Q. Okay. And there's a lot of correspondence going back and forth between you and IBT where you were receiving copies of reports and you were writing letters to IBT about the PCB studies, weren't you?

A. There is some correspondence. I would not characterize it as a lot.

Q. Okay. And the tests that were conducted by IBT on PCBs, were they the kind of routine type tests that you are referring to; or are they some that do not fall in the category of being simple routine type studies?

A. Since the tests were started before my time at Monsanto, I would have to assume that they were consistent with standards being practiced by the industry generally.

Q. Okay. So the standards for the Monsanto PCB studies at IBT were consistent with the standards for the industry generally?

A. I believe so.

Q. All right. Now, in setting up the protocol for

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a two-year chronic oral toxicity study on rats, for example, in your experience is that typically the kind of a study that would have a written protocol?

A. Not necessarily.

Q. Okay. What was Monsanto's policy in that regard during the late 1960s and early 1970s?

A. I can't speak to their policy in the late 1960s because I wasn't there.

Q. Okay. You didn't become familiar -- well, was there any change in their policy in -- let me strike that question and ask this:

In familiarizing yourself with your job and your employment, did you discover that there had been any marked change in Monsanto's procedures for establishing the protocol of toxicological tests, say, from 1968 to the summer of 1971?

A. As I assumed responsibility for toxicity testing, I undertook to do it in the manner to which I was accustomed. I did not go back to deliberately compare and see whether my, quote, management style differed or did not differ from past practices.

Q. And when would you have been responsible for establishing the protocols for the studies of Monsanto's products?

A. Probably well into the mid-Seventies.

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Q. Okay. And at the time that you performed that function for Monsanto, was your standard of care in establishing protocols at least consistent with the minimum standards in the industry existing at that time?

A. They were at least consistent and I dare say would have exceeded.

Q. Okay. Let's focus on the way that you thought it proper to establish protocols for studies. Was it your practice in, other than routine or simple studies, to reduce the protocol for the study to writing?

A. We would have a written agreement as to what we were attempting to do and how we would attempt to do it.

Q. Would it be fair to characterize that written agreement as a protocol?

A. Yes.

Q. Would the protocol tell -- I'm sorry, establish, for example, the length of the study?

A. If you mean duration, yes.

Q. The number of animals?

A. Yes.

Q. The dosage of the particular chemical to be administered?

A. Yes.

Q. And the type of evaluation to be made?

A. Yes.

Q. Okay. And those were not the kind of things that you would leave to chance, would they?

A. Those would be stipulated.

Q. All right. And those would be important elements of a toxicological study, would they not?

A. Yes.

Q. Okay. And when you were responsible for supervising toxicological studies, would it be important to you to be sure that the independent testing laboratory followed your protocol?

A. Yes.

Q. Would you have expected a person in charge of an important segment of adhering to a protocol for a particular study to report to you if there were significant deviations from protocol?

A. Yes.

Q. When were the IBT studies of Monsanto's PCB products concluded?

A. I believe it was the latter part of 1971.

Q. And what is your definition of concluded?

A. A final report which accurately reflects the study has been issued.

Q. And your testimony is that the IBT studies of the Aroclor products were concluded in 1971?

A. The animal feeding portions were concluded in

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1971.

Q. But I think you told me just 30 seconds ago that your definition of concluded was that the final reports were submitted; is that correct?

A. That's correct.

Q. So I'm not asking you when the animals had stopped being fed PCBs; I'm asking you when the studies were concluded. I just want to be sure I have an accurate understanding of your answer.

A. I can't give you a precise date. I suspect it was somewhere about '73, '74.

Q. But by your definition, the conclusion of the IBT studies of Monsanto's PCB products would have been concluded whenever the final reports were finally prepared and submitted; is that correct?

A. That's correct.

Q. Okay. Now, when did Paul Wright return to Monsanto's employment?

A. It was the latter part of 1972.

Q. November?

A. That could be the date. I don't recall specifically.

Q. Did you interview him for that job?

A. Yes, I did.

Q. Who made the decision to hire Paul Wright in

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the fall of 1972?

A. I participated in it. And Elmer Wheeler. That's about it.

Q. So you and -- is Elmer Wheeler a Ph.D.?

A. No.

Q. So you and Mr. Wheeler made the decision to hire Paul Wright in 1972?

A. Yes.

Q. At what position was he hired?

A. I believe his title was the manager of product toxicology.

Q. Okay. And during the interview did you discuss his prior employment?

A. I was aware of it.

Q. Were you aware that he was a prior employee of Monsanto?

A. Yes.

Q. And were you aware that he was an employee of IBT?

A. Yes.

Q. And were you aware that he had been responsible for portions of the studies of Monsanto's PCB products while at IBT?

A. No.

Q. Were you aware that Dr. Wright was responsible

for all rats, mice, and dogs on which tests were administered at IBT during the time that Dr. Wright was employed by IBT?

A. No.

Q. What did you understand Dr. Wright to have been doing at IBT while he was employed there?

A. Participating in toxicity tests quite similar to what many other people do in contract laboratories.

Q. Okay. I use the word "independent laboratory," and you use the word "contract laboratory." Do they mean about the same thing?

A. I would think they probably are synonymous.

Q. Okay. What is your understanding of the meaning of the word "independent" in the context of independent laboratory?

A. I have no particular thoughts on it.

Q. Well, would you agree or disagree with the definition of arm's length?

A. I don't know your definition of arm's length.

Q. Well, the common -- I'm not -- well, let me read to you from Webster's how they define independent and see if you agree or disagree with Webster's definition.

"Not looking to others for one's opinions or for guidance in conduct."

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Do you agree or disagree with that definition of independent?

MR. ANDREWS: Let me interpose an objection here. It's my understanding of the witness's testimony that he said the term independent and contract were synonymous. You are certainly allowed to a free range of an exploratory deposition; but I don't see how, in view of that testimony, an analysis of what Webster has to say about independent is very illuminating.

Q. (By Mr. Pohl) Do you agree or disagree with the definition I just read to you for the word "independent"?

THE WITNESS: In light of your comments --

MR. ANDREWS: Well, I'm not instructing you not to answer it. I'm simply voicing my objection as to the relevancy of the inquiry. If you want to ask him some direct questions about the nature of the relationship between Monsanto and any of its contract laboratories, I think that would be a lot

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more germane. But if we want to go down this trail for a while, that's fine.

He's asking you about whether or not you agree with the definition of independent in Webster's dictionary. What that has to do with this inquiry is problematical, but you are free to answer it if you want to.

A. May I ask you to repeat the question?

Q. (By Mr. Pohl) Sure.

A. And may I ask that if there are, as Webster's generally has, two or three definitions, may I get them all at once?

Q. Oh, sure. I'll be happy to show it to you. I was only going to ask you one question and take about a minute. You may look at them. They are highlighted in yellow at the bottom of the page. I just want to be sure we're talking the same language in the deposition because I want to ask you a number of questions about IBT.

A. Well, one of the capitalized phrases under independent is "self-governing," and I think that defines what I call a contract laboratory. Their use of the term independent may be a offsetting of the fact that it is not a Dow or a DuPont or a Carbide or a

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Monsanto laboratory. But I think the capitalized phrase in the definition "self-governed" is appropriate for an independent laboratory.

Q. Okay. So self-governing would be one of the definitions of independent that you would adopt?

A. Yes.

Q. Would you also adopt the definition that appears just before that in the document I've shown you which is "not subject to control by others"?

A. In a financial sense, yes.

Q. Okay. In what sense, then, can an independent testing laboratory be subject to the control of its customers like Monsanto?

A. I don't believe it is subject to control of its customers.

Q. Okay. So the way that it works in your business is that if there's an independent testing laboratory doing work for a customer like Monsanto, they shouldn't be controlled by Monsanto?

A. To the best of my knowledge, they are not controlled by Monsanto or any other company.

Q. All right. And your understanding of the relationship between Monsanto and IBT is that IBT was not in any way controlled by Monsanto; is that correct?

A. That's correct.

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Q. Okay.

MR. POHL: Let's take about a five minute break.

VIDEO OPERATOR: We're off the record.

(RECESS TAKEN)

VIDEO OPERATOR: We've been off the record for a brief moment. We're back on the record. The time is now 10:11 a.m.

Q. (By Mr. Pohl) Dr. Levinskas, why was Paul Wright hired by Monsanto in the fall of 1972?

A. It was decided that I needed assistance in the environmental assessment review program and Paul was suggested by Elmer Wheeler as a good former employee and so he was rehired by Monsanto.

Q. And did Monsanto approach Dr. Wright and ask him to leave his employment at IBT and consider joining Monsanto?

A. I believe so.

Q. Okay. And was the one who first approached Dr. Wright, Elmer Wheeler?

A. Yes.

Q. Okay. And what were the specific job duties of Paul Wright when he was first rehired by Monsanto?

A. It was intended that Paul Wright would work

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with me on the environmental reviews, environmental assessment. Between making an offer to Paul and Paul's appearance at Monsanto, Bill Hunt died. So Paul was used as a utility player and started to take over some of the audit functions that Bill Hunt had had.

Q. And Bill Hunt had been the one who had previously made visits to the premises of IBT to liaison with regard to ongoing Monsanto studies?

A. Yes.

Q. And one of the things that Paul Wright did after he was hired by Monsanto was to coordinate with IBT regarding Monsanto's ongoing studies with that independent testing laboratory?

A. Yes.

Q. Okay. And for how long did Mr. Wright, Dr. Wright continue in that position?

A. Up until approximately mid-1970s when Monsanto opened its own testing laboratory.

Q. Do you recall more precisely when that was?

A. I believe the first people taking up residency in the building were in about August of 1977. And it was later in '77, early '80 that the lab became substantially fully functional.

Q. Okay. Prior to the time that Monsanto's in-house toxicological laboratory became fully

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functional, was Monsanto still contracting with independent laboratories for its toxicological tests?

A. Yes.

Q. Okay. After Monsanto's in-house toxicological laboratory became fully functional, did Monsanto still contract with outside laboratories for toxicological tests?

A. Yes.

Q. When did Monsanto stop contracting with IBT for toxicological tests?

A. I can't give you a specific date as to when the last studies were placed there, but in the latter 1970s.

Q. Okay. Why?

A. For practical purposes, IBT had ceased to exist as a contract laboratory.

Q. Okay. At any time before IBT ceased to exist as a contract laboratory, did Monsanto make a decision to discontinue use of IBT as an independent testing laboratory?

A. I recall no conscious decision on that.

Q. All right. You recall no conscious decision to stop using the services of IBT before IBT went out of business?

A. That's correct.

Q. Okay.

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Now, we talked earlier this morning about toxicology studies generally and about protocol. Once the day-to-day administration of a test is -- toxicological test is completed and once the pathologist has looked at the organs, the viscera, the slides, how long does it typically take in your business, Doctor, for the final report to be prepared in final form?

A. It could be days to months, depending on the length and complexity of the study.

Q. Okay. So the time period in order to put the final written report in place after the work on the study is completed could be a range of days to months?

A. Yes.

Q. Okay. There are a series of deposition notices that were submitted by the plaintiffs in this case, Dr. Levinskas, that ask Monsanto to produce someone at this deposition who could testify to quite a number of things. Generally have you looked at those deposition notices, and are you a fellow that can testify to all the things stated therein?

MR. ANDREWS: Let me interject something here. It's my understanding that there are three deposition notices that may have some applicability to this witness.

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MR. POHL: Right.

MR. ANDREWS: He has seen the deposition notice that is the longest of them having to do with the manager of the toxicology laboratory or the supervisor of the toxicology laboratory. And he has gone over the areas of examination on that notice. It's my understanding that the notice that related to Mr. Wright's personnel file and other matters was the subject of a motion that has not been ruled on. This witness has some knowledge of Mr. Wright and you've already examined him on some aspects of it but I want to make it clear that he is not being proposed as a 30(b)6 witness under that notice. He is being proposed as a 30(b)6 witness under the notice that has to do with the manager of the toxicology laboratory. I also understand that there is an individual notice naming Dr. Levinskas personally; and, of course, he's responding to that notice as well.

MR. POHL: Okay.

Would you mark this as an exhibit to

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the deposition.

(EXHIBIT NO. 1 MARKED)

MR. POHL: And would you mark this as an exhibit.

(EXHIBIT NO. 2 MARKED)

MR. POHL: Would you mark this.

(EXHIBIT NO. 3 MARKED)

MR. POHL: Mark that.

(EXHIBIT NO. 4 MARKED)

MR. POHL: Let's go off the record for a second.

VIDEO OPERATOR: We're off the record.

(DISCUSSION HELD OFF THE RECORD)

VIDEO OPERATOR: Back on the record.

MR. POHL: I'd understood from Joe Blanks that the matter regarding the one notice that y'all had moved to quash had been resolved by agreement and that y'all were going to produce everything that was required in there, including Dr. Wright's personnel file. And the only thing you didn't have to produce was any studies -- or all the studies that were redone on the various products tested by IBT. And there

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is a letter from Joe to Walter generally discussing that. Let's save that until a break, and we can talk about if there's going to be any problem. I'm not sure there is because I got, shortly after that, two or three other folders of documents from y'all and was told either by Bob Hall or by Robert Jones that you produced everything that was requested by these various subpoenas. And if that's the case, I don't have a problem; but if it's the case that you are not going to comply with one of them for some reason or some other documents y'all know about that I'm not getting that we need to talk about, then I need to establish that on the record. Maybe you could check your office, and if there is anything else --

MR. ANDREWS: I'll tell you what I know about it at this point. I think your recitation of the facts is exactly correct, and my only purpose in making the comment on the report a moment ago was that I didn't want you to misunderstand that this witness was being proposed by

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the company as a 30(b)6 witness pursuant to that deposition notice relating to Mr. Wright's personnel file. I think you're right. I think there has been an agreement worked out and the documents called for under that notice have been negotiated and have been transmitted to you in accordance with the agreement between Joe Blanks and Crawford.

MR. POHL: I just wanted to be sure I had all the documents.

Q. (By Mr. Pohl) While Dr. Wright was employed by Monsanto, were you one of the people designated as his supervisor?

A. Yes.

Q. And did you do personnel evaluations of Dr. Wright while he was an employee of Monsanto?

A. Yes.

Q. Okay. Who was it that Dr. Wright reported to directly while he was an employee of Monsanto from '72 forward?

A. From '72 to about '78 he reported to me.

Q. And then after '78?

A. About 1978 he reported to Dr. Edward Paget.

Q. And what is Dr. Edward -- what was Dr. Edward

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Paget's position at Monsanto at that time?

A. He was a member of the medical department, had joined us some months earlier.

Q. And why was Dr. Wright's reporting to you changed so that he was then reporting to Dr. Paget?

A. When the laboratory was established, Paul Wright was the director of the laboratory, the toxicology laboratory. Subsequently Dr. Paget assumed responsibility for the laboratory, and Dr. Wright reported to him.

MR. POHL: Mark that.

(EXHIBIT NO. 5 MARKED)

Q. (By Mr. Pohl) Dr. Levinskas, let me show you a document that's been previously produced by your lawyers in this case from the records of Monsanto marked 019722 and attached to your deposition as Exhibit 5. Let me ask you to read that document and ask you a couple of questions about it after you've read it.

Have you had a chance to review the document?

A. Yes.

Q. The document talks about the medical department's attention to support the business group efforts. As I understand it from the corporate hierarchy that you told us about in the deposition this morning, you were involved in a subgroup in the medical

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department; is that correct?

A. That's correct.

Q. And you were the manager of one of those subgroups?

A. Yes.

Q. Okay. And tell me in your own words what the medical department's attention to supporting the business group's efforts were.

A. I have indicated our function is to develop toxicity data, knowledge of the biological effects of our properties, which can be made available to our employees and to those who inquire about potential effects of those products.

Q. And what is the group that's called the business group? What does that mean to you?

A. In a sense each product or closely related products would have its own business group.

Q. Can you explain that in a little more detail?

A. Well, we have a group that works on detergents, detergent materials, so the detergent business group. And the products that go in and around detergents would be part of that detergents business group.

Q. I see. And so would one of the groups be functional fluids, for example?

A. Functional fluids would be a business group.

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Q. What group at Monsanto -- what group was responsible for PCBs?

A. I believe it was the functional fluids group.

Q. Okay. The memo goes on to talk about PCBs in foods and the environment. The type of tests that you did in your position at Monsanto, did you perform any tests of PCBs in foods?

A. I did not perform tests of PCBs in foods.

Q. Or supervise anyone else who did?

A. I did not supervise those studies.

Q. What did it mean PCBs in foods? What is that referring to?

MR. ANDREWS: May I look at the document just for a second?

MR. POHL: Sure.

MR. ANDREWS: Would you like to look at the document or have it available for your testimony?

THE WITNESS: Well, the statement says that various regulatory agencies, FDA, EPA, NIOSH, National Institute of Occupational Safety and Health, will conduct hearings on various aspects of the PCBs in foods and the environment. It would be fair to assume that those

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agencies were going to conduct a hearing to see whether there was a question or what issues might be involved that could relate to PCB in foods and the environment.

Q. (By Mr. Pohl) Okay. While you were at Monsanto from the summer of 1971 to date, have there been any studies at Monsanto to determine if PCBs exist in foods?

A. I am not aware of specific analyses on food stuffs that Monsanto has done on PCBs.

Q. Okay. The last sentence of the memo 019722 says that: "We will have to do much more epidemiology in the future although clear-cut conclusions are almost impossible."

What epidemiology is the memo referring to, if you know?

A. Well, it says, "Questions from outside Monsanto about the long-term health effects of chemicals used in two Monsanto plants have required organization of epidemiological studies."

The chemicals are not specified, but what it says is that to do an epidemiology study we will have to get records and so forth and then it goes through some of the details of it. And we will have to do more of those in the future. And he says that although

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clear-cut conclusions are almost impossible is that epidemiological studies, by virtue of their limitations, do not yield conclusive results very readily.

Q. Were the epidemiological studies referred to in that memo conducted by Monsanto?

A. I don't know which ones are being referred to. I would -- I don't know if they've been done or not.

Q. Okay. If they had been done, would it have been something that would have been either conducted by or supervised by the medical department for which you worked?

A. They would have been under the medical department, yes.

Q. Do you have any knowledge of such epidemiological studies being done by Monsanto on its workmen who might have been exposed to PCBs?

A. I believe we did a feasibility study to see if it was feasible to do an epidemiological study on PCB workers.

Q. All right. So what Monsanto did was do a study to determine if they should do an epidemiological study of the workmen exposed to PCBs?

MR. ANDREWS: I object to that question. That's not what he just said. He said they did a feasibility study.

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Q. (By Mr. Pohl) Well, what does a feasibility study tell you?

A. If I might paraphrase your question, you said "should." The feasibility study is to see if one could; not should, but could, whether there were adequate -- there was adequate information to give some probability of getting some sort of conclusion.

Q. Okay. And what was the results of Monsanto's feasibility study?

A. I am not sufficiently familiar with the epidemiology work to comment on it.

Q. The memo is addressed to the corporate administrative committee. What is that committee?

A. That is a committee of the Monsanto, overall Monsanto Company. And its membership I do not know at the time, but it would be senior management personnel.

Q. So at least as of September of 1975, matters pertaining to PCBs were being reported to the company's senior management committee?

A. That memo was sent to them, yes.

Q. Was any law --

MR. ANDREWS: Just before we get off that exhibit, it's a small matter but I would like to state for the record that we would object to the use at trial of any

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exhibits that have highlighting, highlighting or interlineations that were put on by the lawyers for the plaintiffs or anybody other than the authors of the memo. I don't know whether you intend to introduce that or not, but I just want to make sure I didn't waive it.

MR. POHL: That's fine. I appreciate that. And there are a number of documents that I've made some highlights on, but copies that are as clear or clearer of this have been produced by Monsanto. And the various lawyers involved in the case, I believe, have reached or dictated the other day something in the record about proving up these various business records of Monsanto. And we intend to use those copies.

Q. (By Mr. Pohl) Was a log kept at Monsanto of visits by Monsanto employees to IBT in connection with the tests that were being conducted by IBT for Monsanto?

A. No.

Q. Okay. Was there a policy or just generally accepted procedure at Monsanto from the time that you were employed in '71 through the time that Monsanto quit

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using IBT as to how frequently Monsanto should visit the facilities of IBT?

A. No.

Q. Okay. Do you have a recollection of how frequently Monsanto would have visited the facilities of IBT?

A. No.

Q. Okay. Do you have a recollection of how frequently IBT representatives would have come to the facilities of Monsanto at St. Louis?

A. No.

Q. Okay. Do you know about trips between employees of Monsanto and employees at IBT to various cities for seminars or to Europe?

A. I know of a few to the U.S. I'm not aware of any to Europe.

Q. Okay.

Dr. Levinskas, there are a number of items of correspondence between Monsanto and IBT before you joined the employment of Monsanto. Did you review those documents at any time during the course of your employment at Monsanto?

A. No.

Q. Okay. In commencing your interaction with IBT did you go back and review, for example, Monsanto's

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correspondence file on its relationships with IBT?

A. No.

Q. Okay

When did you first become involved with the product manufactured by Monsanto which we have referred to in the depositions as PCBs?

A. Again I can't give a precise date but probably in the latter part of 1971.

Q. Okay. And why was it that you became involved with the product known as PCBs?

A. Dr. Kimbrough at the Center for Disease Control had done some studies on PCBs; and since I knew her, I was asked to call her and discuss those studies.

Q. Okay. Was that her -- which of her studies are you referring to now?

A. These are the studies on Aroclor 1260.

Q. All right. She also did some studies on Aroclor 1254?

A. I do not believe she did.

Q. What type of studies did she do on Aroclor 1260?

A. She had done a feeding study in rats for several months and she had found a bladder tumor, the diagnosis of which was uncertain, and she had referred it -- had it reviewed by several people in an attempt to

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confirm the diagnosis of that particular bladder tumor.

Q. And this occurred in 1971?

A. I believe it was the latter part of '71.

Q. Okay. And what function did you perform in conferring with Dr. Kimbrough about her findings?

A. I called her to inquire about more information, what additional information could she provide regarding that particular study in those animals.

Q. Okay. And what was your conclusion after having performed that task as to the existence or nonexistence of bladder tumors in rats fed Monsanto Aroclor 1260?

A. I didn't draw any particular conclusion. I passed the information on to others and let it drop.

Q. Okay. What information did you pass on to others?

A. I can't recall specifically, but I -- I think I summarized the conversations in a couple of memos. I can't recall specifically.

Q. Whatever it is that you found after performing this task you reduced to writing in a memo and forwarded it on to somebody else in the company?

A. Yes.

Q. Okay. And were there further studies done by Dr. Kimbrough on Sherman strain rats on Aroclor 1260?

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A. Yes.

Q. Okay. Did have you any interaction with her regarding these further studies?

A. Not until they were completed.

Q. Would that have been sometime in 1974?

A. That would be about right.

Q. And was that the time that she found liver damage in the rats that she had tested with Aroclor 1260?

A. In the female rats, yes.

Q. Okay. And so in 1971 you knew that Dr. Kimbrough had found bladder problems with rats fed Aroclor 1260, and then in the subsequent study of rats fed Aroclor 1260 she had also found liver problems?

A. Those were statements she had made.

Q. All right. And that's information that you obtained as an employee of Monsanto?

A. Yes.

Q. And you passed that along to your superiors at Monsanto?

A. Yes.

Q. And with regard to the second study to which I've now made reference that was concluded in 1974 by Dr. Kimbrough and found liver damage in rats fed Aroclor 1260, did you also reduce your report of that to

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writing?

A. There were several contacts with Kimbrough regarding that study, and I believe they were all reduced to writing.

Q. Did you have others review her slides?

A. Yes.

Q. Okay. Just like you had done on the bladder study?

A. Just like she did on the bladder study.

Q. Okay. Who had others review the slides pertinent to the liver damage that she observed in the rats fed Aroclor 1260, her or Monsanto?

A. I'm not sure I understand your question. Which slides are you talking about and --

Q. On the liver slides.

A. Are you talking about Dr. Kimbrough's liver sides.

Q. Right.

A. I do not know who she had -- who else she had review them. We did ask them to be reviewed by people from our side.

Q. And who did you -- who were the people that you had review them from your side?

A. We had the two pathologists at IBT who had done the original work for Monsanto on 1260 and a pathologist

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referred to us from the Eppley Institute for Cancer in Omaha, Nebraska.

Q. Was that Dr. Pour?

A. Dr. Pour.

Q. Did you also have Ward Richter review those slides.

A. He was one of the IBT pathologists, yes. I said we had the two IBT pathologists.

Q. And the other was Donovan Gordon?

A. Don Gordon, yes.

Q. Okay. Was it your understanding at the time that Ward Richter was an employee of IBT?

A. I understood he was a consultant pathologist or retained to do pathology work but not a full-time employee.

Q. Okay. So Donovan Gordon was an employed pathologist by IBT, Ward Richter was a consultant to IBT, and then Monsanto retained someone else, and all three of these people reviewed the Kimbrough slides resulting from her study of Aroclor 1260 completed in 1974?

A. Yes.

Q. Okay.

MR. POHL: Would you mark that.

(EXHIBIT NO. 6 MARKED)

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(EXHIBIT NO. 7 MARKED)

VIDEO OPERATOR: Excuse me just a moment. We're off the record.

(DISCUSSION HELD OFF THE RECORD)

VIDEO OPERATOR: This is the continuing deposition of Dr. George Levinskas. The time is 10:51 a.m. We've been off the record for a short break. We are back on the record.

Q. (By Mr. Pohl) Dr. Levinskas, you've had an opportunity to look through Exhibits 6 through 15 during the break, have you not?

A. Yes.

Q. Okay. And you read these documents?

A. Yes.

Q. Okay.

Exhibit No. 6 is a letter dated October 13, 1971 or, more precisely, a memorandum. It has your signature -- it has your name typed at the back, but it has some initials signed to it. Is that your way of signing an interoffice memo?

A. Yes.

Q. Okay. You recognize those initials as being your own?

A. Yes.

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Q. This document, Exhibit No. 6 to your deposition, refers to a conversation with Renate D. Kimbrough, a pathologist at the EPA, regarding bladder tumors in rats fed Aroclor 1260. Is that the conversation that you referred to earlier this morning in your deposition?

A. Yes.

Q. In the first paragraph of the letter it refers to a rat fed Aroclor 1260 that died after six months and was diagnosed as having a malignant anaplastic carcinoma of the bladder. What is that, Doctor?

A. It is a type of cancer. These terms refer to the specific diagnosis.

Q. Okay. What kind of cancer is a malignant anaplastic carcinoma of the bladder?

A. Malignant is one that has a metastasis or is likely to spread. Anaplastic is a reference to the appearance of the sections, the cells in the tissue. And the carcinoma, obviously, is cancer.

Q. All right. So in connection with the 1971 study on Aroclor 1260, one thing that Dr. Kimbrough found and communicated to you was the fact that Aroclor 1260 caused a malignant cancer; is that correct?

A. No. She reported she found a malignant cancer in a rat that had been fed Aroclor, but she did not

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attribute causation to it.

Q. Okay. It notes in your memorandum, Doctor, that Dr. Kimbrough was trying to analyze the Aroclor 1260 sample which she had for impurities. What impurities was she talking about?

A. I do not recall specifically. That was her comment to me.

Q. Okay. Did you do any further investigation to determine if there were any impurities in the Aroclor 1260?

A. No.

Q. Okay. Because you say in your memo, "I indicated that we would try to track down material from the sample that they had received." Did you do that?

A. Yes.

Q. Okay. And what did you find?

A. The sample that she used was from the same lot or batch of material that was used in the Monsanto study at IBT.

Q. That is that the Aroclor 1260 that was being used by Dr. Kimbrough in her test was the same Aroclor 1260 that was being used by IBT in its tests?

A. Yes.

Q. Okay. Now, you go on to state in the last paragraph of the first page that Dr. Kimbrough observed

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porphyria in some rats with both compounds, speaking of the Aroclor. First, what is porphyria, if you know?

A. Porphyria is the excretion of porphyrin in the urine.

Q. What is the significance of a finding of porphyria in rats fed the Aroclor product?

A. There are two separate parts. One is is it related to the Aroclor, and the other is is it significant.

Q. Okay.

A. I don't believe it has any particular significance.

Q. All right. So the finding or the observation by Dr. Kimbrough of porphyria in some of the rats fed the Aroclor products was not a particular significance to you when you wrote your memo in October of 1971?

A. No.

Q. Okay. Is it today?

A. No.

Q. Okay.

MR. ANDREWS: Doctor, let me interject something. Mr. Pohl, of course, is reading from your memo and you have had a chance to review it. But if at any time you would like to look at it again in

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response to his question, I'm sure he'd be happy to look at it -- or let you look at it. Sometimes it's a little bit difficult when the question is -- comes out of the context of a longer memo; and anytime you feel uncomfortable or you would like to look at the entire memo, please ask him.

THE WITNESS: I will.

Q. (By Mr. Pohl) Certainly. And any time you would like to look on with me, please do so.

In the final portion of your memo that you authored on or about October 13, 1971, you state -- let me read this, and you can look on. "I told" and the word is "here." I assume you mean "her," Dr. Kimbrough?

A. Yes.

Q. Okay. So, "I told her that because of the chloracne and liver hazards, there had been medical supervision of the employees."

First of all, whose employees are you referring to?

A. That would be Monsanto employees.

Q. All right. And at least as of October 13, 1971, you were making a written reference to chloracne and liver hazards as they affected employees of Monsanto who were exposed to PCBs; is that correct?

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A. No, I'm saying there had been medical supervision in the past. In the early days of manufacture the literature contains references to the induction of chloracne and liver injury from people working with or around PCBs and other materials.

Q. And you were familiar with that hazard as of October 1971?

A. Yes.

Q. And I take it from what you've just told me, prior to October 1971 you had done some research of the literature to see what hazards might result from exposure to PCBs?

A. I had done some reading in the general literature, yes.

Q. Okay. And when it talks about these hazards, you are referring to hazards to human beings and you are not making reference in this part of your memo to hazards to animals; is that correct?

A. That's correct.

Q. Okay.

You go on to say, after noting chloracne and liver hazards, that you would raise this point with Drs. Kelly and Johnson for their review. Did you do so?

A. The liver and chloracne hazards were a reference to older conditions. I mentioned there had

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been those conditions reported in the early literature. The thing I was going to mention to Kelly and Johnson was the porphyria which she had -- I had referred to earlier.

Q. Okay. Did you mention the porphyria to Drs. Kelly and Johnson?

A. Yes.

Q. And were they both employees of Monsanto?

A. Yes.

Q. What was their comment to you when you raised the porphyria finding by Dr. Kimbrough with them?

A. I do not recall any particular reaction to it.

Q. Do you recall any written exchange pertaining to your communication of Dr. Kimbrough's findings of porphyria to Drs. Kelly and Johnson?

A. No.

Q. Okay.

Did anyone at Monsanto do any further work or any further investigation as a consequence of Dr. Kimbrough's finding of porphyria in some rats fed Aroclor products?

A. I do not know.

Q. You don't know of any?

A. I do not know if any work was done.

Q. Okay. Either by yourself or by Drs. Kelly or

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Johnson?

A. I would not do work on people. That was a medical issue, and I was not participating in it.

Q. Okay. So as to the part -- as to the area of responsibility which you had, which was tests on animals --

A. Yes.

Q. -- you didn't do or sponsor any studies to further determine whether or not Aroclor products caused porphyria in rats?

A. That's correct.

Q. Okay. And you don't know whether or not the people responsible for human studies or for epidemiology did any follow-up work to see if exposure to Aroclor products might cause porphyria in human beings?

A. I do not.

Q. Okay.

And you mentioned several times in your answers to my questions that the chloracne and liver -- the chloracne and the liver hazards were something that had been experienced in the past. Do you recall that?

A. Yes.

Q. All right. And are you trying to imply by that that PCBs didn't cause that type of problem in 1971, if human beings were exposed to it?

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A. The literature predating 1971 is very confused on this subject. Some textbooks and references indicate that PCBs did produce chloracne and liver injury. Others indicate that they were mixtures of polychlorinated biphenyls and chlorinated naphthalenes and that the injury in chloracne may have been due to the chlorinated naphthalenes which are notorious for producing chloracne. So, depending on which textbook you read and how that author excerpted the literature, you could get a rather -- one of two conclusions.

Q. In your studies of the PCBs which you commenced, you said, sometime in 1971, which included a review of the literature, interchanges with Dr. Kimbrough and other people you've already mentioned, what did you conclude as to whether or not PCBs would cause chloracne and liver hazards if human beings were exposed to that product?

A. Under extreme conditions of exposure, PCBs can produce chloracne.

Q. Okay. And what about the liver hazards that you make reference to in your memo of October 13, '71, what were your conclusions in that regard?

A. Again, under severe exposure conditions, there could be liver injury.

Q. Okay. What type of liver injury could human

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beings sustain under situations of severe exposure?

A. I'm not a good enough clinician to give a very good description.

Q. Just in layman's terms so the Court and jury would understand.

A. I would think they would have digestive disturbances, pain in the region of the liver, would probably lose weight.

Q. Okay.

In your studies and in your discussions with people such as Dr. Kimbrough and others and in your review of the literature, did you uncover any other hazards to human beings that might result from severe exposure to PCBs?

A. The -- basically that those directed to the liver, the chloracne, the skin, other manifestations of skin eruptions, swelling of the eyelids, distortion of surface of skin, fingernail distortion. But things that generally related to the surface of the body or the body's surfaces, I don't believe there are any other demonstrated consistent effects.

Q. These damages to the skin, to the surface of the body that could be caused by the severe exposure to PCBs, would that include skin cancer?

A. No.

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Q. Okay. What, more specifically, would it include?

A. There's a blackening of fingernails, fingernails turn inward, loss of facial hair, head hair, body hair. Apart from chloracne, a general out -- breakout of a rash, generalized skin rash, swelling of the eyelids, probably some difficulty breathing because of swelling of the nasal tissues, pigmentation, darkening of the skin. Most of them are that's related to the skin surface.

Q. And this was information that was available to you and knowledge that was available to you in the fall of 1971?

A. No. The latter information on the skin effects was not available in 1971.

Q. The latter part of your answer that pertains to the skin effects, when did that first become known to you?

A. Following the Yusho incident in Japan.

Q. Okay. That was in 1968?

A. The information began filtering back into English, it was in the mid-Seventies.

Q. Okay. And prior to Monsanto having received information on the Yusho and, I guess, the Yuchang incident as well, had Monsanto done any long-term,

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chronic studies on PCBs?

A. The -- virtually all of the toxicity testing was nearing completion when I joined Monsanto Company.

Q. Okay. And in your interaction with IBT, did you ever determine when those tests had been commenced?

A. A series of tests was started probably in the mid to latter 1960s.

Q. Okay. Did you do any investigation or supervision to make sure that the tests conducted by IBT of Monsanto's Aroclor products had been done strictly in accordance with the protocol established by Monsanto and IBT for the conduction of those tests?

A. No.

Q. Okay. Did you ever discuss that matter with Dr. Wright when he was under your direct supervision?

A. No.

Q. Okay. Did you ever retest any of the Aroclor products that had been tested by IBT?

A. No.

Q. Okay. In your letter to Morino L. Keplinger dated October 28, 1971, which I've previously shown to you and am showing to you again now, you say, "After Don has finished his evaluation of the bladder sections," you are talking about the bladder sections in the rats fed the Aroclor 1260?

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A. Yes.

Q. And who is Don?

A. That would be Don Gordon.

Q. Okay. Why did you send a copy of your memorandum to Dr. Keplinger at IBT, to William Papageorge, and Elmer Wheeler?

A. William Papageorge was the product manager for the PCBs, and Elmer Wheeler was my immediate supervisor.

Q. Now, the -- what was it about Dr. Kimbrough's findings in 1971 of bladder cancers in rats that had been fed Aroclor 1260 that would cause you to make a special trip to see her and to review her slides and to take various people with you in performing that task?

MR. ANDREWS: Let me interject and make an objection here. I think that's a mischaracterization of Dr. Kimbrough's study. She found a bladder cancer in a rat. The witness has already testified that she established no causal relation. And by the phraseology of your question, you have mischaracterized what he's earlier testified to. She did not find cancers.

Q. (By Mr. Pohl) Well, let me rephrase the question, because I don't want to misstate it in any

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way.

What was it about the finding of Dr. Kimbrough that a rat that had been fed Aroclor 1260 developed a liver cancer that caused you to travel to see her and bring other people with you?

A. One was to determine, or to be informed, as to what it is that she was talking about and to review our slides to see whether or not a similar condition was present in the studies that we had done.

Q. And by "the studies that we had done," are you referring to the studies that Monsanto had sponsored with IBT?

A. Yes.

Q. Okay. And did Monsanto conduct that comparison between the results of Dr. Kimbrough's study in 1971 and IBT studies on the same product?

A. We did not.

Q. Why not?

A. My recollection is that I flew to Atlanta that day in the winter, and it was a bad day. We circled the airport. We landed late. Atlanta was icebound. I called Dr. Kimbrough. She said nobody else had showed up. I was welcome to come to the laboratory if I wished. I then proceeded to make reservations and to fly back to St. Louis, and I got home 12 or 14 hours

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after I left with nothing accomplished.

Q. All right. So the bottom line is that there was never a comparison made between Dr. Kimbrough's finding of a bladder cancer in one rat that had been fed Aroclor 1260 and any test conducted for Monsanto by IBT on the same product?

A. That's correct.

Q. Okay. And no one else at Monsanto, after you wrote your interoffice memo dated October 13, 1971, followed up on the issue of the bladder cancer independently of you?

A. Not -- I don't recall any follow-up on this, as a result of that aborted trip.

Q. Now, we talked a little bit earlier this morning about another study conducted by Dr. Kimbrough that was concluded sometime in 1974. Do you recall that?

A. Yes.

Q. Okay. And you had various communications with Dr. Kimbrough about that study, did you not?

A. I probably did, yes.

Q. Who is Robert A. Squire?

A. Dr. Squire is a pathologist who at the time that memo was written was with the National Cancer Institute.

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Q. Did he work with Dr. Kimbrough in her analysis of the rats fed Aroclor 1260?

A. I believe he was one of the principal sources she consulted in reaching her diagnoses.

Q. And the study that was concluded in 1974 dealt with the liver in the rats who had been fed the Aroclor 1260?

A. Right. Female rats and the livers.

Q. And what were Dr. Kimbrough's findings that resulted from her feeding of Aroclor 1260 to female rats?

A. She concluded that 1260 produced -- when fed at the high dosage she used, produced liver cancers in female rats.

Q. Okay. And that result was communicated to Monsanto?

A. Yes.

Q. Okay. And the task of investigating that was assigned to you?

A. I was a participant in the attempt to resolve or to understand the differences in the two findings.

Q. Okay. And who was in charge of that effort to resolve the two findings at Monsanto?

A. I suspect the ultimate responsibility rested with the department head.

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Q. Elmer Wheeler?

A. No, Dr. Kelly at that time.

Q. And were you the person who was in charge of that investigation on a day-to-day basis?

A. I would not characterize it a day-to-day basis, and I participated in a -- in some of it.

Q. Is one of the things that you did was have Donovan Gordon and Ward Richter review Dr. Kimbrough's and Dr. Squire's slides?

A. Yes.

Q. Did you accompany them on that review?

A. Yes.

Q. Did you actually look at the slides yourself?

A. No.

Q. Okay. Is that because you're not a pathologist, and they are?

A. That's correct.

Q. Okay. And did you also discuss Dr. Kimbrough's findings directly with her yourself?

A. Yes.

Q. Okay. Did you talk to her on the phone or in person prior to the time that you actually went on the trip wherein the slides were examined by Drs. Richter and Gordon?

A. Well, I undoubtedly talked to her to arrange

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the meeting. And the intent was that they would look at the slides Monsanto had from its studies at IBT, and the IBT pathologists would look at the slides that Dr. Kimbrough had.

Q. And what was the conclusion of the IBT pathologists, Drs. Gordon and Richter, upon their review of Dr. Kimbrough's slides?

A. In general, the lesions that they described in Dr. Kimbrough's slides were more advanced; and they concurred that those were carcinomas. The lesions that they had seen in the Monsanto-sponsored studies were less advanced, and they did not regard them as carcinomas.

Q. Okay. So in the rats fed Aroclor 1260 -- or fed Aroclor by Dr. Kimbrough, the liver damage was more advanced than in those rats fed the same Aroclor product by IBT?

A. Yes.

Q. Okay. Now, what explanations did you consider to explain that variance?

A. They used a different strain of rat, so the source and origin of the animal was different. The housing conditions, while superficially similar, would differ. One was in Chicago; was one in Atlanta. Despite air conditioning and such, there are variations.

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The sources of feed and the contaminants or other materials; the composition of the feed could vary. The water supply is different. The subtleties of handling the animals day in and day out and so forth could vary. So there are a variety of potential distinguishing features.

Q. Did you consider all those in trying to reconcile the differences between the two studies?

A. We were trying to understand why there was a difference in the two findings and could we come up with some rational explanation for them.

Q. And after considering these various factors, what rational explanation did you come up with, if any?

A. The fact is that we have two sets of information which are at variance with each other.

Q. So they are just two separate and distinct findings based --

A. Two pieces of information.

Q. That are inconsistent?

A. Yes.

Q. Okay. Now, let me ask you some questions about that. How long had Dr. Kimbrough's rats been fed Monsanto's Aroclor product, in connection with this 1974 study?

A. I believe they were fed just under two years,

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something like 21, 23 months, and then held for about a month or two and then sacrificed.

Q. Okay. So it would have been approximately a 24-month study?

A. For practical purposes, they were comparable.

Q. And what was the supposed duration of the IBT study of its rats fed the same Aroclor product?

A. Twenty-four months.

Q. Okay.

I think you indicated a moment ago that the subtleties and the handling of the animals, the source of their feed and their housing could make a difference in the result of the test?

A. Yes.

Q. And so that if two different groups of rats were fed the same Aroclor products but one group was handled differently than the other and one was housed differently than the other and one received watering differently than the other, that could result in a variance?

A. Those are potential variants.

Q. Okay. Now, is one of the goals of a 24-month chronic rat study to try to keep the rats on the study for the full 24 months?

A. Yes.

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Q. Okay. And is one of the reasons that you do that is because that will expose the rodents to the product being tested for the substantial balance of their natural life?

A. Yes.

Q. Okay. What would be the effect on the exposure of the animal to the product if one or more of the rats had not been on the study for the full term? Let's assume that some were only on the study for half as long as the others. They were just accidentally started late. How would that affect the results of one of the studies?

A. It's difficult to speculate, because depending on the postulates and what the outcome of the study is, you could draw a variety of scenarios.

Q. Sure. Would one thing, one variable that is logical be that if some of the animals were exposed for a considerably shorter time than other animals on the same study, then the effects of the chemical on the animals exposed for the shorter term might be less?

A. If there is a correlation, a premise, between dose and response, if the dose is smaller the response should be lesser.

Q. Okay. And from all the studies that you've told us about that you've done in your examination, PCBs

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are the type of product that accumulate in the system, are they not?

A. Yes.

Q. And that includes rats?

A. Yes.

Q. Okay. So the more a rat is fed or the longer a rat is fed PCBs, the more that product will accumulate in the system of the rat?

A. At certain low doses, that is correct.

Q. And why is that not correct at high doses?

A. A sufficiently high dose would kill the animal. He might have less accumulation than he did at the longer -- exposure at a low dose.

Q. Let's assume it's not at a level high enough to quickly kill the animal, but the animal could theoretically survive the full 24 months, if fed the product. Are PCBs the kind of product that would then accumulate in the body of the animal being tested?

A. Yes, but I don't know that they would accumulate indefinitely.

Q. Okay. At some point, they would reach a maximum level?

A. One would anticipate that.

Q. Did you ever find out what that maximum level was in rats?

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A. No.

Q. Okay. So far as you know, then, that rats fed low to moderate doses of Monsanto's Aroclor products would accumulate that product in their bodies over time?

A. Yes.

Q. And so, then, it's logical to conclude that those animals exposed to the Aroclor products for a shortened term, as compared to other animals, would have less of a -- could have less of the product accumulated in their bodies?

A. Yes.

Q. Okay. And that could affect the results of the tests, when those same animals were studied at the end of the test; is that correct?

A. There's a supposition, I believe, in that statement that the accumulation in fat is somehow correlated with or related to other effects; and I'm not sure that is a correct premise.

Q. Dr. Levinskas, if you were conducting a toxicological study of rats and it was to be a study of Aroclor products and extend for 24 months, how long would you want your rats to be on the study?

A. If I intended 24 months, it would be 24 months.

Q. Are you telling me you would find it acceptable if some of the rats were started three, six, eight

months late?

A. I am not saying I find that acceptable, but I don't know where your premise is coming from.

Q. All right. Would you agree or disagree with the statement that if some of the rats on an Aroclor study are started late, that that will or at least could have an effect on the results of their exposure to the Aroclor product?

A. If animals are started late, their response could be expected to be less severe than those started earlier, yes.

Q. Okay. And that could be one explanation, theoretically, between the study done by Dr. Kimbrough and the study conducted for Monsanto by IBT, could it not?

A. I have no indication that that is a condition.

Q. Let's assume there's depositions already that testified that rats generally were started late at IBT and they were interchanged randomly and at irregular times. Let's just assume that. If that occurred with Monsanto's Aroclor studies, that could be one explanation for a variance between the findings of Dr. Kimbrough and the findings of IBT on the same Aroclor product, could it not?

MR. ANDREWS: Before you answer that

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question, Doctor, I'm going to object to it on the basis that it calls for rank speculation. Lawsuits are based on a preponderance of the evidence. It's not could, may be, if.

Second of all, the hypothetical includes evidence that's not in the record before this witness; and any response he could possibly give to it would be rank speculation and be at the level of guessing. It's not probative and it's not relevant and I object to it.

Q. (By Mr. Pohl) I'm just asking you to assume those facts for purposes of this question, Doctor. Just assume them to be true for the question. And what is your answer?

A. Well, obviously, an animal fed one day with an Aroclor would have a different response than an animal fed for two years with Aroclor. I think that's self-evident.

Q. All right. And an animal fed Aroclor for six months or nine months as opposed to an animal fed the same product for 24 months might have a different effect on his body as a consequence of the exposure to that same product; is that correct?

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A. The evidence of the effect would be less strong.

Q. Okay. If animals made part of the IBT study of the same Aroclor products tested by Dr. Kimbrough were administered the dosage of the Aroclor for a shorter time than the rats tested by Dr. Kimbrough, that could then be one explanation for the difference in the findings between Dr. Kimbrough on the one hand and IBT on the other?

A. In addition to the other possibilities I mentioned, that would be a possibility.

Q. Okay. Now, how would the housing of the rats used to test the Aroclor products possibly affect the outcome of the test?

A. I can't give a specific answer; but there are indications in the literature that the position on the cage, whether you feed them ad libitum, let them eat to their freest extent, or whether you restrict their food intake, that these conditions on occasion have been reported to influence the outcome of studies.

Q. So if you're going to do a proper toxicological study and be as careful as you can be, you would want to see that the housing and feeding of the animals was controlled?

A. Yes.

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Q. And you would want to see to it that it was done in a proper and careful manner?

A. It was adequate for its purpose.

Q. Okay. And if you're reviewing a toxicological study that was done by somebody on a product that you were involved with and animals had been substituted during the course of the study and that fact had not been recorded in writing, if some of the animals' data, such as body weight data, feeding data, or other data, had not been accurately recorded and instances had been fabricated and you learned that in connection with your study, would you rely on the validity of that study, as a toxicologist?

A. The confidence I have in the data would depend on the quality from which it came, yes.

Q. Well, to put it more simply, Doctor, if you've learned of facts which would indicate to you that the validity of a particular toxicological study was jeopardized, would you rely on that study?

A. I would want to confirm the information that I had.

Q. Well, just assume with me for purposes of this question that you had confirmed that there were events which had occurred in connection with one of your studies that jeopardized that study's validity, should

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you as a professional toxicologist rely on that study whose results had been jeopardized?

MR. ANDREWS: I object to that question because of the use of the term "jeopardize." It's vague; it's ambiguous. The witness has already testified in response to this question or similar questions that it would depend on a lot of other factors, including what the test was designed to look for. I don't think it's proper to ask him a question in such vague and ambiguous terms and it's globally presented and I object to it.

A. Since we're dealing with evaluations and assessment of information, I think one would have to take into account the totality of the information available to properly assess the results of that particular study.

Q. (By Mr. Pohl) Okay. I just want to understand -- I want the Court and jury to be able to understand, you don't know, then, today or can't answer more directly whether you would rely on a study whose validity had been jeopardized?

A. You would have to define whose validity had been jeopardized.

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Q. Okay. So without any further explanation, you are not able to answer the question?

A. No.

MR. ANDREWS: Let's take about a ten minute break, if we might, right here.

MR. POHL: Sure.

VIDEO OPERATOR: We're off the record.

(RECESS TAKEN)

VIDEO OPERATOR: We've been off the record for a short break. We're back on the record. It's 11:45 a.m.

Q. (By Mr. Pohl) Dr. Levinskas, let me show you Exhibit 10 to your deposition. And I've handed you this document before to look at. It refers to a -- you're referred to in the first sentence, second line of the memorandum, are you not?

A. Yes.

Q. Okay. And it refers to a conversation between you and Dr. Kimbrough?

A. Yes.

Q. Which study is that referring to?

A. The reference is to the NCI study on Aroclor 1254, and she is saying that she expressed the belief that the National Cancer Institute had recently

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contracted out a study on that material.

Q. And was NCI one of Monsanto's customers for the purchase of Aroclor products?

A. I do not know the customer list.

Q. Okay. Well, did NCI use PCB products for its carbonless paper?

A. I do not know whether they did or not.

Q. Okay.

It talks, in the last line of the letter where it said as follows: "If this is the study he is referring to, it could explain why we had not picked it up sooner."

What was the procedure at Monsanto in 1974, while you were employed there, to pick up such studies that were being conducted by people other than Monsanto and Monsanto's independent or contract laboratories?

A. One would be looking at the -- keeping abreast of the literature, published technical literature. The other, which are studies that the National Cancer Institute was doing.

Q. Why did Monsanto want to be aware of anyone who was testing one of its Aroclor products?

A. To avoid duplication of effort, to be aware of what others were doing, what was happening.

Q. And would Monsanto attempt to monitor the

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results of the other studies that were being conducted on Aroclor products?

A. If by "monitor," you mean keep track of, yes.

Q. And would Monsanto audit or evaluate those studies if the results were not in agreement with the results that Monsanto was achieving based upon its own studies or studies conducted for it by others?

A. Monsanto would find it very -- would have no role in studies being conducted by others.

Q. Well, for example, in two studies we've already talked about today by Renate Kimbrough, you and others went and reviewed or critiqued her studies, correct?

A. We sought further information, additional information from her.

Q. Well, you also had people other than Dr. Kimbrough look at her slides to see if they had any disagreement with her findings; isn't that correct?

A. Dr. Kimbrough had sent her slides to other people for review to be sure that -- or to get confirmation or further amplification of what she thought she saw in her slides, and we did the same thing. We participated in that review.

Q. Okay. She, for example, on her 1974 studies, sent copies of the slides to Dr. Squire?

A. Yes.

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Q. Okay. And then Monsanto had Drs. Gordon and Richter go with you to look at those same slides?

A. Yes.

Q. Correct? And then you wrote a report of what findings were made by Dr. Gordon and Dr. Richter, based upon their independent review of Dr. Kimbrough's slides?

A. Yes.

Q. Okay. And what was Monsanto's purpose or goal in so analyzing the findings of those other people who conducted tests of Monsanto's PCB products?

A. It was an attempt to be informed of the possible biological effects of the compound.

Q. So the company would try to gather as much information about any hazards that might be associated with PCBs so that it would be as knowledgeable as possible about the effects of PCBs?

A. Yes.

Q. Okay. And once that information was gathered by Monsanto, what did it do with it?

A. As I indicated earlier, we would summarize it, have it available for our own information and for those who made inquiries about it.

Q. And when Monsanto would provide that information to some other party -- for example, the EPA or the FDA -- should Monsanto have provided a complete

HARTOLDMON0022513

summary of the information which it had gathered to that inquiring party?

A. Monsanto did provide a complete summary of what it knew.

Q. And that is the findings that were adverse to Monsanto's position as well as the findings that were in support of whatever position Monsanto had with regard to its PCB products?

A. Yes.

Q. Okay.

There is an initial at the bottom of Exhibit 10, W. R. Is that William Richard?

A. I do not know if it's William Richard.

Q. Whose handwriting is at the bottom of that memorandum?

A. I really don't -- don't think I can identify it. It looks so stereotyped when it's photocopied, I can't -- I really can't identify it.

Q. Okay. And some of the people that received this information, as communicated by Exhibit 10 to your deposition, are Ralph Munch?

A. Yes, I recognize that name.

Q. Who is he?

A. He was a scientist, a technical person in the functional fluids area.

HARTOLDMON0022514

Q. At Monsanto?

A. At Monsanto.

Q. And who is Mr Gossage?

A. Mr. Gossage is -- is in the business side of the -- at that time would have been the business side of the functional fluid as distinct from the scientists.

Q. At Monsanto?

A. At Monsanto.

Q. And then we've already identified Elmer Wheeler and William Papageorge as being employees of Monsanto?

A. Yes.

Q. And who is Frederick Johannsen?

A. Dr. Johannsen is a toxicologist at Monsanto.

Q. Did he report to you?

A. Yes.

Q. Okay. And it says at the bottom of Johannsen's memorandum, "Our fate may be decided one way or another in six months. I hope your feelings that it is not carcinogenic are born out!", exclamation mark.

Is that referring to the Aroclor product to which the memo makes reference?

A. Since I did not write it, I can guess as well as you can, I guess.

MR. ANDREWS: Well, Dr. Levinskas, I don't want you to guess. Mr. Pohl does

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not want you to guess. Apparently, he's reading to you from some handwritten notations on Exhibit 10, which you have told him that you don't know who wrote it or you don't recognize the handwriting. I don't want you to guess what somebody else said, the identity of whom you don't even know.

Q. (By Mr. Pohl) Did you receive a copy of the memo?

A. I probably did, though there is no indication on that one that I did.

Q. And the memo in its text refers to you by name, does it not?

A. Yes.

Q. Okay.

And was it your feeling or hope that Aroclors were not carcinogenic, as of December 1974?

MR. ANDREWS: I object to that question as compound. You may ask him whether it was his feeling or whether it was his hope, but not the same -- not that compound question.

Q. (By Mr. Pohl) Well, was it your hope in December of 1974 that Aroclors were not carcinogenic?

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A. Insofar as I could recall a mind set about the that time in 1974, I would say that I was very interested in trying to reach a decision or determination based on the available information as to whether or not PCBs were carcinogenic to animals.

Q. So you really didn't know for sure in December of 1974 whether PCBs were carcinogenic or not carcinogenic to animals?

A. That's correct.

Q. Okay.

It said -- this document, Exhibit 10, goes on to say "Should prepare for Aroclor 1016 and MCS 1043" -- I'm not sure I can read the last word, but it may be "anyway." What is Aroclor 1016? Is it an Aroclor product that doesn't have PCBs?

A. It is an Aroclor product with PCBs, with the average chlorination of the PCBs being much lower or somewhat lower than the other products available at that time.

Q. Okay. Is it less than 50 parts per million?

A. The 50 part per million term is -- doesn't fit in the question.

Q. Okay. What would distinguish Aroclor 1016, for example, from Aroclor 1254, which is referred to in the body of Exhibit 10?

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A. The average degree of chlorination in 1254 is approximately 54 percent. In 1016, it would be lower. It would have an average chlorination -- I'm not sure, but something on the order of maybe 30 percent.

Q. Okay. And what would be the purpose for preparing for Aroclor 1016 as opposed to Aroclor 1254?

A. I don't know what he meant by "preparation."

Q. Would there be any benefit to the use of Aroclor 1016 as opposed to the use of Aroclor 1254 in terms of human or environmental hazard?

A. I don't think it's known. Studies have not been done on 1016.

Q. To this day?

A. To this day.

Q. Okay. What about MCS 1043? What is that?

A. MCS is an acronym used simply for Monsanto Company Sample. It's just an experimental designation. The digits, the numbers, at this time have no meaning. One could look them up to get a record, but I have no recollection.

Q. So it was just a -- so the reference to Aroclor, or to 1043, is to just an experimental product that may or may not have ever been manufactured by Monsanto?

A. That's correct.

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Q. Okay. Is Aroclor 1016 manufactured today?

A. No.

Q. When was the last time it was manufactured?

A. I don't know precisely, but I -- I'm sure it ceased when we ceased manufacturing other PCBs.

Q. Okay.

Dr. Levinskas, let me show you Exhibit 13 to your deposition -- again, a document I've previously asked you to read -- and ask you to look on with me.

In approximately the middle of that document, which is Monsanto No. 022820, you make a reference to certain Japanese materials, do you not?

A. Yes.

Q. All right. And why was it that you referred to these Japanese products?

A. The Japanese products are PCBs produced by Japan.

Q. And why were they of direct interest with regard to Monsanto's Aroclor 1260 product?

A. This was -- this memo was issued prior to the meeting that we had with Dr. Squire and Dr. Kimbrough at the National Cancer Institute. These papers discuss the studies looking at liver tumors in animals. They were provided to Dr. Gordon at Bio-Test as part of his general -- for his general information so that he could

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consider these findings together with his own observations and be conversant with these when he looked at Dr. Kimbrough's slides.

Q. Okay. So what you were doing is bringing Dr. Gordon up to speed on the literature with regard to PCBs so that he would be generally familiar with that prior to examining Dr. Kimbrough's slides?

A. I was calling his attention -- his studies, which he may or may not have seen, but I was calling to attention studies which were relevant in this area, yes.

Q. At least these are three selected studies that you expressly wanted Dr. Gordon to have read prior to reviewing Dr. Kimbrough's slides?

A. Yes.

Q. And in your first sentence in your letter of January 14th, 1975, you refer to those three reprints dealing with liver tumorigenesis of PCBs. What does liver tumorigenesis of PCBs mean, as you've used it in your letter?

A. They produce tumors in the livers of rodents.

Q. Okay. And these three studies that you've identified and requested Dr. Gordon to read pertain to tumors of the liver caused by the exposure of animals to PCBs, correct?

A. Yes.

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Q. All right. What animals were exposed, in these three studies, to PCBs?

A. At this time, I cannot recall. They were rats or mice.

Q. Okay. So these three studies: the Gann study in '63, the Gann study in '64, and the Journal of National Cancer Institute's study in '73, dealt with exposure of either rats or mice to PCBs?

A. Yes.

Q. And the resultant liver tumorigenesis resulting as a consequence of that exposure?

A. Yes.

MR. ANDREWS: Object -- object to that question. It's a mischaracterization of his earlier testimony. He hasn't testified as to cause and effect. He's testified about the fact that these reports have dealt with exposure of rats and mice to PCBs.

Q. (By Mr. Pohl) And I think you indicated a moment ago that the substance of these three reports that you sent to Dr. Gordon for his review prior to his meeting with Dr. Kimbrough was the liver tumorigenesis found in those animals that had been exposed to PCBs, correct?

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A. There were studies dealing with liver tumors and PCBs, yes.

Q. Okay.

Were the findings in the three studies that you make reference to in your letter of January 14th consistent with the findings of Dr. Kimbrough?

A. At this time, I do not recall those studies well enough to answer.

Q. Did Dr. Gordon communiate to you any opinions, after he read these three articles that you sent to him?

A. No.

Q. You and he just didn't discuss it?

A. No.

Q. Did he discuss it with Dr. Kimbrough?

A. I'm not -- don't know what he discussed with Dr. Kimbrough.

Q. In your presence?

A. Not in my presence.

Q. Okay. And did you provide these same three articles to Dr. Kimbrough?

A. No.

Q. Okay. And you also wanted Dr. Gordon to review the three studies of liver tumorigenesis in rats or mice exposed to PCBs with Dr. Ward Richter, did you not?

A. Yes.

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Q. Okay. Do you know if Dr. Richter in fact reviewed these three articles?

A. I do not.

Q. Okay. In connection with Dr. Richter's review of the Renate Kimbrough slides of those rats exposed to PCBs on or about 1974, did you personally discuss with Dr. Richter his opinions based upon his review of Dr. Kimbrough's slides?

A. I believe I summarized, in one of those memos, the discussion we had after the meeting with Kimbrough, yes.

Q. Okay. Is the memo that you are referring to Levinskas Exhibit 14?

A. Yes.

Q. Okay. I forgot to ask you one question about Levinskas 13. At the very top of it it has "bcc W. B. Papageorge." Did you send a copy of your memo to William Papageorge?

A. That would indicate a blind carbon copy to Papageorge.

Q. Why did you send a copy of your letter dated January 14, 1975, to Mr. Papageorge?

A. Mr. Papageorge was the product manager for PCBs.

Q. And you were keeping him generally apprised of

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the results of studies which were being conducted or had been conducted by others on the effects of PCBs on either humans or the environment?

A. Keeping him posted of my activities.

Q. Okay.

Did you tell me you recognized Exhibit 14 as your memo regarding your meetings with Dr. Kimbrough, accompanied by Drs. Richter and Gordon?

A. Yes.

Q. Okay.

You say, in Paragraph Numbered 3 of your memo, the following: "There were definite liver adenocarcinomas in Kimbrough's study." What do you mean by that?

A. That would be a -- the term basically says that there were cancers in the livers of the Kimbrough study.

Q. Okay.

You go on to say that "there was agreement by Drs. Gordon and Richter that Dr. Kimbrough's rats had developed a lesion which they had not observed in our earlier study of Aroclor 1260." What type of lesion are you referring to?

A. That would be the adenocarcinoma you just discussed.

Q. Okay. So, in effect, Drs. Gordon and Richter

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are concurring with Dr. Kimbrough's findings of liver cancer. Is that correct?

A. They concur with the diagnosis that Dr. Kimbrough made on her slides.

Q. All right. I'm not asking if they concur or agree that the IBT slides revealed the same thing as Dr. Kimbrough. To be specific, my question was: Drs. Gordon and Richter communicated to you that they concurred with Dr. Kimbrough's readings of the slides resulting from Dr. Kimbrough's exposure of rats to Monsanto's Aroclor product?

A. Yes.

Q. Okay. And that was in -- the meeting actually took place on January 31, 1975?

A. I believe that was it.

Q. And your forwarding of three articles from the literature to Dr. Gordon for his reading prior to the meeting with Dr. Kimbrough occurred on or about January 14, 1975?

A. Yes.

Q. After you -- well, in your report of the trip to review Dr. Kimbrough's slides, you said, "If Drs. Gordon or Richter feel that I have not summarized this meeting correctly or if they desire to amend or expand my remarks, I invite them to let me know."

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A. Yes.

Q. Did they make any amendments to your remarks?

A. They did follow back with a letter.

Q. Okay. And is that Dr. Gordon's letter to you dated March 24, 1975, marked Levinskas 15?

A. That would be it.

Q. And in that letter, he encloses the reports made of the trip by himself and Dr. Richter, does he not?

A. Yes.

Q. And did you receive that letter?

A. Yes.

Q. Okay. Including the trip reports?

A. Yes.

Q. Would you read for the Court and jury Paragraph Numbered 5 of the trip reports attached to Levinskas Exhibit 15?

A. "However, the lesions in Dr. Kimbrough's study were more severe than those in the Bio-Test study. The lesions that she and Dr. Squire are calling carcinoma are also carcinoma by my criteria. I would conclude from an examination of their material that Dr. Kimbrough's study demonstrated carcinogenicity".

Q. Okay. And in layman's terms, what does it mean when a study demonstrates carcinogenicity?

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A. That the animals in the Kimbrough study had cancer.

Q. Okay. Thank you, Doctor.

MR. POHL: Why don't we take our lunch break. It's after 12:00. The tape's about out, and I'm going to start another topic.

VIDEO OPERATOR: We're off the record.

(LUNCH RECESS)

VIDEO OPERATOR: This is the video deposition of Dr. George Levinskas. We've been off the record for a short break. We're now on the record. The time is 1:16 p.m.

Q. (By Mr. Pohl) Dr. Levinskas, do you know the composition of mineral oil?

A. Not specifically, I don't, no.

Q. Okay. Do you know whether or not mineral oil is one of the types of oil that are and have been available as an alternative product to PCBs for use in transformers?

A. I don't know anything of the efficacy or utility of alternates.

Q. Okay. To your knowledge, has Monsanto

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conducted any tests, while you've been an employee of Monsanto, of the toxicology of mineral oil?

A. None that I know of.

MR. POHL: Would you mark this.

(EXHIBIT NO. 16 MARKED)

Q. (By Mr. Pohl) Let me show you what's been marked as Levinskas 16. It's a letter dated shortly before your employment started at Monsanto. You may not have seen that before. Let me just ask you to review it.

Have you had a chance to review Exhibit 16?

A. Yes.

Q. Okay. It talks in this letter about some clean-up activities with regard to Aroclor samples. Do you know what that could be referring to?

A. No.

Q. Okay.

Was it the practice of Monsanto to edit papers to be presented by independent testing laboratories at seminars or scientific meetings before the person authoring that paper would present it?

A. It's a common practice to have scientific findings reviewed by others before they are presented.

Q. And was it Monsanto's practice to review papers presenting findings with regard to Aroclor studies at

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scientific meetings before such papers were presented?

A. Some papers were reviewed. I could not say what was the general practice.

Q. Did you review any papers that were prepared by employees of IBT with regard to Aroclor studies that had been conducted by IBT for Monsanto?

A. Yes.

Q. Okay. And would you from time to time make changes to their proposed papers?

A. I would make editorial comments, yes.

Q. Did IBT let Monsanto know that if there were any points that Monsanto wanted to have changed in a presentation or paper that IBT was presenting at a scientific meeting that IBT would oblige Monsanto in that regard?

A. Your statement says that IBT -- I take it --

MR. ANDREWS: Doctor, let me interject something here. If you don't understand the question, tell him you don't understand the question. I don't want you to rephrase his question. He's entitled to a direct answer to a direct question, but I don't want you to end up asking yourself questions. That's not what we're here for.

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THE WITNESS: May I ask to have the question repeated?

Q. (By Mr. Pohl) Okay. When you were interacting with IBT and they were preparing papers to present at scientific seminars, did they make it known to Monsanto that Monsanto could make changes to the papers that IBT was going to present on regarding its study of various Aroclor products?

A. I was never asked or presented a paper with the request that I could make changes if I so wish.

Q. Did you ever review any of IBT's advertising literature?

A. No.

MR. POHL: Would you mark this document.

(EXHIBIT NO. 17 MARKED)

Q. (By Mr. Pohl) Let me show you Levinskas Exhibit 17 and pass it to you and your lawyer so that you may have an opportunity to read it.

Have you had an opportunity to read the letter?

A. Yes.

Q. And that's a letter from Paul Wright to you dated September 30, 1971?

A. Yes.

Q. And do you recognize Dr. Wright's signature?

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A. Yes.

Q. Okay. The letter refers to "a general indication of the toxicity of the material," referring to Aroclor 1254. What does that mean to you?

A. With respect to this topic that he's talking about, he's making a point about the study, which is difficult to take out of context and to comment on.

Q. Okay. Well, let's take it out of the context of this letter so you don't have any problem with it in that regard. What does it mean, generally, when you refer to a general indication of the toxicity of a material?

A. May I see the letter?

Q. Sure.

A. Prior to this, he's talking about an interpretation.

MR. ANDREWS: Excuse me, Doctor. That's not the question. The question is what is meant by a general indication of toxicity. If you can answer that question, answer it. If you can't, we'll go on to something else; but please listen to his question.

THE WITNESS: Well, his statement is "a general indication of the toxicity of

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the material."

MR. ANDREWS: Excuse me, Doctor, once again. He's not asking you about Mr. Wright's statement. He's asking you about what the term "general indication of toxicity" means. He's taking it out of this letter. Now, if that has meaning separate and apart from this letter, then answer the question. If it doesn't, it doesn't; and we can go on to something else. But he's not asking you about what Mr. Wright wrote.

A. To me, a general indication of toxicity would be a nonspecific reference to an effect of a chemical.

Q. (By Mr. Pohl) Okay. And when a chemical has a toxic effect, what kind of effect is it having?

A. Toxic is such a broad word, it could cover a multitude of effects.

Q. What would be a meaning of the word toxic that you would agree with?

A. Toxic would be an adverse effect.

Q. Okay. So, a general toxic effect would be a general adverse effect caused by the chemical?

A. Yes.

Q. And in terms of animal studies when it has --

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when a chemical has a general toxic effect, does that imply that animals are dying, or does that just apply that animals are suffering an ill effect short of death or either of those two?

A. As I indicated, it's such a general term that would cover any adverse effect.

Q. So when a chemical has a general toxic effect, that can mean that the chemical was causing ill health to the animal as well as death in the animal?

A. It would cover a range of actions, yes.

Q. Which would then cover both -- which would include both of these things which I've just stated to you?

A. Yes.

Q. Thank you.

Now, the letter goes on to say that "there appears to be a reduction in pup survival in the group fed the highest level, 100 ppm, of Aroclor 1254." What does that mean to you?

A. That some of the pups had reduced survival at those high dosages.

Q. Okay. And let me see if I understand that and if we can put that in layman's terms for the Court and jury. What would happen is that the mother rat would be fed an Aroclor product, and then someone would be

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looking at the survivability of that mother rat's pups; is that correct?

A. That's correct.

Q. And when someone refers to baby rats they, in your business, call them pups, don't they?

A. Yes.

Q. In this case, Dr. Wright's reporting that there was death among the pups of the mother rat or rats fed the Aroclor 1254; is that correct?

A. He says there appears to be a reduction in survival fed the highest level of Aroclor 1254.

Q. And my question to you was: Does that mean that there was death among the pups of the mother rat fed the Aroclor 1254?

A. At the highest level fed, yes.

Q. Okay. So as of at least September 30, 1971, you knew from the report that you had received from Paul Wright that rats fed 100 parts per million of Aroclor 1254 was showing a reduction in survivability of the pups of those same rats?

A. Rats fed those high dosages were showing reduced survival.

Q. And Dr. Wright also advises you that this is probably a general indication of the toxicity of the material; is that correct?

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A. As I read his letter, the general indication of toxicity is not in reference to the reduced survival.

Q. Okay. So those are separate, two separate points he's making; is that correct?

A. That's right.

Q. One is that there is a general toxicity of the material, and the second and distinct point is that there is a problem with the survivability of some of the pups of those rats fed Aroclor 1254 at 100 parts per million?

A. Yes.

Q. Thank you.

Oh, after you received Levinskas Exhibit 17, did you make a report of that and send it to anyone else in your department?

A. I cannot recall.

Q. Okay.

But the information contained within Levinskas 17 about the general toxicity of the material and the survivability of the rat pups was then included within this body of information that was available from which Monsanto could draw in communicating to the government or communicating to customers who might inquire about the general effects that PCBs might have, either on the environment or on human health; correct?

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A. On environment or animal health, yes.

Q. Okay.

Did you know Dr. Keplinger personally?

A. I had met Dr. Keplinger professionally.

Q. Okay. You refer to him in some of your correspondence as "Dear Kep." I just wondered if y'all visited socially with each other.

A. No.

Q. Purely a professional relationship?

A. Yes.

Q. Did you visit socially with any of the employees of IBT?

A. No.

Q. Do you know if anyone did at Monsanto?

A. No.

MR. POHL: Would you mark this.

(EXHIBIT NO. 18 MARKED)

Q. (By Mr. Pohl) In addition to you reviewing papers to be published by IBT personnel, either in the literature or at seminars, did others in the medical department at Monsanto also review papers to be published by IBT personnel?

A. Yes.

Q. And was that review done typically before the papers were put in final form?

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A. The review would be on the proposed paper.

Q. If the paper was to be published under the name of the person conducting independent research on Monsanto's products, whose opinions should have been expressed in the papers, those of the independent researcher or those of Monsanto?

A. The ones which were technically correct.

Q. Okay.

Let me show you Exhibit No. 18 to your deposition and see if you can recognize that document.

Do you recall Levinskas Exhibit 18?

A. I do not recall having seen that memo before.

Q. Okay. And it's authored -- purports to be authored by Elmer P. Wheeler. What was his position in Monsanto, as compared to your position, in April of 1972?

A. He was my immediate supervisor.

Q. Okay. Would he -- why would he have been interacting with IBT with regard to their publications regarding Aroclor studies, as opposed to yourself or Dr. Hunt, for example?

A. He was my boss and Dr. Hunt's boss. And I can't answer your question.

Q. It notes on the second page a reference to you.

A. Yes.

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Q. It says, "Dr. Levinskas is reviewing each of the papers to see if you, Kep, and I have missed typos and he may well suggest some grammatical changes which he will enter on your copy and send xeroxes to you and Kep."

Are those the type of editorial comments you made on papers to be published by IBT with regard to Aroclor studies?

A. I made comments on the Aroclor studies on those drafts, yes.

Q. And did you limit those comments to typos and suggested grammatical changes, or did you make substantive editorial comments?

A. My recollection is the typos and errors and were they -- did they appear technically valid.

Q. All right. So you would not only read the proposed publications by independent testing laboratories such as IBT for grammar and typos, but you would study their technical validity?

A. Yes.

Q. And what if you disagreed with their technical validity, what would you do?

A. I would raise a question to them about the technical validity.

Q. Did that ever occur, as you recall, with regard

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to any Aroclor studies done by IBT?

A. No.

Q. Okay. The letter goes on to say, "I hope to get copies of all the studies in the hands of Bill Papageorge, Scott Tucker, and the lawyers next week. I do not anticipate a lot of changes from them and hope that the attorneys agree that we can go ahead with publication."

Was it the practice of the medical department at Monsanto to additionally have Monsanto's lawyers review publications of studies by independent laboratories on Monsanto's Aroclor products?

A. It's a practice that all companies by member -- all publications by members of the company have to have clearance.

Q. By the legal department?

A. The individuals that Mr. Wheeler picked for that, I don't -- I have no knowledge of how or why.

Q. Well, what knowledge do you have about why the lawyers at Monsanto would review -- would be reviewing a proposed publication by an independent entity such as IBT?

A. I have no knowledge of why that was there.

Q. Is that a practice that is companywide or was companywide back in the 1970s, or is that a practice

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that was limited strictly either to IBT or the Aroclor products?

A. I said I have no knowledge on it.

Q. Either way?

A. Either way.

Q. Did you raise any question about it when it was mentioned in connection with a study that you were going to edit, at least for typos and grammar?

A. I have indicated that I do not recall having seen that letter originally.

Q. After you edited this paper, what did you do with it?

A. I returned it to Mr. Wheeler.

Q. Was there any indication on the paper at the time you returned it to Mr. Wheeler that the Monsanto lawyers had already done their work on the paper?

A. I do not -- my recollection is that I had typewritten manuscripts with no indication of anyone else having looked at them.

Q. Okay. So there weren't already any interlineations or handwritten changes or marginal notes by the time you got the paper?

A. That's correct.

Q. Okay.

Do you recall any incidences -- any incidence

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where a paper to be published by a third-party entity, such as Industrial Bio-Test, for example, was ever edited by Monsanto's lawyers?

A. I have no knowledge of that.

MR. POHL: Would you mark this.

(EXHIBIT NO. 19 MARKED)

Q. (By Mr. Pohl) Let me show you a document which the court reporter has marked as Exhibit 19 to your deposition and pass it to you and your lawyer.

Have you had a chance to review the exhibit, Doctor?

A. Yes, I did.

Q. You received a copy of that document?

A. Yes.

Q. And who is Dr. George Roush?

A. He is the current director of the medical department at Monsanto.

Q. Back in April of 1975? I'm sorry. I didn't understand your answer. He's the current -- you mean he is the medical director of Monsanto today?

A. Yes.

Q. Okay. And what was his position in April of '75?

A. I'm not sure when Dr. Kelly retired, but either Dr. Roush had become medical director or he was on the

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verge of becoming it with Dr. Kelly's retirement.

Q. The first sentence of the letter, which has been identified as Exhibit No. 19 to your deposition, reads: "I fully appreciate that the meaning -- that the meeting on PCBs today was not completely satisfactory and that many nagging questions remain."

What were those nagging questions?

A. I have no recollection of the meeting that's being referred to.

Q. Do you have any knowledge of any nagging questions pertaining to PCBs that existed in April of 1975?

A. No.

Q. You had none in April of '75?

A. No.

Q. Okay. You had satisfied yourself as to any questions or doubts you had about PCBs by that time?

A. I said I had no nagging questions.

Q. Okay. And the person writing this letter to Dr. Roush was J. C. Calandra?

A. Yes.

Q. And who was he?

A. He was the president of IBT.

Q. And in the late 1960s and into the early 1970s, did IBT conduct quite a number of Aroclor studies for

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Monsanto?

A. Yes.

Q. And did IBT also do a number of other studies for Monsanto during this same time period?

A. Yes.

Q. And are you familiar with approximately how much money Monsanto spent with IBT for testing during those years?

A. Only in the vaguest terms.

Q. It was in the several hundreds of thousands of dollars, was it not, Doctor?

A. Over that period of time, yes.

Q. Okay. And would you read for the Court and jury the middle paragraph of Dr. Calandra's letter to Monsanto dated April 18, 1975?

A. "Please let me know of any action that you contemplate in the way of seeking additional assistance in pathology or in contacting federal agencies. We will be pleased to be of help in any way that you may wish."

Q. And was there anything out of the ordinary about the paragraph that you just read in terms of your dealing -- your company's dealings with IBT?

A. No.

Q. Okay. And did IBT help Monsanto in presenting its position to governmental agencies?

A. Yes.

Q. Okay. And did -- I assume, then, that Monsanto took up Dr. Calandra's offer to help in any way that Monsanto might wish; is that correct?

A. I've indicated that --

MR. ANDREWS: The question, Doctor is -- Mr. Pohl's last question is directed to whether or not Monsanto did anything in response to the central -- center paragraph of that letter. He's not talking about generally, he's talking about that letter.

Q. (By Mr. Pohl) Let me see it I can approach it this way to help you understand it: For one thing, Monsanto asked Dr. Calandra to accompany William Papageorge to make presentations to several government agencies in congresional oversight committies in November of that same year --

A. Yes.

Q. -- isn't that true?

A. Yes.

Q. So, in fact, in that specific incidence, for example, Monsanto did take up Dr. Calandra on his offer whereby he said, quote, "We will be pleased to be of help in any way that you may wish," close quote. Is

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that correct?

A. Yes.

Q. Thank you.

Do you know the substance of the information that was presented by Monsanto to a committee of the United States Congress and to governmental agencies with regard to PCBs in November of 1975?

A. Yes.

Q. What was it?

A. It was a review of available information on liver sections from animals, rodents, fed Aroclor 12 -- Aroclors, PCBs.

Q. Okay. And what did Monsanto tell the government in the fall of 1975 about the possible carcinogenicity of PCBs?

A. I can describe the information. I was not present at the telling. There were reviews of additional liver sections of the Aroclor rodent studies Monsanto had conducted. There were reviews of those sections by an outside consultant from the Eppley Institute of Cancer who had also looked at Dr. Kimbrough's slides. I think that was essentially it.

Q. In November of 1975, did Monsanto tell the United States Government that it had no indication that

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PCBs were a carcinogen?

A. We presented the information Monsanto had developed on PCBs.

Q. No, sir; you didn't, did you?

A. We did present the information.

Q. All of it?

A. All of it.

Q. Both good and bad?

A. Good and bad.

Q. Okay. That's your position today?

A. Yes.

Q. All right. And so we can be clear about this to the Court and jury, your position today is that Monsanto should have told the government in the fall of 1975 whatever information was available to it about the possible carcinogenicity of PCBs, whether it was good or bad?

A. I said Monsanto presented the information it had developed on PCBs to the agencies.

Q. Well, did that include the information you got from Dr. Gordon, and from Dr. Richter, and from Dr. Squire, and from Dr. Kimbrough?

A. It --

MR. ANDREWS: Are you talking about the same Dr. Squire that was working for

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the government? Are you asking him whether we should have given reports that Dr. Squire had developed while he was working for the government to the government?

MR. POHL: Yes.

A. And Dr. Kimbrough was working for the government as well.

Q. (By Mr. Pohl) Yes. And, of course, you and Dr. Gordon and Dr. Richter had gone and independently reviewed their work, correct?

A. Right.

Q. And we've already established on the record what the findings were of that review, correct?

A. Yes.

Q. And you've already read from and identified your memorandum summarizing that, have you not?

A. Yes.

Q. Okay. And was that information about the possible carcinogenicity of PCBs communicated to the government in November of 1975 by Monsanto? Yes or no.

A. Yes.

Q. Okay.

MR. POHL: Would you mark this.

(EXHIBIT NO. 20 MARKED)

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Q. (By Mr. Pohl) Let me show you Exhibit No. 20 to your deposition and ask you if you recognize this document. Show it to your lawyer as well.

(EXHIBIT NO. 21 MARKED)

(EXHIBIT NO. 22 MARKED)

Q. (By Mr. Pohl) Have you had a chance to review the document, Doctor?

A. Yes.

Q. It's a letter addressed to you, is it not?

A. Yes.

Q. From Donovan Gordon?

A. Yes.

Q. And did you receive that letter?

A. Yes.

Q. It notes in the letter that Dr. Richter and Dr. Gordon have recently re-examined some additional liver sections on an IBT rat study. Do you recall who requested that re-examination?

A. I do not.

Q. It says in here that Dr. Richter has classified this lesion, referring to a liver lesion, as nodular hyperplasia. Do you know what that means?

A. No.

Q. Okay. Did you write or call Dr. Gordon to ask him what he meant by the use of the term "nodular

hyperplasia" in his letter to you of April 28, 1975?

A. No.

Q. Okay. So when Dr. Gordon reported this particular finding as to a review of a liver slide, you didn't know what he meant?

A. Let me go back, when I said no to nodular hyperplasia. That's a description of something he saw under the microscope. I would like to amend that. And I have a general understanding of the term, but I could not describe precisely under a microscope what he was talking about.

Q. Okay. What is your general understanding of the term?

A. It's an alteration in the liver cells which are small nodules that have altered structure from adjacent liver cells.

Q. Does it fall within the general definition of a toxic effect that you told us about earlier in your deposition?

A. Yes.

Q. So you knew, as of April 28, 1975, that upon a re-examination, Dr. Gordon and Dr. Richter had found a nodular hyperplasia which is a toxic effect?

A. A liver change.

Q. Okay. So even if you didn't know the details

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of the meaning of what he was communicating to you, you knew that his review reflected some toxic effect?

A. Yes.

Q. Okay. Dr. Gordon goes on to state, in the last paragraph of his letter, that "This change in reclassification will appear in our revised report of IBT No. 641-06672."

Do you recall whether or not you received a revised report from IBT reflecting this change?

A. I do not recall.

Q. Did you request IBT to change any of its reports to Monsanto with regard to IBT's examination of Aroclor products?

A. No.

Q. You never did that?

A. No.

Q. Let me show you Exhibits 21 and 22 to your deposition and see if you can recognize these documents.

Dr. Levinskas, let me see if I can refresh your recollection. In July of 1975, did you request that an IBT report of a study on Aroclor 1252 be amended to say "Does not appear to be carcinogenic," in lieu of the phrase, "slightly carcinogenic" -- I'm sorry, "slightly tumorigenic"?

A. That's correct.

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Q. Okay. And now that I've shown you that document, do you have a recollection of whether or not IBT, at your request, did in fact change the results of one or more of its studies on Monsanto's Aroclor products?

A. They changed the wording, the conclusion statement, yes, to more accurately reflect what they had reported.

Q. All right. And to more simply state that, Doctor, at your request, IBT changed the wording of its conclusions on one or more of its studies of Aroclor products in the summer of 1975; is that true?

A. To reflect more accurately the findings they had reported.

Q. Okay. And I take it, then, that you had done an independent examination of their findings so that you could more accurately conclude what they had really found than they could; is that correct?

A. I had reviewed what they had written with the conclusions they had drawn. And in comparing six reports, I said that if you have drawn this conclusion in three -- in two of three instances, since there are no differences you should draw the same conclusion in the third instance.

Q. That's what you told IBT?

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A. Yes.

Q. And did they do what you told them?

A. Yes.

Q. Okay.

When some chemical causes a tumor in an animal, is that what you would generally describe as a toxic effect?

A. Yes.

Q. Okay. And that's true today as well as it was in the 1970s, correct?

A. Yes.

Q. Okay. And when a chemical causes a toxic effect, that's something that a chemical manufacturer should take note of, is it not?

A. Yes.

Q. Okay. And is it true, Doctor, that after you had recommended that IBT change the results of its report on Aroclor 1254 to read, "Does not appear to be carcinogenic," in place of "slightly tumorigenic," that the final report made no reference in its conclusion to the product being slightly tumorigenic, but only referred to it as "Does not appear to be carcinogenic"?

MR. ANDREWS: Excuse me, Doctor. I'm going to interpose an objection. That question severely mischaracterizes his

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prior testimony. You encompased within that question a statement that Monsanto had asked IBT to change their results, and that is specifically not what he testified to before. And I object to you recharacterizing his testimony. It's not a proper question.

Q. (By Mr. Pohl) I don't want to have any problems with your understanding of the questions. Did you testify a little while ago that what you had asked IBT to do was change the wording of the conclusion that it had drawn from testing Aroclor 1254?

A. I believe I said to change the wording of the conclusion to reflect what they had reported.

Q. Okay. Is it true, Doctor, that after you made your request for this change in the wording of IBT's conclusion in connection with its test of Aroclor 1254, that the final report made no reference to Aroclor 1254 being slightly tumorigenic, but only concluded that it does not appear to be carcinogenic?

A. The report lists every tumor that had been found and continues to list it. Since the question was whether 1254 was carcinogenic, the change was made to reflect that statement more accurately.

Q. Okay. And, Doctor, you know that when I refer

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to the conclusion of the report that that's a different section of the report than the data that's usually attached and supports the report? You know that, don't you?

A. Yes.

Q. Okay. And let me repeat my question, in case you didn't hear me. You know, don't you, Doctor, that after you made your suggestion that the conclusion "slightly tumorigenic" be deleted and that the conclusion "Does not appear to be carcinogenic" be inserted in place thereof, that the conclusion portion of the final report made no reference whatsoever to Aroclor 1254 being slightly tumorigenic; isn't that true?

A. As I've indicated before, in comparing six reports, IBT had changed two of the -- two of the three reports to read "Does not appear to be carcinogenic." The third report had not been changed by IBT. Since all three studies were very comparable and the findings were very similar, I merely requested that they be consistent and express all three studies in the same way they had already expressed two others.

Q. Now, Doctor, I'm going to have to object to the responsiveness of your answer because that wasn't my question. Let me ask the court reporter to read back my

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question; and take a minute to consider it, if you need to, and then please answer directly.

COURT REPORTER: "QUESTION: Okay. And let me repeat my question, in case you didn't hear me. You know, don't you, Doctor, that after you made your suggestion that the conclusion 'slightly tumorigenic' be deleted and that the conclusion 'Does not appear to be carcinogenic' be inserted in place thereof, that the conclusion portion of the final report made no reference whatsoever to Aroclor 1254 being slightly tumorigenic; isn't that true?"

MR. ANDREWS: Doctor, before you respond, I'd level an objection to his objection, because I think you did answer the question. And merely because he's had the court reporter read it back and ask you to reconsider it doesn't necessarily mean you have to change your answer.

I'd like the court reporter to read back your answer before you respond. If you're satisfied with it, then the record will stand. If you want to change

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it, you are free to do so.

COURT REPORTER: Can we pause for a moment?

VIDEO OPERATOR: We're off the record.

(DISCUSSION OFF THE RECORD)

MR. ANDREWS: Just for continuity, why don't you read the question and the answer together and leave out the commentary by the lawyers.

COURT REPORTER: "QUESTION: Okay. And let me repeat my question, in case you didn't hear me. You know, don't you, Doctor, that after you made your suggestion that the conclusion 'slightly tumorigenic' be deleted and that the conclusion 'Does not appear to be carcinogenic' be inserted in place thereof, that the conclusion portion of the final report made no reference whatsoever to Aroclor 1254 being slightly tumorigenic; isn't that true?

"ANSWER: As I've indicated before, in comparing six reports, IBT had changed two of the -- two of the three reports to

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read 'Does not appear to be carcinogenic.' The third report had not been changed by IBT. Since all three studies were very comparable and the findings were very similar, I merely requested that they be consistent and express all three studies in the same way they had already expressed two others."

Q. (By Mr. Pohl) Now, Doctor, since you've had -- since we've had the court reporter read back my question to you and since I was asking you about the specific -- Aroclor study on what's called Aroclor 1254 that's made the basis of the letters that I've shown you and that you've just read, is the answer to my question -- what is the answer to my question?

A. The same as I had just given.

Q. Okay. Well, again, let me see if I can refresh your recollection.

MR. POHL: Would you mark this.

(EXHIBIT NO. 23 MARKED)

Q. (By Mr. Pohl) And so we can be clear about it, the suggested change in wording on the conclusion of the report that you are referring to in your letter dated July 18, 1975, is on Aroclor 1254; is that correct?

A. Yes.

HARTOLDMON0022557

Q. Okay. And let me show you a page, revised page from the Aroclor 1254 part, which is a revised summary page; and let me ask you to read, first, into the record the final one sentence paragraph of this report.

MR. ANDREWS: Before you respond, Doctor --

Q. (By Mr. Pohl) And you may read it first, if you'd like.

MR. ANDREWS: I'd note for the record that you've been handed a dismembered one page from apparently some report by Bio-Test.

And I'd ask Mr. Pohl: Is it your presentation that this is a true and correct copy of a page from a Bio-Test report?

MR. POHL: Yes, it is. The Aroclor 1254 report, to be exact.

THE WITNESS: Okay. I've read this.

Q. (By Mr. Pohl) Can you tell me now, Doctor, whether when the Aroclor 1254 report was revised, based upon your suggestion, whether or not the revised report noted that the Aroclor 1254 was slightly tumorigenic or whether that phrase was dropped completely and the report only stated that the product does not appear to

HARTOLDMON0022558

be carcinogenic?

A. Since I don't have the other piece of paper, I can't make all the comparisons you requested. I think what I said about the report accurately reflected the work that was done. I would offer the finding that this is a "spectrum of treatment-related histopathological findings in the liver from this re-evaluation did not differ significantly from that previously reported in the original report."

Q. Well, Doctor, let me see if I can rephrase my question. I'm not asking you about any other of the six studies. I'm not asking you about any other Aroclor report but the 1254 report. I'm not asking you anything about the tables. I'm just asking you whether the conclusion that was drawn by the report reflected that the independent researchers had concluded that the product was slightly tumorigenic. I hand you the document to help refresh your recollection.

MR. ANDREWS: When you use the term "conclusion," are you meaning it to be synonymous with summary? Because what you are showing in here is a summary of the report. It's not a conclusion.

MR. POHL: Well, within the summary there is a paragraph that says "in

HARTOLDMON0022559

conclusion." It's there on the page.

A. I don't want to appear -- but I am confused. What is the question that I'm dealing with now?

Q. (By Mr. Pohl) Okay. Same one I asked before. Let me repeat it one more time.

The revised report on Aroclor 1254 made after your suggestions as contained in your letter of July 18, 1975, did not conclude that the Aroclor 1254 was slightly tumorigenic, but rather concluded only that it does not appear to be carcinogenic; is that correct?

A. It includes a statement consistent with the other two reports that was called to IBT's attention.

Q. Doctor, again, let me repeat my question, because I don't want you to answer any questions that you don't understand.

The revised report of Aroclor 1252 does not conclude that the Aroclor 1254 was slightly tumorigenic, but only concludes that it does not appear to be carcinogenic. Is that true?

A. The conclusion does not use the term tumorigenic. In the summary, it does make reference to the fact that Aroclor 1254 produced tumors.

Q. Okay. If you would, for the Court and jury, read the final paragraph of the summary that begins with the words "in conclusion."

HARTOLDMON0022560

A. "In conclusion, Aroclor 1254 does not appear to be carcinogenic in rats fed for two years at levels up to and including 100 PPM."

Q. All right. And is the phrase "Does not appear to be carcinogenic," a verbatim quote of the language that you wanted IBT to include in its report of its testing of Aroclor 1254?

A. My request was "Does not appear carcinogenic." It does not have -- okay, it does appear -- correct, it's a verbatim quote.

Q. And so we can have that in one question and answer on the record: The language that was used in the revised IBT report is an exact verbatim quotation of language suggested by you in your July 18, 1975 letter; correct?

A. It's a request that they use language they had used elsewhere and apply it to this study, yes.

Q. And I'm going to ask you a very simple question, Doctor. The language that IBT uses in the conclusion that you just read to the Court and jury is an exact verbatim quote of language which you set forth in your letter of July 18, 1975, is it not?

A. Yes.

Q. Thank you.

Now, the instance that we just quoted and the

HARTOLDMON0022561

report that we just read from was not the only instance in which you requested that the wording of the conclusion of a study of an Aroclor product by IBT be changed, is it?

A. I do not recall.

Q. You don't recall whether you requested IBT to change the wording of other reports, other conclusions of its independent examinations of Aroclor products?

A. I do not recall. I do not recall making changes. I have made editorial comments and requested that they be consistent with their findings.

Q. Okay. But, of course, their finding on this particular report of Aroclor 1252 -- 1254 was, quote, "slightly tumorigenic," close quote, was it not? And that was the reason that you wrote them and asked for the change?

A. I was comparing -- I repeat, I was comparing six reports. And I said, "You have expressed -- re-expressed these three reports in this manner for two. And, for consistency, I think you should express the third one in the same manner, since all three results, conclusions, and data are very similar."

Q. And the three substances that you are talking about are Aroclor 1242, Aroclor 1254, and Aroclor 1260; is that correct?

HARTOLDMON0022562

A. Yes.

Q. And the fact is, in your own letter of July 18, 1975, you note that in two other instances you had had IBT change the wording of the conclusions that it had drawn from its own testing of the three Aroclor products that you just recited. Look at the second paragraph.

A. No. I'm saying if you look at the six reports, which are described in two columns, that three times they had said "slightly tumorigenic." They had changed two of those to read "Does not appear carcinogenic." And I was requesting that they amend the third report to be consistent with the changes they had already made in the other reports.

Q. Who requested that the other two reports be changed from "slightly tumorigenic" to "Does not appear to be carcinogenic"?

A. I do not know.

Q. Was it you, Doctor?

A. I did not do it.

Q. Are you sure?

A. Yes.

Q. And, of course, you knew, when you wrote your letter on July 18 of 1975, that as early as 19 -- late 1974 and early 1975, there were reports by Dr. Kimbrough of liver carcinogenicity in rat studies which she had

HARTOLDMON0022563

conducted on Aroclor products, correct?

A. On Aroclor 1260 at a specific high dose, yes.

Q. Okay. And you also knew, by the time you wrote your letter on July 18, 1975, that both Drs. Donovan and Gordon, a pathologist, and Dr. Ward Richter, a pathologist, had concurred with Dr. Kimbrough's and Dr. Squire's findings that Aroclor 1260 in high doses caused liver cancer in rats?

A. Yes.

Q. Okay.

And the three test materials, again, that you make reference to in your letter of July 18, were Aroclor 1260, Aroclor 1254, and Aroclor 1242; is that correct?

A. Yes.

Q. And Aroclor 1260 was one of those in which the IBT-reported result of "slightly tumorigenic" was changed to read "Does not appear carcinogenic." Is that correct?

A. That change was made by IBT.

Q. The report of the Aroclor 1260 study on rats was one of the reports that was changed from "slightly tumorigenic" to "Does not appear carcinogenic." Is that true?

A. Yes.

HARTOLDMON0022564

Q. All right. And a cancer -- does a cancer always have to be tumorigenic?

A. A cancer would have to be a tumor, yes.

Q. Okay. And a tumor wouldn't necessarily have to be carcinogenic, would it?

A. That's correct.

Q. In other words, you could have tumors that cause toxic effects in animals or that cause toxic effects in humans that aren't carcinogenic?

A. That's correct.

Q. Okay. So as of the summer of 1975, there were still changes and amendments being made to IBT studies on Aroclor products which were being conducted for Monsanto; is that true?

MR. ANDREWS: I object to the form of that question. We've been discussing a change in language in a summary section of the report. The question is general and vague, and I think is intentionally meant to imply that there were changes in other sections of the report. There's no evidence of that. I think it's unfair mischaracterization in an attempt to mislead the witness, and I object to it.

Q. (By Mr. Pohl) Let me modify my question

HARTOLDMON0022565

because I don't want to confuse you in any way, Doctor. But at least in the summer of 1975, there was still some change being made to one or more of the reports of IBT's tests on Monsanto's Aroclor products; is that true?

A. The original Aroclor studies, the original rat studies, had been completed. In '74 or '5, we were doing additional work on tissues taken from those animals in an attempt to resolve the question of potential carcinogenicity in rodents. So I'd like to make the distinction that the original reports in the work that had been done was completed. We were doing additional work over and above that which was planned; namely, looking at additional liver sections that had not previously been examined.

Q. Okay. And what was your answer this morning, Doctor, when I asked you the question of when a test report on a product was finally completed?

A. I said when the final report is issued.

Q. Okay. When was the absolute final report on the Aroclor tests for Aroclor 1250, for 1260, and 1242 finally issued?

A. I don't recall the dates. I could not recall the specific dates.

Q. But in any event, sometime after your letter of July 1975 asking for changes in the wording with regard

HARTOLDMON0022566

to the conclusion of the Aroclor 1254 study; correct?

A. I'm trying to get -- there's a distinction I'm trying to make. My discussion of those three reports is dealing with the additional liver sections which had been conducted by IBT, not the reports on the original two-year studies themselves, which had less information in them than these review sections.

Q. Well, the reports, as originally issued in all three cases, 1242, 1254, and 1260, concluded that Monsanto's Aroclor products were tumorigenic, did they not?

A. I don't recall the specific wording of the original reports.

Q. Well, they found that there were tumors in the animals to which Aroclor had been administered; correct?

A. I don't recall the wording that was used or the specific findings.

Q. Well, in any event, as I've just shown you from your own documents, after you wrote your letter, each of those three products, 1242, 1254, and 1260, was shown not to be carcinogenic; is that correct?

A. That conclusion is referring to the re-examination of all available livers from those studies, not just the select small number originally proposed in the original two-year study.

HARTOLDMON0022567

Q. And when the change that you requested was made by IBT, was the summary page of the report retyped to reflect the conclusion that you recommended?

A. At this time, I can't recall the precise wording of the final pages in the report.

Q. Okay. Well, let me show it to you again as Levinskas Exhibit 23 and ask you if the summary page of the report on the Aroclor 1254 was retyped to reflect the change in wording that you had requested of IBT. Look at the last paragraph of the summary.

A. What I was trying to say is that this summary is a summary for the review of the additional liver sections which were reviewed after Kimbrough raised the question of potential carcinogenicity of 1260. I do not know that this is a summary which was put and reinserted in the original two-year study. And so far as -- well, I don't know that this refers to the review of the additional liver sections.

Q. Did you ask IBT to redate its report to show the date upon which the change was made that you had requested?

A. We did not ask them, no.

Q. Well, how would you have expected them to do that? What date would you have expected the revised report to bear after the revision that you had requested

HARTOLDMON0022568

had been made?

A. I didn't give it any thought.

Q. You didn't care one way or the other?

A. I hadn't given it any thought.

Q. Well, now that you've had a chance to think about it and we're here in 1987, how do you think -- how do you -- how should the report on the Aroclor 1254 have been dated?

A. Well, I'm not sure what the date is on this document.

Q. Well, should it have been dated to reflect the date that the change was made that you had requested; or should they have just retyped the page but left the date of the report the same -- same so that someone who just picked up the report and read it might conclude that sometime before Kimbrough made her conclusions, IBT had done a study of some of the same materials and concluded that they did not appear to be carcinogenic?

MR. ANDREWS: Wait a minute, before you answer that question. What the witness has said two or three times is that there are different reports. And that is either not getting through to you, or you are choosing to ignore it in an effort to confuse the record. There are

HARTOLDMON0022569

reports that were completed and submitted in 1971. There were re-evaluations of additional liver sections that were done in 1974. And those are separate reports in this witness's mind. And when you don't draw that distinction, it's making a very unclear record.

Q. (By Mr. Pohl) Do you agree with what your lawyer just said?

A. Yes.

Q. And you adopt that as your own testimony?

A. Yes.

Q. Good.

And if there were separate reports that were prepared on the two findings, one in 1971 and one in response to your change in the summer of 1975, they should each bear the date of the preparation of that particular document; true?

A. Yes.

Q. Okay.

And Monsanto wouldn't be the kind of company that would want to represent to anybody else that this finding of "Does not appear to be carcinogenic," was made anytime earlier than at least July 1975, when you requested in your letter that it be made?

HARTOLDMON0022570

A. I'm confused by the question.

Q. Monsanto is not the kind of a company that would want the revised report, the separate report that your lawyer just talked to you about, to be dated at an incorrect date, would it?

A. I guess the answer is yes. We would want the report to reflect the time sequence in the information.

Q. All right. And so if you requested the change in your letter of July 18, 1975, and Dr. Calandra wrote back to you on August 4 and said he'd make the change, and the revised page of the report showing the change -- should be dated at least sometime after August of 19 -- August 1 of 1975, correct?

A. Yes.

Q. Thank you.

After you requested that the report on the Aroclor Product 1254 be changed to read "Does not appear to be carcinogenic," in lieu of "slightly tumorigenic," did Dr. Calandra have the pages retyped, the change pages retyped and mailed to you?

A. I cannot recall.

MR. POHL: Would you mark that.

(EXHIBIT NO. 24 MARKED)

Q. (By Mr. Pohl) Let me show you Levinskas Exhibit No. 24 and see if this document helps refresh

HARTOLDMON0022571

your recollection.

Do you recognize the Exhibit 24?

A. Yes.

Q. Is it a letter to you from J. C. Calandra?

A. Yes.

Q. And is it a letter enclosing three copies of Page 2 of the revised laboratory report on the Aroclor 1254 study?

A. Yes.

Q. Okay. And what is the date of the letter enclosed in the revised pages?

A. The date of the letter, August 8, 1975. And I might add it refers to a revised laboratory report dated March 24, 1975.

Q. And that's how many months before you even requested the change to be made?

A. It is also four years after the original two-year rat study.

Q. That's not my question.

A. To keep that distinction which we talked of earlier.

Q. Sure. But my question to you was, Doctor: The date that you wanted to make a reference to, March 24, 1975, was how many months before you even asked that the change on this very study be made?

HARTOLDMON0022572

A. That's the date of the original report.

Q. When did you first request that the change that's referred to in Dr. Calandra's letter of August 5, 1975, be made?

A. You have the date of the letter before you.

Q. Let me see if I can hand you your letter and see if that refreshes your recollection.

A. July 18.

Q. So my question is: The date that Dr. Calandra chose to put on the revised report is how many months prior to the time that you even asked the change be made?

A. Not quite four months.

Q. All right.

A. Three months. I'm sorry. Three months.

Q. And the letter from Dr. Calandra enclosing the revised pages reflecting the changes that you had asked to have made was sent to you in August of 1975, correct?

A. Yes.

Q. And how many months is that after the date that Dr. Calandra put on that report, which is March of '75?

A. A little over four months.

Q. Almost five months?

A. I said a little over four.

MR. POHL: Would you mark this.

HARTOLDMON0022573

(EXHIBIT NO. 25 MARKED)

Q. (By Mr. Pohl) Let me hand you Levinskas Exhibit 25 and ask you to read that document. And let me pass it to you and your lawyer.

Have you had a chance to read the letter, Doctor?

A. Yes.

Q. That letter you wrote to Dr. Calandra?

A. Yes.

Q. And what's the date of the letter you wrote to Dr. Calandra, marked Exhibit 25?

A. August 14, 1975.

Q. You note in your letter on the second page that the page for the Aroclor 1254 report containing the phrase "Does not appear to be carcinogenic," has been received; correct?

A. Yes.

Q. So in your letter of August 14, 1975, you're acknowledging receipt of the revised summary page to the Aroclor 1254 study; correct?

A. Yes.

Q. All right. Now, in the balance of your letter, are you complaining to Dr. Calandra about various deficiencies which you observed from reading and analyzing the Aroclor two-year rat feeding studies?

HARTOLDMON0022574

A. I am calling to his attention a misnumbering of animals where -- between the 1242 and the 1260 study.

Q. Why did you feel it was important to call to Dr. Calandra's attention that the numbering system used in the reports which he sent to you appeared to have some errors in it?

A. The numbers were transposed.

Q. In other words, you were able to conclude that the numbers were transposed?

A. Yes.

Q. Even though some of the animal numbers for the 1254 study showed to be three-digit animal numbers, but some typing in the report had four digits and in some cases only two digits?

A. Pointing out the differences in the numbering systems and discrepancies that were typos and such, and that different studies transposed numbers between different studies.

Q. Would you agree that the way these studies were written with these errors in the numbering systems used to track the animals, that the reports were sloppily prepared?

A. I would not conclude that.

Q. Isn't that the thrust of what you're communicating to Dr. Calandra in your letter of August

HARTOLDMON0022575

14?

A. Typing, transposition letters.

Q. Why are numbers used in connection with study animals on studies like the Aroclor studies?

A. Identity.

Q. So you can track an animal through the course of the study?

A. Yes.

Q. Okay. And do generally all the animals at a testing laboratory, even control animals, receive a number?

A. Yes.

Q. Okay. And do sometimes control animals and test animals receive numbers of different digits?

A. It would depend on the numbering system used.

Q. Okay.

You indicate in your letter, Doctor, that in the report that -- reports that you received from IBT, some of the same animals were shown to be -- by their number, were shown to be test animals and also control animals?

A. May I look at that? I'll go back to my earlier comment. In the comparing the original reports versus the additional liver sections, I say, "You have transposed these animals. The description you gave of

HARTOLDMON0022576

those numbers in one report is not the same as the description you gave in the second report. So you have transposed and mixed up those groups or interchanged those numbers." And I'm asking them to straighten them out.

Q. All right. And one of the problems you point out is that some of the animals are listed in one report as being a test animal, but on a page of another report they are shown as a control animal. Is that correct?

A. I'm saying the same numbers appear, yes.

Q. All right. And you list at least eight instances of specific animals that were shown on one report to be a test animal, and yet on another report they were shown as a control animal. Correct?

A. I'm saying in two different reports, yes.

Q. The answer to my question is yes?

A. Yes.

Q. All right. And so the Court and jury will understand, a control animal is one to whom the chemical is not to be administered; is that true?

A. Yes.

Q. All right. And so if a sample were for some reason taken from a control animal, then there is not a likelihood that any finding in examining the tissues or organs of the control animal could in any way be caused

HARTOLDMON0022577

by the toxic chemical or by the chemical that was administered to the test animal; is that correct?

A. I'm afraid that in the torturous introduction to the question, I lost it. Would you repeat it?

Q. Sure. Let me see if I can repeat it. If a control animal were examined at the end of the test, there would be nothing about that control animal that would be of value -- well, let me back it up. Let me back up and do this: The control animal is an animal that's not exposed to the chemical being administered in the test; is that correct?

A. That's correct.

Q. And if you are going to look for and study the effects of the chemical on the type of animal being tested, you would not take slides of or look at the organs of the control animal, but you would look to the test animal?

A. Yes.

Q. Did you know, in October of 1975, that Dr. Gordon specifically disagreed with the conclusions reached by Dr. Pour?

A. No.

MR. POHL: Okay. Let me ask the court reporter to mark this document as the next numbered exhibit.

HARTOLDMON0022578

(EXHIBIT NO. 26 MARKED)

Q. (By Mr. Pohl) Let me pass to you what's been marked as Levinskas 26 and ask you and your lawyer to take a look at it.

Is that a letter that you received from Dr. Gordon?

A. Yes.

Q. What is the date of that letter?

A. October 17, 1975.

Q. Would you read to the Court and jury the last sentence of Paragraph 1, beginning with the words "I - found"?

A. "I found his report interesting, although I do not concur with his classification and interpretation of some of the liver lesions."

Q. All right. And that's referring to Dr. Pour's review of lesions in the livers of rats to whom Aroclor had been administered?

A. Yes.

Q. All right. In December of 1975, were you still making contact with IBT regarding further questions on the Aroclor studies which had been conducted by IBT for Monsanto?

A. That was a dozen years ago, and I really can't put time frames on them.

HARTOLDMON0022579

Q. Do you recall if you visited IBT at any time in January of 1976?

A. I would not have specific recall of it.

MR. POHL: Would you mark that and then this one.

(EXHIBIT NO. 27 MARKED)

(EXHIBIT NO. 28 MARKED)

Q. (By Mr. Pohl) Let me show you a document marked Exhibit -- Levinskas Exhibit No. 27, and see if it refreshes your recollection about questions which you may have had regarding PCB papers.

Do you recall, having looked at that, whether or not you had any questions at or about that time?

A. I cannot recall any questions that I might have had at that time.

Q. Let me show you Levinskas Exhibit 28 and ask you to read that document.

A. "Dr. Levinskas" -- this is an interoffice correspondence from IBT. "Dr. Levinskas will be here on Friday, January 9, 1976, to discuss the pathology section of the PCB papers."

Q. Did you make that trip?

A. Underneath it says, "Dr. Levinskas has rescheduled his trip for Thursday, January 15." I have no -- I do not recall.

HARTOLDMON0022580

Q. Okay. What would be the reason why you would be interested in reviewing any of the data, pathology reports, or anything else that might pertain to IBT studies of Aroclor products as late in time as January of 1976?

A. I had indicated earlier that I had reviewed PCB papers that Elmer Wheeler had given me. Redrafts, or revisions, of those papers came to me a second time; and I recall having reviewed them. At this time, whether some question arose with respect to pathology that I might have wanted to explore further, I cannot recall.

Q. Are PCBs the type of products that have a very long half-life?

A. In what sense do you mean half-life?

Q. Well, what do you mean by the phrase? What do you understand?

A. If it's a biological half-life, if they persist, then the answer is yes.

Q. In January of 1976, did Monsanto do a review of the toxicity and environmental effects of commercial PCBs?

A. I specifically cannot recall.

Q. Did you do one?

A. I suspect I have, but I can't recall specifically.

HARTOLDMON0022581

Q. Just let me hand you a document that's not been marked as an exhibit yet. There is a page that has some initials on the back of it. Are those your initials?

A. Those are my initials, but did I not make them.

Q. If you would, turn to the first page of the document. Let me ask you if you prepared that report.

A. I did write sections of this.

Q. Okay. Which sections in particular do you recall having authored?

A. In general, without specific wording, would be the effects dealing with the animal studies.

Q. Okay. Physically describe those pages -- are they the first two pages, first three pages, what portions?

A. Pages -- essentially Pages 2, 3, parts of 4, and part of 5.

Q. 2 and 3, and parts of 4 and 5; is that correct?

A. Yes.

Q. Who wrote Page 1?

A. I would not know.

Q. Well, who collaborated with you on the preparation of this document that I've handed to you?

A. I couldn't -- at this time, I could not say specifically.

Q. Are there anyone's initials on it besides your

HARTOLDMON0022582

own?

A. No. It says "File PCB," which is the topic.

Q. Is there anyone at Monsanto's initials that worked with you had the initials E.T.W.?

A. E.T.W.?

Q. Or E.P. -- E.T. or E.P.W.?

A. E.P.W. could be Elmer P. Wheeler.

Q. Okay. And do you recall when it is you wrote Pages 2 and 3 and parts of Page 4 and 5 of this report?

A. No.

Q. Well, was it before or after Renate Kimbrough discovered other possible carcinogenicity of Aroclor products in rats in her studies?

A. It was after her studies.

Q. All right. Was it before or after Monsanto made its presentations to various governmental persons in approximately November of 1975?

A. I don't know, but probably after.

Q. Okay. There is a date on the top of it handwritten, January 9, 1976, and again the initials which may be E.P.W. What does that date bear to this document?

A. I didn't put it on there. I don't know.

MR. POHL: Let's take a break while she changes her tape, and I'll get you to

HARTOLDMON0022583

mark this as the next exhibit.

VIDEO OPERATOR: We're off the record.

(BREAK RECESS)

(EXHIBIT NO. 29 MARKED)

VIDEO OPERATOR: We've been off the record for a brief moment. We're back on the record. It's 3:08 p.m.

Q. (By Mr. Pohl) Dr. Levinskas, with regard to Exhibit No. 29 to your deposition, there are some what I'll call footnotes or citations contained in the last two pages of that document, are there not?

A. Yes.

Q. And some of the citations include a work, for example, in the year 1975. Do you see that?

A. Yes.

Q. So, this report that you prepared part of at Monsanto that refers in the footnote to a work done in '75 would have had to have been at least sometime after 1975; correct?

A. Yes, if the footnotes were part of the original report.

Q. Well, let me represent to you that I'm presenting the document to you just as your lawyers presented it to us from Monsanto's business records,

HARTOLDMON0022584

each page of which is numbered consecutively; and these last two pages I'm making reference to follow consecutively from the previous pages, including the one with your initials on it. Okay?

A. Yes.

Q. All right. On Page 1 of the report, and continuing over to Page 2 of the report, there is a topic entitled "Conclusions Based on Monsanto Studies." Do you see that?

A. Yes.

Q. The first numbered paragraph of those conclusions reads as follows, and I'll quote, Doctor: "As a class, the Aroclors are relatively harmless materials for routine industrial handling under ambient conditions."

Now, sometime after 1975, at or about the time that this paper was authored, marked Levinskas 29, did you agree or disagree with that statement?

A. I think it's a valid statement then and now.

Q. Okay. So your position is today that Aroclors, as a class, are a relatively harmless material?

A. Yes.

Q. Did you write the part of the report captioned "Summary of Monsanto's Long-Term Toxicity Studies on Commercial PCBs"?

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A. I believe I did.

Q. Okay. Did you make any reference in the part of this report that you wrote that there were findings that PCBs caused cancer in rats?

A. May I see that?

Q. Sure.

A. On Page 4, there are comments; and we make reference to the Kimbrough study.

Q. Okay. Did you write the comments that are on Page 4?

A. I do not recall. I probably did.

Q. Okay. I remembered that earlier you said you wrote Pages 2, 3, and part of 4. And on Page 2 is the section that commences "Summary of Monsanto's Long-Term Studies," and it includes all of Page 3 and goes over for part of Page 4?

A. Yes.

Q. You definitely recall writing that particular part?

A. I have no specific knowledge of writing that, but that is the sort of thing I would have written.

Q. The part of the report marked Levinskas Exhibit 29 that commences with the heading "Summary of Monsanto's Long-Term Studies," that portion of the report does not refer to any findings of carcinogenicity

HARTOLDMON0022586

with regard to Aroclor products tested on rats, does it?

A. It summarizes the results of the Monsanto studies. It does not make reference to carcinogenicity because none was seen.

Q. Except that that you've already told us that was seen by Drs. Richter and Gordon at Industrial Bio-Test, when they reviewed Dr. Kimbrough's slides; correct?

A. My response was that was Monsanto's studies. No carcinogenicity was seen in the Monsanto studies.

Q. But the Monsanto studies at IBT did show that the Aroclor products 1242, 1248 -- I'm sorry 1260, 1254, and 1242, caused tumors; correct?

A. Yes.

Q. Okay.

And I don't know, from just scanning the document, if you reported in your section of the paper that there were findings of tumorigenicity in the Monsanto-sponsored studies. Did you report that?

A. We make the specific statement that no cancers were observed in Monsanto studies.

Q. But did you report that tumors were found in animals tested with Monsanto's Aroclor products at IBT?

A. The section of the document you are referring to is labeled "Conclusions Based on Monsanto Studies."

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And we are -- as I've said before, we saw no cancers in the Monsanto studies.

Q. Okay. I'm not asking that question. You've already testified that tumors can be different from cancers, correct?

A. Yes.

Q. And you already testified that tumors is one of the things that falls in the general definition of a toxic effect, correct?

A. Yes.

Q. You didn't tell the reader of the report that there were findings in Monsanto-sponsored studies that these Aroclor products did produce tumors in the rats to which the product was administered, correct?

A. On Page 3, the statement is made that the heptaocellular alterations such as focal hypertrophy, cytoplasmic lipid, and in some animals hepatomas or cholangiohepatomas. We told them the tumors were observed in the rat livers.

Q. Okay. That's what that means, what you just read?

A. Yes.

Q. That means -- that's another way of telling someone that Aroclor products can cause tumors in rats?

A. We were telling them exactly what we found in

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those rats, yes.

Q. And who was it that was supposed to be the recipient of this report on the toxicity and environmental effects of commercial PCBs?

A. I can't recall at this time.

Q. Who directed that the report be written?

A. I cannot recall.

Q. Do you recall any of the people who were recipients of the report?

A. No, I do not.

Q. Would customers have been potential recipients of the report?

A. I do not know.

Q. Under the section that you referred to a moment ago entitled "Comments," a reference is made, is it not, to a review of the Kimbrough results by Drs. Gordon, Richter, and Pour?

A. Yes.

Q. Let me read this sentence to you, and tell me if I read this correctly, talking about Kimbrough's slides: "The slides were read independently by Dr. D. Gordon of Industrial Bio-Test Laboratories, Professor W. Richter of the University of Chicago, and by Professor P. Pour of the Eppley Institute for Research in Cancer."

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Did I read that correctly?

A. Yes.

Q. "In addition, Dr. Pour evaluated the Kimbrough slides and does not agree with the reported findings."

Is that correct?

A. That's correct.

Q. And so this paper is telling the reader that Dr. Pour disagreed with the Kimbrough finding of carcinogenicity in the Aroclor products, correct?

A. Yes.

Q. Where do you tell the reader that both Dr. Gordon and Dr. Richter agreed with Dr. Kimbrough's findings of carcinogenicity in her study? Show me that language.

A. That is not in that summary.

Q. You nowhere state what Dr. Gordon and Dr. Richter found and what they told you about in which you wrote in your own memo, do you?

A. This is a summary of Monsanto's findings on its studies.

Q. You nowhere state in this report what you wrote in your memo about the findings of Dr. Gordon and Richter, based upon a review of Dr. Kimbrough's slides; correct?

A. Would you please rephrase the question? I had

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a momentary lapse there.

Q. You -- nowhere in this report is stated the conclusions which you set forth in your memo based upon the review of Dr. Kimbrough's slides by Drs. Gordon and Richter?

A. That's correct.

Q. Okay. And those findings by Drs. Gordon and Richter, as reduced to writing by you in your memo, were that the slides of Dr. Kimbrough which they examined demonstrated carcinogenicity; is that correct?

A. They agreed that the rats from Dr. Kimbrough's study had liver cancers.

Q. Okay.

MR. POHL: Would you mark this.

(EXHIBIT NO. 30 MARKED)

Q. (By Mr. Pohl) Let me show you Exhibit No. 30 to your deposition, Doctor. Please look at the document.

Is this a letter from Dr. Gordon to you?

A. Yes.

Q. And what is the date of the letter?

A. February 18th, 1976.

Q. And did you receive the letter?

A. Yes.

Q. Dr. Gordon tells you in that letter that the

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following: "I am enclosing the revised tumor tables for the Aroclor paper that we discussed during your visit on January 15, 1976"; is that correct?

A. Yes.

Q. So as of January of 1976, revised tables for Aroclor papers are still being prepared; is that correct?

A. May I look at this?

Q. Sure.

A. This letter did bring back something I'd forgotten. What he is saying is that there are two tables with the same data. My recollection of this is that it was a matter in the structural arrangement of the tables, that I suggested he recast them, keeping the same information but in a different format which I felt would be easier for the reader to follow.

Q. Okay. And what reader are you referring to?

A. This would be with respect to a publication in the scientific literature of the Aroclor data.

Q. Why couldn't he print it in whatever form he wanted to in a publication but leave the original test report unchanged?

A. I have indicated that I was not changing his information. I was suggesting a style, a format, in which it would present it to the reader that I thought

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would be more intelligible and easier for the reader to follow.

Q. Okay. And were you suggesting that he make a change in the paper that he was going to publish, or were you suggesting that he make a change in the actual report that IBT issued based upon its study of the Aroclor products?

A. I think I've said before, and I'll repeat: I asked him to recast his information into a different form, retaining the same information, the same words, merely rearranging it in a form that I felt would be easier for a reader to follow.

Q. And I accept that, and I'm not trying to quarrel with you in any way about that, Doctor. What I want to know is: What were you suggesting that he recast? The tables for the paper that he was going to publish in the scientific literature, or the underlying rat study on Aroclor products itself?

A. I thought I had indicated that it was recast the information in a paper to be presented for publication.

Q. Okay. I just wanted to make sure that nobody was confused by this letter. You weren't intending to apply there was any change whatsoever to the underlying Aroclor studies; is that correct?

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A. That is correct. He says, "revised tumor tables for the Aroclor paper," not publication or not report.

Q. That's what I'm asking you. "Paper" refers only to the publication, not to the document evidencing IBT's report?

A. That's correct.

Q. Thank you.

MR. POHL: Would you mark this document.

(EXHIBIT NO. 31 MARKED)

Q. (By Mr. Pohl) Dr. Levinskas, let me show you a document that's been marked Exhibit No. 31 to your deposition and ask you to look at that document.

Did you author Exhibit No. 31?

A. Yes.

Q. Okay. And it's a report about a spill of some PCB fluids in the Philadelphia area, correct?

A. Yes.

Q. Okay. And you say in there that you told someone who had inquired about the spill that there was no need for respiratory protection for the clean-up crews; is that correct?

A. That's correct.

Q. On what basis did you make that statement?

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A. The nature of the exposure, the temperatures involved, the conditions of exposure were such that there was -- I saw no need for it.

Q. And this was in 1978?

A. 1978.

Q. And you were talking specifically about Aroclor 1260?

A. That is the nature -- was the subject inquired about, yes.

Q. You also say that you saw no reason for concern about the health of employees' families from possible contact with PCB-contaminated work clothes; is that correct?

A. That's correct.

Q. And why is that?

A. Again, based on the nature of the exposure and degree of exposure.

Q. Had you done any studies or read any literature which would indicate to you whether or not PCBs could be absorbed through the skin?

A. I believe PCBs would be absorbed through skin, yes.

Q. So if someone were handling the clothes of a workman who had spilled PCBs on him, they could absorb those PCBs through their skin; is that correct?

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A. I doubt there would be appreciable absorption.

Q. I'm not asking you if there would be appreciable absorption. I'm saying that if the spouse of a workman handled PCB-contaminated work clothes, she could absorb the PCBs into her skin; correct?

A. In so far as she could absorb an oil, she could, yes.

Q. Are you aware of efforts by the EPA to clean up places where PCBs have been spilled?

A. I have read some newspaper accounts of same.

Q. And that's occurring even as of this point in time, correct?

A. I would assume so.

Q. Okay. And where PCBs are found to have been spilled on the ground or to be accumulated in a pond or a pool, efforts are made to clean up and dispose of those PCBs, aren't they?

A. Some efforts are made.

Q. And does Monsanto encourage those efforts?

A. I do not know what Monsanto's attitude is to it.

Q. Do you know how the PCBs are disposed of, once they are collected?

A. Again, beyond what I read in the newspapers, no.

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Q. Okay. You indicate in here that the clean-up crews need no respiratory protection and that family members of workmen who have been in contact with PCBs don't have to worry about handling the contaminated work clothes, correct?

A. Yes.

Q. Okay. What kind of clothing do workmen working for the EPA or for people contracted with the EPA wear when they clean up PCBs that have been spilled in the environment?

A. I do not know.

Q. Why would they wear the equivalent of a moon suit with respirators when they clean up PCBs, Doctor?

A. I don't know that they do wear moon suits.

Q. Why would they care about inhaling PCBs, if they're totally harmless?

MR. ANDREWS: I'm objecting to that question. He's answered the two previous questions that he's not familiar with what gear people use under the circumstances you've described, and you are simply being argumentative.

Q. (By Mr. Pohl) Well, did you make any investigation as to what particular type of protective clothing should be worn before you told the people who

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were inquiring of you in November of 1978 that there was no need for respiratory protection of the clean-up crews?

A. No.

Q. Okay. So that's just something that you concluded yourself without making any independent investigation, correct?

A. On the basis of general knowledge, the degree and conditions of exposure, those statements were made.

Q. Okay. And would that be your position today?

A. Yes.

Q. Okay. And you would disagree with someone who would say that workmen should be protected by respirators from exposure to PCBs, correct?

A. My statement is that those conditions described in that memo did not require protective equipment.

Q. Okay. And would you also stand by the statement today that you made in your memo that you saw no reason for concern about the health of employees' families from possible contact with PCB-contaminated work clothes?

A. In that context of that memo, yes.

Q. Why, then, Doctor, did Monsanto warn its own employees not to have any PCBs come in contact with their skin, while they were working for Monsanto?

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A. The exposure conditions undoubtedly were different.

Q. Well, why did Monsanto provide separate lockers for workmen's work clothes and their street clothes, if it didn't make any difference --

A. I do not know the conditions under which our workers worked in the plants with PCBs.

Q. You never did any studies to see what procedures Monsanto established for the protection of its own employees who were exposed to PCBs?

A. I was not familiar with those procedures.

Q. All right. And not being familiar with those procedures that Monsanto employed to protect its own workmen, you nevertheless felt competent to advise Joan Ranson, an industrial hygienist from OSHA in Philadelphia, about how to handle a PCB spill in the Philadelphia area?

A. With respect to the conditions of that spill, I felt competent to advise her.

Q. Would there be any difference about this particular spill in Philadelphia -- well, let me put the question to you this way, Doctor: If someone came in contact with some of the transformer fluid that contained what you call Aroclor 1260, in the Philadelphia spill, what would differentiate that

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with -- from someone coming in contact with the same Aroclor 1260 in the workplace?

A. Could be any number of variables.

Q. Under what circumstances did you think it was appropriate for somebody to allow PCBs to come in contact with their skin, in November of 1978?

A. With respect to the situation described to me in that memo, I felt that no protective equipment was necessary.

Q. Well, you also said, in addition to no protective equipment, that you saw no reason for concern about the health of employees' families from possible contact with PCB-contaminated work clothes. Is that correct?

A. That's correct.

Q. And by that --

MR. ANDREWS: Mike, that same question has been asked and answered about two or three times. You are just being argumentative with the witness. He's given you fair and succinct answers to your questions. Let's move on to some new ground.

MR. POHL: Let me finish this line of inquiry first.

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Q. (By Mr. Pohl) In making that statement in your memo of November 1978, were you referring to family members such as a wife actually coming in physical contact with the work clothes of her husband that might have been contaminated with PCBs?

A. I saw no reason for concern from the possible contact with PCB-contaminated work clothes by employees' families, yes.

Q. Okay.

And as of November '78, you had no knowledge whatsoever of what precautions Monsanto implemented, if any, for its workmen to prevent them or their family members from having actual physical contact with PCBs; correct?

A. I have indicated I am not aware of the conditions in the workplace.

MR. POHL: Would you mark this.

(EXHIBIT NO. 32 MARKED)

Q. (By Mr. Pohl) Let me show you Levinskas Exhibit No. 32 and ask you to look at that document, sir.

Are you familiar with that document?

A. I recall parts of it.

Q. Okay. And is that your -- are those your initials appearing on the first page of Levinskas

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Exhibit 32?

A. Yes.

Q. Okay. And in the attachment to that that you're discussing with -- is it Dr. Roush?

A. Dr. Roush.

Q. Dr. Roush, you refer, in the third full paragraph on Page 1 marked Document No. 019717, to the contaminating impurities or by-products of Aroclor. What are you referring to there?

MR. ANDREWS: I object to that question. That's clearly not what this paragraph is saying. It's not talking about by-products of Aroclor.

Q. (By Mr. Pohl) Just tell me in your own words what it's talking about.

A. The document says that there are PCBs made by different concerns or from different parts of the world. And it says the quality, the goodness, if you will, of the test material may vary because of either ~~co~~ntaminating impurities or by-products.

Q. Okay. Well, are you referring to products other than Aroclor; or were you also making reference to Aroclor in that paragraph?

A. I would say that's a general term saying comparisons between products are difficult, because one

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is not aware in all cases; one does not have the same information in all cases.

Q. And when you speak of contaminating impurities or by-products, are you excluding from that Aroclor; or are you including Aroclor?

A. It would include everything.

Q. Because I see the word Aroclor, the name Aroclor used in the same paragraph. So I assume you are not trying to exclude Aroclor from your statement about contaminating impurities or by-products, are you?

A. While not excluding it, it is by no means conversely an admission or statement that there are impurities or by-products in Aroclors.

Q. Do you know one way or the other whether or not there are any impurities and contaminants in Aroclor?

A. I don't concern myself with the impurities.

Q. You don't know one way or the other, then?

A. Don't know.

Q. So you wouldn't be in a position to say whether ~~or~~ not there were impurities in Aroclor, correct?

A. Yes, correct.

Q. On the last page of this document there is a part of a sentence which reads as follows: "It is concluded that the continued use of Aroclors" -- and then inserted the numbers 1242 and 1254 -- "as

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dielectric fluids will not present an unreasonable human health hazard."

Do you see that?

A. Yes.

Q. And there's a line drawn all the way around that. Why was that particular portion singled out? What was the purpose of putting it in a box like that?

A. I did not box it, and I did not add the numbers.

Q. And so you don't know?

A. I don't know.

Q. Okay.

MR. POHL: Would you mark that.

(EXHIBIT NO. 33 MARKED)

Q. (By Mr. Pohl) Let me show you Exhibit 33 to your deposition and ask you to review that document.

Do you recognize that document?

A. Yes.

Q. And you're one of the people who received the document?

A. Yes.

Q. Okay. And this -- who is D. R. Bishop?

A. Mr. Bishop was in the public relations department of Monsanto Company.

Q. And the purpose of this document dated November

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17, 1975, was to have Monsanto issue a press release summarizing Dr. Pour's re-evaluation of Dr. Kimbrough's Aroclor study?

A. Yes.

MR. ANDREWS: Excuse me, Mr. Pohl, what is the exhibit number on that?

MR. POHL: 33.

Q. (By Mr. Pohl) And the document makes reference to distributing this news release in Chicago on Wednesday following Dr. Kimbrough's presentation; is that correct?

A. Yes.

Q. And was that a seminar or speech where Dr. Kimbrough was going to present the results of her Aroclor studies on rats?

A. My recollection is that was a symposium held on PCBs in Chicago.

Q. Okay. And as part of that symposium, was Dr. Kimbrough going to present her findings of carcinogenicity in connection with Aroclor products administered to rats?

A. Yes.

Q. Okay. And so in connection with Dr. Kimbrough's presentation of carcinogenicity in connection with her studies, you were going to --

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Monsanto was going to issue a news release pertaining to Dr. Pour's re-evaluation of her study; correct?

A. Yes.

Q. Okay. You didn't -- Monsanto didn't issue a news release about Dr. Gordon's or Dr. Richter's findings that they concurred in Dr. Kimbrough's finding of carcinogenicity, did you?

A. We did not.

Q. Okay. And after talking to Dr. Pour, he objected to your mentioning his name or the Eppley Institute's name in connection with this news release; correct?

A. Not completely correct.

Q. Well, correct me.

A. Dr. Pour had no reservation about our issuing the information. He, however -- and he was willing to answer questions directed to him by individuals, but he did not want either himself or the Eppley Institute to be engaged in a public debate on a controversial subject.

Q. And Dr. Pour, of course, was the one that Monsanto had retained who disagreed with Dr. Kimbrough's findings of carcinogenicity with regard to Aroclor products; correct?

A. Yes.

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Q. All right. So Monsanto's purpose in this news release was to present Dr. Pour's position that controverted what Dr. Kimbrough had found in her study but not to present the fact that Monsanto knew that Dr. Gordon and Dr. Richter concurred with Dr. Kimbrough, correct?

A. We were attempting an objective appraisal and a presentation of all the information, yes.

Q. Objective. Is that the word you used?

A. Yes.

Q. Would that be the same to you as fair?

A. Objective in a scientific sense means the best possible information we can develop.

Q. Okay. And you had three people look at Dr. Kimbrough's findings of carcinogenicity with regard to the Aroclor products, correct?

A. Yes.

Q. Those were Dr. Richter?

A. Yes.

Q. Dr. Gordon?

A. Yes.

Q. Dr. Pour?

A. Yes.

Q. Two of the three concurred with Dr. Kimbrough's findings of carcinogenicity, did they not?

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A. Yes.

Q. And in the news release that Monsanto was going to issue in November of 1975, it presented only the findings of Dr. Pour; correct?

A. Yes.

Q. The only one of the three that concurred, apparently, with Monsanto's position; correct?

A. Dr. Pour was the only one of the group who had looked at all of the IBT slides and had looked at all of Kimbrough's slides, every available slide in both studies; and, therefore, he was in the best position to draw an overall conclusion comparing both studies.

Q. I see. So you are telling me that Dr. Gordon didn't write the pathological section of every one of the Aroclor studies?

A. No. I'm saying Dr. Pour was the only individual who had looked at all of Kimbrough's slides and all of the IBT slides. The IBT pathologists had looked at the IBT slides, and they had reviewed selected slides with Dr. Kimbrough that she had prepared for them.

Q. Okay.

A. But had not reviewed all of them.

Q. And, of course --

A. Dr. Kimbrough had looked at IBT slides but had

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not reviewed every IBT slide.

Q. All right. And you know that Drs. Richter and Gordon had looked at enough of Dr. Kimbrough's slides where they could conclude in their own report to you at Monsanto that they concurred in Dr. Kimbrough's findings of carcinogenicity in connection with Aroclor studies done on rats, correct?

A. They concurred with her conclusions.

Q. Okay.

A. With her diagnosis.

Q. And you were going to state to the news media that Dr. Pour had re-evaluated Dr. Kimbrough's study, and he disagreed with her findings; correct.

A. We were going to state that Dr. Pour had reviewed all available liver sections, and he was giving his professional judgment as to his observations.

Q. Okay. And were you going to tell the news media that Dr. Pour agreed or that he disagreed with Dr. Kimbrough's finding of carcinogenicity?

A. I don't have a copy of the news release in front of me. I can't recall that point.

Q. You don't recall whether Dr. Pour -- whether Monsanto's news release was going to say that Dr. Pour agreed or disagreed with Dr. Kimbrough?

A. We were going to talk to Dr. Pour, that he had

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viewed all the slides of all the livers; and his conclusions were to be presented, yes.

Q. And you don't remember what Dr. -- you do not remember what Dr. Pour's conclusions were?

A. Dr. Pour concluded that he did not concur with the diagnosis. He said, "I have certain sections of tissues that are undergoing dynamic change, or were undergoing change. I have a static piece of tissue. I can't tell whether it is going to -- you know, it's a static piece of tissue." He says, "I'd have to know more about this before I can make a complete diagnosis of that tissue."

Q. So Dr. Pour would have to know more before he could conclude that the Aroclor had caused liver cancer in the rats?

A. That was his conclusion.

Q. Okay. But Drs. Richter and Ward had communicated to you that they had seen enough --

A. Yes.

Q. -- to convince them that the Aroclor was a carcinogen, with regard to the Kimbrough rat study; correct?

A. They concurred with her diagnosis, yes.

Q. Okay. Did the news release issued by Monsanto say "that a newly completed scientific report,

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commissioned by the St. Louis-based company, does not confirm the presence of malignant liver tumors in experimental rats fed a commercial polychlorinated biphenyl mixture"?

A. The news release you're referring to was not released.

Q. But the news release that Monsanto wanted to issue to the public in connection with the Chicago symposium on PCBs was that, according to Monsanto, a newly completed scientific report does not confirm the presence of malignant liver tumors in experimental rats fed a commercial polychlorinated biphenyl mixture; correct?

A. That was a proposed news release.

Q. Well, what was the newly completed scientific report?

A. The Pour report that reviewed all of the liver sections from the Kimbrough study and all of the IBT liver sections.

Q. But Dr. Pour didn't do any independent investigation in terms of testing animals?

A. He's a pathologist. He reviewed sections of the liver that had been reviewed by other pathologists. He was recommended to us by the people at the Eppley Institute for Cancer Research.

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Q. And when the proposed news release that Monsanto was going to issue in connection with Dr. Kimbrough's speech in Chicago said that this report by Dr. Pour does not confirm the presence of malignant liver tumors and goes on to say a conclusion that had been previously reached and widely reported by Dr. Kimbrough, Monsanto was taking the position that it disagreed with Dr. Kimbrough's findings? Is that correct?

A. If that's what the news release states.

Q. And Monsanto was disagreeing with the findings of Dr. Kimbrough, even though you, as a toxicologist employed by Monsanto, knew that both Dr. Gordon and Dr. Richter had agreed with Dr. Kimbrough's findings; correct?

A. I have indicated that in her study Kimbrough found liver tumors in her rats. There is other information, such as the IBT data, which does not indicate findings of carcinogenicity. The attempt is to arrive at a resolution or understanding of the issue.

Q. And it was Monsanto's position that Dr. Kimbrough was incorrect in her conclusions?

A. She drew her conclusions.

Q. And Monsanto disagreed, as of November 1975; correct?

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A. Based on the Pour report, yes.

Q. And you knew at that time that Drs. Richter and Gordon had agreed with Dr. Kimbrough, that they had also examined Dr. Pour's conclusions and, nevertheless, still agreed with Dr. Kimbrough's findings; is that correct?

A. When you say had examined Pour's findings and nevertheless still agreed with Kimbrough, that sequence I'm not -- unprepared to answer. Dr. Pour was an expert pathologist in cancer, recommended to us by the people at the Eppley Institute for Cancer. Because of his expertise and position, we accepted his conclusions.

Q. Did you reject the conclusions of Drs. Richter and Gordon?

A. Dr. Richter and Gordon, as I recall, concluded that they did not see cancer in the Monsanto studies.

Q. I'm not asking you about that. They concluded that they saw cancer in the Kimbrough studies, true?

A. They saw some cancers; but they did not view all of the sections, all liver sections, to get an idea whether those were real or spontaneous.

Q. I'm not trying to make this point difficult, Doctor, but the sequence of events is that Drs. Richter and Gordon reviewed the Kimbrough slides of her study and they agreed with her findings of carcinogenicity. True?

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A. They concurred with some of her diagnoses.

Q. After that, Monsanto had Dr. Pour examine Dr. Kimbrough's slides; correct?

A. Yes.

Q. He also examined IBT slides; correct?

A. Yes.

Q. Dr. Pour disagreed, according to you, with Dr. Kimbrough's findings; correct?

A. Yes.

Q. You had Drs. Richter and Gordon review Dr. Pour's findings; correct?

A. Yes -- no. They were -- certainly, the Pour findings were made available to IBT for their -- to Gordon and Richter for their information, yes.

Q. And you knew, based upon a communication that you've already testified today, you knew, didn't you, that Drs. Gordon and Richter disagreed with Dr. Pour's findings and reaffirmed their --

A. No.

Q. -- concurrence with Dr. Kimbrough's findings, correct?

A. He says, "I do not concur with his classification and interpretation of some of the liver lesions." I think that's less binding than disagreed.

Q. You are not trying to tell the Court and jury

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that when Dr. Gordon says that he and Dr. Richter do not concur with Dr. Pour's classification and interpretation that that somehow expresses some sort of agreement with Dr. Pour's findings, are you?

A. I do not see that Dr. Gordon makes a reference to Dr. Richter's statement in there. Gordon, speaking for himself, says, "I do not concur with some of his -- with his classification."

Q. All right. Let me just read this sentence that I'm referring to in this letter from Dr. Gordon to you: "I found his report interesting, although I do not concur with his classification and interpretation of some of the liver lesions."

Okay? Does that imply to you that Dr. Gordon agreed with Dr. Pour's findings or disagreed with Dr. Pour's findings?

MR. ANDREWS: Or can you tell, from that sentence?

MR. POHL: Yeah.

A. He says he doesn't concur. He doesn't indicate what he doesn't concur with or -- he says -- he uses two phrases, the classification and the interpretation. He doesn't point out his distinctions or his differences.

Q. (By Mr. Pohl) When somebody tells you they don't concur with somebody else's findings, what does

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that mean to you?

A. I would expect an indication of where the nonconcurrence is.

Q. Okay. I'm not asking you that much detail. Just as a general matter, just as a layman. Forget that you're a Ph.D. in toxicology. When somebody --

MR. ANDREWS: Before you answer this question, Doctor, you can answer in as much detail as you feel is necessary. Simply because he's asked you -- and he characterized his statement by saying that "I don't want a lot of detail," you are free to answer the question any way you want to to make it meaningful.

Q. (By Mr. Pohl) What do you understand when someone tells you they do not concur?

A. That there's -- they may not be in full agreement.

Q. Okay. But you won't go so far as to say that ~~it~~ implies to you disagreement?

A. I think disagreement is a stronger word than concur -- or not concur.

Q. But you knew, at least as of October '75, that Dr. Richter and Dr. Gordon had reviewed Dr. Kimbrough's slides and, in their opinion, found carcinogenicity and

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had the opportunity to review Dr. Pour's work, and Dr. Gordon reported that he did not concur with Dr. Pour's classification and interpretation?

MR. ANDREWS: Object to that question. It's compound, multifarious, been asked and answered half a dozen times, global, vague, and incomprehensible.

A. I would agree with counsel's characterization.

Q. (By Mr. Pohl) Okay. But go ahead and answer the question.

A. Would you break it into manageable pieces?

Q. When Monsanto's proposed press release was to be issued in November of 1975, Monsanto knew that two of the three pathologists that Monsanto had retained to review Dr. Kimbrough's slides agreed with Dr. Kimbrough's analysis; correct?

A. Monsanto had retained one pathologist, Dr. Pour. The other two had been retained by IBT. They were IBT's employees.

Q. Just so we don't quibble about this, who was paying IBT to do this work?

A. Monsanto was; but the obligation or the responsibility of IBT's pathologists is to IBT, as distinct from Pour.

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Q. Well, if it will help you, let me rephrase my question. Monsanto knew, in November 1975, that three pathologists had reviewed the slides of Dr. Kimbrough, one hired directly by Monsanto and one hired by the independent laboratory hired by Monsanto, and that two of those three concurred with Dr. Kimbrough's findings of carcinogenicity; correct?

A. Two of the three concurred with some of Dr. Kimbrough's diagnoses. The one who was the expert in cancer, who was recommended to us by the Eppley Institute of Cancer, his judgment and experience were considered to be superior; and, therefore, his conclusions were the ones Monsanto elected.

Q. Okay. So what happened is that Monsanto accepted Dr. Pour's conclusions that he disagreed with the finding of Dr. -- findings of Dr. Kimbrough and rejected the conclusions of Drs. Gordon and Richter?

A. We accepted the conclusions of the most experienced individual who had reviewed the information and was the only man who had looked at all of the liver slides in all studies.

Q. My question wasn't that complicated, Doctor. My question was: What Monsanto did was accept the findings of Dr. Pour and reject the findings of Drs. Gordon and Richter. Is that correct?

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A. In scientific judgments, I'm not sure that acceptance and rejection in a numerical counting scheme is a way to approach scientific truths. It's an assessment of all the available information, including the judgment and experience of the individuals involved.

Q. Okay. In weighing all that, Monsanto made a decision. It decided to accept the findings of Dr. Pour and reject the findings of Drs. Gordon and Richter?

A. We agreed to accept the conclusions of Dr. Pour.

Q. And in your news release, you made -- you intended to make no reference to the contrary findings of Drs. Gordon and Richter; correct?

A. That's correct.

Q. All right. And in addition to Drs. Gordon and Richter concurring with Dr. Kimbrough's findings, you also knew that Dr. Squire concurred with Dr. Kimbrough's findings; correct?

A. Dr. Squire had devised a new -- if I may use -- classification scheme that Don Gordon refers to, and it was the classification scheme that he had devised that Kimbrough used to grade her lesions. So there should be consistency between the two of them.

Q. Okay. And so you knew, then, that Dr. Squire -- Squire's findings with regard to the

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Kimbrough slides were consistent with the findings of Dr. Kimbrough, correct?

A. Since Dr. Kimbrough used her scheme for classification, her findings were consistent with his classification.

Q. Okay. So in connection with Dr. Kimbrough's study on Aroclor products that were administered to rats, there are at least four people, then, that we can identify today who concurred with Dr. Kimbrough's findings: They were Dr. Kimbrough herself, Dr. Squire, Dr. Gordon, and Dr. Richter. Is that correct?

A. Yes.

Q. Thank you.

Now, there's no mention made of any of these other four people that you just identified, other than Dr. Kimbrough, in Monsanto's proposed press release of November 1975; is that correct?

A. That's correct.

Q. Okay.

MR. POHL: Would you mark this document.

(EXHIBIT NO. 34 MARKED)

Q. (By Mr. Pohl) Let me show you a duplicate of what was marked as Levinskas Exhibit 33, except it doesn't have the handwritten changes on the first page;

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and it has the proposed press release attached. Do you recognize the document?

Have you reviewed it, Doctor?

A. Yes.

Q. Okay. Do you recognize it?

A. Yes.

Q. Okay. This is a copy of D. R. Bishop's memo to you and others dated November 17, 1975, with attached Monsanto press release; is that correct?

A. Yes.

Q. Okay.

MR. POHL: Would you mark this.

(EXHIBIT NO. 35 MARKED)

Q. (By Mr. Pohl) Let me show you what's been marked as Exhibit 35 to your deposition.

Do you recognize that letter?

A. Yes.

Q. And is that from Industrial Bio-Test to you?

A. Yes.

Q. Dated July 31, 1981?

A. Yes.

Q. What was the purpose of your inquiry of Dr. Gordon, in July of 1981, regarding studies of various Aroclor products?

A. We wanted to obtain their original records

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dealing with the liver sections and the issue of carcinogenicity in those animals.

Q. And why were you making such a request in 1981?

A. To undertake an audit of the information.

Q. Why were you going to audit the information pertinent to IBT's Aroclor studies?

A. To get a better understanding, documentation of the confidence we could put in those data.

Q. Why was the confidence that you could put in that data in question?

A. If memory serves me rightly, about 1981 Bio-Test had ceased to be a practicing laboratory; and we were trying to retrieve information from them.

Q. And what were you going to do with that information?

A. As I say, validate or check the reliability of the data that we had.

Q. Did Monsanto ever bother to validate the data from IBT's Aroclor tests?

A. We did with those studies there.

Q. And who was responsible for that validation?

A. I undertook it.

Q. And what did you do?

A. I made an attempt to determine whether the animals' records existed for the existence of those

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animals, their duration on test, and the diagnoses that were made of the livers for cancer.

Q. And do you have an opinion as to whether or not the IBT Aroclor tests that were done for Monsanto were properly conducted in all respects?

A. I believe they were adequately conducted.

Q. I didn't ask you that. Were they properly conducted in all respects?

A. Since I do not -- we talked earlier of protocols. I don't have a protocol against which to match. I can conclude they were adequately performed. If you say proper in all respects in terms of adherence to a protocol which I don't have, I'm unable to answer that question.

Q. Well, there were written protocols for the Aroclor studies, weren't they?

A. I don't recall having seen them.

Q. Well, if Monsanto had produced them in this case, would they have been available to you when you were trying to validate the IBT Aroclor studies?

A. Had we received them from IBT, if they had file copies I would have had them. I do not recall that we have them in the Monsanto files.

Q. So in attempting to validate the IBT studies of Monsanto's Aroclor products, you were unable to make any

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comparison of the test procedures to the protocol for the particular test; is that correct?

A. I was attempting to see if what was reported was substantiated by documentation and records.

Q. And my question was: You were not able to and did not compare the results of the test with the protocol for the conducting of the tests?

A. Since I was not aware of a plan for the test, I was not able to compare the outcome with the plan. Since I had a report, however, I could go back and see whether there was justification for the information in that report. The latter is what I did.

Q. And based upon your evaluation in 1981 of Aroclor studies on Aroclor 1242, 1254, and 1260, did you conclude that all the rats that were reported to be on those studies were on the studies for the full term of the study?

A. I wrote a report which indicated deviations from -- which indicated, as far as the records would indicate, how long animals were on tests; and in a few instances where they had been on tests slightly shorter intervals of time, I indicated those as well.

Q. Did you find, when you reviewed IBT's records in connection with the Aroclor 1242, 1254, and 1260 studies that some of the rats on the study had died and

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reappeared in life a number of times?

A. I do not recall that.

Q. You didn't find that?

A. Did not find that.

Q. So if it occurred, your study wasn't careful enough or thorough enough to find that fact out?

A. I have no knowledge it occurred.

Q. Okay. And how were you able to document, in your validation of the IBT studies, that all the animals on study were properly housed during the course of the study?

A. I indicated that I looked at records which showed that the animals had been on test, that they had been dosed as prescribed, the time they had been on test, and the microscopic findings with respect to the liver.

Q. Well, you indicated earlier in the deposition -- I wrote this down -- that some of the things you looked to that might invalidate a study or affect the ultimate outcome of the study were the strain of rats; is that correct?

A. Yes.

Q. You could determine what strain of rats IBT used on the Aroclor studies, couldn't you?

A. Yes.

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Q. Okay. How did you determine that the rats were properly housed during the course of the IBT study?

A. I made no attempt to do so.

Q. Okay. What about the source of feed? How did you determine what the source of feed was for the rats while they were on the IBT Aroclor studies?

A. I can't specifically recall whether we had records on the source of feed or not.

Q. Okay. So that's not -- that's not an element that you can recall having validated, correct? You'll have to answer verbally.

A. Correct.

Q. Now, another element that you said was important was water supply. Do you remember that?

A. Yes.

Q. Okay. How did you validate the water supply of the rats while they were on the IBT Aroclor study?

A. I did not validate, and I'm not sure that validation in that sense has -- I said that the different water supplies could contribute to different outcomes. I do not know that anybody would make an attempt to validate water supply.

Q. You didn't?

A. I did not.

Q. Okay. And what about the subtleties of

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handling animals? You remember when you told me about that this morning?

A. Yes.

Q. Okay. How did you validate the subtleties of the way that people at IBT handled --

A. I did not.

Q. -- the rats that were in their Aroclor studies?

A. I did not.

Q. Didn't make any effort to?

A. No.

Q. Okay.

MR. POHL: Would you mark this.

(EXHIBIT NO. 36 MARKED)

Q. (By Mr. Pohl) Let me show you what has been marked as Levinskas Exhibit 36. I'll pass that document to you.

Do you recognize the document?

A. Yes.

Q. Referring back to your earlier answers of just a-moment ago, what efforts did you make in attempting to validate IBT's Aroclor studies, to validate the body weights of the animals that had been on the study?

A. I have indicated that since the issue was carcinogenicity, we looked to see whether the animals had been available, had been on test, and whether

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records existed for the microscopic examination of the liver sections. And the report attached thereto has a tabulation of the findings with respect to liver sections.

Q. Okay. Are your findings -- well, first, let me repeat the question: I take it from that that you did not, in attempting to validate the IBT Aroclor studies, make any effort to validate the accuracy of the body weights of the animals on the study?

A. We did not make an effort to do that because, as I indicated in this, the crucial elements for assessing potential carcinogenicity of the materials were looked at, and that was the focus of the validation.

Q. Show me in your report, Doctor, where you recite the facts about how long rats on these various IBT Aroclor studies were on the study.

A. Page 4 says, For the chronic study in rats, weanling animals were divided into a control group and 9 treatment groups, each consisting of 50 males and 50 females, with 3 treatment groups assigned to each of the three Aroclor products studied. Not all of these animals started at the same time. After about two months on test, additional groups of males and females were assigned to each test diet and the controls. The

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animals were added to allow a sufficient number of animals for sacrifice at 3, 6, and 12 months to provide some information prior to the completion of the two-year study period.

Q. And that's your only finding with regard to how long the animals on these three Aroclor studies were on the test?

A. Yes.

Q. Okay. And would you have been able to tell, based upon your review of the records, whether animals had been substituted during the course of the test, if their substitution had not been noted in writing?

A. Yes.

Q. How would you have been able to tell that?

A. By cross-checking individual versus group house records, and so forth.

Q. Okay. Well, tell me what -- specifically what you did to check for that.

A. Well, I would have to resurrect my -- refresh my memory on the records; but, as I said, we looked to see whether there were individual animals that had been received that had been placed on tests, whether there were records attesting to the fact that those animals had been weighed over a period of time and that those animals -- the dates at which they were sacrificed

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relative to the dates at which they started on test.

Q. So one of the things that would help you determine if an animal had been substituted on a test was the body weight?

A. The body weight, yes.

Q. Was that an important element in determining whether an animal had been on the test for the full term of the test or had been substituted during the course of the test?

A. A body weight of an animal would be meaningless except in relation to its own prior weight. It's weight changes. While there is a -- following the weight of an individual animal has some meaning.

Q. It can help you determine whether or not that animal was on the test for a particular period of time, correct?

A. If you have sequential intervals of weighing of the animal, it attests to the existence of that animal over that period of time.

-- Q. And in drawing your conclusion that animals had been on the IBT Aroclor studies, did you look at the body weights as a means for helping you decide whether or not the animals had been on the study?

A. Yes.

Q. That's one of the factors you considered?

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A. Yes.

Q. Okay.

What other factors did you consider, besides the animal's body weight, in helping you determine whether or not the animal was on the study?

A. I don't recall the specific records we have, but it would be information that would track the existence of that animal with respect to time.

Q. One of the things be the animal's identification number?

A. The observations would -- yes, would be recorded on to that animal number.

Q. So at least two ways in which you tracked the existence of a particular rodent on an IBT Aroclor study would be the animal's body weight and the animal's identification number, correct?

A. Yes.

Q. And in making your analysis, you assume the validity of those records?

A. Yes.

Q. Okay.

Now, why did Monsanto sponsor such an attempted valuation of IBT's Aroclor studies several years after PCBs had been completely banned by Congress?

A. I was going to write a review to look at this

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entire question of the carcinogenicity and try to summarize all available information, which included the information available to us in the literature as well as the information in our files. And at that time, since IBT, as I have indicated, had stopped being a functional laboratory -- before we committed ourselves to citing that data, we wanted to assure ourselves that it had some validity.

Q. Okay. And after your review of the IBT data, did you conclude it was the type of reputable laboratory that you would like to cite in one of your papers?

A. I concluded that the data available to me were valid, sufficiently valid and sufficiently important to be included.

Q. Okay. So you had no problem making reference in your paper to studies conducted by IBT, correct?

A. That's correct.

Q. Okay.

Did you author this paper?

A. Yes.

Q. Where is it published?

A. It has not been published.

Q. I'd like to see a copy of it. Do you have a copy with you?

A. No, I do not have a copy with me.

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Q. Is a copy available at Monsanto?

A. Yes.

Q. Okay. How hard would it be to get a copy of that paper?

A. I would think it -- not very difficult, but it would take awhile to get it.

Q. Okay. Did anybody ask you to bring it with you today?

A. No.

Q. Okay. How long is the paper that you've written summarizing all this material on PCBs?

A. It's longer than this one. I don't know, 40, 50 pages.

Q. Forty or 50 pages?

A. Sixty pages.

Q. And how long has that document pertinent to PCBs been in existence?

A. It's about the same date as this one.

Q. So Monsanto's had that document since 1981?

A. Yes.

Q. And did you put a copy of it in Monsanto's files?

A. There should be a copy in the files.

Q. And you're certain that this document has a reference to PCBs?

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A. What?

Q. That this document makes reference to PCBs and Aroclor products?

A. (Moving head up and down)

Q. You are certain of that?

A. Yes.

Q. Okay.

Would the 40- to 60-page paper that you wrote on PCBs compare or contrast the results obtained by IBT on its Aroclor studies?

A. It's a compilation of information from many sources. It lists these data from IBT along with published data from the literature.

Q. Would it be a document regarding an investigation or analysis of those Aroclor tests conducted by IBT for Monsanto?

A. Would you repeat the first few words?

Q. Let me read it to you. "Any document regarding any investigation or analysis of those Aroclor tests eonducted by IBT for Monsanto."

A. Strictly speaking, I would not consider an investigation or analysis. It is merely a compilation, a collection of information. Not a unique investigation.

Q. But as part of the paper, you did investigate

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or analyze the findings and data of IBT in connection with its tests of Aroclor products; is that true?

A. It makes reference to the information which is presented in this report.

Q. Okay. The same type of information you've been telling us for the last few minutes that you had tried to validate at IBT?

A. Yes.

Q. Okay.

MR. POHL: Steve, I'd ask y'all to produce that document in connection with this deposition.

MR. ANDREWS: I'll consider it and ask the people in charge of that to advise me.

Q. (By Mr. Pohl) After Dr. Wright returned to the employment of Monsanto, did you and Dr. Wright ever discuss the work that went on at IBT?

A. I have no specific recollection of specific discussions.

Q. Did he ever tell you whether or not he thought the procedures and policies at IBT with regard to the rodent studies were good, bad, or indifferent?

A. No.

Q. He never communicated that to you one way or

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the other?

A. No.

Q. And you never asked him?

A. No.

Q. Okay. When you did your attempted validity -- validation of the IBT Aroclor studies in 1981, did you consult with Dr. Wright?

A. No.

Q. Why not?

A. It was a task that I was undertaking on my own.

Q. Well, you consulted a woman at IBT named Marilyn Biederer, didn't you?

A. I made a request for the information to her.

Q. Well, and you talked to Dr. Donovan Gordon, didn't you?

A. Since it was -- my recollection, since it was pathology, I asked Don Gordon. And, as I said, IBT had ceased to be a practicing laboratory; and I was referred to someone else for the records. So I made a request of them for information.

Q. Who else did you talk to or request information from in an effort to attempt to validate IBT's Aroclor studies?

A. I don't recall anyone else that I did talk to.

Q. But you specifically recall not having

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attempted to communiate with Dr. Paul Wright?

A. I've indicated I made the inquiry of Don Gordon. Since I thought it was pathology, he would have the records. He referred me to their validation assurance specialist; and so my source was looking for the information, not to discuss the results with anyone else.

Q. Okay. Now, you're aware that sometime after Dr. Wright was rehired by Monsanto, he was criminally indicted for his activities in connection with IBT; is that correct?

A. Yes.

Q. Okay. And you're aware that there was a lengthy jury trial in connection with Dr. Wright's indictment?

A. Yes.

Q. And you're aware that Dr. Wright was ultimately convicted of a felony; is that correct?

A. I read that in the newspaper, yes.

Q. And you are aware that Dr. Wright was convicted at the time he was working for Monsanto; is that correct?

A. Yes.

Q. And he was reporting to you at the time he was convicted?

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A. No.

Q. Who was he reporting to?

A. Dr. Roush.

Q. And ultimately Dr. Wright went to prison; is that correct?

A. I have no knowledge of that.

Q. What's the last -- when is the last time you've communicated with Dr. Wright?

A. I would have to say probably somewhere in the late -- not late -- could be late Seventies, early Eighties. It's a couple more years.

Q. Was one of the things that Dr. Wright was accused of was falsifying test data in connection with tests conducted for Monsanto and others?

A. I don't know that I specifically recall the nature of the indictment.

Q. Well, do you recall the fact that I've just referred to you? Do you recall whether or not, Doctor, one of the things that Dr. Wright was accused of was falsifying test data in connection with tests that were conducted for Monsanto and others?

A. My best recollection is that -- now, I'm the layman in terms of legal -- he was accused of using the mails to defraud by having sent reports to the government agencies, and also of submitting false data.

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Q. Okay. And one of the matters that we set forth that we wanted to talk about in the deposition of Monsanto was the matters pertaining to the payment of Paul Wright's attorneys' fees in connection with his defense in that criminal case. Are you knowledgeable about that subject matter, Doctor?

A. No.

Q. Okay. Do you have any knowledge of it whatsoever?

A. No.

Q. Okay. So if we were to ask somebody questions about that, it would have to be somebody other than you?

A. Yes.

Q. Okay. Now, another one of the areas that we gave your lawyers notice that we were going to talk about today was Paul Wright's personnel file. Are you familiar with that?

A. Not with his file, no.

Q. Were you one of the ones that wrote evaluations or reports that were entered in Paul Wright's personnel file?

A. Yes.

Q. Okay. And is that because for a number of years you were his supervisor at Monsanto?

A. Yes.

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Q. Okay. And as a supervisor, were you called upon by Monsanto to evaluate his performance from time to time?

A. Yes.

Q. And you found his performance overall to be quite good, didn't you?

A. Yes.

Q. And you recommended him for bonuses and for merit raises?

A. Yes.

Q. And what was it that was particularly good about Dr. Wright's work for you at Monsanto?

A. He was a good, competent, experienced toxicologist.

Q. And what did he do that you felt merited him being singled out for praise?

A. He was treated like everyone else, not singled out. When he deserved or we felt he was deserving, he received commensurate recognition.

Q. And he received not only normal advancement in the company, but he received extra cash bonuses, didn't he?

A. At his level, he was eligible for extra compensation, yes.

Q. And you recommended that he receive these extra

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cash bonuses, didn't you?

A. I would have to think of that. I don't believe I ever made a specific recommendation on cash bonus for Dr. Wright, though I could be mistaken. I don't recall at that time I was making specific recommendations for bonuses.

Q. Would the personnel file of someone like Dr. Wright be a file that was kept in the ordinary course of business by Monsanto?

A. I'm sorry. You said --

Q. The personnel file.

A. You used the words before it was kept, something.

Q. Yes. Would the personnel file of an employee like Dr. Wright be the type of file that would be kept by Monsanto in the ordinary course of its business?

A. I assume that Monsanto keeps personnel files.

Q. Do they keep one on you, for example?

A. I assume they do.

Q. Typically, do they keep a personnel file on all the employees, say, that would be in the toxicology department?

A. I have no direct knowledge of that.

Q. Okay.

MR. POHL: Would you mark that.

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(EXHIBIT NO. 37 MARKED)

(EXHIBIT NO. 38 MARKED)

Q. (By Mr. Pohl) Let me hand you Levinskas Exhibit 37 and ask you to review that document for a moment.

Have you had a chance to review it, Doctor?

A. Yes.

Q. Did you sign that document?

A. Yes, I did.

Q. Okay. And that document's dated in February of 1975; is that correct?

A. Yes.

Q. And is that an evaluation of Paul L. Wright?

A. Yes.

Q. Okay. And you prepared that evaluation?

A. Yes.

Q. And at the conclusion of that evaluation, you nominate Dr. Wright for a merit award on the basis of his demonstrated performance, don't you?

A. Yes.

Q. And what type of merit award was that?

A. I think the figure down in here would indicate the award amount approved for payment.

Q. Okay. So you recommended that Dr. Wright be paid a bonus of $2,500?

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A. I made a recommendation that Dr. Wright be considered for a bonus, depending on the availability of funds and other recommendations at the time. The amount, the dollar amount, would have been decided on by others.

Q. Okay. Do you recall the outcome as to whether or not your recommendation was approved by the company?

A. I would have to assume that it was approved, if that document shows the $2,500 payment.

Q. Okay.

And the reasons that you recommended Dr. Wright for a merit award are the reasons that you state forth here in your typewritten evaluation?

A. That's correct.

Q. And one of the things that Dr. Wright did that you found to be praiseworthy or worthy of merit, was to forestall precipitous action against the product by the FDA, referring to Aroclors. Is that correct?

A. No.

Q. All right. What product are you referring to?

A. This is a reference to the Dow Chemical Company reporting studies on maleic anhydride, and that is the compound under study.

Q. Okay. And what is maleic anhydride?

A. It's a chemical intermediate used in making

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other chemicals.

Q. Is it a product used by or made by Monsanto?

A. Yes, Monsanto makes maleic.

Q. Is it a product that will have toxic effect on human beings?

A. In sufficient quantities under the right exposure conditions, every chemical will have toxic effects.

Q. Well, if workmen -- it's a powder, isn't it, a white powder?

A. It's a white powder.

Q. And if workmen breathe it in, it will make their lungs burn like fire, wouldn't it?

A. It would be irritating to the lung, yes.

Q. Makes their skin burn, too, doesn't it?

A. It's a skin irritant, yes.

Q. Particularly if you're sweating and you mix the maleic anhydride with sweat on your skin, it's going to make your skin burn?

A. Yes.

Q. Are you aware of reports that workmen who had been exposed to maleic anhydride in sufficient quantities have become totally and permanently disabled?

A. I am not aware of those reports.

Q. Do you consider maleic anhydride to be a human

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health hazard, if exposure is in sufficient quantities?

A. There are standards set to control the exposure to maleic anhydride in the workplace, and I believe those standards are adequate to protect worker health.

Q. May I see that document.

And when you're praising Dr. Wright for forestalling precipitous action against maleic anhydride by the FDA, what precipitous action are you talking about?

A. I had no specific idea of a -- no idea of a specific action, but a knee-jerk reaction, an overaction. I would like to add that that letter or memo goes on to add to Dr. Wright's commendation the fact that he also was instrumental in organizing a program to further investigate the toxicity of maleic anhydride and to investigate the questions which were raised by the earlier information we had.

Q. Okay. And you note, in your recommendations with regard to Dr. Wright, that Dow Chemical Company had encountered lung tumors in rats fed maleic anhydride; is that correct?

A. Yes.

Q. And that Dow Chemical Company, under their product stewardship program, felt that they had to report those findings to the FDA; is that correct?

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A. Yes.

Q. And Dr. Wright contacted Dow and persuaded them to defer reporting these results to the FDA until there could be further evaluations; is that correct?

A. He advised them to defer; not to not contact, but to defer contacting until they had thoroughly evaluated their findings.

Q. Okay. And would another way to say that, Doctor, would be that Paul Wright had persuaded Dow Chemical to delay reporting to the FDA its findings that maleic anhydride caused lung tumors in rats?

A. Their report raised a question as to whether they were lung tumors. They had the same kinds of uncertainty that we have talked about on the PCBs. And the recommendation to Dow was that they should check and cross-check their information to be sure of their findings, and then they should take and present those to an agency.

Q. And what did you mean when you talked about Dow's "product stewardship" program that you put in quotation marks in your memo?

A. Dow has a program they call product stewardship which would be quite analogous to Monsanto's environmental assessment procedure.

Q. And what is the purpose of that program?

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A. Dow considers themselves to be good stewards of their products.

Q. That means they don't want to expose anyone to a product that might harm them?

A. They would like to have people use the chemicals properly for their intended purposes.

Q. Would part of Dow's product stewardship program, as you know it, be to warn the government, through the FDA, for example, that a product might be hazardous?

A. I don't have adequate knowledge of Dow's product stewardship program and how they were implemented on details. The fact is that maleic anhydride is labeled for hazards, as we have discussed. Standards have been set for its safe handling in the workplace, and adequate information appeared to be available on maleic anhydride.

Q. And have studies with the rats now confirmed that maleic anhydride does cause lung tumors in rats?

A. There have been extended studies. I do not believe lung tumors were detected.

Q. And maleic anhydride is a product that's manufactured by Monsanto?

A. Yes.

Q. And when maleic anhydride is shipped, it has a

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yellow warning sticker on it, doesn't it?

A. I don't believe I've ever seen a container of maleic anhydride shipped, so I can't comment.

Q. And the point about all that that you make in the first paragraph of your memo is that Dr. Wright advised Dow Chemical to defer contacting the FDA about the lung tumors it had encountered until further studies could be done?

A. No. Dow had raised a question as to whether they had a lung tumor. Our recommendation there was that they resolve the issue, or attempt to resolve it, and then present the results of those findings rather than an inconclusive comment to the agency.

Q. Doctor, why did Monsanto have one of its employees telling Dow Chemical to defer contacting the FDA about one of Dow Chemical's findings?

A. Because Dow Chemical called us to tell us of their findings and essentially ask us for suggestions on what to do next.

Q. And your suggestion was, "Don't contact the FDA"?

A. No, my suggestion was, "Let's define the questions. Let's determine what we're dealing with. When we have something that we -- is meaningful or that we can discuss, we will then proceed to discuss it."

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Those findings were presented to the FDA. The recommendations for further study in substantial part were initiated, and I think everything has been appropriately done.

Q. Okay.

And in your memo, you go on to say, "The results of such study would not necessarily resolve FDA's concern over the potential carcinogenicity of maleic anhydride, but the intent to conduct the study promptly would serve to forestall precipitous action against the product by FDA." Is that correct?

A. The context in which that comes, the preceding statement, the first step was a commitment to support a repeat of the feeding study to determine if the findings were reducible. It's my recollection that that study was something on the order of six to eight months duration. So it would answer the question as to whether the findings were repeatable. And then it would not necessarily, since it was less than a lifetime feeding, resolve FDA's concern, if they were to have one about potential carcinogenicity.

Q. But by expressing the intent to conduct the study, that would serve to forestall precipitous action against the product by the FDA; is that correct?

A. That's correct.

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Q. Okay.

And this was a proposal that was acceptable to the business group at Monsanto?

A. Yes.

Q. And for intervening on behalf of Monsanto with Dow Chemical and avoiding any precipitous action by Dow Chemical, Paul Wright was recommended by you for a merit award; correct?

A. I just want to the see where the adjectives fit. Yes, we felt it would be foolhardy for Dow to act precipitously by going with questions that they could get answers to in a little bit of time.

Q. Let me pass to you Exhibit No. 38 to your deposition and ask you to look at that document.

MR. ANDREWS: Let's go off the record for just a few minutes, if we might, and have a discussion about the further timing and continuation of the deposition.

MR. POHL: Sure.

VIDEO OPERATOR: We're off the record.

(DISCUSSION OFF THE RECORD)

MR. POHL: We'll come back at 9:00 o'clock in the morning.

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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 219 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 J. Levinskas

GEORGE LEVINSKAS, Ph.D.

THE STATE OF ~~TEXAS~~ Missouri

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.

Shirley R Lee

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 8, 1988
ISSUED THRU MISSOURI NOTARY ASSOC.

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THE STATE OF TEXAS]

CERTIFICATE

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.

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.

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.

GIVEN UNDER MY HAND AND SEAL OF OFFICE in Houston, Texas, on this the 29th day of May, 1987.

Wanda G. Kuhn, CSR, RPR
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