IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
BEAUMONT DIVISION

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CECIL SCOTT, ET AL	*	
	*	CIVIL ACTION
VS.	*	NO. B-84-1103-CA
	*	
MONSANTO COMPANY	*	

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VOLUME III

VIDEO DEPOSITION OF

R. EMMET KELLY, MD

9:09 a.m. to 12:00 noon
May 28, 1987
Ramada Airport Inn
St. Louis, Missouri

Reported by:

Linda C. Baker
Texas CSR No. 505/Notary Public
Nell McCallum & Associates
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Taxable Cost: $_____
Charged to: DAVID M. LACEY, ESQ.
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Video Deposition of R. EMMET KELLY, M.D., taken on May 28, 1987, at Ramada Airport Inn, St. Louis, Missouri, between the hours of 9:09 a.m. and 12:00 noon, before Linda C. Baker, CSR No. 505 and Notary Public in and for the State of Texas, at the instance of the Plaintiff, pursuant to Notice and the Federal Rules of Civil Procedure.

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*** VOLUME III ***

PROCEEDINGS

THE VIDEOTECHNICIAN: This videotape 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 versus Monsanto Company.

For the record, the video recorder today is James Heironimus of the firm Executive Service Groups; and the Certified Court Reporter present today is Linda Baker of the firm Nell McCallum & Associates.

We are here today to take the audio and video deposition of the witness, Mr. R. Emmet Kelly; and we're located at the Ramada Airport Inn in St. Louis, Missouri.

The date today is May 28th, 1987, and

the time is approximately 9:09 a.m.

Will Counsel now please state their appearances for the record.

MR. LACEY: David Lacey, for the plaintiffs.

MR. CRAWFORD: Walter Crawford, for the defendant.

THE VIDEOTECHNICIAN: Would the court reporter please swear in the witness.

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EMMET R. KELLY, M.D.,

having been first duly sworn, testified as follows:

EXAMINATION

QUESTIONS BY MR. LACEY:

Q Will you state your name for the record, please?

A R. Emmet Kelly, E-m-m-e-t K-e-l-l-y.

Q Dr. Kelly, you're the same Dr. Kelly whose deposition we started in my office a couple of weeks

ago?

A That is correct.

Q And we're here today in St. Louis to complete that deposition. Correct?

A Correct.

Q Okay. You understand you are still under oath, exactly the same way as you were when you were in my office i Houston to testify about this case.

A Yes.

Q Okay.

I want to try to complete some matters with you by way of examination that we did not get a chance to complete when we started your deposition in Houston.

The first topic I want to discuss with you is the issue of contamination of PCB products manufactured by Monsanto. And let me start by first asking you if you understand what I mean by "contamination."

A No. Would you explain it?

Q Yeah, I'll try to do that, then.

The way that Monsanto designed its PCB production, it was not designed to have in it products other than PCBs that were -- when it -- the product was finished, was it?

A Well, with the exception that in industrial chemicals, one rarely gets 100 percent purity.

Q I understand. But the design was to have PCBs, and not a mixture of PCBs plus other chemicals like furans or naphthalenes or anything like that. Isn't that correct?

A That is correct.

Q And then when we talk about contaminants, what I'm talking about is the chemicals that one would find in Monsanto's PCBs that were not PCBs. You understand what I mean by "contaminants"?

A Yes.

Q And another way to put that is that the contaminants are the products that would be found in the PCBs that were not part of what Monsanto intended to produce or designed to produce. Do you understand that?

MR. CRAWFORD: Well, be -- okay. Be sure you understand what he's talking about about the des- -- design. Were you involved in the design of the product?

THE WITNESS: No, I was not.

MR. CRAWFORD: All right.

BY MR. LACEY:

Q My question --

A Would you repeat the question?

A Yes. Very clearly, did Monsanto design its PCBs products to contain contaminants in them like

dibenzofurans and other similar chemicals?

A No.

Q Okay. And when we talk about contaminants, then, we're talking about a chemical that is actually in the PCBs but wasn't part of what was designed to be in it. You understand that?

A Yes; that may be in the PCBs.

Q Okay; may be in it.

Now, with regard to contaminants, these are the chemicals that we find or may find in PCBs. Are you aware of any chemicals that were present in Monsanto's PCBs which were not -- as actually produced -- which were not designed to be there?

MR. CRAWFORD: During what period of time?

MR. LACEY: During any period of time that Monsanto produced PCBs.

MR. CRAWFORD: Well, that's a pretty broad question, David. I think you ought to limit it. I'm going to object to it.

BY MR. LACEY:

Q Well, let's start, then.

Are you aware of any contaminants -- that is, chemicals that were not designed to be in Monsanto's PCBs -- that were in them in the 1930's?

A No.

Q Are you aware of any contaminants -- that is, chemicals that were not designed to be in Monsanto's PCBs -- that were in Monsanto's PCBs in the 1940's?

MR. CRAWFORD: We didn't manufacture the chemical in the '30's, I don't believe, did we?

MR. LACEY: Well --

MR. CRAWFORD: The late '30's?

MR. LACEY: Actually, you bought Swann Chemical Company in 1935.

MR. CRAWFORD: All right.

MR. LACEY: It became a part of Monsanto, and I -- I don't know the effect of your buying that company and assuming its liabilities and its assets. I don't know what that is; whether that means it's Monsanto or not.

But you certainly manufactured them from 1935 forward under the name Monsanto.

MR. CRAWFORD: From '35 is when you're talking about?

MR. LACEY: No, I'm talking about at any time during the 1930's, whether it's Swann or whether it's before Swann was

acquired by Monsanto.

MR. CRAWFORD: Well, let's stick with Monsanto, since that's what you're talking about.

BY MR. LACEY:

Q Well, let me -- let me make it very clear.

Are you aware of any contaminants in materials produced -- PCB materials produced by Monsanto or any company that it acquired, whose plant it acquired, during the 1930's?

A Yes. I -- yes.

Q What contaminants are you aware of in PCBs that were produced by Monsanto or its predecessor in the 1930's?

A In the 1930's, there was a contaminant that was not discovered when Swann Chemical manufactured PCBs with an off-spec benzene; and they had different color, and they had different specifications that I understood was the cause for their chloracne at the time.

Q So there was a problem with PCBs manufactured in the 1930's, at least by Swann, with contaminants in it. Correct?

A Well, I cannot say, because I do not know what any of the details of that particular episode were.

Q Well, is it your understanding that there was a

problem with PCBs produced by Swann Chemical Company in 1930's that --

A I don't --

Q -- resulted from contaminants in the PCBs?

A I don't know what they were producing.

Q I see. Okay. So you do not know whether or not PCBs produced by Swann Chemical company or Monsanto, which later acquired Swann, had any problems with contaminants in them in the 1930's. Is that correct?

A I cannot speak for Swann. I can only speak for the time when I came with Monsanto. And from 1936 to 1939, inclusive, I do not know of any problems with contaminants.

Q Fine. Now, during the 1940's, are you familiar with any problems with Monsanto's PCBs that involved contaminants? And by that, I mean chemicals that were in the PCBs produced by Monsanto that were not designed to be there.

A Not that I know of.

Q Okay. Now, in the 1950's, are you aware of any problem with contaminants in the PCBs produced by Monsanto? And, again, by that, I mean chemicals that were not designed by Monsanto to be in its PCBs.

A No.

Q During the 1960's, are you aware of any problem

with contamination of Monsanto's PCB production? And by that, I mean the presence of chemicals in Monsanto's PCBs that were not designed to be there.

A Well, you have made two statements there, Mr. Lacey. One is the problem, and one is the premise -- the presence. Do you mind breaking that down?

Q Are you aware during the 1960's of any chemicals that were contaminants in PCBs made by Monsanto? And by that, I mean chemicals in the PCBs manufactured by Monsanto that were not designed to be there.

A Of my own knowledge, I do not know. There may have. I may have been told about it, but I have no recollection at the present time.

Q I see. Up to the 1960's, your testimony is you're relatively certain there was no contamination; but beginning in the '60's, you're not sure?

A No, I didn't say there was no contamination.

Q All right.

A I said I was not aware of any contamination.

Q I see. So there may have been contamination of Monsanto's PCB products in the 1930's?

MR. CRAWFORD: Well, he can't tes- -- David, I think he --

MR. LACEY: I want to make clear whether his answer is there was none, or there may have been some and he didn't know about it. I need to know which -- which his answer is.

A Well, there may or may not have been.

BY MR. LACEY:

Q Okay. You just don't know.

A I don't know.

Q Okay. And that answer would -- would apply from the '30's all the way through the '60's?

A With the exception that sometime in the late '60's or early '70's -- I'm not sure of the time frame -- there may have been analyses on Monsanto products for specific contaminations.

Q Well, let me ask you about the 1970's. During the 1970's, are you aware whether or not Monsanto's PCBs contained any chemicals in them that were not designed to be there; that is, contaminants?

A I cannot be sure of -- of that particular -- of an answer to that statement, Mr. Lacey, because I have a recollection of sometime that Monsanto had analyses of PCBs that showed the absence of specific contaminants. So I can't answer any more -- and I don't know when I received that knowledge. I just do not remember it.

Q Well, I guess my question to you is: Did you ever receive any information as the Medical Director of Monsanto that there were any contaminants in Monsanto's PCBs?

A I may, and I may have not. I can't answer that.

Q You just don't recall?

A I do not recall.

Q Okay.

Can we agree that contaminants in a chemical at -- even at very low levels, depending on what the contaminant is, may have an important impact on the toxicology of the chemical?

A Well, I won't agree unless you tell me: A, what the contaminant is; B, how much is in there.

Q Well, I'm trying to find out if generally a contaminant in a chemical -- I'm not talking about any particular chemical or any particular level, but a relatively low level; let's say one part per million of a contaminant -- may, depending on the hazards of that contaminant, create toxicological problems.

A It may owe may not.

Q Okay. Depends on the chemical?

A Depends on a number of factors.

Q One of which is the dangerousness of the

contamination chemical?

A And how much is there.

Q Exactly. That's my question. Contaminants, depending upon what the chemical is and the concentration, may create a problem?

A Well, yes, and they may not.

Q Okay.

A They may be in such a percentage that it's insignificant.

Q Okay. Now, are you aware of the fact that one of the potential contaminants in PCBs are dibenzofurans?

A One of the potential --

Q Yes.

A -- so it may be there. Yes.

Q Okay. And, in fact, are you aware of the fact that Monsanto's PCBs contained dibenzofurans in them as a contaminant?

A At what particular period of time are you stating this?

Q Well, for example, I believe Dr. Kaley has testified as an expert on behalf of Monsanto that he measured those chemicals in Monsanto's PCBs in the 1970's.

A Well, when in the 1970's?

Q Well, he didn't know exactly what the

production dates were for what he measured.

MR. CRAWFORD: Well, Mr. Lacey, he left in 1974 the company, so I think you need to keep that in mind when you're asking him questions --

MR. LACEY: Yeah.

MR. CRAWFORD: -- about what he knows.

MR. LACEY: Yeah.

BY MR. LACEY:

Q My -- my question really is whether or not you knew that dibenzofurans were a contaminant in PCBs produced by Monsanto.

A Before 1974 or after 1974? Any time?

Q Either time. At any time.

A I have seen reports that showed that they looked for dibenzofurans, and they did not discover them at the level of sensitivity that was present at that time. That level of sensitivity was 1 to 5 parts per million.

And later the sensitivity methods became much more sophisticated, and they may have had some found -- some findings of dibenzofurans later, after I left. I'm not sure.

Q I see. Would it be of any concern to you if

dibenzofurans were found in PCBs as a contaminant at a relatively low level in the parts-per-million concentration range?

A Well, after all, we had toxicity testing on that product, and that product was made the same way. And if it had dibenzofurans in 1974, it had dibenzofurans in 1964, and 1954 when we ran the toxicity.

So you cannot distinguish or separate any toxicity of the dibenzofurans from the entire PCB product.

Q Okay. So if I understand your testimony correctly, if dibenzofurans were measured in PCBs that Monsanto produced in 1976, since they were manufactured the same way in 1976 that they were in 1966 and the way they were in 1956, we can reasonably conclude, then, that dibenzofurans would have been present in PCBs manufactured in the '60's and the '50's as a contaminant. Correct?

A No, that isn't what I said at all. I said I was not concerned about the toxicity that could be added by any possible presence of dibenzofurans, because we had tested the whole ball of wax of the PCB, which included any potential dibenzofurans if they were in there or not in there.

Q Well, let me -- let me make sure I understand. Let's try to analyze this thing logically. Unless dibenzofurans were in every batch -- and PCBs were made by batch, were they not?

A Yes.

Q Okay. Unless dibenzofurans were in every batch of Monsanto PCBs that it made at a relatively consistent level, the fact that you tested one particular batch of PCBs wouldn't necessarily mean you had tested a batch of PCBs that had dibenzofurans in it, would it?

MR. CRAWFORD: I don't understand the question, Mr. Lacey.

BY MR. LACEY:

Q Let me make it real clear, if Mr. Crawford's got a problem with it.

You told me that one reason you weren't concerned about dibenzofuran contamination was because you had tested PCBs --

A That wasn't what I said. I said I was not concerned about the toxicity of the PCB that contained any possible dibenzofurans, because we had tested --

Q Okay.

A -- the PCBs.

Q And the only way that you would know that the furan contamination in PCBs was unimportant would be if

the batches of PCBs that you had tested had, in fact, had the dibenzofuran contamination in them. Isn't that correct?

A I didn't use the word "unimportant." I don't say that the presence or absence of dibenzofurans is unimportant in PCBs. I said that whatever additive toxicity dibenzofurans might have contributed to the PCBs, that was included in the gross toxicity that we obtained from the testing of the entire product.

Q And that would only be true if the batches that you tested actually had those dibenzofurans in them as contaminants. Correct?

A No, because I do not know if there is any evidence that shows that whatever amount of dibenzofurans in the PCBs of different batches were significant, as far as the toxicity is concerned.

Q Well, let me stop and ask the question. You -- you tested certain batches of PCBs.

A Yes.

Q And those batches of PCBs that you tested, you do not know if they were contaminated with dibenzofurans or not. Correct?

MR. CRAWFORD: Mr. Lacey, I think you ought to show him whatever test you're talking about. I mean --

MR. LACEY: He's the one who's talking about his testing.

MR. CRAWFORD: Well, he didn't say he personally tested them.

BY MR. LACEY:

Q Now, let's make it real clear. You arranged through your department for the testing of certain PCBs --

A Would you mind lowering your voice a little bit, please?

Q Certainly. I'll try to do that.

You arranged through your Medical Department for the testing of certain batches of PCBs with regard to their toxicity, didn't you?

A Yes.

Q And you do not know whether those batches of PCBs that you had tested were contaminated with dibenzofurans, do you?

A No.

Q It is possible, as far as you know, that those batches of PCBs that you tested did not have any disdibenzofuran contamination, is it not?

A Well, anything is possible. But I think the possibility of one batch of PCBs being different from other batches that are manufactured under the same

manufacturing conditions is extremely remote.

Q Okay. So, while you believe it is possible that Monsanto may have produced batches of PCBs that did not very dibenzofuran contamination in them, the more reasonable conclusion is that every batch would have had the dibenzofuran contamination in it. Correct?

A Would you repeat it, please?

Q Yes. You just told me that anything is possible. Right?

A That's correct.

Q So that it is possible that Monsanto made some batches of PCBs that were not contaminated with dibenzofurans. Correct?

A Well, if anything is possible, that's possible, too.

Q Okay. But what I understood you also to tell me is that it's not reasonable to believe that some batches of PCBs manufactured by Monsanto would have been free of dibenzofuran contamination if other batches were contaminated with dibenzofurans. Correct?

MR. CRAWFORD: I don't believe he said that, Mr. Lacey.

BY MR. LACEY:

Q You can answer the question.

A What is the question again?

Q The question is: I understood what you said to -- to be that it's not reasonable to believe that certain batches of PCBs made by Monsanto would have been free from dibenzofuran contamination if other batches of the PCBs made by Monsanto in exactly the same way had dibenzofuran contamination.

THE WITNESS: Would you read my answer back to that previous question, please?

(The following answer was read back by the Reporter:

"ANSWER: Well, if anything is possible, that's possible, too.")

THE WITNESS: Well, it's the -- I think it's before that.

THE REPORTER: Before that?

(The following answer was read back by the Reporter:

"ANSWER: Well, anything is possible. But I think the possibility of one batch of PCBs being different from other batches that are manufactured under the same

manufacturing conditions is extremely remote.")

A Yes, I -- I agree with that.

BY MR. LACEY:

Q Okay. So you believe, then, it's -- it is reasonable to conclude that almost every batch of PCBs made by Monsanto were contaminated with dibenzofurans. Correct?

MR. CRAWFORD: He didn't testify to that.

MR. LACEY: Well, that's the question I'm asking, and I want to get his answer. I agree; he hasn't answered that question, but I want --

MR. CRAWFORD: Well, he made a statement. You might ask him the question.

MR. LACEY: Yes.

BY MR. LACEY:

Q Is it your opinion that almost every batch of PCBs made by Monsanto was contaminated with dibenzofurans?

A I have no knowledge of -- as far as that is concerned. I just do not know. I do not know what the

sensitivity of any method was; if it was one part per billion, one part per trillion. I just cannot answer that.

Q So your testimony is you do not have any way of knowing whether every batch was contaminated. Correct?

A That's correct.

Q And, therefore, you have no way of knowing whether the batches of PCB that you had tested for toxicity contained dibenzofuran contamination. Correct?

MR. CRAWFORD: Mr. Lacey, that's a broad question. You haven't limited it as to time. You -- you -- you're opening it up -- what -- what are you talking about?

MR. LACEY: At any time.

MR. CRAWFORD: Well, let's limit it to a specific time.

BY MR. LACEY:

Q At what points in time did you have your PCBs tested for toxicity?

A From 1938 to 1970.

Q Fine. Now, at any point in time, do you know of any batch that you had -- well, strike that.

From 1938 to 1970, you didn't have every batch of PCBs tested, did you?

A No, sir.

Q Okay. Out of the -- out of the total production that went on from 1938 to 1970, approximately what percent of the PCBs produced by Monsanto were actually tested for toxicity?

A I don't know.

Q A small percent?

A Yes, a small percent.

Q Certainly less than 10 percent?

A Certainly less than 1 percent.

Q Okay. So between 1938 and 1970, less than 1 percent of the total amount of PCBs produced by Monsanto were tested for their toxicity?

A Yes, sir.

Q Okay. Now, of those PCBs that were tested for toxicity between 1938 and 1970, you have no way of knowing whether any of the batches selected for testing contained any disdibenzofuran contamination. Is that correct?

A Yes, sir.

Q Okay.

A If not --

Q And therefore --

A If not tested.

Q And, therefore, you do know no whether it had it or not?

A I do not know for a certainty. I -- but when batches that were tested that were manufactured in the same way showed the presence of small amounts of dibenzofuran, it is reasonable for me to assume that that was present in the earlier batches that we tested.

Q Okay. So your assumption is that the batches of PCBs that you did test from 1938 to 1970 were contaminated with dibenzofurans. Correct?

A I would say that the batches that we tested were representative of the batches that were analyzed and checked for dibenzofurans. But I have to say that I do not know whether dibenzofurans were found up to 1974 by methods that we -- that were sensitive enough to analyze.

Q Yeah. That -- that's really not my question.

A All right. Would you repeat the question?

Q Yeah. My question is: You do not know whether or not the PCBs that were tested from 1938 to 1970 were contaminated with dibenzofurans. Correct?

MR. CRAWFORD: Well, I think he stated, Mr. Lacey, that the testing was not sensitive enough to pick up any --

MR. LACEY: That --

MR. CRAWFORD: -- contaminants.

MR. LACEY: That -- I'm -- let's make

it very clear.

BY MR. LACEY:

Q I'm talking about the toxicological testing you had done of PCBs.

A Yes, sir.

Q And what I'm trying to find out is whether you know one way or the other whether those batches of PCBs that you had toxicological tests done on were contaminated with PCBs or not.

And I don't really care whether you -- you -- they were sensitive methods or not sensitive methods. I just want to know whether you knew they were or were not contaminated.

MR. CRAWFORD: You mean, does he know now, or does -- did he know then?

MR. LACEY: Either one.

MR. CRAWFORD: Well --

MR. LACEY: Has he -- has he ever known at any point --

BY MR. LACEY:

Q Have you ever known at any point in time whether or not the batches of PCBs you had tested for toxicology from 1938 to 1970 were contaminated with dibenzofurans?

A We did not know for a -- for a scientific

certainty; but we did know that if a product is manufactured the same way and the same -- to the same specifications, it is representative -- one year's production is quite representative of another.

So that after the '70's, when we were able to analyze for PCBs -- for dibenzofurans in PCBs and found this minute amount, it was -- seemed to me to be a logical assumption, although not a scientific certainty, that those figures were representative of the ones -- the batches that we used for testing.

Q Okay. And I take it, then, that it is your assumption that the PCBs that were tested for toxicological effects from 1938 to 1970 were contaminated with dibenzofurans at about the same levels that were measured in the 1970's.

MR. CRAWFORD: Well, don't assume anything, Doctor. You can --

MR. LACEY: No, I'm asking -- he has given an assumption. I want to make sure I understand it.

BY MR. LACEY:

Q Is that the assumption that you make?

A Let's repeat the assumption.

Q Let me ask the question very clearly.

Is it your assumption, Doctor, that the PCBs

that were tested for toxicology between 1938 and 1970 were contaminated with the -- with about the same amount of dibenzofuran contamination as was measured in Monsanto's PCB production in the 1970's?

A Well, it's an assumption. I have no -- no scientific proof that it was.

Q But that is your assumption?

A That's my assumption.

Q Okay. And because of that assumption, you believe that any impact of dibenzofuran contamination on the toxicology of PCBs was taken into account in the toxicological testing of PCBs done between 1938 and 1970?

A That's correct.

MR. CRAWFORD: I object to the form of the question.

MR. LACEY: Fine.

BY MR. LACEY:

Q Now, do you know what the factors are that might cause the amount of dibenzofuran contamination to vary between batches of PCBs that were produced?

A No, sir.

Q Okay. Do you know what factors contribute to the existence of dibenzofuran contamination in PCBs manufactured by Monsanto?

A At any time in their life history?

Q Yes. Yes.

A Yes. Pyrolysis --

Q What is pyrolysis?

A Fire.

Q Okay. And how does fire contribute to dibenzofuran contamination in Monsanto's production of PCBs?

A It does not contribute in the production of Monsanto's PCBs.

Q Okay. Well, let me make my question very clear.

I'm trying to find out what factors, if any, that you know about that contribute to or affect the existence of dibenzofuran contamination in PCBs produced by Monsanto.

A After it leaves Monsanto's plant?

Q No. I'm talking any that Monsanto --

A Any time --

Q -- produces.

A You mean while it pro- -- is being produced?

Q Yes. Let me -- let me make my question very clear.

Again, Monsanto does not seek to produce PCBs with dibenzofurans in it, does it?

MR. CRAWFORD: Object to the form the question.

A Does it? No, it does not.

BY MR. LACEY:

Q Okay. What Monsanto is seeking to produce is PCBs and only PCBs. Correct?

MR. CRAWFORD: Object to the form of the question.

A What Monsanto is seeking to produce is PCBs as pure as they can make it.

BY MR. LACEY:

Q Okay. And that does not include as a part of the plan to make some dibenzofurans on the side, does it?

A Not as part of the plan to manufacture PCBs, no.

Q Now, the measurements that were made in the 1970's showed that PCBs made by Monsanto, in fact, contained some dibenzofurans. Correct?

A You'll have to show me the report.

Q I see. You don't know?

A I want to be positive.

Q I see. With regard to dibenzofuran contamination, let me show you a Document 25363, written by David Wood, Marketing Manager for Dielectrics, to a

Robert A. Stenger with General Electric, dated October 30, 1975, listing chlorinated dibenzofurans as one of the contaminants in PCBs (tendering).

A (Reviews document.)

Q Do you see that?

A May -- may I finish reading it?

Q Certainly.

A (Reviews document.)

Yes, I see it. This is a letter dated October the 30th, 1975, which is approximately a year after I left Monsanto.

Q Yes. My question to you now is: We know that PCBs manufactured by Monsanto contained some dibenzofurans in them, don't we?

A Well, they say under five-tenths parts per million.

Q But they were identified --

A Just a moment.

I do not know the sensitivity of the method. I don't know if five-tenths of a part per million is the lower limit of their sensitivity. And if they say under five-tenths of a part per million, that may be as -- as low as -- as low as they can identify it. So I can't answer that question.

Q You don't know? You -- that letter doesn't

tell that you there were contaminants in Monsanto's PCBs, including dibenzofurans?

A It tells me, but I do not know what the sensitivity of the method is.

If the method is sensitive to only five-tenths of a part per million, and this is under five-tenths of a part per million, obviously it doesn't help me.

If the method is one-tenth of a part per million --

Q I see.

A -- it -- it would help me (tendering).

Q Mr. Wood says -- and maybe I'm having trouble reading the English language -- "Identifiable materials present in our biphenyl contributes to the presence in the polychlorinated biphenyl mixture of the following:

"Chlorinated naphthalene, chlorinated methyl naphthalene, chlorinated methyl biphenyl, chlorinated dibenzofurans," and "Unidentified."

Now, you have trouble understanding that Mr. Wood is saying that the materials that he listed there are present in the PCBs produced by Monsanto?

A Well, he is saying that chlorinated dibenzofurans are present in under five-tenths of a part per million.

Just a moment.

I don't know whether that means one part per billion, one part per trillion, or -- just a moment, please, Mr. Lacey. May I finish?

And I do not know the sensitivity of the method. Now, if he cannot analyze for under five-tenths of a part per million, that invalidates that statement.

Q So Mr. Wood may be inaccurate in reporting that dibenzofuran are present in Monsanto's PCBs?

MR. CRAWFORD: Doctor -- Mr. Lacey, I don't want you to ask this witness to speculate about something somebody else did after he left Monsanto, and I object to the question. I think it's improper.

MR. LACEY: Fine.

BY MR. LACEY:

Q That -- that document doesn't permit you to reach the conclusion that there were dibenzofurans as contaminants in Monsanto's PCBs. Is that your testimony?

A That's my testimony.

Q Okay, sir. Fine.

And as I understand it, you are not familiar, then -- sufficiently familiar with Monsanto's dibenzofuran contamination problems, nor does this document help you refresh your recollection that

Monsanto's PCBs were contaminated with dibenzofuran. Is that correct?

MR. CRAWFORD: I'm going to object to the form of the question.

THE WITNESS: Yes, there are three questions there.

MR. CRAWFORD: Three questions, and you've also made some assumptions in there that are --

MR. LACEY: I see.

MR. CRAWFORD: -- not supported by anything in this record --

BY MR. LACEY:

Q Let me ask you --

MR. CRAWFORD: -- and I think --

MR. LACEY: Well, I think they're well-supported by the record. I think they're, in fact, well-supported by Monsanto's Answers to Interrogatories, the testimonies of Dr. Richard, Dr. Munch, Mr. Papageorge. But that's fine. We'll let the Jury decide that one.

MR. CRAWFORD: Well, let's stick with the record on this witness, Mr. Lacey.

MR. LACEY: Well, it seems that this

witness has a troublesome time assuming the testimony given by other people.

BY MR. LACEY:

Q Now, let me ask you a question --

MR. CRAWFORD: I'm sure he can testify on his own behalf with -- about what he knows, not what somebody else --

MR. LACEY: Well, actually, he's here as a 30(b)(6) corporate representative, as well.

MR. CRAWFORD: For some matters.

BY MR. LACEY:

Q Now, are you familiar with the relative toxicity of polychlorinated biphenyls versus the relative toxicity of chlorinated dibenzofurans?

A Yes.

Q Chlorinated dibenzofurans are a considerably more toxic material, in your opinion, than PCBs, are they not?

A Yes.

Q Okay. Now, are you familiar with the toxicity of chlorinated dibenzodioxins?

A Yes.

Q And in your opinion, the toxicity of chlorinated dibenzodioxins is considerably greater than

the toxicity of chlorinated biphenyl. Correct?

A Yes.

Q Okay. In fact, chemicals like dioxin have systemic effects on human health that can be present at parts as low as 200 parts per billion, do they not?

MR. CRAWFORD: Object to the form of the question.

A 200 parts per billion given how often, and what effects, Mr. -- Mr. Lacey?

BY MR. LACEY:

Q Without regard to the frequency, they can produce systemic effects at 200 parts per billion, can't they?

A One dose of 200 parts per billion?

Q Whether it's one or whether it's chronic, my question to you is: One cannot be exposed to dioxins at the level of 200 parts per billion and assume there will be no effect, can he?

MR. CRAWFORD: Object to the form of the question.

A I'm not sure I have seen the evidence for that.

BY MR. LACEY:

Q I see.

Do you remember giving a deposition in the case of James N. Adkins, Administrator of the Estate of Ralph

E. Adkins versus Monsanto Corporation in a case pending in the United States District Court for the Southern District of West Virginia at Charleston on March 2nd, 1984?

A May I see it?

Q Certainly (tendering)

A (Reviews document.)

Yes, sir. I remember doing it. I don't remember the details of the deposition --

Q Sure.

A -- the details of the case.

MR. LACEY: May I see the deposition, Walter?

MR. CRAWFORD: May I look at it?

MR. LACEY: Feel free.

MR. CRAWFORD: (Reviews document.)

Mr. Lacey, I'd like to take about a five-minute break and ask him about this deposition, since you've dropped it on us here.

MR. LACEY: Well, I think I'm entitled to continue with my examination.

MR. CRAWFORD: Oh, I think you are. There's no question about it.

MR. LACEY: Well, I don't see why we

need to take a break at this time.

MR. CRAWFORD: Well, I'd like to talk with the doctor just briefly about it.

MR. LACEY: Well, do you mind if I ask him my questions from that deposition and impeach his testimony before you show it to him and try to clean it all up?

MR. CRAWFORD: I'm not going to try to clean anything up, but I think I need to find out when he gave his deposition and --

MR. LACEY: The date's on the front of it.

MR. CRAWFORD: Well, I know, but I want to ask him something about it just very briefly. We'll be back in about five minutes.

MR. LACEY: I see.

(Recess)

THE VIDEOTECHNICIAN: Okay. We've been off the record for a short break. We're now back on the record, and the time is 9:52 am.

BY MR. LACEY:

Q You recall giving the deposition in the Adkins case?

A Yes.

Q In that deposition and in that case, one of the issues present there was the presence of dioxins; and you were asked about matters that related to the concentrations at which they could produce health problems. Is that correct?

MR. CRAWFORD: Mr. Lacey, I'm going to object to any testimony that this witness gives or any questions that you may have involving dioxins, since they're not involved in this lawsuit and you haven't shown that they're involved in any PCB products.

MR. LACEY: That's fine.

MR. CRAWFORD: And I'm going to object to it on the record.

BY MR. LACEY:

Q Okay. Now, my -- my question to you is: In that case, the Adkins case, there were issues about dioxins, were there not?

A Yes.

Q And the levels at which they could cause health

effects. Correct?

A That may be.

Q Okay. And in that case, you were shown a letter that you wrote, dated March 17th, 1965; and I want to direct your attention to Page 54A of your deposition, where you noted in that letter that you wrote in 1975 that trace amounts of dioxin at the level of 200 parts per billion had caused chloracne (tendering). Is that correct?

MR. CRAWFORD: Mr. Lacey, I'd suggest that you get his letter to him so he can see it in context. You're asking him to comment about a deposition which he apparently gave several years ago, and I don't think it's fair to require the witness to try to recall some letter that -- that's not attached and you haven't produced.

MR. LACEY: Well, as you know, Monsanto hasn't produced that letter to me. I have the benefit of the deposition, but I don't have the benefit of the letter. If you can produce it for us here today -- I know we're in St. Louis, and you've got your stuff on computer -- I'll

be happy to show it to him.

MR. CRAWFORD: Well --

MR. LACEY: But I don't have it. I'm sorry. Monsanto hasn't give me the pleasure of being able to look at it.

MR. CRAWFORD: Well, maybe that's because you haven't requested it.

MR. LACEY: Oh, I think I've requested it.

A What was the question?

BY MR. LACEY:

Q Isn't it -- your testimony in that deposition was that dioxin at a level of 200 parts per billion could cause chloracne in rabbits. Is that correct?

A That's what I said, according to Dow. That was according to Dow's work.

Q Okay. And so there is scientific evidence establishing that dioxins at a level of 200 parts per billion can cause chloracne. Correct?

A Yes. It does not say how often this was applied to the rabbits; whether it's one time, 40 times --

Q I understand.

A Yes.

Q But whatever the frequency of application is,

dioxin at the level of 200 parts per billion can cause chloracne, whatever the test conditions were that Dow did?

A According to Dow, yes.

MR. CRAWFORD: Mr. Lacey, I'm going to object to the question. We're talking -- what are we talking about; rabbits, or humans, or what? You're skipping around. Are you talking about this testimony?

MR. LACEY: I'm talking about that testimony right there (indicating).

MR. CRAWFORD: About rabbits?

MR. LACEY: Yeah.

BY MR. LACEY:

Q Do you have any problem? Isn't that what toxicological testing is normally done on; animals?

A Yes.

Q Okay.

A But we're talking here -- I'm quoting Dow's work on -- that they stated 200 parts per billion have caused chloracne in rabbits. Unless I had the opportunity to read the entire Dow report, at this time I could not comment any further on it than that.

Q Okay. Well, let's -- let's just try to get a

few things clear.

When you do toxicological testing of chemicals, you normally do that with test animals, don't you?

A Yes.

Q Okay. And it's not unusual to use rabbits as a normal test animal for toxicological testing, is it?

A Well, it is. You generally use them to test for skin problems.

Q And chloracne is a --

A -- skin problem.

Q Okay. So rabbits are just the sort of animal that people use to test for skin problems, isn't it?

A Yes, it is.

Q Chloracne is a skin problem, is it not?

A Yes, but there's also quite a bit of discussion as to whether chloracne can be caused in rabbits or not. There's a good body of investigators that do not believe you can cause chloracne in rabbits. It appears that Dow believes you can.

Q Well, not only Dow believes you can; but that their people administered dioxins at the level of 200 parts per billion, and the animals got chloracne.

A Dow said the animals got chloracne.

Q Okay.

A I said there is a dispute among investigators

as to whether chloracne is caused in animals.

Q I see. Okay. Well, if it wasn't chloracne, is there some -- is there something else the investigators want to call it besides chloracne? Is -- skin sensitivity? Is that --

A It is not skin sensitivity. It could be called folliculitis. It could be called any number of things.

Q Okay. And so there's a question whether you should call it chloracne or whether you should call it -- what's the word?

A Folliculitis, f-o-l-l-i-c-u-l-i-t-i-s.

Q Okay. Whether it was properly called chloracne, or whether it should have properly been called follicu- -- folliculitis, whatever it was, these rabbits exposed to dioxins at 200 parts per billion showed that effect. Correct?

MR. CRAWFORD: Mr. Lacey, he didn't say that. He said the Dow report, about which they were asking him, indicated that.

BY MR. LACEY:

Q That's the information that you had. Correct?

A What information did I have?

Q That the 200 parts per billion exposure to dioxin caused what Dow called chloracne, what maybe

correctly should be called folliculitis --

A Folliculitis.

Q -- in rabbits.

A Yes; something that they -- they got something, yes.

Q Okay.

MR. CRAWFORD: Well, on the Dow report.

A According to their report.

BY MR. LACEY:

Q Now, that establishes in the way that toxicologists establish it, does it not, that exposure to dioxins at very low levels can have effects. Correct?

MR. CRAWFORD: Object to the form of the question.

A On rabbits?

BY MR. LACEY:

Q On rabbits.

A Yes, at -- at levels of 200 parts per billion. I do not know the frequency of the -- of the exposure, but it did cause effects in rabbits.

Q Okay.

MR. CRAWFORD: In that report.

BY MR. LACEY:

Q Would -- would that information cause you as the Medical Director of Monsanto to attempt to ensure that human exposure to dioxins would be limited to less than 200 parts per billion?

MR. CRAWFORD: Mr. Lacey, I'm going to object to the question. You haven't limited it in time as to when he was the Medical Director, as to when that report came out; and I think that the question is improper, the way you phrased it.

BY MR. LACEY:

Q Do you remember when you were Medical Director at Monsanto?

A Yes.

Q Okay. Well, do I need to repeat that in every question for you?

A Yes, please. Just give me the years. You don't have to repeat --

Q I see.

A -- when I'm --

Q I see.

A -- when I'm -- you don't have to remind me when I was Medical Director or remind -- I know that.

Q Well, I was a little bit confused by

Mr. Crawford's objection.

A No; but if you ask me about when I knew something, it would help if you would say, "Did you know this in 1930, '40, '50, '80 --"

Q Well, let's just go at it an entirely different way.

You were responsible ultimately for the decision-making process by Monsanto with regard to what safety precautions to take with regard to your own workmen. Correct?

A Correct.

Q And with what to advise customers to whom you sold products about safety precautions to exercise with Monsanto products?

A Correct.

Q Okay. Now, if you, as a person in charge of safe handling and a person in charge of giving instructions to others about safe handling, had information that dioxin exposure at 200 parts per billion caused this skin condition in rabbits, whatever it's called properly, would that mean that you would want to limit the exposure of humans to dioxin to less than 200 parts per billion?

A Again, you have to quantify the exposure.

If you are talking about one -- one exposure, a

single exposure, no. If you talked about a single exposure once a month, no. If you talked about repeated exposures every day, I may or may not have, because that is only one part of the -- of the decision-making process.

The other decision-making process is: What has been the clinical history of the men who have been exposed to a particular product that contains 200 parts per billion of dioxin?

Remember, now, we're talking about dioxin, which I understand has nothing to do with PCBs.

Q That's your understanding.

A Yes.

Q Okay. Did Monsanto produce any products that contained dioxin at levels of 200 parts per billion?

MR. CRAWFORD: Mr. Lacey, I'm going to object to that. This case is about PCBs, and not about other products that Monsanto produced in this case, and I'm going to object to it. I think it's improper for you to go into that.

MR. LACEY: Well, you can object all you want, Walter. I think the evidence in this case is going to show that PCBs are contaminated with furans, they're

contaminated with dioxins; and that's a real problem Monsanto's got in this case.

MR. CRAWFORD: Well, I object to that. I don't think that's what it's going to show, and I object --

MR. LACEY: Well, that's what we'll let the Jury figure out.

BY MR. LACEY:

Q Did Monsanto make any products that contained dioxins at levels of 200 parts per billion or greater?

MR. CRAWFORD: PCB products?

MR. LACEY: Any products.

A Any products? Yes, they may have. I don't know the time frame. They manufactured an insecticide that contained, presumably, dioxins in that percentage.

BY MR. LACEY:

Q Okay. And did any human beings ever exhibit any health problems resulting from that?

A During the manufacture of this product, they did manifest health prod- -- problems. The use of the product was not accompanied by any health problems.

Q But your workers who were exposed to dioxins at levels of, you assume, around 200 parts per billion -- is that correct?

A No, I don't assume that at all.

Q What was the exposure?

A I don't know.

MR. CRAWFORD: Mr. Lacey, so I don't have to interfere any more and I can let you go with this line, may I have a running objection to all testimony on dioxins in other products? Is that all right? Can I have a running objection?

MR. LACEY: Well, what is the objection? To the form of the question? All objections are being reserved that can be reserved.

MR. CRAWFORD: All right.

MR. LACEY: I think the issues of what objections you're going to make at trial --

MR. CRAWFORD: Okay.

MR. LACEY: -- and what the Court may rule are issues you're going take up with the Court.

MR. CRAWFORD: Just so we don't waive that, that's fine.

MR. LACEY: Well, I don't think -- if you've got an objection to the form of my question, I'd like to have the

form-of-the-question objections covered at this point, because I'll fix that.

MR. CRAWFORD: Okay. Well, the last one was leading.

MR. LACEY: Okay. Well, that's fine. I think I -- I am entitled to ask your expert witness leading questions. I think he's probably an adverse party to me, since he's a -- an expert, been retained against me in this case. Any problem with Mr. Kelly being an adverse witness?

MR. CRAWFORD: Well, I have problems with leading questions, and loading it up with a bunch of stuff he didn't say, but --

MR. LACEY: I see.

MR. CRAWFORD: -- let's hear the questions.

MR. LACEY: Well, I'm sure he'll tell me about it.

BY MR. LACEY:

Q Now, what level do you believe the workers at Monsanto who exhibited health problems from being exposed to dioxins were exposed to, in terms of parts per billion?

MR. CRAWFORD: Object to the question in that it assumes something that he hasn't testified to.

A Monsanto workers were exposed to what was presumably dioxin that was formed by an explosion at the plant in Nitro, West Virginia. The exact nature of the compound was never established; so, obviously, the percentage of the material of dioxins in there was never established.

During the manufacturing of the insecticide following that explosion, people developed chloracne; workers at Monsanto developed chloracne. And it was found that dioxin was present in considerably higher levels than 200 parts per billion.

BY MR. LACEY:

Q What were the levels?

A I can't recall right at the present time, but they were considerably higher than 200 parts per billion.

Q Was it as high as 1 part per million?

A It may have been. I mean, I'd -- I'd have to speculate. I don't know.

Q Okay. You know it was higher than 200 parts per billion, but you're not sure if it was at high as 1 part per million?

A That's correct.

Q Okay. By the way, you say that that happened after an explosion. Are you telling me that the dioxins would not have been present in the product, but for this explosive process?

A No. I didn't say that at all.

Q Were the -- were the dioxins present in the product even without the explosive process?

A Yes.

Q I see. And did the explosive process contribute to the presence of dioxins in the product or add to the presence of dioxins in the product?

A It added to the disability of the individuals, because their reaction was much more severe cleaning up the explosion than it was during the routine manufacture of the product.

Q My question -- and let me make it clear -- is whether or not, as a result of the explosive process, more dioxins were created than were already present in Monsanto's product.

MR. CRAWFORD: Object to the form.

A I told you before I couldn't answer that, because the -- the analysis of the charred material that remained after the explosive -- after the explosion was not identified.

BY MR. LACEY:

Q Do you know whether or not dioxins can be created as the result of explosions or fires of PCB-containing materials?

A I do not know.

Q Okay.

Now, are you familiar with the fact that from time to time, there were efforts to improve the quality of Monsanto's PCB products?

A I don't know any of the details in it -- about it, so I can't comment on it.

Obviously, in all industrial processes, you are trying to improve it as you go along. But I have no direct information as to -- to answer your question.

Q Would one be interested in trying to improve the quality of the product by reducing the level of contaminants in it?

MR. CRAWFORD: That assumes there was a contaminant in it. I'm going to object to the form of the question.

MR. LACEY: Okay. That's fine.

BY MR. LACEY:

Q Can -- can you assume with me for the -- for the moment that Monsanto witnesses have testified that Monsanto's PCB products did contain contaminants in

them?

MR. CRAWFORD: If you know about that testimony.

BY MR. LACEY:

Q I'm asking if you can assume it.

MR. CRAWFORD: Well, he shouldn't assume anything.

MR. LACEY: I see.

BY MR. LACEY:

Q You can't assume that Dr. Richard has told me that Monsanto's PCBs were contaminated with dibenzofurans ?

MR. CRAWFORD: I wouldn't assume anything.

MR. LACEY: I see.

MR. CRAWFORD: Just ask the question, David.

(Discussion off the record)

BY MR. LACEY:

Q I don't know how much of Dr. Richard's deposition you want to read, Dr. Kelly. At Page 104 of his deposition, beginning at Line 16, Dr. Richard said --

MR. LACEY: Okay. We're back on.

BY MR. LACEY:

Q -- "We looked for any dibenzofurans and found parts per million late in 'Seventy -- late in the Seventies -- I shouldn't say late in the Seventies, but late in the Sixties, early in the Seventies.

"QUESTION: So you have found some dibenzofurans as impurities in the manufacture of PCBs?

"ANSWER: Parts per million possibly."

Now, is that -- does that satisfy you that Dr. Richard has testified--

A May I see it, please?

Q Surely. Feel free (tendering). There are several pages of testimony by Dr. Richard about dibenzofuran contamination.

A (Reviews document.)

Well, I don't believe you've quoted him exactly correctly.

Q Well, you want to read from Line 16 --

A Yes.

Q -- on that page down through Line 22?

A Yes, I will.

A Feel free to read it.

A "We look for any dibenzofurans" -- well, I'll start on Line 13, if you like.

Q Well, actually, I think I quoted beginning at Line 16. If you're challenging the accuracy of my quotation --

MR. CRAWFORD: Well, you --

BY MR. LACEY:

Q -- why don't you begin at Line 16?

MR. CRAWFORD: -- you asked him to read it and read what he wanted. He can read what he wants to.

BY MR. LACEY:

Q Okay. If you just want to start reading out of Dr. Richard's deposition, go ahead.

MR. CRAWFORD: He can start up with any --

A "If we're looking for that, we did not find any dioxins in our product analytically. And these methods were developed late. We looked for any dibenzofurans and found parts per million late in 'Seventy -- late in the Seventies -- I shouldn't say late in the Seventies, but late in the Sixties, early in the Seventies.

"(QUESTION) So you did have some dibenzofurans as impurities in the manufacture of PCBs?

"(ANSWER) Parts per million possibly.

"(QUESTION) Well, when you measured it, you found it. Not possibly. You actually found it, didn't

you?

"(ANSWER) I think we did. It was not --"

BY MR. LACEY:

Q Please don't tear it up. If you --

A I'm not, but I've got to read it.

"You would have to ask the analytical people what the exact parts per million were, but very low.

"(QUESTION) Which analytical people did that work?

"(ANSWER) Applied sciences -- in general, applied sciences were working under Dr. Keller," K-e-l-l-e-r.

Q Any question from that excerpt that Monsanto looked for and found dibenzofurans in its PCB products?

A This is no question that they looked for it. He said, "I think we did," when we were asked about if we found it. So I can't be any stronger than what he says.

He said, I think we did," and he's got a "Parts per million possibly" in there. I think you'd have to -- have to ask him more definitely about that.

Q I see. Well, is there any -- do you have any problem assuming that -- that your people found furans as a contaminant in PCB products when they looked for it? Is that something you can assume with me?

A I could assume.

Q Okay. Fine. Now, in a effort to clean up PCB products, one of the things you would want to do would be to take out any contamination, is it not?

A That's correct.

Q Okay. Do you know whether or not Monsanto had a problem with its product, resulting in a competitive problem because they weren't pure enough?

A No, sir, I do not.

Q Okay. Do you know whether a response to a problem like that would be to attempt to clean up the product?

A I don't know what their attempt would be.

Q I see.

Was it always a goal of Monsanto to produce a better-quality product?

A Yes.

Q Did Monsanto attempt to make improvements in its production processes over time to improve the quality of its products?

A Yes.

Q And would one of the goals of those improvements be to reduce or eliminate contaminants in its products?

A It may or may not have been.

Q I see. So Monsanto may not have made an effort to get the contaminants out of its products. Is that correct?

A Well, I -- you'll have to ask someone elimination about that. I don't know.

Q Okay. Was it ever a directive from the Medical Department that Monsanto should attempt to produce products that did not have contaminants in them?

MR. CRAWFORD: Mr. Lacey, I'm going to object to the form of the question, because you have not defined "contaminants." What are you talking about?

MR. LACEY: Any -- well, let's go back. I thought we defined that earlier today.

BY MR. LACEY:

Q Didn't we establish earlier today that a contaminant is a chemical that's found in a product manufactured by Monsanto that it didn't design to be in there?

MR. CRAWFORD: I don't think we established that.

MS. OLESEN: You asked him to assume that definition.

BY MR. LACEY:

Q Well, let's -- let's try to see if we can get it clear, and let's just do it with PCBs.

A Fine.

Q Monsanto set out to produce PCBs. Correct?

A Yes.

Q And they weren't attempting to produce as a part of their PCBs any dioxins, were they?

A No.

Q They didn't design their process to produce PCBs containing dioxin, did they?

A No.

Q They didn't design their process to produce PCBs containing dibenzofurans, did they?

A No.

Q They didn't produce their -- they didn't design their process to produce PCBs containing naphthalenes, did they?

A No.

Q They didn't design their process to produce chlorinated naphthalenes, did they?

A You'll have to ask the design man. I do not know whether the presence of some of these things are a nec- -- are of importance inside a PCB range. I don't know that.

Q So naphthalenes may be important in that. Is that correct?

A I don't know. I said, you'll have to ask someone else.

Q I see.

Now, just talking about those chemicals that definitely were not part of what Monsanto set out to manufacture, I want to use the word "contaminants" for those chemicals. Do you have any problem with that?

A No. Under our definition, it's an unwanted product in the compound, yes.

Q Exactly.

MR. CRAWFORD: But you're limited to what you said.

BY MR. LACEY:

Q And dioxins, if they were present in PCBs, would be a contaminant, would they not?

A Yes.

Q Furans, if they were present, would be a contaminant, would they not?

A Yes.

Q Okay.

Now, my question to you, with that definition that you've given me of "contaminants": Did the Medical Department ever seek to have Monsanto attempt to reduce

or eliminate the presence of contaminants in its products?

A You said before we're limiting it this to the PCB, did you not?

Q Well, if you want to limit it to PCB, I'll be happy to.

A All right. Fine.

Q Did the Medical Department ever seek to have Monsanto limit the presence of or eliminate the presence of contaminants in its PCB products?

A When I was in charge of the Medical Department, we did not.

Q Okay. Now, did the Medical Department ever -- and I'm going to broaden the question beyond PCBs -- did the Medical Department ever seek to have Monsanto limit or eliminate the presence of contaminants in any of its chemical products?

A Yes.

Q Which chemical products did Mon- -- the Medical Department seek to have Monsanto limit or eliminate the presence of?

THE WITNESS (to the Reporter):

Repeat the question?

BY MR. LACEY:

Q Let me just -- let me just ask it again.

What contaminants in what products did the Monsanto Medical Department seek to have Monsanto limit or eliminate the presence of?

A The Medical Department recommended that Monsanto minimize the presence of dioxin in a herbicide, 2,4,5-T.

Q Okay. Any other contaminants that the Medical Department ever recommended that Monsanto production people seek to limit or eliminate as a contaminant in a product?

A Yes.

Q What else?

A A copper scavenger in a hydraulic fluid. I do not recall the name of copper scavenger, but it was in Hydraul hydraulic fluid.

Q A PCB-containing hydraulic fluid?

A No, it was not a PCB-containing hydraulic fluid.

Q I see. And what was the purpose of the scavenger?

A To pick up loose piece of -- pieces of metal.

Q Okay.

Any others that you recall?

A I don't recall. There may have been, but I don't recall.

Q You don't recall. You don't recall any others. Correct?

A I don't recall any. That does not mean that they did not --

Q The reason that you asked the production people to eliminate or limit the presence of dioxin as a contaminant in 2,4,5-T was because of the very high toxicity of dioxin. Is that not correct?

MR. CRAWFORD: Object to the form of the question.

A We knew that dioxin was causing chloracne in our workers at our Nitro plant, so we wanted to eliminate it.

BY MR. LACEY:

Q To eliminate it. Correct?

A Minimize it, yes.

Q And did the production people seek to do that?

A Yes.

Q Were they successful in doing that?

A Yes.

Q That simply required exercising more caution in the production process, did it not?

MR. CRAWFORD: Object to the form of the question.

A I'm not a process engineer. I can't tell you

that.

BY MR. LACEY:

Q I see.

I believe in -- when we started your deposition, you told me that after you became Medical Director of Monsanto following World War II -- or at least by that time, if it did not occur earlier -- there was a directive from the management of the company that all questions regarding toxicology and safe handling of products come to the Medical Department for response. Correct?

A Correct.

Q And also a directive from the management of the company that all information given out to customers about toxicology and safe handling come from the Medical Department. Correct?

A Yes. But, of course, obviously, if a salesman is giving a customer a Technical Bulletin that has toxicity and safe-handling information, it comes from him, but it comes --

Q Yes.

A -- indirectly from us.

Q The -- the -- and the way that would work, obviously you didn't physically go out and hand out every piece of paper to a customer that had the stuff in

it on safe handling.

A That's correct.

Q But before a piece of paper went out on safe handling, it had been approved, at least in substance, by the Medical Department?

A Correct.

Q Okay. And am I also correct in understanding that to the extent that a customer wanted information that had greater detail in it, more step-by-step instruction than was in the Technical Bulletins, on the warning labels, and the like, that more detailed or technical information would come from the Medical Department or be approved by the Medical Department?

A Well, there, you're -- you're giving a -- a broad -- a question that is a broad spectrum.

They may have wanted engineering details that would minimize personal contact. That would not come from the Medical Department.

If they wanted more detailed information about specific action of a product or specific personnel handling methods or specific personal precautions, that would come from the Medical Department.

Q If somebody were asking for specific information on the best way to handle a Monsanto product to avoid problems of dermatitis and toxicology, those

are the sorts of things that would be spoken to either directly or indirectly by the Medical Department department. Correct?

A Not exactly. Suppose they were asking about methods of conveying of -- how to handle it in a centrifuge; whether you should have a self- -- self-emptying centrifuge or a manually-op- -- -emptied centrifuge. That would not come from the Medical Department.

Q So if it were a technical piece of equipment type of question, somebody else might speak to it?

A They might.

Q My understanding from talking to Mr. Elmer Wheeler was that he often was the person at Monsanto that would speak to things like how to design pieces of equipment in order to minimize human exposure in an acceptable way. Is that correct?

A I would like to see what he -- exactly what he said, whether -- because his -- he would just be talking about designing ventilation, spot or general ventilation. He wouldn't be designing whether you had a closed conveyor system, or something like that. I don't believe that was part --

Q I see.

A -- of his expertise.

Q Who at Monsanto would be giving very detailed design directions to customers about how to handle Monsanto products?

A I don't know.

Q Do you know if anybody ever did?

A I don't know whether they did or whether they did not.

Q Okay. General questions about safe handling, though, where a customer asked what to do or how to handle it, would come through the Medical Department?

A That's correct.

Q Okay. And to the extent they had a specific inquiry that went beyond the Technical Bulletins and the warning labels, and they were to be given information beyond the Technical Bulletins or the warning labels, that would come from the Medical Department. Correct?

A If it related to possible health hazards, if it related to possible exposures, if it related to the type of personnel equipment to use, yes.

Q Okay. And it was your intention in requesting that management provide that information on safe handling and toxicology be approved by the Medical Department to ensure that what was being said to customers was generally consistent, generally uniform throughout the company. Correct?

A And accurate.

Q And accurate.

Now, did you review the material that went in any manuals that salesmen used as instructions of what they were to talk to customers about on toxicology and safe handling?

A I do not recall any such manuals.

Q Okay. Well, would it have been -- and let me ask it this way, then -- would it have been your understanding that had such manuals existed during the time that you were Dir- -- Medical Director at Monsanto, that anything in them about what the salesmen were to tell customers on toxicology, safe handling, precautions for their workers, would be approved by you for its accuracy and correctness?

MR. CRAWFORD: David, why don't you show him the manual you're talking about so he can have something to focus on?

MR. LACEY: Well, I'm not sure that there is a manual. I'm just trying to find out. I -- I -- you know, I'm not sure that we've got one of those. But I'm trying to find out if that was covered by this.

MR. CRAWFORD: Well, if there's not a

manual, how can he answer the question?

MR. LACEY: Well, that's what I'm trying to find out.

I'm trying to make sure that if one shows up -- and as you know, Walter, we've had documents continue to show up, and I don't know how many more are going to show up -- I intend to conclude this deposition today, and I want to make sure I understand whether or not any statements in any Salesmen's Manuals or the like that you may provide to us during the time this man was Medical Director would have been something that, under the policies of the company, should have had his approval. It's very simple.

A I -- I have no recollection of ever seeing a Salesmen's Manual.

BY MR. LACEY:

Q Fine.

Now, my question to you is a very simple question: Was the directive that you sought from the company's management and that went out from the company's management one such that any literature that was provided by Monsanto to its sales forces that

contained information for them to use in conveying to customers would have been information that you had approved and consistent with what your views on toxicology and safe handling were?

MR. CRAWFORD: I object to the form of the question. It's about ten strung-together statements that make no sense to me, and I can't understand it.

MR. LACEY: Well, let me make it clear so even you can understand it, Walter.

MR. CRAWFORD: Well, that's what we need to try to accomplish.

MR. LACEY: Okay. Well, let's do that.

BY MR. LACEY:

Q Had there been any instructions to salesmen on how to talk to customers -- do you understand that question?

A Is this in a subjunctive, a subjunctive --

Q Yes.

A -- had there been?

Q Exactly. You told me that you're not aware of any. Is that correct?

A That's right.

Q Okay. Now, what I'm trying to find out is: If someone in the company had put out a manual that it would go to the people that were the salesmen to tell them what to say and what to do, if there were such a mean, any sections in that type of literature that dealt with toxicology and safe handling of Monsanto products should be consistent with what you as the Medical Department said were the safe-handling instructions for the product. Correct?

MR. CRAWFORD: You're going to have to show him what you're talking about.

A Yes. You're asking me to comment on something that I don't know exists, and --

BY MR. LACEY:

Q I don't know if it does, either, Dr. Kelly.

A Well, if I -- if it doesn't exist, how do I know what should be in it? Because that --

Q Well, let me -- let me try to make it clear. It's not a complicated question, I don't think.

A Well, yes.

Q It's not.

A I think you're asking me to decide on things that don't exist, and I can't be assuming situations that aren't present.

Q No, I -- what I'm really trying to find out,

Dr. Kelly -- let me make it very clear -- I'm trying to find out about the scope of the direction that you sought to have issued by company management, what went out to company management, stating what matters had to be approved by the Medical Department before they could be given to others. Do you recall that?

A Yes, certainly.

Q And if I understand your testimony correctly, the directive that you sought from company management was that everything on toxicology and safe handling of Monsanto chemicals had to be approved by the Medical Department. Correct?

MR. CRAWFORD: The directive he sought?

MR. LACEY: That he sought to get management to send out.

BY MR. LACEY:

Q Is that correct?

A Repeat it.

Q What you sought to have Monsanto management put into place was a requirement that anything on safe handling of chemicals and the toxicology of the chemicals had to be approved by the Medical Department. Correct?

A What management approved was that any published

literature that related to health effects of Monsanto's products, precautionary information relating to health, was to be furnished by the Medical Department.

Q Okay. Now, what I'm trying to find out is whether or not the scope of that directive was such that a salesman would or would not be told to say more about the precautions to take with safe handling than what you had approved in the published literature.

A I can't answer that question. I can only say that during the course of my time with the company, we had literally thousands of requests from salesmen for us to answer the questions of toxicity and safe handling. I do not know what every individual salesman did. But I do know that they were only too happy to refer any of those problems back to us at the Corporate Office.

Q And it was your understanding, I take it, that what they were supposed to do was to only give out the information that was published by Monsanto, like Technical Bulletins and warning labels.

A That's correct.

Q They weren't to go beyond that, but rather to refer any additional materials or any additional questions back to the Medical Department.

A Well, we've got to break that down.

For example, suppose a customer said to him,

"Has this been used before?"

And he said, "Yes. X Chemical -- X Company has used 40,000 pounds of this a week for the last five years."

"Have they had any ill effects?"

You wouldn't say, "You'll have to go back and the people in St. Louis." You would say, "No, they haven't had any ill effects. I've been there once a week talking to them."

Q Okay. So he would be authorized to give his personal knowledge?

A That's correct.

Q Okay. Would he be authorized to give his personal opinion about what type of protective equipment ought to be supplied?

A If he were knowledgeable, yes.

Q And where would he get the information about the protective equipment that would be needed for the safe handling of a chemical?

A From the Medical Department, from the Safety Department, and from the Manufacturing Department.

Q Well, I guess my question to you is: Would he have to check with those people and make sure what he was giving out was the right information before he gave it out?

A The first time, certainly.

Q Okay.

A But then after the first time --

Q Well, then, that goes back to the same point. The source of the information initially had then to come from the Medical Department, and he could repeat that when he was asked subsequently?

A Yes.

Q But the first time a salesman was asked what sort of protective equipment should be supplied, he would come to the Medical Department and get an answer. Correct?

A It -- it might be in the Technical Bulletin that he had in front of him.

Q Okay. If it wasn't in the Technical Bulletin, if it wasn't on the warning label, then when he was asked that question it was his obligation to come to the Medical Department and get the information?

A I think so, yes.

Q Okay. And he could then report back to the customer whatever information the Medical Department gave him with regard to additional safe-handling precautions that might not be contained in the Technical Bulletins or on the warning labels. Correct?

A Correct.

Q And then if another customer asked him the same question again, he wouldn't have to come back to the Medical Department the second time; he could go ahead and give out the already-approved information?

A That's correct.

Q Okay.

Now, with regard to PCB products in particular, what information, if any, did the Medical Department give to its salesmen about safety precautions to use around PCBs that were not contained in the Technical Bulletins or on the warning labels?

MR. CRAWFORD: During what period of time?

MR. LACEY: During the entire time he was Medical Director.

BY MR. LACEY:

Q And I'll go year by year; but I want to know what the Medical Department told salesmen to tell customers about PCBs that goes beyond what's on -- on the warning labels and in the Technical Bulletins, if anything.

A We had -- I'm sure we had personal contact with marketing people throughout -- and development people throughout the course of my time at Monsanto.

And this information, we transmitted to them

verbally or trans- -- was transmitted verbally to the -- down the line to the sales personnel. I had many instances of salesmen talking to me in St. Louis about the safe-handling procedures of various things with PCBs. I recall that also.

So there -- there were many contacts.

Q Well, I'm trying to find out -- and let me make it very clear -- I'm not interested in the extent to which you just repeated what was in the Technical Bulletins or the warning literature. Okay? I'm interested in what it was that you told salesmen so that they could tell customers about safe handling or toxicology that went beyond what was in the published literature.

A Well --

MR. CRAWFORD: If there was such a thing.

BY MR. LACEY:

Q If there was any. And -- and maybe there wasn't any.

A Yes. For example, if a customer were worried about after lightning hit a transformer, is there phosgene produced, I do not know if that's in the Technical Bulletins or not. But the salesman would ask me, and I would say, "No, phosgene is not produced if

lightning hits a transformer."

And there -- I'm sure there are other instances, but I can't -- can't think about -- of any more at the present time.

Q The only question you can ever recall salesmen coming to you and asking about is whether or not phosgene gas would be created after a PCB transformer was struck by lightning?

A That's all I can recall at the present time.

Q Do you recall salesmen ever coming to the Medical Department and asking for specific details on protective equipment to wear beyond what was in the Technical Bulletins and on the warning labels?

A Yes. They talked about gloves. Gloves were a problem.

Q Okay. So salesmen came and asked about gloves?

A Uh-huh.

Q What other protective equipment?

A I don't recall. Those are the ones that I remember.

Q Okay. What did you tell salesmen about gloves that was above and beyond whatever may have been said in the Technical Bulletins and on the warning labels?

MR. CRAWFORD: Object to the form of the question.

A When very thin Neoprene-coated gloves were available, we talked to the salespeople about that.

BY MR. LACEY:

Q What did you tell them?

A That these were available. There is a --

Q I'm not sure I follow that. How -- can you explain the context of that?

A Yes. PCBs disintegrate rubber gloves. The old-fashioned Neoprene gloves were so thick that you couldn't use them.

So in some of our bulletins we had recommended canvas gloves, which were discarded, obviously; canvas gloves could get wet.

Then later on in my course at Monsanto, they -- gloves were manufactured. I am not sure of the manufacturer, but they were a thin imp- -- PCB-impervious glove.

Q And so you told salesmen about this new manufacture of gloves that were thinner and easier to use?

A Well, I don't know if I told the salesmen or if that information was transmitted from -- from the Purchasing Department to me or from someone else to me. But I recall that I have told some salesmen about it.

Q Did you ever see any need to have a document

that would provide to salesmen -- and I'm talking in particular now about salesmen for PCBs -- the basic information about toxicology and safe handling so that they would know what to tell customers and be sure that that what they said was consistent and correct?

A No; because I think when you get a third party in between someone, the individuals who understand toxicology, a salesman cannot -- you cannot give them a cookbook and say, "Here is what the toxicology of this product is."

I think you -- the chances of errors are magnified. So we say, "If a customer is interested about the toxicology, let them talk to us, and we'll answer them."

Q Is the same thing true for safe handling, as well; how to handle it safely?

A Well, that is a -- is a much more limited and direct statement.

After all, if the salesman is supposed to tell the individuals, "Don't get any on your hands, don't breathe the material, don't breathe it at elevated temperatures or in confined spaces," that's -- it's hard to misinterpret that.

But if you're talking to somebody about LD-50s and chloracne on rabbits' ears, it's a pretty hard thing

to get that information across to a nontechnically- -- nontoxicologically-trained individual.

Q Well, I guess I'm -- what I'm trying to find out about is this: Did you ever see any need to provide salesmen with written information -- a reference book, so to speak -- that they could go to, so that they could answer questions about what was required for protective gear to safely handle PCBs?

A No, because we had been manufacturing this material for 30 years; and however the information got out, it certainly got out, because the amount of complaints that we had or reports of alleged injury were extremely few in those 30 years.

Q The answer to my question is that you did not see any need, then, for salesmen to have a reference book they could go to in order to answer questions about safe handling and worker precautions?

A The answer is "no," because we were certain that the salesmen were instructed. And whether they had such a reference book or not, I can't answer that; but I didn't see any need for giving one to the salesmen. They were getting the information they needed very adequately.

Q And to your knowledge, no such reference book existed while you were Medical Director?

A I don't know if one did or not.

Q Well, to your knowledge, you don't know. That's really my question.

A No, I do not know, to my knowledge.

Q And had there been such a book that did exist on safe handling, it should have come to you for approval of what was said in it. Correct?

A If a book existed, which I don't know whether it existed or not --

Q I understand.

A -- I would have to look at the whole context of the book to see how -- what we were talking about in that. So I really can't give you a "yes" or "no" answer on that.

Q Okay. So it's been -- it's possible, then, as far as you're concerned, that the book might have been able to say something about safe handling, and it would not have been required for you to approve it first?

A I didn't say that. I said that I couldn't answer the question, because I didn't know what the book looked like which doesn't exist.

Q I guess I'm -- I'm having a problem trying to figure out whether, had there been salesmen's manuals or instructions for salesmen and there were information in there about safe handling and protective equipment, that

is a matter that you should have reviewed before salesmen were provided with a reference book to use in talking to customers.

MR. CRAWFORD: Mr. Lacey, I'm going to object to the form of the question, and I'm also going to object to it because it's improper. It's like asking him, "How long is a piece of string?"

You're talking about some mythical book, some -- that's got speculative stuff in it that we don't know what you're talking about. How can he answer the question?

BY MR. LACEY:

Q Well, the question -- the question --

A I can't answer the question.

Q The question has to do with whether or not it was the function of the Medical Department to review and approve what was written by Monsanto as a source of information to give others about the safe handling of chemicals manufactured by Monsanto.

A Now, when you say "others," we have to define the others; because in plant operating departments, the people would use information we had given them and write operating manuals for the workers. We did not review

those operating manuals. We assumed that the responsible people who did it used the Medical Department data that was in the technical manuals.

Q I'm talking about third parties, customers.

A Well, that, I can't answer, because I -- oh, third party customers?

Q Yes. My question, again, is very simple.

A Well, it isn't quite so simple, Mr. Lacey. Let's make it simple.

Q Well, let's try to make it simple.

My question is whether it was the policy of Monsanto that information which would be referred to or used by Monsanto employees to tell customers about how to safely handle Monsanto chemicals was supposed to be reviewed by the Medical Department before it was given to the customers of Monsanto.

MR. CRAWFORD: That's so broad, I don't see how he can answer it. I'm going to object to it. You've got to give him something more specific than that.

BY MR. LACEY:

Q Can you answer the question?

A Well, if -- repeat it.

MR. LACEY: Would you read it back, please?

(The following question was read back by the Reporter:

"QUESTION: My question is whether it was the policy of Monsanto that information which would be referred to or used by Monsanto employees to tell customers about how to safely handle Monsanto chemicals was supposed to be reviewed by the Medical Department before it was given to the customers of Monsanto.")

A Well, that, you're -- you're saying any information that an employee got, a salesman got or any employee of Monsanto got, no matter how, had to be reviewed by the Medical Department?

BY MR. LACEY:

Q No. I'm asking whether or not the policy of Monsanto was that reference materials given --

A What do you mean by "reference materials"?

Q Any piece of paper; I don't care whether it's a -- whether it's called a Technical Bulletin, whether it's called a Product Bulletin, whether it's called a warning label, whether it's called instruction to salesmen, whether it's called Toxicology and Safe

Handling of Chemicals, whatever it may be called -- any written material that was provided by Monsanto to its employees as a source of information to be used in telling customers about the safe handling of Monsanto chemicals.

Was that supposed to be approved by the Medical Department before the -- the Monsanto employee gave that information to a Monsanto customer?

A The information that a salesman received was primarily based on information that the Medical Department supplied. How that was -- that information -- the form of which that information was transmitted to the salesman, I don't know.

Q But whatever the information was that was transmitted to salesmen with regard to safe handling and toxicology was supposed to have been approved by the Medical Department?

A Primarily approved, yes, by -- if in the finished -- if there were this mythical sales handling manual, there may be some grammatical addition of the -- of material.

Q But the substance of it was to be approved by the Medical Department before the salesman would take that and use it for what he told customers?

A That, and the knowledge that he got from --

Q Sure.

A -- from sales meetings, from letters from me, from correspondence, from telephone correspondence with me; any of these.

MR. CRAWFORD: David, let's take about five minutes.

(Recess)

THE VIDEOTECHNICIAN: Okay. We've been off the record for a short break. We're now back on the record. The time is 10:55 a.m.

BY MR. LACEY:

Q Dr. Kelly, did you ever recommend or suggest that salesmen be provided with any type of reference material that they could use in answering questions about toxicology and safe handling beyond the Technical Bulletins and the product warning labels?

A I have no recollection of making such a recommendation.

Q Okay. Am I correct that it is your belief that every customer who bought PCBs from Monsanto received the Technical Bulletins that Monsanto put out on those chemicals?

MR. CRAWFORD: David, you've got a document that you're reading from there --

MR. LACEY: No, I'm not reading from a document, Walter. If you're going to leave me alone --

MR. CRAWFORD: Well --

MR. LACEY: -- I'm just asking -- can I look at a document while I ask the question? Am I permitted to do that?

MR. CRAWFORD: Well, I mean, if you're reading from it --

MR. LACEY: I'm not.

MR. CRAWFORD: Okay.

A Okay. Repeat the question.

BY MR. LACEY:

Q Let me -- let me ask the question again.

Is it your belief that every customer of Monsanto was supplied with the Technical Bulletins or product literature that Monsanto put out about those chemicals so that they would have information on the safe handling and toxicology of the chemicals?

A I don't know whether every customer received it or not.

Q Was it your direction from the Medical Department that every customer should receive the

Technical Bulletins on Monsanto's chemicals that they bought so that they could have the information on toxicology and safe handling?

A I don't recall making such recommendations.

Q Okay. Well, then, it was, as you understand it, perfectly possible that customers would buy chemicals from Monsanto without the benefit of having available to them the materials on toxicology and safe handling contained in the Technical Bulletins. Is that correct?

A No, it isn't correct, because it depends on what the compound is. It depends on the knowledge -- on what the -- the relationship of that customer has been to Monsanto in regard to that particular product.

Q Well, are you telling me that if there were customers who were thoroughly familiar with the product, you wouldn't be as concerned about getting the technical information to them?

A I think getting the technical information to the customer was a part of the development and the marketing group. I was concerned that everybody would get the information.

Certainly, it was not as necessary in the case of sophisticated users, who knew as much as about the product as we did.

Q And in the case of people who were not as sophisticated, it would be more important that they get the technical information. Is that correct?

A Yes.

Q So that either by supplying the Technical Bulletins to the nonsophisticated customer, or because of the knowledge of the sophisticated customer, all Monsanto customers for any particular chemical would have the necessary information on toxicology and safe handling?

MR. CRAWFORD: Object to the form.

A Well, I can't guarantee that everyone had it. I don't know of my own knowledge that every Monsanto customer had this.

BY MR. LACEY:

Q Was there any program at Monsanto designed to ensure that every customer had, through one means or another, the appropriate information on the safe handling and toxicology of the Monsanto products they bought?

A Well, I think that was certainly part of the development and marketing programs; that the safety and -- and safe handling and precaution --

(Telephone in deposition room rings)

A -- was just as important a part of the -- selling a product to the company as -- as the price or the date of shipping or -- I don't know about how that was implemented.

BY MR. LACEY:

Q Was it your --

MR. CRAWFORD: Do you want to take a break?

MR. LACEY: I guess so, Walter. I guess we've got to.

(Recess)

THE VIDEOTECHNICIAN: We've been off the record for a short break for telephone calls, and we're back on the record. The time is 11:12 a.m.

BY MR. LACEY:

Q Did you have any awareness of problems with PCBs being used in electrical apparatus that were involved in fires or explosions?

A No, sir, not during my time with Monsanto.

Q Okay. Nobody ever came to you and asked about what the effect might be if PCBs were in a product where there was a fire or a -- an explosion?

A No, with the exception of the lightning episode; if -- if -- if a transformer were struck by lightning.

Q And the only question that was raised there was the question of phosgene gas?

A Correct.

Q Do you recall being informed whether one way or the other there was ever any concern within the customers or users of PCB electrical equipment about the toxicity of PCBs?

A We had -- yes. We had numerous letters from customers concerning the toxicity of PCBs.

Q Expressing concerns that they were toxic, or just asking about whether they were toxic?

A Well, there were all sorts of questions they were asking: Could this condition have resulted from PCB contact; Could -- How should you handle this? There were all sorts of letters that I answered that falls under the answer to your question.

Q Let me try to refine what I'm asking about, because I'm really not trying to ask about a specific letter.

I'm trying to find out whether you recall, while you were Medical Director of Monsanto, a level of concerning among those people who would use

PCB-containing electrical equipment that PCBs were toxic; and, therefore, that caused them to have concern or a desire not to use PCB-containing electrical equipment.

A I never had any information from a customer saying they were thinking of discontinuing PCB electrical equipment because of toxicity.

Q Okay. What about -- and -- and I -- when you say "customer," you're talking about somebody who -- to whom Monsanto sold PCBs directly?

A No; or the transformer customer --

Q Okay.

A -- a person who bought the transformer.

Q Okay. So you're not aware of anyone who had a sufficient concern about toxicity of PCBs that it might have affected their decision of whether or not to purchase transformers or capacitors containing PCBs. Correct?

A Correct.

Q And nobody within the company ever asked you to get involved in convincing people that PCB-containing electrical equipment was safe, from a toxicity standpoint. Is that correct?

A I find it hard to -- to understand your question. If you are saying that while I was in the --

in the company, did I attempt to convince third-party users that the use of PCB in electrical transformers was safe?

Q Yes.

A I'm sure I wrote letters to people saying that these products could be handled safely inside a transformer, but I -- I don't know. I have no recollection. Will you show me a letter that I might have written?

Q I'm really not trying to find out about specific letters. I'm trying to find out whether you were asked to write such letters.

A I don't recall. By whom? By the customer?

Q No. By people at the company; by people at Monsanto.

A I don't --

MR. LACEY: David, he was there for 30 years. I don't think that --

A I don't recall whether I was or not.

BY MR. LACEY:

Q Do you recall a Donald Pogue with Monsanto?

A No, I don't.

Q I see.

Do you recall seeing a report entitled "The Transformer Askarel Fluid Market" that was published

in -- or put out by Monsanto in 1970?

A I don't recall it. I may have.

Q Do you recall any suggestion by anyone at Monsanto that Monsanto should address itself to frequent utility technical service visits to neutralize concerns on Askarel's toxicity and handling?

MR. CRAWFORD: Well, David, you've got a document you're reading from now. Could you show it to him --

MR. LACEY: Sure.

MR. CRAWFORD: -- and let him look at it?

MR. LACEY: Sure.

BY MR. LACEY:

Q Let me direct your attention to a document entitled "The Transformer Askarel Fluid Market," written by Donald R. Pogue, dated February 17, 1970, Document No. 27924 through 28017, specifically directing your attention to Page 27935. And there's an underlined portion here in the next-to-last paragraph (indicating).

A (Reviews document.)

On Page 6, now? Is that right? Is that what you asked me?

Q I had a page open for you there.

A Yes (indicating.)

Q Yes, that's the paragraph.

A I have no recollection of ever seeing this document before.

Q Okay. That wasn't my question to you.

A What was it?

Q My question to you was whether you were ever involved in or asked to assist in these visits to utility people in order to convince them about the safety of Askarel.

A No.

Q Okay. That's clearly what's being recommended by Mr. Pogue, is it not?

A You'll have to give it back to me.

Q I see.

A He -- they didn't recommend me go over there, did they? Did he recommend that?

Q No. I -- it doesn't appear he said by name who he recommended do it. But it does indicate that Monsanto needed to assess -- address itself to making direct utility visits with regard to the safety of Askarel and safe handling. Correct?

A (Reviews document.)

Well, he says, "We must address ourselves to frequent utility technical services" -- "technical service visits" -- that's technical service people --

"to neutralize emotions on Askarel toxicity and handling."

That's what he says.

A Yes. And now I'm trying to find out whether you were involved in any way, your department was involved in any way, in providing information, or advice, or anything else to these technical service representatives that they could then use in these visits with utilities to try to not -- what did he say? "Neutralize" --

A "Neutralize emotions."

Q "Neutralize emotions" on what?

A "Askarel's toxicity and handling."

Q I see. And you were not -- the Medical Department was not at all involved in that?

A I have no recollection of that at all.

Q So it -- it may be that that information was provided on toxicity and safe handling without the authorization and approval of the Medical Department?

A No, you may not. I do not believe that the technical service people would provide information on toxicity that was not approved by the Medical Department.

Q Okay. By the way, do you -- do you have any idea where in the world people were getting the idea

that this PCB-containing transformer fluid known as Askarel might have problems with toxicity and safe handling?

MR. CRAWFORD: Object to the form of the question.

A I have no idea.

BY MR. LACEY:

Q Was that a topic that was generally being discussed in the electrical industry in the 1970 time frame, or do you know?

A It certainly wasn't discussed to my knowledge; because we had very, very few requests for toxicity information from the electric -- from people in the electrical industry.

Q In fact, were you involved in the program that was instituted by Monsanto to defend Aroclor at least as early as 1968?

MR. CRAWFORD: Object to the form of the question. It's --

A What is the program to defend them?

MR. CRAWFORD: Yeah.

A From what? How?

BY MR. LACEY:

Q Well, let me show you a document dated December 9th, 1968, Document 39204-39205, written by Dr. Richard

to several people, about seven names here, entitled "Defense of Aroclor" (tendering).

A (Reviews document.)

Q Were you involved with this program to defend Aroclor?

A I have no recollection of being so involved. I do not -- as you see, I'm not copied in on that.

Q Well, I notice you're not; and that's why I was curious whether or not the Medical Department got involved in this defense of Aroclor, or it was left to others within the company to go out and defend the cus- -- the product.

A I'm holding this one piece of -- of correspondence; and, certainly, this is a very preliminary statement from a research man, so I don't know anything about it (tendering).

Q Well, are you thinking that maybe that program never got off the ground?

A I don't know anything about it.

Q I see.

Well, let me show you another document dated September 9th, 1969, from Dr. Richard to E. Wheeler. That's Elmer Wheeler, isn't it?

A That's correct.

Q And Document No. 30840 through 30847, entitled

"Defense of Aroclor, F Fluids." I believe that stands for Functional Fluids, doesn't it (tendering)?

A Yes, it does.

(Reviews document.)

Is there a question?

Q Yes. My question to you is: Were you ever involved in the program that Dr. Richard referred to as the "Defense of Aroclor"?

MR. CRAWFORD: Objection to the form of the question. It assumes there was a program.

A Well, yes. But you must realize that this particular defense of Aroclor functional fluids was in relationship to the ecological problems with Aroclor, which surfaced in the '68-'69 time frame. So we're not talking about harm to workers or users; we're talking about fish, hawks, Peregrine falcons.

BY MR. LACEY:

Q I see. So there wasn't any concern in this "Defense of Aroclors," then, to try to prove that the PCB products were safe for humans. Is that correct?

A I don't know what you mean by "try to prove." We had --

Q Well, did --

A We had -- we had 40 years of experience that it

was safe to use.

Q Did --

A So I don't know what other proof was necessary.

Q Did the defense of Aroclor include attempting to prove that it did not pose hazards to human health?

A I don't believe it did at this time. It was -- it was -- this was for ecological purposes when it -- (tendering).

Q What was it that the Defense of Aroclor Program took on an effort to prove that it was safe for human contact?

A That occurred when there was inadvertent human contact with Aroclors later on around that time, somewhat later, around '70, '71. I'm not sure of the time frame.

Q Were you involved in the portion of the Defense of Aroclor Program that attempted to prove that Aroclors were safe for human contact?

A Now, when you -- you'll have to -- you'll have to delineate what you mean by "human contact."

Q Didn't cause any problems in humans.

A Any place, any time?

Q Yes.

A I was certainly involved in showing -- in developing information that when inadvertent

contamination of food products by Aroclors in the plasticizer field occurred that was involved in developing long-term toxicological studies that showed what the toxicity was, and the Government agencies; some information on which they could set a safe level of Aroclors in food products. I was involved in that, yes.

Q And that was human food and the question of whether PCBs would cause problems in humans. Correct?

A It was inadvertent human contact, and it was a question then of finding out what the long-term feeding studies with PCBs would show. This material was submitted to the Government, who then made their decision as to what they considered a safe level.

Q The people within the Medical Department at Monsanto who were primarily responsible for determining the effect of PCB exposure on humans were the toxicologists. Correct?

A No. I was the primary responsibility -- responsible person.

Q Well, let me see if I understand correctly. Isn't toxicology the discipline that attempts to study the effect of chemicals on humans, among others?

A Usually, it's referred to -- the toxicologist is referred to animals, but translation of the information derived from animals to humans and the

relationship of any ill effects in humans to any supposed chemical really falls under -- fell under my responsibility --

Q I see.

A -- my expertise.

Q Well, who had the greater expertise in the Medical Department with regard to trying to assess what PCBs might cause by way of health hazards? You or your trained toxicologists?

A Health hazards to whom? Animals, fish, birds, humans?

Q All of the above.

A Well, we'll start with humans. I did, as far as humans are concerned.

Q Okay. So you were --

A Animals -- let me finish. Animals, fish, birds were toxicologists.

Q So you were more knowledgeable and you had a better understanding of the health hazards caused by PCBs to humans than the toxicologists that worked for you?

A Yes.

Q I see.

Who was better able to interpret the animal data and assess whether or not it would indicate a

potential problem for humans?

A A toxicologist.

Q Okay. So to the extent that one would be forming an opinion concerning whether or not effects seen in animal data would indicate a potential adverse human effect, one would look primarily to the toxicologists on your staff?

A No, because we are not -- you -- going just on animal data. You are making a decision based on animal data and what the human experience has been over the decades past.

MR. LACEY: Let's go ahead and change the tape right now, and then we'll pick up.

(Recess)

BY MR. LACEY:

Q The only human experience that you had was whatever information you received from workers in your plants, plus whatever you heard about from workers in plants to whom you sold PCBs. Correct?

A No; because it's also communication with other doctors in the field who are using PCBs, and it -- it also included medical literature that related to the

presence or absence of any ill effects --

Q Did you --

A -- in workers.

Q I'm sorry. Go ahead.

A In workers.

Q Did you take into account the Yusho and Yuchang incidents -- incidents in evaluating the effect of PCBs on human health?

A Yes.

Q Do you know of any disagreements that existed within the Medical Department between the people on your staff about what adverse health effects could or could not be caused in humans by PCBs?

A I don't know. I don't -- there may. I have no recollection.

Q Well, did you in the Medical Department ever get together and discuss what adverse effects you thought could be caused by human exposure to PCBs?

A Certainly. But you're -- you've got to decide -- delineate what you mean by "exposure."

If you mean by swallowing it, like they did over in Yusho -- if you mean -- if you're talking about Japanese PCBs, which are different from the United States PCBs -- if you're talking about the extra ingredients or the contaminants that you referred to of

the Japanese PCBs, which were enormously more than they were in the United States PCBs, yes.

I forget what the question was, but --

Q But you've got an answer for it, anyway.

A Well, I have an answer for it.

But we took all that into consideration, as far as ill effects on humans. We -- I think there was still just a feeling of all among the United -- the Medical Department specifically on whether the workers who were exposed to PCB in industrial use in the United States suffered ill effects. I think we all agreed that that did not occur.

Q What were the contaminants that you understood to exist in the Japanese PCBs that you mentioned with regard to the Yusho and Yuchang incidents?

A They were dibenzofurans. They were quat- -- quatriphenyls. I don't know what other ones may have been in there.

Q It is your understanding that the quality of the product produced by the Japanese and its purity was not as good as the American product?

A It is my understanding that their percentage of -- of benzofurans was higher than it was in the United States product.

Q So you understood that the Japanese had more

contaminants in their PCBs than Monsanto had in its PCBs. Is that correct?

A We were just talking about the level of nitrofurans and what was -- and the quatriphenyls which were present in the Japanese.

Q Let me --

A They certainly had more.

Q Let me ask about -- about the specific contaminant dibenzofuran.

A Yes.

Q Is it your understanding that the Japanese PCBs had a higher level of contamination with dibenzofurans than Monsanto had in its PCBs?

A It is my understanding that it did. And it's also my understanding that after this material was subjected to heat in the -- in the heat exchange and in the -- the manufacture of the rice oil or the -- the procedures that were used with the rice oil, a higher level of benzofurans occurred.

Q What was your understanding about whether the uses to which Monsanto's PCBs were put could result in creation of additional dibenzofurans?

A I had seen records of used PCBs that did not show any increase in dibenzofurans.

Q What records did you see?

A Well, I don't know. But I've seen reports -- certainly, the literature -- that showed -- that stated that dibenzofurans were not increased in used PCBs. I can get that reference for you, if you want.

Q Was that Monsanto PCBs, PCBs generally?

A I believe it referred to United States production, in which Monsanto was something like 98 percent.

Q And you believe that in use, the Japanese PCBs produced more dibenzofurans?

A No. I said that the Japanese produced more PCBs in the rice-oil episode; that something increased the dibenzofurans from the time that the PCBs were in the heat exchanger to the treatment of the rice oils in cooking.

Q Did you in the Medical Department ever consider whether the types of problems that would appear in humans would be greater, depending upon the level of exposure?

MR. CRAWFORD: Object to the form of the question. It assumes something that you haven't established.

A Well, the greater exposure, the greater the possibility of -- of injury, certainly. That's why we recommended against repeated skin contact, prolonged

skin contact.

BY MR. LACEY:

Q What did the Medical Department conclude were the human problems that could arise from high levels of exposure to PCBs?

A How high? I hate to say, "How high is high?"

In what method or exposure? You're talking about inhalation? You're talking about drinking it? You're talking about getting it on the skin? Just tell me what you mean.

Q Well, let's start with ingestion.

A Well, here is an industrial chemical that is -- is not supposed to be taken internally. We believe that if somebody had the idea of taking an ounce of this every day for a month, he would have problems.

Q And my question is: What sort of problems did you in the Medical Department believe would result from that type of exposure to PCBs?

A We didn't know, because there has been no evidence of any such exposure. So I do not know how the human body would handle an ounce of PCB every day.

Q So the Medical Department had no knowledge on that. Correct?

A Correct. We had no knowledge about what happens to repeated human ingestion of PCB, no.

Q And no one had any opinions about what we might see the results in humans being, based on animal data or anything else?

A Well, if you took enough, you could die; certainly.

Q All right. What about inhalation? What did the Medical Department conclude the effects on humans could be from inhalations at very high concentrations?

A At very high concentrations, one could die from it if you had a high concentration in a confined space where you couldn't get away.

Q And what was the conclusion about the source of death? What would be the cause of death?

A If it were immediate cause of death, it would be pulmonary irritation.

If it were three or four days later, it could be liver failure.

Q So you concluded that in an inhalation situation, there could be either pulmotary -- pulmonary irritation, or absorption through the body and the result of liver damage. Correct?

A In high enough levels. It's -- now, you're -- you're making an assumption that we have high levels, if you said any -- any level at all. So, certainly, if you get enough PCB at elev- -- at high enough temperatures

in an enclosed space, you could have some of those problems; certainly.

Q Okay. Any other problems besides the respiratory problem and the liver failure, that you are aware of?

A There have been cases of chloracne develop in people who were exposed to inhalation of PCBs.

Q That's a systemic effect?

A Yes.

Q Anything else besides the respiratory, the liver, and the chloracne?

A No. I don't believe we made any assumptions, anything further from that.

Q What about very substantial skin contact? What did the Medical Department conclude the results of very substantial skin contact might be?

A Again, now, what do you mean by "very substantial"? You and I may not be -- be talking about the same levels.

Q Okay. Getting it on the skin in direct contact with the skin on a daily basis.

A It could be -- could -- nothing to happen to you.

Q Well, what else could happen?

A If you --

Q What are the possible consequences?

A If you got enough of it over -- and left it on a large enough portion of your skin, if you had clothes soaked in it and left it on, you may develop absorption of the material and cause -- cause chloracne.

Q Anything else that can be caused from skin contact besides chloracne?

A That is the only thing that I have seen happen. I do not know whether or not you would get systemic injury -- whether you would get enough absorption.

Now, we have to talk about which PCB we're talking about.

If you're talking about one of the higher levels where it's less easily absorbed through the skin, or one of the higher-chlorinated ones where it's more viscous -- and some of them are solids -- that's -- the dust of that would not cause any problems.

But I would think that in the absence of chloracne, you would not ex- -- there would not be any other ill effects.

Q Well, let's assume that the effect is sufficient or there's enough skin absorption to get chloracne. What else did the Medical Department believe might result in humans besides chloracne from skin contact, if anything?

A We didn't know. We didn't conclude anything, because we had they ever had a doseage of individuals or heard about a dosage of individuals that gave them anything except chloracne.

So I don't know what would happen if the person took a bath in the material every day.

Q Did you take into consideration animal work to determine what the effect of repeated skin contact would be?

A Yes, but animal skin and human skin is entirely different.

Q My question is whether or not from the animal work that was done with regard to skin contact, you concluded whether there might be any systemic effects other than chloracne.

A Well, I'd have to look over the animal reports. I can't answer that off the top of my head.

Q You can't recall any, as you sit here today?

A Can't recall any what?

Q Any reports or any conclusions you reached about problems from skin contact that might be assumed in humans, other than chloracne, as you sit here today. Is that correct?

A That is correct.

Q Okay.

Were you consulted about lawsuits filed against Monsanto in which claims were made of adverse effects on human health resulting from contacts with PCBs?

A This is one.

Q No, I understand. I'm talking about back when you were a full-time employee of Monsanto. Did that -- let me -- let me rephrase my question. I think the word "consulted" is confusing to you.

During the time that you were employed by Monsanto as Medical Director, did anyone bring to your attention any lawsuits in which someone was claiming that they were injured as a result of contact with PCBs?

A I don't recall any.

Q Okay.

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

(Discussion off the record)

THE VIDEOTECHNICIAN: We're back on the record. The time is 11:45 a.m.

BY MR. LACEY:

Q Dr. Kelly, at the time we began your deposition several days ago, we went over the fact that you were appearing as a witness designated to testify on behalf

of the company as to certain matters. Do you recall that?

A Yes, we went over it.

Q And at the time of that deposition, you were not aware or had not been aware for a long period of time that you had been so designated before we started your deposition. Correct?

A I don't know if that's accurate or not. I did not know what -- what the parameters of my appearance would include.

Q Yes. And with regard to that, there were certain matters about which you indicated it would be necessary for you to review information before you could give testimony. In particular, one of those matters had to do with the budgeting of toxicological studies. Do you recall that?

A Well, I don't believe that there was -- unless you wanted me to find the exact dollars, I think I told you that the Medical Department had a certain amount of money that they used for toxicological matters at their own discretion; and any larger amounts, as far as "larger" being $20,000 and up, was to -- charged back to the individual sponsoring department.

Q And I believe you told me in that regard that you could not testify as to what the budgets were with

regard to the testing of PCB materials without reviewing certain records. Is that correct?

A Yes. I -- well, I didn't even know if those records were still extant.

Q Have you since that time of -- of the beginning of your deposition made an effort to determine what the budgeting was and how much money was spent by Monsanto on toxicological testing --

A No, sir.

Q -- of PCBs?

A No, sir, I haven't.

Q You made no effort after your --

A No effort; no.

Q None. Okay. Did you ask anybody to assist you in finding out that information so you'd be able to testify about that here --

A No, sir.

Q -- in the completion of your deposition?

A No, sir, I didn't.

Q You weren't aware of the fact from my questions that I was interested in finding out about that budget information?

MR. CRAWFORD: Well, David, it's up to you to get the -- the -- the information that you want and ask him

about it. He doesn't have to go out and research the -- the -- the problem for you --

MR. LACEY: I see.

MR. CRAWFORD: -- or the area.

MR. CRAWFORD: Well, he's the corporate representative, and I --

MR. CRAWFORD: Well, you never asked us -- you never asked us to go get that stuff and have him ready on it, and -- and it's not --

MR. LACEY: I see.

MR. CRAWFORD: -- his obligation to do that.

MR. LACEY: I see.

MR. CRAWFORD: That's your obligation to get the documents and ask him --

MR. LACEY: I see.

MR. CRAWFORD: -- about it.

MR. LACEY: Well, you haven't provided me with the documents on the budgeting, Walter.

MR. CRAWFORD: Well, you never asked me for the documents on the budgeting.

MR. LACEY: Well, I guess we'll take

that up with the Court.

BY MR. LACEY:

Q The period of time that you were Medical Director, were you responsible for the decision on how much money to spend in hiring professional staff for the Medical Department?

A Well, I always had to get my budget approved by someone higher up; yes.

Q But did you make the recommendation on who ought to be hired in the Medical Department?

A Yes.

Q Were you ever refused by Monsanto the opportunity to hire additional professional staff that you requested for the Medical Department?

A No, sir, not that I can recall.

Q Did you ever request that Monsanto hire an epidemiologist while you were Medical Director of Monsanto?

A No, sir.

Q And none was hired for you, was one?

A No, sir.

Q So all of the information that you relied on with regard to the absence of any complaints or problems in your own plants, or anything you heard from the plants of others, was not reviewed by an epidemiologist

before that information was published by Monsanto. Is that correct?

MR. CRAWFORD: Object to the form of the question. It assumes something that you haven't established.

A We had no epidemic- -- epidemiologist. I know of no epidemiologist that reviewed the material until -- and whether he reviewed the material after -- when an epidemiologist came on board or after I left, I don't know.

BY MR. LACEY:

Q So when you would say to others that in 40 years or 30 years, or whatever, of use there had been no problems, that was not based on an epidemiologist's review. Correct?

MR. CRAWFORD: Object to the form of the question.

A It was not based on an epidemiological review, but it was based on a review of the literature; it was based on communication with the users; it was based on current medical thinking, industrial medical thinking of those days.

BY MR. LACEY:

Q Well, the discipline of epidemiology existed for a number of years prior to the time you retired as

Medical Director of Monsanto, did it not?

A Yes, it did. But the amount of epidemiologists in industry were probably one to two, at the most.

Q And it would have been possible for you to hire an epidemiologist to conduct such a review, would it not?

A As I said earlier, anything is possible. Yes, it's possible.

Q Well, I mean, there were epidemiologists who were in practice who you could have retained to assist you in that regard?

A I could have.

Q You did not choose to recommend that?

A It was not, to my opinion, needed at that particular time.

Q And prior to the work with Industrial Bio-Test, you undertook -- undertook no long-term chronic testing of Monsanto's PCB materials. Is that correct?

A No, it isn't correct; because we did some what was considered long-term with the Kettering group back in the 50's.

Q What was the long term you did?

A Well, it was --

Q How much?

A It was 90 days at that time. But in the 50's,

that was considered long-term.

Q I see. The studies you undertook with IBT were two-year and in some cases generational studies, were they not?

A That's correct. But there -- you have to recognize the fact that in toxicity you have sort of a moving target, and it is always increasing in duration and -- and widening of scope of the various tests.

Q Well, there were people who were doing two-year-type studies back in the 50's on chemicals, were there not?

A They might have been doing them on food chemicals. I do not recall whether they were doing them on industrial chemicals that were not intended for use in food.

Q In any event, you didn't have any such long-term tests done on your PCB materials in the 1950's, or even up until 1968?

A We -- we had what we considered long-term enough to give us data that we needed for the safe handling of PCBs by our own people and by our customers.

Q I see.

In taking into account whether or not the experiences of Monsanto employees with regard to PCBs showed that human exposure did not cause problems, did

you take into account what protective garments were provided to Monsanto employees?

MR. CRAWFORD: Object to the form.

A Yes. We -- we knew that they were available. Whether they wore them all the time, I can't be sure.

BY MR. LACEY:

Q Well, I guess my question is: If all of your employees wore all of the protective clothing all the time, then they never would have contacted any PCBs. Correct?

A Well, that is an idealistic situation that rarely occurs in industry, that --

Q Well --

A -- that they wear all the protective clothing all the time.

Q Okay. If your employees had worn all the protective clothing that they were supposed to wear, they wouldn't have contacted the PCBs, would they?

A Yes, they could, by inhalation.

Q I see. But they certainly would not have had any skin contact, would they?

A If they wore gloves all the time and if they wore aprons all the time, no.

But that is a situation that you never see in industry. You see people with their gloves in their

pockets more than you see them on their hands.

Q Let me -- let me ask my question, though: If your people had worn their protective clothing all the time, they never would have had any skin contact with PCBs, would they?

MR. CRAWFORD: Well, I object to the form of the question. You haven't established what conditions, what protective equipment. It's -- it's an impossible question to answer.

A Well, it --

MR. LACEY: No, it's not impossible to answer.

A Well, it isn't impossible to answer.

But they were not in impervious suits, remember. And there were sprays and leaks that could contact -- contact their clothing.

If they had gloves, obviously, they would not -- and wore them all the time, they would not get skin contact with their hands and wrists.

That does not mean that there could not be leaks on their shoulders and coveralls and other methods of skin contact.

BY MR. LACEY:

Q The point is: When you would report to others

that in 30 or 40 years of Monsanto's experience you'd had no problems with PCBs, you really didn't know to what extent your people had even come into contact with PCBs, did you?

A Yes, we did. I mean, we have had air analysis at times that we knew what they were -- were being exposed to. We had -- had some practical understanding of what industrial workers do, and we that knew that we were not living in a perfect world where people wear protective clothing all the time.

Q You assumed that your people didn't wear their protective clothing all the time?

A I accepted as a fact that people do not wear gloves all the time, eight hours a day, in a chemical plant.

Q That -- that's just part of what the truth of a chemical plant is? Is that what you're saying?

A Beg your pardon?

Q That's just part of the way a chemical plant works? Is that what you're saying?

A Well, that's the way -- it's part of the way workers work.

Q And it's not possible for the employer to do anything about that?

A Certainly, it's possible for him to do so

something about it.

Q Well, did you assume that Monsanto did anything to ensure that their people wore their protective gear?

A Certainly, they did their best to see that the people wore their protective gear. But that didn't mean that they had a hundred percent success.

Q I see. What was the success rate at Monsanto in having workers wear their protective gear?

A That, I don't know.

Q Did you instruct that the operations people were to make it a -- a matter of priority to ensure that the workers wore their protective gear?

A We knew that the priority was high enough, because the workers had no troubles. They had no adverse ill effects from the manufacture of this material.

Q And that doesn't tell you what levels they were exposed to or how often that they wore the protective gear, I take it.

A As I say --

Q That does not tell you how often they wore their protective gear or what extent they were exposed to. Is that correct?

MR. CRAWFORD: Well, David, he wasn't down on the floor there every day watching

this, if that's what you're asking.

A If it's a simple "yes" or "no," the answer is no, it doesn't; because I do not know when spills occurred; I do not know what the people did when spills occurred. So I -- I would have to answer no, it does not tell me.

BY MR. LACEY:

Q Did you make an effort to ensure that your operations people advised Monsanto employees working with PCBs of the things that might happen to them if they didn't make use of their protective equipment?

A Would you repeat that?

Q Yes. Did you advise your operations people to instruct Monsanto employees of the types of hazards that they might encounter if they didn't wear their protective equipment?

A In some cases, we did. Some, we may not have done.

We -- we said that "You have to keep this off of you." "You should" -- "If you do the" -- "If you follow these safety precautions, you will get no ill effect."

We didn't say, "If you follow these safety precautions, you won't get this, this, this, and this," no. We said you would not get any ill effect.

Q You didn't --

A We did not describe in detail the ill effects, no.

Q You didn't tell them, I take it, then, for example, that if they got enough of it, it might kill them.

A No, because that was entirely out of the range of probability at these plants.

Q You're talking about the Monsanto plants?

A That's correct.

Q And why was that entirely out of the range of possibilities?

A Probabilities, I said.

Q Probabilities.

A Because we knew that we had precautions there that would prevent it. We -- we knew that we had been operating for years and years and years with not even coming close to this type of an exposure.

Q And so you just assumed there wouldn't be any problems in the future?

A Well, we assumed our present situation of having no problems would continue.

Q Okay.

MR. LACEY: Mr. Benignus is supposed to be here now, Walter?

MR. CRAWFORD: He'll be here for lunch, yeah.

MR. LACEY: I'll pass the witness.

(Discussion off the record, and the deposition was concluded at 12:00 noon)

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THE STATE OF_____*

*

COUNTY OF_____*

I, R. EMMET KELLY, M.D., hereby certify that I have read the foregoing transcript of my testimony given in the foregoing numbered and styled case, and that same is true and correct to the best of my knowledge and belief.

I further certify that any and all corrections have been made on a separate page and attached hereto.

SIGNED on this the_____day of_____, 1987.

_____
R. EMMET KELLY, M.D.

SWORN TO AND SUBSCRIBED BEFORE ME on this the_____day of_____, 1987.

_____
Notary Public

THE STATE OF TEXAS *

COUNTY OF HARRIS *

I, LINDA C. BAKER, 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 132 pages constitute a complete and correct copy of the transcript of the proceedings, and that the original is being given to the attorney taking same, to be filed by him if necessary.

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 11th day of June, 1987.

LINDA C. BAKER, CSR, RPR

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