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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

THE UNITED STATES OF AMERICA, Plaintiff,	)	
vs.	)	No. 78 C 1004
OUTBOARD MARINE CORPORATION AND MONSANTO COMPANY, Defendants.	)	

August 27, 1981,

1:45 o'clock p.m.

The deposition of WILLIAM B. PAPAGEORGE was resumed pursuant to a lunch recess at 200 East Randolph Drive, 58th Floor Conference Room, Chicago, Illinois 60601, before Thea L. Urban.

PRESENT:

MR. JAMES T. HYNES,

MS. ELIZABETH STEIN,

MR. MICHAEL A. POPE,

MR. RICHARD J. KISSEL,

MR. JAMES H. SCHINK.

ALSO PRESENT:

MR. HUGH THOMAS.

- - -

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WILLIAM B. PAPAGEORGE,

called as a witness herein, having been previously duly sworn, was examined and testified further as follows:

DIRECT EXAMINATION (Resumed)

BY MR. POPE:

Q Mr. Papageorge, would you describe for us, please, the process whereby you made Aroclors at Anniston?

MR. SCHINK: I'm going to object to this on the ground of relevance.

MR. POPE: Relevance, manufacture of PCBs are not relevant to this case?

MR. SCHINK: Not the manufacture of PCBs are not relevant. The manufacture of products sold to Johnson Motors is certainly relevant.

I don't think we have established this gentleman had responsibility for manufacturing any of the products sold to Johnson Motors.

BY MR. POPE:

Q Do you want to go ahead?

MR. SCHINK: And indeed I will represent that this gentleman did not have that responsibility; that nothing that was manufactured at Anniston was of the

Pydraul of the type sold to Johnson Motors.

BY THE WITNESS:

A The two starting materials, principal starting materials in the manufacture of chloride biphenyl and chlorine, the biphenyl is introduced into a large tank and heated so that it becomes a liquid.

The chlorine is bubbled through this molten biphenyl in the presence of iron. That iron is generally iron filings or it could be any kind of scrap iron, just so enough surface is exposed.

Sometimes the wall of the vessel itself was the source of iron and the chlorine is continually introduced and based on experience after a given period of time, the operator will take a sample of the content of the vessel and by looking for certain properties such as the density of the material determines that he is near the end of his chlorination step in the process. He terminates the introduction of chlorine. He then transfers the contents of the tank into another unit -- let me back off.

After he terminates the chlorination, they added some lime to reduce any excess chlorine, to eliminate any excess chlorine that might be in the reaction mass. The content is then transferred to

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another unit to which heat is applied to the mass to make the PCBs evaporate and these vapors are then condensed by cooling to form the finished product.

That is the basic process.

BY MR. POPE:

Q Approximately how much heat is applied there to the second last step?

A As I remember, it depends on the kind of PCB. Temperatures from 400 to 600 Fahrenheit are involved.

Q You started to say it depends on the type of PCB you are seeking to make, is that right?

A That's right.

Q Which depends on the temperature?

A The amount of time that the chlorine is introduced to the biphenyl will vary with the type of PCB we are seeking. The lower the chlorine, the shorter the time. The temperature involved in the final distillation step will depend on the chlorine content. The higher the chlorine, the higher temperature it takes to vaporize, separate from the tarry material.

Q So depending on the chlorine content you want your finished product, that will affect the time at which you introduce chlorine into the system as well as the temperature at which you vaporize the mass?

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A Yes.

Q That process that you have just described, was that a process that was unique to Anniston?

A No.

Q As far as you know, was the same process under way at the plant in Sauget?

A Yes.

Q Was that basic process, has that been in effect for the making of PCBs virtually since 1929?

A Yes.

Q In the period of time that you were Plant Manager at Anniston, did you have occasion to do mass balance tests to determine whether you were winding up with a finished product, the same basic weights that you are putting into it?

A We conducted those studies of the type I understand from the explanation mass balance, but there is a continuing record kept of the amount of raw material used and the amount of finished product and the report is based on percent yield which I think is the essence of a mass balance or we know what to expect and we make sure we get that.

Q Were you able to account for all of the raw materials?

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A Yes.

Q Was that done on a daily basis?

A Virtually so, yes, and summarized each month.

Q Those reports then were sent to the Plant Manager?

A Yes.

Q We talked earlier about the inability of Monsanto or any other chemist to analyze water for the presence of PCBs in 1965, do you recall that?

MR. SCHINK: You are talking now about dissolved PCBs in water?

MR. POPE: Correct.

BY THE WITNESS:

A Yes, yes.

BY MR. POPE:

Q When was in your opinion the first time that Monsanto was able to analyze for the presence of dissolved PCBs in water?

A We had developed fairly good expertise in 1969 and had refined it enough by mid-1970 to have confidence in it.

Q What was that ability or what was the process by which you conducted these studies in 1969, the analyses?

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A In 1969 we would use gas chromatography verified by mass spectrography. That is the principal instrument to help us.

Q To your knowledge were there other laboratories able to conduct such analyses prior to 1969?

A To my knowledge, there were two laboratories that had developed some expertise prior to 1969.

Q Which laboratories were those?

A There was the laboratory in Sweden, University of Stockholm.

Q Is that where Dr. Jensen worked?

A Dr. Jensen, Dr. Widmark, and then at the University of California, Berkeley, Dr. Robert Risebrough was developing his methods.

Q Were those two methods different?

A Basically the same.

Q Were those methods basically the same as developed by Monsanto and since 1969?

A Yes.

Q As far as you know, when were their techniques and protocols available?

A Late '68, early '69, I believe Monsanto was able to get some information on the methods used.

Q Did you ever learn for how long a period of

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time Dr. Jensen had had the technique developed prior to late '68?

A Yes. As I understood it, they started their studies in 1966, primarily looking for DDT and spotting this interference. It later turned out to be PCB, so they were gathering knowledge in the period of '66, '67.

Q That was before Dr. Risebrough was working --

A Yes.

Q Did the Stockholm chemists rely on the invention of new equipment, hardware?

A Yes, yes.

Q What is that?

A Gas chromatography.

Q Were they basically the inventors?

A No. The unit was available for other kinds of analyses and was being developed for pesticide work. And they were the pioneers as it relates to the adaption to PCBs.

Q When did Monsanto begin to check any of its plant's wastewater for the presence of PCBs?

MR. SCHINK: You are talking now about the dissolved PCBs in water, if they checked?

MR. POPE: If they checked wastewater for the

presence of PCBs.

BY MR. POPE:

Q I thought I asked you about that, whether it was dissolved or not dissolved?

MR. SCHINK: I don't believe that is right. When you were asking for knowledge on the Krummrich Plant, you were asking dissolved PCBs using this methodology. You asked PCBs and he said the methodology did not exist. He made a distinction about PCBs you could see visually in the water that wouldn't be dissolved would be greater concentrations than the dissolved ones.

MR. POPE: Would you read the question.

(Question read.)

MR. SCHINK: I ask you to clarify it.

MR. POPE: Dissolved or undissolved.

MR. SCHINK: Okay.

Answer if you can.

BY THE WITNESS:

A 1970.

BY MR. POPE:

Q Where was that?

A Both sites.

Q Krummrich and Anniston?

A Krummrich and Anniston.

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Q What period of time in 1970?

A I don't recall exactly. I would say late spring through the summer.

Q What was the result of these analyses?

A As I remember, they were able to detect very little quantities, but I don't remember the exact numbers.

Q I am not asking you for the exact numbers, but tell me what you mean by very low quantities within some kind of a reasonable range.

A I would say in terms of 10ths of parts per million; not tens, tenths.

Q .1?

A Less than .1.

Q This was in the wastewater discharge?

A Yes, yes.

Q As far as you recall, the readings were not greatly different between the two plants?

A Not too different, no.

Q Lest we get ahead of ourselves, how long were you Plant Manager in Anniston?

A April 1965 through December 1969.

Q As Plant Manager were you aware of the customers to whom your finished products were being shipped?

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A Some of them; not all of them.

Q From your own personal knowledge, do you know if you manufactured any product that was sold to Johnson Motors?

A No.

Q You don't know one way or the other?

A No.

Q Mr. Papageorge, when was the first time that you became aware of the presence or reported presence of PCBs in the environment?

A Early part of 1969.

Q What was the occasion for your acquiring that knowledge?

A My supervisor on one of his routine visits to the plant informed me that something was occurring involving this line of products. The information was very sketchy, but it appears as if some laboratories were detecting it out in the area that were a total surprise to us, still some skepticism of the validity of the data and he'd let me know more as it developed.

Q Who was that?

A Raymond Stratmeyer, S-t-r-a-t-m-e-y-e-r.

Q What was his position with Monsanto?

A He was Director of Manufacturing, Organic

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Chemicals Division.

Q Is he still with the company?

A Yes -- no, no. No, he is no longer with Monsanto.

Q Do you know where he resides?

A The last I heard he was with Johnson & Johnson Company somewhere in New Jersey.

Q I take it the purpose of his visit was not simply to give this information to you?

A No.

Q Did you do anything further, were you given any tasks in that respect?

A At this point in time, no, nothing.

Q Did he communicate to you any action that Monsanto anticipated as a result of those findings?

A No.

Q Were there just the two of you present?

A I believe so, yes.

Q Was there any discussion as to how these reports would affect sales?

A No.

Q Did you ask for or receive the reports themselves?

A I received copies -- let me think.

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At this time, no, nothing was made available to me, nor did it occur to me to ask. I didn't.

Q Why was it a surprise that there were substances being found in the environment?

A From our knowledge of the material and the intended use in industry, it struck us as a great surprise to hear reports at that time that it was off the coast of California affecting some pelicans and then seals, and the other report was out of Stockholm that talked about pine needles out of the forests in Sweden. These did not strike us as being areas of high industry concentration or representing waterways with industrial pollution, if you will, so it is these two pieces of information that didn't seem to fit our understanding of where industrial chemicals might be found.

Q Was it your opinion prior to this discussion that PCBs would break down in the environment within a relatively short period of time?

A No, I had no personal opinion regarding the breakdown in the environment. This is a subject that was not one that I would have been involved with personally. I never addressed the subject.

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Q As a chemical engineer, you were aware that one of the important characteristics of PCBs was that it was a highly stable product, is that right?

A Yes, to some elements: Heat, sunlight, chemicals.

Q Those are elements that tend to break down many, many compounds, do they not?

A Yes.

Q Was there a surprise on your part to find there were reports that PCBs were not breaking down once they got into the environment?

MR. SCHINK: I object to the form of that question. I don't think he testified there were any reports to whether they did or didn't break down at the time he received them. He simply received the reports as to supposed finding of its presence, not with respect to whether it did or didn't break down.

MR. POPE: I am trying to get to what his mental attitude was with respect to this breakdown ability.

MR. SCHINK: What point in time?

BY MR. POPE:

Q 1969, the first time you had a discussion with Mr. Stratmeyer.

MR. SCHINK: He answered that question.

You can answer it again for the second

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time.

BY THE WITNESS:

A I don't recall having any personal thoughts regarding the breakdown of PCBs in the environment at that point in time.

BY MR. POPE:

Q Or prior?

A Or prior, yes.

Q During the period of time that you were Plant Manager at Anniston, what was the relative PCB product output between Anniston and Krummrich?

A About equal.

Q Did you make the same types of substances, products?

A Yes.

MR. SCHINK: We are still talking about PCBs, not blended products like Pydrauls but Aroclors.

BY THE WITNESS:

A PCBs.

MR. POPE: Yes.

BY MR. POPE:

Q Did the practices with respect to disposal of chemical wastes from Anniston stay the same as you testified this morning with respect to Krummrich?

A Yes.

MR. SCHINK: You are talking now generally with respect to industrial chemicals as a whole, is that correct?

There was some ambiguity this morning with respect to -- he described practices with regard to PCB and then you asked industrial chemicals generally.

I understood his testimony to apply to industrial chemicals generally.

MR. POPE: I did as well and that was pretty much the same practice you followed during the four years as Plant Manager at Anniston, is that correct, Mr. Papageorge?

BY THE WITNESS:

A Yes.

BY MR. POPE:

Q And the substance was taken in containers and placed in the landfill across the highway as I understand?

A Yes.

Q To your knowledge, prior to 1969 was any work done, either through in-house chemists or independent laboratories with respect to the biodegradation of PCBs?

A I am not aware of any study prior to 1969.

Q Were you aware of any study with respect to the biodegradation of any of the other chemicals that

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would be included in the chemical wastes in the landfill?

A No.

Q Are you aware of any study done at Monsanto with respect to the practice of putting chemical wastes in landfills?

A No.

Q Did you at Anniston inspect the landfill that you were using there?

A Yes.

Q Can you describe the practice, what was being done there, any steps that were taken to make sure that any of the chemical wastes stayed in the landfill?

A The material was placed at the bottom of the trough or trench that had been excavated and then periodically it would be backfilled with the earth or soil that had been initially removed, and as I recall, it would be backfilled to 4 to 6 feet of soil above the tops of the containers.

And the surface would be sloped in such a way as to catch the rainfall and direct it away to the outer edges and this flow would be directed such that it entered the municipal treatment system.

Q Untreated?

A Untreated. There was nothing to treat, really.

Q Was there any sampling program during the time that you were Plant Manager?

A Not a program as such. There may have been a sporadic spot check, but there was no specific program.

Q Now, Mr. Schink brings up a good point. When Aroclor was manufactured by Anniston for use in another Monsanto product such as Pydraul, where would it be shipped?

A Staying with Pydraul?

Q As an example.

A Pydraul was, to the best of my knowledge, blended at one of two sites, either with the W. G. Krummrich Plant or the J. F. Queeny Plant, and depending on which plant was making the specific Pydraul blend, the PCB required in that plant would be acquired from either the Krummrich or the Anniston Plant, depending on where the inventory was at that point in time.

Q How would the Aroclors be shipped from either Anniston to Krummrich or Queeny?

A Tank cars.

Q Did the tank cars have any labeling on them?

A Not other than normal tank car markings.

Q They would travel with invoices that would indicate their particular Aroclor content?

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A The documents accompanying the shipment would of course be properly worded, but I don't remember whether the DOT designation was for PCBs at that time.

Q Was Anniston a point at which other products would be blended with the raw material shipped from other Monsanto plants similar to Pydraul as you just described Queeny?

A Anniston, no.

Q During the period of time that you were Plant Manager, who would receive your orders as to what to manufacture?

A There is a group in St. Louis charged with the production planning. They decide which must be produced in what quantities and what location and they in turn put together the necessary information required regarding the availability of raw material and what unit will be producing, all the critical data, and it is sent to the plant well in advance so the plant can get its work force in place, make sure the raw material is in storage, the containers for the finished goods are on hand and labels are in place; whatever it takes to make a successful run.

Q What is that unit called in St. Louis?

A I don't recall its official name. We just

called it the production planning group.

Q Would that group as well order raw material or would that be left up to the local manager?

A Generally left up to the local management unless it was an unusual kind of material for some special purpose or unless it was material that was used by many Monsanto sites and purchased under a national contract, and under those conditions, those individuals in St. Louis would arrange for the plant to be supplied under that national arrangement.

Q Approximately how much PCB was manufactured in the years that you were Plant Manager at Anniston?

A Very roughly, it's as I remember, we were making 30 to 40 million pounds a year at each site, so for a 5-year period, it would be 150 to 200 million pounds.

Q Were similar amounts being made at Krummrich?

A Krummrich.

Q And nowhere else?

A Nowhere else in the United States.

Q In those five years, 500 million pounds would be appropriate for both plants?

A Approximately 80 million pounds a year for five years, about 400 million, yes.

Q When Mr. Stratmeyer advised you that there were reports of PCBs in the environment, you were surprised, is that right?

A Yes, yes.

Q Why were you surprised given that volume of production that we have just talked about that was manufactured by two plants over just a 5-year period? Where did you think it was going?

A Well, certainly not in pine needles. Landfills or in products still in the transformers that are out there today, to this very day; painted surfaces that retained that old paint, it's still on there, probably this wall right behind us still has some in it. I am guessing, so the fact that there are many million pounds produced doesn't necessarily mean it would end up in the pelican off California and that is the surprising part, but the million pounds still out there in use, yes, I can accept.

The plaster hanging over our heads has PCBs in it and that is part of the millions of pounds.

Q To summarize, it was your feeling that the quantity manufactured was in use for the intended use, is that what your feeling was as of 1969?

A That was my expectation, yes.

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Q At that point in time, had Monsanto had any program in place to discuss with users the proper applications of PCBs?

A In 1969?

Q Early 1969, the time of this discussion.

A Yes, we had as evidenced by this brochure we saw earlier.

Q Exhibit No. 1?

A Yes, Exhibit No. 1 is typical of kinds of information that was available regarding the use in end products.

At the same time, as I said earlier, we saw that as information about how to protect the working man handling the material, and being an industrial chemical we would expect industry to treat it as an industrial chemical. You just don't just promiscuously dump anything down the sewer. Even baby oil shouldn't be dumped down the sewer.

Q As of the early 1969 period when you had this discussion with Mr. Stratmeyer, were you aware of any publicity by Monsanto, some direction, advisory, not to let the water come in contact with PCBs?

A Not as a specific.

MR. SCHINK: You are asking about PCBs as opposed

to industrial chemicals generally?

MR. POPE: We are talking about industrial chemicals that have PCBs in them.

MR. SCHINK: But there is a distinction that I think sometimes at least is at least confusing to me, and that is he indicated in response to one of your last questions that there was certain information conveyed to the customers. It was shown to the customers about proper handling, so there is a distinction of these chemicals of which he has identified PCBs as one. You are now asking about specific communications just about PCBs individually as opposed to industrial chemicals as a whole?

MR. POPE: I mean contact with water.

BY THE WITNESS:

A As I remember, the question said were there written instructions relayed to the customer.

BY MR. POPE:

Q Or publicity or ads or brochures?

A Stating don't mix water with PCBs?

Q Or anything to that effect, right.

A Not to my knowledge.

Q As of this time you had this meeting with Stratmeyer, were you aware of any such publicity or

instruction or brochures advising customers or users to refrain from allowing PCB-bearing fluids to get into wastewater?

MR. SCHINK: Again, as opposed to chemicals, any instructions he has given on them?

MR. POPE: Not as opposed to anything.

MR. SCHINK: That is the problem with the form of your question, the ambiguity.

MR. POPE: If you want to take the broad scope, I would be happy to hear all the publicity and instructions and brochures with Monsanto with respect generally to industrial chemicals and how people were instructed to not get --

MR. SCHINK: Was the practice with the discharge of industrial chemicals as PCBs being one, that is the problem I'm having with your question.

MR. POPE: I am concerned with whether the witness understands, Mr. Schink.

MR. SCHINK: I am concerned with the record in this case and the clarity of the record, Mr. Pope.

MR. POPE: I understand what your concern is, Mr. Schink.

BY MR. POPE:

Q Do you want me to start again?

MR. SCHINK: Whatever is easier.

BY MR. POPE:

Q Let us start with the question that Mr. Schink raises.

Did Monsanto issue publicity or instructions with respect to the wastewater discharge of industrial chemicals generally as of this period, prior to 1969?

MR. SCHINK: And now you are talking wastewater discharges as opposed to coming in contact with water, is that right?

BY THE WITNESS:

A To my knowledge, there was no written material issued by Monsanto. The concept is one of our marketing people who sell industrial chemicals refer to these chemicals as industrial chemicals and they are expected to be treated as such without just promiscuously dumping them into sewers and ditches and roadways and the like.

BY MR. POPE:

Q This is some kind of unwritten understanding that you are aware of?

A Yes.

Q A general understanding?

A It is almost, very normal for this kind of

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business.

Q You have never seen it in writing though?

A No.

Q You have never heard of a particular manual that the Monsanto marketing people are trained on that had such references?

A Not to my knowledge.

Q Let us deal specifically with products containing PCBs as of this early 1969 period.

Was there any publicity, brochures or instructions to users advising them to refrain from allowing those products to come in contact with their discharge water?

MR. SCHINK: Over and above the general industry as he testified to about industrial chemicals?

MR. POPE: The question stands on its form.

MR. SCHINK: I object to the question, to its form and as misleading.

MR. POPE: That's the way to do it.

BY THE WITNESS:

A Now, I am not aware of any written material. I am aware personally that our marketing people have instructions on the kinds of advice that can be given regarding safe handling of our PCBs and also not to

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promiscuously dump them into sewer systems and the like.

BY MR. POPE:

Q Who else was aware of that prior, talking about the pre-1969 period?

A I can't speak for others. Others have been present when these kinds of topics were discussed. It is a very normal kind of subject for those of us involved with industrial chemicals.

I personally know that many of the managers in the marketing function thought and talked along these lines.

Q To whom?

A Oh, certainly to me and from a discussion, I cannot help but understand that that message goes out to the field people and out to the customer.

Q Prior to 1969, was there a concern at Monsanto that there would be potential harm if PCB-bearing fluids escaped to a customer's discharge water?

A A concern was not specific to PCBs. The concern was generally to industrial chemicals, PCBs being one of them, a long list of products that our field salesmen handle.

Q And is it your testimony with respect to the

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practice prior to 1969 that a marketing person or a salesman, I guess the same thing, right?

A Yes.

Q A Monsanto salesman saw a customer permitting PCB fluids to come in contact with discharge water, he would be breaking company policy if he didn't call that to the attention of the customer that that is a bad practice, is that it?

MR. SCHINK: I object to the form of your question. It is ambiguous and misleading.

Do you understand the question?

THE WITNESS: Yes.

BY MR. POPE:

Q Was that your understanding?

A I would suggest that the salesman would be encouraged to tell the customer that is not the way it is done.

Q If he failed to do so, would he be violating the company policy as you understood it prior to 1969?

A If he knew the ultimate end disposal of that stream, that is unknown here. Just seeing the PCBs in water mixing doesn't really say it ends up in the environment. Unless he is thoroughly familiar with the system, he cannot make that final judgment.

Q Mr. Papageorge, I thought you told me this morning that is a bad practice to permit PCB-bearing fluid to come in contact with water. Is that right?

A Yes, because it is difficult to handle. It is much easier to handle PCB with sawdust, per se, than it is to have some water involved.

Q Is it also true that Monsanto salesmen were advised of that fact?

A Yes.

Q Were they encouraged to pass on, to the best of your knowledge, this fact to customers that PCBs should not be allowed to get in contact with water?

A Yes, it is my understanding.

Q And you have gotten that understanding from your discussions with various marketing people, is that right?

A Yes.

Q Would you give me the names of those you can recall?

A Well, let's see. Norm Johnson, Don Pogue, P-o-g-u-e, Larry Bradford, others don't come to mind just now -- Davidson, Jerry Davidson is another one.

Those are just a few. I don't remember them all.

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Q Anybody else you can think of?

A Not at the moment.

Q Was it your understanding that salesmen were encouraged to advise the customers that a particular Monsanto product contained PCBs?

A Yes.

Q This was prior to 1969?

A Yes.

Q What is the basis on which you form that conclusion?

A Again, from discussions with individuals.

Q Same individuals you have just mentioned?

A Yes. Some of them are in that group as well as their supervisors, the next level higher up.

Q These next level supervisors told you that salesmen were encouraged to advise the customers that PCBs were in these products, is that your testimony?

A That is my understanding, yes.

Q Somebody told you that?

A Yes.

Q Who are these higher level supervisors that you have just referred to?

A Individuals like the Director of the Business Group, Howard Bergen, and his immediate staff which

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included as Director of Research, Dr. Richard and his Director of Marketing.

Q Dr. Richard told you that the company policy had been salesmen were encouraged to tell customers the products contained PCBs, if that was true?

A I don't know that he looked right at me and told me personally, but that group would meet periodically and at times I was invited to attend their meetings.

Q This is after 1969?

A After 1965 when I joined the Anniston Plant, I became an occasional participant in Mr. Bergen's business meetings, and during the conversation, the qualities that PCBs brought to the products were discussed and the advantages they offered and how they should be discussed with customers.

This kind of conversation did take place, so Dr. Richard would participate in it along with Mr. Olson, the Marketing man, and so on.

Q So the basis for your statement comes from the meetings you attended between 1965 and 1969?

A And subsequently, yes.

Q What else would these meetings deal with?

A Just about any items one could associate with running a business, from selecting employees to fill

certain jobs to what kind of brochures we should publish to do we need more salesmen in the field, do we need more researchers, do we need another research program to find other applications; can we get a cheaper source of raw material and so on; just very, very broad.

Q Did this group have a name?

A It was the Functional Fluids Business Group.

Q Where would you meet?

A Generally in St. Louis. They met in Anniston on a couple of occasions. They moved around occasionally.

Q What other plant managers would be at these meetings besides you?

A It would be the plant managers of those plants that were involved with producing products for that business group. It would be, I imagine, the Krummrich Plant, Queeny Plant. Those are the three key plants.

Q As part of that group or independent from that group, did you have a regular means of communicating with marketing people regarding customers' use of the products, the finished products?

A No.

Q Would it be fair to say then that the meetings of this Functional Fluids Group would be the only opportunities where you would come into direct business

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contact with the marketing people of Monsanto?

A No, I would still come into contact with smaller groups on an ad hoc basis.

When you mentioned earlier regular meetings, there were occasions when I would be asked to speak to a group of individuals that, say, sold PCBs to the electrical industry. This might be half a dozen people and I would review with them what we were doing at the plant and how we could help them give better service, this kind of question, exposure.

Sometimes they would come to the plant, two or three or four of them to see where the material was made, to get to know us, and that is another opportunity. This is what I meant by ad hoc.

Q Lawyers use that to mean whenever they fell like it.

A This is one-time kind of exposure rather than routine.

Q Was the electrical fluid actually manufactured at Anniston?

A Yes.

Q As a finished product for sale to customers?

A Yes.

Q Unlike the hydraulic fluid which was shipped?

A Yes, that is correct.

Q At Anniston, were you still using PCB-bearing products yourself in the manufacturing process as you had at Queeny?

A Yes.

Q What products were you using that contained PCBs in the manufacture process?

A Our compressors had the Pydrauls in them. I don't know just which. The PCB process itself in this step, which I referred to earlier that required temperatures from 400 to 600 Fahrenheit, the source of heat was the heat of the PCBs right in the unit itself and our transformers in the plant contained PCBs.

Q During that four or five-year period, did you have any leaks?

A Yes.

Q In which use, all of them?

A I would say, yes, at some time or another, yes.

Q What would be done with respect to cleaning?

A What I had described earlier: Contain the leak, minimize the loss and quickly as you can use soil, sand, sawdust, the commercial Oil-Dri, rags, whatever to clean up the material, put it in steel open-top

with the clamp-top can, truck it across the highway to the landfill, place it, bury it.

Q Did any of your ad hoc meetings with marketing people deal with the sale of hydraulic fluid or the subject of hydraulic fluid generally?

A Yes. I don't recall a specific meeting with the people present, but I am under an impression that we did talk about the hydraulic applications.

Q Were you a speaker or a listener in that discussion?

A Primarily a listener with a little bit of contribution from my experience in blending the Pydrauls at the Queeny Plant.

Q Can you tell me what you recall about the discussion that applied to the marketing of Pydraul or hydraulic fluids?

A No, I don't remember.

MR. POPE: I will ask the reporter to mark as Papageorge Exhibit No. 2 for identification a brochure, Pydraul F-9, bears the number on the first page of 0000365.

(Papageorge-OMC Deposition Exhibit No. 2 marked for identification, 8/27/81, TLU.)

WATER_PCB-00054178

BY MR. POPE:

Q Mr. Papageorge, I will ask you to take a look at that Exhibit No. 2 for identification and tell me whether it is a copy of a document you have seen, the original of the same brochure.

A I don't recall ever seeing this brochure.

Q Did you see any brochures with respect to Pydraul?

A What point in time again?

Q Prior to 1970.

A No.

Q Were there any brochures that Monsanto proposed to publish or circulate prior to 1970 which were sent to you to review first?

A No.

Q Prior to 1969, did any of the meetings of the Functional Fluids Group deal with the subject matter of how to go about advising customers on the matter of disposal of industrial products being sold by Monsanto?

A Not when I was present.

Q Were there minutes made of those meetings?

A I never saw any.

Q Were there agendas circulated ahead of time?

A No.

WATER_PCB-00054179

Q Who was in charge of calling the meeting?

A Mr. Bergen.

Q Following your first discussion with Mr. Stratmeyer regarding the reports, PCBs in the environment, what is the next contact you had with anyone on that subject matter?

A The next contact occurred in late November '69, again from Mr. Stratmeyer.

Q You hadn't heard anything about the controversy between the early months when you met with him and November?

A Nothing.

Q You hadn't read anything in the technical journals or in the newspapers or anything, is that right?

A I didn't see any.

Q You received no correspondence from anybody else within Monsanto on this subject?

A That is correct.

Q As Plant Manager, did you receive periodic reports as to what the company expected from the Functional Fluids Group on individual products in terms of sales?

A No.

WATER_PCB-00054180

Q During that six or seven or eight or nine months, whatever the period of time was between an early meeting and the next meeting, nothing changed in your operation of the plant, is that right?

A That is correct.

Q No changes occurred in your monitoring of the wastewater, nor in the laboratory at all, is that correct?

A That is correct.

Q Do you know how many pounds of PCBs you manufactured in 1969 in Anniston?

A No, I don't remember.

Q The next time Mr. Stratmeyer comes into your life is November?

A Yes.

Q Had you seen him in the intervening period of time?

A Yes.

Q Had you asked him whatever happened to the pine needles in Sweden or any similar inquiry?

A I recall nothing new. He said no, nothing that he knew of.

Q What took place in November?

A He told me, reminded me of this evolving issue

and told me that it appeared that it is gaining some momentum and since two business groups in the Organic Chemicals Division were involved, it appeared that we needed someone to be assigned to the task of determining what is going on and who should be doing what; in essence, the left hand ought to know what the right hand is doing, so we are all headed in the right direction, and that the two Business Directors had suggested that I might be the guy assigned to that.

And Mr. Stratmeyer asked me if I would be interested in such a job.

Q How was the assignment described to you, what your job was to be?

A It was rather loosely defined as "Find out what this PCB problem is, how valid is the information that is available currently and help us determine what should be done next, where do we go from here."

Q Find out what the problem is?

A Yes.

Q Evaluate the reports?

A Yes.

Q That is evaluate for scientific accuracy?

A Well, not as an individual, but make sure that the results being reported are properly evaluated

as to whether or not they are in truth PCBs that are being reported or is it something else.

Q And then make recommendations as to the future?

A And make recommendations as to the proper course of action Monsanto should take.

Q You understood that you were not going to be asked to take up your chemistry and become a chemist. You were going to manage the team to do these various things?

A Well, my understanding was one that I would have available to me the appropriate resources both within Monsanto and elsewhere if appropriate.

I would try to coordinate the whole effort so that it was headed in some directed approach. I was, of course, recommending action that I personally did not have the resources to take the action. I had to get the proper approvals and I also had to serve as sort of a monitor of Monsanto's activities, as best I could.

Q Past or future?

A It's all future, future; to use what I had in the way of persuasive abilities to convince people they ought to change their ways, if their ways had to be

changed.

That is in general the way the job was described.

Q Did you say who the two directors were who wanted you?

A It was Howard Bergen representing the Functional Fluids Business Group and James Springgate representing the Plasticizer Group.

Q Did he further tell you what qualities or experience you had in his opinion that qualified you for the job?

A It was rather described that he said with your experience in manufacturing, maintenance, negotiating with labor unions, dealing with the Alabama legislature, handling press relations, all of these were considered to be experiences that I might have to use on this job.

It was felt that my background seemed to fit the needs as they saw them and that is why they asked for me.

Q I take it you accepted?

A Yes.

Q When was it to start?

A 1st of January 1970.

WATER_PCB-00054184

Q Was it in the nature of an emergency situation?

A It moved rapidly, yes, sir.

Q What was your title to be?

A The title chosen was Manager, Environmental Control.

Q What dealings had you had with the Alabama legislature prior to that time?

A For one, I was part of a group with the Associated Industries of Alabama that worked hard to get legislation relating to water pollution passed in this State. That seemed to be the most relevant activity.

My other activity had to do with legislation business or ended up involving taxation, workman's compensation and the like.

Q Was there another Monsanto plant in Alabama at that time?

A Yes.

Q Where was that located?

A Decatur, Alabama.

Q Was that in the southern part of the State?

A Northern part of the State.

Q Any others?

WATER_PCB-00054185

A I'm sorry?

Q Any others?

A No.

Q In this discussion with Mr. Stratmeyer, did he describe any developments or change in the reports that he had talked to you about in January and February of that year?

A Only to tell me that it appeared that the interest was accelerating and that I should arrange to go to St. Louis and talk to Mr. Bergen again to try to get the details, which is what I did.

Q Your title was to be Environmental --

A Manager, Environmental Control.

Q Manager, Environmental Control?

A Yes.

Q Was this a promotion for you in terms of salary?

A I don't think so.

Q What do you mean, on an hourly basis?

MR. SCHINK: Given the cost of living.

BY MR. POPE:

Q It was viewed by Monsanto as a promotion, was it not?

A I don't know.

Q Who took over as Plant Manager at Anniston?

A Mr. Gene Jessee, J-e-s-s-e-e.

Q -e-e?

A Yes.

Q Is he still Plant Manager there?

A No.

Q Did he remain Plant Manager until the plant was closed?

A He was Plant Manager when the PCB unit was checked out.

Q Is it still in operation manufacturing non-PCB products?

A Yes, yes.

Q So he continued to operate as Manager until the PCB manufacturing facility at Anniston was closed, is that right?

A And beyond.

Q When was that closed?

A I believe it was 1972, 1972 or -- yes, 1972.

Q I take it you traveled to St. Louis to assume this new position?

A Yes.

Q You met with Mw. Bergen and Mr. Springgate, is that correct?

A Yes.

Q The same time?

A Yes -- well, the same day.

Q This is till November or is it now December?

A No, this was Christmas holidays, December.

Q You met with them separately?

A Yes.

Q Who did you meet with first?

A Mr. Bergen.

Q At this point, you did not know any more about what your job was going to be other than what you had been told in November, is that right?

A Yes.

Q You had not read any additional things on PCBs?

A No.

Q Hadn't seen any additional documents or anything else regarding new reports on presence in the environment?

A That is right.

Q Mr. Bergen met with you first?

A Yes.

Q What did he tell you about your job and what the status of the problem was or anything like that?

WATER_PCB-00054188

A Of course I don't remember all the discussions, but the essence of it was that we had this report out of Stockholm, Sweden. We had the report of Dr. Risebrough's laboratory, pelicans and seals off the coast of California -- I believe this was a time when an incident occurred in the North Sea where some birds and seals were involved.

Q Who was reporting that?

A The Popular Press reported this. It was not a scientific report, and he also informed me that our Medical Department had started some studies, animal testing and our research people had been involved in developing and analyzing available data and sampling analytical methods to verify what had been reported; that an attempt was being made to contact the European PCB producers to see what they knew.

We had a report that the University of Utrecht in the Netherlands was involved or somebody there was involved with PCBs. And that thus far at that point in time, the only PCB being reported was equivalent to our Aroclor 1254, Monsanto's Aroclor 1254.

Q What is the significance of that?

A I am sorry?

Q What is the significance of that?

WATER_PCB-00054189

A It was significant to Monsanto in that in terms of total pounds produced, the 80 million pounds number of all of them, that only one portion would be detected and that was confusing at that point in time, didn't know how to explain that and we didn't know how in Aroclor 1254, most of which went into transformers, would end up off the coast of California. It just didn't seem to fit our understanding of how this material was distributed in industrial and food use that far.

Q Even at this early point of time, you had no doubt, did you, that as 1254 was being discovered the other Aroclors were as well?

A I wouldn't say that, no. We didn't know enough to be able to even speculate. We just didn't know.

That is about what Mr. Bergen told me. And he asked me to take it on and see if I could help out.

I took the position and I don't know that I was the proper person, but if somebody thought I could help, I gave it a try and at that time, I might add, it was considered to be a six-month to one year assignment.

Q Were you meeting alone with him?

A Yes.

WATER_PCB-00054190

Q What did he tell you the job was, ticked off some of the various developments that were under way or had come about -- what did he tell you the job was to be done?

A It wasn't very specific, but it sounded like get involved, you've got my support, let the left hand know what the right hand is doing and keep me tuned in, that sort of a broad assignment; very unstructured.

Q At the time of that discussion, was there any indication that you were aware of that there was any potential health problem associated with the findings of PCBs in the environment?

A Not at that time, no.

Q If that is the case, then what was the problem you were focusing on?

A The problem was the reported contention and being repeated at an ever-increasing frequency that PCBs were out there and they shouldn't be and they are, the allegation they are hurting the pelicans, the seals, the North Sea birds; the implication being they must be hurting other things.

Q At least as far as you understood, the reports on the presence were also coming in that there was an adverse effect to those animals?

A Correct.

Q At the time of this meeting with Mr. Bergen, was there any discussion of the problem in the Bay outside of Pensacola, Florida?

A I don't recall if that came up at that point or subsequent meetings. I don't recall that as coming up during discussion. It could have, I don't remember.

Q Was there any discussion at that meeting of the Japanese incident?

A I believe there was, yes, yes.

Q I take it that discussion was in the context of the potentiality for harm to humans, is that right?

A Yes, a question was raised, "Gee, we'd like to know more about this. The message is garbled."

Q What message was garbled?

A What happened, how much was ingested, what was ingested. At that point in time there were many questions that weren't answered.

Q We will come back to that.

What did Mr. Springgate have to say? Did you meet him alone, too, the same day?

A Yes, yes. Mr. Springgate did not go over the same material. I didn't spend as much time with him. I had known him for a long time so his plea to me was

WATER_PCB-00054192

help.

He did not go over the same material Mr. Bergen went over and I got the impression at that meeting that even if it meant abandoning some of his business, he was ready. He had gone even further in his thinking.

Q That subject did not come up in your talk to Mr. Bergen?

A No.

Q Those two gentlemen, how did they break down in terms of what product they were selling?

A In the PCB line?

Q Yes.

A Mr. Springgate was in charge of plasticizers, the PCB applications assigned to the Plasticizer Group.

Q Are those uses other than whether it is designated as a functional fluid, to use that word?

A If it didn't serve in heat transfer systems, dielectric system or hydraulic system or vacuum pump, it fell over into Mr. Springgate's bailiwick.

That is why I prefer to call it miscellaneous applications, with respect to the Plasticizer Group.

Q In that same trip did you meet with Dr. Kelly?

WATER_PCB-00054193

A No.

Q Did you meet with anybody else?

A No.

Q Did you pick up any materials?

A Not on that trip, no.

Q When did you actually start work?

A The first week in January I reported for work.

Q What kind of staff were you assigned?

A I shared Mr. Bergen's secretary. That's it.

Q As you took on that job, did you investigate what information was available prior to the 1967, '68, '69 period?

A Yes, yes.

Q That is the point at which you investigated that prior testing had been done either at Monsanto or by outside parties with respect to PCBs?

A Yes.

Q What was the result of that investigation? Did you learn if there had been any testing at all of the effects of PCB on humans?

A On humans, I don't remember reference to human testing.

Q How about study of effect on humans?

A I don't remember any such reference.

Q At any point in time, did you ever come across any published articles that discussed the effects prior to 1969, the effect of PCB-type products on humans?

A The only effect that I was aware of then and was again reported was the chloracne situation we discussed earlier. I don't recall any other. Nothing sticks out in my memory.

Q You were not aware of any reports of reversible liver damage?

A No.

Q You never were, is that right, up until today?

A That's right.

MR. POPE: I will ask the reporter to mark an 8-page article from The Rubber Age dated August 1943 entitled Observations on the Toxic Effects Resulting from Exposure to Chlorinated Napththalene and Chlorinated Phenyls with Suggestions for Prevention as Papageorge Deposition Exhibit No. 3 for identification.

(Papageorge-OMC Deposition Exhibit No. 3 marked for identification, 8/27/81, TLU.)

MR. SCHINK: You just asked him to look at the document. There is no question pending, is that right?

WATER_PCB-00054195

MR. POPE: That's correct.

MR. SCHINK: Do you want him to read it carefully or just page through it?

MR. POPE: I just want to know if he has ever seen it before.

BY THE WITNESS:

A I have never seen it.

BY MR. POPE:

Q Did you ever hear of it?

A No.

Q In your position as Manager, Environmental Control, did you ask anyone in the company what was known about the potential effect of PCB on humans?

A Yes.

Q Who did you start with?

A Elmer Wheeler on Dr. Kelly's staff was my first contact as soon as I arrived, and I recall spending many hours with him getting tutored and he prepared for me a compilation of the available information, although much of it, as I recall, was DDT-related.

PCBs were assumed to have behaved similarly so Elmer Wheeler was my principal source of information on health effects of PCBs.

Q Did Mr. Wheeler ever tell you that prior research

WATER_PCB-00054196

had determined that in animals the liver was the target organ, one of the target organs of PCBs?

A Yes.

Q Did he talk about the possibility of that being the case in humans?

A I don't recall that extrapolation, no.

Q Did you ask him?

A Not at that point in time.

Q Did you ask him whether there was any research done with respect to persistence of PCBs in tissue of test animals?

A No.

Q Did you ever come upon any such test or conclusions that pre-existed 1969?

A No.

Q What tests had been done involving PCBs?

A There were acute toxicity screens that I mentioned earlier, in the '30s and '50s.

Q The standard ones we talked about this morning?

A Yes.

There were some Monsanto-sponsored studies under way when I arrived in 1970 that were long-term studies involving dogs, rats and chickens.

Q We are now talking about the studies that

WATER_PCB-00054197

were completed prior to 1969, is that right?

A I'm sorry. We are talking about studies either completed or under way when I talked with Mr. Wheeler, and as I understood it, prior to the long-term study undertaken there were some shorter-term studies conducted for Monsanto to establish the feeding levels for the long-term studies.

Q Who were these by?

A Industrial Bio-Test Laboratories.

Q Dr. Calandra?

A He and his staff.

I don't recall any other studies.

Q How long had Monsanto been selling PCBs as of 1970, 40 years?

A About that, yes.

Q Is it fair to say that during that entire period of time, the only tests that it performed were these standard acute toxicity tests you referred to?

A That is my understanding, yes.

Q How about a report by Dr. Drinker? Are you familiar with that?

A Dr. who?

Q Dr. Drinker.

A The name is familiar but I don't associate it

WATER_PCB-00054198

with the study.

MR. POPE: Why don't we take a five-minute break and I will pull the document.

(Brief recess had.)

BY MR. POPE:

Q Mr. Papageorge, I show you a document which has previously been marked as Kelly Deposition Exhibit 5 for identification entitled Report to Monsanto Chemical Company by Cecil K. Drinker, M.D.

Would you look that over, please, and tell me if you have ever seen that before?

A I don't recall ever seeing this report.

Q Mr. Papageorge, was it your job upon becoming Manager of Environmental Control to learn what information was available to Monsanto with respect to products?

A Yes.

Q Perhaps I interrupted you earlier. Would you tell us what you did in order to implement that part of your job?

A My role was really one of talking to the proper people within Monsanto to get assurance from them that they had done all they could and exhausted all of the resources at their disposal to get the information together.

WATER_PCB-00054199

There was no way that any one person in my position could have done all this alone. I had to rely on the people in place, such as the Medical people, Research people, Engineering people, Manufacturing people, Marketing people, so my role was really one to sit down with the key representatives of each of these functions and exhaustively discuss what was in hand, what their plans were for the future, what their recommendations were and where possible try to help them out.

Q You also became a spokesman on this subject matter, is that correct?

A Yes, yes.

Q And you became the focal point to receive all inquiries from outside people?

A To receive some inquiry, not all.

Q Did your job change after early 1970?

A That is difficult to answer in that the job itself was not clearly defined to start with, so whether there was a change or not, I cannot tell. It was a situation where I evolved with the situation.

Q Isn't it a fact, Mr. Papageorge, that as of the 1940s, Monsanto was aware that PCB bioaccumulated in the tissue of test animals?

WATER_PCB-00054200

A That I don't know. That is the first I heard this.

Q Who at Monsanto would know, if you don't?

A It would have to be the Medical people.

Q Wasn't that a subject matter that you did inquire of them?

MR. SCHINK: Whether they knew in the '40s, whether they knew in the '40s whether PCB bioaccumulated?

MR. POPE: Yes.

BY THE WITNESS:

A That was not discussed because we didn't have enough knowledge to even raise the question.

BY MR. POPE:

Q You did inquire of the Medical Department to implant to you, to give to you all they knew about the effects of PCBs, did you not?

A Yes, that's right.

Q And no one told you about the Drinker report, is that right?

A I don't remember that.

Q It hasn't been so long. You would remember if somebody told you about a report that was commissioned by Monsanto in 1948 regarding PCBs --

A Yes, yes.

Q Did you make any inquiry to see, prior to your taking on this job, whether anybody at Monsanto had been monitoring the scientific and technical literature regarding PCBs or its effect or presence in the environment?

A Yes. Dr. Richard and Dr. Keller had that assignment.

Q How long had they had that assignment?

A As best I can determine or could determine then, it apparently started in '67, late '67-early '68; somewhere in there.

Q It had begun about the same time Monsanto first learned about Dr. Jensen's work?

A About that time, yes.

Q Between the time it began and you started your job in early 1970, what had been discovered from an analysis of literature or a monitoring of the literature?

A There was the reported presence, as I had earlier mentioned, off the shores of California and this previously mentioned -- you have the Stockholm report.

I don't recall anything else that was discussed at that time.

Q Did you have occasion subsequent to the time you took over this job to determine as best you could

WATER_PCB-00054202

exactly when Monsanto first learned of the presence of PCBs or reports on the presence of PCBs in the environment?

A It appears that Monsanto first knew of the Stockholm report in '67, as best I can remember. It was middle to late 1967 that they were aware.

Q Late 1967?

A As best I can recall.

Q How was this information communicated to Monsanto as you later investigated and determined?

A As best as I could reconstruct it, our European representatives, Monsanto European representatives had heard of a report made by Dr. Jensen and they reported this piece of information to St. Louis. And they in turn were asked to pursue it, get a copy.

It seems, as I recall, it took several months for contact to be made and eventually, and I don't recall just when, a copy of the draft -- it appears to be a rough draft of the report, was made available to Monsanto in which Dr. Jensen reported the identity of these materials as being equivalent to Aroclor 1254 and being found in hair of an infant or a child, pine needles, feathers of an eagle, fish, samples of that type.

Q Was the contact about Dr. Jensen made through

WATER_PCB-00054203

somebody in St. Louis or someone in your European office?

A I believe the initial contact was a European representative of Monsanto.

Q Operating out of Wales?

A No, as best I remember, it was an individual in Marketing operating out of Brussels.

Q Do you have a manufacturing plant in Wales?

A Yes.

Q Did you at that time?

A Yes.

Q Was that facility equipped with a laboratory, to the best of your understanding?

A Yes.

Q Was that laboratory one set up on the lines of the plant you had in Anniston?

A Similar.

Q Did they have similar equipment?

A Yes.

Q Did someone from St. Louis travel to Stockholm to meet with Dr. Jensen or his staff?

MR. SCHINK: When?

MR. POPE: Ever.

BY THE WITNESS:

A Yes.

WATER_PCB-00054204

BY MR. POPE:

Q Who was that?

A Elmer Wheeler, Dr. Keller and I visited.

Q Dr. Keller?

A Bob Keller, Robert Keller and I met with Dr. Widmark at the University of Stockholm.

Q Did Scott Tucker from Monsanto go to Stockholm?

A No.

Q The three of you traveled together, I take it?

A Yes.

Q Were you the first representatives of Monsanto to call on Dr. Widmark?

A Widmark?

Q Or Jensen?

A We were the first St. Louis Monsanto representatives. I do not know if other Monsanto people had talked to Dr. Widmark.

Q At the time you went over there, had you already received this draft?

A Yes.

Q It was going to be a proposed article?

A It was a presentation made before a technical group in 1966.

Q Had that presentation already been made?

A Yes.

Q Why do you characterize it as a draft?

A The copy I saw did not look like a finished-type copy. It had double spacing, marginal gaps, very poorly put together document.

Q Was it used as a speech?

A I could only guess at that. I don't know.

Q When was it that you went to Stockholm?

A Early May 1970.

Q What other articles relevant to this subject matter of PCBs in the environment had you accumulated before you went to Stockholm besides the draft of the report?

A The PCBs, there weren't. The articles were not technical reports. They were copies of newspaper clippings, as I recall.

For example, the copy of the San Francisco Chronicle reference to Dr. Risebrough's work, a newspaper clipping referring to the North Sea seal and bird incident. I don't recall any formal technical-type article on PCB at that time.

Q Prior to May of 1970?

A Correct.

MR. POPE: I would ask the reporter to mark as

WATER_PCB-00054206

Papageorge Deposition Exhibit No. 4 for identification, a copy of an article out of Nature Magazine, October 21, 1967, entitled Chlorinated Hydrocarbons in British Wildlife.

(Papageorge-OMC Deposition Exhibit No. 4 marked for identification, 8/27/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, I will hand you that document marked as Papageorge Deposition Exhibit No. 4 for identification and ask you to look it over and tell me if you have ever seen it.

A Yes, I have seen this article.

Q Was that article relevant to your analysis of the problem?

A Yes.

Q Had you had that article before you went to Stockholm in May of 1970?

A I don't recall having it before that.

Q That one was not found by Mr. Wheeler and Dr. Kelly in their Monsanto literature, is that true?

A Not to my knowledge.

MR. SCHINK: The testimony was there was a Monsanto intercompany memorandum by Dr. Richard and Keller.

WATER_PCB-00054207

MR. POPE: Let the witness tell us.

BY MR. POPE:

Q Who was it that began conducting this monitoring process of technical literature starting at the end of 1967, early '68?

A Monitoring for presence in the environment was assigned to Dr. Richard and Keller.

Monitoring for physical effects on living creatures was assigned to Emmett Kelly and Elmer Wheeler.

Q I see.

Now, Dr. Kelly and Mr. Wheeler, did they come up with anything prior to May of 1970 when you went to Stockholm in their search in the literature with respect to their subject matter?

A Only the acute toxicity studies we talked about.

Q Those were not in the literature, were they? Weren't they in Monsanto's files?

A I'm sorry. You're talking about outside literature, both popular press and technical?

Q I guess so. We were talking, the one time we talked about what was in the files.

A Yes.

Q And we talked about the toxicity studies and

that is all there was, is that right?

MR. SCHINK: That he recalls, that's right.

BY THE WITNESS:

A Yes.

BY MR. POPE:

Q Besides those, that was this monitoring of technical literature and for all I know popular press, is that true?

A Yes.

Q Dr. Kelly and Mr. Wheeler were in charge of monitoring for articles with respect to the effects of PCBs on people?

A On living creatures.

Q What did they find between the time they started and the time you went to Stockholm?

A They had the reference to Dr. Risebrough's study on the effects on pelicans.

They had the reference to the North Sea incident.

Q In the San Francisco paper, the Journal?

A The North Sea incident came out in a European paper in London. The Risebrough came out of the San Francisco Chronicle and they also had a reference to the Japanese incident, a newspaper clipping, as I recall.

WATER_PCB-00054209

I don't know what journal or newspaper it came out from, but we were aware that something had happened and we were trying to get more information through our Japanese Monsanto representatives and we were having difficulties.

Q As of early 1970, all you had was the newspaper clipping?

A Yes, that's all anyone had.

MR. POPE: Let us mark as Papageorge Deposition Exhibit No. 5 for identification, a memorandum from Dr. Kelly dated February 14, 1969, number at the bottom right-hand corner of 0000312 or '812.

(Papageorge-OMC Deposition Exhibit No. 5 marked for identification, 8/27/81, TLU.)

BY MR. POPE:

Q Mr. Papageorge, I am showing you what we have had marked as Exhibit 5 for identification. Just look that over and tell me if that was available to you prior to May of 1970.

A I remember seeing this, but I don't remember -- I did not know of this as of May 1970. I saw it subsequent to that.

Q Why was there a problem acquiring information

WATER_PCB-00054210

regarding the Japanese incident?

A It is very difficult to determine. It appears to be a language problem and it appears to be, to me, a case of the Oriental reluctance to discuss tragedy of this type with the rest of the world.

Q Did Monsanto have Japanese employees in Japan at that time?

A Yes, yes.

Q Was that who you were working with to get this information?

A That is Dr. Durland, our European representative in Tokyo.

Q When did you ultimately find out what took place?

A I will try to be as brief as I can. The Food and Drug Administration had had the same difficulty Monsanto had in getting all of the information it felt they needed and it appears that nothing really happened until a representative of the Food and Drug Administration went to Tokyo personally. And then the data came to be more easily available.

It started in 1971 and it wasn't really until a couple, three years later that the FDA felt it had enough information, they felt comfortable using it

WATER_PCB-00054211

to establish exposure levels for PCBs in American food.

Q Were there any other articles that you had when you went to Sweden with respect to presence of PCBs in the environment?

A I don't remember any.

Q Did Dr. Keller or Dr. Kelly --

A Dr. Keller, the analytical chemist. I don't remember anything other than what we have talked about already.

Q His instructions in connection with conducting his literature search or finding of literature was to convey it to you so you could be the focal point, was it not?

A Yes.

Q I show you a document we have previously marked as Kelly Deposition Exhibit No. 8 for identification, being a 4-page document on the letterhead of Younger Laboratories dated November 9, 1976.

Would you look that over, please.

A Okay.

Q Have you seen that before, sir?

A Yes.

Q Can you tell me why that study was done?

A No, I couldn't. I don't know.

Q Were there any other studies like this done on other products during this time period?

A 1966?

MR. SCHINK: If you know.

BY THE WITNESS:

A I don't know. I don't remember.

BY MR. POPE:

Q This report is a study of toxicity using Pydraul F-9, is that right?

A Yes, acute toxicity screen.

Q Was this not available to you in early 1970?

A In 1970?

MR. SCHINK: The question was was it available or was it not available.

MR. POPE: I am just trying to find out. I keep asking what was known or what was available and this is not one of the ones that you discussed, I don't believe.

BY THE WITNESS:

A I'm trying to determine if this came at a later point in time. That's right. What was available to me initially was for those materials that were 100 percent PCBs.

Later as I got deeper into this, I was

WATER_PCB-00054213

able to find there were studies made of products that contained less than 100 percent PCBs and I don't remember the ingredients that go into F-9.

BY MR. POPE:

Q Can you tell me the other toxicity studies of which you are familiar, dealing with either pure PCB or PCB-bearing fluids that Monsanto was selling?

A I just don't remember them all.

Q Is there one for each and every product that was sold?

A No, no.

Q How many are there?

A I have never counted them.

Q Are we dealing with 50?

MR. SCHINK: Are you limiting yourself to PCB products or are you talking about all products the company makes, and at what time?

MR. POPE: I am talking, I think quite clearly, about toxicity studies done by Monsanto either in-house or under a laboratory involving PCB products.

MR. SCHINK: That were in existence as of 1970 when he assumed his position at St. Louis?

MR. POPE: That were done prior to 1970. I presume none of them were destroyed so that whatever was done was

WATER_PCB-00054214

in existence.

BY MR. POPE:

Q When you answered the question before, you were just talking about pure PCBs?

A Those reports that were made known to me on pure PCBs. That doesn't mean all reports were made known to me. I have no way of knowing that.

I have to rely on the people who were passing that information down to me.

Q And it was your job to find out all you could about those products, is that right?

A Yes.

Q Approximately how many additional toxicity studies were done in 1970 relating to products containing PCBs? Is this the only one?

A That is the only one I know of. I don't recall any others.

Q When did you come across this Kelly Deposition Exhibit No. 8?

A Sometime between late 1970 and 1975, somewhere in that period.

Q When you came across it, did you go to Dr. Kelly and say, "Where did this come from, what is this for, why is this done?"

A No.

Q Wasn't this a surprise to you?

A It was, but it was irrelevant. At the time we were out of the product.

Q At the time you came across this product, you thought you had already received those toxicity studies, hadn't you?

A Yes.

Q Is it your testimony that when you did come across it, you did not inquire of anyone at Monsanto as to why it was conducted in 1966?

A That is right.

Q And you did not discuss it at all with anybody, I guess, is that right?

A That's right.

Q As to what it showed?

A That's right.

Q Was it a matter of concern to you?

A Not at that time.

Q Why not?

A Because we were no longer making the product. The ingredients in the product of interest had already been tested independently at much higher concentrations, so any effects at the lower concentrations would be of

less concern. So all the information included in that report when I first heard about it would not have added anything to what we were doing in the way of improving the situation, whatever it might have been.

Q At the time you came across this report, was it your understanding there was Pydraul in the environment?

A No. I had no reports of that in 1970.

Q When?

A 1970 we're talking about.

Q I thought you came across this sometime between 1972 and '75?

A Yes.

Q At that stage was it your testimony that when you first saw this report, you had no way of knowing that there was Pydraul in the environment?

A That is right.

Q Were there any other products that Monsanto made that contained PCBs that were reported in the environment at the time you came across this?

A There were PCBs reported, but not products. There is no way to tie the PCBs reported to any of the applications.

Q There is no way?

A Unless they were directly related to a source point like an electric equipment plant and the presence of PCBs.

General presence, there was no way to tie it into any particular use.

Q So as to products that Monsanto was no longer manufacturing, you were not concerned about the toxicity of such products, is that right?

A That's -- well, I don't know if I would use the words no longer concerned. It was no longer helpful in managing the issue.

Q What was the issue at that time?

A The presence of PCBs and how to reduce the release to the environment.

Q The toxicity of PCBs was not part of that issue, is that correct?

A That is correct.

Q As you assumed the job, what decisions had already been made by Monsanto that you subsequently learned of with respect to PCBs and its product line?

A The decisions that had already been made when I arrived were that we would act responsibly; we would seek out as much information as was available to us; we would develop accurate analytical methodology;

we would communicate what we knew as it developed to customers when it was helpful to the customer and they could do something with the information, and that my job would be created to coordinate the effort because I remember those are the decisions that were made.

Q Before you came on board?

A Before I read those.

MR. POPE: Would you please read back the witness' answer.

(Record read as requested.)

BY MR. POPE:

Q Let us get it all.

Who told you that those decisions had previously been made? How did you learn that?

A They were touched upon informally when I talked to Mr. Bergen and later I was given a copy of the minutes of our top management committee in which these points were enumerated.

Q I take it the minutes were of the meetings that had been held in 1969?

A Yes.

Q Had there been a plan of action determined?

A I believe those are the items in the Plan

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of Action. I might have missed one or two here, but that was the Plan of Action, as I recall.

Q Had any decisions been made with respect to taking any products off the market?

A I don't believe that decision was finalized in November of '69, but it was being seriously discussed in early 1970.

Q I show you a document we had marked previously as Bergen Deposition Exhibit No. 3 for identification, or rather an edited portion of that document, 3-page document. Those are the minutes that you were referring to that you had read?

A Yes, this is it.

Q Was work undertaken before you became Manager of Environmental Control to find replacement fluids in any of the current product line?

A Yes.

Q And in what types of products was search under way, whether for replacement fluid --

A I am having trouble with the timing. As I recall, efforts were started on all the product lines and success varied depending on the ease with which the alternates could be found.

The initial thrust was to reduce the use

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of the Aroclor 1254 and 1260, followed later by looking for alternative materials that did not contain chlorinated hydrocarbons of any kind, so it was an evolving search for alternatives.

Q Why was the decision made to try and reduce the chlorine content of the various products that were made first as opposed as to initially starting with finding a non-PCB product?

A Well, if you remember, based on the information available to us in 1970, late 1969, no one was reporting the presence of Aroclor 1221, 1232, 1242, but they were reporting something that looked like Aroclor 1254, 1260, and that gave us the reason for developing something to replace those that were being found; to start somewhere, and that seemed to be the most logical place to start.

Q The theory being it would be a couple of years before the 1242 and the other compounds would be discovered in the environment?

A No, I cannot say that. I don't know that any theory would develop. At that point in time, we didn't have enough to develop any theories other than if they are finding 1254, it must be getting out in the environment somehow. Let's stop the use of 1254 wherever we

can; that will reduce the amount that is going to end up in the environment.

Based on the limited resources the company has, you have to work on first things first. That was the decision made, let's get after that which is being reported.

Q As of January 1970, had Monsanto employees detected Aroclor 1242 in the environment anywhere?

A I don't remember the exact timing, but analyses of environmental samples taken near an industrial plant that used 1242 showed 1242 in the effluent, but analyses taken of waters or sediments in remote places did not show 1242.

Q How about the analyses that had been done at Monsanto's discharge at its own plants? Did that locate 1242?

A It would show all of them.

MR. SCHINK: You are talking about the beginning of '70?

MR. POPE: Beginning of '70.

BY THE WITNESS:

A It showed whatever was being produced because it is so close to the source.

BY MR. POPE:

WATER_PCB-00054222

Q So I understand your testimony, was it thought by you and others at Monsanto at the time that if 1242 had escaped into the environment, it would degrade and therefore not remain as a presence?

A That was a thought expressed by some of the people, yes, the researchers. And this was supported by some of the degradation studies we were making where the principal components of 1242 were disappearing and what was left looked like 1254. It changed its appearance.

Q Was it news to Monsanto that 1242 would degrade faster than some of the higher numbered Aroclors?

A It was news in that that is the first time we had any data.

Q Wasn't it simply a matter of the chemical components of the chlorine being less in one substance that would degrade faster?

A That is the current explanation, but I did not hear anyone in 1970 speak in those terms.

Q Why was work under way at all to come up with replacement fluids?

MR. SCHINK: He already explained that with respect to the Aroclor 1254 and 1260. He just gave you that example a few minutes ago. Do you want him to repeat it?

WATER_PCB-00054223

MR. POPE: No, I don't want him to repeat it.

MR. SCHINK: The question has been asked and answered.

BY THE WITNESS:

A We decided early on that if in truth this man-made chemical was being found in the environment and if an alternate could be found which did not result in the wrong kind of sacrifice in the product in which they appeared, that it would be a responsible thing to do to terminate those uses.

We didn't feel it proper where we couldn't control the material to have it end up in the environment.

BY MR. POPE:

Q Was there expression by Dr. Richard or anyone else that the manufacture of PCBs would be banned by the Government?

MR. SCHINK: When?

MR. POPE: The expression was in early 1970.

BY THE WITNESS:

A Dr. Richard was of the belief that PCBs would follow DDT. Yes, he had expressed that belief.

MS. STEIN: I didn't hear the response.

BY THE WITNESS:

WATER_PCB-00054224

A (Continuing.) Dr. Richard expressed his personal belief that because of the frequent comparison with DDT that PCBs would have the same fate as DDT.

BY MR. POPE:

Q Is that one of the reasons why the Plan was formulated to come up with alternate fluids?

A No.

Q Was his opinion outvoted in these discussions?

MR. SCHINK: Was his personal opinion outvoted?

MR. POPE: Do you want me to rephrase it?

MR. SCHINK: I think it assumes certain facts that the witness is not --

MR. POPE: I will strike the question, Mr. Schink.

BY MR. POPE:

Q Where did this statement take place, as far as you remember?

A I heard it many times. He would introduce that thought at informal group discussions or even when the task force that I would call frequently to discuss the status, he would at times express his belief.

He found no support in such a broad conclusion.

Q Was there anyone in these meetings when the PCB plan was discussed who suggested that replacement of

some of the fluids would protect the company's environment in the electrical and dielectric area?

MR. SCHINK: The company's environment?

MR. POPE: The company's sales in that area.

THE WITNESS: I don't think I understand your question.

BY MR. POPE:

Q Did anyone express the conclusion or the opinion that if you replace some of the uses, some of the PCB fluid uses with non-PCB-bearing substances, that that would take some of the pressure from the Government off the company?

MR. SCHINK: I object to the form of the question in that it assumes there was any pressure from the Government at that time on Monsanto to do anything.

BY THE WITNESS:

A I don't recall that thought expressed just that way.

BY MR. POPE:

Q Was it expressed in other ways?

A I think I understand the thought and it was discussed that if the material in truth was in the environment and perceived to be a problem, and in those cases where we could find an acceptable alternate

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and that we did not do so, our customers and Monsanto and finally society would have to forego some of the benefits of the continued use of PCBs.

And it just did not seem to be the wise path to take. If we wanted to maintain fire-resistant transformers in service, we had to give up the PCBs used in adhesives. That is the kind of thought that was discussed.

Q What education was there in late 1969 or early 1970 that the presence of PCBs was a problem as you just referred to?

A It is the evidence that we mentioned earlier about the wild birds and the sea animals.

Q With respect to those decisions that had already been made, you were already in the process of developing the accurate methodology and analytical methodology which is what we were talking about before, the mass spectrometer and the gas chromatograph?

A Yes.

Q The decision that you would communicate what you knew to your customers when it was helpful to them and they could do something with the information, I don't see that listed on the minutes of this meeting in exactly that fashion.

WATER_PCB-00054227

Is that your interpretation?

MR. SCHINK: Do you want to give him the whole minute?

MR. POPE: I would like to give him the whole minute, Mr. Schink, but you won't give it to me.

BY THE WITNESS:

A That was my paraphrasing of Item No. 4.

BY MR. POPE:

Q "Educate the customer on the need to reduce and effectively control PCB effluent at their plants"?

A Yes.

MR. SCHINK: Why don't you give him a chance to look at the rest of the exhibit as well.

BY MR. POPE:

Q Mr. Schink has called some part of that document to your attention. Do you want to change your answer?

MR. SCHINK: Mr. Pope, I thought as a courtesy to the witness, when you show him an exhibit, you show him the entire exhibit and not a page lifted from it before asking him to comment on the basis of it. That is proper practice.

BY MR. POPE:

Q Do you wish to add anything to your answer,

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Mr. Papageorge?

A No.

Q What had been done prior to your becoming Manager of Environmental Control with respect to communicating to the customer what Monsanto knew when it was helpful to the customer and they could do something with the information?

A I personally don't know of anything specific as of January 1970.

Q You don't know of anything specific that had been done with regard to communicating with the customer?

A That's right.

Q I would like to show you a document, Mr. Papageorge, that was marked as a Bergen Deposition Exhibit, I believe. I cannot quite make out what the number is.

MR. HYNES: That may have been the deposition of Mr. Wheeler.

MR. SCHINK: I know the exhibit has been used before. It was also used during the Richard deposition.

(Discussion off the record.)

BY MR. POPE:

Q We have, Mr. Papageorge, a 4-page exhibit previously used at the deposition of Dr. Richard dated

March 10, 1969 entitled Notes on Meeting: 3/6/69, a 3-page memorandum and one-page attachment.

I would like you to take a look at that, please.

MR. SCHINK: Mike, this is a document he has not been shown. He has not read the entire document.

Do you want to ask him a general question about it?

MR. POPE: I want to know if it was available to him after he came from his --

MR. SCHINK: Is it a question of whether he recalls having seen it? He already testified that all of Monsanto was available to him in this position and all of Monsanto's resources.

MR. POPE: I don't believe that is exactly accurate. I think he said he had to rely on other people to give him things.

MR. SCHINK: I don't think there was any indication there was anything he wanted to see that he could not see.

The question, I guess, is do you recall having seen that in 1970. Do you recall?

BY MR. POPE:

Q Have you ever seen that before?

WATER_PCB-00054230

A I've never seen this.

Q Including the chart attached to this?

A That's right.

No, I've never seen this.

Q If other people in the company were involved in meetings involving Aroclors affecting the environment, weren't they supposed to make those minutes of those meetings available to you?

MR. SCHINK: Are you talking about meeting which occurred after he assumed his job in March of '70?

MR. POPE: No, before.

BY THE WITNESS:

A They were encouraged to share with me all of the information which they had. Why that document was never made known to me, I don't know.

BY MR. POPE:

Q Did you ever talk to Dr. Richard about what records he had involving Aroclors?

A Yes.

Q Did you encourage him to make those records available to you?

A Yes.

Q Did he give you some records?

A Yes, he or his staff.

Q At the bottom of Page 2 of this memorandum from Dr. Richard dated March 10, 1969 is listed -- is this from a different page, Jim, can you tell?

MR. SCHINK: No, I think it is part of the same document.

BY MR. POPE:

Q (Continuing.) -- a list of toxicity studies, are they not?

A Yes.

Q Take a look through those and tell me if those were the tests that were already in place at the time, either in place or completed at the time you assumed your duties on January 1, 1970?

A Some of the tests listed appear to be the tests that were in place, starting, but I see some studies listed here that never did take place.

Q Which ones are those?

A I see a reference to mallard duck.

Q Roman Numeral V?

A Roman Numeral V.

Q That study was not done?

A No.

Q Three generation rats was done?

A Yes, it was done. So were some of the fish

studies.

Q Subacute fish study?

A I believe that is one, and if my memory serves me right, there were some problems with the test and it was to be redone. I don't think it was ever completed.

Q Was that to be done by Industrial Bio-Test?

A Yes.

And Roman X was never completed.

Q Roman X, metabolic studies?

A Metabolic studies.

Q The acute/subacute fish studies to consider the possibility of the reproductive cycle, was that part of the study that was done on fish?

A That was the proposal at the time and none of this was completed. The fish study, to my knowledge, with Industrial Bio-Test was aborted totally.

Q Do you know why?

A Just in my opinion, they were incompetent in this field and could not do a good study for us.

Q Industrial Bio-Test was incompetent in what field?

A Aquatic studies.

Q Did they give you any tentative conclusions before the test was aborted?

A No, they couldn't.

Q Based on your review of the records of Monsanto after you became Manager, Environmental Control and your general knowledge of the company, as of March of 1969, had people at Monsanto, such as Dr. Richard, formed any conclusions with respect to the presence of PCBs in the food chain?

MR. SCHINK: He doesn't need this document.

Are you just asking that question generally based on his reading, on his review of the material he has reviewed over the years on his job?

MR. POPE: Yes.

BY THE WITNESS:

A In 1970, is that the point of reference?

BY MR. POPE:

Q Before that.

A Build-up in the food chain, no. The reference to build-up in the food chain did not occur until later.

Q Do you know why this exhibit makes reference to the food chain and the effect in man attached to Dr. Richard --

MR. SCHINK: I object, no foundation.

First of all, the witness said he had never seen this document before. What Dr. Richard meant

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is a category already covered at great length at the deposition with him and I don't think this witness is competent to answer a question like that.

There is no foundation, objection.

BY THE WITNESS:

A I don't know what Dr. Richard had in mind here.

BY MR. POPE:

Q Did you ever talk to Dr. Richard on this subject of possibility of PCBs in the food chain?

A I don't recall any discussion with Dr. Richard focused on that topic.

Q Did you ever hear Dr. Richard say he expected to find PCB effects in man?

A No.

Q One of your jobs was to coordinate the effort of the various other departments, divisions, personnel at Monsanto with respect to PCBs, is that right?

A Yes.

Q Did that responsibility include decision of whether and what to communicate to customers of Monsanto?

A No, the decision what to communicate to the customer is the prime responsibility of the Marketing Department.

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MS. STEIN: I didn't hear the answer.

THE WITNESS: My role was to guide them as best I could to reflect what I knew we were doing in Manufacturing, primarily to make certain that they had communicated with other parts of Monsanto to reflect their input, such as Medical and Research and Public Relations and Legal and everybody on the team.

My role was to ask them, "Did you run this by this person?" Sort of a traffic cop, if you will.

BY MR. POPE:

Q I see. As long as the Marketing Department had contacted all the various people, they were then at liberty to disclose whatever they wished to customers, is that correct?

A That's right.

Q Were you advised when customers were told information with respect to PCBs?

A In a general way, but not each contact by date, by person.

Q What do you mean by "in a general way"?

A I would be informed by the Manager and let's say responsible for hydraulic fluids that we are going to start a program of this type and we intend to do it

in a couple of weeks and finish it by the end of the month; here is the kind of thing we are going to talk about and how do you do that, what do you think, how does that grab you?

And I would give my reactions and my support and I would say, "Look, do you have any problems, do you need any help from anybody, have you told his boss, is he on board?" This kind of dialog would take place.

And then he might come to my office or I would go to his and ask what is the status, how is it going, is everything all right; it's going well or they might come back and say, "We visited but we'd sure like to have you call to reinforce what we said," that kind of thing might take place, or they might come back and say, "Look, they've asked us for some help in analyzing water samples; can we do that?"

I'd say, "Sure, go ahead, have Dr. Keller or Scott Tucker and we'll schedule them in there."

This is the kind of thing, I kind of felt the pulse of what was going on.

Q Is it your testimony that you would not have the right to approve information if it was going out, either as to accuracy or the adequacy of it?

A I would have the right to approve, I would have the right to object, but I could be overruled and then we would appeal it to the boss.

Q How would the marketing -- we should talk about how did, because we are talking about actual events:

How did the Marketing people find out the actual information the company knew about PCBs to pass on to the customer, if they saw fit?

A Several ways. One would be via a report out of the Research Lab. They would get a copy of it.

Q Your in-house Research Laboratory?

A Yes.

Q What were they working on, analytical methods?

A Suppose a research laboratory put out a report and said, "Attached is a copy of our final method for analysis for PCBs for water, sediment, tissue and attached all three copies."

The Marketing Manager would get a copy of that and I'd say, "This is a good piece of information."

Q That did take place?

A Yes, and "I'd like to show it to my customer, any problem in sending this out?" And we'd say, "No, we encourage you to do it."

One of the things would be to go through the lawyers to see if there is anything else we should be doing. And we'd get that clearance and that is an example.

Q When did that example take place?

A The methodology was presented and in usable form in mid-'70, July '70, so some weeks later it was available.

Q But with that example, you wouldn't keep track of who received what and what customers were given that information and what weren't?

A No, I couldn't.

Q With respect to the presence of PCBs in the environment or any possible health effects, how would the Marketing Department learn what facts Monsanto had available to it if it chose to pass that information down to the customer?

A The Marketing Department might, as an example, put out a summary report of the status of the studies under way.

Q The Marketing Department?

A I'm sorry, the Medical, Medical Department. The Marketing Department would get a copy through one of its managers, either Mr. Olson or Mr. Johnson or

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Mr. Gossage. They might decide this is good information to pass on to their customers or I might. I might decide, "It sounds good to me," I just got that copy, "What do you think; think I ought to send it out?"

And they'd generally say, "Yes," and we'd work at it that way.

Or another way to get this information, at a meeting of this task force that I would call every week or two weeks depending on the news or new developments, at that point someone may hand out a document for the group and at that point the decision might be made, "This is a good piece of information to send to customers."

Or at a meeting of that type, somebody may say, "I just had a situation that just happened with this customer and it worked so well I suggest the rest of you do the same sort of thing," so there would be that interchange.

Q Am I correct that there was no corporate decision what to tell specific customers and when to tell them that with respect to PCBs in the environment or potential health hazards?

A With respect to PCBs the corporate position is stated in Line No. 4 of the minutes of that corporate

WATER_PCB-00054240

committee meeting in November of '69.

Q That simply says, "Educate the customer," is that right?

A Yes. The details of what is said is left up to the business group involved with that product.

Q In this case, that became the Marketing Group that really made the decisions as to what to tell each of the customers?

A That is right.

Q The task force you referred to, who are members of this task force?

A It consisted of representatives of Research, Marketing, Medical, Legal, Public Relations and Manufacturing.

Q This group would meet every two weeks or so?

A Roughly, initially met almost every week.

Q Would you set the agenda for the meeting?

A Yes, in a general way. Most of the time it was around the table, "It's your turn to bring the group up to speed," and then go on to the next person.

Q What plan was already in effect at that time in terms of anything in writing other than the minutes that you referred to earlier?

A In early 1970 that is the only written plan.

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Q I show you a report that was marked as Richard Deposition Exhibit 9 at his deposition, being part of a 7-page exhibit from Monsanto's files with a small cover sheet and handwriting dated 9/9/69, the balance being the typed-up portion dated December 9, 1969 from Dr. Richard to Mr. Wheeler.

I would like you to look it over and tell me whether you have ever seen that before. If you don't mind, I will look over your shoulder.

A No, not at all.

This report --

MR. SCHINK: The question is have you ever seen that document before.

BY THE WITNESS:

A I think I have, but I'm not certain.

BY MR. POPE:

Q Assuming you have seen it before, would that be shortly after you took over this job as Manager of Environmental Control in reviewing your other files?

A Yes, within a three-month period.

Q Does that exhibit refresh your recollection as to whether the PCB Pollution Problem in the Pensacola Bay was known to Monsanto at the time you took over the job?

WATER_PCB-00054242

A Well, obviously they were aware of much of it, yes -- I am aware of it, yes.

MR. SCHINK: But is your recollection refreshed that as of 1970 when you assumed the position there was some Pensacola Bay situation in existence? Has your recollection been refreshed by looking at that document?

THE WITNESS: That doesn't help me recall when I first heard of it.

BY MR. POPE:

Q Based on any further reading you did after taking over the job, Mr. Papageorge, is it true that Monsanto was aware of that pollution problem at the Bay outside of Pensacola in late 1969?

MR. SCHINK: Can you answer the question?

BY THE WITNESS:

A Yes, yes.

BY MR. POPE:

Q As a matter of fact, that problem arose because of a spill at a Monsanto plant, didn't it?

A Yes.

Q A spill of heat transfer fluid?

A No, hydraulic.

Q What was it?

A Hydraulic fluid.

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Q What kind of hydraulic fluid?

A One of the Pydrauls, but I don't recall which.

Q What was the use to which it was being made at the time of the spill?

A It was the lubricant in the air compressor.

Q It got out into the Bay itself?

A It got out into an estuary that eventually led into Escambia Bay.

Q How did it get out of the plant?

A It just ran on the surface into the estuary is the best I know.

Q Opened the door and went downstairs?

A Yes.

Q In what amounts?

A I am told that the amounts were less than a gallon.

Q What damage was done?

A None that I am aware of.

Q You are not aware of any fish, shellfish being poisoned?

A Not to my knowledge.

Q You investigated it, didn't you?

A Yes.

Q You investigated the circumstances of that

WATER_PCB-00054244

situation?

A Yes, yes.

Q As a result of your investigation, you concluded that there was no damage to oysters, seafood, sea fish or any fish or shellfish in that incident, is that correct?

A That is right.

Q Did you prepare a report of that investigation?

A I didn't prepare one, no.

Q Did someone prepare one for you?

A The plant prepared a report.

Q Who did the plant send the report to?

A I recall seeing a copy, and if my memory serves me right, they shared that information with the Florida State authorities.

Q As well as someone in the home office, I take it?

A Of course the plant sent copies to its own management within Monsanto.

Q Which plant?

A The Pensacola, Florida Plant.

Q I understand that. What does it manufacture, what group does it fall in?

A It is part of a Monsanto textiles company,

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manufactures synthetic fibers.

Q Who would have been in charge of that division, who would have received the report at the home office?

A I don't recall the individuals in the textiles company organization at that time. It would go to the plant manager and his supervisor, who would be either a director or general manager of manufacturing and I don't know who the individual was.

Q Am I correct in assuming that the way this worked, the plant would not send a report to the Functional Fluids Department even though it involved the Pydraul product?

A That is true, but I got a copy and I represented the Functional Fluids Group in the environmental arena.

Q Approximately when was that report dated? What format did it take?

A About the Fall of 1970.

Q What format was the report in?

A Office memorandum.

Q Getting back to this September 9, 1969 report from Dr. Richard to Mr. Wheeler, was there a practice prior to your assuming your job on January 1970 of maintaining a file at Monsanto that would relate to

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Defense of Aroclor or PCB Action Plan or Functional Fluids Replacement of PCBs, something like that?

A Not to my knowledge.

Q So if you saw this report, it would have come to you from Dr. Richard?

A Or one of the people who received copies.

Q This isn't your handwriting, I take it?

A It doesn't look like mine.

Q Do you recall discussing either with Dr. Richard or with Mr. Wheeler the subject of hydraulic leakage and customers' reaction to change of fluids?

MR. SCHINK: This is after assuming his position in 1970?

MR. POPE: I don't suppose he did it before that, Mr. Schink.

BY THE WITNESS:

A The subject of leakage from hydraulic systems was discussed many times with Bill Richard, Elmer Wheeler and others. I don't recall any specific meeting on the subject.

BY MR. POPE:

Q Was there a group in place prior to January 1970 which roughly had the same functions as your task force group?

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A The group which eventually was referred to as a task force met at some frequency prior to my arrival.

Q Would Mr. Hodges and Mr. Farrar and Mr. Bergen be members of that group? They are the other people on the document.

A Mr. Bergen and Mr. Farrar, definitely. Mr. Hodges, I suspect he was invited to participate on a somewhat infrequent basis.

Q I would like to show you this 4-page report from Elmer Wheeler dated January 29, 1970, which we also used at the Richard deposition, and ask you to look that over and tell me whether that is an accurate summary of the tests, the animal tests that were under way with respect to the effects of Aroclors in January 1970?

A This appears to be an accurate summary, yes.

Q Were there ones later added to that list?

MR. SCHINK: Do you mean by that were there additional studies undertaken?

MR. POPE: Yes, later on.

BY THE WITNESS:

A Yes, there were other studies added.

BY MR. POPE:

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Q Do you know which ones there were?

A Chicken, chicken studies.

Q Was that on the thickness of the shell on the egg or the effect on the chicken itself?

A As I remember it was both. One was a reproduction study which involved the eggs.

Q The so-called hatchability study?

A The hatchability, and the other was the effect on the birds themselves.

Q Who did those tests?

A Industrial Bio-Test.

Q Were they competent to do those tests, in your opinion?

A Yes.

Q Have you since learned that principals of Industrial Bio-Test have been indicted here in the United States District Court?

A Yes.

Q As far as you know, has anyone at Monsanto gone back to examine any of the work that Industrial Bio-Test did for Monsanto in the PCB area following learning of that investigation?

A It's either been recently completed or ongoing. There is an audit being conducted of the studies sponsored

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by Monsanto by an outside consultant.

Q That audit is of all of the work that Industrial Bio-Test did for you, or just the PCB studies?

A PCBs is one of many studies that is being audited. PCBs is now either just completed or is undergoing.

Q Who is that?

A I believe it's Boos, Hamilton.

MR. POPE: Mr. Schink, I don't like to make a whole bunch of requests for a deposition, but I would like to make a request that you notify us when that is completed and is it relates to the Bio-Test PCB studies.

MR. SCHINK: I will let you know when it is completed.

MR. POPE: When it is reduced to writing, I would like to ask and do ask for a copy.

MR. SCHINK: I don't make any representation we will produce that.

MR. POPE: Maybe you could give me at least a part of it.

MR. SCHINK: At least we give you something.

MR. POPE: It is after 5:00 o'clock.

MR. SCHINK: I would like to propose we get some

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indication from you as to how long it will take. Mr. Papageorge is able to go later as I advised you by letter today and he is able to start before 9:00 o'clock tomorrow if that will help expedite.

MR. POPE: I suggest what really helps expedite depositions is if questions are properly organized and that will not be by going longer and starting earlier.

I will start at 9:00 o'clock and we will progress as I think we have.

MR. SCHINK: Let me ask further, in the event we cannot complete in the allotted time tomorrow the deposition of Mr. Papageorge, we will then proceed Monday morning?

MR. POPE: Fine with me.

(Discussion off the record.)

(At 5:15 o'clock p.m., the deposition was adjourned to be resumed on Friday, August 28, 1981, at 9:00 o'clock a.m.)

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