

1 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS

2 STATE OF MISSOURI

3
4 GLENN BROWN, et al.,

5 Plaintiffs,

6 VS.

862-00694

7 MONSANTO COMPANY,

8 Defendant.

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12
13 VOLUME V

14 DEPOSITION OF DR. R. EMMET KELLY

15 On the part of the Defendant

16 June 15, 1990

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Kelly, R. Emmet M.D. (fmr Mons Med Dir) in BROWN Volume 5

1 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS

2 STATE OF MISSOURI

3
4 GLENN BROWN, et al.,,

5 Plaintiffs,

6 vs.

Cause # 862-00694

7 MONSANTO COMPANY,

8 Defendant.

9
10 DEPOSITION OF WITNESS, produced, sworn and examined
11 on June 15, 1990, between 8:00 a.m. and 6:00 p.m. of that
12 day, at the offices of Communitronics Corporation, 1907
13 South Kingshighway, St. Louis, Missouri, before Sheila C.
14 Irvin, a Notary Public within and for the State of
15 Missouri, in a certain cause now pending in the Circuit
16 Court of the City of St. Louis, State of Missouri, wherein
17 GLENN BROWN, et al. are the Plaintiffs, and MONSANTO
18 COMPANY is the Defendant; on behalf of the Defendant.

19 A P P E A R A N C E S

20 The Plaintiffs were represented by Mr. David S.
21 McCrea of the law firm of McCrea & McCrea, 119 South Walnut
22 Street, Bloomington, Indiana 47402.

23 The Defendant was represented by Mr. Thomas M.
24 Carney of the law firm of Husch, Eppenberger, Donohue,
25 Cornfeld & Jenkins, 100 North Broadway, St. Louis, Missouri
26 63102

CONTINUED CROSS EXAMINATION

QUESTIONS BY MR. McCREA:

Q Dr. Kelly, good morning.

A Good morning, Mr. McCrea. Mr. McCrea, before we start, could I clarify something?

Q Yes, sir.

A Last Wednesday I said I would be very surprised if the Judy Zack article were not published. Well, I'm very surprised because it has not been published. I had the computer search on her and she did not publish that article. I had seen it so often I was certain that it had been published, but it has not.

Q All right, sir.

MR. CARNEY: Let me just -- You asked me, Mr. McCrea, if I would check to see if there was a list at Monsanto of the cases that Dr. Kelly's testified in, and I checked with the in-house counsel at Monsanto and he indicated there was no such list. So I have checked that out and determined that, so I think the best evidence as far as I can tell from my questions that Dr. Kelly has given you his best memory of those crases.

Q (By Mr. McCrea) Dr. Kelly, do you have page 21 of Plaintiff's Exhibit Six in front of you?

A Yes, I do.

Q Are you familiar with the report to Monsanto

1 Chemical Company by Cecil K. Drinker, M.D., September 15,
2 1938?

3 A Yes, sir.

4 Q Who requested that Dr. Drinker provide this
5 data?

6 A Monsanto did.

7 Q Was -- Were you in on the decision to request
8 this toxicological information?

9 A Well, in fact I presumably made the decision
10 myself.

11 Q Do you recall having received this information
12 at Monsanto?

13 A Yes, sir.

14 Q Would you turn to page 38 of the Drinker
15 report?

16 A Yes, sir.

17 Q On page 38 there is a diagram called figure
18 two, and it makes reference to a chlorinated diphenyl. Is
19 chlorinated diphenyl the same as PCB?

20 A It is a PCB, yes, sir.

21 Q So in this article when there is reference to
22 chlorinated diphenyl, that would be the same as PCB?

23 A That's what he's referring to. I'll have to
24 look at the article and see whether the compound he used
25 was actually chlorinated diphenyl, but he ought to be able

1 to say that in here someplace.

2 Q All right, sir. On page --

3 A I was going to look up to be sure, to be able
4 to tell you whether he's, whether he, this particular
5 chlorinated diphenyl was, that he called chlorinated
6 diphenyl was PCB.

7 Q You might want to turn to page 26, Doctor. At
8 the top there is a heading, "Chlorinated Dyphenyl -
9 Compound 1268." Would that be a PCB with chlorine
10 composing 68 percent of the weight?

11 A Yes, sir, but also if you see on page 27, he
12 refers to chlorinated diphenyl 4465.

13 Q Yes, sir, and that's in the second full
14 paragraph on page 27?

15 A Yes, yes, and 4465 is not a chlorinated
16 diphenyl. It's a mixture of chlorinated diphenyl and
17 chlorinated terphenyls. That's where they get the 4465.
18 It's not the 1200 series.

19 Q All right, sir. Can you briefly describe the
20 difference between a PCB and a polychlorinated terphenyl?

21 A Yes. It has one more benzene ring on it. It
22 may have more than one ring.

23 Q And does the ter, does that mean three?

24 A Three.

25 Q All right.

1 A In those days, they also had what they called
2 chlorinated high boiler. That was a still bottoms after
3 the chlorinated diphenyl was distilled off the still
4 bottoms. The still is a distilling column. So they
5 chlorinated that and that went into 4465, 5460 and some
6 other materials that were not chlorinated diphenyl, but
7 were still called Aroclors.

8 Q All right. On page 26 under the caption
9 "Chlorinated Diphenyl - Compound 1268", can you briefly
10 explain the purpose of this testing by Dr. Drinker? Why
11 did Monsanto want the testing?

12 A Well, it was because he had tested a
13 chlorinated diphenyl with 62 or 64 percent chlorine in it,
14 and he found some toxicity. We don't believe that that's
15 the, you're testing the right material, so we sent him this
16 1268.

17 Q In this second paragraph on page 26, Dr.
18 Drinker states he makes reference to an article titled "The
19 Problem of Possible Systemic Effects from Certain
20 Chlorinated Hydrocarbons."

21 A Which page are you on?

22 Q Page 26. Do you have that?

23 A Yes, I have, but I --

24 Q And it's the second full paragraph under
25 "Experiments." Do you see that, Doctor?

1 A I really don't.

2 Q Maybe we don't have the same page. Does that
3 have at the top of it three, "Chlorinated Diphenyl"?

4 A Yes. And what paragraph are we on?

5 Q The second paragraph on the page.

6 A Well, I start off on that, "The compound 1268
7 was administered by inhalation."

8 Q Right, right.

9 A Described. Okay. All right.

10 Q Is that the report to which you are referring?

11 A Yes, sir.

12 Q And in the second -- in the third paragraph is
13 he describing experiments with chlorinated diphenyl
14 compound 1268 where he says group one?

15 A Yes, sir.

16 Q That paragraph is making reference to the 1938
17 experiment, not the 1937 article?

18 A Yes, sir.

19 Q In that paragraph which is paragraph three on
20 page 26, Dr. Drinker states, "The experiment was continued
21 for 119 days, animals being sacrificed at intervals for
22 pathological examination and for carbon tetrachloride and
23 alcohol test." What is the carbon tetrachloride test and
24 what is the alcohol test and why is that administered?

25 MR. CARNEY: Well, I'm go to object to the

1 form of the question.

2 A Well, it was administered because Dr. Drinker
3 gave the -- After he treated these animals, he gave them a
4 mixture of carbon tetrachloride and alcohol to see if these
5 animals could handle it.

6 Q (By Mr. McCrea) Why would he do that?

7 A Well, he didn't find -- He said the rabbits
8 were very healthy throughout the period. There was an
9 almost uniform gain in weight.

10 Q Where are you reading, sir?

11 A The, the third, the bottom paragraph.

12 Q All right.

13 A So then he gave this -- So he said, "Though
14 liver damage was apparently slight, some degree of harm had
15 been done to the organ." Well, I don't -- That's a test
16 that he thought up. Maybe it was good at the time. I
17 don't believe it's been used much lately in the last 30
18 years.

19 Q Can you explain how it is that the liver
20 damage was apparently slight, but yet when the carbon
21 tetrachloride alcohol test was administered, it was
22 positive indicating some degree of harm had been done to
23 the organ?

24 A I can't explain it.

25 Q Do you agree with that conclusion that the

1 carbon tetrachloride and alcohol administration proved
2 there had been harm to the organ even though the, there was
3 apparently, there was apparently slight damage?

4 A Well, I don't agree with it because I don't
5 believe that test has been used by anybody since Drinker
6 did it, so I really don't think that test had been subject
7 to any scientific scrutiny.

8 Q Did you discuss the fact that the
9 administration of carbon tetrachloride and alcohol to the
10 animals established harm with Dr. Drinker?

11 A I don't recall that I did.

12 Q Would that conclusion then essentially stand
13 unrefuted?

14 MR. CARNEY: What -- I'm not sure what you're
15 talking about, the slight degree of --

16 MR. McCREA: Where it says --

17 MR. CARNEY: -- of harm after they were given
18 alcohol and carbon tetrachloride.

19 MR. McCREA: No. It says, "Which indicates
20 that although -- that though liver damage was apparently
21 slight, some degree of harm had been done to the organ."

22 MR. CARNEY: After the animals were fed the
23 alcohol and the carbon tetrachloride?

24 Q (By Mr. McCrea) No, I presume that that means
25 there was harm done to the liver after the administration

1 of chlorinated diphenyl compound 1268 which the
2 administration of carbon tetrachloride and alcohol
3 established. Is that what that says, Doctor?

4 MR. CARNEY: Well, I'm going to object. The
5 words speak for themselves, and you're trying to make
6 assumptions about what those words mean. Dr. Drinker -- I
7 think this might call for speculation as to what Dr.
8 Drinker meant in those words.

9 Q (By Mr. McCrea) Dr. Kelly, does that
10 statement indicate to you that Dr. Drinker determined that
11 there had been harm done to the organ which was established
12 by the administration of the carbon tetrachloride alcohol
13 test?

14 A That presumably is what he said, yes, sir.

15 Q Did anyone within Monsanto dispute that?

16 A Well, no, but let me tell you that as I said
17 before, nobody's used that test since. There have been no
18 scientific articles on this. So I wasn't going to argue
19 with Drinker over his test, but the fact that nobody else
20 used it in the 30 years, I've seen no reports of this being
21 used in toxicological experiments. So it was his idea, but
22 obviously nobody else's.

23 Q Dr. Kelly, if I would bring to your attention
24 an experiment done within the last 30 years where PCB was
25 administered in a test condition, where there was no PCB

1 administered in a test condition and carbon tetrachloride
2 was then administered and there was no adverse effect, and
3 in the second test PCB was administered and carbon
4 tetrachloride was then added and there was an adverse
5 effect, are you not familiar with that basic result?

6 MR. CARNEY: I'm going to object to the
7 question. It's ambiguous. I don't know. I don't
8 understand the question, but if you understand it, Doctor.

9 A But you said -- if you bring me that test,
10 fine, bring it to me. I'll be happy to look at it.

11 Q (By Mr. McCrea) Let me ask you this. Is
12 there a synergistic effect between carbon tetrachloride and
13 PCB?

14 A There may be.

15 Q And can you explain what synergism is in
16 medical science?

17 A Yes. It means that if you have two compounds
18 that act similarly if they're used together, that the
19 result is more than the sum of the individual compounds's
20 toxicity.

21 Q Would you agree that PCBs can have a
22 synergistic effect with carbon tetrachloride?

23 A I'd have to have more details of that.

24 Q Would you agree that PCBs can have a
25 synergistic effect with alcohol?

1 A Again I'd -- It may and it may not. I don't
2 know. It all depends on how much alcohol, how much PCBs.

3 Q Would you agree that PCBs can have a
4 synergistic effect with certain medications?

5 MR. CARNEY: Let me object to the question. I
6 thing it's overbroad, certain medications.

7 A Like what ones?

8 Q (By Mr. McCrea) Certain -- I'm asking you.

9 A Well, I can't state that PCBs would have a
10 synergistic effect with a medication that I don't know what
11 the medication is.

12 Q Are you familiar with any medications which if
13 administered to an individual who had been exposed to PCBs
14 would cause adverse effects not otherwise expected in an
15 individual without the PCB burden?

16 A I don't recall any.

17 Q You know what harm had been done to the organ
18 as described by Dr. Drinker at the bottom of page 26 where
19 he says, "Some degree of harm had been done to the organ"?
20 Can you describe that to the jury?

21 MR. CARNEY: Well, I'm going to correct you.
22 I think it says, "Apparently slight, some degree of harm."

23 MR. MCCREA: No, you're not reading that
24 sentence correctly. It says "The carbon tetrachloride
25 alcohol test was positive after 52 days which indicates

1 that though liver damage was apparently slight, some degree
2 of harm had been done the organ."

3 MR. CARNEY: I agree. You read it correctly.

4 Q (By Mr. McCrea) Can you describe to the jury
5 the harm which had been done to the liver organ as
6 described by Dr. Drinker at the bottom of page 26?

7 A Yes. He said that in the first sentence, "The
8 conditions described above cause swelling and increase of
9 granularity in the liver cells." Then in this next
10 paragraph he says, "When sacrificed 72 and 101 days after
11 removal from exposure, it was observed that the swelling
12 had decreased -- has disappeared rather, but the granular
13 material remained."

14 Q Where were you reading that, sir?

15 A On page 27, paragraph one.

16 Q And does it say the granular and hyaline
17 material remained in the liver cells and had apparently
18 become permanent?

19 A Yes, sir, but that isn't hurting the liver
20 cells.

21 Q What?

22 A That is not hurting the liver cell because he
23 said there's absolutely no progression of damage after
24 removal from exposure.

25 Q But he's already determined there was harm to

1 the liver by the administration of the alcohol, the carbon
2 tetrachloride alcohol test; correct?

3 A In -- That's what he stated. He said it
4 indicates that some agree of harm had been done. Yes, he
5 states -- That's what he states.

6 Q Would you go to page 27, the third full
7 paragraph which has the heading group two? Are you with me
8 on that, Doctor?

9 A Yes, I am.

10 Q In this instance there again is reference to
11 PCB 1268; correct?

12 A Yes, sir.

13 Q And he describes the results in this as
14 slightly poisonous?

15 A Yes, sir.

16 Q Then down at the bottom of that page he
17 states, "Under these extreme conditions, the animals again
18 remained in perfect health." Is that correct?

19 A That's what he says, yes, sir.

20 Q And then he adds the sentence, "The carbon
21 tetrachloride and alcohol test was positive, but there was
22 absolutely no other indication of liver damage and no
23 evidence of disturbance to other organs." Is that correct?

24 A That's what he says, yes, sir.

25 Q What is the significance of that statement in

1 your opinion?

2 A Well, that statement shows that when he had to
3 use something like 12 times the amount of material that he
4 used in his previous experiment, over 6 milligrams per
5 cubic meter of air, he got some positive results from the
6 carbon tetrachloride. I don't think anybody will deny that
7 if you heat 1268 up enough, get enough of it in the air and
8 keep on animal in there for 119 days or how many, that you
9 may get some liver damage, certainly.

10 Q All right.

11 A It's not supposed to be breathed at elevated
12 temperatures for 119 days.

13 Q In your opinion, is there a synergistic effect
14 between exposure to PCB and a separate exposure to benzene?

15 A I don't know of any. Benzene acts in the
16 blood forming organs primarily and PCB does not, so I don't
17 know.

18 Q Did Monsanto Company manufacture and sell the
19 product listed on page 29 under heading four, "Mixture of
20 Chlorinated Diphenyl and Chlorinated Diphenyl Benzene -
21 Compound 5460"?

22 A Yes, sir.

23 Q Would you read the last paragraph of that
24 section on page 30? It says, "In view of the fact that
25 5460 in such low concentrations proved so definitely toxic,

1 no higher concentrations were tested. It seems imperative
2 that whenever this compound is used in industry, great care
3 be taken to keep concentrations in the air at extremely low
4 level. No liberties can be taken with it, as with 1268."
5 Do you recall what warnings you issued to the purchasers of
6 the compound 5460?

7 MR. CARNEY: Let me object to your reading a
8 statement out of context, one paragraph out of a long
9 report and then asking an unrelated question about it. I
10 don't know. I object to that way of asking a question, to
11 read some statement out of context and then ask a question
12 that's unrelated.

13 Q (By Mr. McCrea) Dr. Kelly, do you agree with
14 Dr. Drinker's statement that 5460 is definitely toxic?

15 A It's toxic if you get high enough
16 concentrations, yes, but remember 5460 isn't even close to
17 a PCB. We're not talking about -- It's not used in
18 electrical industry at all.

19 Q Dr. Kelly, do you agree with his statement
20 that whenever this compound is used in industry, great care
21 should be taken to keep concentrations in the area at
22 extremely low levels?

23 MR. CARNEY: Well, I'll object. You're
24 talking about a compound that's not involved in this
25 lawsuit.

1 Q (By Mr. McCrea) Do you agree with that
2 statement?

3 A Well, I'd have to know what he means by
4 extremely low level.

5 Q Well, this report came to you from Dr. Drinker
6 and was paid for by Monsanto.

7 A That's correct.

8 Q Is that correct?

9 A Yes.

10 Q Did you ask him what he meant?

11 A I might very well have. This was 1938. I
12 might very well have.

13 Q Do you recall what warnings you issued for
14 1268 or for 12, 5460?

15 A I surely said -- this is solid, of course. I
16 surely said do not breathe the fumes that are involved at
17 elevated temperatures.

18 Q All right, sir. Would you go to page 43? The
19 caption on that is "Results of Inhalation Experiments." Is
20 that correct?

21 A Wait, I haven't got there yet.

22 Q All right, sir.

23 MR. CARNEY: Same report?

24 MR. McCREA: Same report, I believe. Page 43.

25 A Okay, I'm ready.

1 MR. CARNEY: Do you have two copies of the
2 same report in this exhibit?

3 MR. McCREA: I don't think so.

4 MR. CARNEY: I've got pages 21 through 34.
5 That's a report dated September 15, 1936, 1938, I assume.
6 Yeah, by Drinker, and then starting at page 35 --

7 MR. McCREA: This is a different --

8 MR. CARNEY: Section of the same report?

9 Q (By Mr. McCrea) Well, it's -- This has to do
10 with the report which begins on page 35. Dr. Kelly, could
11 you first go to page 35 of the exhibit?

12 A Page 35?

13 Q Yes, sir.

14 A Yes, sir.

15 Q And there seems to be some confusion as to
16 whether this caption sheet and the one on 21 are the same.
17 They appear to be the same, but the page following 35
18 begins with the caption "Report on 4465, Inhalation
19 Experiments."

20 A Yes, sir.

21 Q Is 4465 a PCB or another chemical?

22 A It's another chemical completely.

23 Q On page 38 there is reference to the
24 chlorinated diphenyl in the figure. Is that correct?

25 A Yes, sir.

1 Q And on page 42 is there a discussion of under
2 experiments of exposure to chlorinated diphenyl.

3 A Yes, sir.

4 Q And does that discussion concern only
5 chlorinated diphenyl or PCB?

6 A Frankly I don't know. I mean, this -- As you
7 said, there's some confusion in this report. You can see
8 it's reporting there an experiment July the 1st, 1936 to
9 November the 18th, 1936, and the date of this report in
10 your exhibit is September the 15th, 1938.

11 Q That's correct.

12 A That's a two year lapse. I think he's
13 reporting his previous experiments where he had mislabeled
14 a chlorinated diphenyl.

15 Q At the bottom of page 42 he has listed under
16 table one, "Conditions Maintained in Inhalation Experiment
17 from July 1 to November 18, Material, Chlorinated
18 Diphenyl." Is that correct?

19 A That's what he stated, yes. I'm not sure
20 whether that was chlorinated diphenyl as I've said
21 repeatedly.

22 Q Do you have any independent recollection of
23 this report at this date as to whether or not that's
24 chlorinated diphenyl or something else?

25 A Yes, I think it's something else. I think

1 it's chlorinated diphenyl benzene because I'll repeat, this
2 is experiments that he did in July of 1937, and that's what
3 was reported on the supposition in December of '37 or
4 sometime in '37.

5 Q But this report date is September 15, '38 if
6 that's the appropriate caption page; correct?

7 A That's correct.

8 Q You cannot state if that caption page matches
9 -- You can't state if the caption page at page number 35 is
10 associated with the following pages?

11 A Wait a minute. Page 35? 21 was my, another
12 caption page.

13 Q There was -- well, yes.

14 MR. CARNEY: That's why --

15 Q (By Mr. McCrea) Mr. Carney has brought to our
16 attention there are two caption pages, one at 21 and one at
17 35.

18 A Yeah, but they're both the same thing.

19 Q Exactly.

20 MR. CARNEY: What I'm concerned about is that
21 somebody got an extra caption page in here in the copying.
22 I don't know that for a fact, but that's what it looks
23 like.

24 Q (By Mr. McCrea) well, I can't straighten that
25 out at this point in time. Would you turn to page 43?

1 A Yes, sir.

2 Q The caption of page 43 is "Results of
3 Inhalation Experiments."?

4 A That's correct.

5 Q Would you read -- Let me read to you the first
6 with two sentences of the third paragraph on page 43. "In
7 considering the entire matter, it seemed to us that the
8 chlorinated hydrocarbons, if inhaled in sufficient
9 concentration, might cause a slight degree of damage to the
10 liver. This damage is resisted efficiently and causes no
11 depreciation of health, but if the individual in question
12 happens to suffer some ordinary disease of the liver, the
13 condition is superimposed upon a substratum of injury."
14 Can you explain that to the jury?

15 MR. CARNEY: Well, let me object to this.
16 First of all it, we're talking about chlorinated
17 hydrocarbons as a generic term, not PCBs, and second, this
18 may call for the witness to speculate inside the mind of
19 Dr. Drinker.

20 Q (By Mr. McCrea) Can you explain what that
21 means to the jury?

22 A Well, I don't believe I can get inside Dr.
23 Drinker's head, but what he seems to be, what he is saying
24 is if you inhale chlorinated hydrocarbons, whatever they
25 are, whichever they are, and you inhale enough of it, you

1 might get a slight degree of damage to the liver. The
2 liver is always repairing itself. As I said earlier, if
3 you get three drinks of alcohol a night you'll kill some
4 liver cells. The next morning these liver cells start
5 regenerating. So that's, I guess, what he means by is
6 resisted efficiently and no real depreciation of health,
7 but then if you put some more insult on it you may get
8 problems.

9 Q The next sentence on page 43 in paragraph
10 three status, "In accordance with this hypothesis, we
11 determine that a dose of 0.75 cc of carbon tetrachloride
12 plus 0.75 cc of ethyl alcohol per kilogram of rat was
13 entirely non-toxic to normal animals." Is that correct?

14 A That's what he says, yes, sir.

15 Q And then the next sentence status, "When,
16 however, this dose was given to animals which had inhaled
17 chlorinated diphenyl as had been described in this
18 experiment, the result was acute yellow atrophy of the
19 liver." Can you explain that to the jury?

20 A Explain what?

21 Q Explain the fact that the doses given to a rat
22 were non-toxic, but when that rat had been exposed to
23 chlorinated diphenyl or PCB and was then given the same
24 dose, there was yellow atrophy of the liver.

25 MR. CARNEY: I'm going to object. You've

1 mischaracterized what was said in these two sentences. You
2 haven't made clear anyway that, what the dose is that you
3 were talking about.

4 Q (By Mr. McCrea) Well, let's read it again.
5 Dr. Kelly, the first sentence states, "In accordance with
6 this" --

7 MR. CARNEY: Well, let me, you know, I don't,
8 you know, I'm go to object to your just reading --
9 You're reading a report of Dr. Drinker that was made back
10 in 1937 or '38, and then you're asking this witness to
11 explain what these words mean, you know. I object to that.
12 I don't think that moves this case along. We can all read
13 them. I heard you read it and you did read it accurately
14 the first time you read it. I don't know that we need to
15 reread these sentences into the record. If you have a
16 question, though, I think maybe you ought to ask the
17 question.

18 Q (By Mr. McCrea) Dr. Kelly, why did the
19 chlorinated diphenyl cause yellow atrophy of the liver when
20 carbon tetrachloride and ethyl alcohol were added?

21 A Well, if in this particular experiment he is
22 quoting, he is using chlorinated diphenyl, actually
23 chlorinated diphenyl, that's one thing. If he is using --
24 if he's talking about the stuff that he used in 1936 which
25 was not chlorinated diphenyl, it seems then that you've got

1 an addition of alcohol, carbon tetrachloride and either
2 chlorinated diphenyl benzene or chlorinated diphenyl. I
3 don't know which he did. Who he had this cocktail, these
4 three mixed together, they were worse than the chlorinated
5 diphenyl by itself.

6 Q How does that happen? Explain to the jury why
7 the animal which had been exposed to the inhalation of PCB
8 and is then administered carbon tetrachloride and ethyl
9 alcohol experienced yellow atrophy of the liver when the
10 animal that had no PCB suffered no problems?

11 MR. CARNEY: I'm going to object. You've
12 mischaracterized the witness' testimony. He's already said
13 that he doesn't even know that it was a PCB that we're
14 talking about. We have established and the doctor has said
15 about five times on the record that Dr. Drinker admitted
16 later making a mistake and thought he had PCBs when, in
17 fact, he didn't have PCBs, and this may be a reference to
18 the old test and not the new one, and so I think you've got
19 to clarify that to be fair with the witness and not just
20 make the assumption when he's already said he doesn't know
21 if it was a PCB.

22 MR. McCREA: Would the court reporter please
23 read my question and then I'd like an answer.

24 (Thereupon, the reporter propounded the pending
25 question.)

1 A Well, if the material, the first material that
2 Drinker used, whatever it was, whether it was chlorinated
3 diphenyl or chlorinated diphenyl benzene was used, then
4 after it was unable to handle a mixture of carbon
5 tetrachloride and alcohol, both of which are poisons to the
6 liver.

7 Q (By Mr. McCrea) But they were not poisonous
8 to the liver in the rat which had not been administered the
9 chlorinated diphenyl in this experiment; correct?

10 A Presumably, yes. I don't see the details of
11 that particular experiment here.

12 Q Now, what I'm asking you is to explain to the
13 jury how that process takes place, that there can be yellow
14 atrophy of the liver in the animal which was exposed to the
15 chlorinated diphenyl or PCB and then is administered the
16 carbon tetrachloride and alcohol?

17 A Drinker didn't explain that, either, did he?
18 I didn't see it in here.

19 Q Can you explain it?

20 A No, I can't explain it.

21 Q In 1938 did you know that Dr. Drinker reached
22 this conclusion?

23 A Yes.

24 Q In 1938 did Monsanto know that Dr. Drinker
25 reached this conclusion?

1 A If I knew, Monsanto knew.

2 Q In 1938 did Monsanto issue warnings to
3 purchasers of chlorinated diphenyl that individuals exposed
4 to chlorinated diphenyl and then carbon tetrachloride
5 and alcohol could suffer yellow atrophy of the liver?

6 A No, sir, they did not. Carbon tetrachloride
7 is a poison and I think everybody -- We do not manufacture
8 carbon tetrachloride. Anybody who has manufactured carbon
9 tetrachloride states do not inhale the fumes, do not take
10 internally, and it's not intended to be taken internally.

11 Q I understand that, but you also knew that in
12 this study there was no compromise of the animals who were
13 administered carbon tetrachloride who had not previously
14 been exposed to PCB. You knew that based on this study;
15 correct?

16 A Based on Drinker's statement, I did not -- I
17 knew what Drinker said in this experiment. I do not know
18 how much, what the details of the experiment were, but we
19 knew that if the people followed our recommendations, they
20 would not get injury from the PCBs.

21 Q You knew that these results indicated that
22 carbon tetrachloride and alcohol could cause yellow atrophy
23 of the liver in an animal previously exposed to PCB and
24 that it had no effect in the animal which had not been
25 given PCB?

1 A Yes, sir, but we're -- I knew that, yes, but
2 we're talking about animal experimentations. There have
3 been no yellow atrophy of the liver cases in workers who
4 worked with PCBs for 50 years. There haven't been any.

5 Q And Dr. Kelly, that statement presumes that
6 the people in the plant, the doctors in the plant and the
7 doctors who treated the workers were able to associate PCBs
8 with yellow atrophy of the liver?

9 A Plus the health department because these cases
10 are always reported to the health departments, the labor
11 departments.

12 Q And if a worker didn't know he was exposed to
13 PCB and developed yellow atrophy of the liver, how in the
14 world could a doctor make an association?

15 A Well, if he didn't know it, you're making the
16 assumption that I cannot make a statement about. If the
17 worker didn't know it, there could no association by
18 him.

19 Q Correct. Are you stating that all workers in
20 industry, General Electric, McGraw Edison, Allis-Chalmers,
21 Westinghouse, Saginaw, Niagara and all of your customers
22 knew that they were working with PCBs from 1936 till 1977?

23 A Well, all the companies knew it.

24 Q Are you stating that the workers knew it?

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

1 never been in a GE plant, a Saginaw Electric plant, a
2 Packard manufacturing plant or any of them, so I cannot
3 answer that question.

4 Q Isn't it a fact, Dr. Kelly, that as you sit
5 here today in this deposition, you do not know what workers
6 knew or what percentage of workers knew they were exposed
7 to PCBs?

8 A I think that's correct, but I've told you that
9 I have never been in the plants. How would I know it?

10 MR. CARNEY: This is just an obvious tactic.
11 You've established that -- We've established Dr. Kelly
12 wasn't in these plants. You're talking about work -- He's
13 supposed to speculate inside the mind of what these workers
14 knew? The fact was Dr. Kelly has repeatedly said he gave
15 the warnings to the people that he had contact with. He
16 had no right to go in the plants and start talking to these
17 workers without permission of Westinghouse or General
18 Electric.

19 MR. McCREA: That's exactly my point. It's
20 pure speculation on the part of this witness to state there
21 were no reported cases of yellow atrophy of the liver.
22 That's pure speculation.

23 MR. CARNEY: No.

24 A It is not.

25 MR. McCREA: Just a second. Because he cannot

1 establish that the treating doctors of these workers knew
2 that there was an exposure to PCB and thus the causal
3 relationship, and without that knowledge, yellow atrophy of
4 the liver as being caused by PCB would be undiagnosed, and
5 for him to state there were no reports is, as you state,
6 pure speculation.

7 MR. CARNEY: It's not speculation at all. Let
8 me just make a statement and I'll let you make a statement,
9 too. Let me just correct you. It is not a speculation.
10 It's a fact that there were only less than a handful of
11 reports in 50 years. Now, that's a fact.

12 MR. McCREA: Well, how could --

13 MR. CARNEY: That's not speculation
14 whatsoever.

15 MR. McCREA: That's a fact?

16 MR. CARNEY: Yes.

17 MR. McCREA: But it's also a fact --

18 MR. CARNEY: You agree with that?

19 MR. McCREA: I don't agree with that, but it's
20 also a fact that none of these workers knew they were
21 exposed to PCB.

22 MR. CARNEY: How did you -- Did you go and
23 interview all the General Electric -- how many General
24 Electric workers have you interviewed.

25 MR. McCREA: I've talked to the supervisor of

1 the Pyranol division of General Electric where they made
2 transformers, and his testimony is that he didn't know
3 there was PCB.

4 MR. CARNEY: I'm going to --

5 MR. McCREA: Just a second. You asked my. He
6 didn't know there was PCB in the plant, and he couldn't
7 conduct operations because he spent so much time going to
8 funerals.

9 MR. CARNEY: Well, that's an outrageous
10 statement. You know it's going to be stricken from the
11 record. You're trying to testify.

12 MR. McCREA: You asked me how I knew.

13 MR. CARNEY: You are making misstatements on
14 the record and I'm trying to correct you. You have not
15 talked to all the workers in the electrical plants or all
16 the workers in any plant.

17 MR. McCREA: Well, you took the deposition of
18 Dr. Laland; correct?

19 MR. CARNEY: You have solicited a bunch of
20 workers to join in the lawsuit. I know that you've done
21 that, but --

22 MR. McCREA: Mr. Carney, would you care to
23 apologize for that statement?

24 MR. CARNEY: No, I'm not going to because it's
25 a fact and I have proof of it.

1 MR. McCREA: All right. Name --

2 MR. CARNEY: I have proof of it.

3 MR. McCREA: All right, Mr. Carney. That
4 particular statement is going to be taken to your
5 disciplinary commission. I promise you.

6 MR. CARNEY: I welcome it. I welcome it. I
7 really do. I hope you do.

8 MR. McCREA: All right. Well, I promise you I
9 will.

10 MR. CARNEY: Why don't we go on with the
11 deposition.

12 MR. McCREA: I promise you that will happen?

13 MR. CARNEY: I really --

14 MR. McCREA: As will your interview of all our
15 clients' doctors without our permission.

16 MR. CARNEY: Okay. You're --

17 MR. McCREA: And that's an ex parte conduct,
18 contact which will also go to the disciplinary commission.

19 MR. CARNEY: And I'm challenging you right now
20 to do it. Don't just talking about it. Do it. You've
21 threatened to do it and you haven't done it, so I want you
22 to do it, Mr. McCrea.

23 MR. McCREA: I'll be happy to.

24 MR. CARNEY: I don't think you will and you
25 know you won't. Go ahead.

1 THE WITNESS: Can we get on with my
2 deposition?

3 MR. McCREA: I'd like to if your counsel will
4 stay on track.

5 THE WITNESS: Well, you're asking the
6 questions.

7 Q (By Mr. McCrea) Dr. Kelly, give me the name
8 of one individual working for any corporation in the United
9 States that knew he was exposed to PCBs before 1977?

10 MR. CARNEY: You including Monsanto?

11 A Well, that is -- Do you think I keep a record
12 of the names of people who are exposed to every chemical
13 that we manufacture?

14 Q (By Mr. McCrea) What evidence do you have
15 that these workers knew they were exposed to PCB?

16 A I don't have any evidence.

17 MR. CARNEY: Let me object to the question.
18 It's obviously one that could call for speculation as to
19 what somebody else knew. He'd have to get inside the mind
20 of some unnamed worker or, you know, I think in this case
21 thousands and thousands of workers, get inside their mind
22 and figure out what they knew in 1977. If you, you know,
23 it's a ludicrous question, and it's obvious that you've run
24 out of questions and you're just grasping at straws.

25 MR. McCREA: Would the court reporter please

1 read the question back so that I can get an answer.

2 (Thereupon, the reporter propounded the pending
3 question.)

4 MR. CARNEY: I'm going to object to that.
5 These workers, you haven't given a name. You haven't,
6 you're -- you haven't identified it. It's hopelessly
7 vague.

8 Q (By Mr. McCrea) Dr. Kelly, what evidence do
9 you have that any of the plaintiffs in this case knew they
10 were exposed to PCB before 1977?

11 MR. CARNEY: Objection, you know.

12 A I have no evidence that they knew or didn't
13 know.

14 Q (By Mr. McCrea) What evidence do you have
15 that a single worker employed by Westinghouse knew he was
16 exposed to PCB before 1977?

17 MR. CARNEY: Talking about individually knew
18 or evidence with regard to what the warnings were that
19 Monsanto made to their supervisors? I mean, you know, the
20 question is vague as to what you mean. If you mean what --
21 if you include in that the warnings that Monsanto gave,
22 we've covered that. I don't think that's what you're
23 asking for, but I think you ought to be clear about it.

24 MR. McCREA: Would the court reporter read the
25 question back so that I may again get an answer?

1 (Thereupon, the reporter propounded the pending
2 question.?)

3 A I have never talked to a worker with
4 Westinghouse at the Bloomington plant before or after 1977,
5 so I have no evidence. I don't know if he was
6 knowledgeable or not knowledgeable.

7 Q (By Mr. McCrea) What evidence do you have
8 that a single worker employed by General Electric knew that
9 he was exposed to PCB before 1977?

10 MR. CARNEY: Are you excluding -- I'm going to
11 object to the question. It's vague. Are you excluding
12 from that the evidence that Monsanto gave, the warnings to
13 General Electric supervisors and plant foremen?

14 MR. McCREA: If he considers that evidence, he
15 may.

16 MR. CARNEY: Well, I don't know what you -- I
17 think it's vague. If that's included, if you're asking
18 about that, then I think the doctor has knowledge.

19 MR. McCREA: Well, you want to answer for him?

20 MR. CARNEY: No. I think that the doctor's
21 already testified that he gave the warnings to the
22 Westinghouse supervisors and the General Electric people.
23 The warnings were sent, and he's already described those
24 warnings. Are you excluding that from your question?
25 Otherwise, I think it's an unfair question and it's vague.

1 MR. McCREA: Would the court reporter again
2 read the question back so that we may get an answer?

3 (Thereupon, the reporter propounded the pending
4 questions.)

5 MR. CARNEY: Further, are you excluding from
6 the question the fact that the doctor's already testified
7 that General Electric and Westinghouse knew more about PCBs
8 than Monsanto did? You know, I think if you exclude those
9 things, then I think you talk about the ambiguity.

10 MR. McCREA: Would you answer the question?
11 First of all, I'd like to have the question read again so
12 that you may answer it, and if you have any further
13 objections, we can reread it again. We're going to get an
14 answer.

15 (Thereupon, the reporter propounded the previous
16 question.)

17 A I do not have evidence on the knowledge of the
18 individual worker as the General Electric, but I have
19 definite knowledge that the people at General Electric were
20 informed about the composition of the material and the safe
21 handling factors to be carried out. I also have
22 information that the transformer company I've been to, not
23 General Electric or not Westinghouse, the workers I talked
24 with there did know it was PCBs they were working with in
25 the transformers.

1 Q (By Mr. McCrea) Dr. Kelly, on page 43 Dr.
2 Drinker states that, "If the individual in question happens
3 to suffer some ordinary disease of the liver, the condition
4 is superimposed upon a substratum of injury." That means
5 exposure to chlorinated hydrocarbons can injure an
6 individual who had an ordinary disease of the liver, does
7 it not?

8 A Say that over. I'm reading this.

9 (Thereupon, the reporter propounded the pending
10 question.)

11 A Well, you neglected to mention that Dr.
12 Drinker said in accordance with this hypothesis. He is
13 speculating. I think a hypothesis is a speculation.

14 Q Well, that in accordance with the hypothesis,
15 he confirmed that the --

16 A It's still a hypothesis there.

17 Q All right.

18 A Because when you are --

19 Q All right.

20 A May I finish my explanation?

21 Q I would appreciate it if you'd answer my
22 question.

23 MR. CARNEY: Well, let him finish.

24 A Well, ask a questions. I'll be happy to ask
25 it.

1 MR. McCREA: Could you reread the question?

2 (Thereupon, the reporter propounded the previous
3 question.)

4 MR. CARNEY: Well, let me object to this.
5 You're taking -- you're talking about a person now? This
6 is a rat experiment.

7 MR. McCREA: Does he say rat? He says if the
8 individual.

9 MR. CARNEY: But -- Well, that's what I'm
10 saying. There's a switch there from rat experiment to an
11 individual.

12 MR. McCREA: Did I misquote that, Mr. Carney?

13 MR. CARNEY: No. What I'm saying is I think
14 you ought to make it clear we're not talking about the Dr.
15 Drinker studies, we're not on persons. Is that fair to
16 say? They're on rats.

17 MR. McCREA: And would you go up to the
18 previous paragraph and read that, please?"One is forced
19 to conclude from the experiments that an average
20 concentration of 0.57 mg per cubic meter inhaled 16 hours
21 daily produces definite slight exchanges in the liver and
22 in this organ alone. These changes are resisted
23 efficiently by the animals and cause no depreciation of
24 health. The situation is not unlike that seen in factories
25 where yellow, where acute yellow atrophy of the liver has

1 occurred. In the case of such instances, the patients have
2 been singled out in some way or other from large groups or
3 fellow workmen who have been perfectly healthy." Now, is
4 he talking about rats, Mr. Carney?

5 MR. CARNEY: I think he says, "In accordance
6 with this hypothesis, we determine that the dose of 0.75 of
7 carbon tetrachloride plus 0.75 cc of ethyl alcohol per
8 kilogram of rat was entirely non-toxic to normal animals."

9 MR. McCREA: That's correct. Now read the next
10 sentence. Now read the next sentence to the jury.

11 MR. CARNEY: Well --

12 MR. McCREA: Read the next sentence.

13 MR. CARNEY: I'll read the next sentence.
14 What I -- Well, no, I'm not going to read any more of this
15 document. Why don't you ask a question instead of just
16 reading out of a document. We've got Dr. Kelly here. Do
17 you have a question for Dr. Kelly?

18 MR. McCREA: I've had several.

19 MR. CARNEY: Okay. Why don't you ask some
20 questions or conclude your deposition? This has gone on for
21 three days. You promised that a day and a half ago
22 that you would be done in a day and now you're into your, I
23 think it's your third day of or third day of cross
24 examination, you know. Do you have any more questions?

25 MR. McCREA: I have the last one which hasn't

1 been answer. Would the court reporter read the question
2 which is probably back about four pages?

3 (Thereupon, the reporter propounded the pending
4 questions.)

5 A Yes, that's what he says.

6 Q (By Mr. McCrea) Dr. Kelly, did Monsanto ever
7 warn the purchasers of its chlorinated hydrocarbons that
8 individuals with an ordinary disease of the liver could be
9 injured by exposure to PCBs?

10 A No, it didn't, but that -- Are we talking
11 about what he said? He didn't say that. He said if you
12 have an injured liver already, you shouldn't take carbon
13 tetrachloride or alcohol. If the people followed the
14 warning statements, they wouldn't get any injury to their
15 liver.

16 MR. MCCREA: We're not talking about that,
17 Doctor. Would you reread the question?

18 THE WITNESS: well, I answered the question. I
19 thought.

20 MR. MCCREA: No, you didn't.

21 THE WITNESS: All right.

22 MR. CARNEY: I disagree. He answered it. You
23 just didn't like his answer.

24 MR. MCCREA: No, Mr. Carney.

25 MR. CARNEY: It was an answer to your

1 question.

2 MR. McCREA: Ordinary disease of the liver
3 means is separate, entirely separate from exposure to PCBs
4 and carbon tetrachloride and alcohol. It is entirely
5 separate. What this paper says is if a worker has an
6 ordinary disease of the liver, he can have superimposed on
7 that an additional injury by exposure to PCB. Secondly, if
8 a worker is exposed to PCB and then exposed to carbon
9 tetrachloride and alcohol --

10 MR. CARNEY: Mr. McCrea, are you asking a
11 question?

12 MR. McCREA: No, I'm explaining it to you.

13 MR. CARNEY: You're explaining it to me? You
14 don't need to explain to it me. I don't need your
15 explanations. I heard your question. I understood it. I
16 heard Dr. Kelly's answer and understood it and it was
17 responsive to your question. Now, if you have another
18 question, go ahead and ask it.

19 MR. McCREA: Well, it was not responsive.
20 That sentence makes no reference -- Will you please --

21 MR. CARNEY: All you're doing -- do you want
22 to give the jury -- Why don't you ask the questions and
23 then give the jury the answers that you want. Is that what
24 you prefer?

25 MR. McCREA: No, Mr. Carney.

1 MR. CARNEY: That may be the way to do it
2 because you seem to want to explain how the answer should
3 have been answered.

4 MR. McCREA: No.

5 MR. CARNEY: Unfortunately Dr. Kelly is the
6 one under oath, not you, and I think you ought to get some
7 testimony from Dr. Kelly.

8 MR. McCREA: Break.

9 (Thereupon, a short recess was taken.)

10 MR. McCREA: Dr. Kelly, again I would like the
11 court reporter to reread the question so that we may get an
12 answer.

13 (Thereupon, the reporter propounded the previous
14 question.)

15 A No, sir, we did not because we did not believe
16 that the individuals who followed our safe handling
17 procedures would be injured by PCBs.

18 Q Wouldn't one of the safe handling procedures
19 be to advise Westinghouse that it should conduct
20 pre-employment physicals to determine if there were any
21 liver disease in the prospective workers in accordance with
22 the 1938 information from Dr. Drinker which determined that
23 exposure to PCBs can superimpose injury on a substratum?

24 A I want to find the question. What was the
25 question now that I'm to answer? Would you read the

1 question, please?

2 (Thereupon, the reporter propounded the pending
3 question.)

4 A No, because Westinghouse had the same
5 information we had. They had the same opportunity to have
6 that information. They had a sophisticated medical
7 organization, they had carried out toxicological
8 conditions, toxicological experiments on their own on their
9 product, so they knew as much as we did about it.

10 Q Dr. Kelly, would you acknowledge to this jury
11 that it would be an unsafe work practice not to have a
12 pre-employment physical of a prospective worker to
13 determine if that worker had liver disease before he was to
14 be exposed to PCBs?

15 A I would have to know the exposure, Mr. McCrea.
16 I can't make a statement without knowing the type of
17 exposure of which he might have.

18 Q The exposure could range from anything from
19 very slight exposure to perhaps very substantial exposure.
20 Under those circumstances, will you please answer the
21 question?

22 MR. CARNEY: Objection to the form of the
23 question, vague.

24 A It question is, as I understand it --

25 MR. MCCREA: Let's let the court reporter

1 reread the question.

2 (Thereupon, the reporter propounded the pending
3 question.)

4 A And my answer to it was that would depend
5 entirely upon the exposure to which the man was, what he
6 was exposed to in the workplace, and without knowing the
7 Westinghouse workplace, I'm not in a position to answer
8 that question.

9 Q (By Mr. McCrea) Dr. Kelly, would you consider
10 it an unsafe work practice for the workers at Anniston,
11 Alabama to not have pre-employment physicals to determine
12 if they had pre-existing liver disease before they worked
13 with PCBs in the Monsanto Anniston, Alabama plant?

14 A It depends when they came to work. If they
15 came to work in 1960, we wouldn't be concerned about it
16 because we knew that none of those workers had any problems
17 during the past 20 years, so we would take somebody who had
18 liver disease.

19 Q And exposure them to PCBs?

20 A The exposure was not sufficient to cause any
21 problems.

22 Q How do you know you had people with liver
23 disease?

24 A Well, I didn't know we had them. You asked --
25 That wasn't the question you asked me. Would you repeat

1 the question so we know what we're talking about?

2 (Thereupon, the reporter propounded the previous
3 question.)

4 A And my answer was no, it would not be,
5 although we did do examinations for everybody that came to
6 work at the place, but the reason I would not consider it
7 unsafe because we had no liver injury during the course of
8 the manufacturing of PCBs since I've been with Monsanto.

9 Q How did you communicate with your workers at
10 Anniston, Alabama that they were working with PCBs?

11 A In safety meetings they told them what the
12 products were.

13 Q Who told them?

14 A The foreman, the area supervisor.

15 Q Do you have one piece of documented -- Do you
16 have any document which establishes that these workers were
17 told they were working with PCBs?

18 A I don't have a document, but I think what
19 Monsanto's procedure was, were in all the departments they
20 had. They had regular safety meetings. They had regular
21 manufacturing meetings with the workers, and they told them
22 what the products were and they told them how to avoid
23 problems.

24 Q Did you, Dr. Kelly, ever stand in front of a
25 group of workers in Anniston, Alabama and explain the risk

1 associated with exposure to PCBs to the workers?

2 A Well, first of all, at our plants we didn't
3 have any risks, so the answer to your question is no.

4 Q Did you ever stand before the workers at
5 Sauget, Illinois or East St. Louis and explain to risk of
6 exposure to PCBs?

7 A Yes, I explained that to the people I
8 examined. I explained why we were examining them and I was
9 explaining to them what our experience had been in the past
10 and that's, and I wanted to examine them to find out if my
11 belief was correct. So the answer to your question is yes.
12 I didn't stand before them. I sat down before, with each
13 one.

14 Q What risks did you explain to them were
15 associated with exposure to PCB?

16 A If you get too much on your skin for prolonged
17 periods of time, if you inhale material at elevated
18 temperatures, you are liable to get chloracne. We have not
19 had any chloracne, but that is the hallmark of PCB, adverse
20 effects.

21 Q You never --

22 A I also said if you get too much you are
23 liable, there's a possibility that you may get a chemical
24 hepatitis.

25 Q Did you have chloracne at Nitro, West

1 Virginia?

2 A Yes, sir.

3 Q And what risks did you explain to the workers
4 at Nitro, West Virginia before they got the chloracne?

5 MR. CARNEY: It this -- You agree this is not
6 a PCB plant, isn't it?

7 MR. McCREA: Chlorinated hydrocarbon.

8 MR. CARNEY: But no PCBs were ever made at
9 Nitro.

10 Q (By Mr. McCrea) Stipulated. What risks did
11 you explain to the workers at Nitro, West Virginia before
12 they got chloracne?

13 MR. CARNEY: Objection on the grounds of
14 relevance.

15 A Now, let us explain. What risk did I explain
16 to the workers who were working with an agricultural
17 chemical not even close to PCB, not remotely connected?

18 Q (By Mr. McCrea) Much more hazardous; correct?

19 A It depends. There are all varieties. Yes,
20 this is an agriculture chemical which is a weed killer.

21 Q Explain what risks you explained to those
22 workers. Explain the risks that you communicated with
23 those workers?

24 A I said to those workers, "There have been
25 chloracne cases in this plant. You must exercise complete,

1 complete and thorough housekeeping. You must" --

2 Q That's not my questions, Dr. Kelly. My
3 question is: What risks did you explain to them before they
4 got chloracne, not after?

5 A We didn't know they were going to get
6 chloracne until chloracne showed up.

7 Q All right. What other problems showed up with
8 those workers in Nitro, West Virginia who were exposed to
9 the chlorinated hydrocarbons?

10 A Well, there again, Mr. McCrea --

11 MR. CARNEY: Again stipulating that this is
12 not a PCB?

13 MR. MCCREA: Stipulated.

14 A And you were saying -- We had problems at
15 Nitro, West Virginia from an explosion that caused the
16 formation of dioxins, and I didn't tell these people,
17 "Look, if we have an explosion, here are the risks you're
18 going to have."

19 Q (By Mr. McCrea) What other problems did those
20 workers have? Just a second.

21 A Well, those --

22 Q In addition to chloracne in Nitro, West
23 Virginia?

24 A The problems that the people had at Nitro,
25 West Virginia in addition to chloracne were those that

1 resulted from the uncontrolled reaction which you could
2 call an explosion which blew the content of the material
3 out of the, out of the vessel on to the roof. The people
4 developed chloracne. They developed peripheral neuritis.

5 Q What else?

6 A I'll have to go back. I don't -- Those are
7 the two prominent ones that I remember.

8 Q Well, Doctor, that situation doesn't slip your
9 mind, does it?

10 A Well, it doesn't slip my mind, no, but we had
11 a number of people with different symptoms. I've told you
12 the two prominent ones, peripheral neuritis and chloracne.

13 Q Did they have fatigue?

14 A Well, that's not a condition. That's a
15 symptom.

16 Q Well, did they have fatigue as a symptom?

17 A Some did, some didn't.

18 Q Did they have vertigo as a symptom?

19 A It was not prominent in my recollection.

20 Q Did they have loss of libido?

21 A Some did, some didn't.

22 Q The same as the black worker reported in 1933?

23 MR. CARNEY: Well, let me object to the form
24 of that question.

25 A I cannot answer that because I don't know how

1 much loss the black worker had, and I don't know how much
2 loss these workers had, whether it was five percent, ten
3 percent or a hundred percent loss.

4 Q (By Mr. McCrea) The black worker reported
5 loss of libido; correct?

6 A Yes. How much loss? Five percent? Ten
7 percent? Hundred percent? I don't know. He had some loss
8 of libido. That's what he reported.

9 Q And the workers in Nitro, West Virginia
10 reported loss of libido; correct?

11 A Yes, some did.

12 Q Did they also report painful joints?

13 A It was not a prominent symptom.

14 Q Did they report it?

15 A I don't know whether they reported it. If
16 they had peripheral neuritis, maybe they did have pains
17 around their joints.

18 Q What else did they report?

19 A If you will show me the medical reports I will be
20 happy to give you the symptoms they reported, but ...

21 Q And that was a result of exposure to dioxin;
22 correct?

23 A Presumably. They were unable to find out what
24 the products of combustion were at the explosion.

25 Q Well, now, Dr. Kelly, you know that was

1 dioxin; correct.

2 A No, I don't know it was dioxin because this
3 guck that came out and was burned to a crisp was analyzed
4 and they couldn't analyze for dioxin at that time. The
5 supposition is that it was dioxin, but when you say do I
6 know it was dioxin, I don't know it.

7 Q Do you know what quantity of chemical they
8 were exposed to? Do you know the dose response?

9 A Let's have two, that divided into two
10 sentences, two questions, please.

11 Q Yes. Do you know the dose response?

12 A Of what?

13 Q The chemical to which they were exposed which
14 caused chloracne, loss of libido, dizziness, peripheral
15 neuropathy. Let me go through this list. Fatigue,
16 vertigo, loss of libido, pain in the joints, peripheral
17 neuropathy and chloracne.

18 A The dose response was not able to be
19 calculated because we had men who were cleaning the
20 galvanized roofing and scraping off this black carbonaceous
21 tar. How much they got absorbed through their clothes I do
22 not know, but there was quite a lot.

23 Q They were up on the roof?

24 A They were up on the roof and they were up
25 below the roof.

1 Q How do you explain that these individuals
2 experienced pain in their joints as a result of exposure to
3 the agricultural chemical?

4 A They received -- They developed the pains in the
5 joints in response to the combustion products of the
6 uncontrolled reaction. It was not the agricultural
7 chemical at that time, so --

8 Q Could --

9 A If they had peripheral neuritis, they would
10 get pains in the extremities. The joints presumably that
11 they complained about were in the extremities.

12 Q So you are tying in the mechanism by which
13 they experienced pain in their joints with the peripheral
14 neuropathy which is the demyelination of the coating of
15 the nervous of the extremities?

16 A That is one of the causes, yes.

17 Q And how does this chemical cause the coating
18 to demyelinate?

19 A I don't know.

20 Q Was there any investigation of that with
21 neurologists or specialists in the field of medicine?

22 A In our workers?

23 Q As a result of the workers in Nitro, West
24 Virginia experiencing pain in their joints and peripheral
25 neuropathy?

1 A We sent four of them to the Kettering
2 Institute where they had biopsies on nerves taken in two of
3 them. They were completely examined and checked for these
4 things.

5 Q What did the biopsy of the nerves indicate?

6 A It showed demyelination of the nerves.

7 Q And did the doctors at Kettering Institute
8 explain to you how this chemical from the combustion could
9 demyelinate the nerves in the peripheral area?

10 A I don't believe they knew.

11 Q Demyelination means that the nerve cells
12 became necrotic.

13 A No, it doesn't. It means that the covering of
14 the nerve loses its, the coating of the nerve loses it, its
15 -- Well, the coating gets destroyed.

16 Q So Monsanto was never able to determine the
17 chemical which caused those number of problems?

18 A That is not correct. I said the ones, the
19 severe ones who had the peripheral neuritis, who had severe
20 chloracne were the ones who had worked at the time of the
21 explosion. We did have chloracne from the general
22 manufacturing run of the material, and to the best of my
23 recollection, those were not accompanied by those dire
24 complaints that you mentioned.

25 Q Were there also long-lasting problems

1 affecting the brain?

2 A No, not --

3 MR. CARNEY: Again just for the record, we're
4 not talking about PCBs here.

5 MR. McCREA: Chlorinated hydrocarbons,
6 presumably dioxin which is a contaminant of certain PCB
7 compounds as he earlier testified.

8 MR. CARNEY: No, I think you've
9 mischaracterized the record, but I just think the record
10 ought to be clear that you're spending a lot of time now
11 talking about an entirely different chemical, an
12 agriculture chemical, not a PCB.

13 Q (By Mr. McCrea) Dr. Kelly, was dioxin which
14 is a PCB with two oxygen atoms added, was it implicated in
15 the cause of the illness of the workers in Nitro, West
16 Virginia?

17 A Now, we're dealing with two conditions when
18 you talk about illness. There was an explosion which
19 started the situation. We had that. We did not -- We were
20 unable to analyze the material for dioxin because as I
21 said, it was completely charred much like a, oh, coagulated
22 hunk of ashes, and they were unable to find out whether
23 there was dioxin in it, and I don't know if the mechanism,
24 if the analytical method for running dioxin was available
25 at that time. We were able to find that dioxin was present

1 in the agricultural chemical at Nitro, West Virginia and
2 sometime after the explosion in the regular manufacturing
3 run.

4 Q Was it implicated as a causative agent of the
5 health symptoms and problems suffered by those workers?

6 A Well, now again, what health symptoms and what
7 problems?

8 Q Chloracne?

9 A Chloracne, yes.

10 Q Peripheral neuropathy?

11 A No, that was not present in the workers who
12 were not exposed at the explosion.

13 Q No, I'm talking about the ones who were
14 exposed to the explosion.

15 A Well, I am trying, Mr. McCrea, to clarify two
16 situations which you are throwing in the same bundle. I
17 said we had an explosion during a reaction of the making
18 the agricultural chemical. As a result of the clean up, we
19 developed several, a number of people developed very
20 serious conditions. Those are the ones that had peripheral
21 neuritis and severe chloracne. Those are the ones that we
22 did biopsies on the nerves. Then we had chloracne in
23 varying degrees in a number of individuals in the regular
24 work force. Dioxin was suspected in those cases.

25 Q Which cases, the --

1 A Well, it was definite in the other cases.

2 Q For explosion?

3 A We suspected. We were never able to prove it.

4 Q So dioxin was suspected, but never proven as
5 a causative agent in the workers subjected to the
6 explosion?

7 A I don't know when it was suspected. I mean,
8 I'm not exactly sure. The date of the explosion is
9 something, in 1959 or something like that.

10 Q '49?

11 A It was it '49? '49. Well, I don't believe there
12 was methods of checking for dioxin at that particular time.
13 I'm not sure.

14 Q All right. You may have answered the
15 question, but I don't think I understand it. Was dioxin
16 implicated in the serious conditions of the workers who
17 were subjected to the explosion?

18 A Well, if by implicate you mean was it proven,
19 it wasn't proven.

20 Q No, no, no, suspected.

21 A Well, that's a before word.

22 Q Well, let's change the word to suspected?

23 A It was suspected post hoc, after the
24 situation. It was not suspected at the time of the
25 explosion.

1 Q All right.

2 A It was not suspected when the first people
3 broke out with the chloracne.

4 Q Do you feel it was the probable cause of the
5 workers who experienced chloracne, fatigue, vertigo, loss
6 of libido, pain in their joints and peripheral neuropathy?

7 MR. CARNEY: Objection to the form.

8 THE WITNESS: Would you repeat that question?

9 (Thereupon, the reporter propounded the pending
10 question.)

11 A It might have been.

12 Q (By Mr. McCrea) You can't say it's probable?

13 A Because we didn't find it. We were unable to
14 look for it.

15 Q So all you can say is it might have been the
16 cause?

17 A That's correct.

18 Q Do you feel that dioxin was the probable cause
19 of the chloracne in the regular work force who were not
20 exposed to the explosion?

21 A That and wherever other impurities might have
22 been present in the 245T.

23 Q Did you talk with a doctor from Germany about
24 a similar episode at BASF, Dr. von Oettel?

25 A I talked with him once, and I don't know what

1 his episode was.

2 Q Can you describe for us the health problems
3 experienced by the workers at BASP in Germany as a result
4 of a similar type explosion in the manufacturing of the
5 agricultural chemical?

6 A No, sir, and I don't even know if Dr. Oettel,
7 O-e --

8 Q I have it von Oettel, v-o-n capital
9 O-e-t-t-e-l?

10 A Well, he didn't use the von when I was talking
11 to him.

12 Q All right, sir. Can you describe their
13 symptoms?

14 A No, I can't at this date. I don't know if he
15 read an article on it or not.

16 Q But he did come to St. Louis, Missouri to talk
17 to you?

18 A Not because of that. He came for other
19 reasons. I don't know what he came -- he was over here at
20 some particular meeting. He did not come over to talk
21 about the BASP explosion because I don't know if they had
22 it at that time or maybe it was before. I don't know, but
23 it wasn't -- I don't recall it was written up.

24 Q Did you desire information about the situation
25 at BASP in that your workers at Nitro, West Virginia had

1 experienced these problems as a result of an explosion of
2 this agricultural chemical?

3 A Well, I don't know. I don't remember when I
4 talked to him. I don't remember if I talked to him before
5 our explosion or after our explosion. I don't know.

6 Q That's not it question.

7 A Well, what was the question?

8 MR. McCREA: Could you read the question back?

9 (Thereupon, the reporter propounded the previous
10 question.)

11 A Well, I said I don't remember whether it was
12 before our explosion or after our explosion, so I can't
13 answer the situation. If it was before our explosion, I
14 couldn't very well have talked to him about an explosion
15 that was going to happen in the next six months.

16 Q (By Mr. McCrea) Did you change the workplace
17 passes at Nitro, West Virginia as a result of the
18 chloracne?

19 A Yes.

20 Q With regard to the work done by Dr. Drinker
21 which we have discussed, did you sit down with him and
22 review his reports in detail?

23 A I may have called him on the phone. I do not
24 believe I went up to Cambridge.

25 Q Did you ever write Dr. Drinker and challenge

1 any of his findings?

2 A You mean ever in my life?

3 Q Yes, sir.

4 A No, I did not write him, but I challenged them
5 on the phone.

6 Q Which findings did you challenge on the phone?

7 A I challenged him on the phone that he reported
8 findings on chlorinated diphenyl, and I did not believe it
9 was a chlorinated diphenyl.

10 Q Did you challenge him as to any other findings
11 in any of the reports which he provided to Monsanto under
12 contract?

13 A First of all, I don't believe I would use the
14 word challenged to talk to a scientist. I wouldn't say
15 challenge. It seems to me that you say, "Look, I think
16 you're completely off base on this." I may have discussed
17 parts of the report and I may not have. I have no
18 recollection of what happened 50 years ago.

19 Q If a worker from the Bloomington Westinghouse
20 plant called you in 1958 and informed you that he had liver
21 disease, hepatitis and asked you if he could work in PCBs,
22 what would you have told him?

23 A I would say, "Look, I cannot diagnose you from
24 Missouri. Go and see your family doctor. See a good
25 specialist if you have one. See your family doctor," and

1 then I would call the plant manager at Bloomington and say,
2 "I understand you have a man who is alleging exposure to
3 PCBs and says he has liver problems. I think this should
4 be investigated.

5 Q All right, sir. If a worker called you from
6 Bloomington, Indiana in 1958 and informed you that he was
7 going to work in a department which had PCBs and carbon
8 tetrachloride, what would you tell him?

9 A Again I would tell him, "I cannot make any
10 decisions as far as your workplace is concerned." There is
11 a supposition that you were giving me. I would certainly
12 say "The carbon tetrachloride is, you should not be
13 exposed to that whether you have liver disease or not."
14 They don't even let secretaries clean off their typewriters
15 with carbon tetrachloride. It's a bad actor. I would say,
16 "This is a question you'd have to ask your supervisors.
17 I'll be happy to talk to any of your supervisors, but I
18 don't know anything about your workplace."

19 Q If he called you in 1958 and asked you if
20 there were any special risk in exposure to carbon
21 tetrachloride if he had a contemporaneous exposure to PCBs,
22 what would you tell him?

23 A Again I would say, "It depends on how much
24 exposure you have to carbon tetrachloride. It depends on
25 how much exposure you have with PCBs. I can't quantify

1 those. This is a situation that you have to talk over with
2 your own plant medical department," and I would call the
3 Westinghouse people and say this is what this man said and
4 I would talk to the doctor and give him my thoughts.

5 Q If he asked you if there were special risks
6 irrespective of exposure, what would your answer be?

7 MR. CARNEY: Well, I'm going to object to the
8 form of the question.

9 A That is a question if there were no,
10 regardless of exposure?

11 Q (By Mr. McCrea) Right.

12 A If there's no exposure, there's no risk. Is
13 that what you're saying?

14 Q Right. What if there's slight exposure to
15 PCB?

16 A Well, it depends how much there is and how
17 much exposure there is to carbon tetrachloride.

18 Q You can't answer the question?

19 A Yes, I can answer the question. Give it back
20 to me.

21 MR. McCREA: All right. Read it back.

22 MR. CARNEY: Well, just for the record before
23 it's read back, I certainly heard an answer. Maybe I'm
24 hearing things today, but I heard a question and I heard an
25 answer to the question, and I don't think, Doctor, just

1 because he asks that the question be read back you're
2 obligated to give him a different answer or expand upon it.
3 You can if you want to, though. Read the question and the
4 answer.

5 (Thereupon, the reporter propounded the previous
6 question and answer.)

7 Q (By Mr. McCrea) I said slight exposure.
8 Doctor, let me clarify the question. What if the worker
9 called you and said, "I have a slight exposure to PCB and a
10 slight exposure to tetrachloride"? Is there any special
11 risk with that combined exposure?

12 MR. CARNEY: Objection to the form of the
13 question. It's vague.

14 A Well, yes, I would answer this way. I would
15 say to him, "I to not know what you mean by slight exposure
16 to these two chemicals. This is a situation for your own
17 manufacturing and medical organizations. I'll be happy to
18 talk with any of them and give them any information that I
19 have." And I might say in answer to all those questions, I
20 never received a telephone call from any Westinghouse
21 worker at Bloomington. I mean, I just, all these
22 questions, there is an if in there, if somebody did this,
23 but just for the mind of the jury, I never received any
24 questions or telephone calls or letters from any worker in
25 the Bloomington, Indiana Westinghouse plant.

1 Q (By Mr. McCrea) I think we're prepared to
2 stipulate to that fact.

3 A Well, yes, but I want to be clear, Mr. McCrea,
4 because you've mentioned all these things and it's easy for
5 somebody on the jury to get the impression that there was a
6 hot line between Bloomington and myself.

7 Q Well, I appreciate your clarifying that for
8 the jury and we will stipulate that no worker ever called
9 you or had your phone number.

10 A Thank you.

11 Q If he called you and said, "I'm exposed to .5
12 milligrams per cubic meter of PCB and .5 milligrams of
13 carbon tetrachloride per cubic meter," what the would your
14 answer be as to whether or not those exposures presented
15 any special risk?

16 MR. CARNEY: Well, I'm going to object. You
17 just mentioned some numbers without saying how. Was it
18 fumes? You know, what confined space? Was there
19 ventilation system? Was he putting his head in it? Was he
20 putting his feet in it? I don't know what the exposure is,
21 so it's vague.

22 A Well, I have to say to him, "Monsanto does not
23 manufacture carbon tetrachloride. I am not familiar with
24 the maximum allowable concentration or the TLV if there was
25 one in 1958, but I will be happy to look it up and talk to

1 your people about it, but this is really a question for
2 your own organization, not Monsanto. I'll be happy to
3 discuss it with your manufacturing group or your medical
4 group." I do not believe that I would have, would discuss
5 it with the worker.

6 Q (By Mr. McCrea). Did you ask Dr. Drinker what he
7 felt would be a safe level of PCB and carbon
8 tetrachloride with regard to worker exposure when he
9 provided you with this informations on page 43 and 44?

10 A No, sir.

11 Q Of Plaintiff's Exhibit Six?

12 A No, sir. I did not, but remember, the kind of
13 exposure he gave those rats, that's completely different
14 from the kind of exposure you get in industry. Carbon
15 tetrachloride is gradual by inhalation. Here they
16 gave these rats a good size slug of the material by mouth
17 all in one insult. So I would not expect that condition to
18 obtain in industry.

19 Q Would you go to page 43 and read the caption
20 on that page and tell me if we're talking about giving rats
21 a slug through the mouth? What is the caption on the top
22 of page 43?

23 A "Results of Inhalation Experiments," but --

24 Q Dr. Kelly, does this document talking about --

25 MR. CARNEY: Wait a minute. You just, you

1 interrupted him. I think he -- let him finish this answer
2 and then you can ask another question.

3 A Yes. Look what he says in the last paragraph.
4 "In accordance with this hypothesis, we determined that a
5 dose of .75 cc's of carbon tetrachloride plus 7.5 ethyl
6 chloride per kilogram to rat was entirely non-toxic.
7 However, when this dose was given to animals" -- a dose.
8 He's not talking about inhaling this stuff. He's giving
9 them this in a cocktail, a slug of this stuff by mouth.

10 Q Was the chlorinated hydrocarbon given to the
11 rat by cocktail form? Was the PCB given to the rat by
12 cocktail form?

13 A Tetrachloride is also a chlorinated
14 hydrocarbon.

15 Q Was the PCB given to the rat by cocktail form?

16 A No, it was not.

17 Q As described by Dr. Drinker on page 43?

18 A No, sir.

19 Q On Plaintiff's Exhibit Six?

20 A No, sir, but you were asking me previously,
21 you were including the doses of carbon tetrachloride and
22 alcohol under results of inhalation experiments, and that
23 wasn't correct. That's why I corrected you on it.

24 Q All right. It was inhalation of PCB?

25 A That's correct.

1 Q And it was an injection?

2 A No, it was by mouth, a dose of the stuff.

3 Q But there's no question that the PCB was
4 inhaled?

5 A No, of course not. There's no question about
6 it.

7 Q So if the working called you in 1958 and
8 informed you that they had measured the ambient levels of
9 PCB in the air which he breathes and the ambient levels of
10 carbon tetrachlorides in the air which he breathes and that
11 both results were .5 milligrams per cubic meter and if
12 there were any special risks, what would you tell him?

13 A I'll repeat what I said before. We --
14 Monsanto did not make carbon tetrachloride. I do not know
15 what the safe level of carbon, the maximum concentration,
16 allowable concentration of carbon tetrachloride was in
17 1957. I don't know where you got it figure of .5
18 milligrams per cubic meter. That may be correct, it may
19 not, but I would have to tell them, "Look, you were talking
20 about working conditions in the Westinghouse plant. I
21 don't know whether, what these levels, that accuracy -- not
22 the accuracy of determining it, but whether these are peak
23 levels, whether these occur all the time. This is a
24 question for your manufacturing people and your, and your
25 medical people. You should not -- That's the people who

1 should answer that question. I'll be happy to talk to
2 them."

3 Q Dr. Kelly, if a worker called you in 1958 and
4 asked you if it was safe for him to drink four to six cans
5 of beer a day if he worked an eight hour shift exposed to
6 PCBs, what would you tell him?

7 A I'm say, "What is the exposure?"

8 Q .5 milligrams per cubic meter plus dermal
9 exposure.

10 A How much dermal?

11 Q Hands, forearms, legs.

12 MR. CARNEY: Yeah, but you haven't said, is
13 this constant.

14 MR. McCREA: Constant.

15 MR. CARNEY: The legs?

16 MR. McCREA: Right.

17 MR. CARNEY: So he's constantly got PCBs on
18 his legs and his arms, and he's breathing it constantly for
19 how long a period of time?

20 MR. McCREA: Eight hours a day.

21 MR. CARNEY: For how many years?

22 Q (By Mr. McCrea) That wasn't incorporated into
23 the question. What would your answer be?

24 THE WITNESS: Let me have the question.

25 (Thereupon, the reporter propounded had pending

1 question.)

2 A I would say to him one, I think eight cans a
3 beer are not good for anybody.

4 Q Four to six.

5 A Oh, four to six? Well, maybe I wouldn't say
6 that then. I would also say, "You should not have your
7 arms, legs, clothes contaminated for eight hours a day with
8 PCBs." I would say then the answer, first of all, that
9 should not be done whether you take one can of beer or no
10 cans of beer. That should not be done.

11 I would say to him then, "It depends on your
12 physical condition, what, what are, what examination, what
13 would an examination of you show? I don't know how I can
14 advise you on this, but I will advise you that that type of
15 contamination is wrong, should not be done. We warn
16 against it.

17 Q Did you ever warn against the contamination of
18 alcohol with regard to workers exposed to PCBs in the
19 history of Monsanto from 1936 through 1990?

20 A Not that I can recall, no, sir.

21 Q And you would have given this worker no such
22 warning of the combined effect. You would have said
23 "Drinking can be bad for you, PCBs can be bad for you," but
24 you would not give him a warning that the combined exposure
25 to PCBs and consumption of four to six can of beer a day

1 could have adverse effects?

2 A I would have said, "You have got to avoid this
3 type of exposure to PCBs so that you could drink four to
4 six cans, if that's what you want to do."

5 Q You would have said nothing about the combined
6 effect?

7 A I would have said "You do not, you should not
8 have this type of exposure, period."

9 Q Dr. Kelly, in a yes or no answer, would you
10 have given him a warning as to the health consequences of
11 the combined effect of the exposure to PCB and the
12 consumption of alcohol?

13 MR. CARNEY: And he's got to give a yes or a
14 no answer?

15 MR. McCREA: Correct.

16 MR. CARNEY: I object to that and I instruct
17 you not to answer that because that's an improper question.
18 I don't think you're entitled to say that the doctor has to
19 answer in only two answers, yes or no, and because of that
20 I'm not going to allow the answer. I don't think you can
21 instruct a witness how to answer your own question. I know
22 you'd like to, but it's not proper. I think it's very
23 improper. I think you know it's improper and you know a
24 court will not allow you to say that you can only answer
25 that yes or no and give no other answer. I've never heard

1 of that being done and I think you know that's improper.

2 MR. McCREA: I'll accept the validity of your
3 objection. Would the court reporter please read the
4 question, and then you may answer it in any manner which
5 you desire without a yes or no answer. I have not received
6 an answer to this question.

7 MR. CARNEY: Well, I disagree. You've asked
8 it three or four times now, at least, and you've gotten an
9 answer three or four times.

10 MR. McCREA: Not as to the combined effect.

11 MR. CARNEY: You've asked the question, that
12 question three or four times, I believe.

13 MR. McCREA: I'd say four or five or six
14 times.

15 MR. CARNEY: Okay. I'll go along with four to
16 six, and if I can, I don't know your entitled to just
17 continue to ask the question because you don't like the
18 answer. You've been doing that for some reason today and I
19 don't understand it, but at any rate, I think you've got to
20 ask new questions. I don't like to instruct a witness not
21 to answer, but when it gets so repetitive, I'm really
22 getting at my, to my limit here of tolerance for the
23 repetition that's going on.

24 MR. McCREA: Tom, there's nothing about the
25 answer I don't like. What I don't like is he hasn't

1 answered the question.

2 MR. CARNEY: That's your opinion. I disagree
3 with you and I think probably Dr. Kelly thinks he's
4 answered it, but let's not debate that. I don't think
5 we'll ever agree on that. I'm not going to dispute that.
6 You believe that he didn't answer. I believe he did, and I
7 think Dr. Kelly believes he did answer it.

8 MR. McCREA: Then I'll certify that question
9 to the Court for a ruling. So that we understand the
10 question, would the court reporter please read it back with
11 the understanding that your objection is valid, that he may
12 answer it without simply a yes or no. Would the court
13 reporter please read the question back as to the combined
14 effect and then I want to listen to that question one more
15 time.

16 MR. CARNEY: Okay. Before we listen to the
17 question one more time, I'm going to allow the doctor to
18 answer it one more time. I think he's answered it, and if
19 he wants to answer it, my answer stands. That's perfectly
20 acceptable, but I'm, in order to avoid instructions, I will
21 allow the question to be read back and if the doctor thinks
22 he needs to elaborate or change his answer or add something
23 to it or stand on it or whatever, he's free to answer it in
24 any way he can.

25 (Thereupon, the reporter propounded the previous

1 question.)

2 A Is that the question?

3 Q (By Mr. McCrea) Yes, sir.

4 A I might and where might not. I would ask him,
5 "What exposure do you have? How long have you been -- Is
6 this a common practice for you to have four to six cans of
7 beer a day? Do you have any illnesses? Have you" -- I
8 would go in to some medical history with him and then I
9 would say, "I believe this is a question for somebody who
10 knows more about your exposure than I do." I would not be
11 able to give him a frank yes or no.

12 Q (By Mr. McCrea) Dr. Kelly, if he asks you if
13 there was any special risk in consuming alcohol if he were
14 exposed to PCB in the workplace, what would you tell him?

15 A I'd say, "How much exposure did you have?"

16 Q All right.

17 A If you have, That's -- well --

18 Q We've been through --

19 A We've been throw this, but that's the key
20 point.

21 Q What exposure would you consider -- what is
22 the exposure, Dr. Kelly, that you would consider sufficient
23 to then warn against the consumption of alcohol? You
24 explain it to me?

25 MR. CARNEY: Objection to the form. I don't

1 think you've given him enough facts to answer the question.

2 A I would say the exposure is if an individual
3 has, wears contaminated clothing during his work shift, if
4 he's exposed to regular atmospheric concentrations three or
5 four times the maximum allowable concentration, I would
6 believe that if that continues he should not -- I would
7 also believe that if he has any changes in his liver
8 enzymes, then he should not drink alcohol.

9 Q Thank you, Doctor. Would you turn to page 46,
10 please?

11 A Yes, sir.

12 Q Can you identify that document?

13 A It's a "Process for the Production of
14 Aroclors, Pyranols, Etc. at the Anniston and at the
15 Krummrich Plant", Krummrich plant being Sauget, also being
16 East St. Louis.

17 Q Would you turn to a page 49?

18 MR. CARNEY: When you ask -- just so the
19 record is clear, are you, have you asked the doctor if he's
20 familiar with the document?

21 Q (By Mr. McCrea) I don't believe I did. Are
22 you familiar with this document, Dr. Kelly?

23 A Well, I think I've seen it little earlier in
24 this deposition. I've thumbed through it.

25 Q All right, sir?

1 A This was -- I don't see my name on any of the
2 card, the distribution list. This is pretty much in all
3 English, our English plant.

4 Q This is a process for the production of
5 Aroclors, Pyranols, etc. at the Monsanto Anniston, Alabama
6 plant and the William G. Krummrich plant in East St. Louis
7 or Sauget, Illinois?

8 A That's correct, but it's written by a man who
9 was from our English company, and as you see it, London,
10 Newport, Newport. Newport is in the United Kingdom.
11 Newport, Ruabon, that's in Wales, so ...

12 Q Have you read this document as part of your
13 duties as medical director for Monsanto Company?

14 A I don't know if I ever saw it. I may or I may
15 not. I don't happen. I didn't get a copy of it.

16 Q Would you turn to page 49, please?

17 A I have.

18 Q In paragraph three under Roman numeral nine,
19 "Hazards", subheading "Toxicity", states: "From the start
20 of Aroclor manufacture at the Krummrich plant, the
21 operators have been supplied a clean change of clothes
22 every day, and time has been allowed at the end of the
23 shift for bathing. Operators are advised to wash hands and
24 face before eating. In Anniston operators do not have the
25 same issue of clean clothes." My question to you is: Why

1 did you have one procedure in place in East St. Louis and
2 not in place in Anniston?

3 A Because the change of clothes every day and
4 the time allowed for bathing was negotiated by the union at
5 Krummrich plant for almost all the workers. It was not
6 done for medical reasons. It was negotiated by the union.
7 They were very happy to have 15 minutes off whether they
8 took the shower or not. Anniston it was not a part of the
9 union contract.

10 Q Do you know --

11 A I repeat, it was not done for medical reasons.

12 Q Do you consider taking clothes home which have
13 been contaminated with PCB as an unsafe practice?

14 A Again you'll have to tell me what they, how
15 much they were contaminated, what they did with it, do they
16 to this every day. I mean, if you define those, I'll be
17 happy to answer it.

18 Q Five ounces of PCB spread uniformly over the
19 clothing, would you consider that as unsafe practice?

20 A What do they do with it when they get it home?

21 Q They wear it, put it in the family wash.

22 A Wash it? No, I don't think that's unsafe.

23 Q Do you know it's unsafe for the worker to
24 wear that clothing without laundering it?

25 MR. CARNEY: For one day or one hour?

1 MR. McCREA: For a week.

2 A It might. It might. We advise against it in
3 our labels.

4 Q (By Mr. McCrea) And you did something against
5 it in East St. Louis, but not at your plant in Anniston,
6 and you've explained that. The union insisted on that?

7 A I've explained that and I said we did not --
8 First of all, we did not have five ounces of PCBs on our
9 workers' clothing at the East St. Louis plant. We didn't
10 have that, and I also said we did not have that change of
11 clothing routine put in for medical reasons. That was --
12 They're two entirely different plants. They have two
13 entirely different unions. They have two entirely
14 different set of fringes, and this is what they considered
15 a fringe. It was any number, probably 70 percent of the
16 workers. I think by the time I left 100 percent of the
17 workers got clothing changes.

18 Q Where?

19 A With may very well have been at both.

20 Q Did they get changes at Bloomington, Indiana?

21 A I haven't the slightest idea.

22 Q Did you ever warn that they should have a
23 change of clothes at Bloomington, Indiana?

24 A No, sir, because I did not know -- First of
25 all, I did not think it was my business. Secondly, if they

1 followed the directions, they didn't need to get a change
2 of clothes.

3 Q Would you turn to page 50?

4 A Yes, sir.

5 Q Are you familiar with that document?

6 A I've seen it. I don't know when I saw it.

7 Q Do you know the gentlemen on the upper
8 right-hand corner, Hamer, Ritchie, Newman, Kulifay, Weddell
9 and Marshall?

10 A I know Newman. He was our physician at our
11 London plant.

12 Q Do you know any of the other gentlemen?

13 A The last two names, Wedell and Marshall ring a
14 bell, but I don't know what they were doing in 1951 or I
15 don't really know what their connection was.

16 Q Would you turn -- did you read -- Have you
17 read this before?

18 A I must have. I don't know when.

19 Q Would you turn to page 51?

20 A Yes, sir.

21 Q And do you identify this document?

22 A Well, this is part of the same document, it
23 appears to me.

24 Q Yes, sir. And the top the caption is Roman
25 numeral 11 - "Hazards, continued"; correct?

1 A Yes.

2 Q Have you read this document while working for
3 Monsanto Company?

4 A Well, I really don't know. Hazards,
5 continued. Where do you the hazards start? Where's number
6 ten? Oh, there's 11 there. I mean, Mr. McCrea, we start
7 off with page number 46.

8 Q Where do you see that?

9 A On page 46. Well, let's go back to 46 in this
10 thing, "Process for the Production of Aroclors, Pyranols,
11 Etc."

12 Q All right, sir.

13 A Okay. We go 46. We've got the process on 47.
14 On 48 we've got the process. Then we jump up to 11
15 hazards. I presume it's all in the same document.

16 Q Correct.

17 A I presume.

18 MR. CARNEY: Well, again I would -- Since
19 you've indicated that you don't know whether you saw this
20 or not why you worked at Monsanto, are you representing
21 this is a complete self-contained document, Mr. McCrea?

22 MR. MCCREA: No, I'm not.

23 MR. CARNEY: Okay. I don't think it is.

24 MR. MCCREA: I cannot make that
25 representation. It appears that the document at page 51

1 has a caption and is the commencement of a separate
2 article. I cannot explain the captions. We got this from
3 your company. We got this from Monsanto.

4 MR. CARNEY: Well, you got this document as
5 well as lots of documents from Monsanto and, you know, I
6 haven't committed to memory all of them, and unless we can
7 get the witness to identify that he's familiar with this
8 document, I don't know much more that we can do with it.

9 Q (By Mr. McCrea) Dr. Kelly, I think we have
10 two minutes here remaining before the break. Will you
11 please turn to page 51?

12 A Yes, I have.

13 Q And at the top of the page below the line
14 cross the top there's a reference to "The Chemist Analyst,
15 Volume 36, Number 2, Page 33, J. T. Baker Chemical Company,
16 Phillipsburg, New Jersey, September 1947." Then below
17 that, "On the Toxicity of Arochlors", and then below that,
18 "Robert M. Brown, Chief Industrial Hygiene Section,
19 Division of Health, Department of Public Welfare, City of
20 St. Louis, Missouri." Do you recall if when you were
21 medical director for Monsanto, if you read this sheet of
22 paper that is in front of you now?

23 A I don't recall ever having read it.

24 Q Do you know Robert M. Brown?

25 A I knew he worked someplace in the industrial

1 hygiene section of the city. I would not recognize him as
2 on authority on toxicity. I thought he was doing
3 industrial hygiene work.

4 Q All right, sir. Will you read the second
5 paragraph?

6 A Yes, sir. Now, Mr. McCrea, I'll be happy to
7 read this, but just picking out this, first of all, when he
8 is talking about a melting point bath liquid, he is talking
9 about putting a beaker or a container of open material.

10 MR. MCCREA: We need to break.

11 (Thereupon, a short recess was taken.)

12 Q (By Mr. McCrea) Dr. Kelly, again we left off
13 and you were describing the document on page 51.

14 A Yes, sir.

15 Q Do you recall where we were?

16 A Yes, I think so.

17 Q Would you please continue with that answer?

18 A Yes. I forget what the question was.

19 Q To tell you the truth, I forget the question
20 and forget what you were saying. I was hoping you would
21 remember.

22 A Maybe the court reporter could --

23 MR. MCCREA: That would be helpful.

24 (Thereupon, the reporter propounded the previous
25 answer.)

1 A Yes. In other words, this is an analytical
2 laboratory that they're talking about. They were you using
3 sulfuric acid which is battery acid and they were heating
4 that up as the heat transfer unit. Of course, from
5 sulfuric acid you get off SO₂ and you get off some pretty
6 bad stuff. So they were going to use Aroclor.

7 So Mr. Brown says whether you are subjected to a
8 possible acute exposure depends on the size of the melting
9 pot bath. That's how big it is, what the surface area is
10 and caution with which it's used and the temperature which
11 is heated. I agree with all those things. With careless
12 handling of the material and the resulting contamination of
13 the skin etc., etc., the way is left open for the
14 producing of dermatitis.

15 Well, then he says, "Scrupulous cleanliness must be
16 insisted upon wherever this material is handled." I
17 believe that Mr. Brown is a little overconservative on
18 that. We're not really dealing with a radioactive
19 material.

20 Now, to get back to -- I'm sorry. I should have
21 read the second paragraph. That's what you wanted me to
22 read, wasn't it?

23 Q Yes, beginning, "There is a need."

24 A "Therefore, to give warning. For the toxicity
25 of these compounds has been repeatedly demonstrated, both

1 from the standpoint of absorption from the inspired air as
2 well as from their effects in producing a serious and
3 disfiguring dermatitis when allowed to remain in contact
4 with the skin." That, of course, is an oversimplification.
5 That isn't what he says.

6 It says, "Since these effects have been repeatedly
7 observed, industrial hygienists have taken care to see that
8 the proper controls have been established wherever these
9 product are used. For example, the maximum allowable
10 concentration of chlorinated diphenyl for an eight-hour
11 working day is one milligram per cubic meter of air."
12 There's nothing new in all that.

13 Q All right. Would you agree that that would
14 constitute safe practice, what had been stated in paragraph
15 two, as far as it goes?

16 A Well, he says -- I don't see the practice that
17 he says.

18 Q Eight-hour working day is one milligram per
19 cubic meter of air?

20 A Well, that's a safe practice, yes.

21 Q Would a deviation from that be unsafe?

22 A It depends on how much a deviant and how long
23 you've deviated from it.

24 Q Describe for us what would be unsafe based on
25 how much you deviate and how long you deviate.

1 A Well, I don't believe I can quantify that
2 because it depends on whether you inhale the material at
3 five minutes, ten minutes, half hour. It depends on
4 whether it's done according to one milligram per cubic
5 meter, you go five milligrams, ten milligrams, hundred
6 milligrams. Certainly a hundred milligrams would be unsafe
7 for eight hours. Whether it would be unsafe for five
8 minutes, I wouldn't believe so.

9 Q Dr. Kelly, when the author of this article,
10 and I assume he wrote it, states in paragraph three, the
11 last sentence, "Scrupulous cleanliness must be insisted
12 upon wherever this material is handled," do you agree with
13 that?

14 A No, I don't. I don't know what he means by
15 scrupulous. In the first place, this is not an article.
16 This is very probably a letter to the editor of the, of
17 the, of this particular journal because he's quoting the
18 article and he is -- As I said, it all depends on what he
19 means by scrupulous cleanliness.

20 I think if it's handle like any industry chemical
21 and you clean up the spills and you don't get it on
22 yourself and you don't breathe it at elevated temperatures,
23 I think if this, when he talks about the material being
24 contamination of the work table surfaces, it doesn't
25 volatilize at room temperatures, so that's not the problem.

1 The problem is if you contaminate your skin and clothing or
2 if you breathe the material at elevated temperatures.

3 Q Would you agree that there should be
4 scrupulous cleanliness with respect to the skin?

5 MR. CARNEY: Well, you've just asked the
6 question, so you've repeated yourself and you're, you know,
7 you're talking about -- You've got a question that has
8 undefined terms.

9 Q (By Mr. McCrea) When he talks about
10 scrupulous cleanliness, do you interpret that as referring
11 to the workplace or to the skin of the worker?

12 MR. CARNEY: Well, let me object here. You're
13 asking Dr. Kelly to speculate inside the mind of someone as
14 to what he means.

15 MR. MCCREA: I'm asking him for his
16 interpretation and if he doesn't --

17 A I find it hard to interpret what he means. As
18 I said, he talked about contamination of work table
19 services, etc. Does he mean by that that should be
20 scrupulously clean, surgically clean like we're dealing
21 with a radioactive material? I don't believe it's anything
22 like that.

23 "Scrupulous cleanliness is insisted upon wherever
24 the material is handled." Does that mean if you get
25 something on the skin you should immediately wash it off?

1 It isn't that toxic. No, you don't have to wash it off
2 right away. So I don't know what he means by scrupulous,
3 and I don't believe he's an authority on it in the first
4 place. Just because this man wrote it, that doesn't make
5 him an authority.

6 Q (By Mr. McCrea) Can you you go to page 52?

7 A Yes, sir.

8 Q Do you see the caption, "Health and Safety"?

9 A Yes, sir.

10 Q And under "Health and Safety" are there
11 paragraphs with quotations?

12 A Yes, sir.

13 Q Do those paragraphs relate to Monsanto
14 material?

15 A They relate to what Mr. Pennington of Newport
16 reported in his America tour. He went to Anniston, so it
17 refers to Anniston, yes, sir, and it refers to Plant B
18 which is the Krummrich plant or the Sauget plant or the
19 East St. Louis plant depending on what year you're talking
20 about.

21 Q Are paragraphs one, two, three, four, five and
22 six descriptive of the conditions at the Anniston Monsanto
23 plant and the East St. Louis plant?

24 MR. CARNEY: On December 29th, 1950?

25 MR. McCREA: On December 29, 1950.

1 A Well, starting right off, I don't believe we
2 had tins of cold cream around, ointment around there. We,
3 as our general policy, we were against using protective
4 ointments. We rather would prevent the material from
5 getting on the skin by other means rather than try out
6 protective ointment which never works.

7 I agree when he said that operators were
8 sufficiently trained in the need for personal cleanliness.
9 I think, yes, it represent the procedures at Monsanto and
10 East St. Louis and Anniston. I think the word toxic
11 department has a connotation that really means something
12 different to everyone else. At East St. Louis -- At the
13 East St. Louis plant they called everything toxic so they
14 could get under the umbrella of the daily showers and the
15 15 minutes off and the change of clothes.

16 Q Were the men expected to take a bath in their
17 own time at the end of the shift in Anniston, Alabama?

18 A I can't answer that.

19 Q That statement is attributed to the plant at
20 Anniston, is it not?

21 A Yes, that's true. I suppose they were
22 expected to.

23 Q Would you consider it unsafe if they did not?

24 A At Anniston?

25 Q Yes, sir.

1 A No, sir, it was not unsafe because we never
2 had any problems with any illness at Anniston in the PCB
3 department that could be attributed to PCBs.

4 Q Would you consider it an unsafe practice not
5 to have emergency showers?

6 A Yes. I think emergency -- I would consider it
7 unsafe. I think emergency showers should be in all
8 chemical plants.

9 Q Would you consider it unsafe practice for
10 workers to eat food in the area of PCB manufacture?

11 A Well, we considered it inadvisable. Whether
12 it was safe or not, I can't answer that because, first of
13 all, if there was enough material on the individual's hands
14 and they were getting it, it was getting on the food, that
15 was unsafe. If there was enough material in the air so
16 that when they're sitting down for a half hour lunch break,
17 they were inhaling material above the maximum allowable
18 concentration, that was unsafe.

19 Q Would you consider it unsafe not to provide an
20 annual medical examination for workers exposed to PCBs?

21 A It depends again on the exposure. It depends on
22 the history of the plant. If the people had problems in
23 the PC department, PCB department, they should be examined
24 at intervals. Whether a year or longer is --

25 Q What was the average duration that a worker

1 was employed in the PCB department at East St. Louis,
2 Illinois?

3 A Oh, I can't answer that.

4 Q How many years do you think was the average
5 for a person to work in the PCB department? I believe it's
6 number 246 at East St. Louis, Illinois?

7 A My guess would be pure speculation, would be
8 around five years. Don't hold me to that. I don't know.

9 Q Would you consider it an unsafe practice not
10 to give employees an annual lung x-ray or -- excuse me -- a
11 lung x-ray every three years as stated in the last
12 paragraph?

13 A Would I consider it un --

14 Q An unsafe work practice to not give employees
15 exposed to PCBs a lung x-ray every three years?

16 A No, I do not consider that unsafe because I
17 think exposure to PCBs does not cause any problems with the
18 lungs.

19 Q Then why -- This article states that Monsanto
20 gave its employees a lung x-ray every three years.

21 A We gave it to all the people.

22 Q Why did you give it to all the people?

23 A Because when you examine a person, you are
24 looking for not only occupational conditions, but
25 non-occupational conditions. You also have people who

1 rotate through various departments, so it was a policy that
2 we gave x-rays where we had an x-ray machine at one, two or
3 three years depending on the age of the person. You're
4 looking for the size of his heart. You're looking to see
5 whether he has emphysema. You're looking for a lot of
6 things rather than if your looking for any changes in
7 PCBs or sulfuric acid or whatever the man worked with.

8 Q Your testimony here today is that the lung
9 x-ray given to the workers every three years was unrelated
10 to potential consequences from the exposure to PCB.

11 A That's correct.

12 Q Will you turn, please, to page 53 and address
13 paragraph three which begins, "Mr. Ellenburg"? Do you know
14 Mr. Ellenburg?

15 A Yes. I thought he was an analytical chemist.
16 I'm not --

17 Q Do you know H. B. Richard, Jr. of Monsanto
18 Chemical Company?

19 A We had a Dr. Richard, Ph.D. Richard who was in
20 the research department of MCC. I don't know if that's the
21 same man or not.

22 Q Are you familiar with the results of the safe
23 limits of Aroclor vapor concentration in air which said
24 test was carried by Kettering Laboratories in
25 Cincinnati?

1 A Yes, that's been gone on repeatedly here.
2 That's the Treon work.

3 Q All right. And what were the safe levels for
4 PCB?

5 A Well, he came out with some, but I think it
6 was finally established that .5 or 1242 milligrams per
7 cubic meter -- I mean, .5 for 54, 1254 and one milligram
8 per cubic meter for 42.

9 Q Can you explain to a jury how much that is?

10 A Well, cubic meter of air is sort of pretty
11 close to a yard by a yard by a yard. I mean, a yard is 36
12 inches. A meter is 39 inches. I cubic is this way.
13 That's cubic meter of air, and a milligram is -- let's see
14 -- it's a thousandth of a gram. It's a pretty small
15 amount.

16 Q How would you describe that to the jury so
17 that they could have some frame of reference?

18 A Well, I think it's hard to explain that to the
19 jury. A milligram is -- I'd have to transpose milligrams
20 to a gram. That's a thousandth of a gram and there are
21 four grams in a teaspoonful. So you vaporize 1/4,000 of a
22 teaspoonful and have it present in a small area. That's
23 one milligram per cubic meter.

24 Q All right, sir. Do you agree with the
25 statement in the second to the last paragraph on page 53

1 which states, "The vapors of hot Aroclors are distinctly
2 irritating to eyes and nose above a concentration of three
3 milligrams per cbm in air"?

4 A I don't really know what cbm is. I mean,
5 that's an English term that I don't know, but there's no
6 question what vapors are irritating to the eye and nose
7 above, certainly above .5 milligrams.

8 Q Did you ever warn that if workers experience
9 irritation to their eyes, they are exposing themselves to
10 excessive levels of PCB?

11 A No, but I don't believe if the people, the
12 workers have irritation of their eyes and nose they will
13 stay around in the atmosphere. They'll get out.

14 Q But you did not so warn?

15 A Well, I can't say that I did or didn't, but I
16 think that I'd give the workers credit for common sense.
17 If working in an irritating atmosphere, they get out or
18 correct what's happening. This will occur usually in leaks
19 or something like that.

20 Q Did you ever warn the workers that they could
21 become poisoned if they experienced irritation to their
22 eyes in that that could be an indication of PCB levels
23 above the safe level?

24 A Well, there again you are being too
25 simplistic. Here they are exposed to this for one, two,

1 three, four minutes as a leak, so out comes this hot air
2 PCB, and their eyes and nose are irritated. They're not
3 going to get poisoned from that exposure. They'll get
4 irritation of their eyes and nose. They stop the leak and
5 everything is fine. So no, I didn't warn them.

6 Q Will you turn to page 54? I will address your
7 attention to the heading "Safety Equipment" which is
8 approximately in the middle of the page. Is that an
9 accurate statement as to the operations of the East St.
10 Louis Monsanto plant called Krummrich?

11 MR. CARNEY: Which paragraph are you --

12 MR. McCREA: Under "Safety Equipment."

13 MR. CARNEY: Okay.

14 A I can't answer that because the safety
15 equipment comes under the responsibility of the safety
16 department, and I can't answer of my own knowledge whether
17 these things really were there or not.

18 Q (By Mr. McCrea) Will you consider a deviation
19 from that practice as stated on page 54 under the heading
20 "Safety Equipment" an unsafe practice?

21 MR. CARNEY: Objection to the form.

22 A Unsafe practice where, the Krummrich plant?

23 Q (By Mr. McCrea) Yes, sir.

24 A Well, suppose a pair, spare suit of clothes
25 was in the locker room. That would be unsafe to have it in

1 the locker room rather than encased in an apartment. The
2 first aid cabinets, we were doing our best to get rid of
3 first aid cabinets because the only thing you need for
4 first aid is lots of water and a shower at the chemical
5 plants. So I think having, not having a first aid cabinet,
6 that is not unsafe. Gas mask you certainly wanted. Fire
7 extinguisher you certainly wanted. Stretcher in the
8 department? I don't know if that was important. I don't
9 think we had stretchers in all our departments, so I
10 wouldn't consider it unsafe if we didn't have a stretcher
11 in the department.

12 Q Would you consider it unsafe not to have a
13 fume respirator.

14 MR. CARNEY: Objection to the form. You
15 talking about in Krummrich?

16 A In the Krummrich?

17 Q (By Mr. McCrea) At Krummrich.

18 A Oh, yes, because there they're working with
19 chlorine. Remember your chlorinated diphenyl, and if you
20 get a leak from chlorine, you need a fume respirator.

21 Q Would you consider it an unsafe practice not
22 to have a fume respirator for exposure to ambient levels of
23 PCB under certain conditions?

24 MR. CARNEY: Objection to the form.

25 A How high is the ambient level?

1 Q (By Mr. McCrea) Three parts, three milligrams
2 per cubic meter.

3 A You mean we've got a leak and there it is?

4 Q Right.

5 A Still talking about the criminal plant.

6 Q Yes, sir.

7 A If we had a leak in three parts per, of three
8 milligrams per cubic meter, we would not consider that
9 unsafe for the time that it would take the workers to fix
10 up the leak.

11 Q At what level would you require workers to
12 wear a fume respirator or under what conditions?

13 MR. CARNEY: Again at Krummrich?

14 MR. McCREA: At Krummrich.

15 MR. CARNEY: Which again for the jury's
16 benefit is East St. Louis.

17 MR. McCREA: Correct.

18 A Well, in the first place, remember we've put
19 this fume respirator in there for the chlorine. That was a
20 serious thing. And to answer your question of what level,
21 if we had a big spill of hot PCBs, I believe that we would
22 use the respirator and the goggles to avoid nose and throat
23 irritation, and we would get the people out of there until
24 the condition were corrected, and we would go in there with
25 a gas mask or an airline helmet. I can't give you figures

1 as to what level we'd say, "Put the respirator on."

2 Q (By Mr. McCrea) Did you ever warn the workers
3 at the Krummrich plant that if they experienced nose and
4 throat irritation, they could also be absorbing that
5 chemical into their body in that it permeates the nasal
6 membranes and the lungs?

7 A No, sir, I did not because that would be a
8 very unusual -- The situation of irritation of the nose and
9 eyes and throat would be very unusual. It would be
10 temporary, would not be considered standard operating
11 procedure and would not be repeated.

12 Q Did you ever warn the companies to which you
13 sold PCBs that irritation of the nose could also lead to
14 systemic poisoning?

15 A We warned the people that they should avoid
16 breathing the fumes at elevated temperatures. We did not
17 warn them specifically about irritation of the nose and
18 throat saying that could lead to systemic intoxication, but
19 if they avoided breathing the fumes, if they followed our
20 directions, they wouldn't get irritation of the nose and
21 throat and they wouldn't get systemic adverse effects.

22 Q Would you turn to page 55?

23 A Yes, sir.

24 Q I direct your attention to the third paragraph
25 beginning with the words, "Mr. Benignus." Did I pronounce

1 that correctly?

2 A Benignus, yes, sir.

3 Q Benignus. The sentence states, "Mr. Benignus
4 of St. Louis, September 1953, discussed the dangers of
5 using Aroclor in indoor paints." Do you recall what the
6 dangers were that he discussed in September 1953 with
7 regard to Aroclor in indoor paints?

8 A No, sir, I do not. I do not, but first of
9 all, I don't believe there was a very large amount of
10 Aroclors used in indoor paints, but if it were used and you
11 were using it on a closet or in a confined space, you would
12 be breathing the fumes. That may be elevated temperatures,
13 it may be hot in this closet, but I don't know.

14 I do not -- To answer your question, I do not know
15 what the dangers of using Aroclors in indoor paints was. I
16 have seen no reports in the company literature about or
17 even talking to anybody about whether there had been any
18 danger of using Aroclors in indoor paints.

19 Q Did Mr. Benignus ever discuss with you the
20 dangers he felt existed with using PCBs in indoor paints?

21 A No, sir.

22 Q Did you ever discuss with him the danger you
23 felt existed in using PCBs in indoor paints?

24 A No, sir, I don't ever remember having even
25 heard that there was a danger of using Aroclors in indoor

1 paints.

2 Q Will you turn to page 57?

3 A Yes, sir.

4 Q Can you identify the document which appears at
5 page 57?

6 A I'll have to identify it by using page 58,
7 also.

8 Q All right, sir.

9 A It's a letter from me to Dr. Barrett in London
10 who was a Ph.D. in London with a -- dated September 20th,
11 1955 on a previous memorandum of his which I don't have.
12 There's a copy to Dr. Hardy, a chemist, and Dr. Newman, our
13 physician in London.

14 Q Did you author this document?

15 A I dictated it, yes.

16 Q Did you do the research to prepare the
17 information incorporated in this document?

18 A I don't know what you mean by research. You
19 mean to say did I --

20 Q Did you rely on others rather than information
21 which you independently developed to write this letter?

22 A Well, then again which I independently
23 developed, you mean did I do the laboratory work or did I
24 go and look at the Treon work, talk to the Kettering
25 people? Certainly I did that. I didn't ask anybody at

1 Monsanto for advice in dictating this. This was my own
2 knowledge.

3 Q At the top of the letter in capital letters
4 are the words "Aroclor Toxicity." What is Aroclor?

5 A Aroclor is a generic name of Monsanto products
6 for both chlorinated diphenyl, chlorinated diphenyl
7 benzene, chlorinated terphenyl.

8 Q What is toxicity?

9 A Toxicity is the ability of a material to
10 produce unwanted effects on the animal organism or on
11 plants or on fish or on birds.

12 Q Will you refer to paragraph one? "Howard
13 Nason has given me your memo of September 8." You do not
14 recall the content of that memo as you testify here today?

15 A No, sir, I do not.

16 Q Will you refer to paragraph two? What is
17 Aroclor 1254?

18 A We've been over this one. That's chlorinated
19 diphenyl chlorinated to 54 percent. Aroclor 1242 is
20 chlorinated diphenyl chlorinated to an average of 42
21 percent.

22 Q Working on down in the paragraph there is a
23 reference ten lines down to 1268 -- Strike that. There's a
24 reference on line nine to 1254. What is 1254?

25 A A chlorinated diphenyl chlorinated to 54

1 percent chlorine.

2 Q In the next line which is line ten there's
3 1268. What is 1268?

4 A Chlorinated diphenyl chlorinated to 68 percent
5 chlorine.

6 Q So in that paragraph you're making reference
7 to 1242, 1254 and 1268. Is that correct?

8 A That's correct.

9 Q You make reference to any compounds which
10 include benzene in that paragraph?

11 A I don't know what you mean by including
12 benzene. There are benzene rings in there that are joined
13 together and chlorinated, but that doesn't mean -- The
14 answer is no, I do not make reference to benzene in
15 that.

16 Q Are all the references in paragraph two to
17 PCB?

18 A Yes.

19 Q Are there any references in this letter to
20 anything other than PCB? If so, where are those
21 references?

22 A No, there aren't.

23 Q So when we have Aroclor described at the top,
24 we're talking about PCB?

25 A That's correct.

1 Q Do you agree with the sentence, the second
2 sentence of paragraph two as you testify here today? "This
3 is not particularly surprising because in earlier work it
4 was found that toxicity increased with chlorination."

5 A That's correct.

6 Q Do you agree with the sentence, fourth
7 sentence in paragraph two? "Frankly, there was not too
8 great a difference between the two compounds, however."

9 A That's correct.

10 Q What do you mean by that, not too great a
11 difference?

12 A Well, I take it that it wasn't a great
13 difference. There wasn't a quantitative difference of a
14 large amount. I can't be any more descriptive than that.

15 Q Are we talking about the manner in which they
16 are ingested, the toxicity or what? What does differences
17 relate to?

18 A I would think in this context we're talking
19 concerning inhalation.

20 Q Next sentence you state, "As you know, the
21 maximum allowable concentrate is 0.1 ml per cubic meter in
22 the case of 1254 and as high as 10.0 mgm in the case of
23 1268." What is the source of that information?

24 A I can't give you that information. I believe
25 it may have been Treon's thinking. I do not know if they

1 had maximum allowable concentration. There's a
2 typographical error. It should be .1 milligrams of cubic
3 meter 1264 instead of milliliter. I don't know if they, if
4 these were ones that Treon was thinking about, but I can
5 tell you that it was a range established by the conference
6 of the Government Industrial Hygienists was .5 milligrams
7 of 1254 and 1.0 milligrams of 1242. I don't know the year
8 in which that was established. It was sometime after
9 Treon's work in 1954.

10 Q Was does the term maximum allowable
11 concentrate mean?

12 A That means that amount of material, the
13 recommended limit that the material should be in the air
14 for an eight-hour working day for a worker's lifetime.

15 Q You state in paragraph two, second or the last
16 sentence, "In this country they don't use the MACs very
17 routinely." Explain that to the jury.

18 A Well, they did not go out and calculate a
19 bunch of negative testing. In other words, if they tested
20 a department every six months and found it was under the
21 MAC, they didn't do it and they may have skipped a year or
22 so. They just didn't do it routinely after -- That's 1955
23 we're talking about. After the OSHA acts came in where it
24 was deemed important to do it routinely, then they did it.
25 In '55 they didn't do it routinely.

1 Q Then you state, "But certainly in England I
2 think it would be all right to consider 0.2 mgm/cubic meter
3 as perfectly safe." Is that correct?

4 A I mean, are you reading it correct or is the
5 statement correct?

6 Q Yes. Did I read it correctly?

7 A Yes, you read it correctly.

8 Q What does the 0.2 milligrams per cubic meter
9 apply to, what chemicals?

10 A I don't know whether it applies, whether it
11 applied to 1254 or 1242. This is in English. If I had
12 this previous letter I'd be able to tell you, but I thought
13 I told him then that whether it was 1242, 1254, .2
14 milligrams per cubic meter is perfectly safe and it was
15 perfectly safe because when it came out with the Government
16 Industrial Hygienists level, it was .5 for 54 and 1.0 for
17 42. So this 0.2 it perfectly safe.

18 Q Did you ever communicate to Westinghouse the
19 same information that you communicated to Dr. Barrett, that
20 you thought 0.2 milligrams per cubic meter would be
21 perfectly safe?

22 A No, I never did because remember, this is an
23 English plant, and presumably people over there were
24 talking about using .2 milligrams. I don't know if
25 Westinghouse had any English plants, but if they did, they

1 would certainly have the same opportunity to find out what
2 the level of MAC in England was just the same as we did
3 with our plants in England.

4 Q In the next paragraph, paragraph three, you
5 state in your letter, "I don't know how you would get any
6 particular advantage in doing more work." Are you telling
7 Dr. Barrett that there doesn't need to be any additional
8 work with respect to determining what?

9 A Well, I don't know what work he was asking
10 for, but if he was asking for more work to determine safe
11 levels, we didn't need to do any more because he had those.
12 We had done, had work done by the Kettering Laboratory that
13 was accepted by the government people, so we didn't need
14 any more.

15 Q Then you state, "What is it that you want to
16 prove?" What do you mean by that?

17 A Exactly that. I don't know what he wanted to
18 prove by whatever work he was talking about.

19 Q Was he referring to toxicity testing of
20 animals?

21 A No, he was referring to -- Well, he may have
22 been. He may have been wanting to find out different
23 levels of air levels that you would consider safe. I don't
24 really know what he wanted to prove on this because that's
25 why I asked him. When I had the letter I didn't know what

1 he meant, so I can't answer it now without knowing what,
2 without even seeing the letter, but I had told him we've
3 got the levels that are safe. What else do you want?

4 Q You state, "I believe your work should be
5 directed towards finding out what the concentrations are of
6 Aroclor during the different operations, whether it is
7 industrial or painting." Do you know of any data that was
8 ever obtained by Monsanto at the Krummrich plant which was
9 recorded to show the industrial levels at the plant?

10 A Yes, sir. I know it has been done, but where
11 those records are 13 years after we stopped making the
12 material, 35 years after this letter, I don't know. They
13 were certainly recorded. I've seen the results. They were
14 under the safe maximum allowable concentration. They
15 weren't done routinely.

16 Q Did you ever report to anyone the levels which
17 you found at Krummrich?

18 A Sure. I reported them to the plant doctor. I
19 reported them to the plant manager.

20 Q Did you ever report it to anyone else within
21 the Monsanto organization in writing?

22 A I may have and I may have not.

23 Q But you acknowledge that the testing was done
24 on a random basis before the OSHA regulations?

25 A Well, it was done in a sufficient number. I

1 satisfied myself that these workers had a safe working
2 environment and it was true. They never had any problems.

3 Q Did you ever determine the levels of Aroclor
4 exposure during the process of painting?

5 A Painting what? Anything?

6 Q What do you mean when you state "or painting"
7 in paragraph three?

8 A I don't know because it all depends what he
9 asked about in his letter.

10 Q You state, Dr. Kelly, and you wrote this, "I
11 believe your work should be directed towards finding out
12 what the concentrations are of Aroclor during the different
13 operations, whether it is industrial or painting." You
14 wrote that?

15 A Certainly, I wrote it.

16 Q What did you mean?

17 MR. CARNEY: Just for the record, he wrote it
18 35 years ago. You'll agree to that, and you're acting like
19 you're outraged that he can't remember what one word meant
20 when he wrote it 35 years ago. I think he's doing a pretty
21 darn good job of remembering what he did, but I can't fault
22 him if he can't remember every I and T.

23 Q (By Mr. McCrea) Doctor, you've reviewed this
24 document many times since you've wrote it, haven't you, in
25 other depositions?

1 A Not many times.

2 Q You've been questioned about this document by
3 other attorneys?

4 A I don't believe I have.

5 Q You don't?

6 A I may or I may not. It hasn't been too
7 prominent. Maybe I have. I don't know. I've been
8 questioned about a lot of things by a lot of attorneys.
9 This may be one of the them. I don't know.

10 Q Doctor, do you know today what you meant when
11 you referred to the word painting?

12 A I do not, Mr. McCrea, but you'll have to
13 remember that Dr. Barrett was a research man or a
14 development man in our English operation. He wrote me a
15 letter. He may have described to me what he meant by what
16 the painting or the industrial use he was referring to, so
17 I wrote him back and said, "I think the thing to do is to
18 find out what exposure you've got in these particular
19 operations." So I don't know, to answer your question,
20 what was meant by that statement.

21 Q You make reference in paragraph three to
22 Kettering laboratory reports which cost 15 to \$20,000.

23 A Yes, sir.

24 Q In paragraph four you state, "MCC's position
25 can be summarized in this fashion." What does MCC stand

1 for?

2 A Monsanto Chemical Company.

3 Q "We know Aroclors are toxic, but the actual
4 limit has not been precisely defined." When you refer to
5 Aroclor in that paragraph, are you referring to Aroclor
6 1242, 1254 and 1268 which you reference in paragraph two?

7 MR. CARNEY: I'm going to object here that
8 again you're asking the witness to try to put himself and
9 his mind back 35 years ago and you're acting like he did it
10 yesterday. If you can answer, Doctor.

11 A What is the question? I've lost the train of
12 thought.

13 MR. McCREA: Could you read it back, please?

14 (Thereupon, the reporter propounded the pending
15 question.)

16 A Yes.

17 Q (By Mr. McCrea) Doctor, whatever the debates
18 over reports of human health effects in earlier animal
19 studies, by 1955 it was common knowledge among medical
20 scientists at Monsanto that PCBs were systemically toxic,
21 was it not?

22 MR. CARNEY: Let me object to, I think the
23 questions contains undefined terms as to what you mean by
24 systemically toxic and what you mean by toxic.

25 MR. McCREA: Would you reread the question?

1 (Thereupon, the reporter propounded the pending
2 question.)

3 A Well, the answer to that is yes, but that is,
4 this is not unique in industrial chemicals. All industrial
5 chemicals have a certain amount of toxicity. It varies
6 from very little to quite toxic. We consider this in the
7 lower range.

8 Q (By Mr. McCrea) Did you say that in your
9 letter?

10 A Not in this letter, but I've said it in many
11 letters.

12 Q And on the date, September 20, 1955, you knew
13 that the actual limit for toxic systemic effects caused by
14 PCB had not been precisely defined?

15 A Yes, sir, we had, we had defined a safe level,
16 but we hadn't defined what will make you sick, but I think
17 the answer is you want to define a safe limit. You don't
18 want to define a toxic limit. That's what I said.

19 Q The next sentence says, "It does not make too
20 much difference, it seems to me, because our main worry is
21 what will happen if an individual gives any type of liver
22 disease and gives a history of Aroclor exposure." Doctor,
23 what do you mean by any type of liver disease?

24 MR. CARNEY: Well, you did misread a word. I
25 don't think it was intentional. You used the word gives

1 instead of develops.

2 Q (By Mr. McCrea) What do you mean by any type
3 of liver disease in sentence two of paragraph four of your
4 letter dated September 20, 1955 at page 57?

5 A I meant by that liver disease that can occur
6 in the ordinary run of people who are not exposed to PCB at
7 all. I mean by that infectious hepatitis, serum hepatitis,
8 cirrhosis of the liver, alcoholic hepatitis. That's what I
9 mean by any type of liver disease.

10 Q Can PCBs contribute to hepatitis? Was it your
11 opinion on September 20, 1955 that PCBs could contribute to
12 hepatitis?

13 A They could cause a chemical hepatitis if there
14 was a sufficient exposure, yes.

15 Q Could PCBs contribute to cirrhosis?

16 A No, sir.

17 Q Could PCBs contribute to alcohol cirrhosis?

18 A I don't know.

19 Q Were there any other types of liver disease
20 that would be included in your definition?

21 A We would include everything there except
22 malignancies of the liver. I think that runs, we've got
23 infectious, we've got toxic, we've got hep -- Well, I guess
24 we could say hepatitis from drug needles, but that's a
25 serum hepatitis. I think that takes care of most of the

1 liver diseases.

2 Q What about yellow atrophy of the liver?

3 A Yellow atrophy of the liver is the end result
4 of hepatitis, of continuing, fulminating hepatitis because
5 the vast majority of hepatitises get well.

6 Q Doctor, on September 20, 1955 when you wrote
7 this letter to Dr. J. W. Barrett, did you feel that it was
8 a waste of money to do any other research to determine the
9 extent of harm Aroclor could cause to humans?

10 A I didn't say that. I just talked to him about
11 whether there should be any work done on safe levels of the
12 material in the air.

13 Q As it affects health?

14 A Yes.

15 Q And did you feel it was a waste of money to do
16 any more work on determining safe levels in the air as
17 those safe, as those levels would affect health?

18 A We have determined that already. That was a
19 definite. It was proved. It was proven. We had excellent
20 data on it.

21 Q Is that consistent with your statement in
22 paragraph four, "We know Aroclors are toxic, but the actual
23 limit has not been precisely defined"?

24 A Well, I explained that earlier, Mr. McCrea. I
25 said we don't know how much the exact limit is that you can

1 work in and get sick. We know the exact limit you can work
2 in and be safe. There's a big difference between those
3 two.

4 Q Did you inform Westinghouse of that
5 information?

6 A Of what information?

7 Q The level in which workers would be safe.

8 A It was in the medical literature.

9 Q Did you inform Westinghouse?

10 A I may have.

11 Q Of the levels which workers could work in and
12 be safe?

13 A I may have, and we also have it in our
14 bulletins, so Westinghouse, I'm sure, got some of the
15 bulletins. If you mean I myself called, sent a letter to
16 Westinghouse, I may or may have not, but I do know that
17 Mr. Wheeler wrote to their industrial hygienist and
18 explained all that. I know that it was in our bulletins
19 that Westinghouse got, and I also know that Westinghouse
20 had a medical department that was as up-to-date on the
21 medical literature as I was.

22 Q You don't recall yourself ever communicating
23 verbally or in writing with your author on the letter to
24 Westinghouse as to what the safe levels were?

25 A I do not recall.

1 Q You state, "It does not make too much
2 difference, it seems to me, because our main worry is what
3 will happen if an individual develops any type of liver
4 disease and gives a history of Aroclor exposure"? Is your
5 concern there that because the levels are not defined and
6 you know that PCBs produce liver problems, that the
7 connection would then be made if a person simply
8 establishes exposure?

9 A Well, in the first place, I don't know what
10 you mean the levels were not defined. We had a safe level
11 determined. Now, if you want to rephrase that sentence
12 explaining what you mean by that or leaving it in or --

13 Q What do you mean by that sentence?

14 A Well, I don't know. I didn't say the
15 sentence. Which sentence are you talking about, yours or
16 this one?

17 Q Yours, sentence two in paragraph four?

18 A "We know the Aroclors are toxic. The actual
19 limit has not been precisely defined." By that I said we
20 do not know what level you have to work at to get sick. We
21 know what levels you have to work under to stay well.

22 Q The last sentence is, "I am sure the juries
23 would not pay a great deal of attention to MACs." To what
24 are you referring when you say juries?

25 A Jury is a group of people at a trial.

1 Q Are you stating that if a person establishes
2 two things, that he had exposure to PCBs at any level and a
3 history of liver disease, that the juries would rule that
4 the exposure caused the liver disease?

5 A No, sir, I'm not saying that at all.

6 Q What do you mean?

7 A Well, all I'm saying is if you talk to a jury
8 about .5 milligrams per cubic meter, 1.0 cubic meter, I
9 think the jury will make their mind up on, by using good
10 common sense. Here is the evidence in the case, and make
11 their decision there regardless of what the MACs may or may
12 not have been.

13 Q What did you think juries would pay attention
14 to if not the MACs?

15 A I'm not a lawyer. I don't know.

16 Q Why did you make that statement in the letter?

17 A Because I didn't believe they would pay much
18 attention to MACs. I think they would base their decision
19 on the entire amount of evidence submitted by the
20 defendants and the plaintiffs, the medical records in the
21 case. That's what I would think. That's why I made it. I
22 see -- I mean, I believe I'm oversimplifying when I said my
23 main worry is what would happen if an individual developed
24 liver disease. Our main worry was we wouldn't want a
25 fellow to get any liver disease.

1 Q Were you not worried that a jury would rule
2 that if a person has exposure to liver disease, there would
3 be a finding for that individual?

4 A I may have in 1955, but I certainly didn't by
5 1974 because there was no such jury verdict in the 39 years
6 since then.

7 Q But this was, as you say, you may have felt
8 that way in '55?

9 A I may have.

10 Q On the next page which is page two you state,
11 "We, therefore, review every new Aroclor used from this
12 point of view." Point of view refers to what?

13 MR. CARNEY: Let me just for the record, I
14 think we have less than a minute to go and I don't want to
15 get cut off in the middle of an answer.

16 A Yeah, but why don't we keep going a little bit so
17 we don't have to wait when we get over there? It's only
18 quarter after 12. We're going over to O'Connell's. I
19 think we need to keep going till quarter till one or
20 something like that.

21 MR. CARNEY: I agree, but this tape is about
22 to run out, and we'll decide on whether we break for lunch
23 or go to another tape.

24 Q (By Mr. McCrea) To what does point of view
25 refer?

1 MR. CARNEY: Well, let me -- Why don't we cut
2 at this point so we don't get in the middle of an answer.
3 We've got less than a minute.

4 MR. McCREA: Break.

5 (Thereupon, a short recess was taken).

6 Q (By Mr. McCrea) Dr. Kelly, back on the
7 record. We're on page 58 of your September 20, 1955 letter
8 to Dr. J. W. Barrett. In the first sentence of the first
9 paragraph you state, "We, therefore, review every new
10 Aroclor used from this point of view." To what does point
11 of view refer?

12 A Well, it refers to the next two sentences. In
13 other words, if I had a colon there instead of a period,
14 the point of view is this: If it is an industrial
15 application where we could get air concentrations and have
16 some reasonable expectations that the air concentrations
17 will stay the same, we are much more liberal in the use of
18 Aroclor.

19 If, however, if it is distributed to householders
20 where it can be used in almost any shape or form and we are
21 never able to know how much of the concentration they are
22 exposed to, we are much more strict. That's the point of
23 view.

24 Q Have you sold Aroclor PCB for use in
25 households?

1 A No, sir, but this is England and I don't know
2 what they were going to do over in England.

3 Q You say, "We are much more strict." To whom
4 are you referring when you say we?

5 A Monsanto company.

6 Q Did you sell PCB to be used as a plasticizer
7 in silos?

8 A Not as a plasticizer. We had sold it as a
9 paint for silos. I don't know if that was sold by Monsanto
10 or by the distributors, but Monsanto PCBs were used as a
11 paint in silos.

12 Q Do you have any data on the air concentrations
13 to which individuals were exposed inside the silo where
14 that was used as a plasticizer?

15 A No, sir.

16 Q And did you market it after 1955 to be used as
17 a plasticizer in silos?

18 A Again it was used as an ingredient in the
19 paint sometime, but I do not know when it was. I don't
20 know if we actively marketed it or if it was marketed by a
21 distributor because it was used in a very few states, Ohio
22 and Michigan, I believe. It was not a widespread use
23 through the country.

24 Q Did you know after the 1955 and the date you
25 authored this letter that PCBs were used in a plasticizer

1 formulation on the inside of silos?

2 A You mean after 1955?

3 Q Yes, sir.

4 A Yes, I did, certainly.

5 Q And did you also know that you had no data on
6 the concentration levels into those silos?

7 A Yes, sir.

8 Q And did you continue to market the product
9 notwithstanding the fact you had no data on the
10 concentration levels into the silos?

11 A They continued to be used, yes, sir. Now, I
12 don't know when you're saying marketing, I don't know if we
13 were actively marketing it, but it was used in silos.

14 Q In the last sentence you state, "No amount of
15 toxicity testing will obviate this last dilemma and
16 therefore, I do not believe any more testing would be
17 justified." Do you feel that it was a waste of money to
18 investigate whether there was, whether there were any
19 health effects that could be determined by any future
20 testing?

21 A I think it's never a waste of money to find
22 out what the toxic properties of a compound are.

23 Q When you made that statement, "No amount of
24 toxicity testing will obviate this late dilemma and
25 therefore, I do not believe any more testing would be

1 justified," did you believe it was a waste of money to do
2 any further testing to determine what health effects were
3 determined, were caused at what levels?

4 A No, I did not believe it was a waste of money,
5 but I saw no reason for doing it because we could not get
6 the other parts of the equation. We would never know how
7 much the man was going to be exposed to in these, if it
8 were distributed to householders and so --

9 Q And if you did know, you felt the jury
10 wouldn't pay attention to it at any rate?

11 A No, I didn't say that at all. That's your
12 words.

13 Q You said, "I am sure the juries would not pay
14 a great deal of attention to MACs."

15 A That's correct, but that's not --

16 Q Those were your words.

17 A Yes, but you want to repeat your words?

18 MR. McCREA: Please.

19 (Thereupon, the reporter propounded the previous
20 question.)

21 A What do you mean by pay attention to it?

22 Q (By Mr. McCrea) Maximum allowable
23 concentrations.

24 A Well, there certainly would be no maximum
25 allowable concentrations developed in household use. We

1 would never know what the person was exposed to, so that
2 wouldn't enter into the discussion at all with the juries.

3 Q But if you did know the maximum allowable
4 concentration, your opinion was a jury wouldn't pay
5 attention to it?

6 MR. CARNEY: You're talking about if there
7 was, PCBs were sold to households for use in households?

8 MR. MCCREA: No, in industrial or households.

9 MR. CARNEY: Yeah, but you're mixing apples
10 and oranges. He's saying that he doesn't think any more
11 testing should be made with regard to selling and
12 distributing PCB to householders, not the workplace. So
13 you're trying to twist these words and confuse the jury
14 here, Mr. McCrea. I don't know that -- I hope you're not
15 doing it intentionally, but you're certainly doing it, to
16 confuse householders with the workplace.

17 Q (By Mr. McCrea) Doctor --

18 MR. CARNEY: And there wasn't even any
19 testimony by Dr. Kelly that PCBs were marketed in the
20 United States to be used in the household.

21 Q (By Mr. McCrea) Well, come to that later.
22 Dr. Kelly, you made the statement on page one, quote, "I am
23 sure the juries would not pay a great deal of attention to
24 maximum allowable concentrations" Were you referring to a
25 case where a person in industry would develop liver disease

1 with exposure to PCBs with a known maximum allowable
2 concentration?

3 A I was not referring to any case at all because
4 a case hadn't occurred. If that -- if I was referring to a
5 hypothetical case, that's something else. I was certainly
6 not referring to any actual case.

7 MR. McCREA: Would the court reporter please
8 reread the question?

9 (Thereupon, the reporter propounded the previous
10 question.)

11 A My answer was, was I referring to a case.
12 That's what you asked. There was no such case, so I
13 obviously wasn't referring to one, to any specific case.
14 Now, if you are referring to a hypothetical case, let's
15 phrase it that way to me.

16 Q (By Mr. McCrea) When you stated on page one,
17 quote, "I am sure the juries would not pay a great deal of
18 attention to MACs," maximum allowable concentrations, were
19 you referring to a potential situation where a worker
20 developed liver disease in an industrial setting with a
21 known maximum allowable concentration?

22 A Yes, would develop liver disease that could be
23 from any of the four or five conditions that I mentioned.
24 Serum hepatitis, alcohol hepatitis, other compounds he
25 was working with to give him a chemical hepatitis,

1 infectious hepatitis, liver tumors. Yes, I was referring
2 to that.

3 Q And was it your opinion that the data already
4 gathered by Monsanto was more than enough to convince
5 unbiased people on a jury of the connection between PCBs
6 and systemic damage without reference to maximum allowable
7 concentrations?

8 MR. CARNEY: I'm going to object to that.
9 That question is so vague and convoluted and unintelligible
10 that I certainly don't understand what you're asking.
11 You're reading a question out of some letter that you got,
12 probably from your co-counsel I would suspect, and I would
13 say it's the most unintelligible question I've heard in
14 this deposition, and that's saying something.

15 MR. McCREA: Would the court reporter please
16 reread the question?

17 (Thereupon, the reporter propounded the pending
18 question.)

19 A Well, it's English, but I still have trouble
20 analyzing the question.

21 MR. CARNEY: It's a when did you stop beating
22 your wife question, Doctor, is what it is.

23 A Well, as I said earlier, I believe a jury will
24 take all the evidence into account. If there were levels
25 shown that were under the maximum allowable concentration,

1 that's fine, but I'm sure opposing counsel would say,
2 "Well, you didn't take this every hour, every day that this
3 man worked, so conceivably he's worked at higher levels.
4 Isn't that true," and I would have to say yes. So I think
5 the jury takes into account what the evidence is of his
6 exposure, of his medical condition and make their judgment
7 on that.

8 Q (By Mr. McCrea) Are you stating in this
9 letter that Monsanto could present definitive information
10 as to the maximum allowable concentrations and if the
11 plaintiff had liver disease and could establish exposure,
12 that the jury would not pay attention to Monsanto's proof
13 of maximum allowable concentrations?

14 MR. CARNEY: I'm going to object to that.
15 It's compound. It's more -- I couldn't believe it, but I
16 think this question is more unintelligible than the last
17 one. The memo doesn't say those words. I don't see them
18 in there at all. You're twisting and contorting and
19 harassing this ones for four days. I think this is
20 unconscionable, and I think the jury will pay attention to
21 that conduct, not MACs. I think they're going to want to
22 know about the evidence and what you have, what proof you
23 have that there's any connection between your plaintiff's
24 health problems and PCBs, and so far you haven't touched on
25 that at all.

1 MR. McCREA: I would ask the Court to strike
2 the comments of Mr. Carney as being totally irrelevant to
3 the objection and furthermore, purposely interjecting
4 inflammatory comments to the jury which he knows have no
5 relationship whatsoever to the question. Now, would you
6 please read the question back?

7 MR. CARNEY: I would just caution you, Doctor,
8 if you don't understand the question, just say so.

9 (Thereupon, the reporter propounded the pending
10 question.)

11 A I would have to say I don't know whether they
12 would or not. I'm not an expert on how juries decide
13 cases.

14 Q (By Mr. McCrea) In the sentence preceding
15 that you refer to your main worry. You say, "It does not
16 make too much difference, it seems to me, because our main
17 worry is what will happen if an individual develops any
18 type of liver disease and gives a history of Aroclor
19 exposure." By worry, what do you refer to?

20 A I refer to that if you have a product that is
21 a, that is capable in some overexposures of causing a
22 particular condition and there are numerous other
23 conditions entirely unrelated to occupation that cause the
24 same conditions, there is always the possibility that jury
25 may believe that this condition is due to his work

1 involvement rather than to a nonoccupational cause if he
2 has the illness. If he doesn't have the illness, obviously
3 the jury will not believe it at all.

4 Q Dr. Kelly, when you say our, did other people
5 have the same worry as you stated in this letter at
6 Monsanto Company on the date of September 20, 1955?

7 A I think everybody in industrial medicine has
8 this worry with all sorts of compounds. That's why there's
9 so many cases in litigation, because they may have no
10 foundation, but there's a temporal relationship between
11 work and the condition they have.

12 Q Did you continue to market PCBs for use in
13 nonindustrial applications before you authored this letter?

14 A You mean did I personally myself?

15 Q Monsanto.

16 A Did Monsanto? I don't know. You're talking
17 about Monsanto in England, Monsanto, U.S.A.?

18 Q U.S.A.

19 A Well, I don't know if they marketed it in
20 non-industrial applications before with the exception of
21 paint, and I don't know whether that use was marketed by
22 Monsanto or was just developed, a paint company calling up
23 a distributor and buying the PCBs. I don't know, so the
24 answer is I don't know.

25 Q After this date, did Monsanto continue to

1 market PCBs for non-industrial uses despite the fact that
2 you knew and you and Monsanto knew no maximum allowable
3 concentrations could be obtained?

4 A Well, we do you -- The answer is if we marketed
5 it, if they were marketed, yes, but we knew the maximum
6 allowable concentrations were obtained by heating the
7 material, and we knew that paint is not put on when it's
8 hot. So I don't believe there was any necessity for
9 looking for a maximum allowable concentration on paint.
10 The problem with paint has not been on the workers. It's
11 been on the stuff flaking off and getting into the silos,
12 the silage.

13 Q Have you ever tested for the maximum allowable
14 concentrations of PCBs into a silo?

15 A No, sir, I have not.

16 MR. CARNEY: For the record, I don't know how
17 many workers are inside of silos.

18 MR. McCREA: How about farmers, Mr. Carney?

19 MR. CARNEY: That's what I'm saying. I don't
20 know.

21 MR. McCREA: Do they count?

22 MR. CARNEY: Everybody counts.

23 A I farmer doesn't climb into a silo. He
24 unloads the stuff on the bottom. The paint it put on when
25 the silo is empty.

1 Q (By Mr. McCrea) What about the people that
2 put it on? Did you test for the maximum allowable
3 concentrations during that process?

4 A When they put it on, it's at the ambient
5 temperature and the stuff does not volatilize at the
6 temperatures that exist on a farm.

7 Q You state in the third sentence on page 58,
8 "If, however, it," meaning PCB, "is distributed to
9 householders where it can be used in almost any shape and
10 form and we are never able to know how much of the
11 concentration they are exposed to, we are much more
12 strict." In what way were you much more strict?

13 A I don't know how we were there, but maybe we
14 didn't allow it in some uses. I don't know. I don't know
15 what I meant by that in 1955.

16 Q Now, your attorney has stated that this was
17 written in 1955. Isn't it a fact that you've reviewed this
18 document with your counsel before testifying here today?

19 A I don't think so. He gave it to me, said,
20 "Look this over," but I didn't review it with him.

21 Q So you did look the document over before
22 testifying?

23 A Well, I've seen it before.

24 MR. CARNEY: You gave it to -- You gave the
25 documents to me and I handed them to him and said, "I

1 thought you might get some questions on this document," and
2 I was very correct. You've gotten -- This stack of Exhibit
3 Six is a one inch stack of documents and you're on page 58.
4 We've got 261 questions, so I assume I was correct. We've
5 already had lots of questions on the first 58 pages.

6 Q (By Mr. McCrea) Dr. Kelly, how much time did
7 you spend reviewing this document before your testimony
8 here today?

9 A This one here.

10 Q Yes, sir?

11 A A minute.

12 Q And you can't tell us what you meant when you
13 wrote, "We're are much more strict"?

14 MR. CARNEY: He's always answered that, Mr.
15 McCrea. Let me object. I am really getting irritated at
16 you. I've been restraining myself, but we are now in your
17 fifth day. I was not correct. We're in the fifth day. We
18 started on the 31st of May. You started your cross. You
19 went through on June 1, on June 12, on June 13 and now June
20 15, 1990, and it's after noon, so we're half a day here so,
21 and you're still, and you're asking these repetitive
22 questions and that's why this deposition is being drug out
23 for some reason. I don't know, but, you know, at some
24 point why don't you ask an intelligent question that isn't
25 repetitive so we can get through with this thing. I don't

1 know how many more days you're going to go, even though
2 you've promised two and a half days ago that it would be
3 one day only.

4 MR. McCREA: What's your objection to the
5 question?

6 MR. CARNEY: Repetitive.

7 MR. McCREA: My objection, and I will note to
8 the Court we don't have an answer. Dr. Kelly who is a
9 medical director from 1936 to 1974 and authored this letter
10 stated, "We are much more strict." I presume that he knew
11 then what he meant. I presume that with his testimony in
12 all of these cases and his preparation for this deposition
13 that he could define for the jury what he meant.

14 MR. CARNEY: And he's answered that he doesn't
15 recall, and I'm sorry, Mr. McCrea, but I don't fault this
16 man that he can't recall what he meant by a couple of words
17 that we wrote 35 years ago. I dare say that you can't
18 recall what you were doing 35 years ago.

19 MR. McCREA: Would you like to show me a
20 letter and see if I recall what it means?

21 MR. CARNEY: Mr. McCrea, you've got an answer
22 to your question and you're now badgering this witness
23 who's been sitting here, very patiently I might add, and
24 you're into the fifth day and you're asking him if, and he
25 said he can't recall what he meant by a word 35 years ago.

1 Q (By Mr. McCrea) Dr. Kelly, would there be any
2 way for you to refresh your memory?

3 A No, sir.

4 Q As to what you meant by that statement?

5 A No, sir.

6 Q And by dilemma, what are you referring?

7 A The dilemma is the material may be used in a
8 situation where we don't know how it's being used. It's
9 not being used by a sophisticated organization like GE or
10 Westinghouse. It's being used by a mom and pop shop
11 someplace in England or it may be used in the household. I
12 don't know. Remember, this man is a research man. He's
13 not a marketing man. He was talking about potential
14 applications.

15 Q Recognizing that you did not know and had no
16 way of knowing what the concentrations were and knowing
17 that PCBs were toxic as you admit, what warnings did you
18 distribute to the household users?

19 A I don't know if there were ever any household
20 users. That's what I said. There's a big if, "If,
21 however, it's distributed to householders." I don't know
22 if householders ever used it. I never saw it.

23 Q Did you --

24 A On a grocery store shelf.

25 Q You said, "We are much more strict." Does

1 that suggest you did distribute it to householders?

2 A No, it does not. It might be that somebody
3 wrote up and said we're thinking about using this for X
4 purpose.

5 Q You state, "If, however, it is distributed to
6 householders where it can be used in almost any shape and
7 form and we are never able to know how much of the
8 concentration they are exposed to, we are," present tense,
9 "much more strict."

10 A Well, yes. Suppose somebody writes into me in
11 1955 and said, "We are going to use this on an over the
12 shelf counter that you -- We're going to use it to clean
13 bath tubs with or something like that." We're going to
14 say, "We don't approve. We don't recommend that use at
15 all."

16 Q You're saying that you had no evidence on the
17 date you authored this letter that any householder ever got
18 your product with PCB in it?

19 A In the United States I know of no householder
20 that ever got a product of, certainly at this state, yes,
21 sir. The answer is I don't know.

22 Q But in the future you do know that it was
23 distributed at least for coatings in silos?

24 A That's correct. That's not quite the
25 household use.

1 Q What warnings did you give for its use as a
2 plasticizer?

3 A We used the warnings do not use at an elevated
4 temperature, to not breathe the fumes at elevated
5 temperatures, do not -- and avoid repeated or prolonged
6 skin contact.

7 Q Did you discuss this letter with the attorney
8 from Monsanto?

9 MR. CARNEY: You just asked that about five
10 minutes ago.

11 A In answer is no.

12 MR. CARNEY: I think the answer is the same
13 this time as it was five or six minutes ago.

14 Q (By Mr. McCrea) The last sentence states
15 "Let's see what our discussions with Dr. Newman and
16 yourself bring out." What information did you those
17 discussions produce?

18 A I don't recall what they were. They certainly
19 weren't very earthshaking because it doesn't stand out in
20 my mind what it brought out. I don't know.

21 Q Dr. Kelly, you initially stated that Aroclor
22 stood for products containing benzene and terphenyls?

23 A No, I did not. There's no benzene in
24 Aroclor.

25 Q All right. I misunderstood your answer.

1 Could you explain to us why you recommended in the last
2 sentence, "I do not believe any more testing would be
3 justified"?

4 MR. CARNEY: I'm going to object to that.
5 We've been covering this sentence and this letter for well
6 over an hour. It's getting very repetitive.

7 A Well, yes, I'll say why I did it. We had
8 enough information from toxicity testing to show that we
9 knew what the safe levels were and the worker could work
10 with eight hours a day for the rest of this life.

11 Q (By Mr. McCrea) And you knew that it would
12 not obviate the one dilemma where you don't know the
13 maximum allowable concentrations?

14 A I don't know how it was used. If you give
15 this out to -- Of it was going to be used in the household
16 which people might be smearing all over them, which people
17 might have under the sink where the children could drink
18 it, there are a lot of reasons outside of the MACs that I
19 would be concerned about. The household product is
20 different than an industrial product.

21 Q And you would warn as to those consequences?

22 A I would warn --

23 MR. CARNEY: If it was being sold as a
24 household product so that the children might drink it?

25 A I would put on it in addition to do not

1 breathe at elevated temperatures or do not breathe in
2 confined spaces, do not get an your skin, avoid
3 contaminated clothing. I would put on do not take
4 internally, but I think in the industrial environment you
5 really don't have to write that down because workers are
6 not going to be drinking industrial chemicals.

7 Q (By Mr. McCrea) Would you warn that it's a
8 systemic poison?

9 A I would tell them what they shouldn't do. If
10 I were selling gasoline I would say, "Don't have matches
11 around here." I wouldn't say, "Do not have matches around.
12 This is going to blow up thin your face." You don't have to
13 put the results down. You just tell them what not to do.

14 Q Would you explain to them that if it gets on
15 their skin it can go into their body?

16 A Well, I'm telling them not to put it on their
17 skin.

18 Q Doctor, turn to page 59.

19 THE WITNESS: Why don't we break for lunch at
20 this time now before we start another one. It's 1:00.

21 MR. McCREA: That would be fine.

22 (Thereupon, a lunch recess was taken.)

23 Q (By Mr. McCrea) Dr. Kelly, for the record,
24 we're in the middle of a tape.

25 A Yes, sir.

1 Q And continuing on here after a lunch break.

2 Can you turn to page 59 Plaintiff's Exhibit Six?

3 A Yes, sir.

4 Q Did you recognize the exhibit?

5 A Yes, sir. This exhibit consists of pages 59,
6 60 and 61.

7 Q Have you seen this particular document before
8 the deposition today?

9 A Yes, I have.

10 Q I'll refer you to the bottom of page 59
11 beginning with the third paragraph of -- strike that -- the
12 third sentence of the last paragraph, the word "Secondly."

13 A Yes, sir.

14 Q Do you see that?

15 A Yes, sir.

16 Q And that paragraph states, "Secondly, it is
17 possible that prolonged or repeated skin contact would lead
18 to chloracne." I assume you agree with that?

19 A Yes, I do.

20 Q "I know of only two cases where such
21 experience has developed during the long history of
22 production and use of Aroclors," and this is the author
23 speaking who is Elmer P. Wheeler, assistant director of
24 medical department; correct?

25 A Yes, sir.

1 Q In a letter to Westinghouse Electric
2 Corporation?

3 A Yes, sir.

4 Q "In one case, an Aroclor was being used as a
5 heat transfer medium in a system that allowed vapors to
6 escape when the material was heated to 600 degrees
7 Fahrenheit." Is that correct? Is that F for Fahrenheit?

8 A Yes, sir.

9 Q Are you familiar with that case?

10 A Yes. That's that case in Indiana that I
11 talked about several times during this deposition.

12 Q As you identify for us where in Indiana and
13 what company?

14 A No, I can't because it was a pretty small
15 company. It was in something. It was a rather obscure
16 medical journal. Not obscure, but one that wasn't widely
17 circulated like the Journal of the Indiana State Medical
18 Society or something like that.

19 Q All right, sir.

20 A But that's the one I called Doctor Spoiler about
21 who is either head of industrial hygiene or health
22 department or something in Indiana.

23 Q All right, sir. Then the next sentence,
24 "Several workmen developed quote, 'black heads', quote,
25 which were found by an industrial physician, but which in

1 his words were so insignificant that the men were not aware
2 of them nor would a general practitioner notice them."

3 A Oh, well, I'm sorry. The case I referred to
4 Elmer Wheeler didn't mention here because they didn't have
5 chloracne. They developed a chemical hepatitis. This is a
6 case that he refers to in New English someplace that was
7 written up by a Dr. Maigs, M-a-i-g-s, at Yale University.
8 That's the one. It was a heat transfer unit, also.

9 Q All right.

10 A The case I refer to in Indiana was a chemical
11 hepatitis. It was not chloracne.

12 Q Okay. Is this last sentence descriptive of
13 chloracne?

14 A You mean "several workmen developed
15 blackheads"?

16 Q Right.

17 A Well, it's very mild chloracne, but it can run
18 a whole gamut of severity. It could get quite severe
19 chloracne.

20 Q He goes on to state, "This indicates to me,
21 however, that sufficient exposure, whether by inhalation or
22 vapors or skin contact, can result in chloracne which I
23 thing we must assume could be an indication of more serious
24 systemic injury if the exposure was allowed to continue."
25 Dr. Kelly, did you ever get any more specific data on the

1 extent of the blackheads described by Doctor or by Elmer P.
2 Wheeler in this letter?

3 A First of all, he's not a doctor. He is, I
4 believe, a Master's degree. He's an industrial director of
5 industrial hygiene. Well, I called Maig about this, the
6 doctor that took care of it, and after the article
7 appeared, and it wasn't very severe frankly. In fact, I
8 think he said one or two of them didn't know they had it
9 until they were called in. All the workers were called in
10 and the doctor examined them, said, "Hey, I think we've got
11 chloracne."

12 Q Would you agree that with this case of
13 chloracne a general practitioner would not necessarily be
14 expected to identify it as he states?

15 MR. CARNEY: Well, I'm going to object. I
16 think it would call on this witness to speculate about some
17 unknown general practitioner, what he might or might not
18 find with regard to a mild case of chloracne which referred
19 to in this letter which I think was a reference to a Maigs
20 article.

21 A I think it all depends on the interest of the
22 general practitioner. He certainly can diagnose acne.
23 He's seen acne in a lot of cases, and if this were a
24 peculiar type of acne, he might very well decide to look up
25 the literature and come out with an answer.

1 Q (By Mr. McCrea) Does this suggest that an
2 individual could have chloracne as a result of exposure to
3 PCBs and that that condition could easily go undiagnosed by
4 his general practitioner?

5 MR. CARNEY: I'm going to object. Your covered
6 these questions several days ago at length. There was
7 about a half hour's worth of questions about that, and now
8 you're coving it repetitiously again, so it's
9 repetitious.

10 A Well, somebody diagnosed those cases because
11 that's how Maigs got the word around. So it wasn't Maigs
12 that diagnosed them. It must have been a general
13 practitioner up there in Connecticut someplace.

14 Q (By Mr. McCrea) Didn't it say an industrial
15 physician?

16 A I don't know. Did it? I don't --

17 MR. CARNEY: I'm going to object. You're
18 asking him to -- The Maigs article would be the best
19 evidence of what it says, and this is just a brief summary
20 of what was in that Maigs article.

21 A I think they refer to Maigs at that time, but
22 Maigs didn't go out at the plant to look at them. I think
23 somebody saw these people in chloracne and decided to
24 call in the industrial medical department of the state of
25 Connecticut.

1 MR. McCREA: Okay. What, Doctor, would you
2 describe as the mildest case of chloracne that could be
3 caused by exposure to PCB?

4 A Well, it started as half a dozen blackheads
5 over the cheekbones.

6 Q Could it consistent of one blackhead?

7 A I would doubt very much if it consists of one.
8 I don't know how you could tell a blackhead there from a
9 hickey. No, I don't think so. I think you have to -- You
10 diagnose chloracne on the extent of it. Just if there's
11 one blackhead, that's not chloracne. You look at
12 pigmentation. You look at several things.

13 Q Could chloracne consistent of blackheads only?

14 A Blackheads only?

15 Q Yes, sir.

16 A It's possible.

17 Q Is that a permanent condition?

18 A No, sir. It depends again. Now, how
19 permanent is permanent? For the rest of its life?

20 Q Yes, sir.

21 A No, I don't think. It might. I think
22 sometimes they do. If they turn into cysts, if they get
23 infected cysts, they have scars which last the rest of
24 their life. If the blackheads are expressed and they were
25 removed in exposure, it isn't permanent.

1 Q Do you agree with the statement that this
2 condition of blackheads could be an indication of more
3 serious systemic injury if the exposure were allowed to
4 continue?

5 A Well, yes, if the exposure were allowed to
6 continue, yes, but if the exposure were allowed to
7 continue, then exposure were severe, you'd have more than
8 blackheads. You'd have -- you might have widespread
9 chloracne. You wouldn't get systemic injury if you just
10 had a few blackheads.

11 Q Isn't it a sign of systemic injury that you
12 have blackheads?

13 A You wouldn't get any other systemic injury.
14 Yes, I believe the blackheads are a systemic reaction to
15 the chloracne, to the PCBs. It's not a local skin contact,
16 but you would not, it would not necessarily mean that he
17 had any other systemic effects rather than that limited
18 amount of chloracne.

19 Q Doctor, can you turn to page 64?

20 A Yes, sir.

21 Q Do you know why this document was
22 confidential?

23 MR. CARNEY: Let me object. I don't think
24 you've established any foundation that the doctor saw this
25 document during the time he was employed by Monsanto.

1 Q (By Mr. McCrea) Dr. Kelly, did you review
2 this document or read this document while you were medical
3 director at Monsanto Company?

4 A Not that I remember. I wouldn't have the
5 slightest idea why it's marked confidential.

6 Q You recognize this as a Monsanto Company
7 document?

8 A Well, I can't tell. The name is on there,
9 but I don't know whether that's a Monsanto document or not.

10 Q Do you recognize the names of the preparers
11 of the document, J. W. Molloy and R. G. Moody?

12 A No, sir, I do not.

13 Q It has a date of July 1964; correct?

14 A Correct, on --

15 MR. CARNEY: You read it on the document.

16 A On the document it's correct, yes.

17 MR. McCREA: Yes.

18 A Yes, that's correct.

19 Q (By Mr. McCrea) Can you turn to page 70? Can
20 you explain to the jury the difference -- strike that. On
21 page 70 under the heading "Safety and Housekeeping" there
22 is a subparagraph six and then a list of chemical
23 compounds. Is that correct?

24 A Yes, sir.

25 Q Do you see B?

1 A B?

2 Q B.

3 A Yes.

4 Q Which says "Byphenyl"?

5 A Yes, sir.

6 Q Is that a PCB without the chlorine?

7 A Well, you cannot have a PCB unless you have a
8 chlorine. This is a biphenyl. So PCB is chlorinated
9 biphenyl.

10 Q What are the chemical elements in a biphenyl?

11 A Carbon and hydrogen.

12 Q Do you have an opinion as to the toxicity of
13 the biphenyl compared to polychlorinated byphenyl.

14 A Yes, I think it's less toxic.

15 Q Do you agree with the last sentence in the
16 right-hand column under biphenyl which states, "Inhalation
17 of biphenyl fumes is not recommended since it can cause a
18 drugged effect on the person"?

19 A Well, I don't know why that last sentence is
20 in there. I would say, "Inhalation of biphenyl fumes or
21 any other fumes is not recommended," period.

22 Q Do you know what it meant by drug effect?

23 A No, I don't know, but something like gasoline,
24 I suppose. If you inhale gasoline fumes you get a jag. I
25 imagine what this is, what they call it. What this man

1 wrote I do not believe was written by any medical
2 authority.

3 Q Will you turn to page 78, please?

4 A 78?

5 Q Yes, sir.

6 A Yes, sir.

7 Q Are you familiar with the corporate
8 development committee as it existed at Monsanto Company on
9 April 22, 1968?

10 A Yes, sir.

11 Q Can you tell us what the positions were of the
12 gentlemen listed on page 78?

13 A Well, Charlie Sommer was chairman of the
14 board. I don't know if Ed Bock was the president at that
15 time or whether he was executive vice president. Christian
16 was a vice president. Gillis was a vice president.
17 Mueller was a vice president. O'Neal was a vice president.
18 He was later chairman of the board. Throdahl was a vice
19 president, and Flitcraft was a secretary.

20 Q On page 79 there is a reference or an excerpt
21 from the minutes at the bottom. Do you see that?

22 A Yes, but I'll have to assume that this is an
23 excerpt from the minutes. I mean, I don't know of my own
24 knowledge that this is an excerpt from the minutes.

25 MR. CARNEY: I don't think there has been any

1 foundation that Dr. Kelly was on the corporate development
2 committee, and I don't think there's been any foundation
3 and I doubt that he was in attendance at the April 22, 1968
4 meeting, and it doesn't at least show that he was in
5 attendance, so I don't know what purpose reading some
6 minutes that haven't been authenticated is to Dr. Kelly.
7 It might be more appropriate if you ask questions of the
8 people who were at the meeting.

9 Q (By Mr. McCrea) Dr. Kelly, in 1968 were you
10 familiar with the marketing projections of Monsanto for
11 PCBs?

12 A No, sir, I was not.

13 Q Would you turn to page 80?

14 A Yes, sir.

15 Q Can you identify the document on page 80 with
16 a date of March 3, 1969?

17 A Yes, that is a document written by Elmer P.
18 Wheeler or somebody. I don't know whether it was a
19 publication or in-house use or out-house use, extra house
20 use. Sorry. On second thought, it must have been sent
21 outside. Whether it went outside to customers or to whom,
22 I don't know, or to other people in the industry, I don't
23 know.

24 Q All right, sir. The date of this document is
25 what?

1 A March the 3rd, 1969.

2 Q Will you address your attention to the fifth
3 paragraph on page 81.

4 MR. CARNEY: Which was page two of the
5 document?

6 MR. McCREA: Correct.

7 A The fifth paragraph, yes, sir.

8 Q (By Mr. McCrea) It start PCBs are.
9 Paragraph states, "PCBs are used in several quote, 'plastic
10 type', quote, applications. Here the chemical is
11 incorporated into the polymer as an integral part of the
12 solid material. This applies whether the polymer is used
13 as an adhesive, an elastomer or surface coating." Is that
14 an accurate statement?

15 A Yes, sir.

16 Q Do you know for what period of time PCBs had
17 been used in plastic type applications by Monsanto?

18 A No, sir, I don't. I know when they were
19 stopped. I think they were stopped around 1970.

20 Q Will you turn to page 83?

21 A 83?

22 Q Yes, sir.

23 A Yes, sir.

24 Q The date of that document is what?

25 A April the 14th, 1969.

1 Q Do you recognize it?

2 A Yes, I recognize it.

3 Q Do you know what it meant by the second
4 sentence in the second paragraph, "We can't really satisfy
5 pollution people with this explanation"? Do you know?

6 A I would -- again this is a surmise. It looks
7 like they were getting the Aroclor back and putting it into
8 operations that they thought were not, were not likely to
9 leak into the environment, and they also said the pollution
10 people may think this is probably not correct. It may leak
11 into the environment.

12 Q Can you turn to page 85?

13 A 85?

14 Q Yes, sir.

15 A Yes, sir.

16 Q Well, first can you go back and identify the
17 people at the top of page 83, Olson, Bryant, Kountz, Kuhn
18 and Johnson? Do you see that, sir?

19 A Yes. Don Olsen was, I thought, in marketing.
20 I don't remember any of the other names.

21 Q Now, can you turn to page 85?

22 A Yes, sir.

23 Q The date of this document is April 28, 1969.
24 Is that correct?

25 A Yes, sir, yes, sir.

1 Q And this again is the corporate development
2 committee?

3 A Yes, sir.

4 Q Can you identify the people on that document?

5 A Yes, sir. Ed Bock, I think he was the
6 president of the company. He was chairman of the corporate
7 development committee. Bible was a vice president. Gillis
8 was a vice president in charge of sales. Putzell was the
9 secretary of the company and general counsel. Charlie
10 Sommer was the chairman of the board of the company.
11 Throdahl was vice president in charge of research, I
12 believe. John Ehlets was a lawyer who was a secretary of
13 the committee.

14 MR. CARNEY: When you're asking him to
15 identify the document, are you saying the, can he identify
16 this as the minutes that were taken on the 28th?

17 MR. McCREA: No, I'm asking him to identify
18 these people.

19 MR. CARNEY: Okay. And identify the document,
20 you weren't asking hem to identify that these, in fact, are
21 the minutes, are you.

22 MR. McCREA: No.

23 MR. CARNEY: I didn't think you were.

24 Q (By Mr. McCrea) Have you seen this document
25 before today?

1 A I think I saw it yesterday.

2 Q All right. Are you familiar or is -- On page
3 86, Dr. Kelly.

4 A Yes, sir.

5 Q It states, "Organic Division Appropriation
6 Request Number CEA-2080 for \$1,100,000 for solid Aroclor
7 expansion - Anniston." Can you tell us what is meant by
8 solid Aroclor expansion?

9 MR. CARNEY: I'll going to object here. I
10 don't think there's any testimony that the witness was at
11 this meeting, and so this might call for him to speculate
12 as to whoever took these minutes, what they meant by
13 putting some words down that probably were a very brief
14 summation of what was said.

15 A Well, some Aroclors are solid, and that's what
16 solid means, solid like a piece of ice or a lump of coal.
17 Expansion means they were going, presumably they were going
18 to expand the production facilities of Anniston for this
19 solid Aroclor.

20 Q (By Mr. McCrea) Do you know in what products
21 they were used?

22 A They were not used electrically, in
23 electrical. I don't know.

24 Q Turn to page 87.

25 A Yes, sir.

1 Q At the bottom of the page it states,
2 "Monsanto's worldwide Aroclor business amounts to 104 m
3 pounds a year." Is that -- what is that?

4 A Million.

5 Q And the says, "70 m." Is that 70 million
6 pounds?

7 A That's correct.

8 Q "Used in the functional fluids." Is that like
9 capacitors and transformers?

10 A Capacitors, transformers, heat transfer units,
11 hydraulic fluids.

12 Q All right. And "34 million pounds in the
13 plasticizers." Can you give us examples of plasticizers?

14 A Well, waxes and lubricants. I think they were
15 putting some of it in vinyl sheeting. I'm not sure. They
16 were using it in carbonless carbon paper as a plasticizer.

17 Q How much of that went to non-industry people?

18 MR. CARNEY: I'm going to object. I'm not
19 sure that this witness --

20 A Non-industry? You mean like who by
21 non-industry?

22 MR. McCREA: Consumers that would use the
23 product outside of an industry setting.

24 MR. CARNEY: You mean in the home?

25 MR. McCREA: Correct.

1 MR. CARNEY: I don't know that this witness --
2 Well, if he can answer it.

3 A I don't know. I think the only one that you
4 can possibly use was the carbonless carbon paper.

5 Q (By Mr. McCrea) Can you turn to page 88?

6 A Yes, sir.

7 Q At the bottom of the document it states, "Plan
8 of Action - H. S. Bergen and J. E. Springgate."

9 A Yes, sir.

10 Q Who is Mr. Bergen?

11 A Well, he and Springgate were the top people in
12 the department that were the product managers for PCBs.
13 That meant they were in charge of production, marketing,
14 research.

15 Q On the date of November 17, 1969 the statement
16 is made in the "Plan of Action, "The availability of
17 alternate products to satisfy customer requirements was
18 reviewed. Main problems are that no replacement product is
19 available for capacitors and replacement products for other
20 uses pose a pollution problem." Is that an accurate
21 statement as of November 17, 1969?

22 A Yes, sir, it is. Pollution means pollution to
23 the environment.

24 Q And is it -- All right. And then the next
25 paragraph, "In plasticizer uses, evidence is not available

1 as to whether Aroclors escape from end products, either
2 through leaching or by dispersal in burning." Would you
3 agree with that statement as being accurate?

4 A Yes, sir.

5 MR. CARNEY: We've got less than two minutes.

6 Q (By Mr. McCrea) Can you turn to page 89?

7 There a list of paragraphs there one, two, three through
8 12. Do you see those?

9 A Yes, sir.

10 Q And were you familiar with this plan of action
11 as described on page 88 and then itemized on 89?

12 A Yes. Let's read the recommended plan of
13 action that's on page 88. This is to establish the
14 tailored program for each business group and each customer
15 market situation to assure that the loss of PCBs in the
16 environment, if any, is minimal. That's our plan of action
17 there. Then one to 12.

18 MR. CARNEY: We're off the tape. We'll have
19 to continue.

20 (Thereupon, a short recess was taken.)

21 Q (By Mr. McCrea) Dr. Kelly, directing your
22 attention to page 89, do you see paragraph six and seven or
23 itemization six and seven?

24 A Yes, sir.

25 Q Were these part of the plan of action as you

1 knew it?

2 A Yes. Let me read the plan of action.

3 Q Yes, sir.

4 A This is from the corporate development
5 committee meeting of November the 17th, '69 at which I was
6 present. That's on page 87. It shows me as being present,
7 and the recommended plan of action is to establish a
8 tailored program for each business group and each customer
9 market situation to assure that the loss of PCBs in the
10 environment, if any, is minimal. Now we go to page 89. Do
11 you say six and seven?

12 Q Yes, sir.

13 A Yes, sir. Any questions?

14 Q Yes. At this meeting in which you were
15 present, number six and on the agenda states, "Introduce to
16 market replacement products for Aroclor 1254/1260." What
17 replacement products were considered on that date?

18 A I think they were all gleams in the eye. I
19 don't think they had any. They were potential products in
20 the research group. I don't believe they had any ready to
21 go in market.

22 Q Were they chlorinated hydrocarbons or were
23 they non-chlorinated hydrocarbons?

24 A They may have been either one, but I don't
25 know because it said develop them, and I don't know when

1 they're going to develop. I was not -- That wasn't part of
2 my responsibility. That was the research department's
3 responsibility. They were supposed to develop, introduce
4 to market replacement products, but also, I believe they
5 had to develop them.

6 Q Number seven status, "Continue and expand
7 biodegradation test program with Aroclor series,
8 particularly 1242, 1248 and 1254." Can you describe that
9 for us?

10 A You mean describe what the test program was?

11 Q Right.

12 A No, sir, but I'll tell you what it was. They
13 were testing how you get Aroclors that are in the
14 environment to biodegrade faster.

15 Q What was the thinking at that time as to how
16 that should, could be done?

17 A I can't answer that.

18 Q Was there any plan under the plan of action to
19 replace Aroclor 1242 with a non-chlorinated hydrocarbon?

20 A I don't know, but if you see in channel
21 number ten they were going to talk about seeing if they
22 could eliminate two of the carbon atoms from Aroclor 1242
23 and 1248.

24 Q Do you know if on this date there was any plan
25 to replace Aroclor 1242 with a non-chlorinated product?

1 A I think they would be happy to do it if they
2 had one that worked that had inflammability and it was a
3 good dielectric.

4 Q Number three, it states, "Reduce and
5 effectively control PCB effluents from Monsanto plants."
6 Why was that part of the plan of action?

7 A Well, we couldn't very well talk to our
8 customers and say, "Don't let the PCBs go into the
9 environment," if we were doing it ourself.

10 Q Was an effort made to reduce and effectively
11 control PCB effluents from Monsanto plants?

12 A Oh, yes, a very successful one.

13 Q Did you feel that was necessary to protect the
14 environment?

15 A Yes.

16 Q Number four, "Educate customers on need to
17 reduce and effectively control PCB effluents at their
18 plants." What was format of the education program?

19 A I don't know. That was not part of the
20 medical department's responsibility.

21 Q Did Monsanto take on that responsibility?

22 A To educate the customers on the need to reduce
23 them? Yes. You must recognize, they said the need the
24 reduce it. They couldn't very well tell them how to reduce
25 it because they didn't know what other compounds went into

1 it our effluent stream.

2 Q But Monsanto assumed that responsibility?

3 A To educate the customers. I mean, there are
4 two responsibilities there. One is to stop it and the
5 other is to tell the people the need to reduce it, and so
6 Monsanto certainly educated the customers on the need to
7 reduce and effectively control PCB effluents in their
8 plants.

9 Q In items one through 12, were human health
10 effects a consideration?

11 A I would say --

12 MR. CARNEY: I'm sorry. Which items?

13 A On number eight it was when we said continue
14 the toxicological test program because we did not know what
15 the feasibility, what the long term effects of small
16 amounts of PCB, if taken or when taken in the food, might
17 be.

18 Q (By Mr. McCrea) Did you tell people to whom
19 you sold PCBs that you did not know the long term effects?

20 MR. CARNEY: Well, let me object to it. The
21 question is vague unless you explain what you mean by long
22 term effects. Long term effects in rats, in rabbits, in
23 birds? I'm not sure what you're talking about there.

24 Q (By Mr. McCrea) You may answer if you recall the
25 question.

1 A Yes, I told people of any -- quite a number of
2 people called me up and I said, "To the best of our medical
3 opinion, there are no long term health effects from the
4 ingestion of PCB in the amounts that are present in the
5 food." I told them that I've consulted with the government
6 about it and showed them what we were doing and what our
7 preliminary results are, and I told them that from, my
8 opinion was there would be no problem.

9 Q Did you tell people on the date of 1969 that
10 you were going to conduct a toxicological test program to
11 determine the long term effects?

12 A I'm sure I did. I'm sure I said we are, have
13 tests under way to reinforce my opinion.

14 Q And you expected those tests to show there
15 were no long term effects?

16 A I expected them -- I expected some of the
17 tests to show it. Certainly when you do a test you want to
18 get positive results in some of the levels, but I was also
19 sure we'd come up with a safe level.

20 Q Did any of the other itemizations under the
21 plan of action relate to human health?

22 A I don't think so.

23 Q Did Monsanto ever consider who in the United
24 States had the most exposure to PCBs and where the greatest
25 need was to concentrate on the prevention of disease

1 processes?

2 MR. CARNEY: Objection to the form of the
3 question, compound.

4 THE WITNESS: Will you repeat the question?

5 (Thereupon, the reporter propounded the pending
6 question.)

7 A Well, you have two questions there. I didn't
8 know who had the most exposure. I knew who the people who
9 used the most material, but I didn't know the perimeters of
10 their exposure. GE and Westinghouse certainly were the
11 large users of the material. Westinghouse had information
12 that we had sent them. Westinghouse had information that
13 they had carried out themselves on the inhalation and
14 feeding of PCBs.

15 So I knew they were all larger user, large users,
16 but I didn't know the amount of exposure. We had told them
17 what the recommendations were as far as safe handling
18 procedures and that if their followed them, we knew they
19 would have no trouble.

20 Q Was there any change in the manner in which
21 Westinghouse -- strike that -- the manner in which Monsanto
22 attempted to prevent contamination of workers during this
23 period of time, 1969?

24 MR. CARNEY: Objection to the form of the
25 question. I don't know what you mean by manner. It

1 contains undefined terms.

2 Q (By Mr. McCrea) Let me restate that. In
3 paragraph four you state as part of the plan of action to,
4 "Educate customers on need to reduce and effectively
5 control PCB effluents at their plants." Was there any --
6 Was there any program to educate customers on the need to
7 reduce and effectively control PCBs in the workplace so as
8 to prevent contamination of workers?

9 A We had told them that from the time we started
10 selling them the material. We did not increase our
11 warnings. Remember, this whole problem was not because of
12 problems with workers. This whole plan of action was to
13 decrease the, to decrease the environmental contamination
14 which was causing birds to lay, to lay eggs without shells,
15 and we were afraid you could kill a whole species of birds.

16 Q So in 1969 there was no increased concern
17 about the PCB health effects on workers?

18 A I didn't say that. Is that a question?

19 Q I thought you did say that.

20 A No, I didn't.

21 MR. CARNEY: I didn't hear that, either.

22 Q (By Mr. McCrea) Was there an increased
23 concern in 1969 by Monsanto Company with regard to the
24 health effects on workers exposed in an industrial setting?

25 A No, sir, there wasn't in an industrial

1 setting. Now, that's a little different statement.

2 Q Then obviously there was no corresponding
3 increase in education?

4 A There was not an increase in education. We
5 had carried out an educational program since the products
6 were introduced, and we had no reports of any ill effects
7 from our customers.

8 Q The bottom of that page it states, "The status
9 of Aroclor 1242 should continue to be tested to determine
10 whether it contributes to this problem." Is that the
11 environmental problem?

12 A Yes, sir.

13 Q And what was the result of that testing?

14 A Well, I think they thought it would biodegrade
15 and they found out later that it did not biodegrade as much
16 as they thought it would, so eventually they discontinued
17 the use of Aroclor 1242.

18 Q As of 1969 there was no plan to eliminate
19 1242?

20 A Well, I don't know whether there was or not.
21 They were going to change the type of configuration of
22 Aroclor 1242, and I don't know. I think that the, in the
23 back of their head was if they couldn't eliminate the five
24 and six, the chlorine from the five and six positions, that
25 they might very well have thought, "Well, we'll have to get

1 out of the 1242." They at that time thought it was going
2 to be biodegradable, and when they found out later that it
3 wasn't biodegradable, then they decided to get out of the
4 1242 business, also.

5 Q Dr. Kelly, in Plaintiff's Exhibits Three, in
6 your letter to Dr. Herbert Blumenthal on April 8, 1970 you
7 stated, "Secondly, we have essentially a crash program
8 under way to find non-persistent, non-chlorinated
9 substitute products." Was there a crash program under way
10 on April 8, 1970 to find non-persistent, non-chlorinated
11 substitute products for Aroclor 1242?

12 A If that's when I wrote the letter there was. I
13 certainly didn't lie to him. Yes, if I in April 8th,
14 1970, which is now four months after, five months after
15 these minutes that I've been reading from, we did have
16 essentially a crash program that defined non-persistent,
17 non-chlorinated substitute products, yes.

18 Q For 1242?

19 A For all of them.

20 Q Is that, to your knowledge, documented
21 anywhere in the minutes of Monsanto Company?

22 MR. CARNEY: I'm going to object unless you
23 can establish that this witness has reviewed all the
24 minutes of the company over the last 30 or 40 years.

25 Q (By Mr. McCrea) Do you know if the crash

1 program to find non-persistent, non-chlorinated substitute
2 products for Aroclor 1242 is documented in any minutes or
3 any letters or memoranda which you have read?

4 A Well, which I have read?

5 Q Yes.

6 A Yes, it certainly was documented in the things
7 that I have read because I didn't pull this second
8 paragraph out of thin air. I didn't make it up. I
9 knew they had a crash program under way. Whether that
10 documentation still exists or not, I can't tell you, but I
11 knew it. Otherwise, why would I write to them?

12 Q What was the Aroclor 1016 product?

13 A What was it?

14 Q Yes?

15 A It was a chlorinated compound that was
16 chlorinated to 16 percent.

17 Q And did that replace the Aroclor 1242?

18 A In some instances it did, yes.

19 Q Do you know when the program was commenced to
20 develop Aroclor 1016 in relationship to your letter dated
21 April 8, 1970?

22 A No, sir, but 1016 is a chlorinated product and
23 I'm talking in my letter of April the 8th, they were also
24 looking for non-chlorinated. 1016 is non-persistent, but
25 they were also looking for non-chlorinated. 1016 is

1 chlorinated.

2 Q Why did they use the number 1016?

3 A Because it's biodegradable.

4 Q Why did they use the number 16 in the 1016?

5 A I believe it's because it was chlorinated to
6 16 percent of -- The average chlorination was 16 percent.

7 Q Isn't it a fact, Dr. Kelly, that it contained
8 41 percent chlorine and there was no rhyme or reason to
9 calling it 1016?

10 A I don't know that.

11 Q Can you turn to page 90? Do you see the
12 document on page 90 and then, Dr. Kelly, do you also see
13 the document on page 91?

14 A Yes, sir.

15 Q And 90 states, "Retyped for Legibility." Do
16 you see that at the top?

17 A Yes, sir.

18 Q Did you write this memorandum?

19 A Yes, I did.

20 Q The date of the memorandum is what?

21 A March 30th, 1970.

22 Q Did the individuals at the upper right-hand
23 corner receive copies?

24 A Yes, they received them.

25 Q Who are those individuals?

1 A Well, as I mentioned Bergen and Springgate
2 before, they were either the product managers or one of
3 them was a boss, one was a number two in the PCB
4 department. Minckler was head of the, vice president, head
5 of the organic division of Monsanto Chemicals Company,
6 whichever it was called at that time. Phosha Park was a
7 man in the environmental department.

8 Q Was he also a lawyer?

9 A He was a lawyer in the environmental
10 department.

11 Q All right. Springgate?

12 A Springgate is the same as Bergen.

13 Q This letter went to W. B. Papageorge?

14 A That's correct.

15 Q WPAPA stands for what?

16 A That's the code number for the mailing
17 department. That's like a ZIP code. William P-A-P-A,
18 PAPA. Just like I'm RKEL.

19 Q In the first sentence you state, "We have been
20 in communication with Dr. Hill of the Ohio State Board of
21 Health." Does that include you?

22 A It includes members of the medical department.
23 I think Wheeler was the one that was doing most of the
24 communicating with Hill.

25 Q Did you talk with Dr. Hill?

1 A I may very well have. I don't recall.

2 Q You state, "He has found PCB, particularly
3 Aroclor 1254, in samples of milk from at least three herds
4 in Ohio." Is that information based on a communication to
5 you by Dr. Hill?

6 A Either to me or to Wheeler to me.

7 Q "He has traced this contamination back to
8 silage from three different silos." Again, was that a
9 communication made by Dr. Hill to either Wheeler or
10 yourself?

11 A Yes, sir.

12 Q "Dr. Hill reported concentrations of 0.2 parts
13 per million of PCB on the silage in the center of the silo
14 and up to 20 parts per million in the material next to the
15 walls." Again, that's a communication from Hill to Wheeler
16 or you?

17 A Correct.

18 Q "He also stated that concentrations in the
19 milk were between 0.1 parts per million and 0.6 parts per
20 million and that some of the milk had been destroyed." On
21 the date of March 30, 1970, what was the recommended FDA
22 limit?

23 A I don't think they had one.

24 Q Did that concern you, Dr. Kelly, that PCBs
25 were getting into milk from the silage?

1 A Yes, it did.

2 Q Did that concern you as to potential human health
3 effects?

4 A Potential with a question mark, yes. It also
5 concerned me, I don't believe milk should be contaminated
6 with anything, whether it's PCB or dirt.

7 Q "The silos were concrete silos whose interior
8 surfaces were painted in 1967 using a formulation that
9 contained 1254." Were you knowledgeable in March 30, 1970
10 that PCBs had been used to coat interior surfaces of silos
11 without having had this communication from Dr. Hill?

12 A I don't remember whether I was or not. I
13 certainly wasn't knowledgeable in 1967 because I don't
14 think I had heard about it until -- there may have been
15 something in some of the newspapers or something about this
16 that I may have found out, but I wasn't knowledgeable about
17 it for very long before this communication.

18 Q When you wrote the letter that we spent some
19 time discussing back on page 57, did you send that letter
20 to marketing people at Monsanto?

21 A Where is the letter now?

22 Q That's the letter from you to Dr. J. W.
23 Barrett.

24 A Well, that was to England.

25 Q Did you send it to your marketing people in

1 the United States?

2 A Well, I'll look. No, I didn't.

3 Q The next sentence in paragraph two state, "I
4 don't know" --

5 A Where are we now? Which page are we now?

6 Q Right, yes, sir, page 90?

7 A We're back on 90.

8 Q The March 30, 1970 memorandum to Mr.
9 Papageorge.

10 A Yes, sir.

11 Q Second sentence, paragraph two. "I don't know
12 if there was any other Aroclor in the formulation nor do we
13 know if the coating -- nor do we know the coating
14 manufacturer; although, this could be found out if
15 important." Did you determine the name of the coating
16 manufacturer?

17 A Well, I gave that problem to Papageorge. By
18 that time he was man in charge of the PCB problem. He was
19 the point man in the whole situation.

20 Q Do you know if Mr. Papageorge expressed your
21 concerns to the coating manufacturer relating to the
22 contamination of the milk caused by the PCBs in the silos?

23 A Frankly, I don't know if he could ever find the
24 coating manufacturer, but to answer you question, I don't
25 whether he did or not.

1 Q You do recognize that as potentially being
2 important?

3 A Oh, certainly.

4 Q Because this wasn't the only silo with PCBs
5 in it?

6 A Well, there were three of them.

7 Q Weren't there 50 others?

8 A There may have been, but we're talking now
9 about March the 30th, 1970, and I don't know whether 50 is
10 correct or not.

11 Q "The presence of PCB in the silage came from
12 flaking off of the material and possibly from leaching out
13 during the silage storage." How do you know that?

14 A Well, I would imagine that's the only two ways
15 you can get the PCB out. The paint either flaked off or
16 the silage leached the stuff out. There's no other way to
17 get it.

18 Q How would the silage leach the PCB from the
19 plastic coating?

20 A Because you're fermenting it and you're
21 getting god knows what sort of chemicals as a result of --
22 You get acid chemicals from fermentation inside a silo and
23 that has an action on the paint.

24 Q How did you figure that out?

25 A Well, I guess my knowledge of PCBs and paint.

1 Q Did you know that --

2 A And silos.

3 Q Did you know that in 1967?

4 A No, because I never knew that it was used in
5 1967 in a silo.

6 Q If someone had asked you in 1967, would you
7 have given them that information based on your knowledge of
8 paint?

9 A I wouldn't know whether I would or not at that
10 time.

11 Q Did you have that working knowledge in 1967
12 even though you didn't know PCBs were used in a plasticizer
13 in silos.

14 MR. CARNEY: And you're asking about the
15 knowledge about paint, PCBs and silos?

16 MR. McCREA: The fermentation and the acid
17 leaching out the PCB.

18 A What was the question again then?

19 MR. McCREA: Would you read it back, please?

20 (Thereupon, the reporter propounded the pending
21 question.)

22 A I don't believe I did because of several
23 reasons. One, I had no knowledge if it was being used
24 there, and if there were any used there, there were no
25 reports in '67 that the material was getting into the

1 silage and getting into the milk, so I did not have any
2 idea at that time.

3 Q (By Mr. McCrea) Explain the process as to how
4 the fermentation of the silage and the acid leaches the PCB
5 from the plasticizer.

6 A It dissolves the paint and the PCB comes out
7 of the paint.

8 Q How was that established?

9 A I don't know how it was established.

10 Q Well, how did you come to that information?

11 A Well, as I told you before, there are only a
12 couple of ways it can get out of there. You've got this
13 paint, a solid thing on the wall and either flakes out, it
14 come out or it's dissolved by some of the material in the
15 silage. Nobody's in there scraping it off.

16 Q Have you ever stepped into a silo?

17 A Yes.

18 Q With a PCB plasticizer on the walls?

19 A No.

20 Q Have you ever asked a farmer to describe what
21 it is like to be in a silo with silage in it with PCB in
22 the plasticizer?

23 A No, but I've asked the farmer to describe how
24 he's in the silo with no paint at all or enamel silo.
25 There are an awful lot of fumes in there. There are

1 nitrous fumes in there. There was acid fumes. There's
2 quite a possibility for chemical reaction to go on in the
3 silo.

4 Q But you've never specifically asked a farmer
5 what it was like?

6 A No.

7 Q To be inside a PCB coated silo?

8 A No, sir.

9 Q Next, "At present they will have to destroy
10 about 150 tons of silage which is valued at about \$30 per
11 ton." When you say they, to whom are you referring.

12 A I would imagine the people who owned the silo
13 or the Ohio State Board of Health is telling them to
14 destroy the silage.

15 Q Other than the fact that there are PCBs in the
16 plasticizers which were manufactured by Monsanto and sold
17 by an unknown coat manufacturer, was there any reason
18 to destroy the silage?

19 A Other than the fact that there --

20 Q Were PCBs in the silos, was there any reason
21 to destroy the silage?

22 A Yes, because when the cows ate it, they had
23 PCBs in the milk.

24 Q Who paid for the loss of the silage?

25 A I don't know.

1 Q Did Monsanto pay for it?

2 A I said I don't know.

3 Q Did Monsanto offer to pay for it?

4 A I don't know.

5 Q And the loss to the farmer was how much
6 according to your calculations?

7 MR. CARNEY: Well, you're assuming that that
8 was the farmer and, you know.

9 A Well, whoever owned --

10 Q (By Mr. McCrea) The cost?

11 A Whoever owned the 150 tons of silage that was
12 destroyed, it would cost \$30 a ton. Whoever owned that
13 silage had an expense of \$4,500.

14 Q In your opinion, was the silo of any value
15 with the PCB plasticizer inside of it?

16 A Was it of any value? Yes.

17 Q Could they reuse that silo?

18 A Yes, they sandblasted it and reused it.

19 Q Do you know what the cost of the sandblasting
20 was?

21 A No, I don't.

22 Q And your testimony is that this silo was
23 sandblasted?

24 A No, I didn't say that a all.

25 MR. CARNEY: You asked him if it was of any

1 value. I think he was saying that it --

2 Q (By Mr. McCrea) You said -- Excuse me. Did
3 they sandblast this particular silo?

4 A I don't know.

5 Q All right. Do you know what happened to the
6 silo?

7 A I don't know.

8 Q Do you know if the farmer look a loss on it
9 because of the PCBs?

10 A I don't know that.

11 Q Do you know -- and you don't know if he had to
12 replace it with another silo?

13 A I don't know whether he did or not.

14 Q Did you ever communicate with the farmer?

15 A No, sir. I did not.

16 Q Then you go onto say, "As a rough guess, they
17 consider there may be 50 other silos involved in Ohio that
18 were painted with the same formulation." Would those other
19 people predictably have the same problems as this farmer?

20 A It's possible.

21 Q Did you make any effort to communicate with
22 those farmers?

23 MR. CARNEY: I'm going to object, you know.
24 He wrote this memo to Mr. Papageorge who was the point man.
25 I think you've got the wrong witness here. Mr. Papageorge

1 is the person who was in charge of Monsanto doing this.

2 Q (By Mr. McCrea) Did you or anyone else at --

3 Did you make any effort to contract those farmers?

4 A I did not.

5 Q Did anyone at Monsanto make any effort to

6 locate and contact those farmers?

7 A I don't know.

8 Q In your opinion, was there a human health, was

9 there a potential human health problem as a result of PCBs
10 in those silos?

11 A No, sir.

12 Q Didn't you just say that there was a human health
13 problem as a result of .6 parts per million?

14 A No, I did not.

15 Q In the milk?

16 A I did not say that. I said we didn't want any
17 in the milk. We didn't want any contamination in the milk.
18 I didn't say we didn't want .6 PCB in the milk because
19 there was a health hazard. I said I don't believe milk
20 should be contaminated with anything.

21 Q In your opinion, was there a potential human
22 health problem?

23 A Well, in March 1970 I don't think we knew.
24 That's why we're running our long term experiments.

25 Q Was there a potential human health problem?

1 A Well, I said we did not know if there was a
2 potential.

3 Q All right. The next sentence says, "They are
4 also looking into the fat contamination of the cows
5 themselves." Do you know the results of those tests?

6 A No, sir, I do not.

7 Q Did you maintain any communication with Dr.
8 Hill after March 30, 1970?

9 A I do not recall if I did. I believe that Mr.
10 Papageorge may have, but not I.

11 Q Do you know of any herds of cattle which had
12 to be destroyed in the United States as a result of the PCB
13 contamination from silos?

14 A I do not know.

15 Q Did you offer to assist Dr. Hill in remedying
16 this problem?

17 A Yes, I told him Monsanto would do anything
18 that we could to cooperate with them in any shape or form
19 and he should contact Mr. Papageorge who could direct Dr.
20 Hill's request to the proper agency inside Monsanto.

21 Q Did you offer to replace the farmer's silo?

22 A I personally?

23 Q Monsanto?

24 A That was not my responsibility, To answer it,
25 no, I did not.

1 Q Has Monsanto ever paid to replace a PCB coated
2 silo?

3 A I do not know.

4 Q Do you have any estimate as to how many PCB
5 coated silos there were in the United States as of this
6 date?

7 A No, sir, I do not.

8 Q Next sentence says, "All in all, this could be
9 with quite a serious problem, having legal and publicity
10 overtones." What do you mean by publicity overtones?

11 A Well, I believe that the publicity, if a
12 Monsanto product were present in the milk, that's bad
13 publicity.

14 Q And how would that affect Monsanto?

15 A Well, Monsanto wants to be a good neighbor.
16 Monsanto doesn't want PCBs in milk. They don't want PCBs
17 adulterating food.

18 Q What efforts did Monsanto make to eliminate
19 the PCB contamination of milk from the PCB plasticizers,
20 caused by the PCB in plasticizers in silos?

21 A You'll have to ask Mr. Papageorge and I
22 believe he will tell you that whatever they did. He will
23 also tell you that it was quite successful because you
24 don't hear any more about PCBs in milk or in silage.

25 Q Could that be because they've all been

1 condemned?

2 A No, sir, I don't believe so, and I don't know
3 what you mean by condemned.

4 Q Condemned.

5 A Tore down?

6 Q No, condemned, ribbons placed around them
7 marking condemned?

8 A I don't know if anyone ever was. I don't
9 know. I never saw one.

10 Q Did you tell Mr. Bergen this was a serious
11 problem verbally?

12 A Well, I wrote him a letter. I don't know
13 whether I discussed this memorandum after I talked with him
14 or not -- after I wrote him I mean. I may have talked with
15 him.

16 Q You state, "All in all, this could be quite a
17 serious problem with legal overtones." What are the
18 legal overtones for Monsanto from this serious problem?

19 A Well, there again I get outside my field, but
20 I thought if we were contaminating silage due to our PCBs,
21 the farmer may look to us for remedial action.

22 Q Did you take any efforts to avoid that
23 consequence by going to the farmer first?

24 MR. CARNEY: I'm going to object. You've
25 asked this question about six or seven times. He indicated

1 he didn't know what happened, whether the Monsanto paid the
2 farmer or if indeed it was the farmer that owned the
3 silage. He doesn't know. I think he wrote this memo to
4 Mr. Papageorge who was the point man for Monsanto. You've
5 established that he doesn't know what Monsanto did. I
6 don't know how much clearer that can be made. I will
7 stipulate that with regard to what Monsanto did with the
8 farmer, Dr. Kelly doesn't know. He's said it very clearly,
9 and I don't think asking him three or four times is going
10 to move the deposition along.

11 Q (By Mr. McCrea) Dr. Kelly, you recognized
12 that this could cost Monsanto money?

13 A That was the least of our problem.

14 Q What was the most of your problem?

15 A We didn't want the milk contaminated.

16 Q Did you suggest to Mr. P. S. Park that
17 Monsanto correct this problem of PCBs in silos?

18 A Mr. P. S. Park is a lawyer in the
19 environmental group. He is a very ethical Monsanto
20 employee. He's now retired from Monsanto. I clued him in
21 onto the legal problem, and it is up to him to do it. It
22 was not up to me to handle any legal problems with
23 Monsanto.

24 Q Do you know if Monsanto ever calculated the
25 number of PCB silos in the United States and what it would

1 cost to replace them?

2 A No, sir, I do not know.

3 Q Last paragraph, "This brings us to a very
4 serious point"; correct?

5 A Yes, that's what I said.

6 Q "When are we going to tell our customers not
7 to use any Aroclor in any paint formulation that contacts
8 food, feed or water for animals or humans?"

9 A Was there a question?

10 MR. CARNEY: You read that -- you read his
11 words accurately. I'll agree with that.

12 A Yes, and I wrote that.

13 MR. CARNEY: I don't know if there's a
14 question.

15 Q (By Mr. McCrea) When did you tell your
16 customers not to use any Aroclor?

17 A I do not know when the marketing people told
18 them. I do not know if they had already told them by the
19 time I wrote Papageorge and I didn't know about it, so I
20 cannot answer your question.

21 Q Do you know if it was ever done?

22 A Of my own knowledge did I ever, do I recall
23 sending a memorandum to the customers? I don't know, but I
24 would imagine that it was done, but that again is
25 speculation.

1 Q You state, "I think it is very important that
2 this be done." Why?

3 A Well, we still didn't want PCB in the milk.

4 Q "It may be that some of our customers will
5 assure themselves on the basis of non-extractability that a
6 particular formulation might be safe, but I think we should
7 make a blanket recommendation against these uses." That
8 was your opinion?

9 A Yes, sir, it was.

10 Q And you were adamant about it?

11 A Yes.

12 Q And you sent it to everybody you knew who was
13 of authority in Monsanto?

14 A Yes, sir.

15 Q Were you a medical doctor?

16 A Is that a question? Yes, I was and am.

17 Q Doctor, can you tell us what it is that you
18 brought to this particular situation that somebody without
19 a medical agree could not?

20 A Well, I don't believe that what I brought to
21 this situation was information of a problem, and I believe
22 I summarized a problem and sent it to the important,
23 responsible people in the legal department, in the
24 production department, in the marketing department and to
25 the man who was in charge of the environmental aspects of

1 PCB.

2 Whether or not Mr. Wheeler could have done the same
3 thing, I think he probably could have because there was not
4 a great deal of information in there that you need a
5 medical person to talk about. We don't want PCBs or
6 Aroclor in any food, feed or water for animals or humans,
7 and you didn't have to have a medical degree to know that.

8 Q If you had to communicate to the farmers of
9 this country your expression of concern, what would, how
10 would you have done that?

11 MR. CARNEY: What time are you talking about?

12 MR. McCREA: 1970.

13 A All the farmers in the country, whether they
14 have silos or not?

15 Q (By Mr. McCrea) Correct.

16 A Whether they use PCB paint or not?

17 Q Correct. How would you have gone about that?

18 A I would have said -- Well, first of all, I
19 wouldn't have gone about it. I would have gone to the
20 person whose responsibility it was. There is a man working
21 full-time on PCBs. I'm in charge of the medical
22 department. We've got lots of other things that are doing.
23 This man's full-time. He's got his own staff doing it, so
24 I would tell him my beliefs and let him do it. I would not
25 communicate with the farmers.

1 Q Do you know if there was any notification to
2 your insurance carriers of this potential liability?

3 A I don't know.

4 Q You knew that Monsanto had used publicity
5 releases to communicate it's position on PCBs in the past;
6 correct?

7 A Yes, sir.

8 Q Was there any publicity release issued that
9 reflected your concerns on PCBs getting into the milk?

10 MR. CARNEY: I might suggest to you, Mr.
11 McCrea, you're trying to -- I think you're asking a lot of
12 these questions to the wrong witness. Mr. Papageorge has
13 all this information as I think you do know, in fact, in
14 this very same exhibit, and I refer you to starting on page
15 100 and going through to 115 is a Papageorge document
16 explaining and answering some of these questions.

17 MR. McCREA: Are silos referenced in that?

18 MR. CARNEY: I think plasticizers are at
19 page --

20 MR. McCREA: Are silos?

21 MR. CARNEY: You were talking about
22 plasticizers in the silos.

23 MR. McCREA: Is the problem of PCBs flaking
24 and leaching from plasticizers in silos and getting into
25 the milk of dairy cattle referenced in the Papageorge

1 affidavit dated September 14, 1971, if it's an affidavit?

2 MR. CARNEY: I think if you look at page 107,
3 they talk about the plasticizers, eliminating the
4 plasticizers.

5 MR. McCREA: Do you see silos mentioned there?

6 THE WITNESS: Are you talk to me or to him?

7 MR. McCREA: No, I'm not, sir. It's hard for
8 me to turn all the way around.

9 MR. CARNEY: You know, I think if you'd ask
10 Dr. Papageorge, he would be the one that would be most
11 knowledgeable about this. Dr. Kelly was the head of the
12 medical department.

13 MR. McCREA: All right. I'll just state for,
14 not for the jury and not for Mr. Kelly, Dr. Kelly, that
15 there's no reference to silos in that particular
16 communication if I read it properly.

17 MR. CARNEY: I didn't say there was, did I?

18 MR. McCREA: No, but you said I could read it
19 and determine the response.

20 MR. CARNEY: No. What I'm telling you is that
21 what -- You've asked a lot of questions about what Monsanto
22 did with regard to the plasticizers. Did they eliminate
23 them? You've asked lots of questions about how they
24 noticed or notified the various people in various groups,
25 and I think you have that information. You know -- You've

1 seen Mr. Papageorge testify about these matters, haven't
2 you?

3 MR. McCREA: Never, never.

4 MR. CARNEY: Well, I think you have.

5 MR. McCREA: Never. And I will represent to
6 you that the elimination of PCBs in plasticizers does not
7 solve the problem which Dr. Kelly addressed rather
8 eloquently on March 30, 1970 of PCBs already in the
9 plasticizers.

10 MR. CARNEY: I can say and state for the
11 record that Monsanto did solve the problem very well and
12 with, and they were a very good corporate citizen in the
13 way they handled the problem, an excellent corporate
14 citizen in the way they handled it. Now, Dr. Kelly may not
15 know that because he was the medical director and I don't
16 think he knows everything that went on at Monsanto, but I
17 can state that to you.

18 Q (By Mr. McCrea) All right. Well, I accept
19 what you state and quite frankly don't have that much
20 information about what they did. Dr. Kelly, after you
21 wrote this March 30, 1970 communication to Mr. Papageorge,
22 did you get any feedback from him, Mr. Bergen, Minckler,
23 Park or Springgate as to the remedies and the, that you
24 suggested?

25 A I may very well have. I don't recall it. I

1 do know that over the years the problem diminished to a
2 zero point.

3 Q All right. Before March 30, 1970 had you made
4 similar requests verbally?

5 A Well, I don't think so.

6 Q Other than this document which speaks for
7 itself, Dr. Kelly, do you recall any other efforts on your
8 behalf to see that the customers did not use Aroclor in the
9 paint?

10 A Well, I never talked to any customers. I
11 don't know whether, what Wheeler might have done with
12 Papageorge. I don't know, but to answer your question, I
13 did not and as I said this, you talk like this was in silos
14 all over the country. This was in a pretty small group of
15 areas where this paint was distributed.

16 Q Do you know how many silos were involved?

17 A No, sir, I do not.

18 Q But if it's one farmer and it's his silo, it's
19 important; correct?

20 A Of course it is.

21 Q Did you correspond with the FDA about this
22 problem?

23 A Yes, I talked to them, and that's when I
24 talked to Dr. Fitchu of the FDA because he knew about it.
25 He asked me how our tests were coming and when we started

1 them and when we were going to get finished with them.

2 Yes, I talked to the FDA about it.

3 Q When you say test, you're talking about what?

4 A A long-term feeding test.

5 Q Did you talk to the FDA about the number of silos
6 in the United States with PCBs in them and what could
7 be done to see that that was not getting into the milk of
8 dairy cattle?

9 A Not I, but I don't know whether that came up
10 at the time when Colander and I went up to see Dr. Fitchu
11 and other people of the FDA when we were starting our tests
12 which can dated in this letter, I believe. Yes, I
13 certainly did, I believe. Where are we, March? Yes, I
14 antedated that. We told them what we were doing. They
15 agreed with what steps we should do as far as the testing
16 is concerned, and I believe they were cognizant of the fact
17 that there was PCBs in the milk. Certainly they were.

18 Now, as far as answering your question did I talk to
19 the FDA about what we were going to do about getting,
20 cleaning up this problem with the silage, I don't know
21 whether I taked to them or not.

22 Q Dr. Kelly, you described earlier in your
23 testimony 12 points of a plan of action dealing with
24 environmental aspects of PCBs. Did you add to that plan of
25 action a recommendation and potential solution for PCBs

1 getting into the milk as a result of their flaking and
2 leaching from the plasticizers in silos?

3 A We didn't have to write it out. We knew we
4 had a problem and got on it. I mean, we didn't write it
5 out and say, "Okay, now we've got 13 plans instead of 12."
6 We recognized the problem and we, and Papageorge started
7 out to solve the problem and to remedy it.

8 Q Can you describe for the jury what he did?

9 A No, you'll have to ask him.

10 Q Can you turn to page 92?

11 A Yes, sir.

12 Q This, sir is minutes of meeting of the
13 corporation management committee, April 20, 1970. Is that
14 correct?

15 A Yes, sir.

16 Q And you attended the meeting as indicated by
17 your name under the heading "Organic Division - Report of
18 PCB Status"?

19 A Yes, sir.

20 Q There are figures there representing sales of
21 Aroclor?

22 A Yes, sir.

23 Q You say, "Division has maintained an
24 aggressive program of customer education." Does that
25 include the people who put PCBs in plasticizers in silos?

1 A I don't know what it includes, but I don't
2 even know if there was Aroclor being used in silage, paint
3 for silage in April of 1970. If you notice, our
4 plasticizer sales have dropped down pretty much. It's down
5 to \$3 million worth. I don't know what it was before, but
6 it was considerably higher than that.

7 Q Did that include an aggressive program of
8 customer education with regard to the customers who had put
9 PCBs in plasticizers where they were existing on farmers'
10 field?

11 A I don't know. This says the division has.
12 The medical department did not. This was a division
13 responsibility. They had Papageorge there. They had
14 Bergen there. They had Minckler, they had Mason, they had
15 Smith, Springgate, all these people from the division.
16 They're the ones that carried out the aggressive program of
17 customer education, cooperative efforts with government
18 research, etc.

19 Q You see on page 93 it states at the top, "FDA
20 indicated it was contemplating a residue level of 0.5 parts
21 per million in milk." Do you see that?

22 A Yes.

23 Q And did the levels in Ohio exceed that?

24 A Did what?

25 Q Did the levels in the milk in Ohio exceed that

1 level?

2 A No, sir.

3 Q I thought it said 0.6 parts per million.

4 A Did it? I don't know. Maybe it did.

5 Q Can you refer to page 90, the last sentence of
6 the first paragraph?

7 A Page 90? Well, that's a little confusing here
8 because on, when it's retyped it says between 0.1 ppm and
9 0.6 and then the one I'm looking at where it wasn't
10 retyped it says 0.1 and 0.5 ppm.

11 Q I read that as a six on --

12 A You want to look at mine?

13 Q I accept that you're saying.

14 A Okay.

15 MR. CARNEY: Mine says five.

16 Q (By Mr. McCrea) All right. Did Monsanto do
17 any testing to determine levels of PCB in fish which were
18 in waters in which Monsanto discharged PCBs?

19 A I think they may have, yes, sir, but I'm not
20 certain which locations.

21 Q You don't know the results?

22 A No, sir, I don't.

23 Q Second paragraph on page 93 references the
24 targeting of effluent levels. Do you know how those were
25 established, 50 parts per billion and ultimate target of 10

1 parts per billion?

2 A I think that was established by what we
3 thought was feasible. We tried to get down to as low as we
4 could, as low as we could.

5 Q Third paragraph states, "Sales are being
6 terminated to a number of industrial users where there are
7 inadequate possibilities of control for such uses as
8 pesticide extenders." What is a pest -- how were PCBs used
9 on the date of April 20, 1970 as a pesticide extender?

10 A Well, I think it would be better if you asked
11 somebody from the agricultural, Department of Agriculture
12 of the United States Government because they were the ones
13 that came out with the idea to use PCB in agricultural as a
14 pesticide extender. In other words, you mix this and
15 presumably it stays around on the plant longer.

16 It was peanuts as far as our marketing was concerned
17 and we were not happy with it, but the government, the
18 Department of Agriculture stated that this is possibly a
19 good use for PCBs.

20 Q How were PCBs used in medicinal products?

21 A I never heard of it. I don't know.

22 Q Dental products?

23 A Waxes.

24 Q Cosmetics?

25 A I don't know.

1 Q Did Monsanto locate these industrial users and
2 then terminate the sales?

3 A Well, they said they did. Sales were being
4 terminated to a number of industrial users.

5 Q Did you attend this meeting where it was
6 discussed? It indicates you did.

7 A Well, yes, but I don't think they elaborated
8 on it anymore than that. They said, "We're terminating
9 these to a number of industrial users with inadequate
10 possibilities of control," but I don't think they put them
11 out by name.

12 Q When did Monsanto first know that PCBs were
13 used in pesticides, as pesticide extenders?

14 A I haven't the slightest idea.

15 Q The statement is made, "Sales will be
16 continued for transformers, capacitors and heat transfer
17 uses which are closed systems or sealed units and which
18 permit reclamation or other control of material." Is that
19 correct?

20 A You read it correctly, yes, sir.

21 Q Do you consider transformers, capacitors and
22 heat transfer uses as closed systems today?

23 A They are unless something happens to the heat
24 transfer units. Sometimes there are leaks in it.
25 Sometimes there are fires in the capacitors, but as of

1 fires in the transformers in 1970, I don't believe there
2 was any record of any fires of transformers or fires of
3 capacitors or leaks in -- Well, there were leaks in heat
4 transfers at Yusho at that time.

5 Q Dr. Kelly, if a manufacturing plant called you
6 today and asked you if you thought it was advisable to have
7 1,337 PCB capacitors inside their plant, what would you
8 tell them?

9 A I'd say, "I'd like to come out and look at
10 your plant and see how they're being used."

11 Q Do you think that would present a risk that
12 should be eliminated by replacing the same capacitors?

13 A I would have to make that decision after I saw
14 the installation.

15 Q Down under conclusions, Dr. Kelly, it makes
16 reference in the first paragraph, the last line to NCR
17 application. What does that stand for?

18 MR. CARNEY: I think we're about to lose our
19 tape.

20 A Well, I can answer that real fast. That's a
21 carbonless carbon paper, National Cash Register.

22 MR. MCCREA: Thank you. Break.

23 (Thereupon, a short recess was taken.)

24 Q (By Mr. McCrea) Dr. Kelly, we're back on the
25 record. On page 93 under conclusions the committee states,

1 quote, "A replacement product should be developed on a
2 crash basis for the NCR r application," which stands for
3 National Cash Register in the use of PCBs in carbonless
4 paper. Is that correct?

5 A That is correct.

6 Q And H. L. Minckler was on the corporate
7 management committee on April 20, 1970; correct?

8 A I don't think he was.

9 Q Well, I believe you're right. He was on the
10 organic division?

11 A Yeah.

12 Q And J. E. Springgate was a member of the organic
13 division?

14 A Yes, sir.

15 Q And H. S. Bergen was a member of the
16 organic division?

17 A Yes, sir.

18 Q And were those people participants in the
19 decision to develop a crash program or to develop on a
20 crash basis a replacement product for carbonless paper?

21 A Yes, sir.

22 Q And the date of that meeting was April 20,
23 1970?

24 A Yes, I'll take your word for it. I've
25 misplaced paragraph, page 93. I've got a 92. That's April

1 the 20th, 1970.

2 Q All right.

3 A But I don't have 93. It must be in here
4 someplace.

5 Q I think the record will reflect that the date
6 of the minutes of the meeting of the corporate management
7 committee was April 20, 1970. And on March 30, 20 days
8 before that, you sent your letter expressing your concerns
9 about the PCBs in milk from the silos to H. S. Bergen, H.
10 L. Minckler and J. E. Springgate; correct?

11 A Yes, sir.

12 Q Did they discuss anything to be done on a
13 crash basis with respect to those concerns which were
14 expressed by you to them 20 days earlier?

15 A I don't know. I certainly know that
16 Papageorge was very, very much involved and very much aware
17 of the problem and he might be much better -- he will be
18 much better able to answer that than I do, than I am.

19 Q Go to page 94.

20 A I've got problems. Something's happened to my
21 pages from 91.

22 MR. CARNEY: Do you want to use mine?

23 A I don't have a 94 here. In fact, my next page
24 is 100. In thought I had one before, but I don't. Yes,
25 sir.

1 Q (By Mr. McCrea) Can you identify the document
2 on page 94 of Plaintiff's Exhibits Six?

3 A Well, I will read what it says. It's a
4 photostat of some letter written by a Bernard H. Falk, it
5 looks like, to the representatives of the member companies
6 in the transformer section, capacitor section of the
7 National Electrical Manufacturers Association dated August
8 the 6th, the 2nd, 1971.

9 Q Dr. Kelly, did you have any communications
10 with Congressman Ryan?

11 A No, sir, I did not.

12 Q Did you have any participation in preparing any
13 speeches or information to be given by Monsanto to
14 Congressman Ryan?

15 A No, sir, I did not.

16 Q On this date do you have any understanding of
17 the effort being generated by Congressman Ryan with regard
18 to PCBs?

19 A I may have heard about somebody talking about
20 it at lunch, but I certainly had no formal connection with
21 any of Congressman Ryan's actions.

22 Q Will you go to page 95?

23 A Yes, sir.

24 Q Can you identify this document which consists
25 of two pages and attachments of an additional three pages?

1 A Well, what it says is, "A bill to prohibit the
2 introduction or delivery for introduction into commerce of
3 the chemical compound known as polychlorinated byphenyl."

4 Q And the date is July 26, 1971?

5 A That's correct.

6 Q Do you have any working knowledge today as you
7 testify of the purpose of H. R. 10085 true introduced by
8 Congressman Ryan?

9 A Well, except what he said, "To prohibit the
10 introduction and delivery for introduction into commerce of
11 the chemical compound known as polychlorinated byphenyl." I
12 take it that was his purpose.

13 Q Did Monsanto have meetings to discuss this
14 bill in which you attended?

15 A No, sir. That doesn't mean that he didn't
16 have meetings, but I do not recall ever being at a meeting
17 where they discussed Ryan's bill.

18 Q All right, sir. Dr. Kelly, will you turn,
19 please, to page 97?

20 A Yes, sir.

21 Q Are you -- This is a speech by Congressman
22 Ryan to Congress reported in the "Congressional Record," I
23 believe. Have you seen this before today? See the heading
24 in the left-hand column, "PCBs - En" --

25 A I see that. I don't believe I have. I do not

1 read the Congressional Record."

2 Q All right. Without spending a lot of time on
3 this document --

4 A Okay. That will be new.

5 Q Congressman Ryan makes reference to chickens
6 being contaminated with PCBs, I believe, in North Carolina
7 by leaks of PCBs from a heat transfer system. With that
8 general statement, Dr. Kelly, as you sit here today, did
9 you in any way participate in the investigation of that
10 particular situation?

11 A No, sir, I do not believe I did.

12 Q Do you have any working knowledge of the
13 situation in which the chickens became contaminated with
14 PCBs?

15 A No, I don't. In fact, they talk about the
16 Campbell Soup Company. Is that what we're talking about,
17 with the chicken fat? Is that the one? That's the first
18 time I saw it. I don't know anything about it.

19 Q All right. Down at the bottom of column one
20 on page 97 there's a one paragraph description of human
21 health effects as described by Congressman Ryan on the date
22 of this address to Congress, July 23rd, 1971. Would you
23 please read that paragraph which starts at the bottom of
24 column one and ends at the top of column two to yourself
25 and then tell us if there are any health effects which he

1 describes as being caused be PCBs with which you disagree?

2 A Do I wait till I get through reading it or do
3 I mention my differences of opinion as we go along?

4 Q I think it would be preferable to mention it
5 as you go.

6 A "By far the most frightening hazards" --

7 MR. CARNEY: Well, let me just -- I think he --

8 MR. McCREA: He can read it out loud.

9 MR. CARNEY: I think he said to read it to
10 yourself.

11 A Oh, okay.

12 MR. CARNEY: And then --

13 Q (By Mr. McCrea) Why don't you read it out
14 loud and then as you disagree, you can state your
15 disagreement.

16 MR. CARNEY: I'm going to object to any,
17 having --

18 MR. McCREA: That way it gets on the record.

19 MR. CARNEY: That's what I mean. If you want
20 to get Congressman Ryan in here to testify about what he
21 said, that's one thing, but to have, you know, a speech
22 that he read be read into the record is, you know, hearsay.
23 I don't have Congressman Ryan here to cross examine. We've
24 got Dr. Kelly here. He says he doesn't have any knowledge
25 about this bill of Dr. Ryan's, so I don't know. I think

1 you've got the wrong person here to cross examine about Dr.
2 Ryan's speech.

3 A Mr. Ryan, the Honorable Mr. Ryan. He's not a
4 doctor. He's a politician.

5 MR. CARNEY: I'm sorry. I didn't want to
6 demean the profession of doctors by calling him --

7 A We have a different way of stating things.

8 Q (By Mr. McCrea) Dr. Kelly, why don't you read
9 what he states. Then as you come to something with which
10 you disagree, state your disagreement.

11 A Well, yes, I disagree with the first sentence,
12 "The most frightening hazard is the effect of PCBs on
13 humans." Certainly I don't think there's any frightening
14 hazard. I think that is rhetoric from a congressman.
15 Let's see what else.

16 He also states, gives no limitation of exposure, no
17 statement about exposure. He says, "Polychlorinated
18 byphenyl may be taken into the body by direct actions upon
19 the skin or by a vapor through a respiratory tract."
20 That's true.

21 "The effect on the skin is chloracne." Well, that
22 all depends on how much you get on and how long you've been
23 doing it. "The early symptoms of which are pimples, a dark
24 pigmentation, later, more serious eruptions." That again
25 is how much you are exposed to.

1 "Persons who have been continually exposed to PCB
2 may suffer nausea, vomiting, loss of weight, edema and
3 abdominal pain, increased respiration, lower blood count
4 and inhibition of the carbohydrate metabolism." That -- If
5 he is not referring to Yusho or Yetching, I would like to
6 see his basis for this statement, "More serious effects are
7 those of the kidneys." I don't know where that is
8 documented outside of Yusho.

9 "The principal effect, however, is on the liver
10 possibly leading to atrophy followed by death." That
11 certainly has not occurred in an industrial setting. Now,
12 this I do not consider -- I do not consider a Congressional
13 speech a scientific document. He is making statements,
14 and I don't know the basis of the statement, so I disagree
15 with him.

16 Q All right. Would you go to the top of
17 paragraph three in the first paragraph -- excuse me, Doctor
18 -- the top of column three. In about the middle of that
19 paragraph he states, "I requested that he," and I believe
20 that refers to the administrator of the Environmental
21 Protection Agency, "Obtain from Monsanto those production
22 and sales figures necessary to determine the extent of
23 possible PCB contamination data which Monsanto has refused
24 to provide." Are you aware of a request by Congressman
25 Ryan to Monsanto for sales records in order that the

1 environmental effects could be checked out?

2 MR. CARNEY: Let me object to the question. I
3 object to your reading a speech back in 1971, July 26, I
4 guess, of 1971, by a congressman who's trying to get
5 publicity and run for office and win votes and making a
6 speech in the "Congressional Record" and then examining Dr.
7 Kelly about the speech which he says he wasn't in
8 attendance at and doesn't recall seeing. You know, this
9 deposition could go on for a year. It's already, you're in
10 your fifth day of cross examination. You've indicated
11 you're going to go tomorrow and, you know, I don't know how
12 many speeches by congressmen or other people you can read
13 into the record. It's improper. If you have a question of
14 Dr. Kelly, ask the question of Dr. Kelly.

15 Q (By Mr. McCrea) Dr. Kelly, did --

16 MR. CARNEY: And you're not only reading it,
17 but you're making assumptions about who he is. Now,
18 Congressman Ryan isn't even here for me to examine him on
19 what he means by some of those words. So this is an
20 entirely improper course of action that you're taking, Mr.
21 McCrea, and all I can see is that you're trying to delay
22 this case and bore the tears out of the jury and the judge.
23 You've certainly bored me by all this repetition and now
24 just reading a speech 20 years ago by a congressman trying
25 to win votes.

1 MR. McCREA: Was he trying to win votes with
2 Monsanto?

3 A I don't think he's alive frankly. I don't
4 know when he was running for office in the '70s, but was
5 there a question on the floor?

6 Q (By Mr. McCrea) There was and you may answer
7 it.

8 A I'd like to know what it is.

9 MR. McCREA: I forget.

10 (Thereupon, the reporter propounded the pending
11 question.)

12 A I am aware of a request, and he states a half
13 truth. He states, "I requested that he obtain from
14 Monsanto those production and sales figures necessary to
15 determine the extent of possible PCB contamination."
16 Monsanto, I've seen documents that said we will give you
17 sales and production figures.

18 Then he asks for names of customers and Monsanto
19 said that they, to the best of my knowledge, they could not
20 give the names of the customers without some particular
21 reason. So the good congressman is having a half truth in
22 that statement.

23 MR. CARNEY: And I might add, I assume it's
24 probable a misprint, but it doesn't talk about PCBs there.
25 It talks about PCB, and it doesn't say that Congressman

1 Ryan requested it. It says, "I requested that he,"
2 somebody, whoever he is "obtain it." So there's, I think,
3 a mischaracterization of what's said. This is very
4 confusing. We don't -- It's hard to understand what's
5 being talked about there.

6 Q (By Mr. McCrea) Did Monsanto Company have an
7 action planned to determine the customers who had purchased
8 PCBs in the potential areas of environmental contamination
9 on this date, July 26, 1971?

10 A I don't know what you mean by an action
11 planned. What do you mean?

12 Q Well, I'm referring back to your corporate
13 notes where you say plan of action on page 88.

14 A Yes, sir.

15 Q Did you have a plan of action to determine
16 your PCB customers and the potential environmental
17 pollution as a result of sales to those customers?

18 MR. CARNEY: In addition to the 12 points, the
19 sum of which I think addressed that problem? Are you
20 saying in addition to those 12 points?

21 MR. McCREA: Correct.

22 A I don't know. You'll have to ask Papageorge
23 or Bergen or Springgate.

24 Q (By Mr. McCrea) Could you go to page 99?
25 Column two, fourth paragraph with the heading "Monsanto

1 Tests."

2 A Yes, sir.

3 MR. CARNEY: We're still in -- Can I have my
4 standing objection that you're reading from Congressman
5 Ryan's speech back in 1971?

6 Q (By Mr. McCrea) Yes, you may. It says,
7 "Recently completed Monsanto tests, conducted over two
8 years, showed that rats fed food containing up to 100 ppm
9 showed enlargement of the liver, but suffered no other
10 effects, the company spokesman said. Dogs showed no ill
11 effects, he said. Representative Ryan said he was
12 skeptical of tests ordered by the company for its own
13 product." Did you see that?

14 A Yes.

15 Q Does that refer to IBT tests?

16 A No, he refers to test ordered by a company
17 for its own product, and just like I'm skeptical about a
18 congressman's statements when he's running for office. I
19 think that this is absolutely ridiculous. Who is going to
20 run the tests if the company doesn't run them themselves?
21 Is the government going to run them? The U. S. Food and
22 Drug Division accepted the tests. They know an awful lot
23 more about toxicity than Ryan does.

24 Q All right. My question is: Does that
25 paragraph refer to the tests that were done at IBT or is it

1 some other test facility?

2 MR. CARNEY: I'm going to object here. You're
3 asking this witness to speculate about what was inside
4 Congressman Ryan's mind, and other than winning votes and
5 trying to get re-elected, which I think we've probably
6 established, but what was inside his mind when he makes a
7 speech back in July 26th, 1971. Why don't you ask
8 Congressman Ryan?

9 MR. McCREA: I would also note that he was
10 interested in protecting the environment and protecting
11 human health, and in 1977 Monsanto company fully concurred
12 with the ban of PCBs. It took six years to educate
13 Monsanto, but they fully concurred with the ban six years
14 later.

15 MR. CARNEY: Well, you know, Mr. McCrea,
16 you're making speeches that are untrue, that are
17 inflammatory, that are improper. You have no -- You're not
18 testifying and here you are making these speeches. We're
19 here to take Dr. Kelly's testimony. If you have a
20 question, fine, but to make a speech that Monsanto did
21 something improperly is an outrage to me, and it's improper
22 and unprofessional conduct on your part, and I would urge
23 you to get on with questions and quit making speeches. The
24 jury into interested in what you think or what I think.
25 They want to hear the evidence from the witnesses that are

1 under oath.

2 MR. McCREA: I was just defending Congressman
3 Ryan.

4 MR. CARNEY: Well, I didn't know that was the
5 purpose of this. You're getting so far off the track in
6 the fifth day of your cross examination, Mr. McCrea. Now
7 you're defending a congressman who's running for office,
8 you know. I'm glad you're doing that, but let's not do it
9 on the record and waste the jury's time.

10 Q (By Mr. McCrea) Dr. Kelly, would you turn to
11 page 100?

12 A 100?

13 Q Yes, sir.

14 A I've lost that one, too. Do you have 100?
15 Oh, I'm back here.

16 MR. CARNEY: Why don't you give those back.

17 A I may need those back. Yes, sir.

18 Q (By Mr. McCrea) Are you familiar with this
19 document which has as its caption, "Monsanto's PCB program,
20 W. B. Papageorge, Presented at ANSI," A-N-S-I, all capital
21 letters, "Committee C-107 Meeting - September 14, 1971"?

22 A What did you ask me about it? Am I familiar?

23 Q Are you familiar with it?

24 A Well, I've seen it, but I don't know when I
25 saw it, whether I saw it during my time with Monsanto or

1 not. I don't really believe I did, but I've certainly seen
2 it since I've been out.

3 Q Would you turn to page 104?

4 A Yes, sir.

5 Q Would you read the paragraph three beginning,
6 "Through the years," just to yourself and then I'll ask you
7 if that makes any reference to PCBs and plasticizers in
8 silos?

9 A I've read it. What is your question.

10 Q Does it make any reference to silos?

11 A With the exception it said, "Uses such as in
12 paint formulations."

13 Q Is there any references whatsoever in this
14 document consisting of 15 pages to the problem of PCBs
15 flakes and leaching from plasticizers in silos into the
16 silage contaminating the cattle and contaminating the milk?

17 A Well, we might as well turn off the film
18 because I'll have to read this. I can't answer that.

19 Q All right, sir.

20 A So are we turning it off?

21 MR. McCREA: Yes.

22 MR. CARNEY: Well, let me object to this while
23 we're still on the record.

24 MR. McCREA: Let's --

25 MR. CARNEY: This deposition, you're into the

1 fifth day and now you're asking the witness to read a 15
2 page document that he says he doesn't know that he saw when
3 he was with Monsanto, and to see if there's a word there.

4 MR. McCREA: Just a second. I'll save you
5 time.

6 MR. CARNEY: Okay.

7 MR. McCREA: I'm agree that the document
8 speaks for itself and that it may be read by the jury.

9 MR. CARNEY: Well, you know, whether -- We're
10 not in the courtroom now. We don't have the jury, and I
11 think we'll have to address that to the judge at the time.
12 Whether it's appropriate to have the jury take the time to
13 read this 15 page document or not, I think we'll have to
14 address at a later date.

15 Q (By Mr. McCrea) But I'm -- Dr. Kelly, I don't
16 think it's necessary for you to read this document unless
17 you'd like to.

18 A No, I don't need to.

19 Q All right, sir. Would you turn to page 114 of
20 the Papageorge document, the sixth line, sixth line from
21 the bottom of the page beginning "There is still" --

22 MR. CARNEY: You're on 114?

23 Q (By Mr. McCrea) Yes, sir.

24 A Sixth line, "There is still," yes.

25 Q (By Mr. McCrea) Yes, sir. That statement by

1 Dr., by Mr. Papageorge reads, "There is still a lot of
2 information that is needed to help us determine the long
3 term effect on human beings." That statement was made
4 September 14th, 1971. As of September 14, 1971, do you or
5 did you as medical director concur with that statement?

6 A Well, I have to see --

7 MR. CARNEY: I don't know that you've
8 established that he actually saw that statement. He
9 doesn't know if he saw this document. Are you asking him
10 today or back --

11 MR. McCREA: I'm asking him if --

12 MR. CARNEY: If he saw that in '71, would he
13 agree?

14 MR. McCREA: Did he concur with that statement
15 on September 14th, 1971.

16 MR. CARNEY: Well, I'm going to object to
17 using the word did he concur because I don't think he could
18 concur with something unless he saw it to concur with it.
19 If you're saying did he believe that to be a true statement
20 back then whether or not he saw it or not, I think he could
21 probably answer that. So I object to the form.

22 Q (By Mr. McCrea) Dr. Kelly, on September 14th,
23 1971 did you believe that to be a true statement?

24 A Well, first of all, I'm not going to pick one
25 sentence out of this. Let's take the sentence before it.

1 Q Dr. Kelly --

2 MR. CARNEY: Let him finish his answer,
3 please.

4 MR. McCREA: Just a second, please.

5 MR. CARNEY: Just a minute. If you'd let him
6 finish his answer because I don't like your interrupting
7 him while he's in the middle of his answer, so please.-

8 A You're asking me to pick one sentence out of
9 context, and if I'm going to concur or agree with this
10 statement, I've got to look at the previous statements and
11 the following, the statements following it.

12 Q (By Mr. McCrea) Dr. Kelly, I'm asking the
13 question. Your attorney may ask you on redirect any other
14 information which he feels is necessary to present to the
15 jury. My questions is: Do you agree with the accuracy of
16 that sentence, "There is still a lot of information that is
17 needed to help us determine the long term effect on human
18 beings"?

19 A Now --

20 MR. CARNEY: Let me object to it.

21 Q (By Mr. McCrea) Now, if you want to go and
22 address other portions of this document as not in response
23 to my question, fine, go ahead, but I would ask that the
24 Court at the trial restrict your answer only to that which
25 is responsive to my question. Go ahead and answer.

1 MR. CARNEY: Well, I'm going to object to your
2 picking out a sentence in the middle of a 20 -- I'm sorry
3 -- 15, 16 page document out of context, and that sentence
4 has some undefined words to it. It says, "There's still a
5 lot of information." It doesn't say what kind of
6 information, what he means by a lot. It might call for Dr.
7 Kelly to speculate. I note -- I think that the doctor is
8 entitled to read the sentence in front of it or any other
9 sentence to bring it into context, and I invite the doctor
10 to do that.

11 A Well, I don't believe Mr. McCrea wants me to
12 do that.

13 Q (By Mr. McCrea) No, you can go ahead and do
14 it. I'm just stating that I asked a question as to that
15 sentence and when this is given to the jury, we'll get a
16 ruling from the Court, but you may answer it. I can't
17 restrict you on how you're going to answer it.

18 A Good. Thank you. That was the bottom line on
19 this question?

20 (Thereupon, the reporter propounded the previous
21 question.)

22 Q Well, to answer that in a yes or no situation,
23 I would need a lot of information myself. In the first
24 place, I think it, in context he stated the, "Studies today
25 would indicate that these PCBs are not and cannot be

1 classified as highly toxic."

2 Then he going onto say, "There is still a lot of
3 information that is needed to help us determine the long
4 term effect on human beings." I don't know if at that
5 time we had the two year testing on the two different
6 species.

7 I think that he referred also to other items as how
8 much is in the food that people are taking. So that is
9 just as important as the toxicity of the material. So
10 certainly that information is needed to help us determine
11 the long term effect. You have to equate -- There are two
12 parts to the equation, how toxic are small amounts and
13 what's the size of the amount? Does that answer your
14 question, Mr.McCrea?

15 Q (By Mr. McCrea) Yes, sir. Would you go to
16 page 110? I'll direct your attention to the last sentence
17 in paragraph two beginning, "PCB was brought out." The
18 statement says, "PCB was brought out as" --

19 MR. CARNEY: Are you talking about the middle
20 paragraph; right?

21 MR. McCREA: Paragraph two. What did I say?

22 MR. CARNEY: I thought you said the last. I'm
23 not sure.

24 MR. McCREA: The last sentence of paragraph
25 two. I don't know what I said. The sentence which states,

1 "PCB was brought out at an example of a material introduced
2 into society."

3 A Mine says brought up.

4 Q (By Mr. McCrea) Brought up?

5 A U-p, brought up.

6 Q Mine says brought out.

7 A You want to see mine? Page 11, 110?

8 Q Yeah. That's interesting.

9 MR. CARNEY: I think you're looking at a
10 different sentence. It's the last sentence on paragraph
11 two.

12 A Is that what we want now?

13 MR. CARNEY: Yeah.

14 A Okay. That is one of the problems of picking
15 items out of 15 pages.

16 Q (By Mr. McCrea) I don't dispute that, Doctor.

17 A Okay.

18 Q It states, "PCB was brought out as an example
19 of the material introduced into society and thought at one
20 time to be most valuable, but is now considered a serious
21 threat to all of us." Do you agree?

22 MR. CARNEY: I'm going to object. Again
23 you're --

24 Q (By Mr. McCrea) With that?

25 A No, I don't agree with it.

1 MR. CARNEY: And I'm going to object to your
2 taking a 15 page document, reading one sentence totally out
3 of context. If you're going to read from this document,
4 you're misleading the jury by reading sentences totally out
5 of context. You're doing this throughout the deposition,
6 and this is an example of it. That's not a proper way
7 unless you've established that this witness is familiar
8 with the document or he authored the document or he
9 received the document.

10 A And here again I may further explain, you've
11 got to read the sentence in front of it. Individuals --
12 "Initial hearings were held in August to which a select few
13 individuals were invited to testify." Who were they? I
14 don't know.

15 "PCB was brought out as an example of material
16 introduced in society and thought at one time to be most
17 valuable, but is now considered a serious threat to all of
18 us." Those aren't Papageorge's words. Those are these
19 unnamed individuals who were invited to Senator Phillip
20 Hart's committee, and I don't agree with it at all.

21 MR. CARNEY: And I think this is just an
22 example, Mr. McCrea, of how you're misleading the jury by
23 trying to infer that these were Papageorge's words. This
24 is an example of the improper questioning of the witness by
25 implying that it's Papageorge's words when now we read the

1 sentence just before it and it's clear that they weren't
2 Papageorge's words at all, but some unnamed individuals who
3 we don't even know the names of. I don't think the names
4 are in this memo. How can I cross examine some unnamed
5 people? This is total, totally improper.

6 Q (By Mr. McCrea) Dr. Kelly, would you go to
7 page 116?

8 A 16 this time.

9 Q Yes, sir.

10 A Yes, sir.

11 Q Can you identify the exhibit?

12 A Yes. I haven't seen this until this trial.
13 It's a letter from Dr. Kimbrough to Dr. George Levinskas of
14 Monsanto dated October the 15th, 1971.

15 Q Do you know what did -- in the second
16 paragraph, and you state you have not seen this until this
17 date?

18 A That's to the best of my recollection. I may
19 have, but it doesn't fit itself in my consciousness.

20 Q Okay. It says, "Does Monsanto have a cytology
21 screening program?" Do you know what is meant by that?

22 A Yes. It means can you screen -- I presume
23 she's talking about bladders. Again, I'll answer this
24 question and then I'll read the whole letter out. It says
25 here, "Does Monsanto have a cytology screening program?"

1 Yes, that, we did have one for an entirely different
2 product in which we were looking for a potential bladder
3 carcinogen, and that means you take urine, urine,
4 centerfuge it down, stain the sentiment and look for
5 bladder cells. Now, first paragraph we go to, "Enclosed" --

6 Q Let me ask this. Does this relate to PCBs,
7 this document?

8 A I don't think so because the next one --

9 Q All right.

10 A You say, "Enclosed is a copy of the article on
11 bladder cancer in the U. K. that I mentioned on the phone,"
12 and following that is this article 117, "Bladder Tumors in
13 the Electric Cable Industry," and I read that four
14 different times and I don't see PCB in it at all. So I
15 don't know what it's doing in here.

16 Q At the bottom she says, "For the sake of
17 completeness, I'm also enclosing the summaries of two
18 articles which I am sure you have seen. Both articles
19 report some findings on Aroclor 1260 Lot AK-3." Do you
20 know what she means by that?

21 A I don't know. It certainly wasn't this one
22 because this doesn't mention Aroclors or PCBs at all.

23 Q Then it says, "Let me know if you need any
24 Aroclor. We seem to have more than sufficient for our
25 studies."

1 A I don't know what she meant. I mean --

2 Q Okay.

3 A And frankly this is, just to clarify this,
4 this article that she says, "Enclosed is a copy of the
5 article on bladder cancer in the U. K. that I mentioned on
6 the phone." That's Kimbrough to Levinskas, and the article
7 under your plaintiff's exhibit pages 117 and 120 does not
8 mention Aroclor or PCBs any place.

9 Q I read those and that also is my
10 understanding.

11 A Good.

12 MR. CARNEY: Are you saying --

13 A Why is it in there?

14 MR. CARNEY: The article that starts on page
15 117 of Exhibit Six is the enclosure.

16 MR. McCREA: I don't know.

17 MR. CARNEY: Okay.

18 Q (By Mr. McCrea) But what I was concerned
19 with, Dr. Kelly, does this statement, "Does Monsanto have a
20 cytology screening program," apply?

21 A Yes, but not for PCB people.

22 Q What is cytology? What does that mean? Is
23 that urine?

24 A Looking at cells. It could be urine. It
25 could be a pap stain from women for cancer. They cough up

1 stuff. That's cytology. You're looking for the stuff
2 that's under the microscope.

3 Q All right. Are you familiar with the article
4 written by J. G. Vos and J. H. Koeman of which the, I guess
5 you would call it an abstract, appears on page 121, but not
6 the full article?

7 A Yes, sir, I am.

8 Q On this date do you recall if there was
9 anything in that article with which you disagreed?

10 A No, sir, I don't think so.

11 Q Dr. Kelly, are you familiar with the article
12 written by J. G. Vos and R. P. Beems, B-e-e-m-s, that
13 appears on page 122 again in which only the abstract of the
14 article is provided and the full article is not?

15 A Am I familiar with it?

16 Q Yes, sir.

17 A Well, yes, but I believe on this particular
18 one I would need more information if the next question is
19 going to be do I agree with all the findings. I don't
20 know.

21 MR. CARNEY: I'm going to object to the prior
22 question where you asked if Dr. Kelly agreed with the prior
23 article. He said he didn't disagree with it, but I think
24 that's an overbroad question because I'm sure it has a lot
25 of statements in it. We don't have the full article here,

1 so I would object to the form of the question as being
2 overbroad.

3 Q (By Mr. McCrea) Do you recall the question as
4 to the article on page 121, Dr. Kelly? I asked you if you
5 agreed with that article?

6 A Well, I agreed with the abstract, but there
7 wasn't, I would have to know more about it from going over
8 the whole article to know if I agreed with his findings.

9 Q Fair statement, and I think that's an
10 appropriate clarification. Now, Dr. Kelly, with respect to
11 the article on page 122 again with regard to the abstract,
12 is that information with which you were familiar during the
13 time you were with Monsanto as medical director and do you
14 agree with the information contained in that abstract?

15 A Well, there again because he is talking
16 about --

17 MR. CARNEY: Objection to the form. It's
18 compound, but go ahead.

19 A He is talking about, could be lesions, but I
20 would have know no more about them because that certainly
21 has not been a very positive thing in the examination of
22 animal toxicity reports.

23 Q (By Mr. McCrea) Would you -- And we've got
24 some fine print here, Doctor, and your eyes are probably
25 better than mine, but would you read the, what appear six

1 sentences down from the first paragraph? It says, "A
2 subsequent study revealed the presence of tetra- and
3 pentachloridibenzofuran in Phenoclor and Clophen."

4 A Yes, sir.

5 Q Is that a reference to what we earlier
6 referred to as furans?

7 MR. CARNEY: I'm going to object. It may call
8 for this witness to speculate.

9 A Yes, sir, but also this again is a fallacy of
10 looking at the abstract because Phenoclor and Clophen are
11 either Italian, German or French pentachlorophenyl, and
12 during the body of this article he says we didn't find
13 these things in the Aroclor. That very little significant
14 statement is not listed in this abstract, but it's in the
15 body of the literature.

16 Q All right, sir.

17 A Tetrachlorbenzenes in the European PCBs, not
18 in the Monsanto PCBs.

19 Q But I believe --

20 A Under the analysis done in 1971.

21 Q I believe you stated Monsanto tested its PCBs
22 and did find furans?

23 A Later on, but this man did not find it.

24 Q All right, sir. And we've been over that;
25 fair?

1 A That doesn't mean we can't go over it again.

2 Q Will you turn to page 123?

3 A Yes, sir.

4 Q Do you recognize this document?

5 A I really don't.

6 Q Do you recognize the names which are written
7 on page 123, the last L-e-i-s-y it appears, Richard
8 and the last one I can't read?

9 A I recognize Richard here. As I said, he was
10 in research before. I don't know the other people, but
11 obviously one's a general manufacturing superintendent of
12 the East St. Louis plant and the other is a manufacturing
13 manager which is right below him.

14 Q And in looking at this document, you do not
15 recognize it as having been something you have read before?

16 A I may have, but every department in the
17 company has what they call their manufacturing processes,
18 and so I might very well have seen it.

19 Q All right. Would you go to page 125?

20 A Yes, sir.

21 Q It has a Roman numeral three, "Toxicity" in
22 the middle of the page. Underneath that -- You see that?

23 A Yes.

24 Q Underneath that it says, "The following toxic
25 rating code will be used in describing the toxicity

1 these materials, 0 - none; 1 - slight; 2, moderate; 3,
2 high' U - unknown." In the first chemical is --

3 MR. CARNEY: I don't have a record. I'm on
4 the wrong page.

5 MR. McCREA: 125.

6 MR. CARNEY: Okay.

7 MR. McCREA: Do you have 125?

8 MR. CARNEY: Yes, I have it now.

9 Q (By Mr. McCrea) Then the first chemical which
10 they discuss is byphenyl, code 82601. Do you see that?

11 A Yes, sir.

12 Q And in six it says, "Toxic Hazard Rating,
13 Acute Local: U." That means unknown. Is that correct?

14 A Yes.

15 Q "Acute Systemic Ingestion, 3." That means
16 high; correct?

17 A Yes, that's what he says, but I don't agree
18 with him at all.

19 Q "Inhalation"?

20 A Three.

21 Q Three, high "Chronic Local: U," unknown. Do
22 you not agree with that?

23 A No.

24 Q Categorization?

25 A It's --

1 MR. CARNEY: Let me object before you answer.

2 A It's not a high toxicity.

3 MR. CARNEY: Let me just object, Dr. Kelly,
4 before you answer the question.

5 A Okay.

6 MR. CARNEY: This is a document that the
7 witness did not author. He doesn't know if he saw it while
8 he was employed by Monsanto. Some of the people that did
9 author it, I notice a Mr. Savage, I know he's still with
10 Monsanto, but, and you're obviously free to take the
11 depositions of people that have knowledge of this document.
12 This witness doesn't know about it. He would have to
13 speculate as to what the authors meant by these
14 designations, number one, and you know, we don't know
15 whether these -- if we don't know what they meant by these
16 designations, it's pretty hard to speculate as to the
17 significant of any of this. I think we've got the wrong
18 witness again.

19 Q (By Mr. McCrea) Do you know who -- This says,
20 "Prepared by: R. M. McCutchan." Do you know who he was,
21 Dr. Kelly?

22 A No, I don't know who he is. He's not in the
23 medical department.

24 Q Would you go to page 130? You recognize this
25 document?

1 MR. CARNEY: I take it your question is did
2 he see this document when he was employed?

3 Q (By Mr. McCrea) Correct.

4 A I really don't remember this at all. It
5 doesn't say who it's from. It doesn't say the date on it.
6 I don't know anything about it.

7 MR. McCREA: All right. Do you see
8 paragraph three?

9 A Which page?

10 Q Page 130.

11 A Yes, sir.

12 Q And does that state, at least in this
13 document, "All plasticizer customers were notified on
14 December 31, 1971 of our intention to discontinue PCT."
15 What does that stand for?

16 A I don't know what it means, but unless they
17 had a different name for the plasticizer use of PCBs. I
18 don't know, but they're talking about PCB, so I'm sure that
19 it's PCBs.

20 Q Does that refresh your memory as to the plan
21 of action with respect to eliminating the PCBs in
22 plasticizers?

23 A Well, yes, but I don't know if there were any
24 other plans. This is undated, so I mean, it's obviously
25 sometime after December 31st, '71. I don't know if there

1 were other plans of action of which I wasn't privy. I may
2 not have known about it.

3 Q All right. Will you go to page 131?

4 A Yes, sir.

5 Q The second to the last paragraph it is stated,
6 "We have been in close touch with the Federal Interagency
7 Task Force under Dr. Edward J. Burger, Jr.'s direction.
8 This task force, task force is preparing to issue a report
9 on PCBs about mid-February. We will be allowed to work
10 with them in its preparation." Do you have any
11 understanding of Monsanto's involvement in working with the
12 Federal Interagency Task Force?

13 A No, sir, I was not involved with it. I may
14 have seen reports, but I don't know Monsanto's involvement.

15 Q You go to 133?

16 A Beg your pardon?

17 Q Page 133, Dr. Kelly?

18 A Yes, sir.

19 Q Do you recognize this document?

20 A I recognize what it is. It's a letter from
21 Howard Bergen undated, obviously sometime before January
22 the 15th, 1972. I don't know any more about it than that.

23 Q All right. Were you aware that Monsanto was
24 requiring its purchasers such as Westinghouse, General
25 Electric, McGraw Edison to indemnify Monsanto in case

1 Monsanto got sued for PCB damage to the environment for
2 health effects?

3 A No, sir, I wasn't. Is that in here?

4 Q Yes, sir.

5 A No, sir, I don't know anything about that.

6 Q All right. Can you identify the document on
7 page 141?

8 A 41?

9 Q 141?

10 A Well, it's a letter from --

11 MR. CARNEY: Well, again --

12 Q (By Mr. McCrea) Can you identify it? Have
13 you seen that before this date?

14 A I may have seen it. I saw it yesterday. I
15 took this home last night, but I don't recall it, no.

16 Q Before that date did you see it?

17 A No, I don't recall it.

18 Q Do you have any working knowledge as you
19 testify here today about requests of the U. S.
20 Environmental Protection Agency for a list of Monsanto's
21 customers who purchased PCBs?

22 A No, sir, I do not have a working knowledge.
23 In fact, no knowledge at all.

24 Q Will you go to page 143? Do you know the
25 gentleman who wrote this letter whose signature appears on

1 page 145?

2 A Mr. T. Katayama?

3 Q Yes, sir.

4 A No, sir, I do not.

5 Q Is this a Monsanto Chemical Company document?

6 A Mitsubishi Monsanto. I don't know if that's
7 fully owned by Monsanto. I thought it was 50-50 or maybe
8 it was 51-49. I don't know.

9 MR. CARNEY: Don't speculate, Doctor.

10 A What?

11 MR. CARNEY: Don't speculate.

12 A I said I don't know, but it's not a Monsanto
13 document. It's a Mitsubishi Monsanto Chemical Company.

14 Q (By Mr. McCrea) He states on page 145, the
15 second to the last paragraph, "The grand funeral of PCB in
16 Japan is close at hand," and that was written on March 22,
17 1974. Did you have any knowledge as to the approach of the
18 Japanese with respect to PCBs on this date?

19 A No, sir, but you must remember, in Japan they
20 had an awful lot of trouble from eating the material,
21 eating the Japanese material.

22 Q All right. Can you go to 146?

23 A Yes, sir.

24 Q Have you seen that article, that letter
25 written by W. B. Papageorge before this date?

1 A Yes, the last 48 hours or 24 hours.

2 Q But not while you were serving as medical
3 director of Monsanto?

4 A Not that I recall. I found 93.

5 Q What's that? You found 93?

6 A I said I found number 93 that I was worried
7 about.

8 Q Would you like to go back and discuss it?

9 A No, thanks. I think we discussed it pretty
10 fully.

11 Q Would you go to page -- First of all, can you
12 identify the document that appears on page 148?

13 A Yes, sir. Page 148.

14 Q Yes, sir.

15 A Did you ask me could I identify it?

16 Q Yes. Do you remember this document?

17 A No, sir, I do not.

18 Q All right. Will you go to page --

19 A I saw no carbon on me on this. Yes, sir.

20 Q All right. Would you go to page 151?

21 A Yes, sir.

22 Q The fourth paragraph on that page which
23 begins, "On the basis of available evidence," do you see
24 that?

25 A Yes, sir.

1 Q It says, "On the basis of available evidence,
2 it would appear that PCBs pose less of an acute toxic
3 health hazard than many substances not proposed for your
4 list, and at the levels found in the total environment are
5 not a threat to public health. We believe these views
6 agree with the conclusions reached by the Interdepartmental
7 Task Force on PCBs in its report dated May 1972
8 (CCN-72-10419)." Do you know who participated on the
9 Interdepartment Task Force in preparing that report?

10 MR. CARNEY: I'm going to object. It's again
11 reading a sentence in a multipage letter that this wasn't
12 authored by this witness or copied to him.

13 Q (By Mr. McCrea) Do you know who participated
14 on the Interdepartmental Task Force?

15 A Well, the Interdepartmental Task Force is not
16 a Monsanto task force. It's a government task force, so I
17 do not know who those people are. Whether any Monsanto
18 people were invited to participate, I don't know. I was
19 not. I don't recall anybody from the medical department.
20 So the answer to your question is no, I don't know.

21 Q (By Mr. McCrea) All right, sir. Do you
22 recognize the document which begins on page 154 titled
23 "Minutes of Meeting on Proposed PCB Effluent Standards,
24 February 28, 1974"?

25 A No, sir, I don't.

1 Q On page 157 there's a reference to E. S.
2 Tucker. Was he the gentlemen who did your analytical
3 analysis?

4 A Yes, sir. That's Scott Tucker.

5 Q Did he do analytical analysis on PCB levels in
6 the blood of your workers on any other, on more than one
7 occasion or just the one occasion which he reported in
8 1972?

9 A As long as I was there that's all he did.
10 Whether he did more after I left, I don't know.

11 Q Dr. Kelly, in this document, did you
12 participate in this?

13 A No, sir, I don't believe I did at all. I
14 don't think I ever saw it.

15 MR. McCREA: Break.

16 (Thereupon, a short recess was taken.)

17 Q (By Mr. McCrea) Dr. Kelly, I direct your
18 attention to page 174, a document dated March 12, 1974.

19 A Page?

20 Q 174.

21 A Yes, sir.

22 Q Is the author of that letter the attorney for
23 Monsanto?

24 A He was one of them. He was our environmental
25 attorney. He's not associated with them anymore. I think

1 he's in a private law practice.

2 Q The next page is the beginning of an affidavit
3 of W. B. Papageorge?

4 A Yes, sir.

5 Q And that affidavit goes to page 189 where it
6 is signed. See that?

7 A Yes, sir.

8 Q I'd like to ask you one question about the
9 affidavit, and that relates to the third paragraph on page
10 184.

11 MR. CARNEY: Let me just state for the record
12 that this is an affidavit dated March 14, 1974.

13 Q (By Mr. McCrea) Dr. Kelly, do you have page
14 184?

15 A Yes, sir, I do.

16 Q The third paragraph on page 184 states, "We
17 note in 'Water Quality Criteria, 1972,' in those sections
18 pertaining to polychlorinated biphenyls, the frequent use
19 of unpublished data and the disturbing use of qualifying
20 phrases such as 'may adversely affect,'" which is in
21 quotes, "Apparently related," which is in quotes, or "The
22 work suggests," which is in quotes. "In our opinion, none
23 of the questions present, present adequate data to
24 support establishment of responsible effluent standard for
25 PCBs." My question to you, Dr. Kelly, is: Did Monsanto

1 take the position in 1974 that these qualifying phrases
2 were not sufficient to establish --that because of these
3 qualifying phrases, there was not sufficient data to set
4 effluent standards for PCBs?

5 A I can't answer that because I do not know.

6 Q All right. Will you turn, please, to page
7 190?

8 A Yes, sir.

9 Q Does this post-date your employment at
10 Monsanto? The date on the top of the page I see is
11 December 9, 1974.

12 A Yes, it does, and whoever wrote it, obviously
13 my departure didn't make much impression on them because he
14 copied me in.

15 Q I didn't notice that. Where are you copied?

16 A Right below Bratsch, Engman, Fort, Kelly,
17 Levinskas and Savage.

18 Q All right. Did you get -- Did you actually
19 receive this document?

20 A No, sir. In fact, I don't --

21 Q Do you know who authored this?

22 A I don't know.

23 Q Is this a Monsanto form?

24 A Well, it's Monsanto stationery.

25 Q Is it a memorandum type form?

1 A Yes, sir, interoffice communications.

2 Q The names two and then there are six names
3 including yourself. That is correct?

4 A Yes.

5 Q Was it authored by Papageorge and Wheeler?

6 A I can't make -- I just don't know. I don't
7 know who it is.

8 Q All right?

9 A Those two names are up there, but I don't
10 know. I'd like to see the second page, but there isn't any
11 fall, any second part of it.

12 Q This states paragraph two that -- In
13 paragraph one it discusses a meeting with NIOSH. Can you
14 explain to the jury the functions of NIOSH?

15 A It's the National Institute for Occupational
16 Safety and Health. It's a research arm of the government
17 in the Department of Health, Education and Welfare.

18 Q It says the original purpose was to explore
19 whether Monsanto had a suitable occupational group for
20 study to assess the potential chronic affects of PCBs. To
21 your knowledge, before this date had there been any study
22 of workers in America to determine chronic effects of PCBs?

23 MR. CARNEY: I'm going to object to the form
24 of the question as to what you mean by study.

25 A Well, if you consider what I did when I

1 examined the people who were presently working in the
2 department, if that's called a study, fine. I don't know
3 when the Zack study was done. I don't know if that was
4 before December. No, it wasn't done before December of
5 1974 because it was done after I left there. She wasn't
6 there when I was there, so I would say mine was the only
7 one and that, as I said, it's not anything I would term a
8 study. It was just a report on the health status of the
9 present workers at the PCB plant of East St. Louis.

10 Q All right. This says, "What this would
11 involve in obtaining work histories of time spent in PCB
12 departments and medical records of active and still-living
13 inactive employees." Is that correct?

14 A Yes, sir.

15 Q And they also make reference to examination of
16 death records?

17 A Yes, sir.

18 Q And they say, "The study was stimulated by a
19 report from Dr. Kimbrough, that she had found an alarming
20 rate of liver cancers in rats fed Aroclor 1260."

21 A Yes, to the female rats, yes, none in the
22 males.

23 Q Do you know if Monsanto agreed to make their
24 employees available for a suitable occupational study of
25 the chronic effects of PCBs?

1 A Oh, I'm sure they did because I've seen
2 letters and I know that the people from NIOSH came down and
3 walked through the plant and said, "You don't have enough
4 people here. We don't think it's feasible to do it." Yes,
5 we made everything available, everything they wanted. That
6 presumably, whether this caused Zack, caused the subsequent
7 medical director to have Zack do it or not, I don't know.

8 Q We go to page 191.

9 A Yes, sir.

10 Q Have you seen this document before today other
11 than cursory review?

12 MR. CARNEY: Again, I think all the documents
13 from page 190 through to 262 in the Exhibit Six now
14 post-date the retirement of Dr. Kelly, so I think I just
15 note that for the record so that it might make things go a
16 little faster.

17 Q (By Mr. McCrea) You see the second paragraph
18 on page 191, February 3, 1975, letter from Dan A. Albert to
19 Papageorge?

20 A Yes, sir.

21 Q It says, "We have in the past -- "We have had
22 in the past workplace meetings with our employees
23 explaining proper use of Interteen and telling them unless
24 it is consumed, it presents no real danger to them." Do
25 you agree with that statement?

1 MR. CARNEY: I don't know what you mean by
2 agree with it. Did you read the words correctly? We're
3 talking about a document.

4 Q (By Mr. McCrea) You agree with the accuracy of
5 that statement?

6 MR. CARNEY: Well, I'm going to object for
7 the record that we're now getting into documents that
8 are, were generated after Dr. Kelly retired from Monsanto
9 and reading out -- He didn't get the document. He didn't
10 see it. He didn't write it. To ask him questions about
11 documents will take an awfully long time that he didn't
12 having any involvement with.

13 A Will you ask -- May I answer now?

14 Q (By Mr. McCrea) Yes, sir.

15 A Well, this is by a Westinghouse staff
16 supervisor. He writes this on February the 3rd, 1975.
17 There are at least three letters in this batch of exhibits
18 on plaintiff's exhibit from Wheeler to Spiker in which we
19 have explained to him dating back as far back, I think, as
20 1969 what the problem, what the problems were, the toxicity
21 were, the safe handling of data, the maximum allowable
22 concentration, that was all given to him.

23 Now, I don't know whether Albert was right or not
24 because it depends on what the exposure was. I don't know
25 what his exposure was, so I don't know whether Mr. Albert

1 was accurate in his statement or not, but he, Westinghouse
2 certainly had all the opportunity in the world to know
3 about the toxicity of Inerteen because they even carried
4 out some of their own work back before 1940.

5 Q Do you agree --

6 MR. CARNEY: Just for the record, I think we
7 ought to note that Albert doesn't appear to work in the
8 Bloomington plant.

9 MR. McCREA: He works in South Boston,
10 Virginia where they make PCB transformers.

11 MR. CARNEY: I don't think any of the
12 plaintiffs worked in that plant, just for the record, so
13 the jury isn't confused.

14 Q (By Mr. McCrea) Dr. Kelly, do you agree with the
15 accuracy of that statement?

16 A Well, it all depends on what you mean. I
17 don't know what his exposure level is. Suppose he has --
18 If this were in our plant, I would have had a workplace
19 meeting with our employees saying proper use of Interteen
20 will present no real danger, yes, that's true. Unless you
21 eat it, so he -- I don't know if you, he said explaining
22 the proper use of Interteen that's used properly, there is
23 no real danger.

24 Q Okay. Then you have to define what is meant
25 by using it properly; correct?

1 A Well, using it according to our instructions
2 is properly.

3 Q All right. Will you go to page 192? Did
4 anyone from Monsanto show you these questions shortly after
5 you finished working for them?

6 A No, sir, not that I recall at all.

7 Q Would you focus on question two? And this
8 comes from Westinghouse. Would you consider this a report
9 of problems? Question two, it says, "Several hourly
10 employees have mentioned recently that many chemicals such
11 as Interteen cause sterilization after a prolonged use. Is
12 this true?"

13 A No, it's not true. I mean, is it true that
14 they mentioned it or is what?

15 Q No, is that true?

16 A Is the statement true?

17 Q Right.

18 A I don't know anything about Interteen causing
19 sterilization.

20 Q All right.

21 MR. CARNEY: Well, note for the record it
22 says, "Chemicals such as Interteen." It doesn't identify
23 the other chemicals.

24 Q (By Mr. McCrea) All right. You go to
25 question six. It says, "There is one employee in our plant

1 who had no problem whatsoever with Inerteen years ago.
2 After six years of using, now when he works in Inerteen
3 (which is a part of his job) he develops a swelling on the
4 inner bicep of his left arm, only in one location. Could
5 this be from Inerteen or not? It goes away as soon as he
6 gets out of the Inerteen. It is similar to the swelling
7 after taking an injection."

8 A Is there a question?

9 Q What would your response be to that question?

10 MR. CARNEY: If he had been employed at
11 Monsanto back then?

12 MR. McCREA: Correct.

13 MR. CARNEY: And got that question?

14 A I would say conceivably maybe he had an
15 allergic reaction. I do not know why it would be just on
16 one spot on his arm unless he has got some job where he
17 leans on a rail or something in that job and he gets
18 contamination, but I can't conceive of any other reason.
19 An allergic local reaction comes and goes that way, and
20 it's only in one spot.

21 Q (By Mr. McCrea) All right. Will you go to
22 page 195? And that is a letter from Papageorge to Albert;
23 correct?

24 A Yes, sir.

25 Q Will you go to page 196? Do you see the

1 questions of Mr. Albert repeated in answers from Monsanto
2 to Westinghouse?

3 A Yes, sir.

4 Q Is the answer to question one -- Do you agree
5 with the accuracy of the answer to question one?

6 A May I read it?

7 Q Yes, sir.

8 A Yes, I would agree with it. I don't believe
9 that I would say that polychlorinated biphenyls has not
10 been recognized as skin irritants. It all really depends
11 if you consider paint remover on irritant. If you get that
12 on your hands enough, it's literally efficient paint
13 remover. I think it could detach your skin. With that
14 exception, the rest of it looks all right with me.

15 Q You agree with the, specifically with the last
16 sentence in the next to the last paragraph, "Although
17 chloracne is difficult to evaluate in animals, in humans
18 this takes the form of comedones (large blackheads with
19 typical acute pustules) and may be an external symptom of
20 overexposure preceding serious," and serious is
21 underscored, "liver injury"?

22 A It may be and maybe not. The majority of the
23 chloracnes in industrial work have not been associated with
24 overexposure, but for the sense of completeness, he put it
25 in.

1 Q You agree with the last sentence, "Animal data
2 and human experience indicate that the toxic effects are
3 similar whether exposure results from injection, inhalation
4 of vapors or absorption of the liquid material through the
5 unbroken skin"?

6 A Yes, sir.

7 Q Question two says, "Several hourly employees
8 have mentioned recently that many chemicals such as
9 Inerteen cause sterilization after prolonged use. Is this
10 true?" Answer: "There is no evidence that polychlorinated
11 biphenyls cause sterilization in humans."

12 A I agree with that. That's true.

13 Q Is there evidence that polychlorinated
14 biphenyls cause loss of libido?

15 A It had been reported by the workers. Whether
16 it's true that that was the cause, I don't know.

17 Q Question three, "Since Inerteen affects birds
18 and other animals, if there is no real effects to human
19 beings, how do you explain it to employees in such a way
20 that they will understand why it can kill a bird and not a
21 human?" Answer: "There is a potential real effect to
22 humans including death." Do you agree with that?

23 A Well, as discussed in number one.

24 Q As discussed in the answer to question one.

25 A Yes, but he could answer that, they could put

1 that answer on to any industrial chemical made in the
2 United States. Potential? What potential? One in a
3 million? It all depends on what you do with it. If you
4 take a bath in it, if you swallow it, a pint of it. So
5 that would -- That's my comment on that statement. Now,
6 you want the second part?

7 Q I don't think there's a question. The second
8 part of the answer?

9 A Yes.

10 Q Would you like to comment on it? If you would
11 like to comment on it, you may. I don't have a question to
12 address to it.

13 A Well, I think that they could probably explain
14 to them that the problem with the birds had been the
15 thinning of egg shells, and that particular mode of
16 reproduction is certainly different than in humans.

17 Q All right. Question four, "If any employee
18 spills Inerteen on his clothing and later takes the
19 clothing home to be," I think that's washed, "With other
20 clothes, will this have any effect on he or his family and
21 should he carry his clothes home to be washed?"

22 Answer: "There should not be any effect on an
23 employee or his family from home laundering of work
24 clothing. If washed with other clothing, there maybe be
25 residual odor of the chlorinated hydrocarbons in the

1 clothing." You agree with that answer?

2 A Yes, sir.

3 Q Shouldn't Papageorge have told them that that's
4 an unsafe practice for a worker to have PCBs on his
5 clothing and that if a worker gets PCBs on his clothing, it
6 should be changed immediately?

7 A I think he answered the question that was
8 asked him. I don't believe he wanted to go into a
9 discourse about all safe handlings. Here is 12 questions
10 they asked him and he gave information to non-technical
11 people, person see he could answer the questions.

12 Q Do you consider it safe for a worker to get
13 Inerteen on his clothing and wear it?

14 MR. CARNEY: That's not the question that was
15 asked here.

16 MR. McCREA: No, it's not.

17 A It all depends how much. Yes, if his clothes
18 were dredged with Inerteen, he shouldn't wear them,
19 certainly not.

20 Q (By Mr. McCrea) Are you familiar with
21 articles in the literature back in the 1930s which stated
22 that clothes worn by a worker should be washed separately
23 from the family clothes?

24 A They're talking about chlorinated naphthalene,
25 Mr. McCrea.

1 Q Well, if it says chlorinated diphenyl, are
2 they talking about chlorinated naphthalene?

3 A Every time they use the term chlorinated
4 diphenyl, they have proceeded it by saying naphthalene
5 and/or diphenyl. It's never -- There's nothing in the
6 literature back in the '30s that said chlorinated diphenyl
7 alone.

8 Q Question five: "Employees carry Inerteen home
9 on the soles of their shoes and complain quite a bit about
10 the affect Inerteen has on wearing out their shoes. Is
11 this a serious problem? Will Inerteen in the soles and
12 leather of shoes over a long period of time have an effect
13 on the feet and skin since the shoe is the only protective
14 equipment we wear on our feet and the Inerteen penetrates
15 through the leather?"

16 Answer: "There should not be polychlorinated
17 byphenyl on the floor for workmen to contaminate their
18 shoes to carry home. The plasticizer or solvent action
19 will destroy or shorten the life of the shoes. More
20 importantly, the wearing of contaminated shoes could lead
21 absorption of the liquid through the soles of the feet
22 as though, as through any other unbroken skin surface."

23 A Yes, sir, I agree with that.

24 Q Do you think it's a serious problem?

25 A Well, if they -- it all depends. If it

1 happens all the time, certainly it's serious.

2 Q Question six --

3 A Also, if there's that much on the floor,
4 that's a serious problem.

5 Q Questions six, we've already addressed that
6 one, I believe. The answer to questions six which was the
7 fellow that had had swelling in his arm, "We to not believe
8 there can be any association between a swelling of the
9 inner bicep of the arm and exposure to polychlorinated
10 biphenyls."

11 A Well, I would disagree with that. I think I
12 would say this man may be getting some of the transformer
13 fluid in this particular area and he's allergic to it. If
14 it going away when he leaves and when he comes back it's in
15 the same spot, that's an allergic reaction. It can't be
16 anything else.

17 Q Questions seven: "Are there hand cleaning
18 solvent materials that we should be using when working in
19 Inerteen to coat our skin before working in it and to wash
20 it off after we finish working in it? Please give your
21 recommendation. Our employees working in Inerteen are not
22 able to use gloves since it is an assembly area. Even if
23 they could, the Inerteen would destroy the protective
24 glove."

25 MR. CARNEY: Just so we're clear, Mr. McCrea,

1 you're not claiming that these questions are questions that
2 employees at the Bloomington plant had, are you?

3 Q (By Mr. McCrea) No. Answer: "We assume the
4 questions refers to the use of barrier creams rather than a
5 hand cleaning solvent. There are a number of barrier
6 creams available to protect workers against water insoluble
7 solvents. Probably the most effective include silicone to
8 provide an impenetrable shield. I problem with such creams
9 is that they may offer a false sense of security. Proper
10 use includes a discipline which requires liberal
11 application at the beginning of a work shift and after each
12 washing of hands during the work day." Do you agree with
13 that answer?

14 A Yes, sir, I agree with it. I also agree -- I
15 might be more positive in saying we really don't think the
16 barrier creams are all that good, but if it's the best
17 you've got, do it. I also think that at that particular
18 time, I'm not sure whether Neopreen gloves were, could to
19 be used or not. I don't know whether that was in, could
20 not be used, couldn't be used with Inerteen or not be
21 dissolved by the material. I'm not sure.

22 Q We go to page 199. Do you identify -- Do you
23 recognize and can you identify the document?

24 A Yes, this is the "Hygienic Guide Series" put out
25 the American Association of Industrial Hygiene on

1 Chlorodiphenyls containing, 42, 54 and 42 percent chlorine.

2 Q We go to page 201.

3 A Yes, sir.

4 Q Roman numeral four, "Medical Information, A,
5 Emergency Treatment: Skin surface is exposed to
6 Chlorodiphenyls:" That's PCB; correct?

7 A Yes, sir.

8 Q "Should be thoroughly washed with soap and
9 water at once." Do you agree with that?

10 A Yes, sir.

11 Q "If clothing has been contaminated, it should
12 be removed promptly." Do you agree with that?

13 A Well, it all depends what you mean by promptly.
14 I mean, I wouldn't pull it off as though it had
15 battery acid on it or something like that, but ...

16 Q Define promptly for us.

17 A Well, I think you'd have to ask them how
18 they're using it. My idea of promptly might be entirely
19 different than theirs. I might say within a reasonable
20 time. Then he'll ask me what is reasonable. Well, if the
21 man is going to go to lunch in a half an hour, he can
22 certainly, depending on how much he's got on his clothes,
23 he can wear it, use it for a half an hour.

24 Q So you would --

25 A If it happens every day, that's a different

1 thing.

2 Q You would define promptly as what, half hour?

3 A No, promptly would be any reasonable man would
4 assume to be prompt. Now, I can't say because you weren't
5 telling me how much is on the clothes. You're not telling
6 me how far the man is from where he's going to change the
7 clothes, if he's got a set of clothes right next to him or
8 if he has to walk a quarter of a mile. So there are all
9 sorts of variables, and I cannot quantify that.

10 Q Go to column two under B, "Special
11 Procedures." Do you see that, the last paragraph?

12 A Yes.

13 Q The last sentence, "Persons with known liver
14 disease should not be exposed to repeated contact with the
15 chlorodiphenyls." Do you agree with that?

16 MR. CARNEY: I'm going to object. It doesn't
17 define -- I'm sorry. Where are you reading from, the last?
18 Okay. I'll withdraw the objection.

19 A Now, again --

20 Q (By Mr. McCrea) Now, Dr. Kelly, do you agree
21 with the accuracy of that statement?

22 A Well, I've got to define what contact is -- I
23 mean, what repeated is. Is repeated every day for a year?
24 I don't think anybody should be exposed to repeated contact
25 with chlorodiphenyls whether they have liver disease or

1 not. We warn against repeated or prolonged skin contact.

2 Q Did Monsanto advise prospective employees of
3 that particular special procedure?

4 A Well, we wanted them to avoid repeated
5 contact, so I think we were more conservative than these
6 people. They just said people with known liver disease
7 should not be exposed. We say everybody should not be
8 exposed to repeated contact with chlorinated diphenyls.

9 Q Did you screen potential employees by
10 determining if they had known liver disease before they
11 started working in PCBs?

12 A I think we gave these individuals the same
13 examination we gave any of our industrial workers.

14 Q I'll ask it one more time.

15 A Well --

16 Q Did you screen prospective employees for the
17 existence of known liver disease before they started
18 working in PCBs at Monsanto Company?

19 MR. CARNEY: I'm going to object to it. You
20 haven't spelled out the time frame.

21 MR. McCREA: From 1936 to 1974.

22 MR. CARNEY: And this question had been asked
23 and answered several times today.

24 A We did not screen the employees who worked in
25 the PC department for liver disease any more than we

1 screened anybody who came to work in the chemical plant for
2 liver disease, pre-existing liver disease.

3 Q (By Mr. McCrea) Would you turn to page 203?
4 Have you examined in detail before today's date the
5 documents relating to the IBT studies contracted between
6 Monsanto and IBT?

7 A Well, what document do you mean, Mr. McCrea?
8 Do you mean the reports?

9 Q Yes, sir.

10 A Well, the reports came before I left. I read
11 the reports. There are other reports that came after I
12 left.

13 Q Have you seen this document and reviewed this
14 document before today, the April 18, 1975 letter from J. C.
15 Calandra to Dr. George Roush, Jr.?

16 A I don't think I have.

17 Q Was Calandra indicated along with Wright for
18 falsifying studies at IBT?

19 A I don't know if he was.

20 Q Have you seen the document on page 204 before
21 today which goes 204 through 208?

22 A I may have, but I'm not sure.

23 Q Do you have any present recollection of having
24 seen that document before today's date?

25 A I may have. I mean, I don't know.

1 Q All right. Fair answer. We go to page 209.
2 Before today's date, have you reviewed this document which
3 is a letter from George J. Levinskas to Dr. J. C. Calandra
4 dated July 18, 1975?

5 A Again, I may have seen this in conjunction
6 with some of these depositions, but I don't recall whether
7 I have seen it before. I believe I have seen, but I
8 don't recall when.

9 Q Have you seen the data on page 211?

10 A No, this I have no recollection of having
11 seen.

12 Q Page 212. Have you seen this document dated
13 August 4, 1975 which is a letter from J. C. Calandra,
14 president of IBT, to Dr. George Lavinskas, manager,
15 Environmental Assessment and Toxicology, Monsanto Company?

16 A Again I may have.

17 Q Did J. C. Calandra agree to -- In paragraph
18 one he states, "We will amend our statement in the last
19 paragraph on page two of the Aroclor 1254 report to read,
20 quote, 'does not appear to be carcinogenic', quote, in
21 place of, quote, 'slightly tumorigenic', quote, as
22 requested."

23 A What was the question about that, that you --

24 Q Are you familiar with the fact that your
25 former company requested IBT to change the wording on the

1 results of their studies?

2 A Well, just a moment. I answer is yes, but you
3 have picked out one sentence and implied that they have
4 edited all these studies and there's two other articles or
5 two other reports he called the material non-carcinogenic.
6 This one and 1254, he said slightly tumorigenic. So
7 Lavinskas wrote them and said, "Let's get the wording
8 together on all the same."

9 As far as the company would be concerned, I think
10 the sentence "does not appear to be carcinogenic" would be
11 worse for Monsanto than slightly tumorigenic, and after
12 all, the problems with the Aroclor, the discussion or the
13 debate about the Aroclor toxicity studies was a presence or
14 absence of carcinogen, of cancers. That was what -- They
15 were reviewing all the material to see does this material
16 cause cancer in the livers of the rats.

17 So the answer then was if it doesn't say it -- Now,
18 it might have been better to say slightly tumorigenic, but
19 does not appear to be carcinogenic, well, I don't think
20 that would hurt anybody, but I believe they wanted, if the
21 condition, if it were true in 40, in 60 and 42, and they
22 wanted the reports to read all the same if that were true.

23 Q Is that testimony based on information given
24 to you by George Lavinskas?

25 A Yes, I've talked to George about it.

1 Q Did George know that slightly tumorigenic was
2 a positive finding indicating a positive result indicating
3 a positive action by PCBs?

4 A I'm sure he did, but remember, we are talking
5 about the problem and this was do these PCBs cause cancer
6 in the liver of rats. Kimbrough said they do. Our work at
7 Bio-Test showed they don't.

8 Q Would you also --

9 MR. CARNEY: Would you let him finish?

10 MR. McCREA: Yes, I will.

11 A And so tumor, slightly tumorigenic does not
12 mean cancerous at all.

13 Q (By Mr. McCrea) What does it mean?

14 A It means they are hepatomas which are, could
15 be considered a localized overgrowth of normal liver cells.
16 That's what hepatoma is.

17 Q Is that something that is unwanted in a liver?

18 A Well, I think anything -- Yes, it's unwanted.

19 Q What does not appear to be carcinogenic
20 mean?

21 A Does not look like it causes cancer.

22 Q Is that a negative finding?

23 A Well, I don't know. It's pretty positive. If
24 you say, "I don't believe there's any cancers here," that's
25 pretty positive, isn't it?

1 Q Positive that it doesn't cause cancer?

2 A Yes, that's right.

3 Q But slightly tumorigenic is absolutely a
4 crystal clear communication that PCBs do, in fact, cause
5 that?

6 MR. CARNEY: Cause cancer?

7 MR. McCREA: No.

8 MR. CARNEY: In rats?

9 Q (By Mr. McCrea) Cause these slightly -- that
10 PCBs are slightly tumorigenic?

11 A But then we would have to get down to the
12 reports on the 1254, and let's see how many there were here
13 and let's see whether that same English was used on 1260
14 and 1242.

15 Q It was, wasn't it?

16 A Well, I don't know. Let's see it. I don't
17 know.

18 Q All right. Go ahead. Look at it.

19 A Where is it?

20 Q They changed the wording in all the reports,
21 didn't they?

22 A No, I don't think so. I was just talking
23 here about 54.

24 Q All right. You don't think they changed the
25 wording on any other reports?

1 A Well, I don't know. Let's see the reports,
2 Mr. McCrea.

3 Q All right. Well, let's go to the letter.

4 MR. CARNEY: Mr. McCrea, the problem is you're
5 showing him documents. This is six months at least after
6 Dr. Kelly retired from the company, and if you want to ask
7 him about what's in a report and whether it was changed or
8 not, I think you ought to show him the report. That would
9 be the best evidence of it. Then we don't have to
10 speculate about whether it was changed or what it said.

11 Q (By Mr. McCrea) Go to page 209 to determine
12 whether or not Monsanto changed the wording on the reports
13 for 1242, 1254 and 1260.

14 MR. CARNEY: Well, I'm going to object to
15 Exhibit 209 indicating what was done on the reports. This
16 is a letter from Dr. Lavinskas and Dr. Calandra. I think
17 the best evidence of whether a report was, some wording was
18 changed -- I might add it's insignificant. I don't know
19 why we're wasting time on this slight word change, but the
20 reports would be the best evidence.

21 Q (By Mr. McCrea) If a doctor came up to you
22 and he said, "Dr. Kelly, we've done a" --

23 A Which doctor by the way? Who?

24 Q If a doctor came up to you --

25 A Oh, okay.

1 Q And said, "Dr. Kelly, we've done a magnetic
2 resonance imaging on your grandchild and he has a slightly
3 tumorigenic condition in his liver," would that concern
4 you?

5 A Certainly it would, but the point is you are
6 talking about a completely different situation. On a
7 magnetic resonance imaging you can't tell whether that
8 tumor is a cancer or not. Certainly it would concern me,
9 but here we have got microscopic sections which show that
10 it this is not a cancer.

11 Q Dr. Kelly --

12 MR. CARNEY: And we're talking about rats
13 here, not a grandchild.

14 MR. McCREA: We're talking about the word
15 slightly tumorigenic and the impact that would have on the
16 reader.

17 MR. CARNEY: But the slightly tumorigenic is a
18 reference to a rat.

19 MR. McCREA: Which Monsanto wants the public
20 to accept as being valid with regard to conditions in human
21 health.

22 MR. CARNEY: Well, I think -- I don't think
23 Monsanto cares whether you use -- Does not appear to be
24 carcinogenic is not inconsistent or at odds with slightly
25 tumorigenic. I think you're acting like these two phrases

1 are at odds with each other, and I think Dr. Kelly is
2 saying they aren't.

3 Q (By Mr. McCrea) We'll let a jury determine
4 whether or not those mean the same thing. All right. Now,
5 with respect to whether or not they changed the wording on
6 other reports --

7 A Who is they by the way?

8 Q IBT.

9 A All right, all right.

10 Q At the insistence of Monsanto.

11 A Well, I don't know whether there's been any
12 insistence. In the first place, he suggested it. In the
13 second place, this letter that you wrote on July the, or
14 was written by George Lavinskas on July the 18th, 1975 said
15 the previous conclusion of slightly tumorigenic was changed
16 to does not appear to be carcinogenic. Now, I don't know
17 at whose insistence that was changed. Do you have a letter
18 there showing that Lavinskas wrote them and said change
19 these other two?

20 Q Yes, I do.

21 A May I see it?

22 Q All right. The second paragraph, Dr. Kelly,
23 of the July 18, 1975 letter was George J. Lavinskas to Dr.
24 J. C. Calandra states, "In two instances, the previous
25 conclusion of, quote, 'slightly tumorigenic,' quote, was

1 changed to, quote, 'does not appear to be carcinogenic.'"

2 MR. CARNEY: What page are you reading from?

3 Q (By Mr. McCrea) Page 209. "The latter phrase
4 is preferable. May we request that the Aroclor 1254 report
5 be amended to say, quote, 'does not peer to be
6 carcinogenic.'" That letter would indicate that two
7 previous conclusions were changed and that he is requesting
8 that a third change for Aroclor 1254?

9 A It doesn't indicate that at all to me because I
10 don't know who changed that. It might very well be that
11 -- After all, they're in there testing for cancer, so it
12 might very well be that IBT decided we believe it's wiser
13 to put down does not appear to be carcinogenic if you're
14 doing a carcinogen study, and they didn't do it on 54 and
15 that's why George wrote them and said the latter phrase is
16 preferable, and I didn't see anything in there about
17 insistence on this stuff.

18 Q Go to page 211.

19 A Yes, sir.

20 Q Does that show three columns, one, the
21 product; two, the supplemental report that was mailed; and
22 three, the supplemental report that JCC delivered?

23 A Yes, sir.

24 Q And for Aroclor 1260 did the mail report
25 contain the conclusion slightly tumorigenic?

1 A Yes, sir.

2 MR. CARNEY: I'm going to object here. You're
3 looking on a summary of some reports and it seems to me it
4 would be better to have the actual reports be the best
5 evidence of what's in there.

6 Q (By Mr. McCrea) And did the supplemental
7 report which was delivered by Calandra contain the
8 conclusion does not appear carcinogenic?

9 A Yes, sir, but it doesn't say at whose option
10 this was put in. You were going to give me a letter where
11 Lavinskas wrote about 1260 or 1242 asking for a change in
12 those two studies and --

13 Q I'll try and locate that between now and
14 tomorrow.

15 A Fine. I'd be happy to see it.

16 Q Aroclor 1254, the supplemental report which
17 was mailed contained the conclusion slightly tumorigenic.
18 The supplemental report which was delivered also contained
19 the phrase slightly tumorigenic. And do you understand by
20 the letter of July 18 that Lavinskas is requesting a change
21 of that conclusion for 1254 from slightly tumorigenic to
22 does not appear carcinogenic?

23 A It's not a change in the conclusion. What he
24 is doing is saying, "Let's have all the reports read the
25 same." If that's -- If they're not carcinogenic, let's say

1 it. They're running this test because there was a
2 reevaluation of the test because there was a dispute
3 whether these materials were carcinogenic, and if you're
4 running a test looking for cancers and you don't find any,
5 I think the thing to do it to say you don't, it isn't
6 carcinogenic. It think in the NCA work they said, with
7 1250, NCI, National Cancer Institute, with 1254 they said
8 under the, under the circumstances of this test, 1254 is
9 not carcinogenic.

10 Q Is there a question to you, Dr. Kelly?

11 A I thought there was.

12 Q On Aroclor 1242 it supplemental report stated
13 slight tumorigenic. The hand delivered report from
14 Calandra was changed to does not appear carcinogenic. Is
15 that correct?

16 A That is correct on this statement, yes.

17 Q Dr. Kelly, have you ever requested a change in
18 a conclusion of a laboratory doing toxicological work?

19 MR. CARNEY: You're implying that there was a
20 change in the conclusion. I think that mischaracterizes
21 the record.

22 MR. McCREA: Well, I understand that your
23 position is that the word slightly tumorigenic and does not
24 appear carcinogenic mean exactly the same thing.

25 MR. CARNEY: No, what I'm saying is I don't

1 think they're inconsistent, you know. It's not like saying
2 it's carcinogenic and then saying it's not carcinogenic
3 which is, I think, the implication you're trying to give.

4 MR. McCREA: No, tumorigenic as opposed to not
5 causing cancer which he said is a positive finding.
6 Tumorigenic is a positive finding which indicates a health
7 problem. Does cause, does not appear, does not appear to
8 be carcinogenic indicates no health problem.

9 MR. CARNEY: Well --

10 MR. McCREA: Slightly.

11 A No, it doesn't. Are you quoting me? That
12 isn't what I said.

13 MR. McCREA: All right.

14 A You are putting words that are entirely
15 different than I have testified to.

16 Q (By Mr. McCrea) What does slightly
17 tumorigenic mean?

18 A Means there is a small amount of tumors found
19 in the test animals that were not malignant, were not
20 cancer.

21 Q Is that a physiological change?

22 A It may be.

23 Q Is that a physio --

24 A And it may be pathological because after all,
25 hepatoma is made up of liver cells. It's not a change in

1 the cell. It's made of liver cells, normal liver cells.

2 Q Is that a change in the liver?

3 A Yes, it's a change in the liver.

4 Q Is that a change in the liver caused by PCBs?

5 A It's caused by lots of things, but it could be
6 causes by PCBs, yes.

7 Q What does does not appear to be carcinogenic
8 mean?

9 A It means that it does not appear to be, that
10 PCB does not appear to cause cancers in the test animal.

11 Q And from that can you determine if there were
12 any changes in the liver?

13 A No, sir Remember, we are looking to see
14 whether they're cancerous or not and you are quibbling
15 about phrases and I'm saying that here the National Cancer
16 Institute used the same phrase in describing 1254, does not
17 appear to be carcinogenic under the details of, under the,
18 this program of their testing. They use that term.

19 Q Did you -- Did Monsanto inform the government
20 of this change?

21 A We gave the government every report we had.

22 Q Dr. Kelly, has Monsanto made any independent
23 reviews of the work done at IBT as a result of Paul
24 Wright's indictment?

25 MR. CARNEY: I'm going to object here. You're

1 now going back to IBT and I thought we covered that for a
2 couple of hours. I don't know what day it was, but one of
3 the last five days.

4 Q (By Mr. McCrea) If you know.

5 A I know only from an anecdotal point of view,
6 and my answer to that is they have, that they have reviewed
7 and done work on the toxicological work on products of
8 theirs that were suspected or alleged by the government to
9 be affected by the IBT people. Neither of those two -- One
10 was TCC which is a soap bacteria stat and the other was an
11 agricultural chemical, and they, I've never seen any
12 subsequent reports, but I have been told that the results
13 were consistent with what IBT found and PCB was not
14 involved in the case, so they did not recheck it.

15 Q Dr. Kelly, would you go to page 224? Have you
16 seen this document?

17 A I haven't got up to it yet.

18 Q All right. 224.

19 A Yes, but I've got to see the document.

20 Q I understand. I'm trying to help you out on
21 the page.

22 A Well, I don't know what form I've seen this
23 document. It says, "Background Information on
24 Polychlorinated Biphenyls" by NIOSH. I don't know if that
25 was part of the material that went into the proposed

1 criteria document by NIOSH or not. I don't believe I've
2 seen it in this form as we've got here, 28 pages. It
3 doesn't say where it was published or anything else.

4 Q Would you go to page 229?

5 MR. CARNEY: Why don't we -- If we're going to
6 another page, we're almost finished with the tape, and it's
7 about quarter till six. I think we've been going since
8 8:30 or close to that. That's when we were supposed to
9 start. I guess we got started a little bit late. I think
10 that's a pretty long day, and I believe just --

11 MR. McCREA: Are you saying you'd like to
12 stop? I mean, that's fine with me.

13 MR. CARNEY: Well, I think we're within a few
14 minutes of the end of the tape. I think you've indicated,
15 so the jury will know when there's light at the end of the
16 tunnel on this thing, that you've thought you could
17 complete or you indicated you were sure you could complete
18 this cross examination in three more hours. Is that
19 correct?

20 MR. McCREA: Correct.

21 MR. CARNEY: Okay. Why don't we quit for the
22 day.

23 MR. McCREA: Agreed.

24 * * * * *

1 COURT MEMO

2 IN THE CIRCUIT COURT OF THE CITY OF ST. LOUIS

3 STATE OF MISSOURI

4
5 Glenn Brown, et al. vs. Monsanto Company

6 862-00694

7
8 CERTIFICATE OF OFFICER AND

9 STATEMENT OF DEPOSITION CHARGES

10
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12 TAKEN ON BEHALF OF THE DEFENDANT

13 6/15/1990

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