A When it says pyronol, that would mean that G.E. was calling the shot on what blends they wanted.

Q Okay. And that would not be something then that would be developed by your group?

A No.

(End of reading)

MR. LACEY: I believe that concludes Monsanto's offer and the offers from the deposition.

THE COURT: All right.

Who do you have next?

MR. LACEY: We would now continue, Your Honor, with the plaintiffs' evidence from the deposition of Elmer Wheeler. And again, we would, I assume, go with the videotape at the outset and then switch to the Q&A.

(WHEREUPON THE FOLLOWING PORTIONS OF THE VIDEO DEPOSITION WERE SHOWN TO THE JURY.)

Q What job did you take when you joined Monsanto in 1947?

A I joined Dr. Kelly, who was the medical director for the company, as the first industrial hygienist the company employed.
Q Where was that employment located?
A At the company's headquarters in St. Louis.
Q What year was that that you actually retired? That would have been 1976?
A Yes, sir. June 30th, I believe.

(WHEREUPON THE VIDEO DEPOSITION WAS INTERRUPTED)

MR. LACEY: We would continue now with the plaintiffs over at Page 16, line 12.

(Reading from video deposition)
Q First, as you see the -- the job of industrial hygienist, it's not just for the workers of the company he's working for, but also for people who may use the products of the company, correct?
A By my definition yes, sir.
(End of reading)

MR. LACEY: Then going to Page 17, line 18, with Monsanto's offer.

(Reading from video deposition)

Q Is there a board or a group or association of people who practice industrial hygiene?

A There is the American Industrial Hygiene Association, which I joined in 1948. I was on the board of directors for eight years. I was president in 1958 to '59. There's a second group entitled the American Conference of Governmental Industrial Hygienists, whose membership or the membership of which is limited to government employees and those in universities and research institutes. I -- I can't say that industrial -- industry-employed peoples are barred, but I don't know of any that are members. I think their charter probably specifies that it's an independent group. The two work very, very closely together. They are -- most of the ACHIG members are also AIHA members.

The AIHA membership when I was president was probably 1,300 to 1,500 people. Today it's nearer 8,000. The two organizations sponsor an annual meeting attended by not only people in the United States, but from abroad. The American Industrial Hygiene Association now has, I think, 50 local section groups, includeing several in

Canada, Great Britain, Italy, and I believe Spain and France, Japan. In addition to the AIHA, I belong to the Air Pollution Control Association and was first vice-president of that group at one time.

I'm a member of the -- or an emeritus member of the American Chemical Society. I was a Fellow of the American Association for the Advancement of Science. I've been a member of the American Public Health Association, the Research Society of America, the British Occupational Hygiene Society. I served on an advisory committee of the Environmental Protection Administration for four years, and for a similar period I was on an industrial liaison panel for the Food Protection Committee of the National Academy of Sciences.

(End of reading)

MR. LACEY: Going to Page 22, line 1, continuing with Monsanto's offer.

(Reading from video deposition)

Q I note that you indicated that Harvard, which is where you did some of your studies after your -- you attained your bachelor's degree was interested in this field of industrial hygiene?

A Yes, sir. j At that time it was one of perhaps only five universities that taught industrial hygiene and awarded Bachelor of Science degrees in industrial hygiene.

(End of reading)

MR. LACEY: Going to Page 30, line 9, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q The medical department was stationed St. Louis, Missouri?

A The corporate medical department, yes, sir.

Q Which is where you and Dr. Kelly were?

A Yes, sir.

Q And did the corporate medical department have responsibility for all the Monsanto facilities worldwide?

A Yes.

(End of reading)

MR. LACEY: Going to go Page 36, line 18, with Monsanto's offer.

(Reading from video deposition)

Q Typically from the industrial hygienist's point of view, it's better to be overly safe than underly safe, correct?

A I think it's -- from an industrial hygienist's standpoint, one wants to certainly control exposures to the degree necessary -- to the degree necessary to prevent ill-effects. At the same time, I don't think it's the responsibility of the industrial hygienist to suggest that -- a plant doing something more than was necessary to provide adequate protection.

(End of reading)

MR. LACEY: Going to line 25, with the plaintiffs' offer.

(Reading from video deposition)

Q The sort of safety maxims that I think of are things like, you know, "An ounce of prevention is worth a pound of cure" and "Better safe than sorry." Are those the sorts of things that industrial hygienists think about? That if there's a question about whether to exercise a safety precaution or not, you exercise it.

A I think that is only reasonable. Yes, sir.

(End of reading)

MR. LACEY: Going to Page 40, line 3, and continuing with the plaintiffs' offer.

(Reading from video deposition)

Q You would want to make sure that every worker in any particular plant working with any particular chemical has whatever precautions are necessary to prevent illness or injury.

A Yes, sir.

Q And I guess my question is: Depending on the chemicals that they worked with, would those precautions differ from one plant to another or even within a plant, one section of a plant to another, depending on the chemicals they were working with?

A I believe they could differ, yes, sir.

(End of reading)

MR. LACEY: Going to Page 41, line 12, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q You wouldn't automatically recommend that every worker have special protective clothing

just because some workers need it, would you?

A That's right, sir.

Q And you would look at each particular worker and what chemicals he was producing to determine what was needed in that area, correct?

A Yes, sir.

Q Were there certain areas of plants that were identified as toxic areas where people were working with dangerous chemicals?

A Excuse me. Yes, sir.

(End of reading)

MR. LACEY: Going on with Monsanto's offer at line 25.

(Reading from video deposition)

Q Was that something that every department in every plant was identified as a toxic area or just some departments in certain plants?

A My recollection is that the use of the word "toxic" varied from plant to plant and did not necessarily reflect the general industrial usage of the word "toxic" and the plant might designate a department as toxic, which I would not designate as being toxic. The question of

"toxic," sir, is -- as I'm sure you must know -- is a relative degree. And for whatever reason -- because of inexperience with the normal parameters of calling material "toxic" -- one plant or one department would be designated as having toxic materials or being a toxic department and another not.

MR. LACEY: Going to Page 43, line 4, with the plaintiffs' offer.

(Reading from video deposition)

Q Was it your view that by designating a department as toxic, that communicated to the workmen that that was a department where you really needed to be careful with what you were working with?

A I believe so, yes, sir.

(End of reading)

MR. LACEY: Continuing at line 9 with Monsanto's offer.

(Reading from video deposition)

Q And if it involved a chemical that was

something workmen would need to be careful with, then that was a beneficial development?

A Not necessarily, sir. I think there's a danger of overuse of, say, the word "toxic" and -- and to use your definition of it, toxic department or nontoxic department. And the danger is that if the department that really doesn't deserve that categorization makes it difficult to ensure that in the department that should have that designation follow the proper precautions, particularly if the history is that there haven't been any toxicity effects manifested.

Q Well, what I hear you saying is that you don't want to overuse use the term.

A That's right, sir.

Q But properly used, it can be beneficial in conveying to workmen the need to exercise special precautions.

A Yes, sir.

(End of reading)

MR. LACEY: Going all the way over to Page 61, line 12, with the plaintiffs' offer.

(Reading from video deposition)

Q Did you have data on the toxicology of all the chemicals that were produced by Monsanto giving the relative toxicity for each route of exposure: How much of a problem it is by skin, how much of a problem it is by ingestion, how much of a problem it is by inhalation?

A On all Monsanto products?

Q Uh-huh.

A I don't believe so.

(End of reading)

MR. LACEY: Continuing with Monsanto's offer, line 21.

(Reading from video deposition)

Q Well, now, when you went into a department to analyze the problems that might occur to workers then, could you analyze what safety precautions were needed for each of those routes of exposure for the chemical in that department?

A The chemical -- the human experience of manufacturing the material and handling the raw materials, which in any case would take

precedence over the animal data.

Q Okay. So, in part, if you hadn't -- if you weren't having a problem with it, you would assume that there wouldn't be any problems in the future, correct?

A We assumed that getting the toxicity data would not be necessary to continue safe handling --

Q Now, what --

A -- in manufacture.

Q What if you had a chemical that didn't have a very very significant acute toxic problem but had a significant chronic problem? Then that analysis of just -- of saying, "Well, nobody's having a problem; so, there must not be any," could be an improper analysis, couldn't it?

A No, sir.

Q It wouldn't be?

A No, sir. Because in all of our plants, we had medical supervision, including periodic physical examinations, that would have disclosed if there were a chronic effect that wasn't readily recognized.

WATER_PCB-SD0000065919

with the plaintiffs' offer.

(Reading from video deposition)

Q Was Monsanto conducting any epidemiological study of its workers when you arrived in 1947?

A No, sir.

(End of reading)

MR. LACEY: Page 64, line 5.

(Reading from video deposition)

Q Did you have an epidemiologist even on the staff in the medical department?

A No, sir.

Q So, when you talk about people monitoring the health of Monsanto employees over time to look for chronic effects, you weren't monitoring in accordance with the discipline of epidemiology nor did you have anybody who was an epidemiologist doing that for you, correct?

A That's correct.

(End of reading)

MR. LACEY: Continuing at line 15 with Monsanto's offer.

(End of reading)

Q Okay. You were relying just on these plant doctors to report something to you if they saw anything, correct?

A As a result of specific visits to them and asking those -- asking specific questions, yes, sir. On the part of either Dr. Kelly or when I went to plants, I usually met with the physician. And this would be the kind of interim visit, if you will.

Q And if you don't know what you're looking for, it may be hard to see the link between the exposure and any problem, correct?

A I believe our physical examinations were complete enough to indicate if there were any abnormalities or organ damage or any kind of effect.

Q Well --

A -- if that were occurring.

(End of reading)

MR. LACEY: Going to Page 66, line 12, continuing with Monsanto's offer.

(Reading from video deposition)

Q I understand. My real question is: That's not something that the ordinary physician would necessarily be experienced enough by training, any formal training or by his own clinical experience to pick up and observe; isn't that correct?

A I don't think I agree with that, sir.

Q Okay. So, in your opinion, there was really no need for any epidemiologist at Monsanto to review things like that, correct?

A That's correct.

Q And there was no need for any epidemiological studies; correct?

A That's right, sir.

Q You had sufficient information based on plant doctor examination of your workmen to rule out any possibility of chronic effects from the chemicals that Monsanto people worked with, correct?

A I feel that there were no uncovered effects that occurred.

Q And there was no need for epidemiologists to search for anymore, correct?

A I think, sir -- I'm not an epidemiologist.

Q I understand.

A But it is my understanding that an epidemiological study to be statistically significant involves large numbers of people who are being investigated as well as an equally large if not larger number of people not possibly exposed.

Now, I don't think in any of our cases a true -- a true -- an epidemiological study in that, in the typical sense would have been helpful.

(End of reading)

MR. LACEY: Going to Page 84, line 19 with the plaintiffs' offer.

(Reading from video deposition)

Q What about Paul Wright? What was his background?

A Paul Wright was, again, in our central research group at Monsanto there in St. Louis. I don't think I recognized he had a biological science expertise until he went with Industrial Biotest. And I have forgotten the number of years that he was there but we induced him to

return to Monsanto work with Lavinskas.

(End of reading)

MR. LACEY: Going to Page 87, line 6, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q Do you know why he did not stay with Monsanto until reaching retirement age?

A Unfortunately he was drawn into the investigations of the experimental work done at IBT while he was there.

(End of reading)

MR. LACEY: Continuing with the plaintiffs' offer at line 24.

(Reading from video deposition)

Q Do you know what the outcome of that investigation was?

A My only knowledge is that what he -- he and Dr. Keplinger were found guilty of misrepresenting data or mishandling data, scientific data.

(End of reading)

MR. LACEY: Going to Page 91, line 9 and continuing with the plaintiffs' offer.

(Reading from video deposition)

Q As long as you were at Monsanto, you were the -- the top industrial hygienist?

A Yes, sir, although I was given the title of director of environmental health services because Dr. Levinskas also reported to me and because of the -- the department's involvement in air and water pollution control.

(End of reading)

MR. LACEY: Okay. Going to Page 106, line 12, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q Generally, those products were known at Monsanto by the name of Aroclor, were they not?

A Yes, sir.

(End of reading)

MR. LACEY: Continuing at line 23.

(Reading from video deposition)

Q Also if I understand correctly, Monsanto sold PCBs for different applications under other names like Askarel?

A Yes, sir.

Q That was a PCB used for electrical applications?

A To my knowledge yes, sir.

Q There were also PCBs sold under the name Pyranol. Are you familiar with that?

A Yes, sir. I don't recall what it referred to.

Q And sold under name of Inerteen?

A Yes, sir.

Q And that was another PCB product?

A Yes, sir.

(End of reading)

MR. LACEY: Going to line 25.

(Reading from video deposition)

Q So, there were a variety of different names that were used for different products that were sold by Monsanto containing PCBs?

A Yes, sir.
Q But all of those products were products that to the extent they had PCBs in them, had PCBs that were manufactured by Monsanto?
A Yes, sir.
(End of reading)

MR. LACEY: And Monsanto's offer at line 8.

(Reading from video deposition)
Q In fact, Monsanto had a patent on the manufacture of PCBs, did it not?
A I don't think so, sir.
Q You're not aware of that?
A No, sir.
(End of reading)

MR. LACEY: Continuing with the plaintiffs' offer at line 13.

(Reading from video deposition)
Q Do you have any understanding why no other companies manufactured PCBs here in the United States?

A No, sir.

(End of reading)

MR. LACEY: Continuing with Monsanto's offer.

(Reading from video deposition)

Q Do you recall which plants manufactured PCBs for Monsanto?

A Yes, sir.

Q Which ones were they?

A There was a plant in Anniston, Alabama and a unit also in John -- not John. The W.K. Krummrich plant in East St. Louis, Illinois.

Q When you say "East St. Louis, Illinois," I think of St. Louis being in Missouri. But that's across the river on the other side of the Mississippi?

A Yes, sir.

Q That's over in Illinois where you cross the river?

A Yes, sir.

Q Are those the only two plants in the United States that you're aware of where PCBs were produced?

A Yes, sir.

Q Where else did Monsanto have plants where they manufactured PCBs?

A We had one plant in Great Britain, and I'm not sure whether it was Newport, South Wales, or Ruthin in North Wales. I have forgotten.

Q But it was in Wales?

A Well, it was in Great Britain.

Q And it --

A Yes. In North or South Wales.

Q Yes. Where else did Monsanto manufacture PCBs worldwide?

A I don't know of any other place.

Q Okay. Were there any other people outside the United States states who manufactured PCBs?

A Yes, sir.

Q Who else manufactured PCBs besides Monsanto?

A I don't think I can recall the exact names but Bayer in Germany, I believe, was one.

There was a company in France that had a name, something like Protolac. There was a company in Italy, and I don't recall the name of that, if I ever knew. And as far as we know, there was manufacturing behind the Curtain, either in Russia itself or a satelite country.

(End of reading)

MR. LACEY: I think that's "Iron Curtain."

MR. MUSSLEWHITE: Iron Curtain, excuse me.

(Reading from video deposition)

Q Do you know whether PCBs were manufactured in Japan or not?

A They were yes, sir.

(End of reading)

MR. LACEY: Going to Page 115, line 14, and continuing with Monsanto's offer.

(Reading from video deposition)

Q It would be important to know the history of what protections were provided to workmen throughout their working with the chemical in order for a doctor to assess the exposure they'd had and how that would relate to causing any injury they had, correct?

A Not necessarily. I think more importantly the medical history on each worker, which was

retained in the personnel file on each employee was a better indication of whether there had been any difficulties experienced by the employee in any one department or any of the several departments that he might have worked in during his work history.

(End of reading)

MR. LACEY: Then going to go Page 116, line 3 with the plaintiffs' offer.

(Reading from video deposition)

Q Let's some for a moment --

(End of reading)

MR. LACEY: I'm sorry. Let's skip over that.

We can go down to Page 117, line 23. Continuing with Monsanto's offer.

(Reading from video deposition)

Q And I guess that really comes back to the point of the difficulty if there are not records maintained on how workmen were protected and improvements you made knowing what the exposure

was in the past?

A I think, sir, there were manufacturing operating procedures which were maintained that would indicate any changes.

(End of reading)

MR. LACEY: Going to line 22 with the plaintiff's offer.

(Reading from video deposition)

Q So, it's your belief that these operating instructions including the precautions section of them would help us to know what precautions were provided to Monsanto workers in any particular department?

A Yes, sir.

(End of reading)

MR. LACEY: Going to line 16, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q I guess what I am saying is, if you as industrial hygienist at Monsanto were attempting to go back and find out what precautions had been

provided and for some reason, you couldn't find your plant inspection reports, then you would go look at these operating procedures manuals, correct?

A I think so, yes, sir.

(End of reading)

MR. LACEY: Going to page 120, line 17 continuing with the plaintiffs' offer.

(Reading from video deposition)

Q Now, do you recall any differences in the way that workmen in the unit that made PCBs in Illinois were protected from exposure to PCBs as compared to workers who made PCBs in Alabama?

A Am I aware that there were differences?

Q Do you recall whether there were any or not?

A I don't know that I recall until I reviewed certain documents with Mr. Shoebotham this weekend.

(End of reading)

MR. LACEY: Going to Page 121, line 3, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q Did he call to your attention to the fact that there were differences in worker protection?

A He showed me documents that would indicate that, yes.

Q Okay. Did that refresh your recollection that, in fact, there were worker differences in protection at the two plants?

A Yes, sir.

(End of reading)

MR. LACEY: Monsanto's offer at line 12.

(Reading from video deposition)

Q Having had your recollection refreshed, what can you tell my about that?

A What can I tell about what, sir?

Q About the differences?

A There were changes of clothing provided at the Krummrich plant.

Q That's the one in Illinois?

A That's the one in Illinois.

Q Uh-huh.

A The employees were authorized to quit early,

quit 20 minutes early to take showers. I think these were the principal differences.

The plant at Anniston operated for, well, I guess from 1929 to when they shut down in the 70's without that protection and without any difficulty.

(End of reading)

MR. LACEY: Continuing with the plaintiffs' offer on Page 122, line 23.

(Reading from video deposition)

Q Did you, as an industrial hygienist for Monsanto, direct that workers in Illinois be treated differently than the workers in Alabama?

(End of reading)

MR. MUSSLEWHITE: I'm sorry. Which line did you start on?

MR. LACEY: I started on line 23. The answer is on the top of 123.

MR. MUSSLEWHITE: All right

(Reading from video deposition)

A No, sir.

Q Were you aware, at the time you made plant

inspections of those two plants, that the workers were being treated differently?

A I believe so, yes, sir.

(End of reading)

MR. LACEY: Go to Page 126, line 16, with Monsanto's offer.

(Reading from video deposition)

Q Was there anything about what the industrial hygienist employed by Monsanto itself, like yourself, said that suggested a reason why PCB workers in Illinois got greater precautions than those in Alabama?

A I don't recall any discussions. I think our reaction was that the experience in Anniston indicated that the materials could be manufactured and handled safely without the precautions that were being taken in Illinois.

Q Well, now Anniston, Alabama was the older of the two plants, was it not?

A Yes.

Q The Krummrich plant later built and started producing long after Anniston had already been producing?

A Sometime after. I don't know the age or the differential in years.

Q So, if you were going to pattern the new operation on the old operation as you understood it, there wouldn't be any explanation for why this clothing change and this paid shower ever got started in Illinois, correct?

A To my knowledge, there would be no reason to do it because of the Aroclors. But the two plants were completely different in terms of the other products that were manufactured.

The Krummrich plant had a fair amount of toxic chemicals that were used as raw materials. This was not true at Anniston. So, the provision of clothing changes and these extra precautions were not uncommon at the Krummrich plant; whereas, there had never been any operations at the Anniston plant that required such protection.

(End of reading)

MR. LACEY: Continuing with the plaintiffs' offer on Page 128, line 1.

(Reading from video deposition)

Q Is it your testimony that every employee at

the Krummrich plant got a change of clothing, fresh change of clothing everyday?

A Oh, no, sir.

Q That every employee at the Krummrich plant got a paid shower at the end of the shift everyday?

A No, sir.

(End of reading)

MR. LACEY: Continuing with Monsanto's offer at line 8.

(Reading from video deposition)

Q That was only specific departments at Krummrich, was it not?

A Oh, no, sir. My comment was, if I wasn't articulate, I hope I can be.

I said that there were more manufacturing units, number one, at the Krummrich plant. I think their work population was maybe 1700 or 1800. The Krumm -- the Anniston Plant had maybe a maximum of 300.

The materials at the Anniston Plant were -- until such time as they introduced the production of elemental chlorine down there -- were

phsiologically inert, in my estimation, except for the PCBs, which I would not classify as physiologically inert, but with a degree of risk that was not comparable to the number of operating units on completely unrelated polychlorinated biphenyl at the Illinois plant. So, I would agree that in a number of the units at the Krummrich plant, the changes of clothing and the shower periods and so on were completely justified.

(End of reading)

MR. LACEY: Continuing with plaintiffs' offer, line 4.

(Reading from video deposition)

Q But my question, just so I'm clear: There were units at the Krummrich unit in Illinois where workmen were not provided with clothing everyday, correct?

A That's right, sir..

Q And there were a number of units at the Krummrich plant where workmen were not provided with paid showers everyday.

A That's right, sir.

(End of reading)

MR. LACEY: Going to Page 130, line 23, continuing with plaintiffs' offer.

(Reading from deposition)

Q Now, were plant managers permitted the discretion to exercise less safety precautions than you felt were necessary to protect the workmen?

A No, sir.

Q So, if you had gone to a Monsanto plant and found that a particular safety precaution were necessary to protect Monsanto workmen and the plant manager refused to institute it, you eventually could go back through the chain of command and force that change?

A Yes, sir.

Q Were plant managers permitted the discretion to exercise greater safety precautions than you felt were necessary?

A They obviously did in the case of PCBs.

Q And that was something they were entitled to do?

A Obviously.

(End of reading)

MR. LACEY: Going to Page 132 and continuing with the plaintiffs' offer at line 9.

(Reading from video deposition)

Q We were talking about the ability of a plant manager to institute more stringent safety precautions for a particular operation within the plant that he was over than required by the medical department.

A That's right, sir.

Q And that is something a plant manager was free to do?

A Yes, sir.

Q And I guess that's an indication of the fact that people can disagree about what level of precautions are needed for a particular operation, correct?

A Yes, sir.

Q And the way Monsanto arranged the situation was that whoever had the most stringent precautions, those were precautions that were used, correct?

A In that plant, yes, sir.
Q Well, for example, if there were a plant manager who wanted less stringent precautions than you would require, your precautions would prevail over the less stringent.
A Oh, yes, sir.
Q And if there were somebody who wanted more stringent precautions than you required, those more stringent precautions would prevail, correct?
A Yes, sir.
Q So, the net of it is that the most stringent precautions were the ones that were applied in any particular plant, correct?
A It was in the case Krummrich plant and Anniston Plant and in terms of PCBs.
(End of reading)

MR. LACEY: Continuing Monsanto offer at line 23, toward the end.

(Reading from video deposition)
Q The wording in -- we referred to the operating document. We get back to the definition of the word "toxic." And for whatever

reason -- I don't know -- the plant manager, I think, decided at the Krummrich plant that this was going to be deisgnated a toxid department, and in the other departments justifiably so designated as a toxic department

(End of reading)

MR. LACEY: I'm sorry. That is an offer without a question. Let me go back and read a question preceding their offer of a question.

MR. MUSSLEWHITE: All right.

MR. LACEY: I'll pick up at line 16.

(Reading from video deposition)

Q And the fact that you and the plant manager at Anniston agreed on less stringent precautions than you and the plant manager at Krummrich agreed upon just simply indicated that reasonable people could disagree about what level of precautions were required, correct?

A I couldn't express it better myself.

Q Okay.

A The wording in -- in the -- we referred to the operating document. We get back to the

definition of the word "toxic."

And for whatever reason -- I don't know -- the plant manager, I think, decided at the Krummrich plant that this was going to be designated a toxic department and in the other departments justifiably so designated, got the changes of clothing, et cetera, prevailed. We were never asked if we thought that the materials in the PCB operation deserved the designation of -- of "toxic," as we in industry would in general use it.

(End of reading)

MR. LACEY: Going to Page 145, line 14 and continuing with Monsanto's offer.

(Reading from video deposition)

Q To what extent were you involved in making decisions for Monsanto or making recommendations at Monsanto about what to say to customers about the products that Monsanto produced?

A Eventually, I corresponded with many, many customers about the -- in -- in response to inquiries about the safe handling and use of Monsanto products, normally -- I think perhaps

without exception -- not unless I was convinced that I was expressing Dr. Kelly's views on the toxicity data and what he agreed were the recommendations for -- that should be forwarded.

Q Do I understand that while you -- you corresponded, you were always trying to correspond not what you necessarily thought, but what Dr. Kelly thought?

A No, sir; what we agreed should be the response.

As you've indicated, we were a small office; and for many, many years we each reviewed the other's correspondence, unless it was personal. And if there were questions that I felt I couldn't answer because of previous discussions with Dr. Kelly and answers to previous questions that he'd answered, then I discussed with him what the appropriate answer would be.

(End of reading)

MR. LACEY: Going Page 147, line 4 with the plaintiffs' offer.

(Reading from video deposition)

Q Would you ever just, without the customer

calling, call a customer and talk to them about the safe handling of a product?

A I can't recall of it in the absence of an inquiry.

Q Okay. So one way that information would be communicated to a customer of Monsanto about the safe handling and hazards of a Monsanto product would be if the customer called Monsanto and asked for information.

A That was one way, sir.

Q Okay. And if they called Monsanto and asked for information, they would be directed to the Medical Department. Correct?

A In most cases, yes, sir.

Q Well, was that what the directions were; that they were to be directed to the Medical Department?

A I believe, without exception.

Q In fact, isn't that a requirement that Dr. Kelly had sought and was successful in getting, a directive from the company that questions about the safe handling and hazards of products had to be directed to the Medical Department?

A I believe that's right.

Q Okay. It was not the desire of Dr. Kelly

that people be asking for information about safe handling from people like plant managers, for example?

A That's correct.

(End of reading)

MR. LACEY: Going to Page 152, line 5 continue with the plaintiffs' offer.

(Reading from video deposition)

Q The very fact that there were more precautions in Krummrich for PCB workers than there were in Anniston, Alabama, is a witness to the fact that there was a difference of opinion in -- amont people in Monsanto about the precautions required around PCBs. Isn't that correct?

A Yes.

Q Okay. Now, having established that, if a customer called and asked for information from Monsanto about the safe handling of PCBs and the precautions workers should take around them, would they be told about the difference of opinion within Monsanto concerning the safe

handling of PCBs?

A Not as it related to the differences and the practices of Krummrich and -- and Anniston.

(End of reading)

MR. LACEY: Going to Page 154, line 2 of Monsanto's offer.

(Reading from video deposition)

Q There ways in which information can get between Monsanto and the customer about the safe handling of a product.

A Yes, sir.

Q One way is for the customer to call Monsanto and communicate with the Medical Department.

A Yes, sir.

Q And we've talked about that way?

A Yes, sir.

Q Okay. Are there other ways?

A You said "call." It could be a call or letters.

Q Okay.

A Yes. The contact was there.

Q The contact. And it could be through a phone call or through a letter.

A To the Medical Department.

Q And the response might either be a return phone call, or a phone call in response to a letter; or it might be a written response, a letter in response. Correct?

A Possibly. In most cases, a telephone call and followed by a letter.

Q Okay. Now, having discussed that means of communication, I want to talk about the other means of communication by which customers could get from Monsanto information about the hazards and safe handling of Monsanto products.

You mentioned Technical Bulletins. What do you mean by a Technical Bulletin?

A Well, for -- I don't know what exceptions there might have been. But, certainly, for most of the Monsanto products and certainly the PCBs, there were Technical Bulletins that described their physical and chemical characteristics; proposed applications; I think in all cases a -- a paragraph or some information including precuationary warnings for safe handling; container sizes.

If it were for one application, it would have the engineering data for that application,

as compared to another. A bulletin for the use of plastic -- for PCBs in plasticizers would be quite different than a bulletin for dielectric uses.

Q Okay. And what was done with those bulletins? How was the information then conveyed to customers?

A Through two general methods, I believe.

Q How was that?

A One would be by our development personnel; and secondly, more on a continuing basis by the sales personnel.

(End of reading)

MR. LACEY: Okay. I'm ending the offer this and going to Page 159, line 22 with the plaintiffs' offer.

(Reading from video deposition)

Q In these Technical Bulletins, who prepared the information on toxicology and safe handling that went into them?

A It was either prepared by us in the Medical Department, or it was -- the ultimate form of it was approved by the Medical Department.

Q Okay. So that information, like any response to an inquiry, came from the Medical Department?

A Yes, sir.

Q And that essentially meant it came from you and Dr. Kelly.

A Yes, sir.

(End of reading)

MR. LACEY: Continue with Monsanto's offer.

(Reading from video deposition)

Q Now, when bulletins were updated, was either the substance or the actual information on toxicology and safe handling from the Medical Department?

A The proposed revision was recirculated to us for review of that information; yes, sir.

(End of reading)

MR. LACEY: Continue with the plaintiffs' offer at line 14.

(Reading from video deposition)

Q So that the way things were designed at Monsanto, nothing went out on toxicology and safe handling in Technical Bulletins without the approval of the Medical Department?
A Not to my knowledge.
Q Is that correct, to your knowledge?
A That's correct to my knowledge.
(End of reading)

MR. LACEY: Going to Page 162, line 8, continuing with the plaintiffs' offer.

(Reading from video deposition)
Q Did the Medical Department have anything to do with product labels that went on containers --
A Yes, sir.
Q -- or anything like that?
A Yes, sir.
Q What was the Medical Department involvement in product labeling?
A Approval of the precautionary statement that was on the label that referred to safe handling.
Q And, again, that approval came from either you or Dr. Kelly or the two of you together?
A Yes.

(End of reading)

MR. LACEY: Continue on line 21 with Monsanto's offer.

(Reading from video deposition)

Q And when we're talking about product labels, we're talking about if the thing went out in a 55-gallon drum, there would be some thing on the outside of the drum that said, "This contains" whatever the product is. Correct?

A Yes, sir.

Q And then also if the Medical Department had determined there ought to be some statement about safe handling or warning, it would have whatever you had determined should be on there?

A Yes, sir.

(End of reading)

MR. LACEY: Continue with Monsanto's offer at line 24.

(Reading from video deposition)

Q Some products were shipped out in bulk by Monsanto -- and by "bulk," I mean by railroad car

loads -- were they not?

A Yes, sir.

Q How did Monsanto handle labeling for things shipped out in rail car loads?

A I'm not sure what the Government and label requirements were. I am certain, however, that customers that were using the materials in that quantity were as experienced, if not more so in some cases, than we were with handling and using the products.

(End of reading)

MR. LACEY: Going to Page 166, line 21 with the plaintiffs' offer.

(Reading from video deposition)

Q Can you agree with me that the manufacturer of a chemical should provide an appropriate warning to the customer to whom it sells the chemical --

A Yes, sir.

Q -- about the hazard and the safe handling?

A Yes, sir.

Q And that doesn't matter whether the customer is the biggest company in the world or the

smallest company in the world, does it?

A That's right.

Q Monsanto ought to provide a good, adequate warning to everybody?

A Right.

(End of reading)

MR. LACEY: Going to line 16, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q And, in fact, in the chemical business it's customary for purchasers of chemicals to look to the manufacturer/seller of the chemicals for information about the hazards and safe handling, is it not?

A Yes, sir.

Q Monsanto itself is a purchaser of chemicals from others, is it not?

A Yes, sir.

Q And Monsanto expects those who sells chemicals to it to give them appropriate information about the dangers and the safe handling. Correct?

A That's correct.

Q Even though Monsanto itself is a very large chemical company, correct?

A Yes.

(End of reading)

MR. LACEY: Going to Page 171, line 17 with Monsanto's offer.

(Reading from video deposition)

Q Well, I understand. I'm not trying to even pick out any particular products. But there are certain lines of Monsanto products that go generally to smaller, less sophisticated companies.

A Yes, sir.

Q There are other product lines that by their nature tend to go to larger and more sophisticated companies.

A Yes, sir.

Q In the case of PCBs, they were a product that went to typically larger, more sophisticated companies. Correct?

A I believe that's correct.

Q The very nature of these chemicals were commercial and industrial-type chemicals.

A That's correct.

Q They weren't intended -- you wouldn't buy a bottle as a -- to use in waxing the floor at home, for example.

A Not to our knowledge.

Q Yes. That wasn't the purpose of it.

And my question, then, or my real inquiry to you is: Given the fact that the PCBs were sold to the more sophisticated, larger customers generally, that would then suggest the importance of conveying as much technically detailed information as possible to those customers so they could properly evaluate the hazards and safe handling appropriate for PCBs. Correct?

A They had the access to not only information that we provided, but their people were following the literature appropriate to the safe handling of all of their raw materials, including the polychlorinated biphenyls. And --

Q How do you know that?

A Well, I think --

Well, I had a great deal of respect -- I knew most of those people personally, and I had a great deal of respect for their ability and their integrity and their interests as sincere as mine

in promoting the health and welfare of their employees.

Q What --

A And --

Q I'm sorry.

A And then, I think, to continue to answer your question --

Q Uh-huh.

A -- they were better qualified than we to decide how to prescribe the operating procedures of their plants to accomplish what we recommended.

(End of reading)

MR. LACEY: Going Page 174, line 12, continuing with Monsanto's offer.

(Reading from video deposition)

Q Now, you believe that the companies to whom PCBs were sold were, on their own, monitoring the literature about PCBs. Correct?

A Yes, sir.

Q To whom did you talk and confirm that? And I want the names of the companies that you confirmed were following the literature on PCBs,

and the names of the people in those companies that you talked to.

Q Well, the specific one that comes to mind was Mr. Wilbur Spiker, Senior Industrial Hygienist for Westinghouse Electric.

Q Who else?

A His counterpart, Jack Ferry, at General Electric.

(End of reading)

MR. LACEY: Continuing with Monsanto's offer at line 13.

(Reading from video deposition)

Q Okay. What I want to know is the companies that you talked to people and inquired of them whether they were following the literature to the same extent that Monsanto was.

A On PCBs?

Q Yes.

A I mentioned that I was sure that Spiker and Ferry were. Not because did I ask them, "Jack," or -- or -- or, "Wilbur, are you daily looking for references to PCB?" --

Q Uh-huh.

A -- but the fact that they made frequent inquiries to me, especially if there had been a publication, or even, in the later years, news stories because of the environmental problem. They would ask me for my opinion and for any data that I had, any new data, and -- and my thoughts as to what I thought or what -- what answer I might have to any questions that they asked.

(End of reading)

MR. LACEY: Going to Page 185, line 10 continuing with Monsanto's offer.

(Reading from video deposition)

Q I'm referring to all studies on PCBs that Monsanto paid for and had done for it. It had dozens of such studies, both acute and chronic. Correct?

A Yes, because there were a dozen different compounds, and there were acute data made available on each of those formulations or compounds.

Q And Monsanto received, from whomever it commissioned to do those studies, a detailed report of the study, did it not?

A Yes, sir.
Q Most of those studies were never published, were they?
A That's right.
Q And Monsanto did not make copies of all or even most of those studies and send it to its customers, did they?
A I'm sorry. We did, sir.
Q You made copies of each one of those studies and sent them to your customers?
A Not to each one, but to most of them, sir.
Q I see. So, then, Westinghouse would have gotten a copy of every study commissioned by Monsanto on PCBs. Is that your testimony?
A That's not correct.
Q Well, that's what I thought we were trying to establish. What --
A Because there were PCB studies that were done on materials that were of no interest to Westinghouse.
Q Okay. Westinghouse would have gotten a copy of every private study Monsanto did on any PCB that Monsanto thought was of interest to Westinghouse; is that correct?
A On any product that was -- where there was

an attempt to introduce it to Westinghouse as a new product.

Q Well, let -- let's back up for just a minute.

Monsanto had been selling PCBs to Westinghouse long before Monsanto commissioned its first study of either acute or chronic hazards of PCBs, hadn't it?

A That's correct.

Q And what you're telling me is Monsanto did not send copies of the studies it did on products it was already selling to Westinghouse. Correct?

A No, sir, that's not correct.

Q Okay. Well, I want to know what it was that Monsanto did by way of sending copies of the acute and chronic studies it did on PCBs to people like Westinghouse.

A To my knowledge, sir, they were sent copies of the actual data provided by the consultant.

Q Who sent that?

A In most cases, Dr. Kelly or I.

(End of reading)

MR. LACEY: Going to Page 189, line 4 continuing with Monsanto's offer.

(Reading from video deposition)

Q I understood you to tell me that you sent a copy to Westinghouse -- and we'll just use them as the example right now -- of every study that Monsanto commissioned, both acute and chronic, on any PCB product of interest to Westinghouse. Is -- is that your testimony?

A I believe that's correct, sir.

Q Okay. Now, was that done only after and if Westinghouse requested copies of that, or was that done immediately when you received the studies?

A It wasn't done when we received the -- the data, because at that point we would have no -- would not necessarily have any indication that it was of interest of Westinghouse.

Q I see. So it's only when and if they come and ask you for your studies that you would give it to them?

A That would be the only way we would know if they had an interest.

Q I see. Well, I guess I'm coming back to point we started. If you have a large sophisticated customer for PCBs, they have the

ability to digest and understand technical information, don't they?

A I believe I testified to that effect, yes, sir.

Q And you have also indicated that you thought Westinghouse and Mr. Spiker were -- were people in the company that was interested in the safety of their workmen?

A Yes, sir.

Q So, wouldn't automatically tell you that they would be interested in those studies?

A No, sir, because I believe I told you, sir, that of these dozens of studies, many of them were on new formulations, and the research phase and carried on "RN" designation, if you will. And you may have been seeing some of those reports. Others may have been a little further along, to the point where they had a development designation. And subsequently, if the product developed to be a commercial product, it received some other designation. There would be no reason to send the data on a product in research at that stage. Neither would it be of any particular interest to Westinghouse if the product, even though containing PCB, was intended to be used in

a floor tile. Do you understand my difference, sir?

(End of reading)

MR. LACEY: Continuing with Page 191, line 2, with the plaintiffs' offer.

(Reading from video deposition)

Q Monsanto commissioned in the late 1960's for the first time chronic toxicity studies on Aroclor 1242, did it not?

A And three -- and two others, yes, sir.

Q But let's just talk about --

A All right.

Q -- Aroclor 1242.

A Yes, sir.

Q That was a chemical that Monsanto sold to Westinghouse in railroad carfuls on a regular basis, wasn't it?

A Yes, sir.

(End of reading)

MR. LACEY: Going to Page 195, line 1.

(Reading from video deposition)

Q Now, in terms of providing information on toxicity and safe handling, those of you in the medical department who decided what to say had in your mind what should be done by way of safe handling and then selected working which you hoped was designed to cause people to act appropriately. That's correct, is it not?

A Which we not only hoped but expected people to use appropriately.

Q I understand. But what my point it: You and Dr. Kelly knew what you thought were appropriate safe-handling procedures.

A Yes, sir.

Q You then wrote information on toxicity and safe handling that you thought would convey what you believe should happen with regard to safe handling, correct?

A Yes, sir.

Q And the determination of whether or not what you wrote, in fact, in conveyed what you intended it to convey would be to look and see if it had the desired effect, wouldn't it?

A If -- if the desired effect was to provide a safe working environment, I -- I think that was proven by the 40 years of very -- very few

incidents of any problems. And most of those were skin reaction.

Q You'll agree with me then that the proof of the pudding in a warning, so to speak, is whether it works or not, correct?

A In the context I just mentioned, I think that's correct, sir.

Q Okay. Now, the safe handling instructions were designed to express the extent to which workmen should come into contact with PCBs, were they not?

A No, sir. There was no contact intended. I -- I don't think you intended to phrase that as you did.

Q Well, no, I --

A They -- they were --

Q Was it your intention that the -- that the warning labels you wrote communicate that there should be no contact by workmen with PCBs?

A There should be limited contact.

(End of reading)

MR. LACEY: Continuing with line 24 of Monsanto's offer.

(Reading from video deposition)

Q The way -- let me repeat it -- the way to determine or to find out whether the language that you and Dr. Kelly wrote had the intended effect of limiting contact by customers' workmen would be to see whether or not their contact was limited in their workplace; isn't that correct?

A I think the 40 years' experience indicated that -- that the warnings were sufficient and were being carried out.

Q Well, we actually don't have to wait 40 years though, do we? One can go and determine whether or not the customers are limiting their workmen's contact in the way that you and Dr. Kelly intended to be the result of your warnings; isn't that correct?

A I think the supplier of any material can be expected to go only so far as to provide the proper information, not necessarily offer his services for plant inspections -- determination of what the procedures are that they adopt to -- to avoid the exposure, which you recommended. And yet I -- I judge that that's what your question was getting at.

(End of reading)

MR. LACEY: Going to Page 217, line 10, continuing with the plaintiffs' offer.

(Reading from video deposition)

Q Was there ever any time when Monsanto would not at least advise customers that a product contained some PCB?

(End of reading)

MR. MUSSLEWHITE: What was that line, sir?

MR. LACEY: It's line 10. Let me reread the question.

(Reading from video deposition)

Q Was there every any time when Monsanto would not at least advise customers that a product contained some PCBs?

A Yes, sir.

Q There were times that you would not even disclose that information?

A In connection with the Pydrauls, yes, sir.

(End of reading)

MR. LACEY: Going to Page 218, line 2.

(Reading from video deposition)

Q It would be your expectation as a member of the corporate medical department who was involved in preparing literature to provide to customers that persons who bought, companies that bought Aroclor products would know that they were buying products containing PCBs, correct?

A Sir, the answer to that is they knew they were buying PCBs. The Aroclors were PCBs.

Q Okay. And within a company that was a customer, if the company had its own industrial hygiene or toxicology department, you would certainly expect that the manager of that department would be aware of the fact that Monsanto's Aroclors contained PCBs, would you not?

A I think I just said, sir, that the labels and any information on Aroclors said they were polychlorinated biphenyls.

MR. LACEY: Going now to Page 236 --

THE COURT: How much more of this do

you have?

MR. LACEY: Your Honor, there's probably about 45 minutes to an hour, is my guess. This might be a good spot to stop.

THE COURT: We will have to stop then.

MR. LACEY: Thank you, Your Honor.

THE COURT: Ladies and gentlemen of the jury, as we stated yesterday, we will be recessing the trial until Monday morning at 9:00 o'clock. Please remember the time.

We feel that we have given pretty careful attention to the testimony this week and that we have been able to record quite a bit of testimony in the four days that we have been in trial. We have had some 11 witnesses. Some of them have been rather protracted or lengthy, but they have been witnesses either in person or by deposition.

Now, please remember the instructions that the Court has given you: that you are not to discuss this case with each other, you are not to permit anyone to approach you and talk to you about the case. Also, the Court instructs you that if you should read or hear anything about this case, do not let

it affect you or influence you in any way. And if it does, if there is any question in your mind that you are affected by anything extraneous to this trial, that is outside of this trial, that you have read or heard, you must make this fact known to the Court and the Court will take the appropriate actions.

All right. I hope you have a nice weekend, and we will see you Monday at 9:00 o'clock. Stand adjourned.

(WHEREUPON AT 12:05 P.M. COURT WAS IN RECESS UNTIL AUGUST 31, 1987, at 9:00 A.M., AT WHICH TIME THE FOLLOWING PROCEEDINGS WERE HAD AND DONE.)

WATER_PCB-SD0000065972