(Ms. Carter replaced Ms. Pape)

THE COURT: Good morning, folks.

THE JURY: Good morning.

THE COURT: Mr. Carney, you may proceed.

Q. (By Mr. Carney) Mr. Papageorge, I think when we left off yesterday you were talking about some of the people you knew at Westinghouse. Did you þ know a -- I think you mentioned you knew a Mr. Don McClain?

A. Yes, I did.

Q. Did he also go by Robert?

A. Yes.

Q. It's R. D. McClain, and it was Robert Don McClain?

A. Yes, sir.

Q. And did you have meetings with him?

A. Oh, several times, yes.

Q. He was on that ANSI committee, that 170 committee that Mr. Kotoske askedþ you about?

A. Yes, he was.

Q. And that was a committee that was developing safe handling methods for PCBs?

A. Yes.

Q. Who drafted the procedure for safe handling of PCBs?

A. Mr. McClain made the first draft.

Q. And where was Mr. McClain employed?

A. Westinghouse, Bloomington, Indiana, plant.

Q. Did Mr. McCþ lain in your discussions with him, did he indicate that he knew about how to handle PCBs safely in the work place?

MR. KOTOSKE: Objection, Your Honor, cautionary instruction.

THE COURT: Ladies and gentlemen, I'm going to be giving a cautionary instruction to some of these questions relative to what other people told this witness, and I'll do it as we go along, but basically it is this, thaþ t the evidence of what was told to him by Mr. McClain or anybody else from Westinghouse is not admissible for the truth of the statement, but only on the issue of what Westinghouse or Monsanto knew about this product. So I hope I've made myself clear. And that's the statement. You may continue. You may answer the question.

Q. (By Mr. Carney) What did Mr. McClain indicate to you about what he knew as a Bloomington plant employee about safe handling of PCBs?

A. He knew that the material must be respected and handled properly. He knew that too much of that material could result in chloracne. He also knew that continued exposure, a long period of time and quite a bit of exposure could hurt the employee's liver. Of course,

he also knew about the stinging of the eyes and the reddening of the skin, these other conditþ ions that we've talked about.

Q. And did he know -- did he indicate to you that he knew about avoiding skin contact for prolonged periods?

A. Oh, yes, definitely.

Q. Did he actually put that in his safe handling procedure guide, didn't he?

A. Yes.

Q. And did he know that you should avoid breathing the fumes?

A. Yes.

Q. þ You mentioned a couple of other names of Westinghouse employees that you knew, and these were Dr. Dakin and Dr. Mandelkorn. Who were those two people? Were those Westinghouse employees?

A. They were scientists out of Westinghouse's research center, and their work had an awful lot to do with PCBs and their use in electrical equipment.

MR. KOTOSKE: Could I have those names?

MR. CARNEY: Dr.þ Dakin, D-a-k-i-n, and Dr. Mandelcorn, M-a-n-d-e-l-c-o-r-n.

Q. (By Mr. Carney) Did I spell those right?

A. That is correct.

Q. And did these two gentlemen indicate that they did research on PCBs at that Westinghouse Pittsburgh facility?

MR. KOTOSKE: Your Honor, cautionary instruction.

THE COURT: Again, what these gentlemen said þ to Mr. Papageorge is not admissable for the truth of the statement, but only on the issue of what Westinghouse or Monsanto knew of the product.

A. These gentlemen through the years on and off had worked with PCBs, decades, especially Dr. Dakin.

Q. (By Mr. Carney) Did these gentlemen, Dr. Dakin and Dr. Mandelkorn tell you that they knew about how to handle PCBs safely?

A. Yes, they did.

þ Q. Can you tell me what they said about that?

A. Again, it covered the need to be careful, not to breathe the fumes, not to get it on their skin, over-exposure to the chemical would cause reddening of the skin. They were well aware of the chloracne potential if really over-exposed, and they also knew about the fact that the liver can be harmed by too much PCBs.

Q. Let's switch subjects now and talk about þ this environmental issue. Mr. Kotoske asked you a lot of questions about that. Could you tell me when --

approximately when Monsanto first learned that PCBs might be in the environment, staying in the environment?

A. The first -- I'm going to call it inkling or the first hint that this might be the case was made known to Monsanto in late 1966, about October, November.

Q. And was it sþ ometime later that Monsanto confirmed that?

A. Yes.

Q. Was it immediately known -- and I think there's been some testimony on this, but how did you find that out, just briefly?

A. Monsanto representatives in Europe were contacted by the Swedish workers because the Swedish workers knew that Monsanto was one of the makers or producers of PCBs, and indicated to the Monsanto represþ entatives that in their studies with DDT they saw something in their analytical work that didn't look like DDT, and it looked like something else. They weren't sure what it was, but they were suspicious it was a PCB. Did Monsanto know anything about that. That's the kind of question that was raised then.

Q. During this early period did Monsanto -- was Monsanto surprised to learn this?

A. Very much so, yeþ s.

Q. Why was that?

A. Because the investigators in Sweden reported finding it in such things as pine needles, a child's hair, some fish and feathers from an eagle from a museum. There were other samples. I don't remember them all, but these were places where from our understanding of PCBs and how they are used were very surprising. We would not expect to find them in that kind of sþ ample.

Q. Did Monsanto eventually receive something in writing directly from one of these Swedish scientists?

A. Yes.

Q. Take a look at Defendant's Exhibit 15.

A. I have it.

Q. Can you identify Defendant's Exhibit 15-A?

A. This exhibit is a letter authored by Gunner Widmark from the Institute of Analytical Chemistry, the University of Stockholm. It's dated þ December 29, 1966, and it's addressed to Mr. Ford in Monsanto.

MR. CARNEY: Your Honor, I'd like to offer into evidence Exhibit 15-A.

THE COURT: Any objection?

MR. KOTOSKE: (Shakes head in the negative.)

THE COURT: So admitted.

Q. (By Mr. Carney) This was the first written notification that PCBs might be in the environment?

A. It seems to me þ there was another document

that was a translation of the paper that was given describing the work, but this is the first letter describing the subject to Monsanto.

Q. What did Monsanto do in response to this early report that PCBs might be in the environment?

A. The first action they took was to send a Monsanto representative in Europe to the University of Stockholm and get copies of Dþ r. Widmark's procedure that he used to analyze, and that material was sent then to St. Louis to our research laboratories for our scientists to study and use in St. Louis to analyze for PCBs and see if they could duplicate the work.

Q. Did Monsanto provide any PCB samples to the Swedish scientists?

A. Oh, yes.

Q. And did Monsanto send people over to meet with the Swedish scientists to taþ lk directly to them?

A. Yes, there were. The Monsanto people in Europe made the initial visits, and after Monsanto-St. Louis had a chance to study the procedure, the head of that department went to the University of Stockholm in March of '69.

Q. Did Monsanto have any discussions with any of the European PCB manufacturers about this environmental problem?

A. Yes.
Q. Okay. Tell me about those.
A. There were, of course, many. There were discussions between Monsanto's representatives in Europe and representatives of the European producers. I would call those informal kind of discussions where a salesman would talk to another salesman or a manager would talk to a manager. Finally in 1970 three of us from Monsanto-St. Louis, along with two or three from Monsanto-Europe met with representatives of the European producers in Germany to discuss PCBs and what we all knew about the situation regarding the environment.
Q. Were the European PCB manufacturers, did they indicate a concern about this environmental problem?
A. No, they didn't. They didn't believe that there was an environmental problem at that time.
Q. Did they question why Monsanto had this concern about the environmental problem?
A. Well, yes, they did. In fact, not only question, but criticized us for creating a problem. I don't know where they got that idea, but that's the accusation that was made.
Q. They thought Monsanto was making too much of this environmental problem?
A. Yes, sir.

Q. Did they indicate that it might hurt their sales by þ Monsanto making an issue of the environmental problem?

A. Oh, certainly.

Q. When the PCBs were found by these Swedish scientists in the environment, in what quantities were they found? Can you --

A. Oh, very low parts per million or tenths of a parts per million, hundredths of parts per million, parts per billion.

THE REPORTER: What?

THE WITNESS: Paþ rts per billion.

Q. (By Mr. Carney) Let me show you an exhibit that I think will help explain what parts per billion is. You've seen this chart before?

A. Yes, I have.

Q. Does this give an idea of what a part per billion is and a part per million?

A. Yes, it does.

Q. Let's take the first one in terms of distance to get some idea of what a part per million -- one partþ per million is.

THE COURT: Is this 1117, by the way?

MR. CARNEY: Yes, Your Honor. I'm sorry.

A. In terms of distance and speaking of parts

per million, that would be the equivalent of 1 inch in a 16-mile journey.

Q. (By Mr. Carney) And what is one part per billion?

A. That would be 1 inch in a 16,000-mile journey.

Q. Okay. Let's just take one other example, and that is time.

A. In time, a part per million would be equal to a minute every two years, and a part per billion is a minute in 2,000 years.

Q. So that would be one minute going all the way back to the birth of Christ?

A. Yes.

Q. These chemists or these scientists in Sweden, were they analytical chemists? Is that what they were?

A. Yes, they were.

Q. Just briefly, and try to do it in lay language as much as you can, what is an analytical chemist?

A. It's, of course, a person trained in chemistry, but specializing in techniques and methods and understanding of how to determine whether a particular chemical is present in a mixture. And he uses all kinds of methods to do that, depending, of course, on what the

mixture is and what the chemical he's looking for is. I hope that's helpful.

Q. Yes. Let me ask you, by the way, when you got this letter from Professor Widmark in the late '60s, did he indicate in that letter that there was any biological significance to living organisms because of what he found?

A. Well, he does refer to the possible significance of biological effecþ ts.

Q. And in the fourth paragraph does he state these words, "At present we have no knowledge of the biological significance of the presence of these compounds in living organisms"?

A. He does.

Q. Now, did these Swedish scientists have any piece of equipment that they were using that was a state of the art piece of equipment?

A. I would call it the forefront of the art. It was not just state of the art. It was a very sophisticated, new type of instrumentation capable of getting down to the parts per billion levels.

Q. Were these the kind -- was this the kind of equipment that you could go out and buy in the store off a shelf?

A. Oh, no. You had to order it, and it was

custom built almost, built when the order is placed.

Q. And there wþ eren't very many of these machines in the world at that point in time?

A. That is correct.

Q. Did Monsanto have this type of equipment at the time?

A. Not in 1966, no.

Q. Did Monsanto go out and order that equipment?

A. They did.

Q. And then after they got this equipment did Monsanto start looking for PCBs in the environment in the United States?

þ 13 A. Yes.

Q. Did Monsanto continue its investigation of this potential environmental concern in the late '60s and early '70s?

A. Oh, yes, continually.

Q. Were there additional trips over to Europe?

A. Yes.

Q. Tell me what was done generally in this time period after Monsanto was notified about the possible concern.

MR. KOTOSKE: þ The only objection I have is that at this point could we have some time?

THE COURT: Yes, please.

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MR. KOTOSKE: It's important to know what time it is now.

Q. (By Mr. Carney) Let's talk about, say, the years 1969 and 1970, that time period, keeping that (inaudible).

A. By 1969, of course, the special instrument had been obtained. The procedure thaþ t Dr. Widmark had developed was further refined and being used with the instrument. Samples were looked at. PCBs were being found in some of them, not all of them, but some of them. The PCBs that were being found were determined to be in truth PCBs and not something else, some other strange chemical. During that period of time we were in contact with some other investigators. I have in mind, for example, a Dr. Risebrough iþ n California and a Dr. 'Pikaul' at Cornell University, the Commercial Fishers Laboratory at Gulf Breeze, Florida, and a laboratory in Columbia, Missouri, that works with pesticides in fish. There were several laboratories were picking up this expertise. We were sharing samples of PCBs with them and also samples of unknowns to see if the two or three laboratories looking at the same unknown came up with the same kind of answer.

þ So there was a lot of activity in that period, '69 up to '70.

Q. Do you recall -- and I take it, I think you

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mentioned Risebrough in San Francisco. Did he locate some PCBs in the wildlife in the United States?

A. Yes, he did.

Q. Do you recall a meeting with some Swedish scientists that originally made this discovery in April or May of 1970?

A. Yes, I dþ o.

Q. Who was involved in that?

A. I was there. Elmer Wheeler from Monsanto and Dr. Robert Keller, who was the chief analytical chemist in Monsanto's research department, he was also there.

Q. Did you bring up to date the Swedish scientists on what Monsanto was doing in connection with this investigation in the United States?

A. Yes, we did. He brought us up to date on what hþ is laboratory was doing. We did the same for the Monsanto laboratory, and also shared information we had received from other U.S. laboratories.

Q. Now, this meeting was several years after the Swedish scientists first discovered that PCBs might be in the environment. At this May of 1970 meeting did the Swedish scientists say that PCBs were posing a problem in the environment to living organisms?

MR. KOþ TOSKE: Objection. Hearsay. And this is quite different than --

THE COURT: It's on the issue of knowledge. I'd be happy to give a cautionary statement.

MR. KOTOSKE: Fine.

THE COURT: Ladies and gentlemen, again the answer will involve hearsay. So it's not admissable for the truth of the statement, but only admissable on what Monsanto may have known of this produþ ct at this time. You may answer the question.

A. Dr. Widmark reported that his laboratory was only able to determine the presence of PCBs in samples, but they had no information regarding what effect, if any, these PCBs were having on the environment.

Q. (By Mr. Carney) He did not indicate to Monsanto that PCBs were causing a problem with birds or fish or any other wildlife?

MR. KOTþ OSKE: Same objection, Your Honor.

THE COURT: And I will make the same ruling and the same cautionary instruction. I won't go into it on this one. You may answer.

A. He indicated he had no facts to support allegations he heard and read about.

Q. (By Mr. Carney) Did you during this trip in April or May of 1970 when you visited with the Swedish scientists, did you meet with anyone else in Eurþ ope on this trip in connection with the environmental issue?

A. Oh, yes. We met, I indicated earlier, with the European PCB producers. We met with the scientists at the University of 'Utrect' in the Netherlands in Holland, and we met with several administration -- ministries, as they call them in England, regarding the PCBs in the environment and the analytical methods.

Q. Now, with þ regard to your meeting with Dr. Vos at the University of 'Utrect,' which is in the Netherlands?

A. Yes.

Q. Did you have any discussions with Dr. Vos in that meeting with regard to furans?

A. Yes.

Q. What was discussed in your meetings with Dr. Vos about furans?

A. In his studies with his team of scientists Dr. Vos had discovered the presence of polychlorinatþ ed dibenzofurans in --

Q. Can we call them furans for short?

A. I would suggest that, furans. I want to make sure everybody understands there is chlorine involved because furans themselves don't necessarily have to have furans.

Q. Good. We'll just call them furans because I think that's what's been referred to.

A. Fine.

Q. Just keep iþ t simple.

A. Okay. And Dr. Vos's team discovered the presence of these furans in PCBs that were made in Germany and France, but did not find PCBs in -- I'm sorry -- did not find the furans in the material manufactured by Monsanto.

Q. Did -- Now, the PCBs that were made in Germany and France, those were made by a German manufacturer and a French manufacturer?

A. Yes.

Q. þ So he found some PCBs in Europe -- he found furans in European PCBs, but he found none in Monsanto PCBs, correct?

A. The Monsanto PCBs he looked at were produced in England. So, it's the --

Q. Monsanto PCBs --

A. Right.

Q. -- did not have furans?

A. They were inspected (inaudible) in the world we made them, right.

Q. Did he publish this informaþ tion in any kind of a publication?

A. Yes, I do recall a publication, yes.

Q. Take a look at Exhibit 1077. Can you

identify that document?

A. It is an article authored by Dr. Vos and his team of investigators entitled "Identification and Toxicological Evaluation of Chlorinated Dibenzofuran and Chlorinated (inaudible) in Two Commercial Polychlorinated Biphenyls." Tþ his was published in the -- I think it's Food and Cosmetology Toxicology in 1970.

Q. And in that article does Dr. Vos indicate that he looked at some European, German and French PCBs and found furans, and did not find furans in Monsanto PCBs?

A. He did.

Q. Did you explain to Dr. Vos why there might be furans in the German and French PCBs and not in the Monsanto PCBs?

A. þ Yes. He asked Monsanto what could account for the difference, and I told him that the only difference I knew that could be (inaudible) was the fact that the German and French process used lye in the production of PCBs. Monsanto used lime, l-i-m-e, like the kind we put on our gardens. They are both considered neutralizing materials, but the lye is a much stronger chemical than lime, and it was my considered opinion that tþ he source of oxygen to make the furans was very likely the lye, the sodium hydroxide.

Q. Which Monsanto didn't use in its manufacture?

A. That is correct.

Q. Monsanto, when it learned and investigated this environmental problem with PCBs, did it develop a plan of action?

A. Oh, yes.

Q. Turn to Exhibit D-22 -- I'm sorry. I've got the wrong numberþ . Before I get to D-20, let's get to D-22 first, and then I'll get to a plan of action which is Exhibit (inaudible). Can you identify Exhibit D-22?

A. D-22 is a Monsanto letter dated March 3, 1969, authored by Mr. Wheeler, Elmer Wheeler, addressed to Mr. Robert Ennis of Westinghouse Electric Corporation in Bloomington.

(Ms. Pape replaced Ms. Carter.)

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Q. And was this a letter that was sent to Westinghouse advising them of what Monsanto knew about the environmental problem at that point in time?

A. It was.

Q. Did Monsanto also send similar letters to its other customers?

A. Yes.

MR. KOTOSKE: I have no objection if he wants to offer it.

MR. CARNEY: I would like to offer that, Your Honor.

THE COURT: So admitted as to 22.

Q. And, in fact, this is the Westinghouse file copy of that letter, isn't it?

A. Yes.

Q. And it shows that a Mr. Shoaff of Westinghouse got a copy of it?

A. It does.

Q. And it shows that Mr. McClain of Bloomington got a copy of it?

A. It does.

Q. And now þ let's go to Exhibit 25. Can you identify Exhibit 25 for the jury.

A. Exhibit 25 are copies of some of the minutes of the meeting held on November 17th, 1969, by the Monsanto

Corporate Development Committee.

MR. CARNEY: Your Honor, at this time I would like to offer into evidence Exhibit 25.

THE COURT: Any objection?

MR. KOTOSKE: (Inaudible).

THE COURT: So admitted.

Q. Let me go through--I'd like to go through--I want to go through, Mr. Papageorge, the minutes of the Monsanto--I think there's been a lot of discussion about this committee. This was a (inaudible) committee at Monsanto?

A. Yes, it is.

Q. What I'd like to do is have you not go through all of the points but, if you would, go through with the jury and read items 2--read item 2. Well, first of all, I--is this the twelve-point plan of action of Monsanto in relation to this environmental problem?

A. It is.

Q. Why don't you read for the jury item 2.

A. "Notify all Aroclor customers of PCB problem."

Q. And was that done? Was that followed through on?

A. Yes.

Q. Read item 6 of the twelve-point plan .

A. "Introduce to market replacement products for Aroclor 1254/1260."

Q. Okay. Let me stop you. Why was there an effort made to find replacements for 1254 and 1260?

A. Well, up to this point in time, all of the analytical reports that Monsanto was receiving from all over the world indicated that the Aroclor 1254 and 1260 were the PCBs that were being found in thþ e environment.

Q. Let me stop you there. So 1260 and 1254 were being found in the environment?

A. Yes.

Q. Okay. Was there any--the type of PCBs that went to Bloomington, at least over 99 plus percent was Aroclor 1242, correct?

A. Correct.

Q. Was that found in the environment--that type of PCB?

A. Not to this point in time, no, sirþ .

Q. 1260 didn't go to Bloomington plant?

A. No.

Q. And the 1254, just a tiny, tiny amount of that went to the Bloomington plant as compared to what was sent?

A. Yes.

Q. Much less than 1 percent?

A. Right.

Q. Okay. Go on to point--let's go to point 7 of the twelve-point Monsanto plan of action.

þ A. "Continue and expand biodegradation test program with the Aroclor series, particularly 1242, 1248 and 1254."

Q. What was the purpose of looking into the biodegradation test program with regard to these lower chlorinated PCBs and particularly 1242?

A. Well, the principal--the purpose behind those studies were to determine that if on occasion these particular PCBs did get into the environþ ment, would they degrade or would they persist. In other words, can nature cope with them.

Q. And let's get to this point right now. I'm gonna jump ahead. Was it learned that the lower chlorinated PCB--the 1242--the type that went to Bloomington--did that biodegrade faster than the 1260?

A. It did.

Q. And by biodegrade, you mean disintegrate and go away as opposed to persiþ st?

A. Yes, they are no longer PCBs. They are carbon dioxide--

MR. KOTOSKE: Excuse me. Could I have that answer? They what?

A. When they biodegrade, the materials are no longer PCBs. They change to other products like carbon dioxide, water, hydrochloric gas and so on.

Q. No longer posing a threat to the environment?

A. That is corþ rect.

Q. They disappear?

A. That is correct.

Q. Let's go to the next point, point 8 in the twelve-point plan of action. Could you read that.

A. "Continue toxicological test program."

Q. And would part of that be the IBT studies that were ongoing?

A. Yes.

Q. And what's the next point?

A. Number 9?

þ Q. Let me ask you this while we're on the testing--the toxic--toxicological--I'm having trouble like Counsel saying that word (inaudible)--the toxicology test program. Was--were you aware of any other industrial chemical that was doing long-term animal tests at this point in time? And I'm talking about in 1969 to 1971 period when you were doing the IBT tests.

A. From all I could understand about testing of industrial chemicals, this is a first. The type of testing that was done for PCBs has never been done for an industrial chemical.

Q. Were there long-term animal tests that were done for other substances?

A. Certainly.

Q. What types?

A. Food additives, cosmetic chemicals, insecticides, farm chemicals.

Q. Let's go on to iteþ m 10 of the twelve-point plan of action of Monsanto that was developed. This--we're talking about a time period. This was 19--just to give us a time period, what--when was this meeting?

A. 1969.

Q. Okay.

A. November.

Q. Go on to the next point, point 10.

A. "Determine the feasibility and cost of eliminating the 5/6 chlorine in Aroclors 1242 and 1248."

Q. Was this the part of the plan to try to figure out how to make a biodegradable PCB?

A. Yes.

Q. And did this eventually generate the PCB that we talk about as 1016 which was like 1242?

A. Yes.

Q. That was an attempt by Monsanto to manufacture a biodegradable PCB?

A. Yes.

Q. And, finally, why don't we cover one more point, point 11. If you could read that.

A. "Study incineration products."

Q. And what did that mean?

A. That meant burning PCBs at different temperatures and determining what kinds of gases result at those temperatures, and attempt to reach that temperature which will give safe gases as an end result.

Q. Was it a way to destroy PCBs?

A.þ That was the objective, yes.

Q. Was that objective reached?

A. Yes.

Q. Were all of the points of this plan of action eventually reached by Monsanto?

A. Point No. 12--excuse me--point No. 12 was not successful.

Q. That was on how to try to reclaim fluid?

A. Yes.

Q. The other eleven points were all--of this plan of actioþ n that Monsanto set out to do in 1969 were all accomplished?

A. Yes.

Q. What was the estimated cost of this program?

A. I have forgotten the numbers.

Q. Well, I may be misreading this. Is it--

A. Oh, I see. I see what you mean.

Q. Does that refresh your recollection at all

about the estimated costs?

A. The prþ int is difficult to read, but it looks like it says approximately $400,000--what is called S.A.R.E.--that's Sales, Administration, Research and Engineering. And $700,000 in capital, which means money spent for new equipment.

Q. And that wasn't the total cost to carry out this twelve-point plan, was it?

A. No, that's just the first year.

Q. Did Monsanto continue to communicate with government scientists and researchers and universities in relation to this PCB environmental issue?

A. It did and it does to this day.

Q. Did Monsanto, in 1970, stop sales of PCBs voluntarily for any particular uses?

A. Yes, they did.

Q. Could you describe that?

A. Starting in 1970, Monsanto refused to sell to those uses that we believed to be of the kind thþ at when the product is--is introduced into the marketplace, the PCBs immediately entered the environment. Such things as the caulking and sealant that we mentioned yesterday, the paints, the plasticizers for plastics, the carbonless copy paper. We started in 1970, but that wasn't completed until early '71. There doesn't come to mind any more.

Q. (Inaudible)?

A. Adhesives, þ for example, pastes and glues of all kinds. That was stopped.

Q. Take a look at Exhibit 28--Defendant's Exhibit 28. Is that your memo dated April 7th, 1970?

A. That is.

MR. CARNEY: Your Honor, I would like to offer in evidence Exhibit 28.

THE COURT: Any objection?

MR. KOTOSKE: Can I have a second to look at it?

THE COURT: Sure.

þ MR. KOTOSKE: I think I've seen it before, but--.

MR. CARNEY: Why don't I go through a couple of questions.

THE COURT: (Inaudible).

MR. KOTOSKE: Your Honor, I (inaudible).

THE COURT: So admitted as to 28. Proceed.

BY MR. CARNEY:

Q. Just briefly describe what 20--Exhibit 28 is.

A. Exhibit 20 is--

THE COURT: 8.

MR. Cþ ARNEY: I'm sorry. Did I say 20?

THE COURT: Yeah. It's 28, isn't it?

MR. CARNEY: 28.

A. Exhibit 28 is a--a draft report that I had

prepared.

THE REPORTER: That who?

A. That I had prepared to review with the individuals that reviewed this document in order to make a presentation before the Corporate Development Committee at Monsanto oþ n the subject of--

THE COURT: You okay?

UNKNOWN JUROR: Yeah.

THE COURT: Proceed.

A. This document was prepared so that we could get ready to make a presentation to Monsanto's Corporate Development Committee in a couple weeks after the date of this document.

Q. So this was your plan of action following the instructions of the Monsanto top management on a pþ lan of action?

A. This was my proposed plan of action prepared at their instruction, yes, sir.

Q. Did you present this proposed plan of action to Monsanto's top management?

A. Yes, I did. In fact, 98 percent of it--there is some items in there that were deleted.

Q. And take a look at Exhibit--Defendant's Exhibit 30. Can you identify that exhibit for the jury?

25þ A. I'm sorry. My 30 is--appears to be missing.

Q. Okay. Let me give you mine. These are--yeah, somehow it snuck out of there.

A. Exhibit 30 are copies of minutes of a meeting held on April 20, 1970, to the Corporate Management Committee of Monsanto.

Q. And was there a presentation of your plan of action at this meeting of the top level of Monsanto?

A. Yes.

Q. Top level of management of Monsanto?

A. Yes.

Q. Were there recommendations as to the plan for going forward and how to address this environmental problem adopted by Monsanto's top management?

A. The actions that I proposed were adopted. They were not satisfied with the timetable. They felt that my program was moving too slowly.

Q. You had set up, had you not, in your plan of action, some deadlines about when you were gonna accomplish various points in the plan of action?

A. Yes.

Q. And Monsanto top management told you that some of the deadlines were too long; they wanted you to do 'em faster?

A. That is correct.

Q. Can you tell me which ones they wanted you to

þ speed up in terms of getting something accomplished in responding to the environmental problem?

A. In particular, the sales to the open uses. As I recall, I was proposing that we complete those by the December, 1970, and they felt that was too long.

Q. You wanted to do that within about six--or seven or so months from the point you were presenting it?

A. Yes.

Q. So in April þ of 1970, you wanted to end open uses by the end of the year, or seven or eight months later?

A. Right.

Q. And what did top management tell you?

A. Not fast enough.

Q. What did they tell you was fast enough for them?

A. Well they didn't give us a date, but they--they had another meeting at which a Monsanto individual proposed August 30, 1970, and that wasþ the accepted date.

Q. And that was just a couple months later?

A. Later than what, sir?

Q. Later than the meeting where you were making the presentation.

A. True.

Q. Did you meet that deadline of August 30, 1970, for cutting off open uses--sales of PCBs for open uses?

A. For everything but the carbonless copy paper.

Q. And I don't want to be repetitive. I think you covered this in answering Mr. Kotoske's question, but I'm not sure. Could you just briefly tell the jury why there was a--a longer period for the carbonless paper--cutting off the sales for that?

A. The making of that special coating that goes on the back of the front sheet is very demanding technically. It's very difficult to do. All of the ingredients have to work well together. And when we told the maker of that coating that we could no longer supply PCBs to him, he had to go back to his research department and find another material that would work as well. At the same time, this coating manufacturer had two processes--one that he used in the--in the United States and another that he used in Europe. So he had really two programs to work on. And he finally achieved that, as I remember, by the end of 1970, and we were able to discontinue PCBs about three months after that.

Q. So Monsanto stopped the use--the open--the sale of PCBs for open uses in August of 1970 except for carbonless paper, and that was accomplished by the end of the year 1970?

A. Carbonless copy paper--

Q. Yes.

A. --was about March, '71.

þ Q. '71. Okay. Did the government mandate or tell Monsanto, you've got no choice; we're demanding that you stop the sale of PCBs for open uses at that point in time?

A. No, sir.

Q. This was a voluntary action on Monsanto's part?

A. Yes.

Q. Did the European manufacturers of PCBs stop the sale of PCBs for open uses in 1970?

A. No.

þ Q. They continued on for a period of time, did they not?

A. Yes.

Q. Now, I want to talk about a memo that Mr. Kotoske asked you about, and I'm gonna show it to you because I'm not sure it's in that book. It's page 91. We're on Exhibit 11. He referred you to a document and I'm gonna--do you have it?

A. (Indicating).

Q. Oh, you've got it there? Okay.

þ 21 MR. CARNEY: It's page 90 of Plaintiff's Exhibit 11, Your Honor.

Q. And what--what is the defendant's exhibit number, just so we have the record clear? Defendant's Exhibit--oh, no. It's the same thing. So we've got it.

That's a memo from Dr. Kelly to you dated March 30, 1970?

A. Yes.

Q. And in that memo Dr. Kelly says, when are we going to þ tell our customers not to use any Aroclor in paint. Do you recall that testimony that you gave when Mr. Kotoske was asking you questions?

A. I do.

Q. Did you have a discussion with Dr. Kelly after you received his memo when he asked, when are we gonna--when are we gonna tell our customers not to use Aroclor in paint?

A. I did.

Q. What did you tell him?

A.þ I told Dr. Kelly that I agreed with his concern and that we were already working on it. In fact, the--the marketing--excuse me--the marketing people had started in December looking at their records, researching where these kinds of paints might be involved with PCBs and talking to distributors of PCB chemicals. So the activity was already under way.

Q. In fact, four months before the March 30, 1970, letþ ter when Dr. Kelly says, when are we gonna tell our customers not to use Aroclor in paints, the marketing people at Monsanto were already on top of this?

A. Yes, sir.

Q. Did the marketing people instruct the Monsanto

salesmen about what to tell the customers?

A. Certainly.

Q. What did they say?

A. That for those paints that they knew would be þ ending up in equipment associated with food or animal feed, that they should not use PCBs. And they were also told that eventually we would not be selling PCBs for any paints and that we were hoping to do that in the year 1970.

Q. And you were able to do that by August 30, 1970?

A. Correct.

Q. How many PCB customers did Monsanto have in 1970 when you first took this job on aþ s the manager of environmental control in relation to PCBs?

A. I have never had a full count. It's in the thousands.

Q. By the year 1972, how many PCB customers did Monsanto have left?

A. 1972 was the electric customers. A couple dozen.

Q. Monsanto cut off these other customers, and they weren't required to do it; they voluntarily did it?

A. þ Yes.

Q. Mr. Papageorge--

MR. CARNEY: Judge, I don't know if you want to

take a morning break. It's a break point.

THE COURT: Yeah. I think we will and then we'll bring them back for one more session. Why don't we do it. Is this a good time for you?

MR. CARNEY: It's a good time.

THE COURT: Let's take a short ten-minute break, folks.þ Don't discuss the case among yourselves.

(A recess was taken, after which the following proceedings were had.)

THE COURT: Why don't we go until about 12:30 and then take a break.

MR. CARNEY: Okay.

THE COURT: You may proceed.

THE CLERK: You better wait for Vivian.

THE COURT: Am I the only one that missed that?

þ MR. CARNEY: (Inaudible).

THE COURT: Now you may talk.

MR. CARNEY: Thank you, Judge.

BY MR. CARNEY:

Q. Mr. Papageorge, are you familiar with an organization called the Environmental Defense Fund?

A. Yes, I am.

Q. Is that a government organization?

A. No, no, no. I would call it a citizens' organization.

þ Q. Can you tell the jury what kind of an organization, just briefly?

A. This is a group of individual people who are very, very interested in the environment. They are very, very critical and skeptical of guys like me from industry. They--they are also critical of government agencies and their approach to environmental problems.

Q. Okay. Take a look at Exhibit 41--Defendant's Exhibit 41þ . And I want you to--can you identify that exhibit?

MR. KOTOSKE: (Inaudible).

A. Exhibit 41 is a copy of a Monsanto memorandum dated August 27, 1970, authored by a Monsanto man--Mr. Ford--and addressed to a Mr. Mason, who is also a Monsanto employee.

Q. And were you shown as getting a copy of the memo?

A. I--yes, I did receive a copy.

Q. And þ it's dated August 27, 1970?

A. It is.

MR. CARNEY: Your Honor, I would offer this exhibit.

THE COURT: Any objection?

MR. KOTOSKE: Can I have a second, Your Honor?

THE COURT: It's two pages, isn't it?

MR. CARNEY: Yes, sir.

MR. KOTOSKE: It's actually two letters. I don't have any problems with 41--just that memo. But þ attached to this--I better stand--but attached to it is a letter of August 24, '70. You want to take a look at it?

MR. CARNEY: Let me--

THE COURT: Yeah, I'm not sure--

MR. CARNEY: Let me identify it.

THE COURT: Why don't you identify it and then I'll--.

BY MR. CARNEY:

Q. Was a letter attached to this memo?

A. Yes.

Q.þ And is that a letter from the Environmental Defense Fund dated August 24, 1970?

A. It is.

Q. And does it concern the Environmental Defense Fund's comments about how responsible Monsanto was on the environmental issue?

A. It does.

Q. First of all, I'd like you to read the first paragraph.

MR. KOTOSKE: What I think--excuse me--so the record isþ clear, if this is going to go into evidence and--it has to be in evidence before you can read from it. I have no

objection. Your ruling is it's in?

THE COURT: All right. It's so admitted, then, as to both pages. You may continue.

Q. Read the first paragraph of Exhibit 41.

A. Here is--

Q. This is a Monsanto memo that you got a copy of?

þ A. Yes. "Here is another piece of information to consider as we decide on the feasibility of publicizing our PCB effort in 'Monsanto Magazine.'"

Q. And then what I'd like you to do is read, and I've got a--a blowup of this letter I'd like to show the jury. And I'd like you to read the second paragraph of this letter from the Environmental Defense Fund about Monsanto and its handling of the environmental issue þ of PCB.

A. You want me to read the whole letter to 'em?

Q. Yeah. Why don't you just read the second--

A. Second.

Q. --paragraph of the letter. I think that's all that (inaudible).

A. "At EDF we have been"--

Q. ED--

THE REPORTER: What?

Q. EDF is the Environmental Defense Fund?

A. Yes.

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Q. That's the environmental organization you just described?

A. Yes.

Q. Okay.

A. "At EDF we have been most impressed by Monsanto's willingness to be responsible where the environment is concerned. We have closely watched the development of information concerning the environmental impact of Monsanto's product, polychlorinated biphenyls--PCB. Whatþ impressed us most was Monsanto's attitude and, finally, its action to lessen the environmental degradation caused by this product. We continue to watch your PCB cleanup program to be sure that your action is as good as your word but, in the meantime, we are impressed by your sensitivity and responsibility. Indeed, in many informal conversations we have singled out your company as being one capable of acting on its own long-terþ m interests and that of society rather than its short-term economic interest."

Q. Is the Environmental Defense Fund a group that compliments industry very often, in your experience?

A. This is the only compliment that I've personally seen. They're not noted for that.

Q. Why did Monsanto quit selling PCBs for open uses but continue to sell PCBs to companies like Westinghouse and Generalþ Electric for capacitors and transformers?

A. Well, I think it's obvious that we stopped selling in the open uses because we--there is no way to control the entry into the environment with those uses. In the electrical equipment there were really two considerations: One, and the most important one, is that we were convinced by those who know more about power distribution than Monsanto that the sþ afety that PCBs provided in that kind of equipment was so important and it offset any slight chance of some escape to the environment. And yet that escape was really believed to be very small because the PCB liquid itself is in a steel vault, really--a tank. And when that equipment is properly maintained, taken care of, the chances of that PCB getting into the environment are greatly reduced. So when you weigh the possible escþ ape to the environment versus the great safety of that we were told was needed, the decision really was not too hard to make. We had to stick with it until something was developed that could do the same kind of job without the environmental problem.

Q. In fact, when the government banned the manufacture of PCBs in 1979--that's the date, isn't it?

A. Yes.

MR. KOTOSKE: The statute--let's þ (inaudible) the foolishness. The statute was passed in '76. The implementing regulations from EPA were not effective until '79.

THE COURT: They took effect--

MR. KOTOSKE: That's the (inaudible).

THE COURT: So it took effect in '79.

MR. KOTOSKE: No, it did not. The statute was passed in October of '76.

MR. CARNEY: Judge, could I (inaudþ ible). He's trying to intentionally mislead the jury, in my opinion. I think we ought to have the testimony of the witnesses on this point.

THE COURT: We'll do it this way--

MR. CARNEY: And he can put on any witness he wants.

MR. KOTOSKE: Let's get the statute and read it.

THE COURT: If he knows what the statute is, he can testify to it (inaudible) and that will be bþ inding.

MR. KOTOSKE: (Inaudible.)

MR. CARNEY: I agree. This is an issue that is very important and I think the jury needs to know.

THE COURT: Proceed.

Q. Let's address this issue right now, Mr. Papageorge, because I think you were involved. You were--you were involved and active. What does the statute in 1976--did that statute ban the manufacture of PCBs?

Aþ . It did not.

Q. What did it do?

A. It gave the Environmental Protection Agency the authority to consider the control of PCBs up to and including the banning as appropriate. Those aren't the exact words, but that's my understanding.

Q. So it did--it not only didn't ban it in 1976, but that statute didn't mandate that the government would ban it in 1979 or any otþ her date?

A. That is true.

Q. So in 1977 when Monsanto stopped manufacturing PCBs, was it aware that the government was going to ban PCBs from being manufactured?

A. No, there was no evidence that they were going to ban.

Q. The Environmental Protection Agency had the authority to do it if they wanted to in 1976?

A. That is correct.

MRþ . CARNEY: And I'll be glad, Your Honor--if there's any dispute about that for the rest of this trial, I will gladly have the statute--

MR. KOTOSKE: I have it right here.

THE COURT: You may continue. (Inaudible.)

MR. KOTOSKE: And I'd be happy to offer it into evidence.

THE COURT: Well, if you want to do it on redirect, do it then. Let's proceed.

þ BY MR. CARNEY:

Q. Mr. Papageorge, when the government did ban PCBs from being made in 1979, did they ban the use of PCBs?

A. No.

Q. Are PCBs still being used in capacitors and transformers throughout the United States?

A. Yes.

Q. And it's because they're in these closed containers that the government didn't ban the use; it banned just the manufacture, coþ rrect?

A. Correct.

Q. Could the government have banned the use of PCBs in 1979?

A. Certainly. The act that we talked about gives them that authority.

Q. So the act in '76 gave the authority to the government--to the EPA to ban even the use of PCBs if they saw fit?

A. Yes.

Q. And to this day the EPA has not seen fit to baþ n the use of PCBs in capacitors and transformers?

A. That is correct.

Q. Let's go to Exhibit D-57--Defendant's Exhibit 57. Can you identify that document for the jury?

A. This is a memorandum addressed to several

individuals authored by 'Mr. Ed Robb' of General Electric Company, and attached to it is a Westinghouse report entitled, The Need for the Continued Use of Polychlorþ inated Biphenyls as Electrical Insulating Liquids.

Q. And take a look at the page 15 of that report of Westinghouse. Is that dated January 3, 1972? It's the last page.

A. It is.

Q. And it is prepared by Mr. Voquist?

A. Yes.

Q. E. R. Voquist. Is he a Westinghouse employee?

A. Yes.

MR. CARNEY: Your Honor, I would move forþ the admission of Exhibit 57. We have an affidavit.

THE COURT: Admitted as to 57.

Q. Does this document, Mr. Papageorge, discuss Westinghouse's position that PCBs could be used safely as a dielectric fluid?

A. Yes.

Q. And could be kept out of the environment and should not be banned?

A. Yes.

Q. This report of the Westinghouse employþ ee--of Westinghouse--was supporting the continued use of PCBs in capacitors and transformers?

A. Yes.

Q. Why couldn't Westinghouse just use mineral oil? They had in fact, mineral oil, or they had the Wemco oil in the loading plant. Why couldn't they use mineral oil in capacitors and transformers?

A. Well, the equipment made with mineral oil would not bþ e permitted to be used in certain conditions because the safety codes would not allow it. And, of course, by using mineral oil, you introduce the old problem of fires and explosions, which we were trying to avoid.

Q. Can you compare PCBs with mineral oil in terms of fire resistance?

A. I can compare them, but--.

Q. Were the PCBs many times more fire-resistant?

A. Oh, yes. Yþ es.

Q. Can you give me an estimate?

A. There are some tables I'm trying to recall that compare gasoline, alcohol and kerosene and mineral oil. And down at the bottom of that list as being the least flammable were the PCBs. I'm trying to remember a number like 2 or 3. And then mineral oil was up there in about 50 or so as a number. And 100 is for ether, as I remember. Ether is the most flammabþ le of the group.

Q. So PCBs were many, many times more fire-resistant than mineral oil?

A. Oh, yes.

Q. Was it just a matter of developing a fire-resistant material to put in the capacitors? Was that the only reason that the electric companies and the government wanted Monsanto to keep making PCBs for those uses?

A. It was not only the fire-reþ sistant quality that was looked for, but it had to have good electrical properties. It had to work well in the equipment.

Q. Was there, in addition to developing a substitute that would work well and be fire-resistant, was there also a need to change the transformer and capacitors themselves--change the equipment on how they were made?

A. Certainly. It involved a redesign of the whole capacitor þ or transformer, and it might even involve redesigning the space in which pieces of equipment would be installed.

Q. And with regard to capacitors, when a substitute was developed in 1977, did they use the same type of capacitor with the substitute material that they had been using for PCB material?

A. No. The capacitors were redesigned, and one of the big changes was they had to include in these þ new capacitors a fuse that would kick off when the conditions in the electrical system got out of hand to avoid having a fire

and explosion.

(Ms. Pape was replaced by Ms. Wan.)

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Q. Why did they have to develop these fuses on the capacitors, PCBs and --

A. The fluid thaþ t was finally selected by the capacitor manufacturers was not fire resistant.

Q. It wasn't as fire resistant as PCBs?

A. Nowhere near it, no.

Q. In the early 1970s, let's say 1970 to 1972, did the U.S. government have any discussions with Monsanto or take any position in relation to whether the manufacture and sale of PCBs should be stopped in the electric industry?

MR. KOTOþ SKE: Cautionary instruction.

THE COURT: All right. The answer will be allowed (inaudible), but only on the issue of knowledge of what Monsanto may have known of this product at the time.

You may answer.

A. The government as represented by the members on this task force that you talked about yesterday.

Q. (By Mr. Carney) That's all government agencies --

A. Rþ epresented, yes, sir. They issued their formal report in 197- -- May of 1972, and in a report they -- they stated that because of the need for safety in the capacitors and transformers that the continued use of PCBs was necessary.

Q. And let's go to that report at this point, Exhibit 276, Defendant's Exhibit 276.

Judge, I've got a --

A. I have that.

Q. þ Is Exhibit 276 the Government Task Force on PCBs report on polychlorinated biphenyls or PCBs in the environment?

MR. KOTOSKE: I'll stipulate that it is. I've seen this report, and if you want us to offer it into evidence I'd let him do that.

MR. CARNEY: I'm offering it now.

THE COURT: So admitted as to 276.

Q. (By Mr. Carney) This is a Governmental Task Force repoþ rt on PCBs dated May of 1972; correct?

A. Correct.

Q. And I think I'm not going to go into it, who was on that Governmental Task Force, because I think it was already covered. They were all -- EPA was on it, the Agriculture Department, the Department of Interior, et cetera?

A. Yes.

Q. Now, Mr. Kotoske -- I want you to look at this report a minute. Mr. Kotoske I think suggesteþ d that the only toxicology information or the only scientific information on how toxic PCBs work was the IBT studies,

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and I'd like to go through -- that's not my -- that's Monsanto's.

Well, that was the implication -- the implication I got from hearing the questions that he asked him, but let's clarify it anyway because there may be confusion on this issue. Was the IBT studies -- were they þ 7 the only studies before this Governmental Task Force group?

A. No.

Q. Why don't you look at page 105 and 106 of the report. Is there a listing on those pages of the scientific articles on PCBs that the Government Task Force (inaudible)?

A. Yes. There is.

Q. And how many different scientific articles are there that are listed?

A. There are 27 listeþ d on those two pages.

Q. Okay.

MR. KOTOSKE: What page?

MR. CARNEY: 105 and 106.

Take a look at page 155 through 157. Is there a listing there of the PCB studies on the human aspects of PCBs?

THE COURT: What page? I'm sorry.

MR. CARNEY: 155 through 157.

A. There is a listing, sir, but I see some of þ them may not necessarily be just human studies --

Q. (By Mr. Carney) Okay.

A. -- but the health studies.

Q. Okay. Most of them are human studies but not all of them on that list?

A. That's right.

Q. How many articles -- how many studies are listed in this Governmental Task Force study or report with regard to PCBs in that listing?

A. Sixty-six (66) are lþ isted on those five -- five pages.

Q. All right. Now, turn to page -- pages 169 through 172. Are there listed there articles on PCBs and animal studies or reported in those articles; is that correct?

A. That's correct.

Q. How many PCB articles where animal studies were reviewed by the Task Force are reviewed on those pages?

A. Thirty-eight.

Q. Soþ according to my math -- I haven't had time to do the math, I can do it in my head, but -- I totaled that the Inter-departmental Government Task Force considered over 130 different scientific articles in

reaching its conclusion on PCBs; correct?

A. That's correct.

Q. So the Governmental Task Force wasn't just relying on one study supplied by Monsanto?

A. That's correct.

Q. Could you read to the jury, and I want you to go to page 4 of the report, this governmental report, par-- point 6. Could you read for the jury the precise words used by the Governmental Task Force in relation to why Monsanto should continue to sell PCBs to manufacturers of capacitors and transformers?

A. It's page 4, Item 6: "The use of PCBs should not be banned entirely. Their continued use for transformers and capacitors in the near future is considered necessary because of the significantly increased risk of fire and explosion and the disruption of electrical service which would result from a ban on PCB use. Also, continued use of PCBs in transformers and capacitors presents a minimal risk of environmental contamination."

Q. Okay. Or why don't you read the next -- read the whole -- the whole section tþ here.

A. "The Monsanto Company, the sole domestic producer, has reported voluntarily eliminating its distribution of PCBs to all except manufacturers of

electrical transformers and capacitors.

Q. Okay. Did the United States government's Task Force on PCBs make any statements or findings about why PCBs were so important as a dielectric fluid in capacitors and transformers?

A. Yes.

Q. Would you go to page 2 of this document, second paragraph?

A. I see it.

Q. Would you read what the Government Task Force had to say about why PCBs were essential as a dielectric?

A. This is the second paragraph?

Q. Yes, sir, where it starts "The principal uses . . ."

A. I see it. "The principal uses for PCB fluids are in the eleþ ctrical industry. PCBs have superior cooling, insulating and dielectric properties, and hence are widely used in various electrical devices. Transformers and capacitors filled with PCBs can be used in inside locations where failures of oil-insulated equipment would present a potential danger to life and property. Because PCBs are relatively nonflammable, apparatus containing them is essentially free from the fire and explosiþ on hazards associated with oil-insulated and oil-cooled electrical devices. Stability at high

temperatures is another major factor in the attractiveness of these compounds. The principal advantage of PCBs over substitutes is the relative freedom from flammability in some applications that previously had been plagued by serious fires. PCBs also give electrical equipment the critical advantages of reliability, lonþ g life and compactness."

Q. Okay. Thank you.

Did the United States Government's Task Force on PCBs make any misstatements about PCBs and human health in this report? And I'd like to you look at page three so you can -- at the top.

A. I find that.

Q. And this is the Government Task Force that had 130 scientific and medical articles that's -- that you just mentioneþ d that they referenced; correct?

A. Correct.

Q. Read the -- after the heading would you read the sentence of what the Task Force, the Government Task Force, said in 1972 about PCBs in human health?

A. "There currently are no toxicological or ecological data available to indicate that the levels of PCBs currently known to be in the environment constitute a threat to human health. But the additionaþ l experiments are under way to evaluate the impact of low-level

long-term exposure to PCBs."

Q. Thank you. At some point in time, Mr. Papageorge, before 1977, I think we -- although that is the date Monsanto stopped manufacturing PCBs, did Monsanto decide it wanted to stop making PCB fluids even earlier than that time?

A. Well, that's -- the thought of discontinuing of makinþ g -- the manufacture of PCBs did occur fairly often and was expressed -- I recall hearing about it even back as early as 1970. I don't know if that responds to your question.

Q. Yes, it does. Did -- were you told at a certain point in time by top management by Mr. Fitzgerald of Monsanto's decision that it did want to stop?

A. Certainly.

Q. When did that occur approximately if you recalþ l?

A. Mr. Fitzgerald and I had a discussion on that subject in late 1975 as I recall. November, December of '75.

Q. And what was that discussion with regard to stopping PCBs, stopping the manufacture?

A. Well, it boiled down to that we were ready to stop when our customers were ready to change over to something else.

Q. Is Mr. -- did Monsanto convey that þ view to anyone outside of Monsanto?

A. Yes, yes.

Q. Who did they tell?

A. There was a meeting -- I'm trying to recall the dates. There was a meeting called by Russell Trane, who was the head of the Environmental Protection Agency in January of '76, at which he called vice-presidents and higher of companies that used PCBs in electrical equipment and also invited Monsanto.

þ Q. Did you go to that meeting?

A. I went to the meeting, and Mr. Fitzgerald went to that meeting. We represented Monsanto.

Q. And did Mr. Fitzgerald -- he was a vice-president of Monsanto?

A. Yes.

Q. Did he tell you what he was going to say at the meeting?

MR. KOTOSKE: Well, you know, that's hearsay, Judge.

MR. CARNEY: Well, why don'tþ we do this.

You were at the meeting?

A. I was at the meeting, yes.

Q. (By Mr. Carney) What did Mr. Fitzgerald tell the EPA and the other people who were at the meeting in

January of 1976?

A. Mr. Fitzgerald read a prepared statement before the group telling the group that Monsanto was ready to terminate the manufacture and sale of PCBs as soon as its cþ ustomers who -- who still used PCBs in their equipment had found a suitable replacement and that their production lines had been given enough time to -- to be modified if necessary. All we needed to know was when that would take place, and we would terminate.

Q. Did Monsanto make that statement to the government before this law was passed in 1976 that enabled the EPA to stop the manufacture if it decided to?

þ A. Yes.

Q. At the time that Monsanto announced publicly to government that it was prepared to stop the manufacture of PCBs in January of 1976, was Monsanto aware that the government in fact was going to ban the manufacture of PCBs?

A. No, there was no such knowledge.

Q. And when Monsanto -- when the substitutes were found and the manufacturing processes were developed and fuses develoþ ped so that a substitute could be used for capacitors and transformers, did Monsanto stop in 1977 the manufacture? Did you know at Monsanto that the government was going to ban PCBs?

A. We did not.

Q. Is that something that you would likely have known if it occurred?

A. At that point I would call it speculation, suspicions, but nothing firm.

Q. Let's talkþ about IBT. I think the jury has heard enough about IBT in terms of what kind of a company it is. What was their reputation when you got involved with PCBs in 1970?

A. It was looked upon as a -- as a world-class laboratory in the field of animal testing.

Q. Had you ever heard the term Cadillac of the industry referred -- as a reference to IBT?

A. Many times, yes.

Q. Why did Mþ onsanto go out and hire an independent lab like IBT?

A. Primarily because it didn't have a laboratory of its own of that kind, and it had many, many products that it wanted tested, so it went to the best laboratory it could find to do that work for them.

Q. Did you ever have occasion to go to IBT?

A. I did.

Q. Do you recall approximately when that was?

A. At least thrþ ee times in the period of 1970, '71.

Q. How did the IBT laboratory appear to you when you saw it? Did it cause you to think that they were not a reputable lab, a (inaudible) lab?

A. No. I couldn't help but compare it to laboratories that I had worked in. I was able to, of course, identify the -- the chemical types of apparatus and facilities, and they looked to me to be the latest. Of course I have no personal experience regarding the -- the animal parts, but they too looked like it was a first-class kind of installation. The personnel struck me as being highly professional. All in all I was very favorably impressed.

Q. Back in the 1970s, Mr. Papageorge, did IBT to your knowledge ever submit any false or misleading data to Monsanto?

A. Not to my knowledge, no.

Q. And did Monsanto ever submit any false PCB data to the U.S. government?

A. No.

Q. Has any agency of the government, EPA, the feds, Agriculture, Health and Welfare, has any agency of the U.S. government ever accused Monsanto of submitting false PCB data to them?

MR. KOTOSKE: We're getting into a dangerous area, Judge.

MR. CARNEY: I don't þ think -- I don't think it's dangerous.

MR. KOTOSKE: Well --

MR. CARNEY: Well, Mr. Kotoske --

MR. KOTOSKE: I hope Counsel knows the import of the questions he's asking.

THE COURT: Do you want to come over and I'll tell you my view?

MR. CARNEY: Okay.

(Bench discussion.)

THE COURT: You may restate it or --

þ MR. CARNEY: Just maybe it's better, because I think I asked the question correctly and I'd rather have the court reporter just read it back and the objection (inaudible) --

I think I can restate it precisely if you're --

THE COURT: It's up to you.

MR. CARNEY: Just to save time, I think I can do it.

THE COURT: Is that okay with you, Vivian?

þ THE REPORTER: Well, it's a rather long question.

MR. CARNEY: Yeah, let me do it, and I'm going to shorten up the question to make it a little

shorter.
Has the U.S. government or any agency of the U.S. government ever accused Monsanto of submitting false PCB data?
A. Never.
THE COURT: Pick an area where you can stop.
MR. CARNEY: Yeah, I'm very close to an area.
THE COURT: That's fine. Continue.
Q. (By Mr. Carney) 'When Dr. Wright worked' at IBT, you talked about that you didn't know him (inaudible) IBT?
A. That's correct.
Q. But you did meet him after he came back and worked for Monsanto?
A. Yes.
Q. Did Dr. Wright ever tell you that while he was at IBT doing studies for Monsanto that he falsified those studies for Monsanto?
A. He did not.
Q. Did he ever tell you when he got back from -- went to Monsanto that while he was at IBT, while he was an employee of IBT doing studies for Monsanto, he substituted missing data that he didn't have, made it up?
A. He did not.
Q. Did he tell you anything like that?
A. No.
Q. Did he say anything to any other Monsanto employee to your knowledge about that?
A. Not to my knowledge.
Q. Did you have any reason to question IBT's tests or studies?
A. No.
Q. You've heard Mr. Phil Smith testify; did you not?
A. I did.
Q. And he testified that he didn't -- that IBT in the '70s didn't give out raw data to its customers. Did you hear that testimony?
A. I did.
Q. I was a little confused about your testimony on this issue. Do you have any information that IBT furnished raw data to Monsanto or any of Monsanto's employees?
A. I have no information regarding raw data.
Q. Did you have any information that Monsanto -- that IBT furnished raw data to either Mr. Hunt or Mr. Levinskas or Mr. Wheeler?
A. I do not.
MR. CARNEY: I think this is a good spot.
THE COURT: All right. Sir, you may step

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down. We'll have a lunch break. I know that lunch has been brought in, and that's very nice if you want to -- to do that. Do you want to take a little bit longer break? An hour and ten minutes or something like that? You can't Q really go outside, so just say 1:30 and we'll keep it going? All right.

We'll take a one-hour break, 1:30. Do not discuss the case among yourselves or others.

[Ms. Wann was replaced by Ms. Carter.]

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